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USFWS
File 97-806-4001

WORLDWIDE SERVICES
Burns & McDonnell
ENGINEERS • ARCHITECTS • CONSULTANTS

July 22, 1997

Mr. William H. Gill, Field Supervisor
U.S. Fish and Wildlife Service
315 Houston Street, Suite E
Manhattan, KS 66502

USFWS
Water Supply Planning Study
Quivira National Wildlife Refuge
Project No. 97-271-4

Dear Mr. Gill:

Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) 22 by the U.S. Fish and Wildife Service (Service) to conduct a water supply planning study for the Quivira National Wildlife Refuge (Refuge) (see Figures 1 and 2). The project consists of the formulation of water supply alternatives to provide a more dependable, annual supply of water for use on the Refuge. Alternatives could include, but would not necessarily be limited to, modifications to Refuge facilities and operations, increased retention of surface water from Rattlesnake Creek, and utilization and recharge of groundwater. The water supply would be used to facilitate Refuge operations to provide wildlife habitat, including habitat for numerous federally listed threatened or endangered species. The purpose of this letter is to request your agency's input regarding the environmental issues that should be considered when preparing the plan resulting from this study. Additionally, we would request any information you may have on the environmental resources of the area which includes the Refuge and the Rattlesnake Creek watershed.

We would appreciate your comments or concerns on this project at this time. In addition, any information you can provide relating to the following specific issues would be helpful:

- local land use
- water quality and wetlands
- soils and hydric soils
- biological resources (wildlife, fisheries, T & E species)
- cultural resources (historic or archaeological sites)
- recreational resources, opportunities, and needs
- other appropriate issues

9400 Ward Parkway
Kansas City, Missouri 64114
Tel: 816 333-9400
Fax: 816 333-3690
http://www.burnsmcd.com

Burns & McDonnell

Input from your agency will assist us in determining the environmental issues applicable to this project. Please let us know of any specific issues should be addressed in our study, as well as any permits or approvals, from your agency, necessary to construct and implement a project of this nature. The period of performance under this contract is very short. Accordingly, we would appreciate a reply within 14-21 days of the date of this letter.

If you have any questions about this project or our request, please call me (816) 822-3304 or Steve Thornhill at (816) 333-4375. Thank you for your assistance.

Sincerely,

for

Fred C. Pinkney, Ph.D.
Project Manager, Environmental Studies

enclosures

cc: Megan Estep-Johnston - U.S. Fish and Wildlife Service
Frank Shorney

AGENCY CONTACT LIST

Mr. Dave Waldo
Kansas Department of Health and Environment
Forbes Field
Building 283
Topeka, KS 66620-0001

Mr. Chris Mammoliti
Kansas Department of Wildlife & Parks
512 SE 25th Avenue
Pratt, KS 67124-8174

Mr. Jess Crockford
Natural Resources Conservation Service
9 West 28th, Suite B
Hutchinson, KS 67502-3453

Mr. Ramon S. Powers
State Historic Preservation Officer
Kansas State Historical Society
6425 S.W. 6th Street
Topeka, KS 66615-1099

Mr. Paul Liecht
Kansas Biological Survey
Natural Heritage Program
2041 Constant Avenue
Foley Hall
Lawrence, KS 66047-2906

Mr. William H. Gill, Field Supervisor
U.S. Fish and Wildlife Service
315 Houston Street, Suite E
Manhattan, KS 66502

Mr. Dave Hibbs
U.S. Army Corps of Engineers
Kansas City District (CO-RW)
700 Federal Building
Kansas City, MO 64106

Mr. Bob Dunlevy
U.S. Environmental Protection Agency
Region 7
726 Minnesota Avenue
Kansas City, KS 66101

Mr. John Jackson, Executive Director
Water Protection Association of Central Kansas
6024 Birchwood Drive
Great Bend, KS 67530

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Kansas Field Office
315 Houston Street, Suite E
Manhattan, Kansas 66502-6172

July 31, 1997

Fred C. Pinkney
Project Manager, Environmental Studies
Burns & McDonnell Engineering Co., Inc.
9400 Ward Parkway
Kansas City, Missouri 64114

RE: Water Supply Planning Study for Quivira NWR
Project No. 97-271-4

Dear Mr. Pinkney:

This is in response to your July 22, 1997 letter requesting this office's review and input to your water supply planning study for the Quivira National Wildlife Refuge in Stafford, Reno, and Rice Counties, Kansas. The stated purpose of your study is to investigate and formulate water supply alternatives to provide a more dependable annual supply of water for the refuge. Since Quivira is a National Wildlife Refuge, the primary consideration should be how various alternatives will impact biological resources. Therefore, this letter will focus on migratory and threatened and endangered fish and wildlife and their habitats.

In accordance with section 7(c) of the Endangered Species Act (16 U.S.C. 1531 et seq.), we have determined that the following federally listed species may occur at least seasonally on the refuge: piping plover (Charadrius melodus), bald eagle (Haliaeetus leucocephalus), least tern (Sterna antillarum), peregrine falcon (Falco peregrinus), and whooping crane (Grus americana). The entire refuge has also been designated critical habitat for the latter species. All alternatives must consider the potential for adverse impacts on these listed species. If the preferred alternative may adversely affect listed species, Quivira NWR and the Kansas ES Field Office will have to complete an intra-Service formal section 7 consultation prior to implementation. I am enclosing habitat and locational information for all federally listed and proposed species in Kansas, which should prove useful in an assessment of the potential for impacts.

One candidate species, the Arkansas darter (Etheostoma cragini), also occurs in certain spring habitats on the refuge. Candidates are those species for which the Service has on file substantial information on biological vulnerability and threats to support proposals to list them as endangered or threatened species. Development and publication of proposed rules to list candidate species as threatened or endangered are anticipated at some point in the future.

Candidate species have no legal protection under the Endangered Species Act; however, the Service is concerned for their conservation due to their uncertain status.

Quivira was designated a National Wildlife Refuge primarily due to the presence of saline and freshwater marshes, providing high quality habitat for ducks, geese, shorebirds, and the aforementioned threatened and endangered species. While the purpose of this planning study is to evaluate means to more effectively utilize water to optimize marsh habitat, the potential for each alternative to adversely impact existing wetlands and their hydrology should be carefully assessed. I also point out to you that, if adverse impacts to hydric areas are expected, a permit pursuant to section 404 of the Clean Water Act may be required from the U.S. Army Corps of Engineers. If a permit is required, this office will be given the opportunity to review the application and provide recommendations.

Thank you for this opportunity to provide early input to your proposed planning study. Please do not hesitate to contact me or Dan Mulhern of this office again if you have further questions or need additional information.

Sincerely,

William H. Gill

William H. Gill
Field Supervisor

enclosure

cc: FWS/RW, Stafford, KS (Quivira NWR)
KDWP, Pratt, KS (Environmental Services)

WHG/dwm

HABITAT AND LOCATION INFORMATION FOR FEDERALLY LISTED AND PROPOSED THREATENED AND ENDANGERED SPECIES IN KANSAS

(Updated September 1996)

Species Known to Occur in Kansas:

The **piping plover** (Charadrius melodus) is a small shorebird which may be a seasonal spring and fall migrant through portions of Kansas, along the Cimarron, Ninnescah, Arkansas, Kansas, and Missouri Rivers. Nesting was confirmed in 1996 on the Kansas River. Plovers are associated with unvegetated shorelines, sandbars, and mudflats, utilizing aquatic invertebrates for food. Threatened status.

The **bald eagle** (Haliaeetus leucocephalus) may be expected to occur along any river or at any reservoir in Kansas during winter. Eagles will utilize areas where large trees provide perch sites in proximity to open water, where they feed on fish and waterfowl. A first nest was documented in 1989, increasing to 5 successfully active nests by 1994, with numbers fluctuating annually. Threatened status.

The **least tern** (Sterna antillarum) utilizes similar unvegetated wetland habitat as do piping plovers, in the same geographic regions of Kansas, feeding primarily on small fish. It occurs as a spring and fall migrant through the State, and nests along the Cimarron and Kansas Rivers, at Jeffrey Energy Center in Pottawatomie County, and at Quivira National Wildlife Refuge. Endangered status.

The **peregrine falcon** (Falco peregrinus) is a widespread but uncommon migrant throughout Kansas, most often seen in the spring and fall. Peregrines utilize wetlands and open areas, such as water bodies, crop fields and grasslands, primarily preying upon other birds. A pair established an active nesting territory in downtown Topeka in 1993, which has remained active since. Endangered status.

The **whooping crane** (Grus americana) is a regular migrant through central and western Kansas, generally occurring during March-April and October-November. Preferred habitat sites include wetlands, open fields, and grasslands in areas of low relief with short vegetation which affords the birds an open view of the surrounding terrain. Endangered status.

The **gray bat** (Myotis grisescens) occupies a limited geographic range in limestone cave regions of the southeastern United States. The Kansas population lives in the storm sewers beneath Pittsburg, in Crawford County. They forage for insects along wooded water bodies, with occurrences possible but less likely in Bourbon, Cherokee, and Labette Counties. Endangered status.

The **Neosho madtom** (Noturus placidus) is a small catfish which depends on clean oxygenated gravel bars throughout the mainstem Neosho, Cottonwood, and Spring Rivers in southeastern Kansas, southwestern Missouri, and northeastern Oklahoma. Threatened status.

The **pallid sturgeon** (Scaphirhynchus albus) is a moderately large bottom-dwelling fish which has historically occurred in portions of the Missouri River and lower Kansas River. It may require sandbars, chutes, and backwater areas for reproduction. Endangered status.

The **Mead's milkweed** (Asclepias meadii), a perennial broad-leaved plant, is associated with unbroken tallgrass prairie, generally occurring as small populations or scattered individuals. Kansas counties containing confirmed populations include Allen, Anderson, Bourbon, Coffey, Crawford, Douglas, Franklin, Jefferson, Johnson, Leavenworth, Linn, Miami, and Neosho. Threatened status.

The **western prairie fringed orchid** (Platanthera praeclara) is a perennial plant generally occurring in swales or low edges of slopes in native tallgrass prairie. Small populations are currently extant in Douglas, Jefferson, Leavenworth, and Osage counties, with historical records from Atchison, Anderson, Coffey, Crawford, Franklin, Jackson, Johnson, Lyon, Pottawatomie, Riley, and Shawnee counties. Threatened status.

The **American burying beetle** (Nicrophorus americanus) is a large insect historically documented from the eastern half of Kansas, utilizing level areas in grassland or open woodlands. In addition to known populations in Nebraska and Oklahoma, this species has recently been located in Wilson, Elk and Mongtomery counties. Endangered status.

Species Whose Kansas Status is Unknown:

The **Eskimo curlew** (Numenius borealis) is an upland shorebird which formerly migrated through Kansas in the spring, foraging for invertebrates in plowed fields and heavily-grazed or burned grasslands. There have been no sightings in Kansas since 1902, but a potential sighting was reported from near Grand Island, Nebraska, in April 1987. Endangered status.

The **black-capped vireo** (Vireo atricapillus) is a small perching bird that utilizes scattered trees and brushy clumps, typified by scrub oak, with woody vegetation separated by patches of bare ground or herbaceous vegetation. The species has not been confirmed in this state since the mid 1950s, primarily occurring today in Texas and Oklahoma. Endangered status.

The **black-footed ferret** (Mustela nigripes) is almost exclusively associated with prairie dog towns, dependent on them for cover and food. The last documented ferret evidence in Kansas was 1976. If any federal action will impact at least 80 acres of prairie dogs, a ferret survey should be conducted by certified personnel. Endangered status.

The **Indiana bat** (Myotis sodalis) also occupies caves during hibernation, but during the breeding season may be found in either caves or roost trees. Its actual occurrence in Kansas is unconfirmed, but may occur in the extreme eastern tier of counties. Endangered status.

The **running buffalo clover** (Trifolium stoloniferum) is associated with grassy areas in wooded stream valleys. The only Kansas records are from Miami County, and the plant has not been reported from the State since prior to 1900. Endangered status.

Species Proposed for Federal Listing:

The **Arkansas River shiner** (Notropis girardi) is a small minnow adapted to shallow, braided sand-bottom streams. It formerly occurred throughout the Arkansas River basin, but has either been extirpated from Kansas or may presently occur in very small numbers only in the Cimarron River in southwest Kansas. Proposed for endangered status.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

August 8, 1997

Fred C. Pinkney, Ph.D.
Project Manager, Environmental Studies
Burns & McDonnell
9400 Ward Parkway
Kansas City, MO 64114

Dear Dr. Pinkney:

I appreciate the opportunity to review your water supply planning study for the Quivera National Wildlife Refuge. I have spoken with my colleagues in several Branches at the Regional Office about your request. Most of the information which you are requesting resides in several state of Kansas agencies. From our conversation on August 4, you answered my concerns and have sent the request to various state agencies.

My colleagues have expressed another concern about whether the proper state officials have received your request. Because of this, we would be happy to review your list and make any suggestions for additional state agencies to send your request.

If you have any further concerns or questions, please contact me at (913) 551-7798.

Sincerely,

Robert Dunlevy

Robert Dunlevy
Drinking Water/Groundwater
Management Branch

KANSAS

STATE

HISTORICAL

SOCIETY

◆

◆

6425 S.W. 6th Avenue
Topeka, Kansas
66615-1099
PHONE# (785) 272-8681
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◆

CULTURAL RESOURCES DIVISION
785-272-8681 ext. 240 Fax 785-272-8682

July 30, 1997

Fred C. Pinkney, Ph.D.
Burns & McDonnell Engineering Company, Inc.
Project Manager, Environmental Studies
9400 Ward Parkway
Kansas City MO 64114

Dear Dr. Pinkney:

We have received your July 22, 1997, letter concerning the Water Supply Planning Study for the Quivira National Wildlife Refuge. Within the Rattlesnake Creek Watershed there are a number of recorded archeological sites. With additional survey a large number of sites could be added to the record, as well as historical sites, historic trails, etc.

The enclosed list of applicable state and federal legislation outlines your responsibilities in regard to cultural resources.

Sincerely,

Richard Pankratz

Richard Pankratz, Director
Cultural Resources Division
skm

CULTURAL RESOURCE LEGISLATION

Kansas Water Projects Environmental Coordination Act - 1987
This act requires a review of projects allowed or permitted by K.S.A. 24-126, 24-1213, and 82a-301 et seq, generally those projects such as stream obstructions or stream channel changes requiring a permit from the Division of Water Resources. The permitting agency is required to obtain comments from a number of state agencies, including the Kansas State Historical Society, and to take into account the comments when issuing the permit.

National Historic Preservation Act of 1966, as amended
Section 106 requires a federal agency to identify buildings, sites, structures, objects and districts listed on or eligible for listing on the National Register of Historic Places which will be affected by an undertaking. An undertaking includes those projects carried out by or on behalf of an agency, federally financed, those requiring a federal permit, license, or approval and those subject to State or local regulation administered pursuant to a delegation or approval by a federal agency. If a property is discovered, that agency must seek comment from the SHPO and others on how to avoid, reduce, or mitigate damage to such property.

Kansas Antiquities Commission Act (K.S.A. 74-5401 to 74-5408) - 1967
This act requires an individual, institution, or corporation to obtain a permit before excavating archeological sites located on public property owned or controlled by the state, or any of its subdivisions. It requires a person to report archeological discoveries on public property to the State Archeologist and to protect them from damage, if found during construction. Any person removing artifacts from or vandalizing or defacing any archeological site can be punished by a misdemeanor penalty.

Kansas Historic Preservation Act (K.S.A. 75-2715 to 75-2725, as amended) - 1977
This act establishes the preservation and maintenance of historical, architectural, archeological, and cultural sites as state policy. The Register of Historic Kansas Places (state register) identifies the properties that will be protected. The act requires the State Historic Preservation Officer to review and comment upon projects proposed by the state or any of its political subdivisions, that may encroach upon, damage, or destroy any property listed in the Register of Historic Kansas Places (this list also includes all properties listed on the National Register of Historic Places). The act also provides for the review of projects within the "environs" of a listed property. The environs extend 500 feet from a property located within the city limits or 1000 feet from a property located in a rural area.

Kansas Unmarked Burial Sites Preservation Act (K.S.A. 75-2741 to 75-2754) - 1989
This act establishes a procedure for the protection, treatment, and disposition of human skeletal remains, and associated grave artifacts, from unmarked burial sites not covered by existing laws pertaining to cemeteries. It establishes a nine member board to make recommendations for the disposition of human remains and grave goods and provides for a registry of unmarked burial sites. The act requires the board to establish a system of permits to excavate, study, or display human skeletal remains or burial goods from unmarked graves. The act prohibits any person from willfully disturbing an unmarked burial site, possessing skeletal remains or burial goods, or to sell, trade, give away, throw away or discard human skeletal remains or grave goods. Fines ranging from $5,000 to $100,000 may be levied for breaking the law, depending upon the circumstances of the conviction.

Kansas Historic Preservation Office
August 1995

Flas 75-20?-4-001

STATE OF KANSAS

DEPARTMENT OF WILDLIFE & PARKS

Operations Office
512 SE 25th Avenue
Pratt, KS 67124-8174
316/672-5911 FAX 316/672-6020

KANSAS WILDLIFE & PARKS

September 9, 1997

Dr. Fred C. Pinkney, Project Manager, Environmental Studies
Burns and McDonnell
9400 Ward Parkway
Kansas City, MO 64114

REF: D4.0100
SF, ED, FO, KW, PN, RC

Tracking No. 970355

Dear Dr. Pinkney:

We have reviewed your request for environmental input for the proposed study by the U.S.D.I. Fish and Wildlife Service for a water supply plan for the Quivira National Wildlife Refuge(Stafford and Rice Counties). The project was preliminarily reviewed for potential impacts on crucial wildlife habitats, current state-listed threatened and endangered wildlife species, and public recreation areas for which this agency has some administrative authority.

We consider the alternative for a dam and reservoir project in the Rattlesnake Creek basin, upstream of the national wildlife refuge to be an Impact Level 3, meaning the project as it is currently proposed should not be implemented and some alternate approach should be considered. The project sponsor should consider nonstructural alternatives such as exercising their federal reserve water rights and asking the Chief Engineer, Kansas Department of Agriculture, to administer Kansas water rights law by reducing or calling water from junior water rights users in the Rattlesnake Creek basin or by forming an IGUCA — Intensive Groundwater Use Control Area — and implementing a water conservation and water use reduction plan for adjudicated water users — both ground water and surface water. A structural alternative of creating a deep-water pool on the refuge to improve storage and water use could be designed in a legal and environmentally-sound fashion, as the Kansas Department of Wildlife and Parks did on Cheyenne Bottoms Wildlife Area, a Wetlands of International Importance. If wetlands are destroyed, mitigation may be necessary. A Project Action Permit application will be required for construction work on the refuge or along Rattlesnake Creek. Combination solutions of water conservation, water rights law administration, and improved water storage and use on the refuge should also be entertained. We look forward to reviewing the completed plan and ranked alternatives. Other permits from the Kansas Department of Agriculture, Division of Water Resources, the U.S. Army Corps of Engineers - Kansas City District, and the Kansas Department of Health and Environment may be necessary, depending on the alternative arrived at.

The.above recommendations are based upon the following:

- The proposed water supply planning study will include alternatives that modify existing refuge facilities and operations, increased retention of surface water from Rattlesnake Creek, and utilization and recharge of groundwater.
- The increased retention of surface waters (i.e., dam and reservoir construction) in the Rattlesnake Creek watershed includes Ford, Pawnee, Edwards, Stafford, Rice, and Kiowa counties.

- Rattlesnake Creek is Designated Critical Habitat for the threatened Arkansas darter, a federal candidate species. This obligate stream fish depends on subirrigated water and aquatic plants such as watercress and water buttercup. The Arkansas darter also occurs in numerous springs and well flows on the Quivira National Wildlife Refuge.
- Quivira National Wildlife Refuge is federal Designated Critical Habitat for endangered whooping crane.
- Quivira National Wildlife Refuge is Designated Critical Habitat for endangered whooping crane, bald eagle, and threatened snowy plover and white-face ibis. These migratory birds are dependent on clean water for nesting, drinking, and food sources.
- Quivira National Wildlife Refuge probably has federal reserve water rights associated with the establishment and operations of this wetland complex for the management of waterfowl, shorebirds, and threatened and endangered wildlife, as well as providing public outdoor recreation opportunities — hunting for consumption, angling for consumption, trapping, wildlife appreciation, hiking, education and others.
- The appropriation of water rights along the Rattlesnake Creek watershed results in Quivira National Wildlife Refuge not receiving sufficient water for its operations as a national wildlife refuge.
- Constructing a dam and reservoir along Rattlesnake Creek or its tributaries may result in increased evaporation losses, losses due to conveyance, and destruction of Crucial and Critical Stream and Riparian wildlife habitat.
- There are freshwater and saline wetlands on the Quivira National Wildlife Refuge and along the Rattlesnake Creek-Salt Creek watersheds. Construction alternatives will probably need formal jurisdictional wetland determinations by the USDA Natural Resources Conservation Service and/or U.S. Army Corps of Engineers - Kansas City District.
- Rattlesnake Creek is classified as a High-Priority Fishery Resource in Edwards and Stafford counties and as a Moderate Fishery Resource in Kiowa and Rice counties. Salt Creek in Reno County is classified as a Limited Fishery Resource because of its highly saline nature but is listed as habitat for threatened Arkansas darter.
- Rattlesnake Creek supports populations of Arkansas darter, largemouth bass, bluegill, black crappie, common carp, gizzard shad, black bullhead, green sunfish, Western mosquitofish, Plains killifish, river carpsucker, suckermouth minnow, red shiner, sand shiner, fathead minnow, channel catfish, goldfish, flathead catfish, orangespotted sunfish, and probably Plains minnow (SINC species).
- Rattlesnake Creek supports hunting for ducks and other waterfowl species, trapping, deer and turkey hunting, and wildlife appreciation. It is used by outdoor recreationists as contact — swimming, wading --, noncontact - angling, trapping --, angling for consumption, livestock watering, and irrigation waters.

Because the project involves potential impact to a state listed threatened or endangered species and/or its designated critical habitat, a separate action permit is needed from our agency to be in compliance with regulations pursuant to the Kansas Nongame and Endangered Species Conservation Act. A copy of this letter and permit application information have been forwarded to the project sponsor. We ask that all other necessary permits be held in abeyance until conditions necessary to protect threatened and endangered species have been established with the project sponsor.

Thank you for providing us this preliminary opportunity to review this project. We have substantial public interests in invaluable Public Trust natural resources in the Rattlesnake Creek-Salt Creek watershed and on Quivira National Wildlife Refuge. We look forward to continuing this review process and providing our recommendations and conditions. We strongly suggest that coordination with the USDI Fish and Wildlife Service, Kansas Field Office, Manhattan, KS commence at this time.

Sincerely,

Larry Zuckerman

Larry Zuckerman, Aquatic Ecologist
Environmental Services Section

LDZ
Encls {Photocopies: Edwards, Ford, Kiowa, Pawnee, Rice & Stafford COs T&E Lists; Project Action Permit Application/Information Packet}

xc: Baugh, KDWP REG3 F&W Superv., Dodge City
Mueldener, KDHE, Topeka
Sorensen, KDWP REG4 F&W Superv., Wichita
Byrd, DWR, Topeka
Gill, FWS, Manhattan
Hilley, FWS, Stafford
Liechti, KBS, Lawrence
LeDoux, KWO, Topeka
Streeter, SCC, Topeka
Cavin, COE, KCMO
Jacobs, EPA, KCKS

[G:\PROJECTS\1997\970355.LDZ]

THREATENED AND ENDANGERED SPECIES KNOWN OR LIKELY TO OCCUR IN RENO COUNTY, KANSAS

Arkansas Darter (*Etheostoma cragini*) - Threatened: Known to occur south of the Arkansas River in shallow, clear, spring-fed streams having sand or sand-gravel substrates with aquatic vegetation, or similar protective cover present. Critical habitats have been designated.

Arkansas River Shiner (*Notropis girardi*) - Endangered: May occur occasionally in the Arkansas River. Restricted to the broad, sandy channels where it frequents areas leeward of sand ridges formed by perennial shallow flows. The fish is dependent upon high flows during late spring and early summer to successfully spawn. Critical habitat has been designated.

Bald Eagle (*Haliaeetus leucocephalus*) - Endangered: Known to occur as a regular winter visitant along the Arkansas and Ninnescah Rivers. Wintering eagles are dependent upon large water bodies and larger rivers where they feed on waterfowl and fish. Endangered nationally.

Eastern Spotted Skunk (*Spilogale putorius interrupta*) - Threatened: Known to occur in suitable habitat. Prefers forest edge and rock outcrops in upland prairie grasslands. Also frequents fencerows, outbuildings, brushpiles, and riparian woodlands.

Eskimo Curlew (*Numenius borealis*) - Endangered: Formerly a regular spring transient using plowed fields, heavily grazed pastures, burned grasslands, and prairie dog towns. Was most common in the eastern 2/3 of the state, but has not been verified in Kansas since 1902. A few birds may still migrate through the state. Endangered nationally.

Least Tern (*Sterna antillarum*) - Endangered: Known to occur as transients or summer residents. Prefers barren flats and sandbars near water where a dependable supply of small fish and aquatic crustaceans is available.

Peregrine Falcon (*Falco peregrinus*) - Endangered: May occur as an uncommon transient and occasional winter visitant. Prefers marshes, lakes, and rivers where concentrations of waterfowl or other birdlife provide ample prey. Endangered nationally.

Piping Plover (*Charadrius melodus*) - Threatened: May occur occasionally as a rare transient through Kansas. Prefers sparsely vegetated shorelines of shallow lakes, salt flats and open ground in marshes, and bare river sandbars. Threatened nationally.

(continued)

Snowy Plover (*Charadrius alexandrinus*) - Threatened: May occur occasionally as a seasonal transient or summer visitant at sparsely vegetated shorelines of rivers and impoundments. Critical habitat has been designated.

Speckled Chub (*Macrhybopsis aestivalis tetranemus*) - Endangered: May occur occasionally in the Arkansas River. Prefers currents over clean, fine sand, avoiding calm water and silt bottoms. Critical habitat has been designated.

White-faced Ibis (*Plegadis chihi*) - Threatened: Known to occur occasionally as a local summer visitant at marshes and impoundments. Critical habitat has been designated.

Whooping Crane (*Grus americana*) - Endangered: Known to occur as a seasonal transient. Frequently stops to rest and feed at marshes and hay fields. Endangered nationally. Critical habitat has been designated.

THREATENED AND ENDANGERED SPECIES KNOWN OR LIKELY TO OCCUR IN STAFFORD COUNTY, KANSAS

Arkansas Darter (*Etheostoma cragini*) - Threatened: Known to occur in Rattlesnake Creek basin. Prefers shallow sand-bottomed streams with aquatic vegetation. Critical habitat has been designated.

Bald Eagle (*Haliaeetus leucocephalus*) - Endangered: Known to occur as a regular winter resident at wetlands where waterfowl concentrate. Endangered nationally.

Eastern Spotted Skunk (*Spilogale putorius interrupta*) - Threatened: May occur in suitable habitat. Prefers woodland edges, abandoned buildings, and brushy grasslands along streams.

Eskimo Curlew (*Numenius borealis*) - Endangered: Formerly a regular spring transient in the eastern 2/3 of the state. Used heavily grazed grasslands and bare fields. Has not been verified in Kansas since 1902, but a few may still migrate through Kansas. Endangered nationally.

Least Tern (*Sterna antillarum*) - Endangered: Known to occur as a regular seasonal transient and summer resident. Nests at Quivira National Wildlife Refuge. Frequents shallow streams and wetlands having bare to sparsely vegetated shorelines. Critical habitat has been designated. Endangered nationally.

Peregrine Falcon (*Falco peregrinus*) - Endangered: Known to occur as an occasional winter visitant at areas where waterfowl or other birds concentrate. Endangered nationally.

Piping Plover (*Charadrius melodus*) - Threatened: Known to occur as a rare seasonal transient at marshes or on sparsely vegetated shorelines of streams and lakes. Threatened nationally.

Snowy Plover (*Charadrius alexandrinus*) - Threatened: Known to occur as a regular seasonal transient and summer resident at bare river sandbars and lake shores. Known to nest at Quivira National Wildlife Refuge. Critical habitat has been designated.

White-faced Ibis (*Plegadis chihi*) - Threatened: Known to occur as a regular summer resident at wetlands and impoundments. Known to nest at Quivira National Wildlife Refuge. Critical habitat has been designated.

Whooping Crane (*Grus americana*) - Endangered: Known to occur as a regular seasonal transient. Frequently stops to rest at Quivira National Wildlife Refuge or other open areas away from disturbance by humans. Critical habitat has been designated. Endangered nationally.

Effective January 1993

THREATENED AND ENDANGERED SPECIES KNOWN OR LIKELY TO OCCUR IN RICE COUNTY, KANSAS

Arkansas Darter (*Etheostoma cragini*) - Threatened: Known to occur in the Salt (Rattlesnake) Creek drainage and have been recorded as waifs in the Arkansas River main stem. Prefers shallow, clear, spring-fed headwater streams having sand or sand-gravel substrates with aquatic vegetation, or similar protective cover present. Critical habitat has been designated.

Arkansas River Shiner (*Notropis girardi*) - Endangered: May occur occasionally in the main stem Arkansas River. Critical habitat has been designated.

Bald Eagle (*Haliaeetus leucocephalus*) - Endangered: Known to occur as a regular winter resident. Wintering eagles are dependent upon large water bodies and larger rivers where they feed on waterfowl and fish. Critical habitat has been designated. Endangered nationally.

Eastern Spotted Skunk (*Spilogale putorius interrupta*) - Threatened: May occur in suitable habitat. Prefers forest edge and rock outcrops in upland prairie grasslands. Also frequents fencerows, outbuildings, brushpiles, and riparian woodlands.

Eskimo Curlew (*Numenius borealis*) - Endangered: Formerly a regular spring migrant using plowed fields, heavily grazed pastures, burned grasslands, and prairie dog towns. Was most common in the eastern 2/3 of the state, but has not been verified in Kansas since 1902. A few birds may still migrate through Kansas. Endangered nationally.

Least Tern (*Sterna antillarum*) - Endangered: May occur foraging in summer along Arkansas River and Salt Creek. Critical habitat has been designated. Endangered nationally.

Peregrine Falcon (*Falco peregrinus*) - Endangered: May occur as an uncommon transient and occasional winter visitant. Prefers marshes, lakes, and rivers where concentrations of waterfowl or other birdlife provide ample prey. Endangered nationally.

Piping Plover (*Charadrius melodus*) - Threatened: May occur as an uncommon transient through Kansas. Prefers sparsely vegetated shorelines of shallow lakes, salt flat and open ground in marshes, and bare river sandbars. Threatened nationally.

Snowy Plover (*Charadrius alexandrinus*) - Threatened: May occur as a regular summer visitant or resident on saline flats in wetlands and bare river sandbars. Critical habitat has been designated.

(continued)

THREATENED AND ENDANGERED SPECIES KNOWN OR LIKELY TO OCCUR IN PAWNEE COUNTY, KANSAS

Bald Eagle (*Haliaeetus leucocephalus*) - Endangered: Known to occur as an occasional winter visitant. Wintering eagles are dependent upon large water bodies and larger rivers where they feed on waterfowl and fish. Endangered nationally.

Eastern Spotted Skunk (*Spilogale putorius interrupta*) - Threatened: May occur in suitable habitat. Prefers forest edge and rock outcrops in upland prairie grasslands. Also frequents fencerows, outbuildings, brushpiles, and riparian woodlands.

Eskimo Curlew (*Numenius borealis*) - Endangered: Formerly a regular spring migrant using plowed fields, heavily grazed pastures, burned grasslands, and prairie dog towns. Was most common in the eastern 2/3 of the state, but has not been verified in Kansas since 1902. A few birds may still migrate through the state. Endangered nationally.

Least Tern (*Sterna antillarum*) - Endangered: May occur as transients or occasional summer visitants at impoundments and wetlands. Endangered nationally.

Peregrine Falcon (*Falco peregrinus*) - Endangered: Known to occur as an uncommon transient and occasional winter visitant. Prefers marshes, lakes, and rivers where concentrations of waterfowl or other birdlife provide ample prey. Endangered nationally.

Piping Plover (*Charadrius melodus*) - Threatened: May occur as a rare transient. Prefers sparsely vegetated shorelines of shallow lakes, salt flats and open ground in marshes, and bare river sandbars. Threatened nationally.

Snowy Plover (*Charadrius alexandrinus*) - Threatened: May occur as an occasional summer visitant or transient on mud flats in wetlands, bare river sandbars, and shorelines on impoundments.

White-faced Ibis (*Plegadis chihi*) - Threatened: May occur as a local summer visitant or seasonal transient in marshes and at impoundments.

Whooping Crane (*Grus americana*) - Endangered: Known to occur occasionally as a seasonal transient. May stop to rest and feed at marshes and hay fields. Endangered nationally.

Effective January 1993

THREATENED AND ENDANGERED SPECIES KNOWN OR LIKELY TO OCCUR IN KIOWA COUNTY, KANSAS

Arkansas Darter (*Etheostoma cragini*) - Threatened: Known to occur in shallow, clear, spring-fed headwater streams having sand or sand-gravel substrates with aquatic vegetation, or similar protective cover present in the Medicine Lodge and Bluff Creek basins. Critical habitat has been designated.

Bald Eagle (*Haliaeetus leucocephalus*) - Endangered: Known to occur as seasonal transients or occasional winter visitants. Wintering eagles are dependent upon large water bodies and larger rivers where they feed on waterfowl and fish. Endangered nationally.

Eastern Spotted Skunk (*Spilogale putorius interrupta*) - Threatened: May occur in suitable habitat. Prefers forest edge and rock outcrops in upland prairie grasslands. Also frequents fencerows, outbuildings, brushpiles, and riparian woodlands.

Eskimo Curlew (*Numenius borealis*) - Endangered: Formerly a regular spring transient using plowed fields, heavily grazed pastures, burned grasslands, and prairie dog towns. Was most common in the eastern 2/3 of the state, but has not been verified in Kansas since 1902. A few birds may still migrate through the state. Endangered nationally.

Least Tern (*Sterna antillarum*) - Endangered: May occur as seasonal transients or occasional summer visitants. Endangered nationally.

Peregrine Falcon (*Falco peregrinus*) - Endangered: May occur as an uncommon transient and occasional winter visitant. Prefers marshes, lakes, and rivers where concentrations of waterfowl or other birdlife provide ample prey. Endangered nationally.

Piping Plover (*Charadrius melodus*) - Threatened: May occur as a rare seasonal transient. Prefers sparsely vegetated shorelines of shallow lakes, salt flats and open ground in marshes, and bare river sandbars. Threatened nationally.

Snowy Plover (*Charadrius alexandrinus*) - Threatened: May occur as a transient on saline flats in wetlands and bare river sandbars.

Texas Longnose Snake (*Rhinocheilus lecontei tessellatus*) - Threatened: Known to occur in sandy, open prairies with canyons and rock outcrops.

White-faced Ibis (*Plegadis chihi*) - Threatened: May occasionally occur as a summer visitant at wetlands and impoundments.

Whooping Crane (*Grus americana*) - Endangered: Known to occur as an occasional spring and fall transient. Known to stop to rest and feed at marshes and open fields away from human disturbance.

Effective January 1993

KANSAS WILDLIFE & PARKS

THREATENED AND ENDANGERED SPECIES KNOWN OR LIKELY TO OCCUR IN FORD COUNTY, KANSAS

Bald Eagle (*Haliaeetus leucocephalus*) - Endangered: Known to occur as a regular winter visitant. Endangered nationally.

Eastern Spotted Skunk (*Spilogale putorius interrupta*) - Threatened: Known to occur in suitable habitat. Prefers brushy grasslands along streams. Also uses abandoned or little used farm buildings and junkyards. Critical habitat has been designated.

Least Tern (*Sterna antillarum*) - Endangered: Known to occur as an occasional seasonal transient or summer visitant. Endangered nationally.

Peregrine Falcon (*Falco peregrinus*) - Endangered: May occur as an uncommon winter visitant. Endangered nationally.

Piping Plover (*Charadrius melodus*) - Threatened: May occur as a rare seasonal transient near ponds and streams. Threatened nationally.

Snowy Plover (*Charadrius alexandrinus*) - Threatened: May occur as an occasional seasonal transient or summer visitant at wetlands or impoundments.

Texas Longnose Snake (*Rhinocheilus lecontei tessellatus*) - Threatened: May occur in sandy prairies.

White-faced Ibis (*Plegadis chihi*) - Threatened: Known to occur as an occasional seasonal transient or summer visitant at wetlands and impoundments.

Whooping Crane (*Grus americana*) - Endangered: Known to occur occasional seasonal transients. Endangered nationally.

Effective January 1993

THREATENED AND ENDANGERED SPECIES KNOWN OR LIKELY TO OCCUR IN EDWARDS COUNTY, KANSAS

Arkansas Darter (*Etheostoma cragini*) - Threatened: May occur in shallow, clear, spring-fed headwater streams having sand or sand-gravel substrates with aquatic vegetation, or similar protective cover present.

Bald Eagle (*Haliaeetus leucocephalus*) - Endangered: Known to occur as seasonal transients or occasional winter visitants. Wintering eagles are dependent upon large water bodies and larger rivers where they feed on waterfowl and fish. Endangered nationally.

Eastern Spotted Skunk (*Spilogale putorius interrupta*) - Threatened: May occur in suitable habitat. Prefers forest edge and rock outcrops in upland prairie grasslands. Also frequents fencerows, outbuildings, brushpiles, and riparian woodlands.

Eskimo Curlew (*Numenius borealis*) - Endangered: Formerly a regular spring transient using plowed fields, heavily grazed pastures, burned grasslands, and prairie dog towns. Was most common in the eastern 2/3 of the state, but has not been verified in Kansas since 1902. A few birds may still migrate through the state. Endangered nationally.

Least Tern (*Sterna antillarum*) - Endangered: May occur as seasonal transients or occasional summer visitants. Endangered nationally.

Peregrine Falcon (*Falco peregrinus*) - Endangered: May occur as an uncommon transient and occasional winter visitant. Prefers marshes, lakes, and rivers where concentrations of waterfowl or other birdlife provide ample prey. Endangered nationally.

Piping Plover (*Charadrius melodus*) - Threatened: May occur as a rare seasonal transient. Prefers sparsely vegetated shorelines of shallow lakes, salt flats and open ground in marshes, and bare river sandbars. Threatened nationally.

Snowy Plover (*Charadrius alexandrinus*) - Threatened: May occur as a transient on saline flats in wetlands and bare river sandbars.

White-faced Ibis (*Plegadis chihi*) - Threatened: Known to occur occasionally as a summer visitant at wetlands and impoundments.

Whooping Crane (*Grus americana*) - Endangered: Known to occur as an occasional spring and fall transient. Known to stop to rest and feed at marshes and open fields away from human disturbance.

Effective January 1993

EQUATIONS --> AREA = A2 + X*(A3 + A3)

05-01-1995

$$\text{CAPACITY} = A3*X^2 + A2*X + A1$$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA NWR AREA/ELEVATION/CAPACITY
POOL 5

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1780.00	1	1.0000	308.1200	110.4650
2	1782.00	1059	1059.0999	749.9802	56.9399

QUIVIRA NWR AREA/ELEVATION/CAPACITY 05-01-1995
POOL 5

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1780	308	330	352	374	396	419	441	463	485	507
1781	529	551	573	595	617	640	662	684	706	728
1782	750	761	773	784	796	807	818	830	841	852
1783	864									

QUIVIRA NWR AREA/ELEVATION/CAPACITY
POOL 5

05-01-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1780	1	33	67	103	142	183	226	271	318	368
1781	420	474	530	588	649	712	777	844	914	985
1782	1059	1135	1211	1289	1368	1448	1530	1612	1696	1780
1783	1866									

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3) 05-26-1995

$$\text{CAPACITY} = A3 \cdot X^{2} + A2 \cdot X + A1$$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 10 A&B

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1774.00	0	0.0000	6.2900	4.5450
2	1776.00	30	30.7600	24.4700	3.6325
3	1778.00	94	94.2300	39.0000	12.2525

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 10 A&B

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1774	6	7	8	9	10	11	12	13	14	14
1775	15	16	17	18	19	20	21	22	23	24
1776	24	25	26	27	27	28	29	30	30	31
1777	32	32	33	34	35	35	36	37	38	38
1778	39	41	44	46	49	51	54	56	59	61
1779	64									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 10 A&B

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1774	0	1	1	2	3	4	5	7	8	9
1775	11	12	14	16	18	20	22	24	26	28
1776	31	33	36	38	41	44	47	50	53	56
1777	59	62	65	69	72	76	79	83	87	90
1778	94	98	103	107	112	117	122	128	133	139
1779	145									

---------- END OF REPORT -----------

05-26-1995

EQUATIONS --> $\text{AREA} = A2 + X*(A3 + A3)$

--> $\text{CAPACITY} = A3*X^2 + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 10C

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1772.00	0	0.0000	3.6700	0.6825
2	1774.00	10	10.0700	6.4000	5.3450

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 10C

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1772	4	4	4	4	4	4	4	5	5	5
1773	5	5	5	5	6	6	6	6	6	6
1774	6	7	9	10	11	12	13	14	15	16
1775	17	18	19	20	21	22	24	25	26	27
1776	28									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 10C

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1772	0	0	1	1	2	2	2	3	3	4
1773	4	5	5	6	6	7	8	8	9	9
1774	10	11	12	12	13	15	16	17	19	20
1775	22	24	25	27	30	32	34	36	39	42
1776	44									

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

$$CAPACITY = A3*X^2 + A2*X + A1$$

05-26-1995

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 11B or 11W

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1768.00	0	0.0000	0.3800	0.5050
2	1770.00	2	2.7800	2.4000	2.1800
3	1772.00	16	16.3000	11.1200	8.2675

QUIVIRA AREA/ELEVATION/CAPACITY 05-26-1995
POOL 11B

THE AREA TABLE IS IN ACRES THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1768	0	0	1	1	1	1	1	1	1	1
1769	1	1	2	2	2	2	2	2	2	2
1770	2	3	3	4	4	5	5	5	6	6
1771	7	7	8	8	9	9	9	10	10	11
1772	11	13	14	16	18	19	21	23	24	26
1773	28	29	31	33	34	36	38	39	41	43
1774	44	46	47	49	51	52	54	56	57	59
1775	61									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 11B

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1768	0	0	0	0	0	0	0	1	1	1
1769	1	1	1	1	2	2	2	2	2	3
1770	3	3	3	4	4	5	5	6	6	7
1771	7	8	9	10	10	11	12	13	14	15
1772	16	17	19	20	22	24	26	28	30	33
1773	36	39	42	45	48	52	55	59	63	67
1774	72	76	81	86	91	96	101	107	112	118
1775	124									

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

05-26-1995

$$CAPACITY = A3*X^2 + A2*X + A1$$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 11E oR 11A

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1754.00	0	0.0000	0.3000	0.5050
2	1756.00	2	2.6200	2.3200	0.5700
3	1758.00	9	9.5400	4.6000	0.5875
4	1760.00	21	21.0900	6.9500	0.6975
5	1762.00	37	37.7800	9.7400	0.7775
6	1764.00	60	60.3700	12.8500	0.7150
7	1766.00	88	88.9300	15.7100	1.5075
8	1768.00	126	126.3800	21.7400	2.3025
9	1770.00	179	179.0700	30.9500	3.0025
10	1772.00	252	252.9800	42.9600	1.2850

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 11E

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1754	0	0	1	1	1	1	1	1	1	1
1755	1	1	2	2	2	2	2	2	2	2
1756	2	2	3	3	3	3	3	3	3	3
1757	3	4	4	4	4	4	4	4	4	4
1758	5	5	5	5	5	5	5	5	6	6
1759	6	6	6	6	6	6	6	7	7	7
1760	7	7	7	7	8	8	8	8	8	8
1761	8	8	9	9	9	9	9	9	9	10
1762	10	10	10	10	10	11	11	11	11	11
1763	11	11	12	12	12	12	12	12	13	13
1764	13	13	13	13	13	14	14	14	14	14
1765	14	14	15	15	15	15	15	15	15	16
1766	16	16	16	17	17	17	18	18	18	18
1767	19	19	19	20	20	20	21	21	21	21
1768	22	22	23	23	24	24	25	25	25	26
1769	26	27	27	28	28	29	29	30	30	30
1770	31	32	32	33	33	34	35	35	36	36
1771	37	38	38	39	39	40	41	41	42	42
1772	43	43	43	44	44	44	45	45	45	45
1773	46	46	46	46	47	47	47	47	48	48
1774	48	48	49	49	49	49	50	50	50	50
1775	51									

QUIVIRA AREA/ELEVATION/CAPACITY 05-26-1995
POOL 11E

THE CAPACITY TABLE IS IN ACRE FEET THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1754	0	0	0	0	0	0	0	0	1	1
1755	1	1	1	1	1	2	2	2	2	2
1756	3	3	3	3	4	4	4	5	5	5
1757	6	6	6	7	7	7	8	8	9	9
1758	10	10	10	11	11	12	13	13	14	14
1759	15	15	16	17	17	18	18	19	20	20
1760	21	22	23	23	24	25	26	26	27	28
1761	29	30	30	31	32	33	34	35	36	37
1762	38	39	40	41	42	43	44	45	46	47
1763	48	49	51	52	53	54	55	57	58	59
1764	60	62	63	64	66	67	68	70	71	73
1765	74	75	77	78	80	81	83	84	86	87
1766	89	91	92	94	95	97	99	101	102	104
1767	106	108	110	112	114	116	118	120	122	124
1768	126	129	131	133	135	138	140	143	145	148
1769	150	153	156	159	161	164	167	170	173	176
1770	179	182	185	189	192	195	199	202	206	209
1771	213	217	221	224	228	232	236	240	245	249
1772	253	257	262	266	270	275	279	284	288	293
1773	297	302	306	311	316	320	325	330	334	339
1774	344	349	354	359	363	368	373	378	383	388
1775	393									

---------- END OF REPORT -----------

EQUATIONS --> $AREA = A2 + X*(A3 + A3)$ 05-26-1995

--> $CAPACITY = A3*X^{2} + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE
ELEVATION AND A GIVEN ELEVATION.
AREA IS IN ACRES AND CAPACITY
IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 14A

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1772.00	0	0.0000	3.6700	1.7150
2	1774.00	14	14.2000	10.5300	7.9625
3	1776.00	67	67.1100	42.3800	11.0625

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 14A

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1772	4	4	4	5	5	5	6	6	6	7
1773	7	7	8	8	8	9	9	10	10	10
1774	11	12	14	15	17	18	20	22	23	25
1775	26	28	30	31	33	34	36	38	39	41
1776	42	45	47	49	51	53	56	58	60	62
1777	65	67	69	71	73	76	78	80	82	84
1778	87									

QUIVIRA AREA/ELEVATION/CAPACITY 05-26-1995
POOL 14A

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1772	0	0	1	1	2	2	3	3	4	5
1773	5	6	7	8	8	9	10	11	12	13
1774	14	15	17	18	20	21	23	25	28	30
1775	33	35	38	41	45	48	51	55	59	63
1776	67	71	76	81	86	91	97	102	108	114
1777	121	127	134	141	148	156	163	171	179	188
1778	196									

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

--> CAPACITY = $A3*X^2 + A2*X + A1$

05-26-1995

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 14B

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1772.00	0	0.0000	0.0800	2.5050
2	1774.00	10	10.1800	10.1000	9.5525
3	1776.00	68	68.5900	48.3100	12.1175

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 14B

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1772	0	1	1	2	2	3	3	4	4	5
1773	5	6	6	7	7	8	8	9	9	10
1774	10	12	14	16	18	20	22	23	25	27
1775	29	31	33	35	37	39	41	43	44	46
1776	48	51	53	56	58	60	63	65	68	70
1777	73									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 14B

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1772	0	0	0	0	0	1	1	1	2	2
1773	3	3	4	4	5	6	7	7	8	9
1774	10	11	13	14	16	18	20	22	24	27
1775	30	33	36	39	43	47	51	55	59	64
1776	69	74	79	84	90	96	102	108	115	122
1777	129									

---------- END OF REPORT -----------

05-26-1995

EQUATIONS --> AREA = A2 + X*(A3 + A3)

--> $CAPACITY = A3*X^2 + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 14C

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1774.00	0	0.0000	0.3000	2.6500
2	1775.00	2	2.9500	5.6000	0.3400

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 14C

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1774	0	1	1	2	2	3	3	4	5	5
1775	6	6	6	6	6	6	6	6	6	6
1776	6	6	6	6	7	7	7	7	7	7
1777	7									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 14C

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1774	0	0	0	0	1	1	1	2	2	2
1775	3	4	4	5	5	6	6	7	8	8
1776	9	10	10	11	11	12	13	13	14	15
1777	16									

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

--> CAPACITY = $A3*X^2$ + A2*X + A1

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

05-26-1995

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 16

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1768.00	0	0.0000	0.4700	0.9075
2	1770.00	4	4.5700	4.1000	0.9850
3	1772.00	16	16.7100	8.0400	4.5925
4	1774.00	51	51.1600	26.4100	2.3550

QUIVIRA AREA/ELEVATION/CAPACITY 05-26-1995
POOL 16

THE AREA TABLE IS IN ACRES THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1768	0	1	1	1	1	1	2	2	2	2
1769	2	2	3	3	3	3	3	4	4	4
1770	4	4	4	5	5	5	5	5	6	6
1771	6	6	6	7	7	7	7	7	8	8
1772	8	9	10	11	12	13	14	14	15	16
1773	17	18	19	20	21	22	23	24	25	25
1774	26	27	27	28	28	29	29	30	30	31
1775	31	32	32	33	33	33	34	34	35	35
1776	36									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 16

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1768	0	0	0	0	0	0	1	1	1	1
1769	1	2	2	2	2	3	3	3	4	4
1770	5	5	5	6	6	7	7	8	8	9
1771	10	10	11	12	12	13	14	14	15	16
1772	17	18	19	20	21	22	23	25	26	28
1773	29	31	33	35	37	39	41	44	46	49
1774	51	54	57	59	62	65	68	71	74	77
1775	80	83	86	89	93	96	99	103	106	110
1776	113									

---------- END OF REPORT -----------

05-26-1995

EQUATIONS --> $AREA = A2 + X*(A3 + A3)$

--> $CAPACITY = A3*X^2 + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 20

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1767.00	0	0.0000	0.8800	0.8400
2	1768.00	1	1.7200	2.5600	20.9950
3	1769.00	25	25.2750	44.5500	35.8750
4	1770.00	105	105.7000	116.3000	15.8000

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 20

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1767	1	1	1	1	2	2	2	2	2	2
1768	3	7	11	15	19	24	28	32	36	40
1769	45	52	59	66	73	80	88	95	102	109
1770	116	119	123	126	129	132	135	138	142	145
1771	148									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 20

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1767	0	0	0	0	0	1	1	1	1	1
1768	2	2	3	4	6	8	11	14	17	21
1769	25	30	36	42	49	57	65	74	84	94
1770	106	117	130	142	155	168	181	195	209	223
1771	238									

---------- END OF REPORT -----------

QUIVIRA AREA/ELEVATION/CAPACITY 05-26-1995
POOL 21

THE AREA TABLE IS IN ACRES THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1764	1	2	2	2	3	3	3	3	4	4
1765	4	4	5	5	5	6	6	6	6	7
1766	7	7	8	9	9	10	10	11	11	12
1767	13	13	14	14	15	15	16	17	17	18
1768	18	19	19	20	20	21	22	22	23	23
1769	24	24	25	26	26	27	27	28	28	29
1770	30									

QUIVIRA AREA/ELEVATION/CAPACITY 05-26-1995
POOL 21

THE CAPACITY TABLE IS IN ACRE FEET THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1764	0	0	0	1	1	1	1	2	2	2
1765	3	3	4	4	5	5	6	6	7	8
1766	8	9	10	11	12	12	13	15	16	17
1767	18	19	21	22	24	25	27	28	30	32
1768	33	35	37	39	41	43	45	48	50	52
1769	54	57	59	62	64	67	70	73	75	78
1770	81									

---------- END OF REPORT -----------

05-26-1995

EQUATIONS --> AREA = A2 + X*(A3 + A3)

--> CAPACITY = $A3*X^2 + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 21

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1764.00	0	0.0000	1.4200	1.3675
2	1766.00	8	8.3100	6.8900	2.8300

05-26-1995

EQUATIONS --> $AREA = A2 + X*(A3 + A3)$

--> $CAPACITY = A3*X^{2} + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 22

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1764.00	0	0.0000	3.4700	1.6350
2	1766.00	13	13.4800	10.0100	1.2825

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 22

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1764	3	4	4	4	5	5	5	6	6	6
1765	7	7	7	8	8	8	9	9	9	10
1766	10	10	11	11	11	11	12	12	12	12
1767	13									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 22

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1764	0	0	1	1	2	2	3	3	4	4
1765	5	6	7	7	8	9	10	11	12	12
1766	13	14	16	17	18	19	20	21	22	24
1767	25									

---------- END OF REPORT -----------

05-26-1995

EQUATIONS --> $AREA = A2 + X*(A3 + A3)$

--> $CAPACITY = A3*X^{2} + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 23

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1762.00	0	0.0000	3.7900	1.1625
2	1764.00	12	12.2300	8.4400	1.0625

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 23

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1762	4	4	4	4	5	5	5	5	6	6
1763	6	6	7	7	7	7	8	8	8	8
1764	8	9	9	9	9	10	10	10	10	10
1765	11									

QUIVIRA AREA/ELEVATION/CAPACITY 05-26-1995
POOL 23

THE CAPACITY TABLE IS IN ACRE FEET THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1762	0	0	1	1	2	2	3	3	4	4
1763	5	6	6	7	8	8	9	10	11	11
1764	12	13	14	15	16	17	18	19	20	21
1765	22									

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

--> CAPACITY = $A3*X^2$ + A2*X + A1

05-26-1995

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 24

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1765.00	0	0.0000	0.1600	0.3700
2	1766.00	0	0.5300	0.9000	0.6200
3	1767.00	2	2.0500	2.1400	3.5750
4	1768.00	7	7.7650	9.2900	6.8600
5	1769.00	23	23.9150	23.0100	10.3950

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 24

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1765	0	0	0	0	0	1	1	1	1	1
1766	1	1	1	1	1	2	2	2	2	2
1767	2	3	4	4	5	6	6	7	8	9
1768	9	11	12	13	15	16	18	19	20	22
1769	23	25	27	29	31	33	35	38	40	42
1770	44									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 24

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1765	0	0	0	0	0	0	0	0	0	0
1766	1	1	1	1	1	1	1	1	2	2
1767	2	2	3	3	3	4	5	5	6	7
1768	8	9	10	11	13	14	16	18	20	22
1769	24	26	29	32	35	38	41	45	49	53
1770	57									

---------- END OF REPORT -----------

EQUATIONS --> $AREA = A2 + X*(A3 + A3)$ 05-26-1995

--> $CAPACITY = A3*X^{2} + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE
ELEVATION AND A GIVEN ELEVATION.
AREA IS IN ACRES AND CAPACITY
IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 25

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1762.00	0	0.0000	0.4600	2.3875
2	1764.00	10	10.4700	10.0100	15.9925
3	1766.00	94	94.4600	73.9800	4.1675

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 25

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1762	0	1	1	2	2	3	3	4	4	5
1763	5	6	6	7	7	8	8	9	9	10
1764	10	13	16	20	23	26	29	32	36	39
1765	42	45	48	52	55	58	61	64	68	71
1766	74	75	76	76	77	78	79	80	81	81
1767	82	83	84	85	86	86	87	88	89	90
1768	91	91	92	93	94					

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 25

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1762	0	0	0	0	1	1	1	1	2	2
1763	3	3	4	5	5	6	7	8	9	9
1764	10	12	13	15	17	19	22	25	29	32
1765	36	41	46	51	56	61	67	74	80	87
1766	94	102	109	117	125	132	140	148	156	164
1767	173	181	189	198	206	215	223	232	241	250
1768	259	268	277	287	296					

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

$$\text{CAPACITY} = A3*X^{2} + A2*X + A1$$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

05-26-1995

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 26

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1758.00	0	0.0000	2.4800	5.4875
2	1760.00	26	26.9100	24.4300	8.7050

QUIVIRA AREA/ELEVATION/CAPACITY 05-26-1995
POOL 26

THE AREA TABLE IS IN ACRES THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1758	2	4	5	6	7	8	9	10	11	12
1759	13	15	16	17	18	19	20	21	22	23
1760	24	26	28	30	31	33	35	37	38	40
1761	42	44	45	47	49	51	52	54	56	58
1762	59									

QUIVIRA AREA/ELEVATION/CAPACITY 05-26-1995
POOL 26

THE CAPACITY TABLE IS IN ACRE FEET THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1758	0	0	1	1	2	3	3	4	5	7
1759	8	9	11	12	14	16	18	20	22	25
1760	27	29	32	35	38	41	45	48	52	56
1761	60	64	69	73	78	83	88	94	99	105
1762	111									

----------- END OF REPORT -----------

05-26-1995

EQUATIONS --> $\text{AREA} = A2 + X*(A3 + A3)$

--> $\text{CAPACITY} = A3*X^{2} + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 28

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1762.00	0	0.0000	0.0400	0.8125
2	1764.00	3	3.3300	3.2900	6.7775
3	1766.00	37	37.0200	30.4000	13.7275

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 28

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1762	0	0	0	1	1	1	1	1	1	2
1763	2	2	2	2	2	2	3	3	3	3
1764	3	5	6	7	9	10	11	13	14	15
1765	17	18	20	21	22	24	25	26	28	29
1766	30	33	36	39	41	44	47	50	52	55
1767	58	61	63	66	69	72	74	77	80	83
1768	85									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 28

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1762	0	0	0	0	0	0	0	0	1	1
1763	1	1	1	1	2	2	2	2	3	3
1764	3	4	4	5	6	7	8	9	10	12
1765	13	15	17	19	21	24	26	29	31	34
1766	37	40	44	47	51	56	60	65	70	75
1767	81	87	93	100	106	114	121	128	136	144
1768	153									

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

05-26-1995

$$\text{CAPACITY} = A3*X^{2} + A2*X + A1$$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 29

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1757.00	0	0.0000	0.0600	0.2650
2	1758.00	0	0.3250	0.5900	1.6500
3	1759.00	2	2.5650	3.8900	5.2800
4	1760.00	11	11.7350	14.4500	13.6450
5	1761.00	39	39.8300	41.7400	9.4300
6	1762.00	91	91.0000	60.6000	12.8350

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 29

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1757	0	0	0	0	0	0	0	0	0	1
1758	1	1	1	2	2	2	3	3	3	4
1759	4	5	6	7	8	9	10	11	12	13
1760	14	17	20	23	25	28	31	34	36	39
1761	42	44	46	47	49	51	53	55	57	59
1762	61	63	66	68	71	73	76	79	81	84
1763	86									

QUIVIRA AREA/ELEVATION/CAPACITY 05-26-1995
POOL 29

THE CAPACITY TABLE IS IN ACRE FEET THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1757	0	0	0	0	0	0	0	0	0	0
1758	0	0	1	1	1	1	1	2	2	2
1759	3	3	4	4	5	6	7	8	9	10
1760	12	13	15	17	20	22	25	29	32	36
1761	40	44	49	53	58	63	68	74	79	85
1762	91	97	104	110	117	125	132	140	148	156
1763	164									

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

--> $CAPACITY = A3*X^2 + A2*X + A1$

05-26-1995

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 30

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1756.00	0	0.0000	1.6200	12.7325

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 30

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1756	2	4	7	9	12	14	17	19	22	25
1757	27	30	32	35	37	40	42	45	47	50
1758	53	55	58	60	63	65	68	70	73	75
1759	78									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 30

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1756	0	0	1	2	3	4	6	7	9	12
1757	14	17	20	24	27	31	35	40	44	49
1758	54	60	65	71	77	84	90	97	104	112
1759	119									

---------- END OF REPORT -----------

EQUATIONS --> $$AREA = A2 + X*(A3 + A3)$$

--> $$CAPACITY = A3*X^2 + A2*X + A1$$

05-01-1995

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA NWR AREA/ELEVATION/CAPACITY
POOL 40

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1736.00	0	0.0000	0.1900	0.2650
2	1738.00	1	1.4400	1.2500	2.2725
3	1740.00	13	13.0300	10.3400	4.3375
4	1742.00	51	51.0600	27.6900	4.4375

QUIVIRA NWR AREA/ELEVATION/CAPACITY 05-01-1995

POOL 40

THE AREA TABLE IS IN ACRES THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1736	0	0	0	0	0	0	1	1	1	1
1737	1	1	1	1	1	1	1	1	1	1
1738	1	2	2	3	3	4	4	4	5	5
1739	6	6	7	7	8	8	9	9	9	10
1740	10	11	12	13	14	15	16	16	17	18
1741	19	20	21	22	22	23	24	25	26	27
1742	28	29	29	30	31	32	33	34	35	36
1743	37	37	38	39	40	41	42	43		

QUIVIRA NWR AREA/ELEVATION/CAPACITY 05-01-1995
POOL 40

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1736	0	0	0	0	0	0	0	0	0	0
1737	0	1	1	1	1	1	1	1	1	1
1738	1	2	2	2	2	3	3	3	4	4
1739	5	6	6	7	8	8	9	10	11	12
1740	13	14	15	17	18	19	21	22	24	26
1741	28	30	32	34	36	38	41	43	46	48
1742	51	54	57	60	63	66	69	73	76	80
1743	83	87	91	95	99	103	107	111		

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

05-01-1995

$$\text{CAPACITY} = A3 \cdot X^{2} + A2 \cdot X + A1$$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA NWR AREA/ELEVATION/CAPACITY
POOL 48

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1750.00	0	0.0000	0.2700	0.4750
2	1751.00	0	0.7450	1.2200	2.1400
3	1752.00	4	4.1050	5.5000	14.3300
4	1753.00	23	23.9350	34.1600	21.3150
5	1754.00	79	79.4100	76.7900	15.6400

QUIVIRA NWR AREA/ELEVATION/CAPACITY 05-01-1995

POOL 48

THE AREA TABLE IS IN ACRES THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1750	0	0	0	1	1	1	1	1	1	1
1751	1	2	2	3	3	3	4	4	5	5
1752	6	8	11	14	17	20	23	26	28	31
1753	34	38	43	47	51	55	60	64	68	73
1754	77	80	83	86	89	92	96	99	102	105
1755	108									

QUIVIRA NWR AREA/ELEVATION/CAPACITY 05-01-1995
POOL 48

THE CAPACITY TABLE IS IN ACRE FEET THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1750	0	0	0	0	0	0	0	0	1	1
1751	1	1	1	1	2	2	2	3	3	4
1752	4	5	6	7	9	10	13	15	18	21
1753	24	28	32	36	41	46	52	58	65	72
1754	79	87	95	104	113	122	131	141	151	161
1755	172									

---------- END OF REPORT -----------

05-01-1995

EQUATIONS --> $AREA = A2 + X*(A3 + A3)$

--> $CAPACITY = A3*X^{2} + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA NWR AREA/ELEVATION/CAPACITY
POOL49

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1750.00	0	0.0000	0.4600	1.6450
2	1751.00	2	2.1050	3.7500	11.2350
3	1752.00	17	17.0900	26.2200	19.3450
4	1753.00	62	62.6550	64.9100	12.4750

QUIVIRA NWR AREA/ELEVATION/CAPACITY 05-01-1995
POOL49

THE AREA TABLE IS IN ACRES THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1750	0	1	1	1	2	2	2	3	3	3
1751	4	6	8	10	13	15	17	19	22	24
1752	26	30	34	38	42	46	49	53	57	61
1753	65	67	70	72	75	77	80	82	85	87
1754	90	92	95	97	100	102	105	107	110	112
1755	115	117	120	122						

QUIVIRA NWR AREA/ELEVATION/CAPACITY
POOL49

05-01-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1750	0	0	0	0	0	1	1	1	1	2
1751	2	3	3	4	5	7	8	10	12	15
1752	17	20	23	27	31	35	40	45	50	56
1753	63	69	76	83	91	98	106	114	123	131
1754	140	149	159	168	178	188	198	209	220	231
1755	242	254	266	278						

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

05-03-1995

$$\text{CAPACITY} = A3*X^2 + A2*X + A1$$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA NWR AREA/ELEVATION/CAPACITY
POOL 57

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1740.00	0	0.0000	5.5300	14.5825
2	1742.00	69	69.3900	63.8600	20.9075

QUIVIRA NWR AREA/ELEVATION/CAPACITY 05-03-1995
POOL 57

THE AREA TABLE IS IN ACRES THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1740	6	8	11	14	17	20	23	26	29	32
1741	35	38	41	43	46	49	52	55	58	61
1742	64	68	72	76	81	85	89	93	97	101
1743	106	110	114	118	122	127	131	135	139	143
1744	147	152	156	160	164	168	173	177	181	185
1745	189									

QUIVIRA NWR AREA/ELEVATION/CAPACITY 05-03-1995
POOL 57

THE CAPACITY TABLE IS IN ACRE FEET THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1740	0	1	2	3	5	6	9	11	14	17
1741	20	24	28	32	36	41	46	52	57	63
1742	69	76	83	90	98	107	115	124	134	144
1743	154	165	176	188	200	212	225	238	252	266
1744	281	296	311	327	343	360	377	394	412	430
1745	449									

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

05-03-1995

--> $CAPACITY = A3*X^2 + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA NWR AREA/ELEVATION/CAPACITY
POOL 58

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1736.00	0	0.0000	2.2800	3.9775
2	1738.00	20	20.4700	18.1900	9.5700
3	1740.00	95	95.1300	56.4700	10.6425

QUIVIRA NWR AREA/ELEVATION/CAPACITY
POOL 58

05-03-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1736	2	3	4	5	5	6	7	8	9	9
1737	10	11	12	13	13	14	15	16	17	17
1738	18	20	22	24	26	28	30	32	34	35
1739	37	39	41	43	45	47	49	51	53	55
1740	56	59	61	63	65	67	69	71	73	76
1741	78	80	82	84	86	88	91	93	95	97
1742	99									

QUIVIRA NWR AREA/ELEVATION/CAPACITY
POOL 58

05-03-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1736	0	0	1	1	2	2	3	4	4	5
1737	6	7	8	10	11	12	14	15	17	19
1738	20	22	24	27	29	32	35	38	41	45
1739	48	52	56	60	65	69	74	79	84	90
1740	95	101	107	113	119	126	133	140	147	155
1741	162	170	178	187	195	204	213	222	231	241
1742	251									

---------- END OF REPORT -----------

05-08-1995

EQUATIONS --> $AREA = A2 + X*(A3 + A3)$

--> $CAPACITY = A3*X^2 + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE
ELEVATION AND A GIVEN ELEVATION.
AREA IS IN ACRES AND CAPACITY
IS IN ACRE-FEET

QUIVIRA NWR AREA/ELEVATION/CAPACITY
POOL 61

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1740.00	0	0.0000	10.2900	6.9975
2	1742.00	48	48.5700	38.2800	25.7175

QUIVIRA NWR AREA/ELEVATION/CAPACITY 05-08-1995
POOL 61

THE AREA TABLE IS IN ACRES THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1740	10	12	13	14	16	17	19	20	21	23
1741	24	26	27	28	30	31	33	34	35	37
1742	38	43	49	54	59	64	69	74	79	85
1743	90	95	100	105	110	115	121	126	131	136
1744	141	146	151	157	162	167	172	177	182	187
1745	193	198	203	208	213	218	223	229	234	239
1746	244									

QUIVIRA NWR AREA/ELEVATION/CAPACITY
POOL 61

05-08-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1740	0	1	2	4	5	7	9	11	13	15
1741	17	20	22	25	28	31	34	38	41	45
1742	49	53	57	62	68	74	81	88	96	104
1743	113	122	132	142	153	164	176	188	201	214
1744	228	242	257	273	289	305	322	339	357	376
1745	395	414	434	455	476	498	520	542	565	589
1746	613									

---------- END OF REPORT -----------

EQUATIONS -->   AREA = A2 + X*(A3 + A3)   05-08-1995

$$CAPACITY = A3 \cdot X^2 + A2 \cdot X + A1$$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 62

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1735.00	0	0.0000	0.0100	0.1000
2	1736.00	0	0.1100	0.2100	0.1900
3	1737.00	0	0.5100	0.5900	0.3150
4	1738.00	1	1.4150	1.2200	1.0550
5	1739.00	3	3.6900	3.3300	2.4350
6	1740.00	9	9.4550	8.2000	5.4750
7	1741.00	23	23.1300	19.1500	4.0800
8	1742.00	46	46.3600	27.3100	4.8150

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 62

05-08-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1735	0	0	0	0	0	0	0	0	0	0
1736	0	0	0	0	0	0	0	0	1	1
1737	1	1	1	1	1	1	1	1	1	1
1738	1	1	2	2	2	2	2	3	3	3
1739	3	4	4	5	5	6	6	7	7	8
1740	8	9	10	11	13	14	15	16	17	18
1741	19	20	21	22	22	23	24	25	26	26
1742	27	28	29	30	31	32	33	34	35	36
1743	37	38	39	40	41	42	43	44	45	46
1744	47									

QUIVIRA AREA/ELEVATION/CAPACITY 05-08-1995
POOL 62

THE CAPACITY TABLE IS IN ACRE FEET THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1735	0	0	0	0	0	0	0	0	0	0
1736	0	0	0	0	0	0	0	0	0	0
1737	1	1	1	1	1	1	1	1	1	1
1738	1	2	2	2	2	2	3	3	3	3
1739	4	4	4	5	5	6	7	7	8	9
1740	9	10	11	12	14	15	16	18	20	21
1741	23	25	27	29	31	34	36	39	41	44
1742	46	49	52	55	58	61	64	68	71	75
1743	78	82	86	90	94	98	102	107	111	116
1744	120									

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

05-25-1995

$$\text{CAPACITY} = A3*X^2 + A2*X + A1$$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 63

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1736.00	0	0.0000	0.3800	6.0175
2	1738.00	24	24.8300	24.4500	24.6250
3	1740.00	172	172.2300	122.9500	13.0675

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 63

05-25-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1736	0	2	3	4	5	6	8	9	10	11
1737	12	14	15	16	17	18	20	21	22	23
1738	24	29	34	39	44	49	54	59	64	69
1739	74	79	84	88	93	98	103	108	113	118
1740	123	126	128	131	133	136	139	141	144	146
1741	149	152	154	157	160	162	165	167	170	173
1742	175									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 63

05-25-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1736	0	0	0	1	1	2	2	3	4	5
1737	6	8	9	11	12	14	16	18	20	22
1738	25	28	31	34	39	43	48	54	60	67
1739	74	82	90	98	107	117	127	138	149	160
1740	172	185	197	210	224	237	251	265	279	293
1741	308	323	339	354	370	386	402	419	436	453
1742	470									

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

05-26-1995

$$\text{CAPACITY} = A3*X^2 + A2*X + A1$$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 7

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1774.00	0	0.0000	0.1800	1.6575
2	1776.00	6	6.9900	6.8100	4.7775
3	1778.00	39	39.7200	25.9200	7.2600

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 7

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1774	0	1	1	1	2	2	2	3	3	3
1775	3	4	4	4	5	5	5	6	6	6
1776	7	8	9	10	11	12	13	13	14	15
1777	16	17	18	19	20	21	22	23	24	25
1778	26	27								

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 7

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1774	0	0	0	0	0	1	1	1	1	2
1775	2	2	3	3	4	4	5	5	6	6
1776	7	8	9	9	10	12	13	14	15	17
1777	19	20	22	24	26	28	30	32	35	37
1778	40	42								

---------- END OF REPORT -----------

05-25-1995

EQUATIONS --> AREA = A2 + X*(A3 + A3)

$$CAPACITY = A3*X^2 + A2*X + A1$$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 75

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1736.00	0	0.0000	0.3100	96.7650
2	1737.00	97	97.0750	193.8400	84.3200
3	1738.00	375	375.2350	362.4800	76.1350
4	1739.00	813	813.8500	514.7500	113.3850
5	1740.00	1441	1441.9851	741.5198	641.6354

QUIVIRA AREA/ELEVATION/CAPACITY 05-25-1995
POOL 75

THE AREA TABLE IS IN ACRES THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1736	0	20	39	58	78	97	116	136	155	174
1737	194	211	228	244	261	278	295	312	329	346
1738	362	378	393	408	423	439	454	469	484	500
1739	515	537	560	583	605	628	651	673	696	719
1740	742	870	998	1127	1255	1383	1511	1640	1768	1896
1741	2025									

QUIVIRA AREA/ELEVATION/CAPACITY 05-25-1995
POOL 75

THE CAPACITY TABLE IS IN ACRE FEET THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1736	0	1	4	9	16	24	35	48	62	79
1737	97	117	139	163	188	215	244	274	306	340
1738	375	412	451	491	532	576	620	666	714	763
1739	814	866	921	978	1038	1100	1164	1230	1298	1369
1740	1442	1523	1616	1722	1841	1973	2118	2275	2446	2629
1741	2825									

---------- END OF REPORT -----------

05-25-1995

EQUATIONS --> AREA = A2 + X*(A3 + A3)

$$\text{CAPACITY} = A3 \cdot X^2 + A2 \cdot X + A1$$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 78

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1735.00	0	0.0000	1.1200	19.9100
2	1736.00	21	21.0300	40.9400	154.7650
3	1737.00	216	216.7350	350.4701	167.0399
4	1738.00	734	734.2450	684.5502	120.3348
5	1739.00	1539	1539.1300	925.2202	98.8799
6	1740.00	2563	2563.2301	1122.9797	115.3102

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 78

05-25-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1735	1	5	9	13	17	21	25	29	33	37
1736	41	72	103	134	165	196	227	258	289	320
1737	350	384	417	451	484	518	551	584	618	651
1738	685	709	733	757	781	805	829	853	877	901
1739	925	945	965	985	1004	1024	1044	1064	1083	1103
1740	1123	1146	1169	1192	1215	1238	1261	1284	1307	1331
1741	1354	1377	1400	1423	1446	1469	1492	1515	1538	1561
1742	1584									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 78

05-25-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1735	0	0	1	2	4	6	8	11	14	17
1736	21	27	35	47	62	80	101	126	153	183
1737	217	253	294	337	384	434	487	544	604	667
1738	734	804	876	950	1027	1107	1188	1272	1359	1448
1739	1539	1633	1728	1826	1925	2026	2130	2235	2343	2452
1740	2563	2677	2792	2911	3031	3154	3279	3406	3535	3667
1741	3802	3938	4077	4218	4361	4507	4655	4806	4958	5113
1742	5270									

---------- END OF REPORT -----------

05-25-1995

EQUATIONS --> $AREA = A2 + X*(A3 + A3)$

--> $CAPACITY = A3*X^2 + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 80

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1734.00	0	0.0000	2.6600	45.9600
2	1735.00	48	48.6200	94.5800	57.7100
3	1736.00	200	200.9100	210.0001	14.8849

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 80

05-25-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1734	3	12	21	30	39	49	58	67	76	85
1735	95	106	118	129	141	152	164	175	187	198
1736	210	213	216	219	222	225	228	231	234	237
1737	240									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 80

05-25-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1734	0	1	2	5	8	13	18	24	32	40
1735	49	59	70	82	96	110	126	143	161	180
1736	201	222	244	265	287	310	332	355	378	402
1737	426									

---------- END OF REPORT -----------

EQUATIONS --> AREA = A2 + X*(A3 + A3)

--> CAPACITY = $A3*X^2 + A2*X + A1$

05-25-1995

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 81

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1736.00	0	0.0000	15.9100	28.9300
2	1737.00	44	44.8400	73.7700	27.1250
3	1738.00	145	145.7350	128.0200	22.4550
4	1739.00	296	296.2100	172.9300	17.7250

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 81

05-25-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1736	16	22	27	33	39	45	51	56	62	68
1737	74	79	85	90	95	101	106	112	117	123
1738	128	133	137	141	146	150	155	159	164	168
1739	173	176	180	184	187	191	194	198	201	205
1740	208									

QUIVIRA AREA/ELEVATION/CAPACITY 05-25-1995
POOL 81

THE CAPACITY TABLE IS IN ACRE FEET THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1736	0	2	4	7	11	15	20	25	31	38
1737	45	52	61	69	79	89	99	110	121	133
1738	146	159	172	186	201	215	231	246	263	279
1739	296	314	332	350	368	387	406	426	446	466
1740	487									

---------- END OF REPORT -----------

05-26-1995

EQUATIONS --> $AREA = A2 + X*(A3 + A3)$

--> $CAPACITY = A3*X^2 + A2*X + A1$

WHERE X = THE DIFFERENCE BETWEEN THE BASE ELEVATION AND A GIVEN ELEVATION. AREA IS IN ACRES AND CAPACITY IS IN ACRE-FEET

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 83

EQUATION NUMBER	ELEVATION BASE	CAPACITY BASE	COEFFICIENT A1(INTERCEPT)	COEFFICIENT A2(1ST TERM)	COEFFICIENT A3(2ND TERM)
1	1734.00	0	0.0000	26.7500	36.4550
2	1735.00	63	63.2050	99.6600	28.2750

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 83

05-26-1995

THE AREA TABLE IS IN ACRES

THE ELEVATION INCREMENT IS IN ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1734	27	34	41	49	56	63	70	78	85	92
1735	100	105	111	117	122	128	134	139	145	151
1736	156	162	168	173	179	184	190	196	201	207
1737	213									

QUIVIRA AREA/ELEVATION/CAPACITY
POOL 83

05-26-1995

THE CAPACITY TABLE IS IN ACRE FEET

THE ELEVATION INCREMENT IS ONE TENTH FOOT

ELEV. FEET	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1734	0	3	7	11	17	22	29	37	45	54
1735	63	73	84	96	108	120	133	147	161	176
1736	191	207	224	241	258	276	295	314	334	355
1737	376									

---------- END OF REPORT -----------

X Pool 62

Date Area

62B = TBM = 1743.15

1735 [illegible]
1736 0.12 + [illegible] = 0.21
[illegible] [illegible] = 0.59
[illegible] 0.44 + 0.68 + 0.10 = 1.22
[illegible] [illegible] + 1.15 + [illegible] = 3.33
[illegible] [illegible] = 8.20
[illegible] 19.15 -
1742 [illegible] 1.[illegible] = 27.31
[illegible] 37.14 - [illegible] = 36.94

X Pool 63

63A - TBM = 1743.09
63 B Spillway = 1741.20

1736 [illegible] + 0.07 = 0.38
[illegible] [illegible] = 24.45
1740 [illegible] 123
[illegible] [illegible] 175

X Pool 75

75 A = Spillway = 1740.76
75 B = TBM = 1740.94

1736 0.31
1737 193.89
1738 362.85 - 1.15 + 0.78 = 362.48
1739 515.50 - 0.75 = 514.75
1740 741.99 - 0.47 = 741.52
1741 2035.07 - 0.28 2024.79
1742 3429.58 - 12.03 = 3417.55 =

X Pool 78

1735 0.33 + 0.55 + 0.24 = 1.12
1736 24.5[illegible] + 3[illegible] - 1.43 + 10.95 + 1.81 + 0.18 + 1.05 = 40.94
1737 313.82 - 1.43 + 35.51 + 2.55 = 350.47
1738 [illegible] - [illegible] - 0.43 - 0.82 = 684.55
1739 925.22 =
1740 [illegible].38
174[illegible] [illegible] - 25.09 = 1353.6

✓ Pool 80

1734 1.72 + 0.94 = 2.66 (80A = TBM = 1737.19)
1735 97.58
1736 [illegible] - 5.28 - 1.20 = 210.71
1737 639.77

Pool 81 - WEIRD

Elev	Area
1736	15.91
1737	73.77
1738	128.62
1739	172.93
1740	208.38

Pool 83

1734 26.31 + 0.44 26.75
1735 103.85 - 6.46 - 0.08 + 2.35 = 99.66
1736 156.21

14A 2 - Spillway 1778.02
14A1 1779.03
B - Spillway 1776.72
C BM = 1779.05'

X Pool 14C

1774 0.30
1775 2.80 + 2.80 = 5.60
1776 6.28

Notes from Notebook

X 10 C

(Inv. of Structure 1771.84

BM on top structure 1776.39)

Elev	Area	Totals
1772	1.16 + 0.12 + 2.39	3.67
1774	0.79 + 0.18 + 5.43	6.40
1776	27.78	
1778	35.80	
1780	38.39	

X 11 W (11B)

(11B Spillway 1774.82')

1768	0.38	
1770	1.46 + 0.94 = 2.40	
1772	0.01 + 0.13 + 5.02 + 5.96	11.12
1774	44.19	

NOTE: INSUFFICIENT DATA FOR 14 C

X Pool 16

(invert 18" tube 1771.35

BM on wingwall 1775.59)

1768	0.44 + 0.03	0.47
1770	4.1	
1772	8.04	
1774	26.41	
1776	35.83	

X Pool 20

(20A East Spillway 1770.73)

1767	0.88
1768	2.56
1769	152.1 − 0.12 − 107.09 = 44.9 − 0.35 = 44.55
1770	152.1 − 26.6 − 9.18 = 116.3
1771	152.1 − 0.21 − 3.995 = 147.9

X Pool 21

(21A TBM = 1770')

1764	1.42
1766	5.97
1768	11.88 + 6.33 = 18.21

X Pool 22

(22A TBM 1766.60)

1764	0.31 + 3.16 =	3.47
1766	[illegible]	10.01
1768	15.14	15.14

Notes from Book

X [illegible] 40

40A 63 TBM 1743.70
40B(42) TBM = 1743.08

[illegible]	[illegible]
1736	[illegible]
1737	1.00 + 0.25 = 1.25
17[illegible]	[illegible] + 0.12 = 10.34
1742	37.[illegible]
17[illegible]	45.[illegible]

X Pool 48

(39) 48C Spillway = 1754.41
48D

1750	0.27
1751	0.22 + 1.0 = 1.22
1752	0.32 + 0.34 − 0.11 + 4.65 = 5.[illegible]
1753	[illegible]
[illegible]	[illegible]
175[illegible]	[illegible]

49A = TBM 1755.30
49B = Spillway 1754.23

X [illegible]

1750	0.31 + 0.02 + 0.12 + 0.01 = 0.[illegible]
1751	1.97 + 0.43 + 0.34 + 0.83 − 0.18 = 3.[illegible]
1752	19.65 − 1.0985 + 0.08 + 0.10 + 7.49 = [illegible]
1753	64.[illegible]
1754	[illegible]

/ Pool 5

1780	0.96 + [illegible] − 3.39 − [illegible] + 4.72 = 308.12
17[illegible]	756.97 [illegible] − 2.32 − 0.45 − 5.72 − 0.19 − [illegible] = 749.92
17[illegible]	[illegible] − [illegible] + 3.52 = 977.74
17[illegible]	[illegible]

X [illegible]

[illegible]	[illegible]
[illegible]	[illegible] = 63.26
[illegible]	147.49

X Pool 58

58A = 1741.95 = BM

1736	[illegible] = 2.28
[illegible]	[illegible] = 18.19
174[illegible]	[illegible]
[illegible]	[illegible]

Pool 61

61D Spillway = 1745.[illegible]

[illegible]	[illegible]
[illegible]	[illegible] − 0.57 = 38.28
174[illegible]	[illegible]

0.85 = 1 mi = 5280

0.7225 sq in = 640 ac

Notes from Notebo

X Pool 23

(23A TBM 1765.74)

Elev	Area
1762	3.79
1764	8.44
1766	12.69

X Pool 24

(24 A, B, C, D, E ?

E = TBM 1771.92

D = Spillway 1769.36

A = TBM 1774.22

1765 0.15 + 0.01 = 0.16

1766 0.82 + 0.08 = 0.90

1767 0.10 + 1.82 + 0.22 = 2.14

1768 0.58 + 7.17 + 0.31 + 0.52 + 0.05 + 0.25 + 0.41 = 9.29

1769 25.63 − 2.22 − 2.91 + 0.12 + 0.73 + 0.30 + 1.36 = 23.01

1770 45.27 − 1.30 − 0.17 = 43.80

X Pool 25

(25A = TBM = 1768.38

25B = 1769.34)

1762 0.46

1764 1.57 + 5.68 − 0.33 + 3.09 = 10.01

1766 75.17 − 0.53 − 0.66 = 73.98

1768 90.65

X Pool 26

(26A Spillway = 1761.98)

1758 1.75 + 0.73 = 2.48

1760 24.43

1762 59.25

X Pool 28

(28A = TBM = 1768.89)

1762 0.04

1764 0.14 + 2.87 + 0.28 = 3.29

1766 0.49 + 4.35 + 25.91 − 0.35 = 30.40

1768 1.33 − 0.69 + 84.67 = 85.31

X Pool 29

31 29C = TBM = 1762.58

29B = TBM = 1762.91

32 29A = TBM = 1764.01

1757 0.06

1758 0.39 + 0.20 = 0.59

1759 1.11 + 0.26 + 0.02 + 2.49 = 3.89

1760 1.13 + 0.97 + 0.75 + 11.60 = 14.45

1761 44.38 − 0.74 − 1.90 = 41.74

1762 60.6

1763 89.83 − 3.13 − 0.38 − 0.05 = 86.27

X Pool 30

33 30B = TBM = 1760.02

31 30A = TBM = 1760.52

1756 1.15 + 0.47 = 1.62

1758 [illegible]

QUIVIRA NWR 02/10/93

AREAS FOR IMPOUNDMENTS

Note Book Notes

X 11 E

(11A? [illegible] 1774.92

ELEV	AREA	TOTALS
1754	0.30	0.3
1756	2.32	2.32
1758	4.60	4.60
1760	6.95	6.95
1762	9.74	9.74
1764	12.65 + 0.20	12.85
1766	15.675 + 0.23	15.71
1768	2.40 + 19.34	21.74
1770	30.95 + ~~[illegible]~~	30.95
1772	0.81 + 42.15	42.96
1774	48.095	48.095

X 14A

(14A2? 1778.02)

1772	3.67	3.67
1774	10.53	10.53
1776	41.68 + 0.70	42.38
1778	81.19 + 5.44	86.63
1780	116.46	116.46

X 14B

(Spillway 1776.72)

1772	0.08	0.08
1774	2.44 + 7.14 + 0.36 + 0.16	10.10
1776	2.14 + 46.17	48.31
1778	96.78	96.78

7

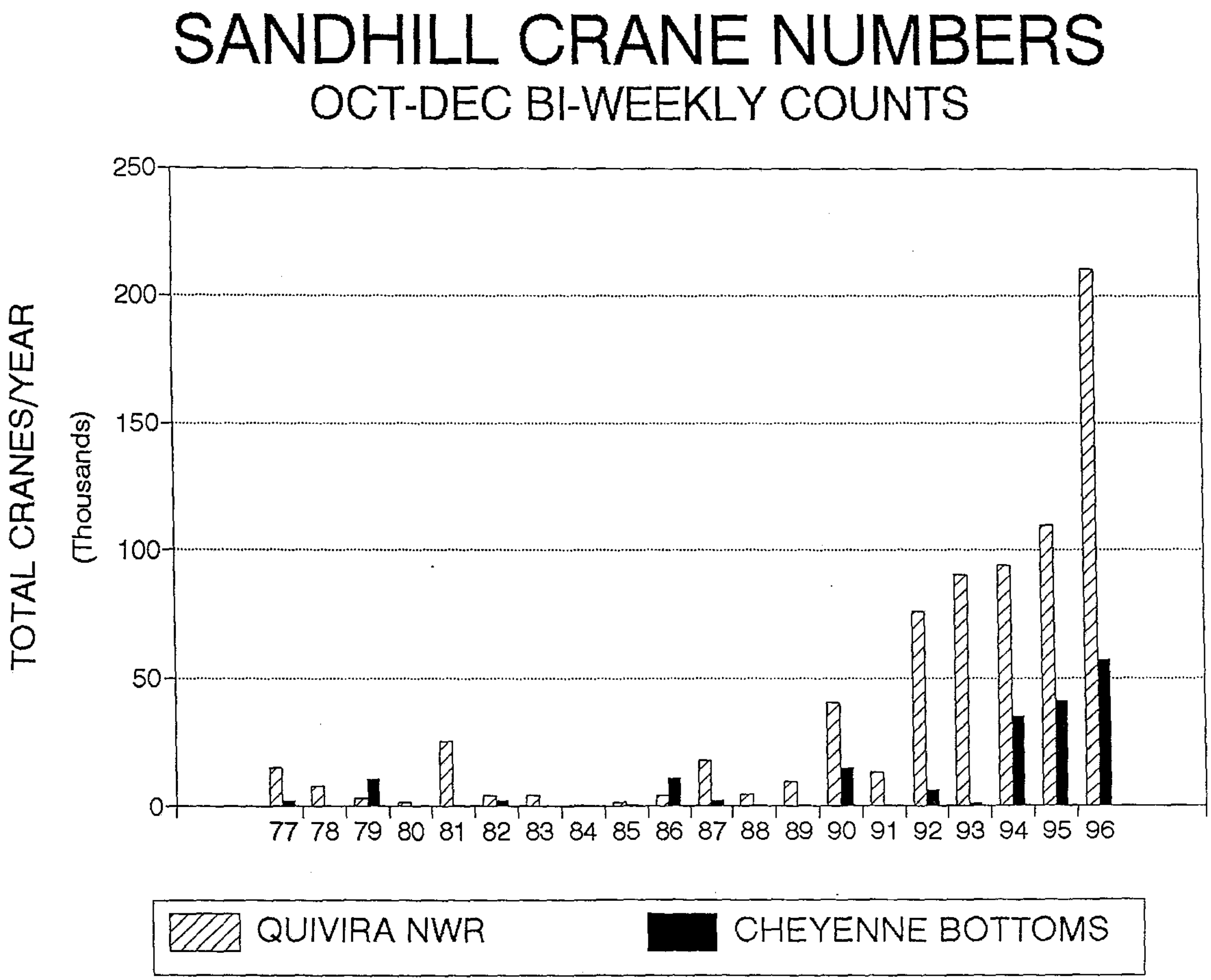
(7A? 18" tube invert @ 1774.45)

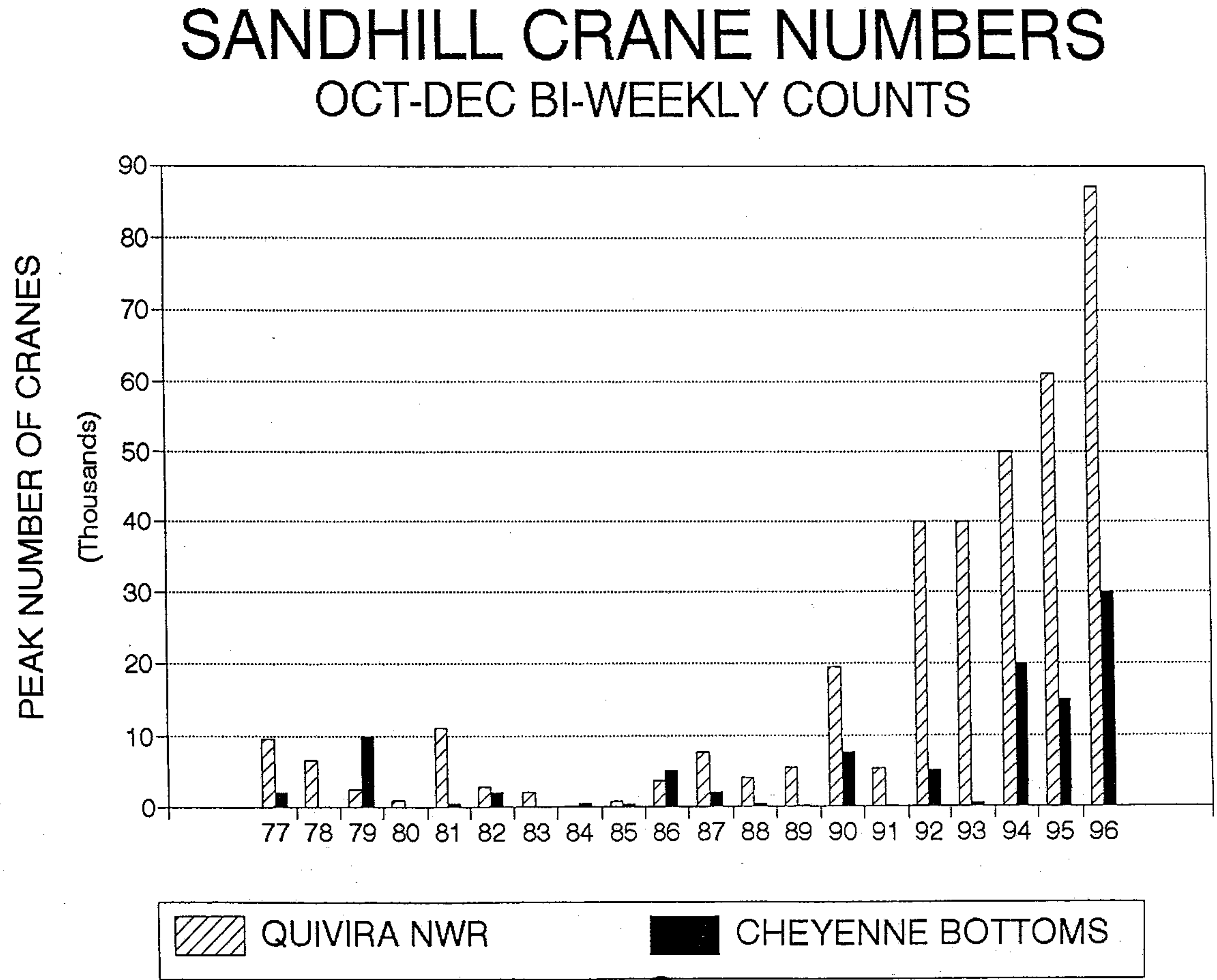
B.mon wing 1780.27

X 1774	0.18	0.18
1776	3.18 + 3.63	6.81
1778	0.38 + 25.54	25.92
1780	34.96	34.96

X 10 A & B

1774	6.29	6.29
1776	24.47	24.47
1778	35.04 + 2.57 + 1.39	39.00
1780	88.01	88.01


SANDHILL CRANE NUMBERS
OCT-DEC BI-WEEKLY COUNTS
TOTAL CRANES/YEAR
(Thousands)
0
50
100
150
200
250
77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96
QUIVIRA NWR
CHEYENNE BOTTOMS



SANDHILL CRANE NUMBERS
OCT-DEC BI-WEEKLY COUNTS
PEAK NUMBER OF CRANES
(Thousands)
0
10
20
30
40
50
60
70
80
90
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
QUIVIRA NWR
CHEYENNE BOTTOMS

Quivira NWR
Sandhill Crane Surveys

	Oct.	Nov.	Dec.	March	Feb.
1989	10-3 - 2 10-17 - 706 10-31 - 3350	11-14 - 5435 11-21 - 2328	12-5 - 1160	3-7 - 7500 3-21 - 3732	
1990	10-10 - 297 10-23 - 4,936	11-20 - 15,716	12-4 - 7 12-18 - 19,357	3-6 - 18,386 3-20 - 9,392	2-6 - 1175 2-20 - 16
1991	10-15 - 3,780 10-22 - 197	11-4 - 3388 11-19 - 5242	12-2 - 505 12-10 - 92	3-5 - 5690 3-19 - 12,250	
1992	10-13 - 100 10-27 - 1330	11-10 - 40,000+	12-8 - 8,075 12-18 - 2655		
1993	10-13 - 600 10-26 - 40,000	11-9 - 13 020 11-23 - 21,500	12-7 - 15,000		
1994	10-18 - ∅	11-8 - 30,000 11-22 - 50,000	12-9 - 8550 12-20 - 5500	3-2 - 4000 3-15 - 2840	2-2 - 125 2-17 - 41
1995	10-17 - 250 10-30 - 15,000	11-7 - 12,070 11-21 - 61,000	12-5 - 21,100	3-9 - 1500 3-21 - 550	2-7 - 1050 1-17 - 150 2-21 - 650
1996	10-23 - 50,000	11-5 - 87,000 11-19 - 62,000	12-3 - 8,000 12-17 - 3,300	3-5 - 26,050 3-19 - 1311	2-6 - ∅ 1-22 - 550 2-20 - 17,90
1997				3-4 - 7300 3-18 - 30	2-4 - ∅ 2-18 - 734

Shorebirds
Total Refuge Peak / Average Populations

Org. Number: 64620
Refuge Name: QUIVIRA NWR

Report Date: 07/11/97
Survey Type: Ground Census

Species Name	June 97. Peak	/ Ave	May 97. Peak	/ Ave	June 96. Peak	/ Ave
Spotted Sandpiper	0 /	0	34/	17	0/	0
Ruddy Turnstone	0 /	0	3/	1	0/	0
Upland Sandpiper	0 /	0	10/	3	0/	0
Sanderling	0 /	0	12/	5	0/	0
Dunlin	0 /	0	0/	0	0/	0
Little Brown Peeps	408 /	408	1111/	547	0/	0
Baird's Sandpiper	0 /	0	23/	10	0/	0
White-rumped Sandpiper	425 /	425	2085/	942	0/	0
Stilt Sandpiper	0 /	0	152/	56	0/	0
Western Sandpiper	0 /	0	1/	0	0/	0
Pectoral Sandpiper	0 /	0	2/	0	0/	0
Least Sandpiper	0 /	0	14/	7	0/	0
Semipalmated Sandpiper	0 /	0	367/	161	0/	0
Willet	0 /	0	1/	0	0/	0
Snowy Plover	24 /	24	65/	45	0/	0
Piping Plover	0 /	0	1/	0	0/	0
Semipalmated Plover	0 /	0	4/	3	0/	0
Killdeer	52 /	52	49/	37	0/	0
Common Snipe	0 /	0	0/	0	0/	0
Black-necked Stilt	6 /	6	20/	17	0/	0
Marbled Godwit	0 /	0	1/	0	0/	0
Short-billed Dowitcher	0 /	0	0/	0	0/	0
Long-billed Dowitcher	0 /	0	196/	127	0/	0
Whimbrel	0 /	0	0/	0	0/	0
Red-necked Phalarope	0 /	0	1/	0	0/	0
Wilson's Phalarope	5 /	5	1172/	443	0/	0
Black-bellied Plover	0 /	0	3/	2	0/	0
American Avocet	43 /	43	63/	43	0/	0
Lesser Yellowlegs	0 /	0	21/	9	0/	0
Greater Yellowlegs	0 /	0	12/	4	0/	0
Solitary Sandpiper	0 /	0	0/	0	0/	0
Report Totals	963 /	963	5423/	2479	0/	0

Shorebirds
Total Refuge Peak / Average Populations

Org. Number: 64620
Refuge Name: QUIVIRA NWR

Report Date: 05/30/97
Survey Type: Ground Censu

Species Name	May 97. Peak	/ Ave	April 97. Peak	/ Ave	May 96. Peak	/ Ave
Spotted Sandpiper	34 /	17	1/	0	0/	0
Ruddy Turnstone	3 /	1	0/	0	0/	0
Upland Sandpiper	10 /	3	0/	0	0/	0
Sanderling	12 /	5	51/	17	0/	0
Dunlin	0 /	0	0/	0	0/	0
Little Brown Peeps	1111 /	547	221/	75	0/	0
Baird's Sandpiper	23 /	10	108/	36	0/	0
White-rumped Sandpiper	2085 /	942	0/	0	0/	0
Stilt Sandpiper	152 /	56	0/	0	0/	0
Western Sandpiper	1 /	0	102/	34	0/	0
Pectoral Sandpiper	2 /	0	8/	2	0/	0
Least Sandpiper	14 /	7	14/	4	0/	0
Semipalmated Sandpiper	367 /	161	0/	0	0/	0
Willet	1 /	0	4/	1	0/	0
Snowy Plover	65 /	45	43/	34	0/	0
Piping Plover	1 /	0	2/	0	0/	0
Semipalmated Plover	4 /	3	11/	3	0/	0
Killdeer	49 /	37	51/	46	0/	0
Common Snipe	0 /	0	1/	0	0/	0
ack-necked Stilt	20 /	17	16/	5	0/	0
rbled Godwit	1 /	0	0/	0	0/	0
Short-billed Dowitcher	0 /	0	0/	0	0/	0
Long-billed Dowitcher	196 /	127	0/	0	0/	0
Whimbrel	0 /	0	0/	0	0/	0
Red-necked Phalarope	1 /	0	0/	0	0/	0
Wilson's Phalarope	1172 /	443	104/	34	0/	0
Black-bellied Plover	3 /	2	1/	0	0/	0
American Avocet	63 /	43	480/	167	0/	0
Lesser Yellowlegs	21 /	9	28/	16	0/	0
Greater Yellowlegs	12 /	4	44/	30	0/	0
Solitary Sandpiper	0 /	0	0/	0	0/	0
Report Totals	5423 /	2479	1290/	504	0/	0

INTERNATIONAL SHOREBIRD SUR~~YS
c/o Manomet Bird Observatory
Box 1770, Manomet, MA USA 02345

F~~c ______

copy

Year 1996

Name: ______________________

Census Area QUIVIRA NWR

(Please include state in census area if different from mailing address)

Address RR3 BOX 48A STAFFORD, KANSAS 67578

(Address needed only on pg. 1)

DATE (mm/dd)-->	4/13	4/24	5/1	5/9	5/23	6/3	8/15	9/7	9/17
Black-bellied Plover									2
Lr. Golden Plover									
Snowy Plover	20	25	21	65	39	25	1		1
Wilson's Plover									
Semipalmated Plover		15	2	1					
Piping Plover			2						
Killdeer	60	24	35	30	40	27	46	7	9
Am. Oystercatcher									
Black-necked Stilt	1	6	4	11	21	31	1		
Am. Avocet	16	36	71	45	33	34	41	78	206
Greater Yellowlegs	12						78		23
Lesser Yellowlegs	16	14	20	5	1				2
Yellowlegs, unident.			3					40	2
Solitary Sandpiper									
Willet		11	4	3	17				1
Spotted Sandpiper			5	13	9			1	
Upland Sandpiper					1				
Whimbrel									
Long-billed Curlew									
Hudsonian Godwit									
Marbled Godwit									
Ruddy Turnstone									
Black Turnstone									
Surfbird									
Red Knot									
Sanderling				17	7	105			
Semipalmated Sandp.	1	26	78	19	3				
Western Sandpiper				2					
Least Sandpiper	45	24	12	57	2	35		31	36
Wh.-rumped Sandp.				17	84				
Baird's Sandpiper	21	3		1		11			11
Pectoral Sandpiper					2				
Dunlin									
Stilt Sandpiper			34	27	3				1
Buff-br. Sandpiper									
Short-bill. Dowitcher					2	2			
Long-bill. Dowitcher		19	121	8			77		
Dowitcher, unident.			14		2		1	129	376
Common Snipe	2								
Am. Woodcock									
Wilson's Phalarope		196	1454	315	45	20		17	
Red-Neck. Phalar.									3
Red Phalarope									
add others below									
UNIDENTIFIED PEEPS	239	203	453	450	181	200	[illegible]	260	69
UNIDENTIFIED SHOREBIRDS							[illegible]		
~ance-see below									
~me, start									
, end									
~r level)									

~ance: During this census, shorebirds were:

A=undisturbed, B=disturbed 1-2 times, C=3-4 times, D=5-10 times, E=>10 times, X= unknown

~): 1=high, 2=near high/RISING, 3=near high/FALLING, 4=half/RISING

5=half/FALLING, 6=near low/RISING, 7=near low/FALLING, 8=LOW, 9=unknown.

(non-tidal sites): N=normal, H=higher than normal, L=lower than normal, X=not observed

Please indicate in each block whether your count is:

* a true count, ** an extrapolated estimate, or circle ...

INTERNATIONAL SHOREBIRD SUR[illegible]S
c/o Manomet Bird Observatory
Box 1770, Manomet, MA USA 02345

Year 1996

copy 12/13/96

Name: ______

Census Area QUIVIRA NWR
(Please include state in census area if different from mailing address)

Address RR3 BOX 48A STAFFORD, KANSAS 67578

(Address needed only on pg. 1)

DATE (mm/dd)->	4/13	4/24	5/1	5/9	5/23	6/3	8/15	9/7	9/17						
Black-bellied Plover									2						
Lr. Golden Plover															
Snowy Plover	20	25	21	65	39	25	1		1						
Wilson's Plover															
Semipalmated Plover		15	2	1											
Piping Plover			2												
Killdeer	60	24	35	30	40	27	46	7	9						
Am. Oystercatcher															
Black-necked Stilt	1	6	4	11	21	31	1								
Am. Avocet	16	36	71	45	33	34	41	78	206						
Greater Yellowlegs	12						78		23						
Lesser Yellowlegs	16	14	20	5	1				2						
Yellowlegs, unident.			3					40	2						
Solitary Sandpiper															
Willet		11	4	3	17				1						
Spotted Sandpiper			5	13	9			1							
Upland Sandpiper					1										
Whimbrel															
Long-billed Curlew															
Hudsonian Godwit															
Marbled Godwit															
Ruddy Turnstone															
Black Turnstone															
Surfbird															
Red Knot															
Sanderling				17	7	105									
Semipalmated Sandp.	1	26	78	19	3										
Western Sandpiper				2											
Least Sandpiper	45	24	12	57	2	35		31	36						
Wh.-rumped Sandp.				17	84										
Baird's Sandpiper	21	3		1		11			11						
Pectoral Sandpiper					2										
Dunlin															
Stilt Sandpiper			34	27	3				1						
Buff-br. Sandpiper															
Short-bill. Dowitcher					2	2									
Long-bill. Dowitcher		19	121	8			77								
Dowitcher, unident.			14		2		1	129	376						
Common Snipe	2														
Am. Woodcock															
Wilson's Phalarope		196	1454	315	45	20		17							
Red-Neck. Phalar.									3						
Red Phalarope															
add others below															
UNIDENTIFIED PEEPS	239	203	453	450	181	200	45	240	67						
UNIDENTIFIED SHOREBIRDS							62								
Disturbance-see below															
Census time, start															
, end															
Tide (or water level)															

Human disturbance: During this census, shorebirds were:
A=undisturbed, B=disturbed 1-2 times, C=3-4 times, D=5-10 times, E=>10 times, X= unknown

TIDE (coastal sites): 1=high, 2=near high/RISING, 3=near high/FALLING, 4=half/RISING
5=half/FALLING, 6=near low/RISING, 7=near low/FALLING, 8=LOW, 9=unknown.

WATER LEVEL: (non-tidal sites): N=normal, H=higher than normal, L=lower than normal, X=not observed

ACCURACY: Please indicate in each block whether your count is:
* a true count ** an extrapolated estimate [illegible]

INTERNATIONAL SHOREBIRD SURVEYS
c/o Manomet Bird Observatory
Box 936, Manomet, MA 02345 U.S.A.

YEAR 1991

NAME U.S. Fish & Wildlife Service CENSUS AREA Quivira NWR

ADDRESS 315 Houston St, Suite E, Manhattan, KS 66502

DATE	3/26	4/9	4/18	4/30	5/8	5/16	5/29	7/16	7/23	8/6	8/15	8/22	9/17	9/26
Piping Plover		1												
Semipalmated Plover				67	16	4		2	6	2	4	1		2
Killdeer	65	34	41	29	84	52	61	129**	121	183	169	268	8	2
Golden Plover														2
Black-bellied Plover						2	2			6	4			8
Ruddy Turnstone					1									
Common Snipe	1				3			1						
Whimbrel						5								
Spotted Sandpiper				8	24	17	13	12	3	14	9	8		
Solitary Sandpiper				1						6				
Willet		1		3	4	1								
Greater Yellowlegs	44	42	16	3	8	2		22	39	82	81	28	57	134
Lesser Yellowlegs	7	[illegible]	23	112	81	5	6	195	127	135	23	211	76	
Red Knot														
Pectoral Sandpiper		72	4		6		7	1	2	39	73**	19		
White-rumped Sandpiper					16	281**	[illegible]**							
Baird's Sandpiper	49	10	7	7	11			4	2	22	102	11	1	
Least Sandpiper	6	8	60	1	51	5		52**	12	107	17	88	159	103
Dunlin							1							
Short-billed Dowitcher				1	2	4		2	5	2		1		
Long-billed Dowitcher			1	91	6	20		28		4				3
Stilt Sandpiper					38	261**	12	96	16	16	75**	82	53	58
Semipalmated Sandpiper		12	113	75	95	18**	50	104	64	43	9	30	66	59
Western Sandpiper				1				80	118	18		34	89	12
Marbled Godwit													1	
Hudsonian Godwit	1													
Sanderling		1			1								1	4
Wilson's Phalarope		3	1	1373	805**	130	[illegible]	26**				28	53	11
Peep sp.	23	52	411**	3125**	807**	1765**	2523*	257	604**	1055**	418**	779	482	377**
Snowy Plover	13	99	75	69	111	97	101	69**	49	87	29	77	17	42
Dowitcher spp	18	19		134	[illegible]			28	109	9	524**	46	109	8
Sandpiper sp	1	3	26**	431**	216**	223**	2		67	55**	243**	270**	3	13
Yellowlegs sp.		1	2	217**	6	7		65**	110**		4	13	9	
American Avocet		5	37	50	31	67**	50	20	14	2	9	31	522	182**
Black-necked Stilt			2	6	11	34	30	4	6	13	9	8		
Phalarope sp.					121									4
Total	225	371	1067**	5544	1688**	2981**	3446**	1,101**	1474**	2060**	1326**	2027**	4,504	955**
TIME	0800 [illegible]	0820 [illegible]	0830 1200	1515 2055	[illegible] 1352	[illegible]	[illegible]	0745 1230	1230 1620	0730 1310	1045 1455	0740 1215	0750 1155	0715 1015
TIDE (or water level)	L	N	H	N	N	N	N	L	L	L	L	L	L	L

Contd. on back →

MANAGER	
ASST. MGR.	
REF. ASST.	
TRAINEE	
[illegible]	
FILE	
Last Reader Discard	

RECEIVED
APR 06 1992
Quivira National Wildlife Refuge

Tide (Coastal sites): 1=high; 2=almost high and rising; 3=almost high and falling; 4=half tide and rising; 5=half tide and falling; 6=almost low and rising; 7=almost low and falling; 8=low; 9=not observed

Water level (inland; non-tidal sites): N=normal; H=higher than normal; L=lower than normal

Please write in species not listed above

Please indicate how you derived your count estimate:

* a true count; ** an extrapolated estimate; ◯ a "guestimate".

INTERNATIONAL SHOREBIRD SURVEYS
c/o Manomet Bird Observatory
Box 936, Manomet, MA 02345 U.S.A.

YEAR ____________

NAME ______________________ CENSUS AREA ______________________

ADDRESS ______________________

DATE					5/8			7/16					9/17	
Piping Plover														
Semipalmated Plover														
Killdeer														
Golden Plover														
Black-bellied Plover														
Ruddy Turnstone														
Common Snipe														
Whimbrel														
Spotted Sandpiper														
Solitary Sandpiper														
Willet														
Greater Yellowlegs														
Lesser Yellowlegs														
Red Knot														
Pectoral Sandpiper														
White-rumped Sandpiper														
Baird's Sandpiper														
Least Sandpiper														
Dunlin														
Short-billed Dowitcher														
Long-billed Dowitcher														
Stilt Sandpiper														
Semipalmated Sandpiper														
Western Sandpiper														
Marbled Godwit														
Hudsonian Godwit														
Sanderling														
Wilson's Phalarope														
Peep sp.														
Upland Sandpiper					4			6						
Red-necked Phalarope													3	1
TIME														
TIDE (or water level)														

Tide (Coastal sites): 1=high; 2=almost high and rising; 3=almost high and falling; 4=half tide and rising; 5=half tide and falling; 6=almost low and rising; 7=almost low and falling; 8=low; 9=not observed

Water level (inland; non-tidal sites): N=normal; H=higher than normal; L=lower than normal

Please write in species not listed above

Please indicate how you derived your count estimate:

* a true count; ** an extrapolated estimate; ⬭ a "guestimate".

Quivira NWR shorebird surveys spring 1992

	1 Apr	8 Apr	13 Apr	16 Apr	22 Apr	24 Apr	28 Apr
Black-bellied Plover	0	0	0	0	4	0	2
Lesser Golden Plover	0	0	0	0	0	0	0
Snowy Plover	17	66	21	85	77	112	54
Semipalmated Plover	0	0	0	34	11	6	0
Piping Plover	0	0	0	0	1	1	0
Killdeer	12	19	17	26	29	23	43
Black-necked Stilt	0	0	1	0	3	2	8
American Avocet	0	0	139	117	141	118	29
UnID Large	0	0	0	0	9	0	0
Yellowlegs (sp.)	3	10	10	4	0	173	4
Greater Yellowlegs	0	10	4	12	82	88	27
Lesser Yellowlegs	9	19	38	107	325	71	128
Solitary Sandpiper	0	0	0	0	2	5	0
Willet	0	0	2	0	60	51	58
Spotted Sandpiper	0	0	0	0	0	0	10
Upland Sandpiper	0	0	0	0	0	0	0
Whimbrel	0	0	0	0	0	0	0
Hudsonian Godwit	0	0	0	0	0	51	0
Marbled Godwit	0	0	0	0	0	9	0
Ruddy Turnstone	0	0	0	0	0	0	0
Red Knot	0	0	0	0	0	0	0
Sanderling	0	0	0	0	0	0	0
Peep (sp.)	0	65	71	85	276	737	209
Semipalmated Sandpiper	0	1	986	181	347	282	77
Western Sandpiper	0	0	0	0	0	6	0
Least Sandpiper	0	1	0	0	2	20	17
White-rumped Sandpiper	0	0	0	0	0	0	0
Baird's Sandpiper	23	70	1244	797	333	480	105
Pectoral Sandpiper	0	5	0	0	1	0	4
Dunlin	0	0	0	0	0	0	0
Stilt Sandpiper	0	0	0	0	1	0	10
Buff-breasted Sandpipe	0	0	0	0	0	0	0
Dowitcher spp.	0	0	0	0	352	215	45
Short-billed Dowitcher	0	0	0	0	0	0	0
Long-billed Dowitcher	0	0	0	4	0	0	0
Common Snipe	0	0	0	1	0	1	0
Wilson's Phalarope	2	0	0	0	11	16	259
Red-necked Phalarope	0	0	0	0	0	0	0
TOTALS	66	266	2533	1453	2067	2467	1089

Quivira NWR shorebird surveys spring 1992

	2 May	6 May	8 May	11 May
Black-bellied Plover	1	0	11	0
Lesser Golden Plover	0	0	0	0
Snowy Plover	10	59	85	32
Semipalmated Plover	1	3	22	4
Piping Plover	0	0	0	0
Killdeer	19	19	44	66
Black-necked Stilt	11	0	23	4
American Avocet	62	57	78	62
UnID Large	0	0	0	0
Yellowlegs (sp.)	381	0	21	0
Greater Yellowlegs	1	0	0	0
Lesser Yellowlegs	25	48	10	14
Solitary Sandpiper	0	0	1	0
Willet	8	0	0	0
Spotted Sandpiper	3	2	4	7
Upland Sandpiper	0	0	0	0
Whimbrel	0	0	0	16
Hudsonian Godwit	9	42	0	2
Marbled Godwit	3	1	0	1
Ruddy Turnstone	0	0	0	0
Red Knot	0	0	0	0
Sanderling	0	0	0	0
Peep (sp.)	1112	186	1118	397
Semipalmated Sandpiper	64	246	2267	188
Western Sandpiper	0	0	3	2
Least Sandpiper	7	18	13	3
White-rumped Sandpiper	15	2	30	5
Baird's Sandpiper	6	74	68	13
Pectoral Sandpiper	0	10	4	0
Dunlin	0	0	0	0
Stilt Sandpiper	6	36	326	427
Buff-breasted Sandpipe	0	0	0	0
Dowitcher spp.	637	76	170	90
Short-billed Dowitcher	0	0	0	0
Long-billed Dowitcher	0	0	0	0
Common Snipe	2	0	0	0
Wilson's Phalarope	373	823	1015	176
Red-necked Phalarope	0	0	0	0
TOTALS	2756	1702	5313	1509

	Ducks	Geese	Eagles
Apr. 95	5672	215	0
Apr. 94	6450	36	0

QUIVIRA NWR WATERFOWL/EAGLE COUNTS

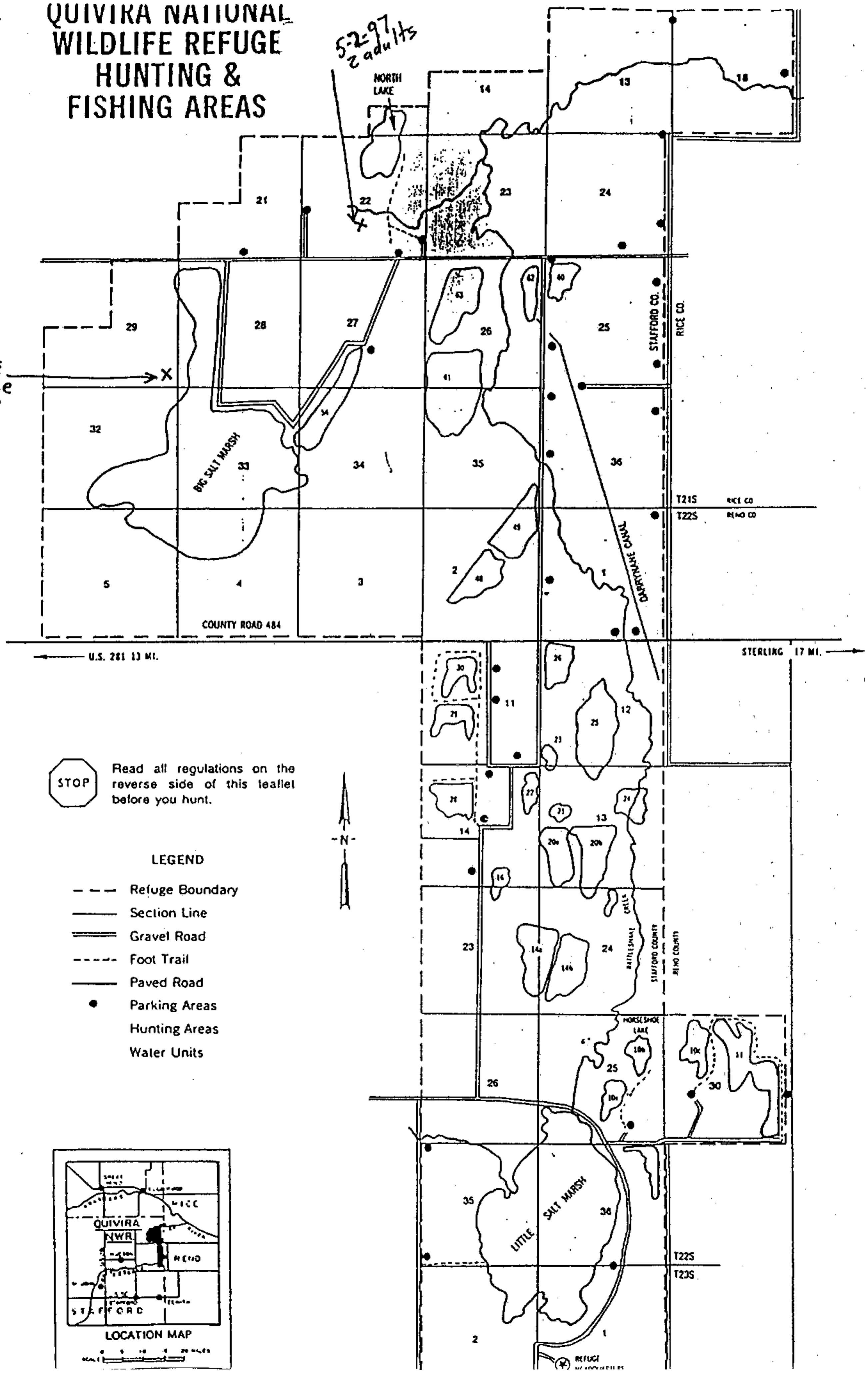
	1997			1996			1995		
	Ducks	Geese	Eagles	Ducks	Geese	Eagles	Ducks	Geese	Eagles
January	7829	78026	26	2800	16650	35	29055	74245	11
February	9,211	123,980	20	42995	56320	8	7555	18435	4
March	27,477	29432	3	11721	2254	0	14,336	13,055	3
September				3596	145	0	10929	185	0
October				30700	5350	1	26830	3337	3
November				39917	146151	19	66309	107850	10
December				10,620	219436	24	6607	67170	11
	1994			**1993**			**1992**		
	Ducks	Geese	Eagles	Ducks	Geese	Eagles	Ducks	Geese	Eagles
January	1869	19174	9				3,198	8,963	3
February	3348	32655	17				12,471	10,779	2
March	21,772	29,375	6	123,500	76,000	12	5,724	421	0
September	11,163	49	0	7031	225	0	24,244	107	1
October	11,978	217	0	21460	1432	5	64,764	7,982	0
November	16803	28064	15	30,516	10,169	9	78,145	26,976	7
December	10,811	126,295	16	7445	34001	11	12,307	16,507	24

1 Osprey sighted on refuge

WHOOPING CRANE SIGHTINGS AT QUIVIRA NWR - 1997

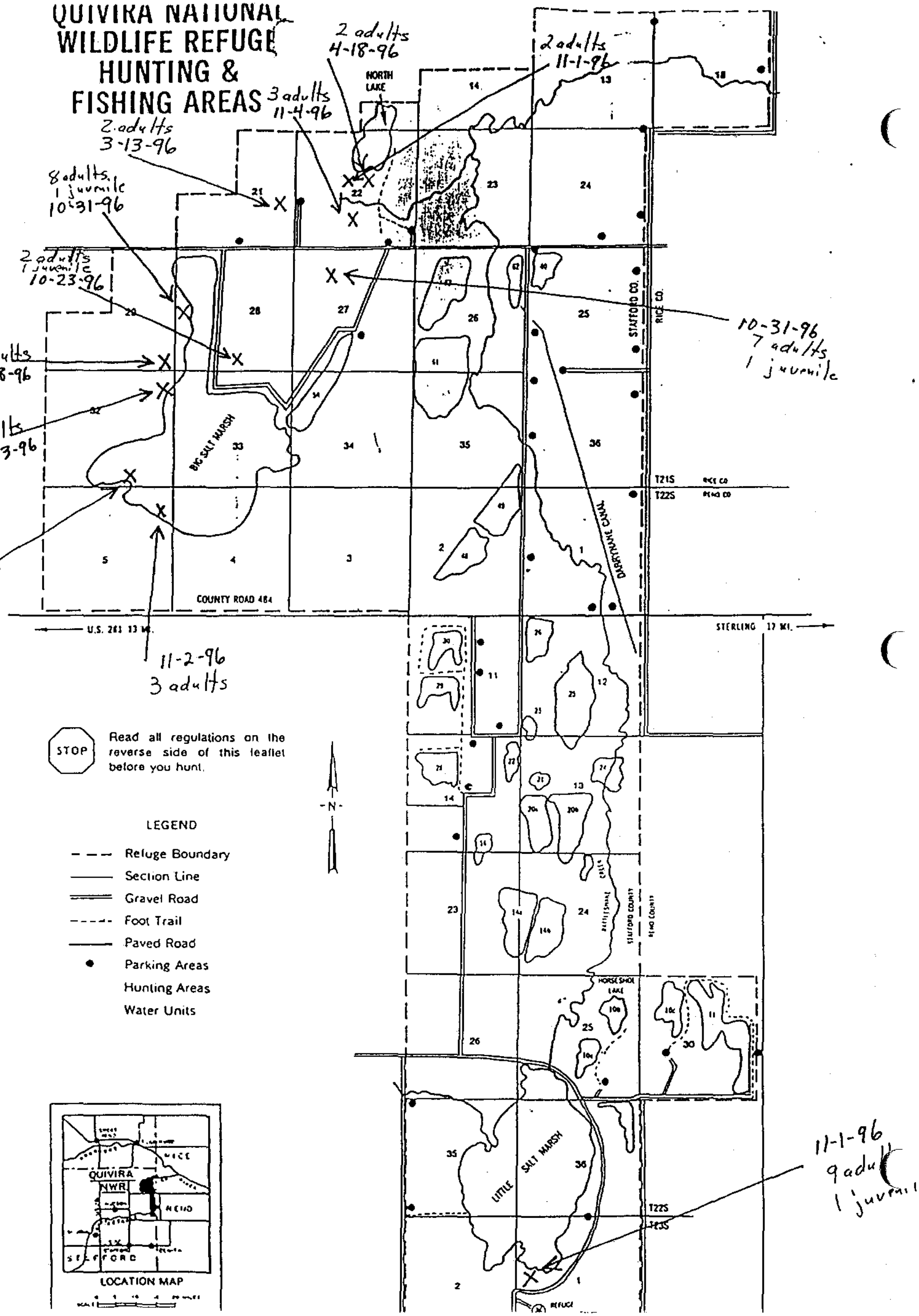
DATE	TIME	NO. OF BIRDS	ADULTS	JUVENILES	OBSERVER	LOCATION OF BIRDS
4-10-97	2:00 pm	2	✓		Bill Scheff	Kirwin NWR
4-15-97	9:00 AM to 10:15 AM	3	2	1	Meggers	West side of BSM
5-2-97 5-3-97	5:00 PM to 11:00 AM	2	✓		Wachholz Meggers	North of marsh R

QUIVIRA NATIONAL WILDLIFE REFUGE HUNTING & FISHING AREAS



WHOOPING CRANE SIGHTINGS AT QUIVIRA NWR - 1996

DATE	TIME	NO. OF BIRDS	ADULTS	JUVENILES	OBSERVER	LOCATION OF BIRDS
3-13-96		2	✓	—	Carl Marks	North of Marsh Rd - Salt Flats
4-18-96		2	✓	—	Allen Meggers	South of North Lake
10-21-96 to 10-29-96	3:00PM 10-21-96	1	✓	—	Hoogland Meggers	SW side of BSM
10-23-96	8:30 AM	3	2	adopted sandhill crane	Meggers	South End of Wildlife Dr.
10-28-96 to 10-29-96	10:35AM	4	✓	—	Hoogland Meggers	BSM Wildlife Dr.
10-31-96 to 11-1-96	6:35AM	17	15	2	Meggers Hands Allen	BSM North Wildlife Dr.
11-1-96	7:00AM	2	✓	—	Fellows Meggers	North of Marsh Rd - South of Unit 80
11-1-96	1:30PM	10	9	1	Burridge	South End of LSM
11-2-96 to 11-4-96	6:40AM	3	✓	—	Meggers	BSM
11-3-96	5:10 PM	4	✓	—	Meggers	BSM; west side
11-4-96 to 11-5-96	5:32 PM	3	✓	—	Meggers	North of Marsh Rd - BSM
10-31-96	AM	6-8	unconfirmed	Local Hunter	Kirwin NWR	Boundry of Refuge


QUIVIRA NATIONAL
WILDLIFE REFUGE
HUNTING &
FISHING AREAS
NORTH LAKE
BIG SALT MARSH
LITTLE SALT MARSH
HORSESHOE LAKE
DARRYNANE CANAL
RATTLESNAKE CREEK
COUNTY ROAD 484
U.S. 281 13 MI.
STERLING 17 MI.
STAFFORD CO.
RICE CO.
STAFFORD COUNTY
RENO COUNTY
T21S
T22S
T23S
Read all regulations on the reverse side of this leaflet before you hunt.
STOP
N
LEGEND
Refuge Boundary
Section Line
Gravel Road
Foot Trail
Paved Road
Parking Areas
Hunting Areas
Water Units
QUIVIRA NWR
LOCATION MAP
2 adults 4-18-96
2 adults 11-1-96
3 adults 11-4-96
2 adults 3-13-96
8 adults, 1 juvenile 10-31-96
2 adults 1 juvenile 10-23-96
4 adults 10-28-96
4 adults 11-3-96
10-21-96 1 adult
11-2-96 3 adults
10-31-96 7 adults 1 juvenile
11-1-96 9 adult 1 juvenil

Fall 1995 Whooping Crane Sightings at Quivira

Date	No.	Legal Description
10/26/95	4 birds BSM	Sec 32 T21S R11-W (Putnam North TWP Stafford Co.)
Sun 10/29/95	2 birds ? (BSM probably)	
10/27/95	3 birds BSM	
10/30/95	13 birds (10+3) BSM	
10/31/95	a.m. 8 birds (5+3) BSM 10-31-95 pm 3 ad 1 juv	
11/3/95	10 birds (8+2) LSM	Sec 2 T 23S R 11 W (East Cooper TWP)
11-7-95 11/27/95 →	16 birds flying BSM N of Marsh Rd unconfirmed	

BSM = Big Salt Marsh (far west edge)

1993

WHOOPING CRANE REPORT FIELD SHEET

STATE KANSAS
Recorded by:
Date:
Phone Number

FOR RECORDS CENTER ONLY
Obs. Number
Confirmed
Probable
Unconfirmed

STATE CONTACT PERSONS:

Name Jerry Horak
Office Phone 316/342-0658
Home Phone 316/343-6080

Name Karl Grover
Office Phone 316/793-7730
Home Phone 316/792-7854

FWS CONTACT PERSONS:

Name Briedi Zinn
Office Phone 316/486-2393
Home Phone 316/234-5471

Name Daniel Mulhern
Office Phone 913/539-3474
Home Phone 913/539-5027

If a whooping crane is sighted or reported IMMEDIATELY notify your agency contact person. If you are unable to advise your designated agency contact person, please notify a contact person of the cooperative agency. Notify your immediate supervisor, if you are unable to contact any of the people listed above. Complete this form whenever you receive a report of a whooping crane. Inquire about the observer's familiarity with whoopers and look-alike species. The question should be worded to gain some insight about the validity of the sighting report. Send completed form to: Wally Jobman, U.S. Fish and Wildlife Service, 203 West Second Street, Federal Building, Second Floor, Grand Island, NE 68801.

Observers name Eugene Krehbiel
Address 146 Wallace Kingman KS
Phone Number (home) 316-532-3663 (work)
Other observers(?)names

Date of observation 10-14-93 Time 3:30pm
Location of sighting (distance and direction from nearest town)
BSm

Description of birds 6 whooping cranes

Number of adults (unknown) young Duration of sighting
Behavior of birds (circle appropriate descriptor: flying or landed, feeding or roosting)
Evidence of injury, sickness, or hazard? No

Colored leg bands observed: Left Right
None

/✓/ Reported to Records Center: Date 10-18 Time
/✓/ Phone /_/ Mail By BZinn
(Name)

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 83 (North Lake)

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10%<					
Maximum	10%>					
Desired	1736.7		1736.2		1736.7	
Species						
Waterfowl						
Shorebirds						
Least Terns						
Sandhill Cranes						
Whooping Cranes						
Pelicans						
Egrets						
Bald Eagles						
Water Quality Criteria						
Comments	Unit receives water from off North flats and ground water, drains overland to Salt Creek but not through Salt Creek water control structure, Hunting Unit.					

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE (North Flats)
BASIN OPERATING DATA - BASIN No. 80, 81

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1736.7					
Species						
Waterfowl						
Shorebirds						
Least Terns						
Whooping Cranes						
Sandhill Cranes						
Bald Eagles						
Water Quality Criteria						

Comments	
	Very important shore bird area. Endangered least tern nesting area. Shallow water over large expanse is the desired condition. Hunting unit.

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE INTERIOR OF
BASIN OPERATING DATA - BASIN No. 78 (WILDLIFE DRIVE)

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1740.2 →	→	1739.7 →	→	1740.2 →	→

Species	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Waterfowl -						
Shorebirds -						
Sandhill Cranes -						
Egrets —						
Ibis —						
Bald Eagles -						
Least TerN -						
WhoopingCranes						
Pelicans						

Water Quality Criteria						

Comments	
	Unit burned each year to improve area for Shorebirds. Receives water from BSM, Unit 58 and Unit 57. Drains to North flats.

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 75 (BIG SALT MARSH)
7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1740.5		1740.0		1740-5	
Species						
Waterfowl						
Shorebirds						
Sandhill Cranes						
Egrets						
Ibis						
Bald Eagles						
Least Terns						
Whooping Cranes						
Pelicans						
Water Quality Criteria						
Comments	Major wildlife use area. Over 40 whooping cranes used the Big Salt Marsh and adjacent units during 1996.					

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 63

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.

Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1740.7 →	→	1740.2 →	→	1740.7 →	→

Species						
Waterfowl	←	↔	→		←	→
Shorebirds		←	→	←	→	
Egrets		←	↔	↔	→	
Ibis		←	↔	↔	→	
Sandhill Cranes	←	→			←	→

Water Quality Criteria						

Comments	
	Unit has large borrow area, Could be an outstanding moist soil unit to be flooded with water from Unit 61. High wildlife use area.

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 62

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1743.5 →	→	1743.0 →	→	1743.5 →	→
Species						
Waterfowl	↔	↔	↔		↔	↔
Shorebirds		↔	↔	↔	↔	
Egrets		↔	↔	↔	↔	
Water Quality Criteria						
Comments	Unit is fed by Darrynane Canal. Connected to Unit 40 and managed in conjunction with that unit.					

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 61

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.

Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1745.0 →		1744.5 →		1745.0 →	

Species						
Waterfowl						
Shorebirds						
Egrets						
Ibis						
Bald Eagles						
Sandhill Cranes						

Water Quality Criteria						

Comments	
	Large unit has contained over 25,000 ducks during migration peaks. Unit could be enlarged to hold additional water, then released to flood units 63 and 57 (East Lake).

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 58

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.

Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1741.5 →	→	1741.0 →	→	1741.5 →	→

Species						
Waterfowl	←		→		←	→
Shorebirds		←	→	←	→	
Egrets		←			→	
Ibis		←			→	
Pelicans		←			→	
Least Terns			←		→	
Bald Eagles	←	→			←	→

Water Quality Criteria						

Comments	
	South end of unit 58 has had over 8000 nesting egrets in past years. High wildlife use area due to proximity to Big Salt marsh and salt flats.

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 57 (EAST LAKE)

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.

Water Surface Level	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Minimum	10% <					
Maximum	10% >					
Desired	1743.0		1742.5		1743.0	

Species	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Waterfowl						
Shorebirds						
Bald Eagles						
Egrets						
Ibis						

Water Quality Criteria	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.

Comments	
	Fed from RC canal through control structure RC-F. Eagle Roost trees on west side of unit.

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 49

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1753.7		1753.2		1753.7	

Species	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Waterfowl -						
Shorebirds -						
Ibis						
Egrets						

Water Quality Criteria						

Comments: Known white-faced Ibis nesting unit. Water is often moved through units 48 and 49 to flood a non-number wetland area south of the Rattlesnake Canal berm.

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 48

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1753.9 →	→	1753.4 →	→	1753.9 →	→
Species						
Waterfowl						
Shorebirds						
Egrets						
Ibis						
Pelicans						
Water Quality Criteria						
Comments	Usually managed in conjunction with Unit 49 through the connecting control structure 48B. Known white-faced ibis nesting unit.					

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 40

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10%<					
Maximum	10%>					
Desired	1742.6		1742.1		1742.6	

Species	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Waterfowl -						
Shorebirds -						
Egrets -						
Pelicans -						

Water Quality Criteria						

Comments	
	Receives water through Dorrynane Canal. Hunting Unit

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 30

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10%<					
Maximum	10%>					
Desired	1758.5 →	→	1758.0 →	→	1758.5 →	→
Species						
Waterfowl	←		→		←	→
Shorebirds		←	→	←	→	
Egrets		←			→	
Water Quality Criteria						
Comments	See Comment on Unit 28					

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 29

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.

Water Surface Level						
Minimum	10%<					
Maximum	10%>					
Desired	1761.5		1761.0		1761.5	

Species						
Waterfowl						
Shorebirds						
Egrets						

Water Quality Criteria						

Comments	
	See comment on Unit 28

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 28

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10%<					
Maximum	10%>					
Desired	1767.5		1767.0		1767.5	

Species	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Waterfowl -						
Shorebirds -						
Egrets -						

Water Quality Criteria	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.

Comments Gets water from D-line canal. 28, 29 + 30 are often managed in relation to each other. (One might be kept low for shorebirds, one dried up to control cattails and one kept at a level favored by waterfowl and then process might be rotated next year. Units 28, 29, + 30 are hunting units.

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 26

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10%<					
Maximum	10%>					
Desired	1761.5		1761.0		1761.5	
Species						
waterfowl						
shorebirds						
pelicans						
Water Quality Criteria						

Comments	Good waterfowl unit. Large borrow area requires filling prior to flooding the unit.

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 25

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1767.9		1767.4		1767.9	
Species						
waterfowl -						
Shore birds -						
Egrets -						
SANDHILLS -						
Bald eagles -						
Water Quality Criteria						
Comments	Excellent duck and goose unit. Receives water from Unit 24, drains to Unit 26 or back to Rattlesnake Creek					

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 24 (Darrynane Lake)

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1768.9 →	→	1768.4 →	→	1768.9 →	→
Species						
Waterfowl	←	→	→		←	→
Pelicans		←	→	→	→	
Egrets		←	→	→	→	
Water Quality Criteria						
Comments	Major Diversion Point. Generally manage at full level to allow moving water to other units within the system.					

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 23 (PARK SMITH LAKE)

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1764.3	→	1763.8 →	→	1764.3 →	→

Species	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
waterfowl -	←	↔	→		←	→
Shorebirds -		←	→	←	→	

Water Quality Criteria						

Comments	
	Unit fed from Unit 22, drains into Unit 26. Has to have some flow to pass water through to other units north of Unit 23

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 22

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1769.5		1769.0		1769.5	
Species						
Waterfowl						
Shorebirds						
Egrets						
Water Quality Criteria						
Comments	Unit 22 is circled by an interpretive foot trail and crossed by a 335' boardwalk.					

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 21

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1769.5		1769.0		1769.5	

Species	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Waterfowl						
Shorebirds						
Egrets						
Pelicans						

Water Quality Criteria	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.

Comments: Unit 21 receives water from Unit 20A or from Unit 24 (Darrynane) through control structure 240.

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 20 (A + B combined)

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1770.2 →	→	1769.7 →	→	1770.2 →	→
Species						
Waterfowl	←		→		←	→
Shorebirds		←	→	←	→	
Egrets		←			→	
Ibis		←			→	
Water Quality Criteria						
Comments	Units 20A + B are managed as one unit. Tube connects units at 20C but no control screw gate now exists. Units could be managed					

as moist soil with water from 14A+B used to flood.

1770.7 is spillway elevation

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 16

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1774.5		1774.0		1774.5	
Species						
Waterfowl -						
Shorebirds -						
Egrets -						
Water Quality Criteria						
Comments	Receives water through structure 14A2 out of Unit 14A.					

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 14C

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1776.5	→	1776.0 →	→	1776.5 →	→

Species						
Waterfowl -						
Shorebirds -						
Egrets -						

Water Quality Criteria						

Comments	
	Receives water through F-2 water control structure on the F-Line canal.

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 14B

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1776.2 →	→	1775.7 →	→	1776.2 →	→
Species						
Waterfowl	←		→		←	→
Shorebirds		←	→	←	→	
Egrets		←			→	
Ibis		←			→	
Water Quality Criteria						
Comments	1776.7 is the spillway level. If water level in 14A was increased, 14B could be used as moist soil unit. Water level could be increased in 14A + B and used to flood moist soil in 20A + B and Unit 16.					

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 14A

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.

Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1778.0		1777.5		1778.0	

Species						
Waterfowl -						
Shorebirds -						
Egrets -						
Pelicans -						
Whoopers						

Water Quality Criteria						

Comments	
	1778.0 is the spillway level. Unit 14A could be used to store water to flood 20A+B or unit 16 for moist soil development.

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 10 C/11

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1774.0		1773.5		1774.0	
Species						
Waterfowl -						
Shorebirds -						
Bald Eagles -						
Egrets -						
Ibis —						
Water Quality Criteria						
Comments	Filled from A-1 on the Little Salt Marsh. Following 1993 flood, have managed 11 and 10c together. Unit 11 bottom does not hold water as well as some other units (may be more gravel content)					

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 10 A+B

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1778.50		1778.0		1778.50	

Species	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Waterfowl						
Shorebirds						
Bald Eagles						
EGRETS						
IBIS						

Water Quality Criteria						

Comments	
	Filled through A-1 from the Little Salt Marsh, 10 A+B are usually managed together. 1779.0 Top of Stoplog slot. 10A+B can lose water to the north onto private land with high levels. 10 B is locally called "HORSESHOE LAKE". Units 10 A, B, C and 11 are hunting units

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 7

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10%<					
Maximum	10%>					
Desired	1777.50		1777.0		1777.50	

Species	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
WATER FOWL -						
SHORE BIRDS -						
BALD EAGLES -						
EGRETS -						
IBIS -						

Water Quality Criteria	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.

Comments	
	FILLED FROM LSM THROUGH WCS - A-3 (CULVERT W/SCREW GATE) 1778 (TOP OF STOPLOG SLOT)

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. 5 (Little Salt Marsh)

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	1783.0	(SPILLWAY ELEVATION)				
Species						
WATERFOWL						
SHORE BIRDS						
BALD EAGLES						
WHOOPING CRANES						
Water Quality Criteria						
Comments	MAIN STORAGE BASIN - DESIRE WOULD BE TO KEEP UNIT FULL (TO SPILLWAY ELEVATION) year long to allow transfer of water to other units					

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. Unit 34

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	No Gage Water depth of 18" desired →					
Species Waterfowl	←	→	→		←	→
Water Quality Criteria						

Comments	This unit was planned in the original development but no dike was constructed. Area is a series of shallow depressions. A water control structure DCC was built with a feeder ditch from Darrynane canal to flood the area. Approx 30 acres can be flooded.

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. Dead Horse Slough

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10%<					
Maximum	10%>					
Desired	No elevations determined but the two structures 37+39 have gages Desire 18" of water in the area →					
Species						
Waterfowl -	←		→		←	→
Egrets -		←			→	
Ibis -		←			→	
Water Quality Criteria						
Comments	This is a long natural slough area. Two control structures have been added to the road culverts where the roads provide a dike effect. Total area flooded is approx. 60-70 acres. Water can be put in Dead Horse slough through structure DCF on the Darrynane Canal.					

basndat/07/03/97

QUIVERA NATIONAL WILDLIFE REFUGE Un-Named Unit
BASIN OPERATING DATA - BASIN No. North of 40

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Water Surface Level						
Minimum	10% <					
Maximum	10% >					
Desired	No gage Desired water depth of 18" throughout the area					
Species Waterfowl	←	→	→		←	→
Water Quality Criteria						
Comments	This area is generally filled in late fall with water from Unit 40, through control structure 40A. Water flows over approx 180-200 acres and empties into Salt Creek. Area is a series of small potholes and old dikes from the gunclub days.					

basndat/07/03/97

Rattlesnake Canal Berm Area

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. NO NUMBER OR NAME UNITS

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.

Water Surface Level						
Minimum	12" Depth					
Maximum	36" Depth					
Desired	NO GAGE A Depth of 18"-24" is preferred over this area.					

Species	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
Waterfowl						
Shorebirds						
Egrets						
Ibis						

Water Quality Criteria						

Comments: This water area is south of the Rattlesnake Canal berm, fed by water from Units 48 + 49. It's approx 75-80 acres and can be drained through control structure RCC1 back into Rattlesnake Canal. Excess water can be moved westward through control structure RCC2 (Screw ga to flood another Non-Named wetland area still south of the canal berm but west of the old ownship road. Area west of road is approx. 50-6

basndat/07/03/97

Rattlesnake Canal Berm Area

QUIVERA NATIONAL WILDLIFE REFUGE
BASIN OPERATING DATA - BASIN No. NO NUMBER OR NAME UNITS

7-8-97

Dates	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.

Water Surface Level						
Minimum	12" Depth					
Maximum	36" Depth					
Desired	NO GAGE A Depth of 18"–24" is preferred over this area.					

Species	Jan. - Feb.	Mar. - Apr.	May - Jun.	Jul. - Aug.	Sep. - Oct.	Nov. - Dec.
waterfowl –						
Shorebirds –						
Egrets –						
Ibis –						

Water Quality Criteria						

Comments

This water area is south of the Rattlesnake Canal berm, fed by water from Units 48 + 49. It's approx 75-80 acres and can be drained through control structure RCC1 back into Rattlesnake Canal. Excess water can be moved westward through control structure RCC2 (Screw ga to flood another Non-Named wetland area still south of the canal berm but west of the old township road. Area west of road is approx. 50-6

basndat/07/03/97

Net Evaporation Rates
Quivira NWR

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	2.28	1.59	4.41	5.19	5.21	4.39	8.17	7.72	3.38	4.34	3.46	2.51	52.65
1956	1.74	2.32	4.71	4.64	5.16	8.31	7.26	8.73	8.37	3.34	3.34	2.65	60.57
1957	1.89	2.34	0.48	2.09	-1.30	2.51	7.38	7.37	1.69	0.85	1.46	3.00	29.76
1958	2.11	0.87	0.35	3.16	3.11	3.62	2.42	6.49	2.18	4.06	3.20	2.28	33.85
1959	1.44	1.91	3.00	4.65	1.45	7.26	1.60	6.84	4.47	1.47	3.06	2.46	39.61
1960	1.13	0.08	1.96	5.20	4.33	4.30	6.97	6.25	4.87	2.55	3.27	1.15	42.06
1961	2.77	2.34	2.44	4.44	3.48	5.00	5.39	3.12	4.79	3.38	1.11	1.69	39.95
1962	1.38	2.50	3.55	4.25	6.20	2.44	3.81	6.27	2.71	3.57	1.98	2.07	40.73
1963	1.87	3.04	4.09	6.08	4.38	4.62	5.20	7.00	3.41	4.59	3.38	1.74	49.40
1964	3.10	2.46	3.71	4.70	5.22	6.90	8.08	5.24	4.17	4.64	0.30	1.17	49.69
1965	2.10	1.57	3.23	3.96	2.74	-0.33	7.02	5.86	1.85	3.37	3.09	-0.04	34.42
1966	1.79	0.86	5.01	3.54	6.54	6.64	4.43	4.73	4.64	4.99	2.96	1.91	48.04
1967	2.41	3.17	4.64	2.86	4.92	0.68	5.20	6.68	2.98	4.60	2.41	1.99	42.54
1968	2.39	2.79	4.99	5.57	3.45	6.29	5.10	5.99	6.16	0.71	1.21	1.90	46.55
1969	1.98	0.86	2.33	3.58	3.31	4.82	6.09	1.46	2.64	1.23	3.20	1.92	33.42
1970	2.07	3.23	1.53	3.81	5.29	5.21	8.04	6.84	2.82	1.75	3.01	2.25	45.85
1971	1.79	0.87	4.04	4.22	4.01	6.83	5.14	6.60	5.19	2.12	1.03	1.75	43.59
1972	2.29	3.21	5.60	5.37	4.04	5.07	6.52	4.82	4.71	3.45	0.55	1.42	47.05
1973	1.62	2.11	-2.15	3.18	5.73	7.89	5.96	7.90	-5.78	3.21	2.66	0.77	33.10
1974	1.98	3.25	3.46	2.67	5.00	7.01	9.53	3.56	4.45	2.35	2.57	2.11	47.94

Net Evaporation Rates
Quivira NWR

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	1.68	0.07	2.19	3.66	1.54	1.72	8.33	5.14	4.02	6.03	-0.63	1.37	35.12
1976	2.61	2.79	2.23	-6.38	1.17	4.71	6.75	7.90	0.02	1.11	2.85	2.22	27.98
1977	1.58	3.31	3.38	3.58	2.22	4.69	8.29	3.65	2.89	3.40	2.06	2.23	41.28
1978	1.71	1.32	3.40	5.25	2.33	5.33	8.06	6.79	3.06	5.54	1.08	2.13	46.00
1979	0.74	2.16	1.42	4.18	3.68	6.18	5.05	5.22	6.31	2.93	2.36	2.58	42.81
1980	1.26	1.74	1.11	4.51	4.35	6.92	9.94	5.23	6.03	4.39	3.49	1.75	50.72
1981	2.77	3.28	2.12	5.17	1.36	4.28	4.08	6.63	4.43	2.27	1.19	2.25	39.83
1982	2.10	1.97	2.99	5.15	1.56	3.57	5.24	5.76	4.85	3.89	2.79	2.31	42.18
1983	1.76	1.46	2.58	1.99	3.28	4.86	9.63	8.14	5.92	2.74	1.93	1.10	45.39
1984	2.28	3.39	0.06	1.62	5.79	5.64	8.89	7.61	5.73	1.20	3.14	-0.61	44.74
1985	1.75	1.17	3.43	1.91	5.99	4.93	6.33	5.16	3.92	0.24	1.70	1.64	38.17
1986	3.46	2.12	4.11	3.64	4.91	4.93	5.08	1.87	3.33	1.64	2.59	1.64	39.32
1987	1.64	1.56	-0.89	5.07	2.21	3.96	6.62	4.10	4.89	4.56	2.69	1.62	38.03
1988	1.63	2.92	4.33	2.59	6.02	5.87	6.11	7.71	4.68	3.93	3.36	2.91	52.06
1989	2.84	2.00	4.00	6.25	2.17	1.71	6.05	4.40	4.11	4.55	3.86	2.03	43.97
1990	2.36	1.35	2.42	2.09	-0.31	6.76	7.33	5.36	3.69	4.41	1.91	1.98	39.35
1991	1.74	3.70	4.09	3.77	4.90	6.91	8.40	6.45	5.63	4.40	1.24	0.84	52.07
1992	2.07	2.54	2.89	4.44	3.24	-0.01	5.67	3.14	5.62	3.33	-0.61	1.07	33.39
1993	0.72	0.41	1.82	4.19	1.49	2.63	2.42	5.69	5.37	4.27	2.70	2.05	33.76
1994	1.95	2.54	5.54	3.71	6.20	8.06	5.70	7.76	6.34	3.22	2.79	1.47	55.28

Incremental Flow Data (acre-feet)
Node 10--Rattlesnake Creek above Mullinville, KS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.1	0.0	0.0	0.0	30.1
1956	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1958	0.0	0.0	0.0	0.0	256.7	211.2	431.2	0.0	103.9	0.0	0.0	0.0	1,003.1
1959	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.3	0.0	0.0	18.3
1960	0.0	0.0	0.0	0.0	0.0	31.5	0.0	0.0	0.0	0.0	0.0	0.0	31.5
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962	0.0	0.0	0.0	0.0	0.0	0.0	143.0	0.0	1,646.7	0.0	0.0	0.0	1,789.7
1963	0.0	0.0	0.0	0.0	541.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	541.9
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,532.0	0.0	0.0	3,532.0
1969	0.0	0.0	148.0	25.3	988.5	260.7	0.0	605.9	778.9	0.0	0.0	0.0	2,807.4
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	44.6	0.0	0.0	0.0	47.4
1971	0.0	91.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	94.6	0.0	186.3
1972	0.0	0.0	0.0	0.0	35.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.3
1973	0.0	0.0	2,346.4	424.2	0.0	0.0	741.5	208.2	6,329.9	478.2	0.0	0.0	10,528.5
1974	0.0	0.0	0.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0	13.2

Incremental Flow Data (acre-feet)
Node 10--Rattlesnake Creek above Mullinville, KS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.0	0.0	0.0	0.0	153.1	3,566.1	0.0	0.0	0.0	0.0	0.0	0.0	3,719.2
1976	0.0	0.0	0.0	2,130.2	1,942.8	0.0	0.0	0.0	694.2	0.0	0.0	0.0	4,767.2
1977	0.0	0.0	0.0	0.0	213.4	0.0	236.3	164.2	704.5	0.0	0.0	0.0	1,318.4
1978	0.0	182.2	0.0	0.0	2,078.1	64.9	0.0	0.0	0.0	0.0	0.0	0.0	2,325.2
1979	0.0	0.0	0.0	0.0	0.0	0.0	604.1	0.0	0.0	404.4	0.0	0.0	1,008.5
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981	0.0	0.0	0.0	0.0	491.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	491.7
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	0.0	340.8	0.0	0.0	0.0	0.0	0.0	0.0	340.8
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,093.8	0.0	0.0	1,093.8
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	147.6	0.0	0.0	0.0	0.0	147.6
1987	0.0	0.0	23.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.8
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	51.3	0.0	0.0	1,495.2	0.0	0.0	0.0	0.0	1,546.5
1990	0.0	0.0	0.0	0.0	512.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	512.6
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	146.5	0.0	0.0	0.0	0.0	0.0	146.5
1993	0.0	240.1	0.0	0.0	0.0	158.5	41.6	0.0	0.0	0.0	0.0	0.0	440.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Incremental Flow Data (acre-feet)
Node 20--Rattlesnake Creek above S. Branch

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.0	0.0	0.0	0.0	155.1	578.8	0.0	0.0	-30.1	0.0	0.0	0.0	703.8
1956	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1957	0.0	0.0	0.0	0.0	0.0	236.0	0.0	0.0	0.0	0.0	0.0	0.0	236.0
1958	0.0	0.0	0.0	0.0	-13.4	-57.3	-217.6	0.0	-103.9	0.0	0.0	0.0	-392.1
1959	0.0	0.0	0.0	0.0	336.3	0.0	0.0	0.0	0.0	-18.2	0.0	0.0	318.1
1960	0.0	0.0	0.0	0.0	2.8	-13.8	0.0	0.0	0.0	0.0	0.0	0.0	-11.1
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962	0.0	0.0	0.0	0.0	0.0	344.1	-32.8	0.0	-441.5	0.0	0.0	0.0	-130.2
1963	0.0	0.0	0.0	0.0	-450.2	0.0	0.0	0.0	16.7	0.0	0.0	0.0	-433.5
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0	0.0	7.4
1967	0.0	0.0	0.0	0.0	0.0	168.8	0.0	0.0	0.0	0.0	0.0	0.0	168.8
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	602.8	0.0	0.0	602.8
1969	0.0	0.0	-148.0	-25.3	-480.0	-260.7	0.0	2,308.4	1,783.1	0.0	0.0	0.0	3,177.4
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.8	-44.6	0.0	0.0	0.0	-47.4
1971	0.0	-91.7	0.0	0.0	0.0	0.0	86.0	0.0	0.0	0.0	-94.4	0.0	-100.1
1972	0.0	0.0	0.0	0.0	-35.3	0.0	246.5	69.2	386.7	0.0	0.0	0.0	667.1
1973	0.0	0.0	2,177.0	-293.9	0.0	0.0	-636.8	-208.2	3,759.6	-132.6	0.0	0.0	4,665.1
1974	0.0	0.0	0.0	0.0	0.0	-13.2	0.0	0.0	0.0	0.0	0.0	0.0	-13.2

Incremental Flow Data (acre-feet)
Node 20--Rattlesnake Creek above S. Branch

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.0	0.0	0.0	0.0	41.9	1,608.1	0.0	0.0	0.0	0.0	0.0	0.0	1,650.0
1976	0.0	0.0	0.0	1,258.3	-230.6	0.0	0.0	0.0	-694.2	0.0	0.0	0.0	333.5
1977	0.0	0.0	0.0	0.0	1,313.8	569.8	-222.1	-164.2	-396.4	0.0	0.0	0.0	1,100.9
1978	0.0	-182.2	0.0	0.0	714.5	94.2	0.0	0.0	0.0	0.0	0.0	0.0	626.5
1979	0.0	0.0	0.0	0.0	0.0	0.0	-93.4	0.0	0.0	-359.5	0.0	0.0	-452.9
1980	0.0	0.0	0.0	0.0	0.0	183.2	0.0	0.0	0.0	0.0	0.0	0.0	183.2
1981	0.0	0.0	0.0	0.0	543.8	0.0	289.8	0.0	0.0	0.0	0.0	0.0	833.6
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	122.4	499.8	701.9	0.0	0.0	0.0	0.0	0.0	0.0	1,324.1
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1985	0.0	0.0	0.0	0.0	0.0	416.5	101.2	0.0	0.0	-276.1	0.0	0.0	241.6
1986	0.0	0.0	0.0	0.0	0.0	156.5	0.0	15.8	0.0	0.0	0.0	0.0	172.3
1987	0.0	0.0	80.8	0.0	47.7	13.2	0.0	0.0	0.0	0.0	0.0	0.0	141.6
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	334.5	234.2	0.0	-229.1	0.0	0.0	0.0	0.0	339.6
1990	0.0	0.0	0.0	0.0	-512.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-512.6
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	839.5	78.7	0.0	0.0	0.0	0.0	0.0	918.2
1993	0.0	-240.1	0.0	0.0	0.0	-51.6	1,203.1	0.0	0.0	0.0	0.0	0.0	911.3
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Incremental Flow Data (acre-feet)
Node 30--S. Branch of Rattlesnake Creek

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.0	0.0	0.0	0.0	207.2	1,953.9	0.0	0.0	0.0	0.0	0.0	0.0	2,161.1
1956	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1957	0.0	0.0	0.0	0.0	35.0	351.6	0.0	0.0	0.0	0.0	0.0	0.0	386.6
1958	0.0	0.0	0.0	0.0	0.0	0.0	117.1	0.0	0.0	0.0	0.0	0.0	117.1
1959	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1960	0.0	0.0	0.0	0.0	60.4	80.5	0.0	0.0	0.0	0.0	0.0	0.0	140.9
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962	0.0	0.0	0.0	0.0	0.0	540.8	0.0	0.0	0.0	0.0	0.0	0.0	540.8
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.0	0.0	0.0	0.0	0.0	24.0
1967	0.0	0.0	0.0	0.0	0.0	345.3	0.0	0.0	0.0	0.0	0.0	0.0	345.3
1968	0.0	0.0	0.0	0.0	0.0	0.0	21.8	0.0	0.0	0.0	0.0	0.0	21.8
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	782.1	955.2	0.0	0.0	0.0	1,737.3
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	17.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6
1972	0.0	0.0	0.0	0.0	0.0	0.0	267.5	0.0	1,146.0	0.0	0.0	0.0	1,413.5
1973	0.0	0.0	2,567.0	169.8	0.0	0.0	0.0	0.0	6,062.0	624.9	0.0	0.0	9,423.7
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	316.3	0.0	0.0	0.0	0.0	316.3

Incremental Flow Data (acre-feet)
Node 30--S. Branch of Rattlesnake Creek

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.0	0.0	0.0	0.0	0.0	383.5	0.0	0.0	0.0	0.0	0.0	0.0	383.5
1976	0.0	0.0	0.0	709.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	709.4
1977	0.0	0.0	0.0	0.0	410.8	2,207.3	0.0	0.0	65.9	0.0	0.0	0.0	2,684.0
1978	0.0	0.0	0.0	0.0	997.8	253.2	0.0	0.0	0.0	0.0	0.0	0.0	1,251.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	59.5	0.0	0.0	0.0	0.0	0.0	59.5
1980	0.0	0.0	0.0	0.0	0.0	444.0	0.0	0.0	0.0	0.0	0.0	0.0	444.0
1981	0.0	0.0	0.0	0.0	245.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	245.6
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	193.5	130.4	127.8	0.0	0.0	0.0	0.0	0.0	0.0	451.7
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1985	0.0	0.0	0.0	0.0	0.0	954.5	243.4	0.0	0.0	255.2	0.0	0.0	1,453.1
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.4	0.0	0.0	0.0	0.0	60.4
1987	0.0	0.0	275.0	0.0	129.3	14.3	0.0	0.0	0.0	0.0	0.0	0.0	418.6
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	126.4	339.8	0.0	242.2	247.7	0.0	0.0	0.0	956.1
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	2,141.2	0.0	0.0	0.0	0.0	0.0	0.0	2,141.2
1993	0.0	0.0	0.0	0.0	0.0	177.1	3,828.0	0.0	0.0	0.0	0.0	0.0	4,005.1
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Incremental Flow Data (acre-feet)
Node 40--Rattlesnake Creek above E. Fork

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.0	0.0	0.0	0.0	448.9	1,559.6	115.6	5.1	186.2	0.0	0.0	0.0	2,315.4
1956	0.0	0.0	0.0	0.0	14.9	0.0	68.3	0.0	0.0	0.0	0.0	0.0	83.2
1957	0.0	0.0	144.0	85.4	317.8	601.8	65.5	0.0	353.9	118.3	5.1	0.0	1,691.8
1958	0.0	0.0	80.8	0.0	40.9	74.0	236.5	0.0	99.3	0.0	0.0	0.0	531.5
1959	0.0	0.0	0.0	0.0	135.3	9.1	125.3	11.3	78.5	283.0	0.0	0.0	642.5
1960	11.3	86.9	73.4	42.6	329.8	359.0	0.0	0.0	14.4	69.7	0.0	0.0	987.1
1961	0.0	0.0	11.8	0.0	127.2	107.2	61.8	190.8	0.0	38.5	52.2	0.0	589.5
1962	0.0	0.0	0.0	0.0	108.6	875.5	32.5	39.8	-227.9	0.0	0.0	0.0	828.4
1963	0.0	0.0	0.0	0.0	-91.7	261.4	0.0	0.0	221.6	0.0	0.0	0.0	391.3
1964	0.0	0.0	0.0	0.0	29.8	0.0	0.0	0.0	6.4	0.0	194.1	12.7	243.0
1965	0.0	0.0	0.0	88.2	187.0	324.1	16.3	12.2	0.0	142.6	0.0	66.9	837.3
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	386.6	0.0	0.0	0.0	0.0	386.6
1967	0.0	0.0	0.0	23.0	9.5	622.3	0.0	55.9	0.0	111.8	0.0	0.0	822.5
1968	0.0	0.0	0.0	0.0	99.8	26.6	333.3	115.6	0.0	-204.2	0.0	0.0	371.1
1969	0.0	42.5	41.7	184.3	-205.4	61.9	46.2	726.6	953.9	14.0	0.0	0.0	1,865.5
1970	0.0	0.0	6.0	145.0	0.0	0.0	0.0	0.0	0.0	24.8	0.0	0.0	175.8
1971	0.0	337.0	0.0	0.0	137.4	131.9	80.4	0.0	0.0	121.1	225.9	0.0	1,033.7
1972	0.0	0.0	0.0	0.0	58.2	59.5	559.2	181.8	963.8	0.0	68.8	0.0	1,891.2
1973	6.9	18.7	1,022.7	188.9	0.0	0.0	134.4	14.5	4,661.2	622.9	0.0	116.9	6,787.0
1974	0.0	0.0	191.2	0.0	33.4	110.9	0.0	69.8	0.0	0.0	4.2	0.0	409.6

Incremental Flow Data (acre-feet)
Node 40--Rattlesnake Creek above E. Fork

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.0	0.0	25.3	7.3	92.7	288.7	0.0	0.0	0.0	0.0	53.1	0.0	467.1
1976	0.0	0.0	0.0	722.5	-75.4	0.0	0.0	0.0	23.9	0.0	0.0	0.0	670.9
1977	0.0	0.0	0.0	29.8	658.8	1,486.6	29.8	90.9	-71.7	0.0	0.0	0.0	2,224.3
1978	0.0	116.6	0.0	0.0	1,334.4	545.7	0.0	0.0	42.6	0.0	0.0	0.0	2,039.2
1979	0.0	0.0	99.3	0.0	74.3	61.4	90.4	0.0	0.0	229.6	0.0	0.0	554.9
1980	0.0	61.4	313.6	0.0	230.2	688.9	21.2	75.7	0.0	0.0	0.0	0.0	1,391.0
1981	0.0	0.0	0.0	0.0	289.6	24.4	-31.3	176.7	42.1	92.3	147.3	0.0	741.1
1982	0.0	0.0	0.0	0.0	248.1	40.3	29.4	0.0	29.8	0.0	0.0	0.0	347.5
1983	0.0	0.0	104.4	474.0	361.8	342.6	0.0	0.0	0.0	90.0	0.0	0.0	1,372.9
1984	0.0	0.0	19.0	235.1	66.9	97.4	0.0	0.0	0.0	75.7	0.0	273.5	767.5
1985	0.0	58.4	0.0	104.0	0.0	1,217.8	558.5	22.1	5.1	496.3	0.0	0.0	2,462.2
1986	0.0	0.0	0.0	15.3	0.0	100.7	49.9	228.7	15.3	4.2	0.0	0.0	414.2
1987	35.3	0.0	473.8	0.0	364.0	311.8	28.4	106.8	28.9	0.0	0.0	0.0	1,348.9
1988	0.0	0.0	0.0	82.6	0.0	5.5	198.3	0.0	7.3	0.0	0.0	0.0	293.8
1989	0.0	0.0	0.0	0.0	316.2	581.6	0.0	-30.8	96.8	0.0	0.0	0.0	963.8
1990	0.0	27.0	0.0	91.0	160.3	0.0	58.2	0.0	13.6	0.0	0.0	0.0	350.1
1991	0.0	0.0	0.0	15.8	5.1	57.3	31.6	38.0	0.0	0.0	11.8	23.0	182.6
1992	22.6	0.0	0.0	0.0	59.5	1,792.7	-183.2	186.5	0.0	0.0	0.0	38.0	1,916.1
1993	103.5	150.0	74.3	16.3	250.4	488.8	2,812.5	243.8	0.0	28.5	0.0	0.0	4,167.9
1994	0.0	0.0	0.0	63.2	0.0	1.6	151.0	46.7	37.1	46.2	0.0	0.0	345.8

Incremental Flow Data (acre-feet)
Node 50--E. Fork of Rattlesnake Creek

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.0	0.0	0.0	0.0	425.6	1,629.5	0.0	0.0	37.3	0.0	0.0	0.0	2,092.4
1956	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1957	0.0	0.0	13.6	0.0	226.2	774.1	0.0	0.0	217.7	0.2	0.0	0.0	1,231.8
1958	0.0	0.0	0.0	0.0	63.6	130.7	334.1	0.0	0.0	0.0	0.0	0.0	528.4
1959	0.0	0.0	0.0	0.0	232.9	0.0	0.0	0.0	0.0	111.9	0.0	0.0	344.8
1960	0.0	0.0	0.0	0.0	262.0	289.7	0.0	0.0	0.0	0.0	0.0	0.0	551.6
1961	0.0	0.0	0.0	0.0	15.9	13.6	0.0	89.3	0.0	0.0	0.0	0.0	118.9
1962	0.0	0.0	0.0	0.0	5.8	905.7	0.2	0.0	0.0	0.0	0.0	0.0	911.7
1963	0.0	0.0	0.0	0.0	0.0	172.4	0.0	0.0	140.1	0.0	0.0	0.0	312.5
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	77.4	0.0	77.4
1965	0.0	0.0	0.0	0.0	52.3	167.7	0.0	0.0	0.0	0.0	0.0	0.0	220.0
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	271.2	0.0	0.0	0.0	0.0	271.2
1967	0.0	0.0	0.0	0.0	0.0	609.4	0.0	0.0	0.0	23.8	0.0	0.0	633.3
1968	0.0	0.0	0.0	0.0	8.1	0.0	187.5	0.0	0.0	115.0	0.0	0.0	310.7
1969	0.0	0.0	0.0	72.3	0.0	0.0	0.0	1,036.2	1,078.5	0.0	0.0	0.0	2,186.9
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	264.7	0.0	0.0	13.1	3.0	15.7	0.0	0.0	0.0	80.4	0.0	376.8
1972	0.0	0.0	0.0	0.0	0.0	0.0	777.1	118.6	1,079.9	0.0	0.0	0.0	1,975.6
1973	0.0	0.0	1,620.4	131.5	0.0	0.0	96.4	0.0	5,298.9	533.3	0.0	0.0	7,680.6
1974	0.0	0.0	31.2	0.0	0.0	0.0	0.0	59.5	0.0	0.0	0.0	0.0	90.8

Incremental Flow Data (acre-feet)
Node 50--E. Fork of Rattlesnake Creek

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.0	0.0	0.0	0.0	145.8	784.4	0.0	0.0	0.0	0.0	0.0	0.0	930.2
1976	0.0	0.0	0.0	793.4	80.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	873.7
1977	0.0	0.0	0.0	0.0	787.8	1,697.7	0.0	0.0	18.6	0.0	0.0	0.0	2,504.0
1978	0.0	0.0	0.0	0.0	1,294.5	560.6	0.0	0.0	0.0	0.0	0.0	0.0	1,855.1
1979	0.0	0.0	0.0	0.0	0.0	0.0	262.0	0.0	0.0	176.7	0.0	0.0	438.7
1980	0.0	0.0	190.3	0.0	77.6	611.7	0.0	0.0	0.0	0.0	0.0	0.0	879.7
1981	0.0	0.0	0.0	0.0	487.4	0.0	95.0	105.7	0.0	0.0	18.6	0.0	706.7
1982	0.0	0.0	0.0	0.0	77.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	77.4
1983	0.0	0.0	0.0	527.6	395.9	359.8	0.0	0.0	0.0	0.0	0.0	0.0	1,283.3
1984	0.0	0.0	0.0	128.0	0.0	15.9	0.0	0.0	0.0	0.0	0.0	158.7	302.6
1985	0.0	0.0	0.0	0.0	0.0	1,012.4	534.9	0.0	0.0	615.2	0.0	0.0	2,162.5
1986	0.0	0.0	0.0	0.0	0.0	142.6	0.0	206.7	0.0	0.0	0.0	0.0	349.2
1987	0.0	0.0	509.8	0.0	349.0	305.6	0.0	15.4	0.0	0.0	0.0	0.0	1,179.9
1988	0.0	0.0	0.0	0.0	0.0	0.0	113.6	0.0	0.0	0.0	0.0	0.0	113.6
1989	0.0	0.0	0.0	0.0	422.2	611.7	0.0	155.7	92.1	0.0	0.0	0.0	1,281.7
1990	0.0	0.0	0.0	0.0	29.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.4
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	1,985.5	0.0	46.7	0.0	0.0	0.0	0.0	2,032.2
1993	0.0	17.4	0.0	0.0	96.4	490.1	3,370.4	105.1	0.0	0.0	0.0	0.0	4,079.4
1994	0.0	0.0	0.0	0.0	0.0	0.0	59.0	0.0	0.0	0.0	0.0	0.0	59.0

Incremental Flow Data (acre-feet)
Node 60--Rattlesnake Creek near Hopewell, KS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.0	0.0	0.0	0.0	-867.8	-1,761.7	-115.6	-5.1	-223.5	0.0	0.0	0.0	-2,973.6
1956	0.0	0.0	0.0	0.0	-14.9	0.0	-68.3	0.0	0.0	0.0	0.0	0.0	-83.2
1957	0.0	0.0	-157.6	-85.4	-455.9	-344.3	-65.5	0.0	-557.0	-118.5	-5.1	0.0	-1,789.3
1958	0.0	0.0	-80.8	0.0	-347.8	-358.7	-609.4	0.0	-99.3	0.0	0.0	0.0	-1,495.9
1959	0.0	0.0	0.0	0.0	-506.6	-9.1	-125.3	-11.3	-78.5	-394.9	0.0	0.0	-1,125.7
1960	-11.3	-86.9	-73.4	-42.6	-654.9	-737.8	0.0	0.0	-14.4	-69.7	0.0	0.0	-1,691.0
1961	0.0	0.0	-11.8	0.0	-143.1	-120.8	-61.8	-280.1	0.0	-38.5	-52.2	0.0	-708.3
1962	0.0	0.0	0.0	0.0	-114.4	-995.9	-142.8	-39.8	-817.0	0.0	0.0	0.0	-2,109.9
1963	0.0	0.0	0.0	0.0	0.0	-433.7	0.0	0.0	-378.4	0.0	0.0	0.0	-812.1
1964	0.0	0.0	0.0	0.0	-29.8	0.0	0.0	0.0	-6.4	0.0	-271.5	-12.7	-320.4
1965	0.0	0.0	0.0	-88.2	-239.3	-491.8	-16.2	-12.2	0.0	-142.6	0.0	-66.9	-1,057.2
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-689.2	0.0	0.0	0.0	0.0	-689.2
1967	0.0	0.0	0.0	-23.0	-9.5	-1,035.7	0.0	-55.8	0.0	-135.6	0.0	0.0	-1,259.7
1968	0.0	0.0	0.0	0.0	-107.9	-26.6	-542.6	-115.6	0.0	-1,302.0	0.0	0.0	-2,094.8
1969	0.0	-42.4	-41.6	-256.5	-303.0	-61.9	-46.2	-1,420.5	-1,213.5	-14.0	0.0	0.0	-3,399.7
1970	0.0	0.0	-6.0	-145.0	0.0	0.0	0.0	0.0	0.0	-24.8	0.0	0.0	-175.8
1971	0.0	-582.4	0.0	0.0	-150.5	-134.9	-182.1	0.0	0.0	-121.1	-306.5	0.0	-1,477.4
1972	0.0	0.0	0.0	0.0	-58.2	-59.5	-1,052.6	-369.5	-1,456.6	0.0	-68.8	0.0	-3,065.1
1973	-6.9	-18.7	-1,798.4	-549.7	0.0	0.0	-335.5	-14.4	-429.7	-849.3	0.0	-116.9	-4,119.5
1974	0.0	0.0	-222.4	0.0	-33.4	-110.9	0.0	-445.6	0.0	0.0	-4.2	0.0	-816.6

Incremental Flow Data (acre-feet)
Node 60--Rattlesnake Creek near Hopewell, KS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.0	0.0	-25.3	-7.3	-433.5	-1,811.3	0.0	148.7	0.0	0.0	-53.1	0.0	-2,181.8
1976	0.0	0.0	0.0	-1,037.9	-1,019.4	0.0	0.0	0.0	-23.9	0.0	0.0	0.0	-2,081.2
1977	0.0	0.0	0.0	-29.8	-1,371.4	-1,797.5	-43.9	-90.9	-320.9	0.0	0.0	0.0	-3,654.4
1978	0.0	-116.6	0.0	0.0	-1,550.0	-852.9	0.0	0.0	-42.6	0.0	0.0	0.0	-2,562.0
1979	0.0	0.0	-99.3	0.0	-74.3	-61.4	-699.3	0.0	0.0	-451.1	0.0	0.0	-1,385.4
1980	0.0	-61.4	-452.5	0.0	-307.9	-992.6	-21.2	-75.6	0.0	0.0	0.0	0.0	-1,911.1
1981	0.0	0.0	0.0	0.0	-993.4	-24.4	-353.5	-282.4	-42.1	-92.3	-165.9	0.0	-1,953.9
1982	0.0	0.0	0.0	0.0	-325.4	-40.3	-29.4	0.0	-29.8	0.0	0.0	0.0	-424.9
1983	0.0	0.0	-104.4	-869.9	-760.1	-866.7	0.0	0.0	0.0	-90.0	0.0	0.0	-2,691.1
1984	0.0	0.0	-18.9	-363.0	-66.9	-113.4	0.0	0.0	0.0	-75.6	0.0	-432.2	-1,070.0
1985	0.0	-58.4	0.0	-104.0	0.0	-1,230.0	-1,006.6	-22.1	-5.1	-742.6	0.0	0.0	-3,168.8
1986	0.0	0.0	0.0	-15.3	0.0	-379.9	-49.9	-377.0	-15.3	-4.2	0.0	0.0	-841.7
1987	-35.3	0.0	-654.2	0.0	-292.1	-252.2	-28.4	-90.0	-28.9	0.0	0.0	0.0	-1,381.1
1988	0.0	0.0	0.0	-82.6	0.0	-5.5	-311.8	0.0	-7.3	0.0	0.0	0.0	-407.3
1989	0.0	0.0	0.0	0.0	-779.8	-338.3	0.0	-1,049.3	-436.6	0.0	0.0	0.0	-2,603.9
1990	0.0	-27.0	0.0	-91.0	-189.7	0.0	-58.2	0.0	-13.6	0.0	0.0	0.0	-379.4
1991	0.0	0.0	0.0	-15.8	-5.1	-57.2	-31.6	-38.0	0.0	0.0	-11.8	-23.0	-182.5
1992	-22.5	0.0	0.0	0.0	-59.5	-949.7	-42.0	394.3	0.0	0.0	0.0	-38.0	-717.5
1993	-103.5	-167.4	-74.3	-16.2	-346.8	-55.5	-2,153.5	-348.9	0.0	-28.4	0.0	0.0	-3,294.5
1994	0.0	0.0	0.0	-63.2	0.0	-1.6	-210.0	-46.7	-37.1	-46.2	0.0	0.0	-404.8

Incremental Flow Data (acre-feet)
Node 70--Unnamed Tributary of Rattlesnake Creek

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1956	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1957	0.0	0.0	0.0	7.5	223.7	1,173.6	31.5	0.0	30.3	0.0	0.0	0.0	1,466.6
1958	0.0	0.0	0.0	0.0	545.6	219.4	226.9	0.0	63.9	0.0	0.0	0.0	1,055.8
1959	0.0	0.0	0.0	0.0	345.2	14.1	0.0	0.0	0.0	0.0	0.0	0.0	359.2
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.3	0.0	0.0	0.0	0.0	80.3
1962	0.0	0.0	0.0	0.0	0.0	137.1	139.8	44.8	0.0	0.0	0.0	0.0	321.7
1963	0.0	0.0	0.0	0.0	0.0	147.9	0.0	0.0	0.0	0.0	0.0	0.0	147.9
1964	0.0	0.0	0.0	0.0	0.0	0.0	0.0	101.4	0.0	0.0	33.1	0.0	134.5
1965	0.0	0.0	0.0	0.0	97.5	7.7	0.0	0.0	0.0	0.0	0.0	0.0	105.2
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	91.8	0.0	0.0	91.8
1969	0.0	0.0	0.0	0.0	0.0	0.0	0.0	450.4	520.2	0.0	0.0	0.0	970.6
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	55.8	0.0	21.8	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	80.6
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	0.0	0.0	0.0	0.0	8.4
1973	0.0	0.0	994.9	0.0	0.0	0.0	0.0	0.0	6,704.5	209.3	0.0	0.0	7,908.7
1974	0.0	0.0	0.0	42.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.5

Incremental Flow Data (acre-feet)
Node 70--Unnamed Tributary of Rattlesnake Creek

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.0	0.0	0.0	0.0	0.0	0.0	0.0	893.8	0.0	0.0	0.0	0.0	893.8
1976	0.0	0.0	0.0	1,166.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,166.0
1977	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978	0.0	0.0	0.0	0.0	508.8	25.2	0.0	0.0	0.0	0.0	0.0	0.0	534.0
1979	0.0	0.0	0.0	0.0	0.0	0.0	614.7	0.0	0.0	41.8	0.0	0.0	656.5
1980	0.0	0.0	432.5	0.0	0.0	7.9	0.0	17.5	0.0	0.0	0.0	0.0	458.0
1981	0.0	0.0	0.0	0.0	74.4	0.0	605.5	0.0	0.0	0.0	0.0	0.0	679.9
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	0.0	118.0	83.0	0.0	0.0	0.0	0.0	0.0	0.0	201.0
1984	0.0	0.0	5.1	43.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.7
1985	0.0	0.0	0.0	0.0	0.0	78.4	0.0	0.0	0.0	457.3	0.0	0.0	535.8
1986	0.0	0.0	0.0	0.0	0.0	242.1	0.0	708.8	0.0	0.0	0.0	0.0	950.9
1987	0.0	0.0	728.0	0.0	707.8	1,606.8	409.2	1,194.9	0.0	0.0	0.0	0.0	4,646.7
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	273.1	1,140.5	0.0	0.0	0.0	0.0	0.0	0.0	1,413.6
1990	0.0	0.0	0.0	0.0	69.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.6
1991	0.0	0.0	0.0	0.0	0.0	0.0	44.3	0.0	0.0	0.0	0.0	0.0	44.3
1992	0.0	0.0	0.0	0.0	0.0	1,207.3	0.0	1,721.5	0.0	0.0	0.0	0.0	2,928.8
1993	0.0	0.0	0.0	0.0	30.2	1,132.2	158.6	50.8	0.0	0.0	0.0	0.0	1,371.8
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Incremental Flow Data (acre-feet)
Node 80--Rattlesnake Creek near Macksville, KS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	62.5	60.1	65.6	67.8	132.8	-255.5	96.8	69.9	139.7	60.6	41.4	39.5	581.2
1956	37.9	35.2	36.4	37.1	137.2	43.5	20.5	9.6	8.2	8.0	7.5	7.6	388.7
1957	7.7	7.1	39.1	103.4	310.4	727.3	312.2	103.7	242.8	159.8	106.4	70.1	2,189.9
1958	64.7	54.6	132.9	65.8	58.9	480.4	540.1	196.9	368.8	132.9	105.7	93.4	2,294.9
1959	85.5	75.4	91.9	74.2	402.7	175.1	96.1	46.8	37.2	107.0	36.0	35.1	1,263.0
1960	35.5	43.6	41.9	45.3	113.8	97.5	24.3	16.1	13.9	23.9	12.1	11.9	479.9
1961	11.4	10.5	19.2	13.3	60.1	17.0	38.6	128.2	9.1	9.1	11.5	5.4	333.5
1962	4.9	4.1	4.3	3.9	38.9	-34.5	181.3	171.9	-81.3	32.4	24.6	20.4	370.7
1963	18.4	15.5	16.1	12.7	12.7	192.4	15.0	2.0	3.8	2.9	2.3	1.9	295.7
1964	1.4	1.0	0.8	0.0	0.0	0.0	0.0	74.2	0.0	0.0	93.3	0.0	170.7
1965	0.0	0.0	0.0	0.0	86.3	51.6	0.0	0.0	0.0	0.0	0.0	0.0	137.9
1966	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967	0.0	0.0	0.0	0.0	0.0	-298.3	0.0	0.0	0.0	0.0	0.0	0.0	-298.3
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-311.0	0.0	0.0	-311.0
1969	0.0	0.0	0.0	0.0	33.7	0.0	0.0	-309.5	-56.7	0.0	0.0	0.0	-332.5
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	-92.7	0.0	23.1	0.0	0.0	0.0	0.0	0.0	0.0	13.1	0.0	-56.5
1972	0.0	0.0	0.0	0.0	0.0	0.0	-294.2	15.7	-531.7	0.0	0.0	0.0	-810.2
1973	0.0	0.0	-333.0	-43.3	0.0	0.0	27.2	0.0	2,138.4	-73.4	0.0	36.2	1,752.2
1974	0.0	0.0	0.0	43.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.0

Incremental Flow Data (acre-feet)
Node 80--Rattlesnake Creek near Macksville, KS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.0	0.0	0.0	0.0	0.0	-588.2	0.0	427.8	0.0	0.0	0.0	0.0	-160.4
1976	0.0	0.0	0.0	96.4	-276.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-180.1
1977	0.0	0.0	0.0	0.0	-422.0	-662.5	0.0	0.0	0.0	0.0	0.0	0.0	-1,084.5
1978	0.0	0.0	0.0	0.0	-314.5	-152.0	0.0	0.0	0.0	0.0	0.0	0.0	-466.5
1979	0.0	0.0	11.1	0.0	0.0	0.0	-112.7	0.0	0.0	44.0	0.0	0.0	-57.6
1980	0.0	0.0	-50.8	0.0	0.0	-258.5	0.0	18.5	0.0	0.0	0.0	0.0	-290.7
1981	0.0	0.0	0.0	0.0	-161.2	0.0	54.2	0.0	0.0	0.0	0.0	0.0	-107.0
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	-195.4	-70.7	-127.1	0.0	0.0	0.0	0.0	0.0	0.0	-393.2
1984	0.0	0.0	9.0	40.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	109.4
1985	0.0	0.0	0.0	14.5	0.0	-285.7	-295.7	0.0	0.0	86.4	0.0	0.0	-480.5
1986	0.0	0.0	0.0	25.9	0.0	94.6	0.0	135.6	0.0	0.0	0.0	0.0	256.1
1987	0.0	0.0	59.7	0.0	326.1	197.5	94.0	145.7	0.0	0.0	0.0	0.0	823.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	-127.6	418.7	0.0	-325.6	0.0	0.0	0.0	0.0	-34.5
1990	0.0	0.0	0.0	0.0	-28.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-28.0
1991	0.0	0.0	0.0	0.0	0.0	15.6	27.0	8.5	0.0	0.0	0.0	0.0	51.0
1992	0.0	0.0	0.0	0.0	0.0	276.9	0.0	821.5	0.0	0.0	0.0	0.0	1,098.3
1993	0.0	0.0	0.0	0.0	32.8	489.7	-614.0	13.0	0.0	0.0	0.0	0.0	-78.6
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Incremental Flow Data (acre-feet)
Node 90--Rattlesnake Creek near St. John, KS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	182.2	178.8	194.1	198.7	251.1	-66.1	131.0	-2.1	65.8	-27.3	-31.8	-28.7	1,045.7
1956	-24.9	-19.4	-18.1	-6.9	86.4	-33.5	-18.2	-9.6	-8.1	-6.7	-5.4	-4.9	-69.2
1957	-4.5	-3.9	-25.9	-64.9	948.4	1,583.3	619.2	150.0	577.3	300.9	147.7	105.8	4,333.5
1958	98.9	93.1	225.0	136.5	270.9	598.5	936.5	389.8	877.2	391.0	291.1	280.8	4,589.3
1959	272.1	243.0	318.8	261.0	1,237.6	379.9	513.9	198.5	115.0	202.3	87.8	89.9	3,919.7
1960	101.9	140.9	242.0	181.3	315.2	418.0	169.0	78.6	50.6	33.7	32.5	38.5	1,802.3
1961	33.6	31.4	38.2	40.9	100.1	45.3	24.7	105.8	15.5	15.3	28.8	10.1	489.5
1962	13.6	12.9	16.5	19.9	-11.4	63.4	100.3	24.5	-45.6	-22.9	-15.1	-10.2	145.8
1963	-8.0	-5.9	-5.5	-3.0	-2.6	87.7	19.4	1.7	-0.9	0.5	1.5	2.5	87.3
1964	3.3	3.6	4.3	4.5	4.7	1.6	0.0	-175.6	0.0	0.0	-126.4	0.0	-280.0
1965	0.0	21.4	0.1	0.5	-33.9	224.7	4.3	1.4	1.8	2.7	3.3	4.4	230.8
1966	4.7	4.8	5.2	5.4	5.8	4.4	2.0	0.0	0.0	0.0	0.0	0.0	32.3
1967	0.0	0.0	0.0	0.0	0.0	-375.3	0.0	0.0	48.1	0.0	0.0	0.0	-327.1
1968	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-385.0	0.0	0.0	-385.0
1969	0.0	0.0	0.0	0.0	-33.7	0.0	0.0	-7.1	264.5	0.0	0.0	0.0	223.7
1970	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.8	0.0	0.0	16.8
1971	0.0	0.0	0.0	-44.9	0.0	0.0	0.0	0.0	0.0	0.0	-16.0	0.0	-61.0
1972	0.0	0.0	0.0	0.0	0.0	0.0	-471.2	-24.1	-677.0	0.0	0.0	0.0	-1,172.3
1973	0.0	0.0	-669.0	-27.5	0.0	0.0	-27.2	0.0	4,731.4	582.1	5.3	-9.8	4,585.4
1974	5.2	3.6	3.6	170.7	111.4	5.4	0.0	0.0	0.0	0.0	0.0	0.0	299.9

Incremental Flow Data (acre-feet)
Node 90--Rattlesnake Creek near St. John, KS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.0	0.0	0.0	0.0	0.0	-802.3	0.0	441.2	0.0	0.0	0.0	0.0	-361.1
1976	0.0	0.0	0.0	-309.2	-392.3	0.0	0.0	0.0	7.3	0.0	0.0	0.0	-694.2
1977	0.0	0.0	0.0	0.0	-588.5	-824.4	0.0	0.0	42.2	0.0	0.0	0.0	-1,370.7
1978	0.0	0.0	0.0	0.0	-676.1	-404.3	0.0	0.0	0.0	0.0	0.0	0.0	-1,080.3
1979	0.0	0.0	-11.1	0.0	0.0	0.0	-402.6	0.0	0.0	-85.8	0.0	0.0	-499.5
1980	0.0	0.0	-316.6	0.0	0.0	-474.8	0.0	-36.0	0.0	0.0	0.0	0.0	-827.4
1981	0.0	0.0	0.0	0.0	-425.2	0.0	-107.0	0.0	0.0	0.0	0.0	0.0	-532.2
1982	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983	0.0	0.0	0.0	-252.2	-394.3	-387.2	0.0	0.0	0.0	0.0	0.0	0.0	-1,033.7
1984	0.0	0.0	-14.1	-83.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-60.0	-158.1
1985	0.0	0.0	0.0	100.8	0.0	-451.1	-98.9	0.0	0.0	162.3	0.0	0.0	-287.0
1986	0.0	0.0	0.0	-25.9	0.0	-81.5	0.0	-140.2	0.0	7.9	0.0	0.0	-239.7
1987	0.0	0.0	252.6	9.5	440.5	662.5	78.8	546.5	0.0	0.0	0.0	0.0	1,990.6
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	-335.0	4.1	0.0	-258.2	0.0	0.0	0.0	0.0	-589.1
1990	0.0	0.0	0.0	13.5	586.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	599.9
1991	0.0	0.0	0.0	0.0	0.0	-15.6	-71.3	-8.5	0.0	0.0	0.0	0.0	-95.4
1992	0.0	0.0	0.0	0.0	0.0	268.6	0.0	456.2	0.0	0.0	0.0	0.0	724.8
1993	0.0	0.0	5.8	0.0	330.9	1,639.8	21.4	112.5	0.0	0.0	0.0	0.0	2,110.5
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Incremental Flow Data (acre-feet)
Node 100--Wild Horse Creek

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.0	0.0	0.0	0.0	0.0	34.6	0.0	0.0	149.8	27.6	0.0	0.0	212.0
1956	0.0	0.0	0.0	5.9	8.9	0.0	0.0	0.0	0.0	29.7	0.0	0.0	44.5
1957	0.0	0.0	131.8	106.5	1,624.0	606.8	86.3	0.0	955.9	187.9	10.7	0.0	3,709.9
1958	0.0	0.0	185.7	1.3	323.4	309.1	748.7	0.7	219.4	123.3	0.6	0.5	1,912.6
1959	0.4	0.3	66.5	0.4	814.8	0.7	551.5	7.6	9.6	207.0	0.0	0.0	1,658.9
1960	0.0	31.5	125.4	0.3	74.9	404.0	0.4	0.0	15.8	17.4	0.0	0.0	669.7
1961	0.0	0.0	0.0	0.0	410.8	290.7	51.4	483.3	0.0	1.5	35.5	0.0	1,273.2
1962	0.0	0.0	0.0	0.0	0.0	132.8	463.6	47.9	10.6	0.0	0.0	0.0	654.9
1963	0.0	0.0	0.0	0.0	0.0	77.1	161.0	0.0	19.2	0.0	0.0	0.0	257.2
1964	0.0	0.0	0.0	0.0	22.2	0.0	0.0	16.4	0.0	0.0	57.6	14.3	110.4
1965	0.0	7.6	0.0	20.4	139.3	1,186.6	0.0	715.2	1,177.0	36.8	0.0	84.8	3,367.8
1966	0.0	108.4	0.0	32.9	0.0	0.0	120.5	0.0	0.0	0.0	0.0	0.0	261.8
1967	0.0	0.0	0.0	91.1	0.0	405.4	0.0	0.0	181.3	7.7	0.0	0.0	685.3
1968	0.0	0.0	0.0	0.0	15.1	0.0	54.7	0.0	0.0	789.9	15.9	0.0	875.6
1969	0.0	29.7	0.0	23.8	65.2	0.0	16.4	787.8	1,325.1	59.3	0.0	0.0	2,307.2
1970	0.0	0.0	1.5	84.4	107.9	340.6	0.0	0.0	84.8	106.7	0.0	0.0	725.8
1971	0.0	9.2	0.0	10.9	33.0	0.0	462.1	26.6	0.0	53.5	769.3	0.0	1,364.6
1972	0.0	0.0	0.0	0.0	70.2	226.2	0.0	108.2	0.0	0.0	23.8	0.0	428.4
1973	0.0	3.2	1,341.5	78.5	0.0	15.0	48.9	0.0	7,279.6	1,326.5	0.0	84.8	10,178.1
1974	0.0	0.0	14.3	455.4	374.3	0.0	0.0	19.3	0.0	1.5	0.0	0.0	864.7

Incremental Flow Data (acre-feet)
Node 100--Wild Horse Creek

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.0	0.0	0.0	0.0	33.4	42.5	0.0	252.0	0.0	0.0	14.2	0.0	342.1
1976	0.0	0.0	33.4	1,157.7	164.1	10.0	6.1	0.0	578.2	28.0	0.0	0.0	1,977.6
1977	0.0	0.0	0.0	13.4	175.9	73.1	0.0	142.5	281.3	34.3	0.0	0.0	720.4
1978	0.0	0.0	0.0	0.0	212.5	14.2	0.0	0.0	108.7	0.0	0.0	0.0	335.4
1979	0.0	0.0	42.2	0.0	67.7	0.0	238.1	29.3	0.0	218.8	0.0	0.0	595.9
1980	0.0	0.0	209.9	3.8	16.4	0.0	0.0	82.0	0.0	0.0	0.0	0.0	312.1
1981	0.0	0.0	10.1	0.0	229.6	2,619.1	483.9	0.0	0.9	21.8	70.1	0.0	3,435.6
1982	0.0	0.0	0.0	0.0	340.1	111.4	95.4	0.0	0.0	53.9	0.0	0.0	600.8
1983	0.0	2.0	0.0	43.3	91.9	266.5	0.0	0.0	0.0	0.0	0.0	0.0	403.8
1984	0.0	0.0	102.9	182.6	0.0	0.0	0.0	138.3	0.0	41.8	0.0	273.8	739.4
1985	0.0	27.7	0.0	419.4	0.0	704.5	141.1	68.9	14.6	822.0	0.0	0.0	2,198.1
1986	0.0	0.0	0.0	118.6	15.9	44.2	2,613.2	1,194.9	11.7	155.3	0.0	0.0	4,153.8
1987	0.0	0.0	1,513.7	181.1	722.3	514.6	129.7	343.0	0.0	0.0	0.0	0.0	3,404.5
1988	0.0	0.0	0.0	69.3	0.0	5.1	11.4	0.0	0.0	0.0	0.0	0.0	85.7
1989	0.0	0.0	0.0	0.0	252.4	598.5	18.4	6.4	22.1	0.0	0.0	0.0	897.8
1990	0.0	12.0	16.4	150.6	1,359.3	19.2	37.2	207.4	227.5	0.0	0.0	0.0	2,029.5
1991	0.0	0.0	0.0	2.6	0.0	41.3	148.9	0.0	0.0	0.0	0.0	9.3	202.1
1992	2.3	0.0	0.0	0.0	56.4	834.7	2.3	1,074.6	0.0	7.7	9.2	171.3	2,158.4
1993	119.2	36.1	640.3	19.2	919.5	2,594.4	2,322.9	1.9	0.0	0.0	0.0	0.0	6,653.3
1994	0.0	0.0	0.0	12.9	0.0	0.0	34.5	0.0	0.0	0.0	0.0	0.0	47.4

Incremental Flow Data (acre-feet)
Node 110--Rattlesnake Creek below Zenith Gage

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	312.4	291.6	281.3	309.3	306.7	278.1	367.6	273.2	577.9	356.6	229.7	221.5	3,806.0
1956	211.8	210.2	192.8	261.1	272.1	198.4	255.2	161.6	128.2	248.0	114.2	107.3	2,360.8
1957	98.7	90.0	523.6	478.2	2,801.8	800.3	611.9	454.5	1,347.8	848.7	513.5	434.5	9,003.7
1958	411.2	380.6	849.0	447.7	1,092.1	915.4	1,229.0	555.6	819.2	648.0	464.9	454.4	8,267.2
1959	436.9	385.8	519.0	391.0	1,760.7	497.7	1,984.8	592.6	565.5	910.6	482.0	471.3	8,998.0
1960	470.0	509.0	792.7	457.4	650.5	1,093.6	527.1	522.9	558.5	549.1	394.2	412.2	6,937.2
1961	364.3	321.1	403.5	371.3	868.0	672.5	594.3	887.7	399.2	439.3	473.7	336.3	6,131.1
1962	337.8	277.9	296.0	293.6	306.4	637.9	634.4	400.1	410.9	299.7	267.5	244.2	4,406.3
1963	232.0	196.3	226.2	196.8	255.0	416.5	696.4	232.4	359.5	196.9	154.0	148.6	3,310.6
1964	134.8	122.6	128.5	153.7	235.3	143.8	117.2	112.6	105.5	67.0	239.6	125.1	1,685.8
1965	65.1	111.6	56.2	175.2	635.9	2,200.1	296.8	425.6	742.0	406.6	216.5	433.3	5,764.9
1966	200.5	458.7	182.9	322.2	188.3	242.7	580.4	217.9	143.1	114.5	100.6	95.4	2,847.1
1967	93.0	73.7	78.2	332.3	100.8	771.6	161.8	144.8	457.1	140.0	86.6	81.3	2,521.3
1968	66.6	56.5	55.9	60.4	142.4	87.3	248.1	80.5	31.9	957.9	126.7	61.0	1,975.1
1969	50.8	122.1	87.3	126.7	311.9	100.1	113.9	962.9	1,289.9	303.6	142.4	129.9	3,741.6
1970	112.8	91.7	159.9	391.0	490.8	366.7	118.0	132.0	277.5	324.9	85.7	83.6	2,634.7
1971	75.5	138.8	68.0	201.3	236.4	93.3	448.1	98.3	64.8	188.1	436.0	53.7	2,102.4
1972	37.9	28.5	23.7	40.5	221.3	323.1	28.8	235.5	-53.0	22.3	109.9	9.8	1,028.3
1973	2.5	42.6	1,113.8	350.1	134.1	134.3	243.3	86.0	5,736.9	1,783.4	464.1	712.1	10,803.1
1974	477.0	397.1	482.0	1,070.7	1,042.9	513.9	420.1	525.1	350.5	388.4	297.5	276.7	6,242.0

Incremental Flow Data (acre-feet)
Node 110--Rattlesnake Creek below Zenith Gage

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	259.0	239.1	253.4	238.4	346.4	190.3	218.4	182.8	211.7	166.4	227.4	154.3	2,687.6
1976	134.1	126.1	206.1	1,467.6	598.3	269.1	292.6	192.1	539.2	243.8	152.0	145.5	4,366.7
1977	140.5	108.3	161.8	174.3	676.0	289.9	184.1	322.0	748.8	256.7	162.3	136.5	3,361.1
1978	117.8	134.0	107.3	97.9	159.0	203.3	132.2	105.2	309.0	73.1	87.3	52.3	1,578.3
1979	47.4	36.4	148.7	44.0	212.1	75.1	119.1	76.6	17.0	280.2	26.8	6.4	1,089.8
1980	15.0	5.5	246.4	65.0	117.8	-78.8	4.5	154.1	0.0	14.2	0.0	3.3	547.1
1981	0.0	0.0	33.2	0.0	304.5	1,059.9	403.8	12.4	32.9	57.2	86.4	0.0	1,990.2
1982	0.0	8.9	0.0	0.0	520.3	154.9	99.0	21.5	20.2	41.8	0.0	0.0	866.6
1983	0.0	18.1	9.4	57.6	167.0	41.5	0.0	0.0	0.0	6.8	0.0	0.0	300.4
1984	0.0	0.0	107.9	245.9	0.0	8.6	0.0	-66.0	0.0	57.4	0.0	429.3	783.1
1985	0.0	41.5	0.0	771.2	3.6	340.9	71.4	11.8	11.9	960.0	9.5	1.2	2,223.1
1986	0.0	0.0	0.0	163.4	34.0	-61.6	1,024.1	1,031.2	64.0	269.4	17.9	14.9	2,557.3
1987	13.5	29.6	1,635.4	320.1	747.2	216.1	266.0	202.1	140.6	114.7	92.4	84.8	3,862.6
1988	85.4	47.8	46.5	181.4	51.8	117.9	93.4	21.0	24.8	12.7	4.2	0.0	687.0
1989	0.0	0.0	1.4	0.0	546.0	183.2	132.5	54.8	71.3	8.1	0.0	0.0	997.2
1990	0.0	30.3	19.9	181.6	2,051.4	92.1	95.5	218.3	242.9	66.2	91.9	31.1	3,121.4
1991	23.9	13.7	37.7	57.7	50.2	138.6	-17.1	8.4	0.0	0.0	28.2	28.1	369.2
1992	18.7	0.0	0.5	0.0	96.8	363.6	49.3	-120.3	9.1	38.9	36.8	265.2	758.7
1993	376.7	81.7	526.0	87.4	1,339.0	2,392.6	2,117.9	342.2	313.8	281.9	238.6	219.2	8,316.8
1994	200.9	161.5	157.4	227.7	168.3	136.9	252.6	114.7	89.6	108.1	72.2	64.6	1,754.4

Incremental Flow Data (acre-feet)
Node 200--Unit 5--Little Salt Marsh

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	42.5	49.5	37.7	49.0	42.0	70.5	91.8	43.7	150.6	68.2	40.9	40.3	726.7
1956	39.3	53.4	36.7	56.3	55.7	34.8	56.2	38.4	37.8	62.8	38.2	39.5	549.2
1957	39.5	35.2	229.1	129.7	503.3	252.2	95.4	67.9	253.5	144.3	71.9	57.2	1,879.0
1958	53.4	49.5	198.8	60.7	212.5	129.8	242.9	79.3	186.2	81.9	55.2	53.0	1,403.3
1959	49.7	45.6	68.2	43.8	305.4	69.2	291.3	66.7	61.8	119.2	47.0	45.9	1,213.7
1960	66.4	55.8	131.4	58.7	75.7	113.9	52.5	59.4	62.6	61.8	40.1	46.1	824.4
1961	36.7	33.0	48.5	45.5	165.1	70.1	69.0	95.8	40.7	52.7	66.7	37.0	760.7
1962	40.7	32.0	36.5	34.4	38.1	164.6	147.9	103.0	61.3	44.0	40.9	36.9	780.3
1963	36.0	30.6	38.4	32.0	53.1	62.4	121.9	37.3	49.9	38.0	33.0	34.3	566.8
1964	34.7	32.2	34.3	33.8	53.7	58.8	39.3	40.1	40.0	39.0	67.9	60.8	534.6
1965	52.2	60.8	41.6	48.8	160.6	551.5	80.4	50.7	81.8	60.2	39.4	76.4	1,304.4
1966	37.7	106.5	38.5	55.3	36.8	79.0	127.7	80.6	42.7	43.2	41.3	42.2	731.5
1967	41.4	37.4	40.8	84.4	58.9	181.7	114.1	42.6	75.6	41.4	42.2	42.7	803.1
1968	42.8	39.7	41.9	42.7	48.8	41.0	100.3	41.8	42.1	253.3	45.7	43.9	783.9
1969	46.4	51.4	42.7	50.8	143.3	50.5	59.0	448.2	341.3	84.6	52.1	52.0	1,422.3
1970	49.9	43.7	60.7	116.7	94.3	183.8	50.7	48.2	73.7	91.2	45.6	59.4	917.8
1971	71.8	100.1	66.3	60.7	117.4	90.5	76.9	47.3	50.3	83.7	123.9	58.9	947.9
1972	52.6	47.8	50.2	59.9	120.3	83.4	51.8	82.3	67.1	56.3	61.0	50.7	783.4
1973	49.8	46.1	415.0	116.5	70.9	63.5	99.6	73.5	1,024.7	336.8	76.5	113.9	2,486.9
1974	64.1	51.1	67.9	207.6	168.6	71.3	54.9	82.7	49.3	78.0	47.8	43.0	986.3

Incremental Flow Data (acre-feet)
Node 200--Unit 5--Little Salt Marsh

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	41.7	49.3	46.5	53.4	79.1	55.3	43.1	46.3	47.7	39.0	52.0	38.8	592.2
1976	38.8	36.3	57.1	341.3	128.2	55.9	62.5	39.5	68.0	58.8	37.4	38.9	962.6
1977	41.2	35.1	43.5	48.3	198.1	147.4	47.6	125.4	144.4	66.3	47.7	42.9	988.1
1978	42.3	40.3	42.0	41.4	64.2	77.4	40.9	52.7	125.7	45.9	45.7	45.1	663.7
1979	45.3	42.7	70.0	43.6	70.4	42.9	133.6	42.4	45.6	111.6	46.5	47.4	742.2
1980	46.3	44.9	111.6	49.3	50.8	33.0	50.3	85.3	46.5	45.7	43.6	48.7	656.0
1981	43.5	38.6	47.9	49.1	205.2	322.8	125.0	61.5	65.6	56.7	86.6	53.7	1,156.3
1982	51.7	58.0	50.6	46.6	197.7	69.1	65.6	52.7	49.6	59.7	46.0	46.5	793.7
1983	45.3	48.0	48.1	51.3	98.4	51.8	47.9	47.2	50.4	80.1	49.2	44.6	662.2
1984	43.4	40.0	127.4	190.0	58.7	59.6	52.3	44.6	47.5	66.2	45.1	196.4	971.2
1985	49.1	44.2	47.3	348.4	59.9	193.5	114.8	69.8	68.5	271.1	60.7	59.2	1,386.5
1986	55.5	48.6	54.4	98.6	51.4	72.0	99.1	198.3	53.8	87.2	49.1	47.4	915.3
1987	46.3	43.2	338.5	114.2	185.5	76.2	94.4	80.8	44.7	45.7	43.4	44.1	1,157.0
1988	44.3	41.8	44.2	67.1	44.9	42.8	51.2	52.9	42.7	43.6	42.3	43.4	561.0
1989	43.0	38.3	42.2	40.1	207.3	187.1	115.4	57.3	61.0	51.9	48.8	48.9	941.4
1990	48.1	42.4	52.6	86.6	437.2	62.1	52.8	160.3	81.0	49.4	46.6	48.4	1,167.3
1991	47.7	42.6	52.7	44.4	50.5	59.1	35.0	48.8	43.0	43.6	44.5	49.4	561.0
1992	46.2	39.1	42.7	39.5	78.5	259.2	81.6	72.4	55.3	60.0	52.4	98.3	925.1
1993	110.5	90.3	129.0	53.6	273.9	400.1	1,175.6	109.6	84.5	79.3	71.8	70.9	2,649.2
1994	64.5	54.8	57.8	79.8	55.7	53.3	77.8	52.8	51.1	57.8	49.8	51.6	706.8

Incremental Flow Data (acre-feet)
Node 210--Unit 7

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	1.7	2.0	1.5	2.0	1.7	2.8	3.7	1.8	6.1	2.7	1.6	1.6	29.2
1956	1.6	2.2	1.5	2.3	2.2	1.4	2.3	1.5	1.5	2.5	1.5	1.6	22.1
1957	1.6	1.4	9.2	5.2	20.2	10.1	3.8	2.7	10.2	5.8	2.9	2.3	75.6
1958	2.2	2.0	8.0	2.4	8.6	5.2	9.8	3.2	7.5	3.3	2.2	2.1	56.4
1959	2.0	1.8	2.7	1.8	12.3	2.8	11.7	2.7	2.5	4.8	1.9	1.9	48.8
1960	2.7	2.2	5.3	2.4	3.0	4.6	2.1	2.4	2.5	2.5	1.6	1.9	33.1
1961	1.5	1.3	2.0	1.8	6.6	2.8	2.8	3.8	1.6	2.1	2.7	1.5	30.6
1962	1.6	1.3	1.5	1.4	1.5	6.6	5.9	4.1	2.5	1.8	1.6	1.5	31.4
1963	1.5	1.2	1.5	1.3	2.1	2.5	4.9	1.5	2.0	1.5	1.3	1.4	22.8
1964	1.4	1.3	1.4	1.4	2.2	2.4	1.6	1.6	1.6	1.6	2.7	2.5	21.5
1965	2.1	2.5	1.7	2.0	6.5	22.2	3.2	2.0	3.3	2.4	1.6	3.1	52.5
1966	1.5	4.3	1.5	2.2	1.5	3.2	5.1	3.2	1.7	1.7	1.7	1.7	29.4
1967	1.7	1.5	1.6	3.4	2.4	7.3	4.6	1.7	3.0	1.7	1.7	1.7	32.3
1968	1.7	1.6	1.7	1.7	2.0	1.6	4.0	1.7	1.7	10.2	1.8	1.8	31.5
1969	1.9	2.1	1.7	2.0	5.8	2.0	2.4	18.0	13.7	3.4	2.1	2.1	57.2
1970	2.0	1.8	2.4	4.7	3.8	7.4	2.0	1.9	3.0	3.7	1.8	2.4	36.9
1971	2.9	4.0	2.7	2.4	4.7	3.6	3.1	1.9	2.0	3.4	5.0	2.4	38.1
1972	2.1	1.9	2.0	2.4	4.8	3.3	2.1	3.3	2.7	2.3	2.5	2.0	31.5
1973	2.0	1.9	16.7	4.7	2.8	2.6	4.0	3.0	41.2	13.6	3.1	4.6	100.0
1974	2.6	2.0	2.7	8.4	6.8	2.9	2.2	3.3	2.0	3.1	1.9	1.7	39.7

Incremental Flow Data (acre-feet)
Node 210--Unit 7

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	1.7	2.0	1.9	2.2	3.2	2.2	1.7	1.9	1.9	1.6	2.1	1.6	23.8
1976	1.6	1.5	2.3	13.7	5.2	2.3	2.5	1.6	2.7	2.4	1.5	1.6	38.7
1977	1.7	1.4	1.8	1.9	8.0	5.9	1.9	5.1	5.8	2.7	1.9	1.7	39.7
1978	1.7	1.6	1.7	1.7	2.6	3.1	1.6	2.1	5.1	1.9	1.8	1.8	26.7
1979	1.8	1.7	2.8	1.8	2.8	1.7	5.4	1.7	1.8	4.5	1.9	1.9	29.8
1980	1.9	1.8	4.5	2.0	2.0	1.3	2.0	3.4	1.9	1.8	1.8	2.0	26.4
1981	1.8	1.5	1.9	2.0	8.3	13.0	5.0	2.5	2.6	2.3	3.5	2.2	46.5
1982	2.1	2.3	2.0	1.9	7.9	2.8	2.6	2.1	2.0	2.4	1.9	1.9	31.9
1983	1.8	1.9	1.9	2.1	4.0	2.1	1.9	1.9	2.0	3.2	2.0	1.8	26.6
1984	1.8	1.6	5.1	7.6	2.4	2.4	2.1	1.8	1.9	2.7	1.8	7.9	39.1
1985	2.0	1.8	1.9	14.0	2.4	7.8	4.6	2.8	2.8	10.9	2.4	2.4	55.8
1986	2.2	2.0	2.2	4.0	2.1	2.9	4.0	8.0	2.2	3.5	2.0	1.9	36.8
1987	1.9	1.7	13.6	4.6	7.5	3.1	3.8	3.3	1.8	1.8	1.8	1.8	46.5
1988	1.8	1.7	1.8	2.7	1.8	1.7	2.1	2.1	1.7	1.8	1.7	1.8	22.6
1989	1.7	1.5	1.7	1.6	8.3	7.5	4.6	2.3	2.5	2.1	2.0	2.0	37.9
1990	1.9	1.7	2.1	3.5	17.6	2.5	2.1	6.4	3.3	2.0	1.9	2.0	46.9
1991	1.9	1.7	2.1	1.8	2.0	2.4	1.4	2.0	1.7	1.8	1.8	2.0	22.6
1992	1.9	1.6	1.7	1.6	3.2	10.4	3.3	2.9	2.2	2.4	2.1	4.0	37.2
1993	4.4	3.6	5.2	2.2	11.0	16.1	47.3	4.4	3.4	3.2	2.9	2.8	106.5
1994	2.6	2.2	2.3	3.2	2.2	2.2	3.1	2.1	2.0	2.3	2.0	2.1	28.4

Incremental Flow Data (acre-feet)
Node 220--Units 10a & 10b

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	1.3	1.5	1.1	1.5	1.3	2.1	2.8	1.3	4.5	2.1	1.2	1.2	21.9
1956	1.2	1.6	1.1	1.7	1.7	1.0	1.7	1.2	1.1	1.9	1.1	1.2	16.6
1957	1.2	1.1	6.9	3.9	15.2	7.6	2.9	2.0	7.7	4.3	2.2	1.7	56.7
1958	1.6	1.5	6.0	1.8	6.4	3.9	7.3	2.4	5.6	2.5	1.7	1.6	42.3
1959	1.5	1.4	2.1	1.3	9.2	2.1	8.8	2.0	1.9	3.6	1.4	1.4	36.6
1960	2.0	1.7	4.0	1.8	2.3	3.4	1.6	1.8	1.9	1.9	1.2	1.4	24.9
1961	1.1	1.0	1.5	1.4	5.0	2.1	2.1	2.9	1.2	1.6	2.0	1.1	23.0
1962	1.2	1.0	1.1	1.0	1.1	5.0	4.5	3.1	1.9	1.3	1.2	1.1	23.5
1963	1.1	0.9	1.2	1.0	1.6	1.9	3.7	1.1	1.5	1.1	1.0	1.0	17.1
1964	1.0	1.0	1.0	1.0	1.6	1.8	1.2	1.2	1.2	1.2	2.0	1.8	16.1
1965	1.6	1.8	1.3	1.5	4.8	16.6	2.4	1.5	2.5	1.8	1.2	2.3	39.4
1966	1.1	3.2	1.2	1.7	1.1	2.4	3.8	2.4	1.3	1.3	1.2	1.3	22.0
1967	1.3	1.1	1.2	2.5	1.8	5.5	3.4	1.3	2.3	1.3	1.3	1.3	24.2
1968	1.3	1.2	1.3	1.3	1.5	1.2	3.0	1.3	1.3	7.6	1.4	1.3	23.6
1969	1.4	1.5	1.3	1.5	4.3	1.5	1.8	13.5	10.3	2.5	1.6	1.6	42.9
1970	1.5	1.3	1.8	3.5	2.8	5.6	1.5	1.5	2.2	2.8	1.4	1.8	27.7
1971	2.2	3.0	2.0	1.8	3.5	2.7	2.3	1.4	1.5	2.5	3.7	1.8	28.6
1972	1.6	1.4	1.5	1.8	3.6	2.5	1.6	2.5	2.0	1.7	1.8	1.5	23.6
1973	1.5	1.4	12.5	3.5	2.1	1.9	3.0	2.2	30.9	10.2	2.3	3.4	75.0
1974	1.9	1.5	2.0	6.3	5.1	2.2	1.6	2.5	1.5	2.3	1.4	1.3	29.7

Incremental Flow Data (acre-feet)
Node 220--Units 10a & 10b

Year	*Jan*	*Feb*	*Mar*	*Apr*	*May*	*Jun*	*Jul*	*Aug*	*Sep*	*Oct*	*Nov*	*Dec*	*Annual*
1975	1.3	1.5	1.4	1.6	2.4	1.7	1.3	1.4	1.4	1.2	1.6	1.2	17.9
1976	1.2	1.1	1.7	10.3	3.9	1.7	1.9	1.2	2.0	1.8	1.1	1.2	29.0
1977	1.2	1.1	1.3	1.5	6.0	4.4	1.4	3.8	4.4	2.0	1.4	1.3	29.8
1978	1.3	1.2	1.3	1.3	1.9	2.3	1.2	1.6	3.8	1.4	1.4	1.4	20.0
1979	1.4	1.3	2.1	1.3	2.1	1.3	4.0	1.3	1.4	3.4	1.4	1.4	22.4
1980	1.4	1.4	3.4	1.5	1.5	1.0	1.5	2.6	1.4	1.4	1.3	1.5	19.8
1981	1.3	1.2	1.5	1.5	6.2	9.7	3.8	1.9	2.0	1.7	2.6	1.6	34.9
1982	1.6	1.8	1.5	1.4	6.0	2.1	2.0	1.6	1.5	1.8	1.4	1.4	23.9
1983	1.4	1.5	1.5	1.5	3.0	1.6	1.5	1.4	1.5	2.4	1.5	1.3	20.0
1984	1.3	1.2	3.8	5.7	1.8	1.8	1.6	1.3	1.4	2.0	1.4	5.9	29.3
1985	1.5	1.3	1.4	10.5	1.8	5.8	3.5	2.1	2.1	8.2	1.8	1.8	41.8
1986	1.7	1.5	1.6	3.0	1.5	2.2	3.0	6.0	1.6	2.6	1.5	1.4	27.6
1987	1.4	1.3	10.2	3.4	5.6	2.3	2.8	2.4	1.4	1.4	1.3	1.3	34.9
1988	1.3	1.3	1.3	2.0	1.4	1.3	1.5	1.6	1.3	1.3	1.3	1.3	16.9
1989	1.3	1.1	1.3	1.2	6.3	5.6	3.5	1.7	1.8	1.6	1.5	1.5	28.4
1990	1.5	1.3	1.6	2.6	13.2	1.9	1.6	4.8	2.4	1.5	1.4	1.5	35.2
1991	1.4	1.3	1.6	1.3	1.5	1.8	1.0	1.5	1.3	1.3	1.3	1.5	16.9
1992	1.4	1.2	1.3	1.2	2.4	7.8	2.5	2.2	1.7	1.8	1.6	3.0	27.9
1993	3.3	2.7	3.9	1.6	8.3	12.1	35.5	3.3	2.5	2.4	2.2	2.1	79.9
1994	2.0	1.6	1.7	2.4	1.7	1.6	2.3	1.6	1.5	1.7	1.5	1.6	21.3

Incremental Flow Data (acre-feet)
Node 230--Units 10c & 11

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	5.2	6.1	4.6	6.0	5.2	8.6	11.2	5.3	18.5	8.4	5.0	4.9	89.0
1956	4.8	6.5	4.5	6.9	6.8	4.3	6.9	4.7	4.6	7.7	4.7	4.8	67.2
1957	4.8	4.3	28.1	15.9	61.7	30.9	11.7	8.3	31.0	17.7	8.8	7.0	230.1
1958	6.5	6.1	24.4	7.4	26.0	15.9	29.8	9.7	22.8	10.0	6.8	6.5	171.9
1959	6.1	5.6	8.4	5.4	37.4	8.5	35.7	8.2	7.6	14.6	5.8	5.6	148.7
1960	8.1	6.8	16.1	7.2	9.3	13.9	6.4	7.3	7.7	7.6	4.9	5.7	101.0
1961	4.5	4.0	5.9	5.6	20.2	8.6	8.4	11.7	5.0	6.4	8.2	4.5	93.2
1962	5.0	3.9	4.5	4.2	4.7	20.2	18.1	12.6	7.5	5.4	5.0	4.5	95.6
1963	4.4	3.8	4.7	3.9	6.5	7.6	14.9	4.6	6.1	4.7	4.1	4.2	69.4
1964	4.3	3.9	4.2	4.1	6.6	7.2	4.8	4.9	4.9	4.8	8.3	7.4	65.5
1965	6.4	7.4	5.1	6.0	19.7	67.6	9.9	6.2	10.0	7.4	4.8	9.4	159.8
1966	4.6	13.0	4.7	6.8	4.5	9.7	15.6	9.9	5.2	5.3	5.1	5.2	89.6
1967	5.1	4.6	5.0	10.3	7.2	22.3	14.0	5.2	9.3	5.1	5.2	5.2	98.4
1968	5.2	4.9	5.1	5.2	6.0	5.0	12.3	5.1	5.2	31.0	5.6	5.4	96.0
1969	5.7	6.3	5.2	6.2	17.5	6.2	7.2	54.9	41.8	10.4	6.4	6.4	174.2
1970	6.1	5.3	7.4	14.3	11.6	22.5	6.2	5.9	9.0	11.2	5.6	7.3	112.4
1971	8.8	12.3	8.1	7.4	14.4	11.1	9.4	5.8	6.2	10.3	15.2	7.2	116.1
1972	6.4	5.9	6.2	7.3	14.7	10.2	6.3	10.1	8.2	6.9	7.5	6.2	96.0
1973	6.1	5.7	50.8	14.3	8.7	7.8	12.2	9.0	125.5	41.3	9.4	13.9	304.6
1974	7.8	6.3	8.3	25.4	20.7	8.7	6.7	10.1	6.0	9.6	5.8	5.3	120.8

Incremental Flow Data (acre-feet)
Node 230--Units 10c & 11

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	5.1	6.0	5.7	6.5	9.7	6.8	5.3	5.7	5.8	4.8	6.4	4.8	72.5
1976	4.8	4.4	7.0	41.8	15.7	6.8	7.7	4.8	8.3	7.2	4.6	4.8	117.9
1977	5.1	4.3	5.3	5.9	24.3	18.0	5.8	15.4	17.7	8.1	5.8	5.3	121.0
1978	5.2	4.9	5.2	5.1	7.9	9.5	5.0	6.4	15.4	5.6	5.6	5.5	81.3
1979	5.6	5.2	8.6	5.3	8.6	5.3	16.4	5.2	5.6	13.7	5.7	5.8	90.9
1980	5.7	5.5	13.7	6.0	6.2	4.0	6.2	10.4	5.7	5.6	5.3	6.0	80.3
1981	5.3	4.7	5.9	6.0	25.1	39.5	15.3	7.5	8.0	6.9	10.6	6.6	141.6
1982	6.3	7.1	6.2	5.7	24.2	8.5	8.0	6.4	6.1	7.3	5.6	5.7	97.2
1983	5.5	5.9	5.9	6.3	12.1	6.3	5.9	5.8	6.2	9.8	6.0	5.5	81.1
1984	5.3	4.9	15.6	23.3	7.2	7.3	6.4	5.5	5.8	8.1	5.5	24.0	119.0
1985	6.0	5.4	5.8	42.7	7.3	23.7	14.1	8.6	8.4	33.2	7.4	7.3	169.8
1986	6.8	5.9	6.7	12.1	6.3	8.8	12.1	24.3	6.6	10.7	6.0	5.8	112.1
1987	5.7	5.3	41.5	14.0	22.7	9.3	11.6	9.9	5.5	5.6	5.3	5.4	141.7
1988	5.4	5.1	5.4	8.2	5.5	5.2	6.3	6.5	5.2	5.3	5.2	5.3	68.7
1989	5.3	4.7	5.2	4.9	25.4	22.9	14.1	7.0	7.5	6.4	6.0	6.0	115.3
1990	5.9	5.2	6.4	10.6	53.5	7.6	6.5	19.6	9.9	6.1	5.7	5.9	143.0
1991	5.8	5.2	6.4	5.4	6.2	7.2	4.3	6.0	5.3	5.3	5.4	6.1	68.7
1992	5.7	4.8	5.2	4.8	9.6	31.8	10.0	8.9	6.8	7.3	6.4	12.0	113.3
1993	13.5	11.1	15.8	6.6	33.5	49.0	144.0	13.4	10.4	9.7	8.8	8.7	324.5
1994	7.9	6.7	7.1	9.8	6.8	6.5	9.5	6.5	6.3	7.1	6.1	6.3	86.6

Incremental Flow Data (acre-feet)
Node 250--Unit 14a

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	1.3	1.5	1.1	1.5	1.3	2.1	2.8	1.3	4.5	2.1	1.2	1.2	21.9
1956	1.2	1.6	1.1	1.7	1.7	1.0	1.7	1.2	1.1	1.9	1.1	1.2	16.6
1957	1.2	1.1	6.9	3.9	15.2	7.6	2.9	2.0	7.7	4.3	2.2	1.7	56.7
1958	1.6	1.5	6.0	1.8	6.4	3.9	7.3	2.4	5.6	2.5	1.7	1.6	42.3
1959	1.5	1.4	2.1	1.3	9.2	2.1	8.8	2.0	1.9	3.6	1.4	1.4	36.6
1960	2.0	1.7	4.0	1.8	2.3	3.4	1.6	1.8	1.9	1.9	1.2	1.4	24.9
1961	1.1	1.0	1.5	1.4	5.0	2.1	2.1	2.9	1.2	1.6	2.0	1.1	23.0
1962	1.2	1.0	1.1	1.0	1.1	5.0	4.5	3.1	1.9	1.3	1.2	1.1	23.5
1963	1.1	0.9	1.2	1.0	1.6	1.9	3.7	1.1	1.5	1.1	1.0	1.0	17.1
1964	1.0	1.0	1.0	1.0	1.6	1.8	1.2	1.2	1.2	1.2	2.0	1.8	16.1
1965	1.6	1.8	1.3	1.5	4.8	16.6	2.4	1.5	2.5	1.8	1.2	2.3	39.4
1966	1.1	3.2	1.2	1.7	1.1	2.4	3.8	2.4	1.3	1.3	1.2	1.3	22.0
1967	1.3	1.1	1.2	2.5	1.8	5.5	3.4	1.3	2.3	1.3	1.3	1.3	24.2
1968	1.3	1.2	1.3	1.3	1.5	1.2	3.0	1.3	1.3	7.6	1.4	1.3	23.6
1969	1.4	1.5	1.3	1.5	4.3	1.5	1.8	13.5	10.3	2.5	1.6	1.6	42.9
1970	1.5	1.3	1.8	3.5	2.8	5.6	1.5	1.5	2.2	2.8	1.4	1.8	27.7
1971	2.2	3.0	2.0	1.8	3.5	2.7	2.3	1.4	1.5	2.5	3.7	1.8	28.6
1972	1.6	1.4	1.5	1.8	3.6	2.5	1.6	2.5	2.0	1.7	1.8	1.5	23.6
1973	1.5	1.4	12.5	3.5	2.1	1.9	3.0	2.2	30.9	10.2	2.3	3.4	75.0
1974	1.9	1.5	2.0	6.3	5.1	2.2	1.6	2.5	1.5	2.3	1.4	1.3	29.7

Incremental Flow Data (acre-feet)
Node 250--Unit 14a

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	1.3	1.5	1.4	1.6	2.4	1.7	1.3	1.4	1.4	1.2	1.6	1.2	17.9
1976	1.2	1.1	1.7	10.3	3.9	1.7	1.9	1.2	2.0	1.8	1.1	1.2	29.0
1977	1.2	1.1	1.3	1.5	6.0	4.4	1.4	3.8	4.4	2.0	1.4	1.3	29.8
1978	1.3	1.2	1.3	1.3	1.9	2.3	1.2	1.6	3.8	1.4	1.4	1.4	20.0
1979	1.4	1.3	2.1	1.3	2.1	1.3	4.0	1.3	1.4	3.4	1.4	1.4	22.4
1980	1.4	1.4	3.4	1.5	1.5	1.0	1.5	2.6	1.4	1.4	1.3	1.5	19.8
1981	1.3	1.2	1.5	1.5	6.2	9.7	3.8	1.9	2.0	1.7	2.6	1.6	34.9
1982	1.6	1.8	1.5	1.4	6.0	2.1	2.0	1.6	1.5	1.8	1.4	1.4	23.9
1983	1.4	1.5	1.5	1.5	3.0	1.6	1.5	1.4	1.5	2.4	1.5	1.3	20.0
1984	1.3	1.2	3.8	5.7	1.8	1.8	1.6	1.3	1.4	2.0	1.4	5.9	29.3
1985	1.5	1.3	1.4	10.5	1.8	5.8	3.5	2.1	2.1	8.2	1.8	1.8	41.8
1986	1.7	1.5	1.6	3.0	1.5	2.2	3.0	6.0	1.6	2.6	1.5	1.4	27.6
1987	1.4	1.3	10.2	3.4	5.6	2.3	2.8	2.4	1.4	1.4	1.3	1.3	34.9
1988	1.3	1.3	1.3	2.0	1.4	1.3	1.5	1.6	1.3	1.3	1.3	1.3	16.9
1989	1.3	1.1	1.3	1.2	6.3	5.6	3.5	1.7	1.8	1.6	1.5	1.5	28.4
1990	1.5	1.3	1.6	2.6	13.2	1.9	1.6	4.8	2.4	1.5	1.4	1.5	35.2
1991	1.4	1.3	1.6	1.3	1.5	1.8	1.0	1.5	1.3	1.3	1.3	1.5	16.9
1992	1.4	1.2	1.3	1.2	2.4	7.8	2.5	2.2	1.7	1.8	1.6	3.0	27.9
1993	3.3	2.7	3.9	1.6	8.3	12.1	35.5	3.3	2.5	2.4	2.2	2.1	79.9
1994	2.0	1.6	1.7	2.4	1.7	1.6	2.3	1.6	1.5	1.7	1.5	1.6	21.3

Incremental Flow Data (acre-feet)
Node 260--Unit 14b

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.8	0.9	0.7	0.9	0.8	1.4	1.8	0.8	2.9	1.3	0.8	0.8	13.9
1956	0.8	1.0	0.7	1.1	1.1	0.7	1.1	0.7	0.7	1.2	0.7	0.8	10.6
1957	0.8	0.7	4.4	2.5	9.7	4.8	1.8	1.3	4.9	2.8	1.4	1.1	36.1
1958	1.0	0.9	3.8	1.2	4.1	2.5	4.7	1.5	3.6	1.6	1.1	1.0	26.9
1959	0.9	0.9	1.3	0.8	5.9	1.3	5.6	1.3	1.2	2.3	0.9	0.9	23.3
1960	1.3	1.1	2.5	1.1	1.5	2.2	1.0	1.1	1.2	1.2	0.8	0.9	15.8
1961	0.7	0.6	0.9	0.9	3.2	1.4	1.3	1.8	0.8	1.0	1.3	0.7	14.6
1962	0.8	0.6	0.7	0.7	0.7	3.2	2.8	2.0	1.2	0.9	0.8	0.7	15.0
1963	0.7	0.6	0.7	0.6	1.0	1.2	2.3	0.7	1.0	0.7	0.6	0.7	10.9
1964	0.7	0.6	0.7	0.6	1.0	1.1	0.8	0.8	0.8	0.8	1.3	1.2	10.3
1965	1.0	1.2	0.8	0.9	3.1	10.6	1.5	1.0	1.6	1.2	0.8	1.5	25.1
1966	0.7	2.0	0.7	1.1	0.7	1.5	2.5	1.5	0.8	0.8	0.8	0.8	14.0
1967	0.8	0.7	0.8	1.6	1.1	3.5	2.2	0.8	1.5	0.8	0.8	0.8	15.4
1968	0.8	0.8	0.8	0.8	0.9	0.8	1.9	0.8	0.8	4.9	0.9	0.8	15.1
1969	0.9	1.0	0.8	1.0	2.8	1.0	1.1	8.6	6.6	1.6	1.0	1.0	27.3
1970	1.0	0.8	1.2	2.2	1.8	3.5	1.0	0.9	1.4	1.8	0.9	1.1	17.6
1971	1.4	1.9	1.3	1.2	2.3	1.7	1.5	0.9	1.0	1.6	2.4	1.1	18.2
1972	1.0	0.9	1.0	1.1	2.3	1.6	1.0	1.6	1.3	1.1	1.2	1.0	15.0
1973	1.0	0.9	8.0	2.2	1.4	1.2	1.9	1.4	19.7	6.5	1.5	2.2	47.8
1974	1.2	1.0	1.3	4.0	3.2	1.4	1.0	1.6	0.9	1.5	0.9	0.8	18.9

Incremental Flow Data (acre-feet)
Node 260--Unit 14b

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.8	0.9	0.9	1.0	1.5	1.1	0.8	0.9	0.9	0.8	1.0	0.7	11.4
1976	0.8	0.7	1.1	6.6	2.5	1.1	1.2	0.8	1.3	1.1	0.7	0.8	18.5
1977	0.8	0.7	0.8	0.9	3.8	2.8	0.9	2.4	2.8	1.3	0.9	0.8	18.9
1978	0.8	0.8	0.8	0.8	1.2	1.5	0.8	1.0	2.4	0.9	0.9	0.9	12.7
1979	0.9	0.8	1.3	0.8	1.4	0.8	2.6	0.8	0.9	2.1	0.9	0.9	14.2
1980	0.9	0.9	2.1	0.9	1.0	0.6	1.0	1.6	0.9	0.9	0.8	0.9	12.6
1981	0.8	0.7	0.9	0.9	3.9	6.2	2.4	1.2	1.3	1.1	1.7	1.0	22.2
1982	1.0	1.1	1.0	0.9	3.8	1.3	1.3	1.0	0.9	1.1	0.9	0.9	15.2
1983	0.9	0.9	0.9	1.0	1.9	1.0	0.9	0.9	1.0	1.5	0.9	0.9	12.7
1984	0.8	0.8	2.5	3.7	1.1	1.1	1.0	0.9	0.9	1.3	0.9	3.8	18.7
1985	0.9	0.9	0.9	6.7	1.1	3.7	2.2	1.3	1.3	5.2	1.2	1.1	26.6
1986	1.1	0.9	1.0	1.9	1.0	1.4	1.9	3.8	1.0	1.7	0.9	0.9	17.6
1987	0.9	0.8	6.5	2.2	3.6	1.5	1.8	1.5	0.9	0.9	0.8	0.9	22.2
1988	0.9	0.8	0.9	1.3	0.9	0.8	1.0	1.0	0.8	0.8	0.8	0.8	10.8
1989	0.8	0.7	0.8	0.8	4.0	3.6	2.2	1.1	1.2	1.0	0.9	0.9	18.1
1990	0.9	0.8	1.0	1.7	8.4	1.2	1.0	3.1	1.5	0.9	0.9	0.9	22.4
1991	0.9	0.8	1.0	0.9	1.0	1.1	0.7	0.9	0.8	0.8	0.9	0.9	10.8
1992	0.9	0.8	0.8	0.8	1.5	5.0	1.6	1.4	1.1	1.1	1.0	1.9	17.8
1993	2.1	1.7	2.5	1.0	5.3	7.7	22.6	2.1	1.6	1.5	1.4	1.4	50.8
1994	1.2	1.0	1.1	1.5	1.1	1.0	1.5	1.0	1.0	1.1	1.0	1.0	13.6

Incremental Flow Data (acre-feet)
Node 270--Unit 14c

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.7	0.8	0.6	0.8	0.6	1.1	1.4	0.7	2.3	1.1	0.6	0.6	11.3
1956	0.6	0.8	0.6	0.9	0.9	0.5	0.9	0.6	0.6	1.0	0.6	0.6	8.5
1957	0.6	0.6	3.6	2.0	7.8	3.9	1.5	1.0	3.9	2.2	1.1	0.9	29.2
1958	0.8	0.8	3.1	0.9	3.3	2.0	3.8	1.2	2.9	1.3	0.9	0.8	21.8
1959	0.8	0.7	1.1	0.7	4.8	1.1	4.5	1.0	1.0	1.9	0.7	0.7	18.9
1960	1.0	0.9	2.0	0.9	1.2	1.8	0.8	0.9	1.0	1.0	0.6	0.7	12.8
1961	0.6	0.5	0.8	0.7	2.6	1.1	1.1	1.5	0.6	0.8	1.0	0.6	11.8
1962	0.6	0.5	0.6	0.5	0.6	2.6	2.3	1.6	0.9	0.7	0.6	0.6	12.1
1963	0.6	0.5	0.6	0.5	0.8	1.0	1.9	0.6	0.8	0.6	0.5	0.5	8.8
1964	0.5	0.5	0.5	0.5	0.8	0.9	0.6	0.6	0.6	0.6	1.1	0.9	8.3
1965	0.8	0.9	0.6	0.8	2.5	8.6	1.3	0.8	1.3	0.9	0.6	1.2	20.3
1966	0.6	1.6	0.6	0.9	0.6	1.2	2.0	1.3	0.7	0.7	0.6	0.7	11.4
1967	0.6	0.6	0.6	1.3	0.9	2.8	1.8	0.7	1.2	0.6	0.7	0.7	12.4
1968	0.7	0.6	0.6	0.7	0.8	0.6	1.6	0.6	0.6	3.9	0.7	0.7	12.2
1969	0.7	0.8	0.7	0.8	2.2	0.8	0.9	7.0	5.3	1.3	0.8	0.8	22.1
1970	0.8	0.7	0.9	1.8	1.5	2.9	0.8	0.8	1.1	1.4	0.7	0.9	14.3
1971	1.1	1.5	1.0	0.9	1.8	1.4	1.2	0.7	0.8	1.3	1.9	0.9	14.7
1972	0.8	0.7	0.8	0.9	1.9	1.3	0.8	1.3	1.0	0.9	0.9	0.8	12.2
1973	0.8	0.7	6.4	1.8	1.1	1.0	1.5	1.1	15.9	5.2	1.2	1.8	38.6
1974	1.0	0.8	1.1	3.2	2.6	1.1	0.9	1.3	0.8	1.2	0.7	0.7	15.3

Incremental Flow Data (acre-feet)
Node 270--Unit 14c

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.6	0.8	0.7	0.8	1.2	0.9	0.7	0.7	0.7	0.6	0.8	0.6	9.2
1976	0.6	0.6	0.9	5.3	2.0	0.9	1.0	0.6	1.1	0.9	0.6	0.6	14.9
1977	0.6	0.6	0.7	0.8	3.1	2.3	0.7	2.0	2.2	1.0	0.7	0.7	15.4
1978	0.7	0.6	0.6	0.6	1.0	1.2	0.6	0.8	2.0	0.7	0.7	0.7	10.3
1979	0.7	0.7	1.1	0.7	1.1	0.7	2.1	0.7	0.7	1.7	0.7	0.7	11.5
1980	0.7	0.7	1.7	0.8	0.8	0.5	0.8	1.3	0.7	0.7	0.7	0.8	10.2
1981	0.7	0.6	0.7	0.8	3.2	5.0	1.9	1.0	1.0	0.9	1.4	0.8	18.0
1982	0.8	0.9	0.8	0.7	3.1	1.1	1.0	0.8	0.8	0.9	0.7	0.7	12.3
1983	0.7	0.8	0.8	0.8	1.5	0.8	0.7	0.7	0.8	1.2	0.8	0.7	10.3
1984	0.7	0.6	2.0	3.0	0.9	0.9	0.8	0.7	0.7	1.0	0.7	3.0	15.1
1985	0.8	0.7	0.7	5.4	0.9	3.0	1.8	1.1	1.1	4.2	0.9	0.9	21.5
1986	0.9	0.8	0.8	1.5	0.8	1.1	1.5	3.1	0.8	1.4	0.8	0.7	14.2
1987	0.7	0.7	5.3	1.8	2.9	1.2	1.5	1.3	0.7	0.7	0.7	0.7	18.0
1988	0.7	0.6	0.7	1.0	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	8.7
1989	0.7	0.6	0.7	0.6	3.2	2.9	1.8	0.9	0.9	0.8	0.8	0.8	14.6
1990	0.8	0.7	0.8	1.4	6.8	1.0	0.8	2.5	1.3	0.8	0.7	0.8	18.2
1991	0.7	0.7	0.8	0.7	0.8	0.9	0.5	0.8	0.7	0.7	0.7	0.8	8.7
1992	0.7	0.6	0.7	0.6	1.2	4.0	1.3	1.1	0.9	0.9	0.8	1.5	14.4
1993	1.7	1.4	2.0	0.8	4.3	6.2	18.3	1.7	1.3	1.2	1.1	1.1	41.2
1994	1.0	0.9	0.9	1.2	0.9	0.8	1.2	0.8	0.8	0.9	0.8	0.8	11.0

Incremental Flow Data (acre-feet)
Node 280--Unit 20a&b

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	3.0	3.4	2.6	3.4	2.9	4.9	6.4	3.0	10.5	4.7	2.8	2.8	50.5
1956	2.7	3.7	2.5	3.9	3.9	2.4	3.9	2.7	2.6	4.4	2.7	2.7	38.2
1957	2.7	2.4	15.9	9.0	35.0	17.5	6.6	4.7	17.6	10.0	5.0	4.0	130.5
1958	3.7	3.4	13.8	4.2	14.8	9.0	16.9	5.5	12.9	5.7	3.8	3.7	97.5
1959	3.5	3.2	4.7	3.0	21.2	4.8	20.2	4.6	4.3	8.3	3.3	3.2	84.3
1960	4.6	3.9	9.1	4.1	5.3	7.9	3.7	4.1	4.3	4.3	2.8	3.2	57.3
1961	2.5	2.3	3.4	3.2	11.5	4.9	4.8	6.7	2.8	3.7	4.6	2.6	52.9
1962	2.8	2.2	2.5	2.4	2.6	11.4	10.3	7.2	4.3	3.1	2.8	2.6	54.2
1963	2.5	2.1	2.7	2.2	3.7	4.3	8.5	2.6	3.5	2.6	2.3	2.4	39.4
1964	2.4	2.2	2.4	2.3	3.7	4.1	2.7	2.8	2.8	2.7	4.7	4.2	37.1
1965	3.6	4.2	2.9	3.4	11.2	38.3	5.6	3.5	5.7	4.2	2.7	5.3	90.6
1966	2.6	7.4	2.7	3.8	2.6	5.5	8.9	5.6	3.0	3.0	2.9	2.9	50.8
1967	2.9	2.6	2.8	5.9	4.1	12.6	7.9	3.0	5.3	2.9	2.9	3.0	55.8
1968	3.0	2.8	2.9	3.0	3.4	2.8	7.0	2.9	2.9	17.6	3.2	3.0	54.5
1969	3.2	3.6	3.0	3.5	9.9	3.5	4.1	31.1	23.7	5.9	3.6	3.6	98.8
1970	3.5	3.0	4.2	8.1	6.6	12.8	3.5	3.3	5.1	6.3	3.2	4.1	63.8
1971	5.0	6.9	4.6	4.2	8.2	6.3	5.3	3.3	3.5	5.8	8.6	4.1	65.8
1972	3.7	3.3	3.5	4.2	8.4	5.8	3.6	5.7	4.7	3.9	4.2	3.5	54.4
1973	3.5	3.2	28.8	8.1	4.9	4.4	6.9	5.1	71.2	23.4	5.3	7.9	172.8
1974	4.4	3.5	4.7	14.4	11.7	4.9	3.8	5.7	3.4	5.4	3.3	3.0	68.5

Incremental Flow Data (acre-feet)
Node 280--Unit 20a&b

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	2.9	3.4	3.2	3.7	5.5	3.8	3.0	3.2	3.3	2.7	3.6	2.7	41.1
1976	2.7	2.5	4.0	23.7	8.9	3.9	4.3	2.7	4.7	4.1	2.6	2.7	66.9
1977	2.9	2.4	3.0	3.4	13.8	10.2	3.3	8.7	10.0	4.6	3.3	3.0	68.6
1978	2.9	2.8	2.9	2.9	4.5	5.4	2.8	3.7	8.7	3.2	3.2	3.1	46.1
1979	3.2	3.0	4.9	3.0	4.9	3.0	9.3	3.0	3.2	7.8	3.2	3.3	51.6
1980	3.2	3.1	7.8	3.4	3.5	2.3	3.5	5.9	3.2	3.2	3.0	3.4	45.6
1981	3.0	2.7	3.3	3.4	14.3	22.4	8.7	4.3	4.6	3.9	6.0	3.7	80.3
1982	3.6	4.0	3.5	3.2	13.7	4.8	4.6	3.7	3.4	4.2	3.2	3.2	55.2
1983	3.1	3.3	3.3	3.6	6.8	3.6	3.3	3.3	3.5	5.6	3.4	3.1	46.0
1984	3.0	2.8	8.9	13.2	4.1	4.1	3.6	3.1	3.3	4.6	3.1	13.6	67.5
1985	3.4	3.1	3.3	24.2	4.2	13.4	8.0	4.8	4.8	18.8	4.2	4.1	96.3
1986	3.9	3.4	3.8	6.8	3.6	5.0	6.9	13.8	3.7	6.1	3.4	3.3	63.6
1987	3.2	3.0	23.5	7.9	12.9	5.3	6.6	5.6	3.1	3.2	3.0	3.1	80.4
1988	3.1	2.9	3.1	4.7	3.1	3.0	3.6	3.7	3.0	3.0	2.9	3.0	39.0
1989	3.0	2.7	2.9	2.8	14.4	13.0	8.0	4.0	4.2	3.6	3.4	3.4	65.4
1990	3.3	3.0	3.7	6.0	30.4	4.3	3.7	11.1	5.6	3.4	3.2	3.4	81.1
1991	3.3	3.0	3.7	3.1	3.5	4.1	2.4	3.4	3.0	3.0	3.1	3.4	39.0
1992	3.2	2.7	3.0	2.8	5.4	18.0	5.7	5.0	3.8	4.2	3.6	6.8	64.3
1993	7.7	6.3	9.0	3.7	19.0	27.8	81.7	7.6	5.9	5.5	5.0	4.9	184.0
1994	4.5	3.8	4.0	5.6	3.9	3.7	5.4	3.7	3.5	4.0	3.5	3.6	49.1

Incremental Flow Data (acre-feet)
Node 300--Unit 24--Darrynane Lake

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	1.4	1.7	1.3	1.7	1.4	2.4	3.1	1.5	5.1	2.3	1.4	1.4	24.6
1956	1.3	1.8	1.2	1.9	1.9	1.2	1.9	1.3	1.3	2.1	1.3	1.3	18.6
1957	1.3	1.2	7.8	4.4	17.0	8.5	3.2	2.3	8.6	4.9	2.4	1.9	63.5
1958	1.8	1.7	6.7	2.0	7.2	4.4	8.2	2.7	6.3	2.8	1.9	1.8	47.5
1959	1.7	1.5	2.3	1.5	10.3	2.3	9.9	2.3	2.1	4.0	1.6	1.5	41.1
1960	2.2	1.9	4.4	2.0	2.6	3.8	1.8	2.0	2.1	2.1	1.4	1.6	27.9
1961	1.2	1.1	1.6	1.5	5.6	2.4	2.3	3.2	1.4	1.8	2.3	1.3	25.7
1962	1.4	1.1	1.2	1.2	1.3	5.6	5.0	3.5	2.1	1.5	1.4	1.3	26.4
1963	1.2	1.0	1.3	1.1	1.8	2.1	4.1	1.3	1.7	1.3	1.1	1.2	19.2
1964	1.2	1.1	1.2	1.1	1.8	2.0	1.3	1.4	1.4	1.3	2.3	2.1	18.1
1965	1.8	2.1	1.4	1.6	5.4	18.6	2.7	1.7	2.8	2.0	1.3	2.6	44.1
1966	1.3	3.6	1.3	1.9	1.3	2.7	4.3	2.7	1.4	1.5	1.4	1.4	24.8
1967	1.4	1.3	1.4	2.8	2.0	6.1	3.9	1.4	2.6	1.4	1.4	1.4	27.1
1968	1.5	1.3	1.4	1.4	1.6	1.4	3.4	1.4	1.4	8.6	1.5	1.5	26.5
1969	1.6	1.7	1.5	1.7	4.8	1.7	2.0	15.2	11.5	2.9	1.8	1.8	48.1
1970	1.7	1.5	2.0	4.0	3.2	6.2	1.7	1.6	2.5	3.1	1.5	2.0	31.0
1971	2.4	3.4	2.2	2.0	4.0	3.1	2.6	1.6	1.7	2.8	4.2	2.0	32.0
1972	1.8	1.6	1.7	2.0	4.1	2.8	1.8	2.8	2.3	1.9	2.1	1.7	26.5
1973	1.7	1.6	14.0	3.9	2.4	2.2	3.4	2.5	34.7	11.4	2.6	3.8	84.1
1974	2.2	1.7	2.3	7.0	5.7	2.4	1.9	2.8	1.7	2.6	1.6	1.5	33.4

Incremental Flow Data (acre-feet)
Node 300--Unit 24--Darrynane Lake

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	1.4	1.7	1.6	1.8	2.7	1.9	1.5	1.6	1.6	1.3	1.8	1.3	20.0
1976	1.3	1.2	1.9	11.5	4.3	1.9	2.1	1.3	2.3	2.0	1.3	1.3	32.6
1977	1.4	1.2	1.5	1.6	6.7	5.0	1.6	4.2	4.9	2.2	1.6	1.5	33.4
1978	1.4	1.4	1.4	1.4	2.2	2.6	1.4	1.8	4.3	1.5	1.5	1.5	22.4
1979	1.5	1.4	2.4	1.5	2.4	1.5	4.5	1.4	1.5	3.8	1.6	1.6	25.1
1980	1.6	1.5	3.8	1.7	1.7	1.1	1.7	2.9	1.6	1.5	1.5	1.6	22.2
1981	1.5	1.3	1.6	1.7	6.9	10.9	4.2	2.1	2.2	1.9	2.9	1.8	39.1
1982	1.8	2.0	1.7	1.6	6.7	2.3	2.2	1.8	1.7	2.0	1.6	1.6	26.9
1983	1.5	1.6	1.6	1.7	3.3	1.8	1.6	1.6	1.7	2.7	1.7	1.5	22.4
1984	1.5	1.4	4.3	6.4	2.0	2.0	1.8	1.5	1.6	2.2	1.5	6.6	32.9
1985	1.7	1.5	1.6	11.8	2.0	6.5	3.9	2.4	2.3	9.2	2.0	2.0	46.9
1986	1.9	1.6	1.8	3.3	1.7	2.4	3.3	6.7	1.8	3.0	1.7	1.6	31.0
1987	1.6	1.5	11.4	3.9	6.3	2.6	3.2	2.7	1.5	1.5	1.5	1.5	39.1
1988	1.5	1.4	1.5	2.3	1.5	1.5	1.7	1.8	1.4	1.5	1.4	1.5	19.0
1989	1.5	1.3	1.4	1.4	7.0	6.3	3.9	1.9	2.1	1.8	1.6	1.6	31.8
1990	1.6	1.4	1.8	2.9	14.8	2.1	1.8	5.4	2.7	1.7	1.6	1.6	39.5
1991	1.6	1.4	1.8	1.5	1.7	2.0	1.2	1.6	1.5	1.5	1.5	1.7	19.0
1992	1.6	1.3	1.4	1.3	2.7	8.8	2.8	2.5	1.9	2.0	1.8	3.3	31.3
1993	3.7	3.1	4.4	1.8	9.3	13.5	39.8	3.7	2.9	2.7	2.4	2.4	89.6
1994	2.2	1.9	2.0	2.7	1.9	1.8	2.6	1.8	1.7	2.0	1.7	1.8	23.9

Incremental Flow Data (acre-feet)
Node 320--Unit 21

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.4	0.4	0.3	0.4	0.4	0.6	0.8	0.4	1.4	0.6	0.4	0.4	6.6
1956	0.4	0.5	0.3	0.5	0.5	0.3	0.5	0.3	0.3	0.6	0.3	0.4	5.0
1957	0.4	0.3	2.1	1.2	4.6	2.3	0.9	0.6	2.3	1.3	0.7	0.5	17.2
1958	0.5	0.4	1.8	0.6	1.9	1.2	2.2	0.7	1.7	0.8	0.5	0.5	12.8
1959	0.4	0.4	0.6	0.4	2.8	0.6	2.7	0.6	0.6	1.1	0.4	0.4	11.1
1960	0.6	0.5	1.2	0.5	0.7	1.0	0.5	0.5	0.6	0.6	0.4	0.4	7.5
1961	0.3	0.3	0.4	0.4	1.5	0.6	0.6	0.9	0.4	0.5	0.6	0.3	7.0
1962	0.4	0.3	0.3	0.3	0.3	1.5	1.4	0.9	0.6	0.4	0.4	0.3	7.1
1963	0.3	0.3	0.3	0.3	0.5	0.6	1.1	0.3	0.5	0.3	0.3	0.3	5.2
1964	0.3	0.3	0.3	0.3	0.5	0.5	0.4	0.4	0.4	0.4	0.6	0.6	4.9
1965	0.5	0.6	0.4	0.4	1.5	5.0	0.7	0.5	0.8	0.6	0.4	0.7	11.9
1966	0.3	1.0	0.3	0.5	0.3	0.7	1.2	0.7	0.4	0.4	0.4	0.4	6.7
1967	0.4	0.3	0.4	0.8	0.5	1.7	1.0	0.4	0.7	0.4	0.4	0.4	7.3
1968	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.4	0.4	2.3	0.4	0.4	7.2
1969	0.4	0.5	0.4	0.5	1.3	0.5	0.5	4.1	3.1	0.8	0.5	0.5	13.0
1970	0.5	0.4	0.6	1.1	0.9	1.7	0.5	0.4	0.7	0.8	0.4	0.5	8.4
1971	0.7	0.9	0.6	0.6	1.1	0.8	0.7	0.4	0.5	0.8	1.1	0.5	8.7
1972	0.5	0.4	0.5	0.6	1.1	0.8	0.5	0.8	0.6	0.5	0.6	0.5	7.2
1973	0.5	0.4	3.8	1.1	0.6	0.6	0.9	0.7	9.4	3.1	0.7	1.0	22.7
1974	0.6	0.5	0.6	1.9	1.5	0.6	0.5	0.8	0.4	0.7	0.4	0.4	9.0

Incremental Flow Data (acre-feet)
Node 320--Unit 21

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.4	0.4	0.4	0.5	0.7	0.5	0.4	0.4	0.4	0.4	0.5	0.3	5.4
1976	0.3	0.3	0.5	3.1	1.2	0.5	0.6	0.4	0.6	0.5	0.3	0.4	8.8
1977	0.4	0.3	0.4	0.4	1.8	1.4	0.4	1.1	1.3	0.6	0.4	0.4	9.0
1978	0.4	0.4	0.4	0.4	0.6	0.7	0.4	0.5	1.1	0.4	0.4	0.4	6.1
1979	0.4	0.4	0.6	0.4	0.6	0.4	1.2	0.4	0.4	1.0	0.4	0.4	6.8
1980	0.4	0.4	1.0	0.4	0.5	0.3	0.5	0.8	0.4	0.4	0.4	0.4	6.0
1981	0.4	0.3	0.4	0.4	1.9	3.0	1.1	0.6	0.6	0.5	0.8	0.5	10.6
1982	0.5	0.5	0.5	0.4	1.8	0.6	0.6	0.5	0.4	0.6	0.4	0.4	7.3
1983	0.4	0.4	0.4	0.5	0.9	0.5	0.4	0.4	0.5	0.7	0.4	0.4	6.0
1984	0.4	0.4	1.2	1.7	0.5	0.5	0.5	0.4	0.4	0.6	0.4	1.8	8.9
1985	0.4	0.4	0.4	3.2	0.6	1.8	1.0	0.6	0.6	2.5	0.6	0.5	12.7
1986	0.5	0.4	0.5	0.9	0.5	0.7	0.9	1.8	0.5	0.8	0.4	0.4	8.4
1987	0.4	0.4	3.1	1.0	1.7	0.7	0.9	0.7	0.4	0.4	0.4	0.4	10.6
1988	0.4	0.4	0.4	0.6	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	5.1
1989	0.4	0.3	0.4	0.4	1.9	1.7	1.1	0.5	0.6	0.5	0.4	0.4	8.6
1990	0.4	0.4	0.5	0.8	4.0	0.6	0.5	1.5	0.7	0.4	0.4	0.4	10.7
1991	0.4	0.4	0.5	0.4	0.5	0.5	0.3	0.4	0.4	0.4	0.4	0.4	5.1
1992	0.4	0.4	0.4	0.4	0.7	2.4	0.8	0.7	0.5	0.6	0.5	0.9	8.5
1993	1.0	0.8	1.2	0.5	2.5	3.7	10.8	1.0	0.8	0.7	0.7	0.6	24.2
1994	0.6	0.5	0.5	0.7	0.5	0.5	0.7	0.5	0.5	0.5	0.5	0.5	6.5

Incremental Flow Data (acre-feet)
Node 330--Unit 25

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	2.4	2.8	2.1	2.7	2.3	3.9	5.1	2.4	8.4	3.8	2.3	2.3	40.5
1956	2.2	3.0	2.0	3.1	3.1	1.9	3.1	2.1	2.1	3.5	2.1	2.2	30.6
1957	2.2	2.0	12.8	7.2	28.1	14.1	5.3	3.8	14.1	8.0	4.0	3.2	104.8
1958	3.0	2.8	11.1	3.4	11.9	7.2	13.5	4.4	10.4	4.6	3.1	3.0	78.3
1959	2.8	2.5	3.8	2.4	17.0	3.9	16.2	3.7	3.4	6.7	2.6	2.6	67.7
1960	3.7	3.1	7.3	3.3	4.2	6.3	2.9	3.3	3.5	3.5	2.2	2.6	46.0
1961	2.0	1.8	2.7	2.5	9.2	3.9	3.8	5.3	2.3	2.9	3.7	2.1	42.4
1962	2.3	1.8	2.0	1.9	2.1	9.2	8.3	5.7	3.4	2.5	2.3	2.1	43.5
1963	2.0	1.7	2.1	1.8	3.0	3.5	6.8	2.1	2.8	2.1	1.8	1.9	31.6
1964	1.9	1.8	1.9	1.9	3.0	3.3	2.2	2.2	2.2	2.2	3.8	3.4	29.8
1965	2.9	3.4	2.3	2.7	9.0	30.8	4.5	2.8	4.6	3.4	2.2	4.3	72.7
1966	2.1	5.9	2.1	3.1	2.0	4.4	7.1	4.5	2.4	2.4	2.3	2.3	40.8
1967	2.3	2.1	2.3	4.7	3.3	10.1	6.4	2.4	4.2	2.3	2.3	2.4	44.8
1968	2.4	2.2	2.3	2.4	2.7	2.3	5.6	2.3	2.3	14.1	2.5	2.5	43.7
1969	2.6	2.9	2.4	2.8	8.0	2.8	3.3	25.0	19.0	4.7	2.9	2.9	79.3
1970	2.8	2.4	3.4	6.5	5.3	10.3	2.8	2.7	4.1	5.1	2.5	3.3	51.2
1971	4.0	5.6	3.7	3.4	6.6	5.0	4.3	2.6	2.8	4.7	6.9	3.3	52.9
1972	2.9	2.7	2.8	3.3	6.7	4.7	2.9	4.6	3.7	3.1	3.4	2.8	43.7
1973	2.8	2.6	23.1	6.5	4.0	3.5	5.6	4.1	57.1	18.8	4.3	6.3	138.7
1974	3.6	2.8	3.8	11.6	9.4	4.0	3.1	4.6	2.8	4.3	2.7	2.4	55.0

Incremental Flow Data (acre-feet)
Node 330--Unit 25

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	2.3	2.8	2.6	3.0	4.4	3.1	2.4	2.6	2.7	2.2	2.9	2.2	33.0
1976	2.2	2.0	3.2	19.0	7.2	3.1	3.5	2.2	3.8	3.3	2.1	2.2	53.7
1977	2.3	2.0	2.4	2.7	11.1	8.2	2.7	7.0	8.1	3.7	2.7	2.4	55.1
1978	2.4	2.3	2.3	2.3	3.6	4.3	2.3	2.9	7.0	2.6	2.5	2.5	37.0
1979	2.5	2.4	3.9	2.4	3.9	2.4	7.4	2.4	2.5	6.2	2.6	2.7	41.4
1980	2.6	2.5	6.2	2.8	2.8	1.8	2.8	4.8	2.6	2.5	2.4	2.7	36.6
1981	2.4	2.2	2.7	2.7	11.4	18.0	7.0	3.4	3.7	3.2	4.8	3.0	64.5
1982	2.9	3.2	2.8	2.6	11.0	3.8	3.7	2.9	2.8	3.3	2.6	2.6	44.2
1983	2.5	2.7	2.7	2.9	5.5	2.9	2.7	2.6	2.8	4.5	2.8	2.5	36.9
1984	2.4	2.2	7.1	10.6	3.3	3.3	2.9	2.5	2.7	3.7	2.5	10.9	54.2
1985	2.7	2.5	2.6	19.4	3.3	10.8	6.4	3.9	3.8	15.1	3.4	3.3	77.3
1986	3.1	2.7	3.0	5.5	2.9	4.0	5.5	11.1	3.0	4.9	2.7	2.6	51.0
1987	2.6	2.4	18.9	6.4	10.3	4.3	5.3	4.5	2.5	2.5	2.4	2.5	64.5
1988	2.5	2.3	2.5	3.7	2.5	2.4	2.8	3.0	2.4	2.4	2.4	2.4	31.3
1989	2.4	2.1	2.3	2.2	11.6	10.4	6.4	3.2	3.4	2.9	2.7	2.7	52.5
1990	2.7	2.4	2.9	4.8	24.4	3.5	2.9	8.9	4.5	2.8	2.6	2.7	65.1
1991	2.7	2.4	2.9	2.5	2.8	3.3	2.0	2.7	2.4	2.4	2.5	2.8	31.3
1992	2.6	2.2	2.4	2.2	4.4	14.4	4.6	4.0	3.1	3.3	2.9	5.5	51.6
1993	6.2	5.0	7.2	3.0	15.3	22.3	65.6	6.1	4.7	4.4	4.0	4.0	147.7
1994	3.6	3.0	3.2	4.4	3.1	3.0	4.3	2.9	2.8	3.2	2.8	2.9	39.4

Incremental Flow Data (acre-feet)
Node 340--Unit 16

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	1.0	1.2	0.9	1.2	1.0	1.7	2.2	1.0	3.6	1.6	1.0	1.0	17.3
1956	0.9	1.3	0.9	1.3	1.3	0.8	1.3	0.9	0.9	1.5	0.9	0.9	13.0
1957	0.9	0.8	5.4	3.1	12.0	6.0	2.3	1.6	6.0	3.4	1.7	1.4	44.6
1958	1.3	1.2	4.7	1.4	5.1	3.1	5.8	1.9	4.4	2.0	1.3	1.3	33.4
1959	1.2	1.1	1.6	1.0	7.3	1.6	6.9	1.6	1.5	2.8	1.1	1.1	28.9
1960	1.6	1.3	3.1	1.4	1.8	2.7	1.3	1.4	1.5	1.5	0.9	1.1	19.6
1961	0.9	0.8	1.1	1.1	3.9	1.7	1.6	2.3	1.0	1.3	1.6	0.9	18.1
1962	1.0	0.8	0.9	0.8	0.9	3.9	3.5	2.5	1.5	1.0	1.0	0.9	18.6
1963	0.9	0.7	0.9	0.8	1.3	1.5	2.9	0.9	1.2	0.9	0.8	0.8	13.5
1964	0.8	0.8	0.8	0.8	1.3	1.4	0.9	0.9	0.9	0.9	1.6	1.5	12.7
1965	1.2	1.5	1.0	1.2	3.8	13.1	1.9	1.2	1.9	1.4	0.9	1.8	31.0
1966	0.9	2.5	0.9	1.3	0.9	1.9	3.0	1.9	1.0	1.0	1.0	1.0	17.4
1967	1.0	0.9	1.0	2.0	1.4	4.3	2.7	1.0	1.8	1.0	1.0	1.0	19.1
1968	1.0	0.9	1.0	1.0	1.2	1.0	2.4	1.0	1.0	6.0	1.1	1.0	18.6
1969	1.1	1.2	1.0	1.2	3.4	1.2	1.4	10.6	8.1	2.0	1.2	1.2	33.8
1970	1.2	1.0	1.4	2.8	2.2	4.4	1.2	1.1	1.8	2.2	1.1	1.4	21.8
1971	1.7	2.4	1.6	1.4	2.8	2.2	1.8	1.1	1.2	2.0	2.9	1.4	22.5
1972	1.3	1.1	1.2	1.4	2.9	2.0	1.2	2.0	1.6	1.3	1.5	1.2	18.6
1973	1.2	1.1	9.9	2.8	1.7	1.5	2.4	1.8	24.4	8.0	1.8	2.7	59.1
1974	1.5	1.2	1.6	4.9	4.0	1.7	1.3	2.0	1.2	1.9	1.1	1.0	23.4

Incremental Flow Data (acre-feet)
Node 340--Unit 16

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	1.0	1.2	1.1	1.3	1.9	1.3	1.0	1.1	1.1	0.9	1.2	0.9	14.1
1976	0.9	0.9	1.4	8.1	3.0	1.3	1.5	0.9	1.6	1.4	0.9	0.9	22.9
1977	1.0	0.8	1.0	1.1	4.7	3.5	1.1	3.0	3.4	1.6	1.1	1.0	23.5
1978	1.0	1.0	1.0	1.0	1.5	1.8	1.0	1.3	3.0	1.1	1.1	1.1	15.8
1979	1.1	1.0	1.7	1.0	1.7	1.0	3.2	1.0	1.1	2.7	1.1	1.1	17.6
1980	1.1	1.1	2.7	1.2	1.2	0.8	1.2	2.0	1.1	1.1	1.0	1.2	15.6
1981	1.0	0.9	1.1	1.2	4.9	7.7	3.0	1.5	1.6	1.4	2.1	1.3	27.5
1982	1.2	1.4	1.2	1.1	4.7	1.6	1.6	1.3	1.2	1.4	1.1	1.1	18.9
1983	1.1	1.1	1.1	1.2	2.3	1.2	1.1	1.1	1.2	1.9	1.2	1.1	15.7
1984	1.0	0.9	3.0	4.5	1.4	1.4	1.2	1.1	1.1	1.6	1.1	4.7	23.1
1985	1.2	1.0	1.1	8.3	1.4	4.6	2.7	1.7	1.6	6.4	1.4	1.4	32.9
1986	1.3	1.1	1.3	2.3	1.2	1.7	2.4	4.7	1.3	2.1	1.2	1.1	21.7
1987	1.1	1.0	8.1	2.7	4.4	1.8	2.2	1.9	1.1	1.1	1.0	1.0	27.5
1988	1.0	1.0	1.0	1.6	1.1	1.0	1.2	1.3	1.0	1.0	1.0	1.0	13.3
1989	1.0	0.9	1.0	0.9	4.9	4.4	2.7	1.4	1.5	1.2	1.2	1.2	22.4
1990	1.1	1.0	1.3	2.1	10.4	1.5	1.3	3.8	1.9	1.2	1.1	1.1	27.7
1991	1.1	1.0	1.3	1.0	1.2	1.4	0.8	1.2	1.0	1.0	1.1	1.2	13.3
1992	1.1	0.9	1.0	0.9	1.9	6.2	1.9	1.7	1.3	1.4	1.3	2.3	22.0
1993	2.6	2.2	3.1	1.3	6.5	9.5	27.9	2.6	2.0	1.9	1.7	1.7	63.0
1994	1.5	1.3	1.4	1.9	1.3	1.3	1.9	1.3	1.2	1.4	1.2	1.2	16.8

Incremental Flow Data (acre-feet)
Node 350--Unit 28

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	7.2	8.4	6.4	8.3	7.2	12.0	15.6	7.4	25.6	11.6	6.9	6.8	123.6
1956	6.7	9.1	6.2	9.6	9.5	5.9	9.6	6.5	6.4	10.7	6.5	6.7	93.4
1957	6.7	6.0	39.0	22.1	85.6	42.9	16.2	11.5	43.1	24.5	12.2	9.7	319.5
1958	9.1	8.4	33.8	10.3	36.1	22.1	41.3	13.5	31.6	13.9	9.4	9.0	238.6
1959	8.4	7.8	11.6	7.4	51.9	11.8	49.5	11.3	10.5	20.3	8.0	7.8	206.4
1960	11.3	9.5	22.3	10.0	12.9	19.4	8.9	10.1	10.6	10.5	6.8	7.8	140.2
1961	6.2	5.6	8.2	7.7	28.1	11.9	11.7	16.3	6.9	8.9	11.3	6.3	129.3
1962	6.9	5.4	6.2	5.8	6.5	28.0	25.1	17.5	10.4	7.5	6.9	6.3	132.7
1963	6.1	5.2	6.5	5.4	9.0	10.6	20.7	6.3	8.5	6.5	5.6	5.8	96.4
1964	5.9	5.5	5.8	5.8	9.1	10.0	6.7	6.8	6.8	6.6	11.6	10.3	90.9
1965	8.9	10.4	7.1	8.3	27.3	93.8	13.7	8.6	13.9	10.2	6.7	13.0	221.8
1966	6.4	18.1	6.5	9.4	6.3	13.4	21.7	13.7	7.3	7.3	7.0	7.2	124.4
1967	7.0	6.3	6.9	14.4	10.0	30.9	19.4	7.2	12.9	7.0	7.2	7.3	136.5
1968	7.3	6.7	7.1	7.3	8.3	7.0	17.1	7.1	7.2	43.1	7.8	7.5	133.3
1969	7.9	8.7	7.3	8.6	24.4	8.6	10.0	76.2	58.0	14.4	8.9	8.8	241.8
1970	8.5	7.4	10.3	19.8	16.0	31.3	8.6	8.2	12.5	15.5	7.8	10.1	156.1
1971	12.2	17.0	11.3	10.3	20.0	15.4	13.1	8.0	8.6	14.2	21.1	10.0	161.2
1972	8.9	8.1	8.5	10.2	20.5	14.2	8.8	14.0	11.4	9.6	10.4	8.6	133.2
1973	8.5	7.8	70.6	19.8	12.1	10.8	16.9	12.5	174.2	57.3	13.0	19.4	422.8
1974	10.9	8.7	11.6	35.3	28.7	12.1	9.3	14.1	8.4	13.3	8.1	7.3	167.7

Incremental Flow Data (acre-feet)
Node 350--Unit 28

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	7.1	8.4	7.9	9.1	13.4	9.4	7.3	7.9	8.1	6.6	8.8	6.6	100.7
1976	6.6	6.2	9.7	58.0	21.8	9.5	10.6	6.7	11.6	10.0	6.4	6.6	163.7
1977	7.0	6.0	7.4	8.2	33.7	25.1	8.1	21.3	24.6	11.3	8.1	7.3	168.0
1978	7.2	6.8	7.1	7.0	10.9	13.2	6.9	9.0	21.4	7.8	7.8	7.7	112.8
1979	7.7	7.3	11.9	7.4	12.0	7.3	22.7	7.2	7.8	19.0	7.9	8.1	126.2
1980	7.9	7.6	19.0	8.4	8.6	5.6	8.5	14.5	7.9	7.8	7.4	8.3	111.5
1981	7.4	6.6	8.1	8.3	34.9	54.9	21.3	10.5	11.1	9.6	14.7	9.1	196.6
1982	8.8	9.9	8.6	7.9	33.6	11.8	11.2	9.0	8.4	10.1	7.8	7.9	135.0
1983	7.7	8.1	8.2	8.7	16.7	8.8	8.1	8.0	8.6	13.6	8.4	7.6	112.6
1984	7.4	6.8	21.7	32.3	10.0	10.1	8.9	7.6	8.1	11.3	7.7	33.4	165.1
1985	8.4	7.5	8.0	59.2	10.2	32.9	19.5	11.9	11.6	46.1	10.3	10.1	235.7
1986	9.4	8.3	9.2	16.8	8.7	12.2	16.9	33.7	9.1	14.8	8.4	8.1	155.6
1987	7.9	7.3	57.5	19.4	31.5	12.9	16.0	13.7	7.6	7.8	7.4	7.5	196.7
1988	7.5	7.1	7.5	11.4	7.6	7.3	8.7	9.0	7.3	7.4	7.2	7.4	95.4
1989	7.3	6.5	7.2	6.8	35.3	31.8	19.6	9.8	10.4	8.8	8.3	8.3	160.1
1990	8.2	7.2	8.9	14.7	74.3	10.6	9.0	27.3	13.8	8.4	7.9	8.2	198.5
1991	8.1	7.3	8.9	7.5	8.6	10.0	5.9	8.3	7.3	7.4	7.6	8.4	95.4
1992	7.8	6.7	7.3	6.7	13.3	44.1	13.9	12.3	9.4	10.2	8.9	16.7	157.3
1993	18.8	15.4	21.9	9.1	46.6	68.0	199.9	18.6	14.4	13.5	12.2	12.1	450.4
1994	11.0	9.3	9.8	13.6	9.5	9.1	13.2	9.0	8.7	9.8	8.5	8.8	120.2

Incremental Flow Data (acre-feet)
Node 360--Unit 29

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	1.4	1.7	1.3	1.7	1.4	2.4	3.1	1.5	5.1	2.3	1.4	1.4	24.6
1956	1.3	1.8	1.2	1.9	1.9	1.2	1.9	1.3	1.3	2.1	1.3	1.3	18.6
1957	1.3	1.2	7.8	4.4	17.0	8.5	3.2	2.3	8.6	4.9	2.4	1.9	63.5
1958	1.8	1.7	6.7	2.0	7.2	4.4	8.2	2.7	6.3	2.8	1.9	1.8	47.5
1959	1.7	1.5	2.3	1.5	10.3	2.3	9.9	2.3	2.1	4.0	1.6	1.5	41.1
1960	2.2	1.9	4.4	2.0	2.6	3.8	1.8	2.0	2.1	2.1	1.4	1.6	27.9
1961	1.2	1.1	1.6	1.5	5.6	2.4	2.3	3.2	1.4	1.8	2.3	1.3	25.7
1962	1.4	1.1	1.2	1.2	1.3	5.6	5.0	3.5	2.1	1.5	1.4	1.3	26.4
1963	1.2	1.0	1.3	1.1	1.8	2.1	4.1	1.3	1.7	1.3	1.1	1.2	19.2
1964	1.2	1.1	1.2	1.1	1.8	2.0	1.3	1.4	1.4	1.3	2.3	2.1	18.1
1965	1.8	2.1	1.4	1.6	5.4	18.6	2.7	1.7	2.8	2.0	1.3	2.6	44.1
1966	1.3	3.6	1.3	1.9	1.3	2.7	4.3	2.7	1.4	1.5	1.4	1.4	24.8
1967	1.4	1.3	1.4	2.8	2.0	6.1	3.9	1.4	2.6	1.4	1.4	1.4	27.1
1968	1.5	1.3	1.4	1.4	1.6	1.4	3.4	1.4	1.4	8.6	1.5	1.5	26.5
1969	1.6	1.7	1.5	1.7	4.8	1.7	2.0	15.2	11.5	2.9	1.8	1.8	48.1
1970	1.7	1.5	2.0	4.0	3.2	6.2	1.7	1.6	2.5	3.1	1.5	2.0	31.0
1971	2.4	3.4	2.2	2.0	4.0	3.1	2.6	1.6	1.7	2.8	4.2	2.0	32.0
1972	1.8	1.6	1.7	2.0	4.1	2.8	1.8	2.8	2.3	1.9	2.1	1.7	26.5
1973	1.7	1.6	14.0	3.9	2.4	2.2	3.4	2.5	34.7	11.4	2.6	3.8	84.1
1974	2.2	1.7	2.3	7.0	5.7	2.4	1.9	2.8	1.7	2.6	1.6	1.5	33.4

Incremental Flow Data (acre-feet)
Node 360--Unit 29

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	1.4	1.7	1.6	1.8	2.7	1.9	1.5	1.6	1.6	1.3	1.8	1.3	20.0
1976	1.3	1.2	1.9	11.5	4.3	1.9	2.1	1.3	2.3	2.0	1.3	1.3	32.6
1977	1.4	1.2	1.5	1.6	6.7	5.0	1.6	4.2	4.9	2.2	1.6	1.5	33.4
1978	1.4	1.4	1.4	1.4	2.2	2.6	1.4	1.8	4.3	1.5	1.5	1.5	22.4
1979	1.5	1.4	2.4	1.5	2.4	1.5	4.5	1.4	1.5	3.8	1.6	1.6	25.1
1980	1.6	1.5	3.8	1.7	1.7	1.1	1.7	2.9	1.6	1.5	1.5	1.6	22.2
1981	1.5	1.3	1.6	1.7	6.9	10.9	4.2	2.1	2.2	1.9	2.9	1.8	39.1
1982	1.8	2.0	1.7	1.6	6.7	2.3	2.2	1.8	1.7	2.0	1.6	1.6	26.9
1983	1.5	1.6	1.6	1.7	3.3	1.8	1.6	1.6	1.7	2.7	1.7	1.5	22.4
1984	1.5	1.4	4.3	6.4	2.0	2.0	1.8	1.5	1.6	2.2	1.5	6.6	32.9
1985	1.7	1.5	1.6	11.8	2.0	6.5	3.9	2.4	2.3	9.2	2.0	2.0	46.9
1986	1.9	1.6	1.8	3.3	1.7	2.4	3.3	6.7	1.8	3.0	1.7	1.6	31.0
1987	1.6	1.5	11.4	3.9	6.3	2.6	3.2	2.7	1.5	1.5	1.5	1.5	39.1
1988	1.5	1.4	1.5	2.3	1.5	1.5	1.7	1.8	1.4	1.5	1.4	1.5	19.0
1989	1.5	1.3	1.4	1.4	7.0	6.3	3.9	1.9	2.1	1.8	1.6	1.6	31.8
1990	1.6	1.4	1.8	2.9	14.8	2.1	1.8	5.4	2.7	1.7	1.6	1.6	39.5
1991	1.6	1.4	1.8	1.5	1.7	2.0	1.2	1.6	1.5	1.5	1.5	1.7	19.0
1992	1.6	1.3	1.4	1.3	2.7	8.8	2.8	2.5	1.9	2.0	1.8	3.3	31.3
1993	3.7	3.1	4.4	1.8	9.3	13.5	39.8	3.7	2.9	2.7	2.4	2.4	89.6
1994	2.2	1.9	2.0	2.7	1.9	1.8	2.6	1.8	1.7	2.0	1.7	1.8	23.9

Incremental Flow Data (acre-feet)
Node 370--Unit 30

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.5	0.6	0.5	0.6	0.5	0.9	1.2	0.6	1.9	0.9	0.5	0.5	9.3
1956	0.5	0.7	0.5	0.7	0.7	0.4	0.7	0.5	0.5	0.8	0.5	0.5	7.0
1957	0.5	0.4	2.9	1.7	6.4	3.2	1.2	0.9	3.2	1.9	0.9	0.7	24.0
1958	0.7	0.6	2.5	0.8	2.7	1.7	3.1	1.0	2.4	1.0	0.7	0.7	17.9
1959	0.6	0.6	0.9	0.6	3.9	0.9	3.7	0.9	0.8	1.5	0.6	0.6	15.5
1960	0.9	0.7	1.7	0.8	1.0	1.5	0.7	0.8	0.8	0.8	0.5	0.6	10.5
1961	0.5	0.4	0.6	0.6	2.1	0.9	0.9	1.2	0.5	0.7	0.9	0.5	9.7
1962	0.5	0.4	0.5	0.4	0.5	2.1	1.9	1.3	0.8	0.6	0.5	0.5	10.0
1963	0.5	0.4	0.5	0.4	0.7	0.8	1.6	0.5	0.6	0.5	0.4	0.4	7.3
1964	0.4	0.4	0.4	0.4	0.7	0.8	0.5	0.5	0.5	0.5	0.9	0.8	6.8
1965	0.7	0.8	0.5	0.6	2.1	7.1	1.0	0.6	1.0	0.8	0.5	1.0	16.7
1966	0.5	1.4	0.5	0.7	0.5	1.0	1.6	1.0	0.6	0.6	0.5	0.5	9.3
1967	0.5	0.5	0.5	1.1	0.8	2.3	1.5	0.6	1.0	0.5	0.5	0.6	10.3
1968	0.6	0.5	0.5	0.6	0.6	0.5	1.3	0.5	0.5	3.2	0.6	0.6	10.0
1969	0.6	0.7	0.6	0.6	1.8	0.6	0.8	5.7	4.4	1.1	0.7	0.7	18.2
1970	0.6	0.6	0.8	1.5	1.2	2.3	0.6	0.6	0.9	1.2	0.6	0.8	11.7
1971	0.9	1.3	0.9	0.8	1.5	1.2	1.0	0.6	0.6	1.1	1.6	0.8	12.1
1972	0.7	0.6	0.6	0.8	1.5	1.1	0.7	1.0	0.9	0.7	0.8	0.6	10.0
1973	0.6	0.6	5.3	1.5	0.9	0.8	1.3	0.9	13.1	4.3	1.0	1.5	31.8
1974	0.8	0.6	0.9	2.7	2.2	0.9	0.7	1.1	0.6	1.0	0.6	0.6	12.6

Incremental Flow Data (acre-feet)
Node 370--Unit 30

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.5	0.6	0.6	0.7	1.0	0.7	0.6	0.6	0.6	0.5	0.7	0.5	7.6
1976	0.5	0.5	0.7	4.4	1.6	0.7	0.8	0.5	0.9	0.8	0.5	0.5	12.3
1977	0.5	0.4	0.6	0.6	2.5	1.9	0.6	1.6	1.9	0.9	0.6	0.6	12.7
1978	0.5	0.5	0.5	0.5	0.8	1.0	0.5	0.7	1.6	0.6	0.6	0.6	8.5
1979	0.6	0.6	0.9	0.6	0.9	0.6	1.7	0.5	0.6	1.4	0.6	0.6	9.5
1980	0.6	0.6	1.4	0.6	0.6	0.4	0.6	1.1	0.6	0.6	0.6	0.6	8.4
1981	0.6	0.5	0.6	0.6	2.6	4.1	1.6	0.8	0.8	0.7	1.1	0.7	14.8
1982	0.7	0.7	0.6	0.6	2.5	0.9	0.8	0.7	0.6	0.8	0.6	0.6	10.1
1983	0.6	0.6	0.6	0.7	1.3	0.7	0.6	0.6	0.6	1.0	0.6	0.6	8.5
1984	0.6	0.5	1.6	2.4	0.8	0.8	0.7	0.6	0.6	0.9	0.6	2.5	12.4
1985	0.6	0.6	0.6	4.5	0.8	2.5	1.5	0.9	0.9	3.5	0.8	0.8	17.8
1986	0.7	0.6	0.7	1.3	0.7	0.9	1.3	2.5	0.7	1.1	0.6	0.6	11.7
1987	0.6	0.6	4.3	1.5	2.4	1.0	1.2	1.0	0.6	0.6	0.6	0.6	14.8
1988	0.6	0.5	0.6	0.9	0.6	0.6	0.7	0.7	0.6	0.6	0.5	0.6	7.2
1989	0.6	0.5	0.5	0.5	2.7	2.4	1.5	0.7	0.8	0.7	0.6	0.6	12.0
1990	0.6	0.5	0.7	1.1	5.6	0.8	0.7	2.0	1.0	0.6	0.6	0.6	14.9
1991	0.6	0.6	0.7	0.6	0.6	0.8	0.4	0.6	0.6	0.6	0.6	0.6	7.2
1992	0.6	0.5	0.6	0.5	1.0	3.3	1.0	0.9	0.7	0.8	0.7	1.3	11.8
1993	1.4	1.2	1.6	0.7	3.5	5.1	15.0	1.4	1.1	1.0	0.9	0.9	33.9
1994	0.8	0.7	0.7	1.0	0.7	0.7	1.0	0.7	0.6	0.7	0.6	0.7	9.0

Incremental Flow Data (acre-feet)
Node 390--Unit 22

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.7	0.8	0.6	0.8	0.7	1.2	1.5	0.7	2.5	1.1	0.7	0.7	12.0
1956	0.6	0.9	0.6	0.9	0.9	0.6	0.9	0.6	0.6	1.0	0.6	0.6	9.0
1957	0.6	0.6	3.8	2.1	8.3	4.2	1.6	1.1	4.2	2.4	1.2	0.9	30.9
1958	0.9	0.8	3.3	1.0	3.5	2.1	4.0	1.3	3.1	1.4	0.9	0.9	23.1
1959	0.8	0.8	1.1	0.7	5.0	1.1	4.8	1.1	1.0	2.0	0.8	0.8	20.0
1960	1.1	0.9	2.2	1.0	1.3	1.9	0.9	1.0	1.0	1.0	0.7	0.8	13.6
1961	0.6	0.5	0.8	0.8	2.7	1.1	1.1	1.6	0.7	0.9	1.1	0.6	12.5
1962	0.7	0.5	0.6	0.6	0.6	2.7	2.4	1.7	1.0	0.7	0.7	0.6	12.8
1963	0.6	0.5	0.6	0.5	0.9	1.0	2.0	0.6	0.8	0.6	0.5	0.6	9.3
1964	0.6	0.5	0.6	0.6	0.9	1.0	0.6	0.7	0.7	0.6	1.1	1.0	8.8
1965	0.9	1.0	0.7	0.8	2.6	9.1	1.3	0.8	1.4	1.0	0.6	1.3	21.4
1966	0.6	1.8	0.6	0.9	0.6	1.3	2.1	1.3	0.7	0.7	0.7	0.7	12.0
1967	0.7	0.6	0.7	1.4	1.0	3.0	1.9	0.7	1.2	0.7	0.7	0.7	13.2
1968	0.7	0.6	0.7	0.7	0.8	0.7	1.6	0.7	0.7	4.2	0.8	0.7	12.9
1969	0.8	0.9	0.7	0.8	2.4	0.8	1.0	7.4	5.6	1.4	0.9	0.9	23.4
1970	0.8	0.7	1.0	1.9	1.5	3.0	0.8	0.8	1.2	1.5	0.8	1.0	15.1
1971	1.2	1.6	1.1	1.0	1.9	1.5	1.3	0.8	0.8	1.4	2.0	1.0	15.6
1972	0.9	0.8	0.8	1.0	2.0	1.4	0.9	1.4	1.1	0.9	1.0	0.8	12.9
1973	0.8	0.8	6.8	1.9	1.2	1.0	1.6	1.2	16.9	5.5	1.3	1.9	40.9
1974	1.0	0.8	1.1	3.4	2.8	1.2	0.9	1.4	0.8	1.3	0.8	0.7	16.2

Incremental Flow Data (acre-feet)
Node 390--Unit 22

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.7	0.8	0.8	0.9	1.3	0.9	0.7	0.8	0.8	0.6	0.9	0.6	9.7
1976	0.6	0.6	0.9	5.6	2.1	0.9	1.0	0.6	1.1	1.0	0.6	0.6	15.9
1977	0.7	0.6	0.7	0.8	3.3	2.4	0.8	2.1	2.4	1.1	0.8	0.7	16.3
1978	0.7	0.7	0.7	0.7	1.1	1.3	0.7	0.9	2.1	0.8	0.8	0.7	10.9
1979	0.8	0.7	1.1	0.7	1.2	0.7	2.2	0.7	0.8	1.8	0.8	0.8	12.2
1980	0.8	0.7	1.8	0.8	0.8	0.5	0.8	1.4	0.8	0.8	0.7	0.8	10.8
1981	0.7	0.6	0.8	0.8	3.4	5.3	2.1	1.0	1.1	0.9	1.4	0.9	19.0
1982	0.9	0.9	0.8	0.8	3.3	1.1	1.1	0.9	0.8	1.0	0.8	0.8	13.1
1983	0.7	0.8	0.8	0.8	1.6	0.9	0.8	0.8	0.8	1.3	0.8	0.7	10.9
1984	0.7	0.7	2.1	3.1	1.0	1.0	0.9	0.7	0.8	1.1	0.7	3.2	16.0
1985	0.8	0.7	0.8	5.7	1.0	3.2	1.9	1.1	1.1	4.5	1.0	1.0	22.8
1986	0.9	0.8	0.9	1.6	0.9	1.2	1.6	3.3	0.9	1.4	0.8	0.8	15.0
1987	0.8	0.7	5.6	1.9	3.0	1.3	1.5	1.3	0.7	0.8	0.7	0.7	19.0
1988	0.7	0.7	0.7	1.1	0.7	0.7	0.8	0.9	0.7	0.7	0.7	0.7	9.2
1989	0.7	0.6	0.7	0.7	3.4	3.1	1.9	0.9	1.0	0.9	0.8	0.8	15.5
1990	0.8	0.7	0.9	1.4	7.2	1.0	0.9	2.6	1.3	0.8	0.8	0.8	19.2
1991	0.8	0.7	0.9	0.7	0.8	1.0	0.6	0.8	0.7	0.7	0.7	0.8	9.2
1992	0.8	0.6	0.7	0.6	1.3	4.3	1.3	1.2	0.9	1.0	0.9	1.6	15.2
1993	1.8	1.5	2.1	0.9	4.5	6.6	19.3	1.8	1.4	1.3	1.2	1.2	43.6
1994	1.1	0.9	0.9	1.3	0.9	0.9	1.3	0.9	0.8	0.9	0.8	0.9	11.6

Incremental Flow Data (acre-feet)
Node 400--Unit 23--Park Smith Lake

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.7	0.8	0.6	0.8	0.6	1.1	1.4	0.7	2.3	1.1	0.6	0.6	11.3
1956	0.6	0.8	0.6	0.9	0.9	0.5	0.9	0.6	0.6	1.0	0.6	0.6	8.5
1957	0.6	0.6	3.6	2.0	7.8	3.9	1.5	1.0	3.9	2.2	1.1	0.9	29.2
1958	0.8	0.8	3.1	0.9	3.3	2.0	3.8	1.2	2.9	1.3	0.9	0.8	21.8
1959	0.8	0.7	1.1	0.7	4.8	1.1	4.5	1.0	1.0	1.9	0.7	0.7	18.9
1960	1.0	0.9	2.0	0.9	1.2	1.8	0.8	0.9	1.0	1.0	0.6	0.7	12.8
1961	0.6	0.5	0.8	0.7	2.6	1.1	1.1	1.5	0.6	0.8	1.0	0.6	11.8
1962	0.6	0.5	0.6	0.5	0.6	2.6	2.3	1.6	0.9	0.7	0.6	0.6	12.1
1963	0.6	0.5	0.6	0.5	0.8	1.0	1.9	0.6	0.8	0.6	0.5	0.5	8.8
1964	0.5	0.5	0.5	0.5	0.8	0.9	0.6	0.6	0.6	0.6	1.1	0.9	8.3
1965	0.8	0.9	0.6	0.8	2.5	8.6	1.3	0.8	1.3	0.9	0.6	1.2	20.3
1966	0.6	1.6	0.6	0.9	0.6	1.2	2.0	1.3	0.7	0.7	0.6	0.7	11.4
1967	0.6	0.6	0.6	1.3	0.9	2.8	1.8	0.7	1.2	0.6	0.7	0.7	12.4
1968	0.7	0.6	0.6	0.7	0.8	0.6	1.6	0.6	0.6	3.9	0.7	0.7	12.2
1969	0.7	0.8	0.7	0.8	2.2	0.8	0.9	7.0	5.3	1.3	0.8	0.8	22.1
1970	0.8	0.7	0.9	1.8	1.5	2.9	0.8	0.8	1.1	1.4	0.7	0.9	14.3
1971	1.1	1.5	1.0	0.9	1.8	1.4	1.2	0.7	0.8	1.3	1.9	0.9	14.7
1972	0.8	0.7	0.8	0.9	1.9	1.3	0.8	1.3	1.0	0.9	0.9	0.8	12.2
1973	0.8	0.7	6.4	1.8	1.1	1.0	1.5	1.1	15.9	5.2	1.2	1.8	38.6
1974	1.0	0.8	1.1	3.2	2.6	1.1	0.9	1.3	0.8	1.2	0.7	0.7	15.3

Incremental Flow Data (acre-feet)
Node 400--Unit 23--Park Smith Lake

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.6	0.8	0.7	0.8	1.2	0.9	0.7	0.7	0.7	0.6	0.8	0.6	9.2
1976	0.6	0.6	0.9	5.3	2.0	0.9	1.0	0.6	1.1	0.9	0.6	0.6	14.9
1977	0.6	0.6	0.7	0.8	3.1	2.3	0.7	2.0	2.2	1.0	0.7	0.7	15.4
1978	0.7	0.6	0.6	0.6	1.0	1.2	0.6	0.8	2.0	0.7	0.7	0.7	10.3
1979	0.7	0.7	1.1	0.7	1.1	0.7	2.1	0.7	0.7	1.7	0.7	0.7	11.5
1980	0.7	0.7	1.7	0.8	0.8	0.5	0.8	1.3	0.7	0.7	0.7	0.8	10.2
1981	0.7	0.6	0.7	0.8	3.2	5.0	1.9	1.0	1.0	0.9	1.4	0.8	18.0
1982	0.8	0.9	0.8	0.7	3.1	1.1	1.0	0.8	0.8	0.9	0.7	0.7	12.3
1983	0.7	0.8	0.8	0.8	1.5	0.8	0.7	0.7	0.8	1.2	0.8	0.7	10.3
1984	0.7	0.6	2.0	3.0	0.9	0.9	0.8	0.7	0.7	1.0	0.7	3.0	15.1
1985	0.8	0.7	0.7	5.4	0.9	3.0	1.8	1.1	1.1	4.2	0.9	0.9	21.5
1986	0.9	0.8	0.8	1.5	0.8	1.1	1.5	3.1	0.8	1.4	0.8	0.7	14.2
1987	0.7	0.7	5.3	1.8	2.9	1.2	1.5	1.3	0.7	0.7	0.7	0.7	18.0
1988	0.7	0.6	0.7	1.0	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	8.7
1989	0.7	0.6	0.7	0.6	3.2	2.9	1.8	0.9	0.9	0.8	0.8	0.8	14.6
1990	0.8	0.7	0.8	1.4	6.8	1.0	0.8	2.5	1.3	0.8	0.7	0.8	18.2
1991	0.7	0.7	0.8	0.7	0.8	0.9	0.5	0.8	0.7	0.7	0.7	0.8	8.7
1992	0.7	0.6	0.7	0.6	1.2	4.0	1.3	1.1	0.9	0.9	0.8	1.5	14.4
1993	1.7	1.4	2.0	0.8	4.3	6.2	18.3	1.7	1.3	1.2	1.1	1.1	41.2
1994	1.0	0.9	0.9	1.2	0.9	0.8	1.2	0.8	0.8	0.9	0.8	0.8	11.0

Incremental Flow Data (acre-feet)
Node 410--Unit 26

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	1.9	2.3	1.7	2.2	1.9	3.2	4.2	2.0	6.9	3.1	1.9	1.8	33.2
1956	1.8	2.4	1.7	2.6	2.5	1.6	2.6	1.8	1.7	2.9	1.8	1.8	25.1
1957	1.8	1.6	10.5	5.9	23.0	11.5	4.4	3.1	11.6	6.6	3.3	2.6	85.9
1958	2.4	2.3	9.1	2.8	9.7	5.9	11.1	3.6	8.5	3.7	2.5	2.4	64.1
1959	2.3	2.1	3.1	2.0	14.0	3.2	13.3	3.0	2.8	5.4	2.2	2.1	55.5
1960	3.0	2.5	6.0	2.7	3.5	5.2	2.4	2.7	2.9	2.8	1.8	2.1	37.7
1961	1.7	1.5	2.2	2.1	7.6	3.2	3.2	4.4	1.9	2.4	3.0	1.7	34.8
1962	1.9	1.5	1.7	1.6	1.7	7.5	6.8	4.7	2.8	2.0	1.9	1.7	35.7
1963	1.6	1.4	1.8	1.5	2.4	2.8	5.6	1.7	2.3	1.7	1.5	1.6	25.9
1964	1.6	1.5	1.6	1.5	2.5	2.7	1.8	1.8	1.8	1.8	3.1	2.8	24.4
1965	2.4	2.8	1.9	2.2	7.3	25.2	3.7	2.3	3.7	2.8	1.8	3.5	59.6
1966	1.7	4.9	1.8	2.5	1.7	3.6	5.8	3.7	2.0	2.0	1.9	1.9	33.4
1967	1.9	1.7	1.9	3.9	2.7	8.3	5.2	2.0	3.5	1.9	1.9	2.0	36.7
1968	2.0	1.8	1.9	2.0	2.2	1.9	4.6	1.9	1.9	11.6	2.1	2.0	35.8
1969	2.1	2.3	2.0	2.3	6.6	2.3	2.7	20.5	15.6	3.9	2.4	2.4	65.0
1970	2.3	2.0	2.8	5.3	4.3	8.4	2.3	2.2	3.4	4.2	2.1	2.7	41.9
1971	3.3	4.6	3.0	2.8	5.4	4.1	3.5	2.2	2.3	3.8	5.7	2.7	43.3
1972	2.4	2.2	2.3	2.7	5.5	3.8	2.4	3.8	3.1	2.6	2.8	2.3	35.8
1973	2.3	2.1	19.0	5.3	3.2	2.9	4.6	3.4	46.8	15.4	3.5	5.2	113.7
1974	2.9	2.3	3.1	9.5	7.7	3.3	2.5	3.8	2.3	3.6	2.2	2.0	45.1

Incremental Flow Data (acre-feet)
Node 410--Unit 26

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	1.9	2.3	2.1	2.4	3.6	2.5	2.0	2.1	2.2	1.8	2.4	1.8	27.1
1976	1.8	1.7	2.6	15.6	5.9	2.5	2.8	1.8	3.1	2.7	1.7	1.8	44.0
1977	1.9	1.6	2.0	2.2	9.1	6.7	2.2	5.7	6.6	3.0	2.2	2.0	45.2
1978	1.9	1.8	1.9	1.9	2.9	3.5	1.9	2.4	5.8	2.1	2.1	2.1	30.3
1979	2.1	2.0	3.2	2.0	3.2	2.0	6.1	1.9	2.1	5.1	2.1	2.2	33.9
1980	2.1	2.0	5.1	2.3	2.3	1.5	2.3	3.9	2.1	2.1	2.0	2.2	30.0
1981	2.0	1.8	2.2	2.2	9.4	14.8	5.7	2.8	3.0	2.6	4.0	2.5	52.9
1982	2.4	2.7	2.3	2.1	9.0	3.2	3.0	2.4	2.3	2.7	2.1	2.1	36.3
1983	2.1	2.2	2.2	2.3	4.5	2.4	2.2	2.2	2.3	3.7	2.3	2.0	30.3
1984	2.0	1.8	5.8	8.7	2.7	2.7	2.4	2.0	2.2	3.0	2.1	9.0	44.4
1985	2.2	2.0	2.2	15.9	2.7	8.8	5.2	3.2	3.1	12.4	2.8	2.7	63.4
1986	2.5	2.2	2.5	4.5	2.3	3.3	4.5	9.1	2.5	4.0	2.3	2.2	41.8
1987	2.1	2.0	15.5	5.2	8.5	3.5	4.3	3.7	2.0	2.1	2.0	2.0	52.9
1988	2.0	1.9	2.0	3.1	2.0	2.0	2.3	2.4	2.0	2.0	1.9	2.0	25.6
1989	2.0	1.8	1.9	1.8	9.5	8.6	5.3	2.6	2.8	2.4	2.2	2.2	43.0
1990	2.2	1.9	2.4	4.0	20.0	2.8	2.4	7.3	3.7	2.3	2.1	2.2	53.4
1991	2.2	2.0	2.4	2.0	2.3	2.7	1.6	2.2	2.0	2.0	2.0	2.3	25.7
1992	2.1	1.8	2.0	1.8	3.6	11.9	3.7	3.3	2.5	2.7	2.4	4.5	42.3
1993	5.1	4.1	5.9	2.5	12.5	18.3	53.7	5.0	3.9	3.6	3.3	3.2	121.1
1994	3.0	2.5	2.6	3.7	2.5	2.4	3.6	2.4	2.3	2.6	2.3	2.4	32.3

Incremental Flow Data (acre-feet)
Node 420--Unit 48

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	2.2	2.6	2.0	2.5	2.2	3.7	4.8	2.3	7.8	3.6	2.1	2.1	37.9
1956	2.0	2.8	1.9	2.9	2.9	1.8	2.9	2.0	2.0	3.3	2.0	2.1	28.6
1957	2.1	1.8	11.9	6.8	26.2	13.1	5.0	3.5	13.2	7.5	3.8	3.0	97.9
1958	2.8	2.6	10.4	3.2	11.1	6.8	12.7	4.1	9.7	4.3	2.9	2.8	73.1
1959	2.6	2.4	3.5	2.3	15.9	3.6	15.2	3.5	3.2	6.2	2.5	2.4	63.2
1960	3.5	2.9	6.8	3.1	3.9	5.9	2.7	3.1	3.3	3.2	2.1	2.4	43.0
1961	1.9	1.7	2.5	2.4	8.6	3.7	3.6	5.0	2.1	2.7	3.5	1.9	39.6
1962	2.1	1.7	1.9	1.8	2.0	8.6	7.7	5.4	3.2	2.3	2.1	1.9	40.6
1963	1.9	1.6	2.0	1.7	2.8	3.3	6.3	1.9	2.6	2.0	1.7	1.8	29.5
1964	1.8	1.7	1.8	1.8	2.8	3.1	2.0	2.1	2.1	2.0	3.5	3.2	27.9
1965	2.7	3.2	2.2	2.5	8.4	28.7	4.2	2.6	4.3	3.1	2.0	4.0	68.0
1966	2.0	5.6	2.0	2.9	1.9	4.1	6.7	4.2	2.2	2.3	2.2	2.2	38.1
1967	2.2	2.0	2.1	4.4	3.1	9.5	5.9	2.2	3.9	2.2	2.2	2.2	41.9
1968	2.2	2.1	2.2	2.2	2.5	2.1	5.2	2.2	2.2	13.2	2.4	2.3	40.9
1969	2.4	2.7	2.2	2.6	7.5	2.6	3.1	23.4	17.8	4.4	2.7	2.7	74.1
1970	2.6	2.3	3.2	6.1	4.9	9.6	2.6	2.5	3.8	4.8	2.4	3.1	47.8
1971	3.7	5.2	3.5	3.2	6.1	4.7	4.0	2.5	2.6	4.4	6.4	3.1	49.4
1972	2.7	2.5	2.6	3.1	6.3	4.3	2.7	4.3	3.5	2.9	3.2	2.6	40.8
1973	2.6	2.4	21.6	6.1	3.7	3.3	5.2	3.8	53.4	17.5	4.0	5.9	129.6
1974	3.3	2.7	3.5	10.8	8.8	3.7	2.9	4.3	2.6	4.1	2.5	2.2	51.4

Incremental Flow Data (acre-feet)
Node 420--Unit 48

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	2.2	2.6	2.4	2.8	4.1	2.9	2.3	2.4	2.5	2.0	2.7	2.0	30.8
1976	2.0	1.9	3.0	17.8	6.7	2.9	3.3	2.1	3.5	3.1	2.0	2.0	50.1
1977	2.2	1.8	2.3	2.5	10.3	7.7	2.5	6.5	7.5	3.5	2.5	2.2	51.5
1978	2.2	2.1	2.2	2.2	3.3	4.0	2.1	2.8	6.6	2.4	2.4	2.3	34.6
1979	2.4	2.2	3.7	2.3	3.7	2.2	7.0	2.2	2.4	5.8	2.4	2.5	38.7
1980	2.4	2.3	5.8	2.6	2.7	1.7	2.6	4.4	2.4	2.4	2.3	2.5	34.2
1981	2.3	2.0	2.5	2.6	10.7	16.8	6.5	3.2	3.4	3.0	4.5	2.8	60.2
1982	2.7	3.0	2.6	2.4	10.3	3.6	3.4	2.8	2.6	3.1	2.4	2.4	41.4
1983	2.4	2.5	2.5	2.7	5.1	2.7	2.5	2.5	2.6	4.2	2.6	2.3	34.5
1984	2.3	2.1	6.6	9.9	3.1	3.1	2.7	2.3	2.5	3.5	2.3	10.2	50.6
1985	2.6	2.3	2.5	18.1	3.1	10.1	6.0	3.6	3.6	14.1	3.2	3.1	72.2
1986	2.9	2.5	2.8	5.1	2.7	3.8	5.2	10.3	2.8	4.5	2.6	2.5	47.7
1987	2.4	2.3	17.6	5.9	9.7	4.0	4.9	4.2	2.3	2.4	2.3	2.3	60.3
1988	2.3	2.2	2.3	3.5	2.3	2.2	2.7	2.8	2.2	2.3	2.2	2.3	29.2
1989	2.2	2.0	2.2	2.1	10.8	9.8	6.0	3.0	3.2	2.7	2.5	2.5	49.1
1990	2.5	2.2	2.7	4.5	22.8	3.2	2.8	8.4	4.2	2.6	2.4	2.5	60.8
1991	2.5	2.2	2.7	2.3	2.6	3.1	1.8	2.5	2.2	2.3	2.3	2.6	29.2
1992	2.4	2.0	2.2	2.1	4.1	13.5	4.3	3.8	2.9	3.1	2.7	5.1	48.2
1993	5.8	4.7	6.7	2.8	14.3	20.9	61.3	5.7	4.4	4.1	3.7	3.7	138.0
1994	3.4	2.8	3.0	4.2	2.9	2.8	4.1	2.8	2.7	3.0	2.6	2.7	36.8

Incremental Flow Data (acre-feet)
Node 430--Unit 49

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	2.6	3.0	2.3	3.0	2.6	4.3	5.6	2.7	9.2	4.2	2.5	2.5	44.5
1956	2.4	3.3	2.3	3.5	3.4	2.1	3.4	2.3	2.3	3.8	2.3	2.4	33.6
1957	2.4	2.2	14.0	7.9	30.8	15.4	5.8	4.2	15.5	8.8	4.4	3.5	115.1
1958	3.3	3.0	12.2	3.7	13.0	7.9	14.9	4.8	11.4	5.0	3.4	3.3	85.9
1959	3.0	2.8	4.2	2.7	18.7	4.2	17.8	4.1	3.8	7.3	2.9	2.8	74.3
1960	4.1	3.4	8.1	3.6	4.6	7.0	3.2	3.6	3.8	3.8	2.5	2.8	50.5
1961	2.3	2.0	3.0	2.8	10.1	4.3	4.2	5.9	2.5	3.2	4.1	2.3	46.6
1962	2.5	2.0	2.2	2.1	2.3	10.1	9.1	6.3	3.8	2.7	2.5	2.3	47.8
1963	2.2	1.9	2.3	2.0	3.3	3.8	7.5	2.3	3.0	2.3	2.0	2.1	34.7
1964	2.1	2.0	2.1	2.1	3.3	3.6	2.4	2.5	2.5	2.4	4.2	3.7	32.8
1965	3.2	3.7	2.5	3.0	9.8	33.8	4.9	3.1	5.0	3.7	2.4	4.7	79.9
1966	2.3	6.5	2.3	3.4	2.3	4.8	7.8	4.9	2.6	2.6	2.5	2.6	44.8
1967	2.5	2.3	2.5	5.2	3.6	11.1	7.0	2.6	4.6	2.5	2.6	2.6	49.2
1968	2.6	2.4	2.6	2.6	3.0	2.5	6.1	2.6	2.6	15.5	2.8	2.7	48.0
1969	2.8	3.2	2.6	3.1	8.8	3.1	3.6	27.5	20.9	5.2	3.2	3.2	87.1
1970	3.1	2.7	3.7	7.2	5.8	11.3	3.1	3.0	4.5	5.6	2.8	3.6	56.2
1971	4.4	6.1	4.1	3.7	7.2	5.5	4.7	2.9	3.1	5.1	7.6	3.6	58.1
1972	3.2	2.9	3.1	3.7	7.4	5.1	3.2	5.0	4.1	3.5	3.7	3.1	48.0
1973	3.0	2.8	25.4	7.1	4.3	3.9	6.1	4.5	62.8	20.6	4.7	7.0	152.3
1974	3.9	3.1	4.2	12.7	10.3	4.4	3.4	5.1	3.0	4.8	2.9	2.6	60.4

Incremental Flow Data (acre-feet)
Node 430--Unit 49

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	2.5	3.0	2.8	3.3	4.8	3.4	2.6	2.8	2.9	2.4	3.2	2.4	36.3
1976	2.4	2.2	3.5	20.9	7.8	3.4	3.8	2.4	4.2	3.6	2.3	2.4	58.9
1977	2.5	2.2	2.7	3.0	12.1	9.0	2.9	7.7	8.9	4.1	2.9	2.6	60.5
1978	2.6	2.5	2.6	2.5	3.9	4.7	2.5	3.2	7.7	2.8	2.8	2.8	40.6
1979	2.8	2.6	4.3	2.7	4.3	2.6	8.2	2.6	2.8	6.8	2.8	2.9	45.5
1980	2.8	2.8	6.8	3.0	3.1	2.0	3.1	5.2	2.8	2.8	2.7	3.0	40.2
1981	2.7	2.4	2.9	3.0	12.6	19.8	7.7	3.8	4.0	3.5	5.3	3.3	70.8
1982	3.2	3.5	3.1	2.8	12.1	4.2	4.0	3.2	3.0	3.7	2.8	2.8	48.6
1983	2.8	2.9	3.0	3.1	6.0	3.2	2.9	2.9	3.1	4.9	3.0	2.7	40.6
1984	2.7	2.5	7.8	11.6	3.6	3.7	3.2	2.7	2.9	4.1	2.8	12.0	59.5
1985	3.0	2.7	2.9	21.3	3.7	11.9	7.0	4.3	4.2	16.6	3.7	3.6	84.9
1986	3.4	3.0	3.3	6.0	3.2	4.4	6.1	12.1	3.3	5.3	3.0	2.9	56.1
1987	2.8	2.7	20.7	7.0	11.4	4.7	5.8	4.9	2.7	2.8	2.7	2.7	70.9
1988	2.7	2.6	2.7	4.1	2.8	2.6	3.1	3.2	2.6	2.7	2.6	2.7	34.4
1989	2.6	2.3	2.6	2.5	12.7	11.5	7.1	3.5	3.7	3.2	3.0	3.0	57.7
1990	2.9	2.6	3.2	5.3	26.8	3.8	3.2	9.8	5.0	3.0	2.8	3.0	71.5
1991	2.9	2.6	3.2	2.7	3.1	3.6	2.1	3.0	2.6	2.7	2.7	3.0	34.4
1992	2.8	2.4	2.6	2.4	4.8	15.9	5.0	4.4	3.4	3.7	3.2	6.0	56.6
1993	6.8	5.5	7.9	3.3	16.8	24.5	72.0	6.7	5.2	4.9	4.4	4.3	162.2
1994	4.0	3.3	3.5	4.9	3.4	3.3	4.8	3.2	3.1	3.5	3.0	3.2	43.3

Incremental Flow Data (acre-feet)
Node 440--Unit 51--Rattlesnake Canal Berm

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	5.2	6.0	4.6	5.9	5.1	8.6	11.1	5.3	18.3	8.3	5.0	4.9	88.3
1956	4.8	6.5	4.5	6.8	6.8	4.2	6.8	4.7	4.6	7.6	4.7	4.8	66.8
1957	4.8	4.3	27.9	15.8	61.2	30.7	11.6	8.3	30.8	17.5	8.7	6.9	228.4
1958	6.5	6.0	24.2	7.4	25.8	15.8	29.5	9.6	22.6	10.0	6.7	6.4	170.6
1959	6.0	5.5	8.3	5.3	37.1	8.4	35.4	8.1	7.5	14.5	5.7	5.6	147.6
1960	8.1	6.8	16.0	7.1	9.2	13.9	6.4	7.2	7.6	7.5	4.9	5.6	100.2
1961	4.5	4.0	5.9	5.5	20.1	8.5	8.4	11.6	4.9	6.4	8.1	4.5	92.5
1962	4.9	3.9	4.4	4.2	4.6	20.0	18.0	12.5	7.4	5.3	5.0	4.5	94.9
1963	4.4	3.7	4.7	3.9	6.4	7.6	14.8	4.5	6.1	4.6	4.0	4.2	68.9
1964	4.2	3.9	4.2	4.1	6.5	7.2	4.8	4.9	4.9	4.7	8.3	7.4	65.0
1965	6.3	7.4	5.1	5.9	19.5	67.1	9.8	6.2	9.9	7.3	4.8	9.3	158.6
1966	4.6	12.9	4.7	6.7	4.5	9.6	15.5	9.8	5.2	5.3	5.0	5.1	88.9
1967	5.0	4.5	5.0	10.3	7.2	22.1	13.9	5.2	9.2	5.0	5.1	5.2	97.6
1968	5.2	4.8	5.1	5.2	5.9	5.0	12.2	5.1	5.1	30.8	5.6	5.3	95.3
1969	5.6	6.3	5.2	6.2	17.4	6.1	7.2	54.5	41.5	10.3	6.3	6.3	172.9
1970	6.1	5.3	7.4	14.2	11.5	22.4	6.2	5.9	9.0	11.1	5.5	7.2	111.6
1971	8.7	12.2	8.1	7.4	14.3	11.0	9.4	5.8	6.1	10.2	15.1	7.2	115.2
1972	6.4	5.8	6.1	7.3	14.6	10.1	6.3	10.0	8.1	6.8	7.4	6.2	95.2
1973	6.1	5.6	50.5	14.2	8.6	7.7	12.1	8.9	124.6	41.0	9.3	13.9	302.4
1974	7.8	6.2	8.3	25.2	20.5	8.7	6.7	10.1	6.0	9.5	5.8	5.2	119.9

Incremental Flow Data (acre-feet)
Node 440--Unit 51--Rattlesnake Canal Berm

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	5.1	6.0	5.7	6.5	9.6	6.7	5.2	5.6	5.8	4.7	6.3	4.7	72.0
1976	4.7	4.4	6.9	41.5	15.6	6.8	7.6	4.8	8.3	7.2	4.6	4.7	117.0
1977	5.0	4.3	5.3	5.9	24.1	17.9	5.8	15.3	17.6	8.1	5.8	5.2	120.1
1978	5.1	4.9	5.1	5.0	7.8	9.4	5.0	6.4	15.3	5.6	5.6	5.5	80.7
1979	5.5	5.2	8.5	5.3	8.6	5.2	16.2	5.2	5.6	13.6	5.7	5.8	90.2
1980	5.6	5.5	13.6	6.0	6.2	4.0	6.1	10.4	5.7	5.6	5.3	5.9	79.7
1981	5.3	4.7	5.8	6.0	25.0	39.2	15.2	7.5	8.0	6.9	10.5	6.5	140.6
1982	6.3	7.1	6.2	5.7	24.0	8.4	8.0	6.4	6.0	7.3	5.6	5.7	96.5
1983	5.5	5.8	5.8	6.2	12.0	6.3	5.8	5.7	6.1	9.7	6.0	5.4	80.5
1984	5.3	4.9	15.5	23.1	7.1	7.3	6.4	5.4	5.8	8.1	5.5	23.9	118.1
1985	6.0	5.4	5.8	42.3	7.3	23.5	13.9	8.5	8.3	33.0	7.4	7.2	168.5
1986	6.8	5.9	6.6	12.0	6.3	8.8	12.1	24.1	6.5	10.6	6.0	5.8	111.3
1987	5.6	5.3	41.2	13.9	22.6	9.3	11.5	9.8	5.4	5.6	5.3	5.4	140.7
1988	5.4	5.1	5.4	8.1	5.4	5.2	6.2	6.4	5.2	5.3	5.1	5.3	68.2
1989	5.2	4.7	5.1	4.9	25.2	22.7	14.0	7.0	7.4	6.3	5.9	5.9	114.4
1990	5.8	5.2	6.4	10.5	53.2	7.6	6.4	19.5	9.9	6.0	5.7	5.9	141.9
1991	5.8	5.2	6.4	5.4	6.1	7.2	4.3	5.9	5.2	5.3	5.4	6.0	68.2
1992	5.6	4.8	5.2	4.8	9.5	31.5	9.9	8.8	6.7	7.3	6.4	11.9	112.5
1993	13.4	11.0	15.7	6.5	33.3	48.6	142.9	13.3	10.3	9.6	8.7	8.6	322.0
1994	7.8	6.7	7.0	9.7	6.8	6.5	9.5	6.4	6.2	7.0	6.1	6.3	85.9

Incremental Flow Data (acre-feet)
Node 455--Unit 34

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.7	0.8	0.6	0.8	0.6	1.1	1.4	0.7	2.3	1.1	0.6	0.6	11.3
1956	0.6	0.8	0.6	0.9	0.9	0.5	0.9	0.6	0.6	1.0	0.6	0.6	8.5
1957	0.6	0.6	3.6	2.0	7.8	3.9	1.5	1.0	3.9	2.2	1.1	0.9	29.2
1958	0.8	0.8	3.1	0.9	3.3	2.0	3.8	1.2	2.9	1.3	0.9	0.8	21.8
1959	0.8	0.7	1.1	0.7	4.8	1.1	4.5	1.0	1.0	1.9	0.7	0.7	18.9
1960	1.0	0.9	2.0	0.9	1.2	1.8	0.8	0.9	1.0	1.0	0.6	0.7	12.8
1961	0.6	0.5	0.8	0.7	2.6	1.1	1.1	1.5	0.6	0.8	1.0	0.6	11.8
1962	0.6	0.5	0.6	0.5	0.6	2.6	2.3	1.6	0.9	0.7	0.6	0.6	12.1
1963	0.6	0.5	0.6	0.5	0.8	1.0	1.9	0.6	0.8	0.6	0.5	0.5	8.8
1964	0.5	0.5	0.5	0.5	0.8	0.9	0.6	0.6	0.6	0.6	1.1	0.9	8.3
1965	0.8	0.9	0.6	0.8	2.5	8.6	1.3	0.8	1.3	0.9	0.6	1.2	20.3
1966	0.6	1.6	0.6	0.9	0.6	1.2	2.0	1.3	0.7	0.7	0.6	0.7	11.4
1967	0.6	0.6	0.6	1.3	0.9	2.8	1.8	0.7	1.2	0.6	0.7	0.7	12.4
1968	0.7	0.6	0.6	0.7	0.8	0.6	1.6	0.6	0.6	3.9	0.7	0.7	12.2
1969	0.7	0.8	0.7	0.8	2.2	0.8	0.9	7.0	5.3	1.3	0.8	0.8	22.1
1970	0.8	0.7	0.9	1.8	1.5	2.9	0.8	0.8	1.1	1.4	0.7	0.9	14.3
1971	1.1	1.5	1.0	0.9	1.8	1.4	1.2	0.7	0.8	1.3	1.9	0.9	14.7
1972	0.8	0.7	0.8	0.9	1.9	1.3	0.8	1.3	1.0	0.9	0.9	0.8	12.2
1973	0.8	0.7	6.4	1.8	1.1	1.0	1.5	1.1	15.9	5.2	1.2	1.8	38.6
1974	1.0	0.8	1.1	3.2	2.6	1.1	0.9	1.3	0.8	1.2	0.7	0.7	15.3

Incremental Flow Data (acre-feet)
Node 455--Unit 34

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.6	0.8	0.7	0.8	1.2	0.9	0.7	0.7	0.7	0.6	0.8	0.6	9.2
1976	0.6	0.6	0.9	5.3	2.0	0.9	1.0	0.6	1.1	0.9	0.6	0.6	14.9
1977	0.6	0.6	0.7	0.8	3.1	2.3	0.7	2.0	2.2	1.0	0.7	0.7	15.4
1978	0.7	0.6	0.6	0.6	1.0	1.2	0.6	0.8	2.0	0.7	0.7	0.7	10.3
1979	0.7	0.7	1.1	0.7	1.1	0.7	2.1	0.7	0.7	1.7	0.7	0.7	11.5
1980	0.7	0.7	1.7	0.8	0.8	0.5	0.8	1.3	0.7	0.7	0.7	0.8	10.2
1981	0.7	0.6	0.7	0.8	3.2	5.0	1.9	1.0	1.0	0.9	1.4	0.8	18.0
1982	0.8	0.9	0.8	0.7	3.1	1.1	1.0	0.8	0.8	0.9	0.7	0.7	12.3
1983	0.7	0.8	0.8	0.8	1.5	0.8	0.7	0.7	0.8	1.2	0.8	0.7	10.3
1984	0.7	0.6	2.0	3.0	0.9	0.9	0.8	0.7	0.7	1.0	0.7	3.0	15.1
1985	0.8	0.7	0.7	5.4	0.9	3.0	1.8	1.1	1.1	4.2	0.9	0.9	21.5
1986	0.9	0.8	0.8	1.5	0.8	1.1	1.5	3.1	0.8	1.4	0.8	0.7	14.2
1987	0.7	0.7	5.3	1.8	2.9	1.2	1.5	1.3	0.7	0.7	0.7	0.7	18.0
1988	0.7	0.6	0.7	1.0	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	8.7
1989	0.7	0.6	0.7	0.6	3.2	2.9	1.8	0.9	0.9	0.8	0.8	0.8	14.6
1990	0.8	0.7	0.8	1.4	6.8	1.0	0.8	2.5	1.3	0.8	0.7	0.8	18.2
1991	0.7	0.7	0.8	0.7	0.8	0.9	0.5	0.8	0.7	0.7	0.7	0.8	8.7
1992	0.7	0.6	0.7	0.6	1.2	4.0	1.3	1.1	0.9	0.9	0.8	1.5	14.4
1993	1.7	1.4	2.0	0.8	4.3	6.2	18.3	1.7	1.3	1.2	1.1	1.1	41.2
1994	1.0	0.9	0.9	1.2	0.9	0.8	1.2	0.8	0.8	0.9	0.8	0.8	11.0

Incremental Flow Data (acre-feet)
Node 460--Unit 37--Dead Horse Slough

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	3.7	4.3	3.3	4.3	3.7	6.2	8.1	3.8	13.2	6.0	3.6	3.5	63.8
1956	3.4	4.7	3.2	4.9	4.9	3.1	4.9	3.4	3.3	5.5	3.4	3.5	48.2
1957	3.5	3.1	20.1	11.4	44.2	22.1	8.4	6.0	22.2	12.7	6.3	5.0	164.9
1958	4.7	4.3	17.5	5.3	18.6	11.4	21.3	7.0	16.3	7.2	4.8	4.7	123.1
1959	4.4	4.0	6.0	3.8	26.8	6.1	25.6	5.9	5.4	10.5	4.1	4.0	106.5
1960	5.8	4.9	11.5	5.2	6.6	10.0	4.6	5.2	5.5	5.4	3.5	4.0	72.3
1961	3.2	2.9	4.3	4.0	14.5	6.2	6.1	8.4	3.6	4.6	5.8	3.2	66.7
1962	3.6	2.8	3.2	3.0	3.3	14.4	13.0	9.0	5.4	3.9	3.6	3.2	68.5
1963	3.2	2.7	3.4	2.8	4.7	5.5	10.7	3.3	4.4	3.3	2.9	3.0	49.7
1964	3.0	2.8	3.0	3.0	4.7	5.2	3.5	3.5	3.5	3.4	6.0	5.3	46.9
1965	4.6	5.3	3.7	4.3	14.1	48.4	7.1	4.4	7.2	5.3	3.5	6.7	114.5
1966	3.3	9.3	3.4	4.8	3.2	6.9	11.2	7.1	3.7	3.8	3.6	3.7	64.2
1967	3.6	3.3	3.6	7.4	5.2	15.9	10.0	3.7	6.6	3.6	3.7	3.7	70.5
1968	3.8	3.5	3.7	3.7	4.3	3.6	8.8	3.7	3.7	22.2	4.0	3.8	68.8
1969	4.1	4.5	3.8	4.5	12.6	4.4	5.2	39.3	30.0	7.4	4.6	4.6	124.8
1970	4.4	3.8	5.3	10.2	8.3	16.1	4.4	4.2	6.5	8.0	4.0	5.2	80.5
1971	6.3	8.8	5.8	5.3	10.3	7.9	6.8	4.2	4.4	7.3	10.9	5.2	83.2
1972	4.6	4.2	4.4	5.3	10.6	7.3	4.5	7.2	5.9	4.9	5.3	4.4	68.7
1973	4.4	4.1	36.4	10.2	6.2	5.6	8.7	6.4	89.9	29.6	6.7	10.0	218.2
1974	5.6	4.5	6.0	18.2	14.8	6.3	4.8	7.3	4.3	6.8	4.2	3.8	86.5

Incremental Flow Data (acre-feet)
Node 460--Unit 37--Dead Horse Slough

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	3.7	4.3	4.1	4.7	6.9	4.9	3.8	4.1	4.2	3.4	4.6	3.4	52.0
1976	3.4	3.2	5.0	30.0	11.3	4.9	5.5	3.5	6.0	5.2	3.3	3.4	84.5
1977	3.6	3.1	3.8	4.2	17.4	12.9	4.2	11.0	12.7	5.8	4.2	3.8	86.7
1978	3.7	3.5	3.7	3.6	5.6	6.8	3.6	4.6	11.0	4.0	4.0	4.0	58.2
1979	4.0	3.7	6.1	3.8	6.2	3.8	11.7	3.7	4.0	9.8	4.1	4.2	65.1
1980	4.1	3.9	9.8	4.3	4.5	2.9	4.4	7.5	4.1	4.0	3.8	4.3	57.6
1981	3.8	3.4	4.2	4.3	18.0	28.3	11.0	5.4	5.8	5.0	7.6	4.7	101.5
1982	4.5	5.1	4.4	4.1	17.3	6.1	5.8	4.6	4.3	5.2	4.0	4.1	69.7
1983	4.0	4.2	4.2	4.5	8.6	4.6	4.2	4.1	4.4	7.0	4.3	3.9	58.1
1984	3.8	3.5	11.2	16.7	5.2	5.2	4.6	3.9	4.2	5.8	4.0	17.2	85.2
1985	4.3	3.9	4.2	30.6	5.3	17.0	10.1	6.1	6.0	23.8	5.3	5.2	121.7
1986	4.9	4.3	4.8	8.6	4.5	6.3	8.7	17.4	4.7	7.7	4.3	4.2	80.3
1987	4.1	3.8	29.7	10.0	16.3	6.7	8.3	7.1	3.9	4.0	3.8	3.9	101.5
1988	3.9	3.7	3.9	5.9	3.9	3.8	4.5	4.6	3.7	3.8	3.7	3.8	49.2
1989	3.8	3.4	3.7	3.5	18.2	16.4	10.1	5.0	5.4	4.6	4.3	4.3	82.6
1990	4.2	3.7	4.6	7.6	38.4	5.4	4.6	14.1	7.1	4.3	4.1	4.2	102.4
1991	4.2	3.7	4.6	3.9	4.4	5.2	3.1	4.3	3.8	3.8	3.9	4.3	49.2
1992	4.1	3.4	3.7	3.5	6.9	22.7	7.2	6.4	4.8	5.3	4.6	8.6	81.2
1993	9.7	7.9	11.3	4.7	24.0	35.1	103.2	9.6	7.4	7.0	6.3	6.2	232.5
1994	5.7	4.8	5.1	7.0	4.9	4.7	6.8	4.6	4.5	5.1	4.4	4.5	62.0

Incremental Flow Data (acre-feet)
Node 470--Unit 39--Dead Horse Slough

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	3.7	4.3	3.3	4.3	3.7	6.2	8.1	3.8	13.2	6.0	3.6	3.5	63.8
1956	3.4	4.7	3.2	4.9	4.9	3.1	4.9	3.4	3.3	5.5	3.4	3.5	48.2
1957	3.5	3.1	20.1	11.4	44.2	22.1	8.4	6.0	22.2	12.7	6.3	5.0	164.9
1958	4.7	4.3	17.5	5.3	18.6	11.4	21.3	7.0	16.3	7.2	4.8	4.7	123.1
1959	4.4	4.0	6.0	3.8	26.8	6.1	25.6	5.9	5.4	10.5	4.1	4.0	106.5
1960	5.8	4.9	11.5	5.2	6.6	10.0	4.6	5.2	5.5	5.4	3.5	4.0	72.3
1961	3.2	2.9	4.3	4.0	14.5	6.2	6.1	8.4	3.6	4.6	5.8	3.2	66.7
1962	3.6	2.8	3.2	3.0	3.3	14.4	13.0	9.0	5.4	3.9	3.6	3.2	68.5
1963	3.2	2.7	3.4	2.8	4.7	5.5	10.7	3.3	4.4	3.3	2.9	3.0	49.7
1964	3.0	2.8	3.0	3.0	4.7	5.2	3.5	3.5	3.5	3.4	6.0	5.3	46.9
1965	4.6	5.3	3.7	4.3	14.1	48.4	7.1	4.4	7.2	5.3	3.5	6.7	114.5
1966	3.3	9.3	3.4	4.8	3.2	6.9	11.2	7.1	3.7	3.8	3.6	3.7	64.2
1967	3.6	3.3	3.6	7.4	5.2	15.9	10.0	3.7	6.6	3.6	3.7	3.7	70.5
1968	3.8	3.5	3.7	3.7	4.3	3.6	8.8	3.7	3.7	22.2	4.0	3.8	68.8
1969	4.1	4.5	3.8	4.5	12.6	4.4	5.2	39.3	30.0	7.4	4.6	4.6	124.8
1970	4.4	3.8	5.3	10.2	8.3	16.1	4.4	4.2	6.5	8.0	4.0	5.2	80.5
1971	6.3	8.8	5.8	5.3	10.3	7.9	6.8	4.2	4.4	7.3	10.9	5.2	83.2
1972	4.6	4.2	4.4	5.3	10.6	7.3	4.5	7.2	5.9	4.9	5.3	4.4	68.7
1973	4.4	4.1	36.4	10.2	6.2	5.6	8.7	6.4	89.9	29.6	6.7	10.0	218.2
1974	5.6	4.5	6.0	18.2	14.8	6.3	4.8	7.3	4.3	6.8	4.2	3.8	86.5

Incremental Flow Data (acre-feet)
Node 470--Unit 39--Dead Horse Slough

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	3.7	4.3	4.1	4.7	6.9	4.9	3.8	4.1	4.2	3.4	4.6	3.4	52.0
1976	3.4	3.2	5.0	30.0	11.3	4.9	5.5	3.5	6.0	5.2	3.3	3.4	84.5
1977	3.6	3.1	3.8	4.2	17.4	12.9	4.2	11.0	12.7	5.8	4.2	3.8	86.7
1978	3.7	3.5	3.7	3.6	5.6	6.8	3.6	4.6	11.0	4.0	4.0	4.0	58.2
1979	4.0	3.7	6.1	3.8	6.2	3.8	11.7	3.7	4.0	9.8	4.1	4.2	65.1
1980	4.1	3.9	9.8	4.3	4.5	2.9	4.4	7.5	4.1	4.0	3.8	4.3	57.6
1981	3.8	3.4	4.2	4.3	18.0	28.3	11.0	5.4	5.8	5.0	7.6	4.7	101.5
1982	4.5	5.1	4.4	4.1	17.3	6.1	5.8	4.6	4.3	5.2	4.0	4.1	69.7
1983	4.0	4.2	4.2	4.5	8.6	4.6	4.2	4.1	4.4	7.0	4.3	3.9	58.1
1984	3.8	3.5	11.2	16.7	5.2	5.2	4.6	3.9	4.2	5.8	4.0	17.2	85.2
1985	4.3	3.9	4.2	30.6	5.3	17.0	10.1	6.1	6.0	23.8	5.3	5.2	121.7
1986	4.9	4.3	4.8	8.6	4.5	6.3	8.7	17.4	4.7	7.7	4.3	4.2	80.3
1987	4.1	3.8	29.7	10.0	16.3	6.7	8.3	7.1	3.9	4.0	3.8	3.9	101.5
1988	3.9	3.7	3.9	5.9	3.9	3.8	4.5	4.6	3.7	3.8	3.7	3.8	49.2
1989	3.8	3.4	3.7	3.5	18.2	16.4	10.1	5.0	5.4	4.6	4.3	4.3	82.6
1990	4.2	3.7	4.6	7.6	38.4	5.4	4.6	14.1	7.1	4.3	4.1	4.2	102.4
1991	4.2	3.7	4.6	3.9	4.4	5.2	3.1	4.3	3.8	3.8	3.9	4.3	49.2
1992	4.1	3.4	3.7	3.5	6.9	22.7	7.2	6.4	4.8	5.3	4.6	8.6	81.2
1993	9.7	7.9	11.3	4.7	24.0	35.1	103.2	9.6	7.4	7.0	6.3	6.2	232.5
1994	5.7	4.8	5.1	7.0	4.9	4.7	6.8	4.6	4.5	5.1	4.4	4.5	62.0

Incremental Flow Data (acre-feet)
Node 510--Unit 61

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	2.5	2.8	2.2	2.8	2.4	4.1	5.3	2.5	8.7	3.9	2.3	2.3	41.8
1956	2.3	3.1	2.1	3.2	3.2	2.0	3.2	2.2	2.2	3.6	2.2	2.3	31.6
1957	2.3	2.0	13.2	7.5	29.0	14.5	5.5	3.9	14.6	8.3	4.1	3.3	108.2
1958	3.1	2.8	11.4	3.5	12.2	7.5	14.0	4.6	10.7	4.7	3.2	3.0	80.8
1959	2.9	2.6	3.9	2.5	17.6	4.0	16.8	3.8	3.6	6.9	2.7	2.7	69.9
1960	3.8	3.2	7.6	3.4	4.4	6.6	3.0	3.4	3.6	3.6	2.3	2.7	47.5
1961	2.1	1.9	2.8	2.6	9.5	4.0	4.0	5.5	2.3	3.0	3.8	2.1	43.8
1962	2.3	1.8	2.1	2.0	2.2	9.5	8.5	5.9	3.5	2.5	2.4	2.1	44.9
1963	2.1	1.8	2.2	1.8	3.1	3.6	7.0	2.2	2.9	2.2	1.9	2.0	32.6
1964	2.0	1.9	2.0	2.0	3.1	3.4	2.3	2.3	2.3	2.3	3.9	3.5	30.8
1965	3.0	3.5	2.4	2.8	9.3	31.8	4.6	2.9	4.7	3.5	2.3	4.4	75.1
1966	2.2	6.1	2.2	3.2	2.1	4.6	7.3	4.6	2.5	2.5	2.4	2.4	42.1
1967	2.4	2.2	2.3	4.9	3.4	10.5	6.6	2.5	4.3	2.4	2.4	2.5	46.2
1968	2.5	2.3	2.4	2.5	2.8	2.4	5.8	2.4	2.4	14.6	2.6	2.5	45.1
1969	2.7	3.0	2.5	2.9	8.3	2.9	3.4	25.8	19.6	4.9	3.0	3.0	81.9
1970	2.9	2.5	3.5	6.7	5.4	10.6	2.9	2.8	4.2	5.3	2.6	3.4	52.8
1971	4.1	5.8	3.8	3.5	6.8	5.2	4.4	2.7	2.9	4.8	7.1	3.4	54.6
1972	3.0	2.8	2.9	3.5	6.9	4.8	3.0	4.7	3.9	3.2	3.5	2.9	45.1
1973	2.9	2.7	23.9	6.7	4.1	3.7	5.7	4.2	59.0	19.4	4.4	6.6	143.2
1974	3.7	2.9	3.9	11.9	9.7	4.1	3.2	4.8	2.8	4.5	2.8	2.5	56.8

Incremental Flow Data (acre-feet)
Node 510--Unit 61

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	2.4	2.8	2.7	3.1	4.6	3.2	2.5	2.7	2.8	2.3	3.0	2.2	34.1
1976	2.2	2.1	3.3	19.6	7.4	3.2	3.6	2.3	3.9	3.4	2.2	2.2	55.4
1977	2.4	2.0	2.5	2.8	11.4	8.5	2.7	7.2	8.3	3.8	2.8	2.5	56.9
1978	2.4	2.3	2.4	2.4	3.7	4.5	2.3	3.0	7.2	2.6	2.6	2.6	38.2
1979	2.6	2.5	4.0	2.5	4.1	2.5	7.7	2.4	2.6	6.4	2.7	2.7	42.7
1980	2.7	2.6	6.4	2.8	2.9	1.9	2.9	4.9	2.7	2.6	2.5	2.8	37.8
1981	2.5	2.2	2.8	2.8	11.8	18.6	7.2	3.5	3.8	3.3	5.0	3.1	66.6
1982	3.0	3.3	2.9	2.7	11.4	4.0	3.8	3.0	2.8	3.4	2.7	2.7	45.7
1983	2.6	2.8	2.8	3.0	5.7	3.0	2.8	2.7	2.9	4.6	2.8	2.6	38.2
1984	2.5	2.3	7.3	10.9	3.4	3.4	3.0	2.6	2.7	3.8	2.6	11.3	55.9
1985	2.8	2.5	2.7	20.1	3.5	11.1	6.6	4.0	4.0	15.6	3.5	3.4	79.8
1986	3.2	2.8	3.1	5.7	3.0	4.1	5.7	11.4	3.1	5.0	2.8	2.7	52.7
1987	2.7	2.5	19.5	6.6	10.7	4.4	5.4	4.7	2.6	2.6	2.5	2.5	66.6
1988	2.5	2.4	2.5	3.9	2.6	2.5	3.0	3.0	2.5	2.5	2.4	2.5	32.3
1989	2.5	2.2	2.4	2.3	11.9	10.8	6.7	3.3	3.5	3.0	2.8	2.8	54.2
1990	2.8	2.4	3.0	5.0	25.2	3.6	3.0	9.2	4.7	2.8	2.7	2.8	67.2
1991	2.8	2.5	3.0	2.5	2.9	3.4	2.0	2.8	2.5	2.5	2.6	2.8	32.3
1992	2.7	2.3	2.5	2.3	4.5	14.9	4.7	4.2	3.2	3.5	3.0	5.7	53.3
1993	6.4	5.2	7.4	3.1	15.8	23.0	67.7	6.3	4.9	4.6	4.1	4.1	152.5
1994	3.7	3.2	3.3	4.6	3.2	3.1	4.5	3.0	2.9	3.3	2.9	3.0	40.7

Incremental Flow Data (acre-feet)
Node 520--Unit 63

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	1.7	2.0	1.5	2.0	1.7	2.8	3.7	1.8	6.1	2.7	1.6	1.6	29.2
1956	1.6	2.2	1.5	2.3	2.2	1.4	2.3	1.5	1.5	2.5	1.5	1.6	22.1
1957	1.6	1.4	9.2	5.2	20.2	10.1	3.8	2.7	10.2	5.8	2.9	2.3	75.6
1958	2.2	2.0	8.0	2.4	8.6	5.2	9.8	3.2	7.5	3.3	2.2	2.1	56.4
1959	2.0	1.8	2.7	1.8	12.3	2.8	11.7	2.7	2.5	4.8	1.9	1.9	48.8
1960	2.7	2.2	5.3	2.4	3.0	4.6	2.1	2.4	2.5	2.5	1.6	1.9	33.1
1961	1.5	1.3	2.0	1.8	6.6	2.8	2.8	3.8	1.6	2.1	2.7	1.5	30.6
1962	1.6	1.3	1.5	1.4	1.5	6.6	5.9	4.1	2.5	1.8	1.6	1.5	31.4
1963	1.5	1.2	1.5	1.3	2.1	2.5	4.9	1.5	2.0	1.5	1.3	1.4	22.8
1964	1.4	1.3	1.4	1.4	2.2	2.4	1.6	1.6	1.6	1.6	2.7	2.5	21.5
1965	2.1	2.5	1.7	2.0	6.5	22.2	3.2	2.0	3.3	2.4	1.6	3.1	52.5
1966	1.5	4.3	1.5	2.2	1.5	3.2	5.1	3.2	1.7	1.7	1.7	1.7	29.4
1967	1.7	1.5	1.6	3.4	2.4	7.3	4.6	1.7	3.0	1.7	1.7	1.7	32.3
1968	1.7	1.6	1.7	1.7	2.0	1.6	4.0	1.7	1.7	10.2	1.8	1.8	31.5
1969	1.9	2.1	1.7	2.0	5.8	2.0	2.4	18.0	13.7	3.4	2.1	2.1	57.2
1970	2.0	1.8	2.4	4.7	3.8	7.4	2.0	1.9	3.0	3.7	1.8	2.4	36.9
1971	2.9	4.0	2.7	2.4	4.7	3.6	3.1	1.9	2.0	3.4	5.0	2.4	38.1
1972	2.1	1.9	2.0	2.4	4.8	3.3	2.1	3.3	2.7	2.3	2.5	2.0	31.5
1973	2.0	1.9	16.7	4.7	2.8	2.6	4.0	3.0	41.2	13.6	3.1	4.6	100.0
1974	2.6	2.0	2.7	8.4	6.8	2.9	2.2	3.3	2.0	3.1	1.9	1.7	39.7

Incremental Flow Data (acre-feet)
Node 520--Unit 63

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	1.7	2.0	1.9	2.2	3.2	2.2	1.7	1.9	1.9	1.6	2.1	1.6	23.8
1976	1.6	1.5	2.3	13.7	5.2	2.3	2.5	1.6	2.7	2.4	1.5	1.6	38.7
1977	1.7	1.4	1.8	1.9	8.0	5.9	1.9	5.1	5.8	2.7	1.9	1.7	39.7
1978	1.7	1.6	1.7	1.7	2.6	3.1	1.6	2.1	5.1	1.9	1.8	1.8	26.7
1979	1.8	1.7	2.8	1.8	2.8	1.7	5.4	1.7	1.8	4.5	1.9	1.9	29.8
1980	1.9	1.8	4.5	2.0	2.0	1.3	2.0	3.4	1.9	1.8	1.8	2.0	26.4
1981	1.8	1.5	1.9	2.0	8.3	13.0	5.0	2.5	2.6	2.3	3.5	2.2	46.5
1982	2.1	2.3	2.0	1.9	7.9	2.8	2.6	2.1	2.0	2.4	1.9	1.9	31.9
1983	1.8	1.9	1.9	2.1	4.0	2.1	1.9	1.9	2.0	3.2	2.0	1.8	26.6
1984	1.8	1.6	5.1	7.6	2.4	2.4	2.1	1.8	1.9	2.7	1.8	7.9	39.1
1985	2.0	1.8	1.9	14.0	2.4	7.8	4.6	2.8	2.8	10.9	2.4	2.4	55.8
1986	2.2	2.0	2.2	4.0	2.1	2.9	4.0	8.0	2.2	3.5	2.0	1.9	36.8
1987	1.9	1.7	13.6	4.6	7.5	3.1	3.8	3.3	1.8	1.8	1.8	1.8	46.5
1988	1.8	1.7	1.8	2.7	1.8	1.7	2.1	2.1	1.7	1.8	1.7	1.8	22.6
1989	1.7	1.5	1.7	1.6	8.3	7.5	4.6	2.3	2.5	2.1	2.0	2.0	37.9
1990	1.9	1.7	2.1	3.5	17.6	2.5	2.1	6.4	3.3	2.0	1.9	2.0	46.9
1991	1.9	1.7	2.1	1.8	2.0	2.4	1.4	2.0	1.7	1.8	1.8	2.0	22.6
1992	1.9	1.6	1.7	1.6	3.2	10.4	3.3	2.9	2.2	2.4	2.1	4.0	37.2
1993	4.4	3.6	5.2	2.2	11.0	16.1	47.3	4.4	3.4	3.2	2.9	2.8	106.5
1994	2.6	2.2	2.3	3.2	2.2	2.2	3.1	2.1	2.0	2.3	2.0	2.1	28.4

Incremental Flow Data (acre-feet)
Node 530--Unit 57--East Lake

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	3.7	4.3	3.3	4.3	3.7	6.1	8.0	3.8	13.1	5.9	3.5	3.5	63.1
1956	3.4	4.6	3.2	4.9	4.8	3.0	4.9	3.3	3.3	5.5	3.3	3.4	47.7
1957	3.4	3.0	19.9	11.3	43.7	21.9	8.3	5.9	22.0	12.5	6.2	5.0	163.2
1958	4.6	4.3	17.3	5.3	18.5	11.3	21.1	6.9	16.2	7.1	4.8	4.6	121.9
1959	4.3	4.0	5.9	3.8	26.5	6.0	25.3	5.8	5.4	10.4	4.1	4.0	105.4
1960	5.8	4.8	11.4	5.1	6.6	9.9	4.6	5.2	5.4	5.4	3.5	4.0	71.6
1961	3.2	2.9	4.2	4.0	14.3	6.1	6.0	8.3	3.5	4.6	5.8	3.2	66.0
1962	3.5	2.8	3.2	3.0	3.3	14.3	12.9	8.9	5.3	3.8	3.5	3.2	67.8
1963	3.1	2.7	3.3	2.8	4.6	5.4	10.6	3.2	4.3	3.3	2.9	3.0	49.2
1964	3.0	2.8	3.0	2.9	4.7	5.1	3.4	3.5	3.5	3.4	5.9	5.3	46.4
1965	4.5	5.3	3.6	4.2	13.9	47.9	7.0	4.4	7.1	5.2	3.4	6.6	113.3
1966	3.3	9.3	3.3	4.8	3.2	6.9	11.1	7.0	3.7	3.8	3.6	3.7	63.5
1967	3.6	3.3	3.5	7.3	5.1	15.8	9.9	3.7	6.6	3.6	3.7	3.7	69.7
1968	3.7	3.4	3.6	3.7	4.2	3.6	8.7	3.6	3.7	22.0	4.0	3.8	68.1
1969	4.0	4.5	3.7	4.4	12.4	4.4	5.1	38.9	29.6	7.3	4.5	4.5	123.5
1970	4.3	3.8	5.3	10.1	8.2	16.0	4.4	4.2	6.4	7.9	4.0	5.2	79.7
1971	6.2	8.7	5.8	5.3	10.2	7.9	6.7	4.1	4.4	7.3	10.8	5.1	82.3
1972	4.6	4.2	4.4	5.2	10.4	7.2	4.5	7.2	5.8	4.9	5.3	4.4	68.0
1973	4.3	4.0	36.0	10.1	6.2	5.5	8.6	6.4	89.0	29.3	6.6	9.9	216.0
1974	5.6	4.4	5.9	18.0	14.6	6.2	4.8	7.2	4.3	6.8	4.2	3.7	85.7

Incremental Flow Data (acre-feet)
Node 530--Unit 57--East Lake

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	3.6	4.3	4.0	4.6	6.9	4.8	3.8	4.0	4.1	3.4	4.5	3.4	51.4
1976	3.4	3.2	5.0	29.6	11.1	4.8	5.4	3.4	5.9	5.1	3.3	3.4	83.6
1977	3.6	3.0	3.8	4.2	17.2	12.8	4.1	10.9	12.5	5.8	4.1	3.7	85.8
1978	3.7	3.5	3.7	3.6	5.6	6.7	3.5	4.6	10.9	4.0	4.0	3.9	57.6
1979	3.9	3.7	6.1	3.8	6.1	3.7	11.6	3.7	4.0	9.7	4.0	4.1	64.5
1980	4.0	3.9	9.7	4.3	4.4	2.9	4.4	7.4	4.0	4.0	3.8	4.2	57.0
1981	3.8	3.3	4.2	4.3	17.8	28.0	10.9	5.3	5.7	4.9	7.5	4.7	100.4
1982	4.5	5.0	4.4	4.1	17.2	6.0	5.7	4.6	4.3	5.2	4.0	4.0	68.9
1983	3.9	4.2	4.2	4.4	8.5	4.5	4.2	4.1	4.4	6.9	4.3	3.9	57.5
1984	3.8	3.5	11.1	16.5	5.1	5.2	4.5	3.9	4.1	5.8	3.9	17.0	84.3
1985	4.3	3.8	4.1	30.3	5.2	16.8	10.0	6.1	5.9	23.5	5.3	5.1	120.4
1986	4.8	4.2	4.7	8.6	4.5	6.3	8.6	17.2	4.7	7.6	4.3	4.1	79.5
1987	4.0	3.8	29.4	9.9	16.1	6.6	8.2	7.0	3.9	4.0	3.8	3.8	100.5
1988	3.8	3.6	3.8	5.8	3.9	3.7	4.4	4.6	3.7	3.8	3.7	3.8	48.7
1989	3.7	3.3	3.7	3.5	18.0	16.3	10.0	5.0	5.3	4.5	4.2	4.3	81.8
1990	4.2	3.7	4.6	7.5	38.0	5.4	4.6	13.9	7.0	4.3	4.1	4.2	101.4
1991	4.1	3.7	4.6	3.8	4.4	5.1	3.0	4.2	3.7	3.8	3.9	4.3	48.7
1992	4.0	3.4	3.7	3.4	6.8	22.5	7.1	6.3	4.8	5.2	4.6	8.5	80.3
1993	9.6	7.8	11.2	4.7	23.8	34.7	102.1	9.5	7.3	6.9	6.2	6.2	230.0
1994	5.6	4.8	5.0	6.9	4.8	4.6	6.8	4.6	4.4	5.0	4.3	4.5	61.4

Incremental Flow Data (acre-feet)
Node 540--Unit 75--Big Salt Marsh

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	70.2	81.7	62.3	80.8	69.4	116.4	151.4	72.1	248.6	112.6	67.5	66.5	1,199.7
1956	64.9	88.2	60.6	93.0	92.0	57.5	92.7	63.4	62.4	103.7	63.1	65.2	906.6
1957	65.1	58.0	378.2	214.2	830.9	416.3	157.4	112.1	418.4	238.2	118.7	94.4	3,101.9
1958	88.2	81.8	328.3	100.2	350.8	214.3	401.0	130.8	307.4	135.2	91.2	87.5	2,316.6
1959	82.0	75.2	112.6	72.3	504.2	114.3	480.8	110.2	102.0	196.8	77.5	75.8	2,003.7
1960	109.6	92.1	216.9	96.9	124.9	188.1	86.8	98.1	103.3	102.1	66.2	76.1	1,361.0
1961	60.5	54.5	80.0	75.0	272.6	115.7	113.9	158.2	67.2	86.9	110.1	61.1	1,255.8
1962	67.3	52.8	60.2	56.7	62.8	271.8	244.2	170.0	101.2	72.7	67.5	60.9	1,288.2
1963	59.4	50.5	63.4	52.8	87.6	103.0	201.3	61.6	82.3	62.7	54.5	56.6	935.7
1964	57.3	53.1	56.5	55.8	88.6	97.0	64.9	66.2	66.1	64.4	112.1	100.4	882.5
1965	86.2	100.4	68.7	80.5	265.1	910.5	132.8	83.7	134.9	99.4	65.1	126.2	2,153.4
1966	62.3	175.8	63.5	91.2	60.8	130.5	210.8	133.1	70.5	71.3	68.1	69.6	1,207.5
1967	68.3	61.7	67.4	139.3	97.2	299.9	188.4	70.3	124.8	68.3	69.7	70.5	1,325.7
1968	70.6	65.4	69.1	70.5	80.5	67.7	165.6	69.1	69.5	418.1	75.5	72.5	1,294.1
1969	76.6	84.9	70.5	83.8	236.5	83.3	97.3	739.9	563.4	139.7	86.0	85.8	2,347.9
1970	82.4	72.1	100.2	192.6	155.7	303.5	83.7	79.6	121.6	150.5	75.2	98.0	1,515.1
1971	118.6	165.2	109.4	100.2	193.9	149.3	127.0	78.1	83.0	138.2	204.5	97.3	1,564.7
1972	86.8	79.0	82.9	98.9	198.6	137.6	85.5	135.9	110.7	93.0	100.6	83.7	1,293.2
1973	82.3	76.1	685.0	192.4	117.0	104.9	164.4	121.3	1,691.6	556.0	126.3	188.0	4,105.5
1974	105.8	84.3	112.2	342.7	278.4	117.7	90.6	136.5	81.5	128.8	78.9	70.9	1,628.2

Incremental Flow Data (acre-feet)
Node 540--Unit 75--Big Salt Marsh

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	68.9	81.4	76.8	88.2	130.5	91.3	71.2	76.3	78.7	64.4	85.8	64.0	977.6
1976	64.1	60.0	94.3	563.4	211.7	92.3	103.1	65.2	112.2	97.0	61.8	64.2	1,589.1
1977	68.1	58.0	71.8	79.7	327.1	243.3	78.6	207.1	238.4	109.4	78.8	70.9	1,631.1
1978	69.8	66.5	69.3	68.4	106.0	127.8	67.5	87.0	207.5	75.8	75.5	74.5	1,095.6
1979	74.8	70.4	115.5	72.0	116.3	70.9	220.6	70.1	75.3	184.3	76.8	78.3	1,225.2
1980	76.5	74.1	184.2	81.4	83.8	54.5	83.0	140.9	76.8	75.4	71.9	80.4	1,082.9
1981	71.8	63.8	79.1	81.0	338.8	532.8	206.4	101.6	108.3	93.6	142.9	88.7	1,908.8
1982	85.3	95.7	83.6	76.9	326.3	114.1	108.3	87.0	81.8	98.6	75.9	76.8	1,310.3
1983	74.7	79.2	79.4	84.6	162.4	85.6	79.1	77.8	83.1	132.2	81.3	73.6	1,093.1
1984	71.7	66.0	210.4	313.7	96.9	98.4	86.4	73.6	78.4	109.3	74.5	324.1	1,603.3
1985	81.0	73.0	78.1	575.1	98.9	319.4	189.4	115.2	113.1	447.5	100.1	97.8	2,288.8
1986	91.6	80.2	89.8	162.8	84.9	118.8	163.6	327.4	88.8	144.0	81.1	78.2	1,511.1
1987	76.5	71.3	558.8	188.5	306.3	125.8	155.8	133.4	73.8	75.4	71.7	72.9	1,910.1
1988	73.2	69.0	72.9	110.7	74.1	70.6	84.5	87.3	70.4	72.0	69.8	71.7	926.2
1989	71.1	63.2	69.7	66.2	342.3	308.8	190.6	94.6	100.7	85.7	80.5	80.7	1,554.1
1990	79.4	70.0	86.8	142.9	721.7	102.5	87.1	264.6	133.7	81.6	76.9	79.9	1,927.1
1991	78.7	70.4	86.9	73.2	83.3	97.5	57.7	80.5	70.9	71.9	73.5	81.6	926.1
1992	76.2	64.5	70.4	65.3	129.5	427.9	134.6	119.5	91.2	99.1	86.5	162.3	1,527.1
1993	182.4	149.1	213.0	88.5	452.2	660.5	1,940.7	180.9	139.5	130.9	118.5	117.1	4,373.3
1994	106.5	90.4	95.3	131.8	92.0	88.1	128.5	87.1	84.3	95.4	82.2	85.2	1,166.8

Incremental Flow Data (acre-feet)
Node 550--Unit 58

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	1.1	1.3	1.0	1.3	1.1	1.9	2.4	1.2	4.0	1.8	1.1	1.1	19.3
1956	1.0	1.4	1.0	1.5	1.5	0.9	1.5	1.0	1.0	1.7	1.0	1.0	14.6
1957	1.0	0.9	6.1	3.4	13.3	6.7	2.5	1.8	6.7	3.8	1.9	1.5	49.8
1958	1.4	1.3	5.3	1.6	5.6	3.4	6.4	2.1	4.9	2.2	1.5	1.4	37.2
1959	1.3	1.2	1.8	1.2	8.1	1.8	7.7	1.8	1.6	3.2	1.3	1.2	32.2
1960	1.8	1.5	3.5	1.6	2.0	3.0	1.4	1.6	1.7	1.6	1.1	1.2	21.8
1961	1.0	0.9	1.3	1.2	4.4	1.9	1.8	2.5	1.1	1.4	1.8	1.0	20.2
1962	1.1	0.9	1.0	0.9	1.0	4.4	3.9	2.7	1.6	1.2	1.1	1.0	20.7
1963	0.9	0.8	1.0	0.9	1.4	1.6	3.2	1.0	1.3	1.0	0.9	0.9	15.0
1964	0.9	0.9	0.9	0.9	1.4	1.6	1.0	1.1	1.1	1.0	1.8	1.6	14.2
1965	1.4	1.6	1.1	1.3	4.3	14.6	2.1	1.3	2.2	1.6	1.0	2.0	34.6
1966	1.0	2.8	1.0	1.5	1.0	2.1	3.4	2.1	1.1	1.1	1.1	1.1	19.4
1967	1.1	1.0	1.1	2.2	1.6	4.8	3.0	1.1	2.0	1.1	1.1	1.1	21.3
1968	1.1	1.0	1.1	1.1	1.3	1.1	2.7	1.1	1.1	6.7	1.2	1.2	20.8
1969	1.2	1.4	1.1	1.4	3.8	1.3	1.6	11.9	9.1	2.2	1.4	1.4	37.7
1970	1.3	1.2	1.6	3.1	2.5	4.9	1.3	1.3	2.0	2.4	1.2	1.6	24.3
1971	1.9	2.7	1.8	1.6	3.1	2.4	2.0	1.3	1.3	2.2	3.3	1.6	25.1
1972	1.4	1.3	1.3	1.6	3.2	2.2	1.4	2.2	1.8	1.5	1.6	1.3	20.8
1973	1.3	1.2	11.0	3.1	1.9	1.7	2.6	2.0	27.2	8.9	2.0	3.0	65.9
1974	1.7	1.4	1.8	5.5	4.5	1.9	1.5	2.2	1.3	2.1	1.3	1.1	26.1

Incremental Flow Data (acre-feet)
Node 550--Unit 58

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	1.1	1.3	1.2	1.4	2.1	1.5	1.1	1.2	1.3	1.0	1.4	1.0	15.7
1976	1.0	1.0	1.5	9.1	3.4	1.5	1.7	1.0	1.8	1.6	1.0	1.0	25.5
1977	1.1	0.9	1.1	1.3	5.3	3.9	1.3	3.3	3.8	1.8	1.3	1.1	26.2
1978	1.1	1.1	1.1	1.1	1.7	2.0	1.1	1.4	3.3	1.2	1.2	1.2	17.6
1979	1.2	1.1	1.9	1.2	1.9	1.1	3.5	1.1	1.2	3.0	1.2	1.3	19.7
1980	1.2	1.2	3.0	1.3	1.4	0.9	1.3	2.3	1.2	1.2	1.2	1.3	17.4
1981	1.1	1.0	1.3	1.3	5.4	8.6	3.3	1.6	1.7	1.5	2.3	1.4	30.6
1982	1.4	1.5	1.3	1.2	5.2	1.8	1.7	1.4	1.3	1.6	1.2	1.2	21.0
1983	1.2	1.3	1.3	1.4	2.6	1.4	1.3	1.3	1.3	2.1	1.3	1.2	17.5
1984	1.1	1.1	3.4	5.0	1.6	1.6	1.4	1.2	1.3	1.8	1.2	5.2	25.8
1985	1.3	1.2	1.3	9.2	1.6	5.1	3.0	1.9	1.8	7.2	1.6	1.6	36.8
1986	1.5	1.3	1.4	2.6	1.4	1.9	2.6	5.3	1.4	2.3	1.3	1.3	24.3
1987	1.2	1.1	9.0	3.0	4.9	2.0	2.5	2.1	1.2	1.2	1.1	1.2	30.7
1988	1.2	1.1	1.2	1.8	1.2	1.1	1.4	1.4	1.1	1.2	1.1	1.1	14.9
1989	1.1	1.0	1.1	1.1	5.5	5.0	3.1	1.5	1.6	1.4	1.3	1.3	25.0
1990	1.3	1.1	1.4	2.3	11.6	1.6	1.4	4.3	2.2	1.3	1.2	1.3	30.9
1991	1.3	1.1	1.4	1.2	1.3	1.6	0.9	1.3	1.1	1.1	1.2	1.3	14.9
1992	1.2	1.0	1.1	1.0	2.1	6.9	2.2	1.9	1.5	1.6	1.4	2.6	24.5
1993	2.9	2.4	3.4	1.4	7.3	10.6	31.2	2.9	2.2	2.1	1.9	1.9	70.2
1994	1.7	1.5	1.5	2.1	1.5	1.4	2.1	1.4	1.4	1.5	1.3	1.4	18.7

Incremental Flow Data (acre-feet)
Node 560--Unit 78--Interior of Wildlife Drive

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	6.4	7.5	5.7	7.4	6.3	10.6	13.8	6.6	22.7	10.3	6.2	6.1	109.6
1956	5.9	8.1	5.5	8.5	8.4	5.3	8.5	5.8	5.7	9.5	5.8	5.9	82.8
1957	5.9	5.3	34.5	19.6	75.9	38.0	14.4	10.2	38.2	21.8	10.8	8.6	283.4
1958	8.1	7.5	30.0	9.1	32.0	19.6	36.6	11.9	28.1	12.4	8.3	8.0	211.6
1959	7.5	6.9	10.3	6.6	46.1	10.4	43.9	10.1	9.3	18.0	7.1	6.9	183.1
1960	10.0	8.4	19.8	8.9	11.4	17.2	7.9	9.0	9.4	9.3	6.0	6.9	124.3
1961	5.5	5.0	7.3	6.8	24.9	10.6	10.4	14.4	6.1	7.9	10.1	5.6	114.7
1962	6.1	4.8	5.5	5.2	5.7	24.8	22.3	15.5	9.3	6.6	6.2	5.6	117.7
1963	5.4	4.6	5.8	4.8	8.0	9.4	18.4	5.6	7.5	5.7	5.0	5.2	85.5
1964	5.2	4.9	5.2	5.1	8.1	8.9	5.9	6.1	6.0	5.9	10.2	9.2	80.6
1965	7.9	9.2	6.3	7.3	24.2	83.2	12.1	7.6	12.3	9.1	5.9	11.5	196.7
1966	5.7	16.1	5.8	8.3	5.6	11.9	19.3	12.2	6.4	6.5	6.2	6.4	110.3
1967	6.2	5.6	6.2	12.7	8.9	27.4	17.2	6.4	11.4	6.2	6.4	6.4	121.1
1968	6.4	6.0	6.3	6.4	7.4	6.2	15.1	6.3	6.3	38.2	6.9	6.6	118.3
1969	7.0	7.8	6.4	7.7	21.6	7.6	8.9	67.6	51.5	12.8	7.9	7.8	214.5
1970	7.5	6.6	9.1	17.6	14.2	27.7	7.7	7.3	11.1	13.8	6.9	8.9	138.4
1971	10.8	15.1	10.0	9.2	17.7	13.6	11.6	7.1	7.6	12.6	18.7	8.9	143.0
1972	7.9	7.2	7.6	9.0	18.1	12.6	7.8	12.4	10.1	8.5	9.2	7.7	118.1
1973	7.5	7.0	62.6	17.6	10.7	9.6	15.0	11.1	154.6	50.8	11.5	17.2	375.1
1974	9.7	7.7	10.3	31.3	25.4	10.8	8.3	12.5	7.4	11.8	7.2	6.5	148.8

Incremental Flow Data (acre-feet)
Node 560--Unit 78--Interior of Wildlife Drive

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	6.3	7.4	7.0	8.1	11.9	8.3	6.5	7.0	7.2	5.9	7.8	5.8	89.3
1976	5.8	5.5	8.6	51.5	19.3	8.4	9.4	5.9	10.3	8.9	5.6	5.9	145.2
1977	6.2	5.3	6.6	7.3	29.9	22.2	7.2	18.9	21.8	10.0	7.2	6.5	149.0
1978	6.4	6.1	6.3	6.3	9.7	11.7	6.2	7.9	19.0	6.9	6.9	6.8	100.1
1979	6.8	6.4	10.6	6.6	10.6	6.5	20.1	6.4	6.9	16.8	7.0	7.2	111.9
1980	7.0	6.8	16.8	7.4	7.7	5.0	7.6	12.9	7.0	6.9	6.6	7.3	98.9
1981	6.6	5.8	7.2	7.4	31.0	48.7	18.9	9.3	9.9	8.6	13.1	8.1	174.4
1982	7.8	8.7	7.6	7.0	29.8	10.4	9.9	7.9	7.5	9.0	6.9	7.0	119.7
1983	6.8	7.2	7.3	7.7	14.8	7.8	7.2	7.1	7.6	12.1	7.4	6.7	99.9
1984	6.6	6.0	19.2	28.7	8.9	9.0	7.9	6.7	7.2	10.0	6.8	29.6	146.5
1985	7.4	6.7	7.1	52.5	9.0	29.2	17.3	10.5	10.3	40.9	9.1	8.9	209.1
1986	8.4	7.3	8.2	14.9	7.8	10.9	14.9	29.9	8.1	13.1	7.4	7.1	138.0
1987	7.0	6.5	51.1	17.2	28.0	11.5	14.2	12.2	6.7	6.9	6.6	6.7	174.5
1988	6.7	6.3	6.7	10.1	6.8	6.4	7.7	8.0	6.4	6.6	6.4	6.6	84.6
1989	6.5	5.8	6.4	6.0	31.3	28.2	17.4	8.6	9.2	7.8	7.4	7.4	142.0
1990	7.3	6.4	7.9	13.1	65.9	9.4	8.0	24.2	12.2	7.4	7.0	7.3	176.1
1991	7.2	6.4	7.9	6.7	7.6	8.9	5.3	7.3	6.5	6.6	6.7	7.4	84.6
1992	7.0	5.9	6.4	6.0	11.8	39.1	12.3	10.9	8.3	9.1	7.9	14.8	139.5
1993	16.7	13.6	19.5	8.1	41.3	60.3	177.3	16.5	12.7	12.0	10.8	10.7	399.5
1994	9.7	8.3	8.7	12.0	8.4	8.1	11.7	8.0	7.7	8.7	7.5	7.8	106.6

Incremental Flow Data (acre-feet)
Node 570--Unit 81--West Salt Flats

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	2.6	3.1	2.3	3.0	2.6	4.4	5.7	2.7	9.4	4.2	2.5	2.5	45.2
1956	2.4	3.3	2.3	3.5	3.5	2.2	3.5	2.4	2.3	3.9	2.4	2.5	34.1
1957	2.5	2.2	14.2	8.1	31.3	15.7	5.9	4.2	15.8	9.0	4.5	3.6	116.8
1958	3.3	3.1	12.4	3.8	13.2	8.1	15.1	4.9	11.6	5.1	3.4	3.3	87.2
1959	3.1	2.8	4.2	2.7	19.0	4.3	18.1	4.1	3.8	7.4	2.9	2.9	75.4
1960	4.1	3.5	8.2	3.7	4.7	7.1	3.3	3.7	3.9	3.8	2.5	2.9	51.2
1961	2.3	2.0	3.0	2.8	10.3	4.4	4.3	6.0	2.5	3.3	4.1	2.3	47.3
1962	2.5	2.0	2.3	2.1	2.4	10.2	9.2	6.4	3.8	2.7	2.5	2.3	48.5
1963	2.2	1.9	2.4	2.0	3.3	3.9	7.6	2.3	3.1	2.4	2.1	2.1	35.2
1964	2.2	2.0	2.1	2.1	3.3	3.7	2.4	2.5	2.5	2.4	4.2	3.8	33.2
1965	3.2	3.8	2.6	3.0	10.0	34.3	5.0	3.2	5.1	3.7	2.5	4.8	81.1
1966	2.3	6.6	2.4	3.4	2.3	4.9	7.9	5.0	2.7	2.7	2.6	2.6	45.5
1967	2.6	2.3	2.5	5.2	3.7	11.3	7.1	2.7	4.7	2.6	2.6	2.7	49.9
1968	2.7	2.5	2.6	2.7	3.0	2.5	6.2	2.6	2.6	15.7	2.8	2.7	48.7
1969	2.9	3.2	2.7	3.2	8.9	3.1	3.7	27.9	21.2	5.3	3.2	3.2	88.4
1970	3.1	2.7	3.8	7.3	5.9	11.4	3.2	3.0	4.6	5.7	2.8	3.7	57.0
1971	4.5	6.2	4.1	3.8	7.3	5.6	4.8	2.9	3.1	5.2	7.7	3.7	58.9
1972	3.3	3.0	3.1	3.7	7.5	5.2	3.2	5.1	4.2	3.5	3.8	3.2	48.7
1973	3.1	2.9	25.8	7.2	4.4	4.0	6.2	4.6	63.7	20.9	4.8	7.1	154.6
1974	4.0	3.2	4.2	12.9	10.5	4.4	3.4	5.1	3.1	4.8	3.0	2.7	61.3

Incremental Flow Data (acre-feet)
Node 570--Unit 81--West Salt Flats

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	2.6	3.1	2.9	3.3	4.9	3.4	2.7	2.9	3.0	2.4	3.2	2.4	36.8
1976	2.4	2.3	3.5	21.2	8.0	3.5	3.9	2.5	4.2	3.7	2.3	2.4	59.8
1977	2.6	2.2	2.7	3.0	12.3	9.2	3.0	7.8	9.0	4.1	3.0	2.7	61.4
1978	2.6	2.5	2.6	2.6	4.0	4.8	2.5	3.3	7.8	2.9	2.8	2.8	41.3
1979	2.8	2.7	4.3	2.7	4.4	2.7	8.3	2.6	2.8	6.9	2.9	3.0	46.1
1980	2.9	2.8	6.9	3.1	3.2	2.0	3.1	5.3	2.9	2.8	2.7	3.0	40.8
1981	2.7	2.4	3.0	3.0	12.8	20.1	7.8	3.8	4.1	3.5	5.4	3.3	71.9
1982	3.2	3.6	3.1	2.9	12.3	4.3	4.1	3.3	3.1	3.7	2.9	2.9	49.3
1983	2.8	3.0	3.0	3.2	6.1	3.2	3.0	2.9	3.1	5.0	3.1	2.8	41.1
1984	2.7	2.5	7.9	11.8	3.7	3.7	3.3	2.8	3.0	4.1	2.8	12.2	60.4
1985	3.0	2.8	2.9	21.7	3.7	12.0	7.1	4.3	4.3	16.9	3.8	3.7	86.2
1986	3.5	3.0	3.4	6.1	3.2	4.5	6.2	12.3	3.3	5.4	3.1	2.9	56.9
1987	2.9	2.7	21.0	7.1	11.5	4.7	5.9	5.0	2.8	2.8	2.7	2.7	71.9
1988	2.8	2.6	2.7	4.2	2.8	2.7	3.2	3.3	2.7	2.7	2.6	2.7	34.9
1989	2.7	2.4	2.6	2.5	12.9	11.6	7.2	3.6	3.8	3.2	3.0	3.0	58.5
1990	3.0	2.6	3.3	5.4	27.2	3.9	3.3	10.0	5.0	3.1	2.9	3.0	72.6
1991	3.0	2.7	3.3	2.8	3.1	3.7	2.2	3.0	2.7	2.7	2.8	3.1	34.9
1992	2.9	2.4	2.7	2.5	4.9	16.1	5.1	4.5	3.4	3.7	3.3	6.1	57.5
1993	6.9	5.6	8.0	3.3	17.0	24.9	73.1	6.8	5.3	4.9	4.5	4.4	164.7
1994	4.0	3.4	3.6	5.0	3.5	3.3	4.8	3.3	3.2	3.6	3.1	3.2	43.9

Incremental Flow Data (acre-feet)
Node 580--Unit 80--Middle Salt Flats

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	2.6	3.1	2.3	3.0	2.6	4.4	5.7	2.7	9.4	4.2	2.5	2.5	45.2
1956	2.4	3.3	2.3	3.5	3.5	2.2	3.5	2.4	2.3	3.9	2.4	2.5	34.1
1957	2.5	2.2	14.2	8.1	31.3	15.7	5.9	4.2	15.8	9.0	4.5	3.6	116.8
1958	3.3	3.1	12.4	3.8	13.2	8.1	15.1	4.9	11.6	5.1	3.4	3.3	87.2
1959	3.1	2.8	4.2	2.7	19.0	4.3	18.1	4.1	3.8	7.4	2.9	2.9	75.4
1960	4.1	3.5	8.2	3.7	4.7	7.1	3.3	3.7	3.9	3.8	2.5	2.9	51.2
1961	2.3	2.0	3.0	2.8	10.3	4.4	4.3	6.0	2.5	3.3	4.1	2.3	47.3
1962	2.5	2.0	2.3	2.1	2.4	10.2	9.2	6.4	3.8	2.7	2.5	2.3	48.5
1963	2.2	1.9	2.4	2.0	3.3	3.9	7.6	2.3	3.1	2.4	2.1	2.1	35.2
1964	2.2	2.0	2.1	2.1	3.3	3.7	2.4	2.5	2.5	2.4	4.2	3.8	33.2
1965	3.2	3.8	2.6	3.0	10.0	34.3	5.0	3.2	5.1	3.7	2.5	4.8	81.1
1966	2.3	6.6	2.4	3.4	2.3	4.9	7.9	5.0	2.7	2.7	2.6	2.6	45.5
1967	2.6	2.3	2.5	5.2	3.7	11.3	7.1	2.7	4.7	2.6	2.6	2.7	49.9
1968	2.7	2.5	2.6	2.7	3.0	2.5	6.2	2.6	2.6	15.7	2.8	2.7	48.7
1969	2.9	3.2	2.7	3.2	8.9	3.1	3.7	27.9	21.2	5.3	3.2	3.2	88.4
1970	3.1	2.7	3.8	7.3	5.9	11.4	3.2	3.0	4.6	5.7	2.8	3.7	57.0
1971	4.5	6.2	4.1	3.8	7.3	5.6	4.8	2.9	3.1	5.2	7.7	3.7	58.9
1972	3.3	3.0	3.1	3.7	7.5	5.2	3.2	5.1	4.2	3.5	3.8	3.2	48.7
1973	3.1	2.9	25.8	7.2	4.4	4.0	6.2	4.6	63.7	20.9	4.8	7.1	154.6
1974	4.0	3.2	4.2	12.9	10.5	4.4	3.4	5.1	3.1	4.8	3.0	2.7	61.3

Incremental Flow Data (acre-feet)
Node 580--Unit 80--Middle Salt Flats

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	2.6	3.1	2.9	3.3	4.9	3.4	2.7	2.9	3.0	2.4	3.2	2.4	36.8
1976	2.4	2.3	3.5	21.2	8.0	3.5	3.9	2.5	4.2	3.7	2.3	2.4	59.8
1977	2.6	2.2	2.7	3.0	12.3	9.2	3.0	7.8	9.0	4.1	3.0	2.7	61.4
1978	2.6	2.5	2.6	2.6	4.0	4.8	2.5	3.3	7.8	2.9	2.8	2.8	41.3
1979	2.8	2.7	4.3	2.7	4.4	2.7	8.3	2.6	2.8	6.9	2.9	3.0	46.1
1980	2.9	2.8	6.9	3.1	3.2	2.0	3.1	5.3	2.9	2.8	2.7	3.0	40.8
1981	2.7	2.4	3.0	3.0	12.8	20.1	7.8	3.8	4.1	3.5	5.4	3.3	71.9
1982	3.2	3.6	3.1	2.9	12.3	4.3	4.1	3.3	3.1	3.7	2.9	2.9	49.3
1983	2.8	3.0	3.0	3.2	6.1	3.2	3.0	2.9	3.1	5.0	3.1	2.8	41.1
1984	2.7	2.5	7.9	11.8	3.7	3.7	3.3	2.8	3.0	4.1	2.8	12.2	60.4
1985	3.0	2.8	2.9	21.7	3.7	12.0	7.1	4.3	4.3	16.9	3.8	3.7	86.2
1986	3.5	3.0	3.4	6.1	3.2	4.5	6.2	12.3	3.3	5.4	3.1	2.9	56.9
1987	2.9	2.7	21.0	7.1	11.5	4.7	5.9	5.0	2.8	2.8	2.7	2.7	71.9
1988	2.8	2.6	2.7	4.2	2.8	2.7	3.2	3.3	2.7	2.7	2.6	2.7	34.9
1989	2.7	2.4	2.6	2.5	12.9	11.6	7.2	3.6	3.8	3.2	3.0	3.0	58.5
1990	3.0	2.6	3.3	5.4	27.2	3.9	3.3	10.0	5.0	3.1	2.9	3.0	72.6
1991	3.0	2.7	3.3	2.8	3.1	3.7	2.2	3.0	2.7	2.7	2.8	3.1	34.9
1992	2.9	2.4	2.7	2.5	4.9	16.1	5.1	4.5	3.4	3.7	3.3	6.1	57.5
1993	6.9	5.6	8.0	3.3	17.0	24.9	73.1	6.8	5.3	4.9	4.5	4.4	164.7
1994	4.0	3.4	3.6	5.0	3.5	3.3	4.8	3.3	3.2	3.6	3.1	3.2	43.9

Incremental Flow Data (acre-feet)
Node 590--Unit 83--North Lake

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	7.1	8.3	6.3	8.2	7.0	11.8	15.4	7.3	25.2	11.4	6.8	6.7	121.6
1956	6.6	8.9	6.1	9.4	9.3	5.8	9.4	6.4	6.3	10.5	6.4	6.6	91.9
1957	6.6	5.9	38.3	21.7	84.2	42.2	15.9	11.4	42.4	24.1	12.0	9.6	314.3
1958	8.9	8.3	33.3	10.1	35.5	21.7	40.6	13.3	31.1	13.7	9.2	8.9	234.7
1959	8.3	7.6	11.4	7.3	51.1	11.6	48.7	11.2	10.3	19.9	7.9	7.7	203.0
1960	11.1	9.3	22.0	9.8	12.7	19.1	8.8	9.9	10.5	10.3	6.7	7.7	137.9
1961	6.1	5.5	8.1	7.6	27.6	11.7	11.6	16.0	6.8	8.8	11.2	6.2	127.3
1962	6.8	5.3	6.1	5.8	6.4	27.5	24.7	17.2	10.3	7.4	6.8	6.2	130.5
1963	6.0	5.1	6.4	5.3	8.9	10.4	20.4	6.2	8.3	6.3	5.5	5.7	94.8
1964	5.8	5.4	5.7	5.7	9.0	9.8	6.6	6.7	6.7	6.5	11.4	10.2	89.4
1965	8.7	10.2	7.0	8.2	26.9	92.3	13.4	8.5	13.7	10.1	6.6	12.8	218.2
1966	6.3	17.8	6.4	9.2	6.2	13.2	21.4	13.5	7.1	7.2	6.9	7.1	122.3
1967	6.9	6.3	6.8	14.1	9.9	30.4	19.1	7.1	12.6	6.9	7.1	7.1	134.3
1968	7.2	6.6	7.0	7.1	8.2	6.9	16.8	7.0	7.0	42.4	7.7	7.3	131.1
1969	7.8	8.6	7.2	8.5	24.0	8.4	9.9	75.0	57.1	14.2	8.7	8.7	237.9
1970	8.4	7.3	10.1	19.5	15.8	30.8	8.5	8.1	12.3	15.3	7.6	9.9	153.5
1971	12.0	16.7	11.1	10.2	19.6	15.1	12.9	7.9	8.4	14.0	20.7	9.9	158.6
1972	8.8	8.0	8.4	10.0	20.1	13.9	8.7	13.8	11.2	9.4	10.2	8.5	131.0
1973	8.3	7.7	69.4	19.5	11.9	10.6	16.7	12.3	171.4	56.3	12.8	19.0	416.0
1974	10.7	8.6	11.4	34.7	28.2	11.9	9.2	13.8	8.3	13.1	8.0	7.2	165.0

Incremental Flow Data (acre-feet)
Node 590--Unit 83--North Lake

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	7.0	8.3	7.8	8.9	13.2	9.3	7.2	7.7	8.0	6.5	8.7	6.5	99.1
1976	6.5	6.1	9.6	57.1	21.5	9.4	10.4	6.6	11.4	9.8	6.3	6.5	161.0
1977	6.9	5.9	7.3	8.1	33.1	24.6	8.0	21.0	24.2	11.1	8.0	7.2	165.3
1978	7.1	6.7	7.0	6.9	10.7	12.9	6.8	8.8	21.0	7.7	7.7	7.6	111.0
1979	7.6	7.1	11.7	7.3	11.8	7.2	22.4	7.1	7.6	18.7	7.8	7.9	124.2
1980	7.8	7.5	18.7	8.3	8.5	5.5	8.4	14.3	7.8	7.6	7.3	8.1	109.7
1981	7.3	6.5	8.0	8.2	34.3	54.0	20.9	10.3	11.0	9.5	14.5	9.0	193.4
1982	8.6	9.7	8.5	7.8	33.1	11.6	11.0	8.8	8.3	10.0	7.7	7.8	132.8
1983	7.6	8.0	8.0	8.6	16.5	8.7	8.0	7.9	8.4	13.4	8.2	7.5	110.8
1984	7.3	6.7	21.3	31.8	9.8	10.0	8.8	7.4	7.9	11.1	7.6	32.8	162.5
1985	8.2	7.4	7.9	58.3	10.0	32.4	19.2	11.7	11.5	45.3	10.1	9.9	231.9
1986	9.3	8.1	9.1	16.5	8.6	12.0	16.6	33.2	9.0	14.6	8.2	7.9	153.1
1987	7.8	7.2	56.6	19.1	31.0	12.7	15.8	13.5	7.5	7.6	7.3	7.4	193.5
1988	7.4	7.0	7.4	11.2	7.5	7.2	8.6	8.8	7.1	7.3	7.1	7.3	93.9
1989	7.2	6.4	7.1	6.7	34.7	31.3	19.3	9.6	10.2	8.7	8.2	8.2	157.5
1990	8.0	7.1	8.8	14.5	73.1	10.4	8.8	26.8	13.6	8.3	7.8	8.1	195.3
1991	8.0	7.1	8.8	7.4	8.4	9.9	5.8	8.1	7.2	7.3	7.4	8.3	93.8
1992	7.7	6.5	7.1	6.6	13.1	43.4	13.6	12.1	9.3	10.0	8.8	16.4	154.7
1993	18.5	15.1	21.6	9.0	45.8	66.9	196.6	18.3	14.1	13.3	12.0	11.9	443.1
1994	10.8	9.2	9.7	13.4	9.3	8.9	13.0	8.8	8.6	9.7	8.3	8.6	118.2

Incremental Flow Data (acre-feet)
Node 600--Unit 40

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	0.7	0.9	0.7	0.9	0.7	1.2	1.6	0.8	2.6	1.2	0.7	0.7	12.6
1956	0.7	0.9	0.6	1.0	1.0	0.6	1.0	0.7	0.7	1.1	0.7	0.7	9.6
1957	0.7	0.6	4.0	2.3	8.7	4.4	1.7	1.2	4.4	2.5	1.3	1.0	32.6
1958	0.9	0.9	3.5	1.0	3.7	2.3	4.2	1.4	3.2	1.4	1.0	0.9	24.4
1959	0.9	0.8	1.2	0.8	5.3	1.2	5.1	1.2	1.1	2.1	0.8	0.8	21.1
1960	1.1	1.0	2.3	1.0	1.3	2.0	0.9	1.0	1.1	1.1	0.7	0.8	14.3
1961	0.6	0.6	0.8	0.8	2.9	1.2	1.2	1.7	0.7	0.9	1.2	0.6	13.2
1962	0.7	0.6	0.6	0.6	0.7	2.9	2.6	1.8	1.1	0.8	0.7	0.6	13.5
1963	0.6	0.5	0.7	0.6	0.9	1.1	2.1	0.6	0.9	0.7	0.6	0.6	9.9
1964	0.6	0.6	0.6	0.6	0.9	1.0	0.7	0.7	0.7	0.7	1.2	1.1	9.3
1965	0.9	1.1	0.7	0.9	2.8	9.6	1.4	0.9	1.4	1.0	0.7	1.3	22.7
1966	0.7	1.9	0.7	1.0	0.6	1.4	2.2	1.4	0.7	0.8	0.7	0.7	12.7
1967	0.7	0.6	0.7	1.5	1.0	3.2	2.0	0.7	1.3	0.7	0.7	0.7	13.9
1968	0.7	0.7	0.7	0.7	0.9	0.7	1.7	0.7	0.7	4.4	0.8	0.8	13.6
1969	0.8	0.9	0.7	0.9	2.5	0.9	1.0	7.8	5.9	1.5	0.9	0.9	24.7
1970	0.9	0.8	1.0	2.0	1.6	3.2	0.9	0.8	1.3	1.6	0.8	1.0	15.9
1971	1.3	1.7	1.1	1.0	2.0	1.6	1.3	0.8	0.9	1.5	2.2	1.0	16.5
1972	0.9	0.8	0.9	1.0	2.1	1.5	0.9	1.4	1.2	1.0	1.1	0.9	13.6
1973	0.9	0.8	7.2	2.0	1.2	1.1	1.7	1.3	17.8	5.8	1.3	2.0	43.2
1974	1.1	0.9	1.2	3.6	2.9	1.2	0.9	1.4	0.9	1.4	0.8	0.8	17.1

Incremental Flow Data (acre-feet)
Node 600--Unit 40

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	0.7	0.9	0.8	0.9	1.4	1.0	0.8	0.8	0.8	0.7	0.9	0.7	10.3
1976	0.7	0.6	1.0	5.9	2.2	1.0	1.1	0.7	1.2	1.0	0.6	0.7	16.7
1977	0.7	0.6	0.8	0.8	3.4	2.6	0.8	2.2	2.5	1.1	0.8	0.8	17.2
1978	0.7	0.7	0.7	0.7	1.1	1.3	0.7	0.9	2.2	0.8	0.8	0.8	11.5
1979	0.8	0.7	1.2	0.8	1.2	0.8	2.3	0.7	0.8	1.9	0.8	0.8	12.9
1980	0.8	0.8	1.9	0.9	0.9	0.6	0.9	1.5	0.8	0.8	0.8	0.9	11.4
1981	0.8	0.7	0.8	0.9	3.6	5.6	2.2	1.1	1.1	1.0	1.5	0.9	20.1
1982	0.9	1.0	0.9	0.8	3.4	1.2	1.1	0.9	0.9	1.0	0.8	0.8	13.8
1983	0.8	0.8	0.8	0.9	1.7	0.9	0.8	0.8	0.9	1.4	0.9	0.8	11.5
1984	0.8	0.7	2.2	3.3	1.0	1.0	0.9	0.8	0.8	1.1	0.8	3.4	16.8
1985	0.9	0.8	0.8	6.1	1.0	3.4	2.0	1.2	1.2	4.7	1.0	1.0	24.1
1986	1.0	0.8	0.9	1.7	0.9	1.3	1.7	3.4	0.9	1.5	0.9	0.8	15.9
1987	0.8	0.8	5.9	2.0	3.2	1.3	1.6	1.4	0.8	0.8	0.8	0.8	20.1
1988	0.8	0.7	0.8	1.2	0.8	0.7	0.9	0.9	0.7	0.8	0.7	0.8	9.7
1989	0.8	0.7	0.7	0.7	3.6	3.3	2.0	1.0	1.1	0.9	0.9	0.9	16.4
1990	0.8	0.7	0.9	1.5	7.6	1.1	0.9	2.8	1.4	0.9	0.8	0.8	20.3
1991	0.8	0.7	0.9	0.8	0.9	1.0	0.6	0.9	0.8	0.8	0.8	0.9	9.8
1992	0.8	0.7	0.7	0.7	1.4	4.5	1.4	1.3	1.0	1.0	0.9	1.7	16.1
1993	1.9	1.6	2.2	0.9	4.8	6.9	20.4	1.9	1.5	1.4	1.3	1.2	46.0
1994	1.1	0.9	1.0	1.4	1.0	0.9	1.4	0.9	0.9	1.0	0.9	0.9	12.3

Incremental Flow Data (acre-feet)
Node 610--Unit 62

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	1.7	2.0	1.5	2.0	1.7	2.8	3.7	1.8	6.1	2.7	1.6	1.6	29.2
1956	1.6	2.2	1.5	2.3	2.2	1.4	2.3	1.5	1.5	2.5	1.5	1.6	22.1
1957	1.6	1.4	9.2	5.2	20.2	10.1	3.8	2.7	10.2	5.8	2.9	2.3	75.6
1958	2.2	2.0	8.0	2.4	8.6	5.2	9.8	3.2	7.5	3.3	2.2	2.1	56.4
1959	2.0	1.8	2.7	1.8	12.3	2.8	11.7	2.7	2.5	4.8	1.9	1.9	48.8
1960	2.7	2.2	5.3	2.4	3.0	4.6	2.1	2.4	2.5	2.5	1.6	1.9	33.1
1961	1.5	1.3	2.0	1.8	6.6	2.8	2.8	3.8	1.6	2.1	2.7	1.5	30.6
1962	1.6	1.3	1.5	1.4	1.5	6.6	5.9	4.1	2.5	1.8	1.6	1.5	31.4
1963	1.5	1.2	1.5	1.3	2.1	2.5	4.9	1.5	2.0	1.5	1.3	1.4	22.8
1964	1.4	1.3	1.4	1.4	2.2	2.4	1.6	1.6	1.6	1.6	2.7	2.5	21.5
1965	2.1	2.5	1.7	2.0	6.5	22.2	3.2	2.0	3.3	2.4	1.6	3.1	52.5
1966	1.5	4.3	1.5	2.2	1.5	3.2	5.1	3.2	1.7	1.7	1.7	1.7	29.4
1967	1.7	1.5	1.6	3.4	2.4	7.3	4.6	1.7	3.0	1.7	1.7	1.7	32.3
1968	1.7	1.6	1.7	1.7	2.0	1.6	4.0	1.7	1.7	10.2	1.8	1.8	31.5
1969	1.9	2.1	1.7	2.0	5.8	2.0	2.4	18.0	13.7	3.4	2.1	2.1	57.2
1970	2.0	1.8	2.4	4.7	3.8	7.4	2.0	1.9	3.0	3.7	1.8	2.4	36.9
1971	2.9	4.0	2.7	2.4	4.7	3.6	3.1	1.9	2.0	3.4	5.0	2.4	38.1
1972	2.1	1.9	2.0	2.4	4.8	3.3	2.1	3.3	2.7	2.3	2.5	2.0	31.5
1973	2.0	1.9	16.7	4.7	2.8	2.6	4.0	3.0	41.2	13.6	3.1	4.6	100.0
1974	2.6	2.0	2.7	8.4	6.8	2.9	2.2	3.3	2.0	3.1	1.9	1.7	39.7

Incremental Flow Data (acre-feet)
Node 610--Unit 62

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	1.7	2.0	1.9	2.2	3.2	2.2	1.7	1.9	1.9	1.6	2.1	1.6	23.8
1976	1.6	1.5	2.3	13.7	5.2	2.3	2.5	1.6	2.7	2.4	1.5	1.6	38.7
1977	1.7	1.4	1.8	1.9	8.0	5.9	1.9	5.1	5.8	2.7	1.9	1.7	39.7
1978	1.7	1.6	1.7	1.7	2.6	3.1	1.6	2.1	5.1	1.9	1.8	1.8	26.7
1979	1.8	1.7	2.8	1.8	2.8	1.7	5.4	1.7	1.8	4.5	1.9	1.9	29.8
1980	1.9	1.8	4.5	2.0	2.0	1.3	2.0	3.4	1.9	1.8	1.8	2.0	26.4
1981	1.8	1.5	1.9	2.0	8.3	13.0	5.0	2.5	2.6	2.3	3.5	2.2	46.5
1982	2.1	2.3	2.0	1.9	7.9	2.8	2.6	2.1	2.0	2.4	1.9	1.9	31.9
1983	1.8	1.9	1.9	2.1	4.0	2.1	1.9	1.9	2.0	3.2	2.0	1.8	26.6
1984	1.8	1.6	5.1	7.6	2.4	2.4	2.1	1.8	1.9	2.7	1.8	7.9	39.1
1985	2.0	1.8	1.9	14.0	2.4	7.8	4.6	2.8	2.8	10.9	2.4	2.4	55.8
1986	2.2	2.0	2.2	4.0	2.1	2.9	4.0	8.0	2.2	3.5	2.0	1.9	36.8
1987	1.9	1.7	13.6	4.6	7.5	3.1	3.8	3.3	1.8	1.8	1.8	1.8	46.5
1988	1.8	1.7	1.8	2.7	1.8	1.7	2.1	2.1	1.7	1.8	1.7	1.8	22.6
1989	1.7	1.5	1.7	1.6	8.3	7.5	4.6	2.3	2.5	2.1	2.0	2.0	37.9
1990	1.9	1.7	2.1	3.5	17.6	2.5	2.1	6.4	3.3	2.0	1.9	2.0	46.9
1991	1.9	1.7	2.1	1.8	2.0	2.4	1.4	2.0	1.7	1.8	1.8	2.0	22.6
1992	1.9	1.6	1.7	1.6	3.2	10.4	3.3	2.9	2.2	2.4	2.1	4.0	37.2
1993	4.4	3.6	5.2	2.2	11.0	16.1	47.3	4.4	3.4	3.2	2.9	2.8	106.5
1994	2.6	2.2	2.3	3.2	2.2	2.2	3.1	2.1	2.0	2.3	2.0	2.1	28.4

Incremental Flow Data (acre-feet)
Node 620--Unit 44--East Salt Flats

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	2.6	3.0	2.3	3.0	2.6	4.3	5.6	2.7	9.2	4.2	2.5	2.5	44.5
1956	2.4	3.3	2.3	3.5	3.4	2.1	3.4	2.3	2.3	3.8	2.3	2.4	33.6
1957	2.4	2.2	14.0	7.9	30.8	15.4	5.8	4.2	15.5	8.8	4.4	3.5	115.1
1958	3.3	3.0	12.2	3.7	13.0	7.9	14.9	4.8	11.4	5.0	3.4	3.3	85.9
1959	3.0	2.8	4.2	2.7	18.7	4.2	17.8	4.1	3.8	7.3	2.9	2.8	74.3
1960	4.1	3.4	8.1	3.6	4.6	7.0	3.2	3.6	3.8	3.8	2.5	2.8	50.5
1961	2.3	2.0	3.0	2.8	10.1	4.3	4.2	5.9	2.5	3.2	4.1	2.3	46.6
1962	2.5	2.0	2.2	2.1	2.3	10.1	9.1	6.3	3.8	2.7	2.5	2.3	47.8
1963	2.2	1.9	2.3	2.0	3.3	3.8	7.5	2.3	3.0	2.3	2.0	2.1	34.7
1964	2.1	2.0	2.1	2.1	3.3	3.6	2.4	2.5	2.5	2.4	4.2	3.7	32.8
1965	3.2	3.7	2.5	3.0	9.8	33.8	4.9	3.1	5.0	3.7	2.4	4.7	79.9
1966	2.3	6.5	2.3	3.4	2.3	4.8	7.8	4.9	2.6	2.6	2.5	2.6	44.8
1967	2.5	2.3	2.5	5.2	3.6	11.1	7.0	2.6	4.6	2.5	2.6	2.6	49.2
1968	2.6	2.4	2.6	2.6	3.0	2.5	6.1	2.6	2.6	15.5	2.8	2.7	48.0
1969	2.8	3.2	2.6	3.1	8.8	3.1	3.6	27.5	20.9	5.2	3.2	3.2	87.1
1970	3.1	2.7	3.7	7.2	5.8	11.3	3.1	3.0	4.5	5.6	2.8	3.6	56.2
1971	4.4	6.1	4.1	3.7	7.2	5.5	4.7	2.9	3.1	5.1	7.6	3.6	58.1
1972	3.2	2.9	3.1	3.7	7.4	5.1	3.2	5.0	4.1	3.5	3.7	3.1	48.0
1973	3.0	2.8	25.4	7.1	4.3	3.9	6.1	4.5	62.8	20.6	4.7	7.0	152.3
1974	3.9	3.1	4.2	12.7	10.3	4.4	3.4	5.1	3.0	4.8	2.9	2.6	60.4

Incremental Flow Data (acre-feet)
Node 620--Unit 44--East Salt Flats

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	2.5	3.0	2.8	3.3	4.8	3.4	2.6	2.8	2.9	2.4	3.2	2.4	36.3
1976	2.4	2.2	3.5	20.9	7.8	3.4	3.8	2.4	4.2	3.6	2.3	2.4	58.9
1977	2.5	2.2	2.7	3.0	12.1	9.0	2.9	7.7	8.9	4.1	2.9	2.6	60.5
1978	2.6	2.5	2.6	2.5	3.9	4.7	2.5	3.2	7.7	2.8	2.8	2.8	40.6
1979	2.8	2.6	4.3	2.7	4.3	2.6	8.2	2.6	2.8	6.8	2.8	2.9	45.5
1980	2.8	2.8	6.8	3.0	3.1	2.0	3.1	5.2	2.8	2.8	2.7	3.0	40.2
1981	2.7	2.4	2.9	3.0	12.6	19.8	7.7	3.8	4.0	3.5	5.3	3.3	70.8
1982	3.2	3.5	3.1	2.8	12.1	4.2	4.0	3.2	3.0	3.7	2.8	2.8	48.6
1983	2.8	2.9	3.0	3.1	6.0	3.2	2.9	2.9	3.1	4.9	3.0	2.7	40.6
1984	2.7	2.5	7.8	11.6	3.6	3.7	3.2	2.7	2.9	4.1	2.8	12.0	59.5
1985	3.0	2.7	2.9	21.3	3.7	11.9	7.0	4.3	4.2	16.6	3.7	3.6	84.9
1986	3.4	3.0	3.3	6.0	3.2	4.4	6.1	12.1	3.3	5.3	3.0	2.9	56.1
1987	2.8	2.7	20.7	7.0	11.4	4.7	5.8	4.9	2.7	2.8	2.7	2.7	70.9
1988	2.7	2.6	2.7	4.1	2.8	2.6	3.1	3.2	2.6	2.7	2.6	2.7	34.4
1989	2.6	2.3	2.6	2.5	12.7	11.5	7.1	3.5	3.7	3.2	3.0	3.0	57.7
1990	2.9	2.6	3.2	5.3	26.8	3.8	3.2	9.8	5.0	3.0	2.8	3.0	71.5
1991	2.9	2.6	3.2	2.7	3.1	3.6	2.1	3.0	2.6	2.7	2.7	3.0	34.4
1992	2.8	2.4	2.6	2.4	4.8	15.9	5.0	4.4	3.4	3.7	3.2	6.0	56.6
1993	6.8	5.5	7.9	3.3	16.8	24.5	72.0	6.7	5.2	4.9	4.4	4.3	162.2
1994	4.0	3.3	3.5	4.9	3.4	3.3	4.8	3.2	3.1	3.5	3.0	3.2	43.3

Incremental Flow Data (acre-feet)
Node 630--Rattlesnake Creek near Raymond, KS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1955	388.7	452.3	345.0	447.6	384.3	644.6	838.6	399.1	1,376.7	623.7	373.8	368.2	6,642.7
1956	359.1	488.3	335.4	514.8	509.5	318.2	513.3	351.1	345.5	574.3	349.5	360.8	5,019.9
1957	360.7	321.4	2,094.1	1,185.9	4,600.9	2,305.1	871.8	620.4	2,316.8	1,318.7	657.0	522.6	17,175.5
1958	488.4	452.6	1,817.6	554.7	1,942.1	1,186.6	2,220.4	724.5	1,701.8	748.7	504.8	484.6	12,826.9
1959	454.0	416.5	623.4	400.1	2,791.9	632.9	2,662.3	609.9	564.7	1,089.6	429.3	419.9	11,094.6
1960	606.6	510.0	1,201.3	536.8	691.7	1,041.3	480.4	543.1	572.0	565.1	366.3	421.3	7,535.8
1961	335.1	301.7	443.0	415.4	1,509.4	640.5	631.0	876.0	372.3	481.3	609.6	338.2	6,953.5
1962	372.4	292.5	333.6	314.1	347.9	1,504.8	1,352.2	941.3	560.3	402.5	373.8	337.4	7,132.8
1963	329.1	279.8	350.9	292.4	485.0	570.3	1,114.5	340.9	455.9	347.1	301.9	313.3	5,181.0
1964	317.3	294.3	313.1	308.9	490.8	537.3	359.2	366.8	365.9	356.6	620.9	555.8	4,886.8
1965	477.0	556.2	380.1	445.7	1,468.2	5,041.3	735.1	463.3	747.2	550.2	360.3	698.6	11,923.3
1966	344.9	973.4	351.4	505.2	336.8	722.5	1,167.4	737.1	390.4	394.7	377.1	385.3	6,686.1
1967	378.0	341.6	373.3	771.5	538.0	1,660.5	1,043.0	389.4	690.9	378.3	385.8	390.2	7,340.6
1968	391.0	362.4	382.8	390.1	445.8	374.9	917.0	382.5	384.9	2,315.0	418.0	401.2	7,165.6
1969	424.4	470.0	390.6	463.9	1,309.6	461.5	538.9	4,097.0	3,119.8	773.6	476.4	475.1	13,000.8
1970	456.2	399.4	554.5	1,066.7	862.3	1,680.4	463.4	440.5	673.5	833.3	416.5	542.7	8,389.4
1971	656.8	914.5	606.0	555.0	1,073.5	826.9	703.1	432.3	459.6	765.4	1,132.2	538.7	8,664.0
1972	480.4	437.4	459.1	547.9	1,099.8	762.0	473.6	752.2	612.9	514.9	557.2	463.4	7,160.7
1973	455.6	421.6	3,793.2	1,065.2	648.0	580.7	910.6	672.0	9,366.4	3,078.6	699.3	1,041.2	22,732.4
1974	586.0	467.0	621.1	1,897.4	1,541.5	651.5	501.5	755.9	451.1	713.2	436.6	392.6	9,015.3

Incremental Flow Data (acre-feet)
Node 630--Rattlesnake Creek near Raymond, KS

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1975	381.3	450.7	425.4	488.1	722.5	505.5	394.3	422.7	435.9	356.4	475.3	354.6	5,412.9
1976	354.8	332.0	521.9	3,119.8	1,172.1	510.8	570.9	360.9	621.2	537.3	342.0	355.2	8,799.0
1977	376.8	321.2	397.6	441.5	1,811.2	1,347.1	435.0	1,146.7	1,320.3	605.8	436.1	392.5	9,031.7
1978	386.4	368.1	384.0	378.6	587.1	707.8	373.7	481.7	1,149.2	419.7	417.9	412.3	6,066.6
1979	414.4	390.1	639.6	398.7	643.9	392.4	1,221.2	387.9	416.9	1,020.5	425.1	433.6	6,784.3
1980	423.5	410.5	1,019.8	450.6	464.1	301.6	459.4	780.1	425.5	417.5	398.3	445.0	5,996.0
1981	397.4	353.1	438.2	448.5	1,875.9	2,950.4	1,142.9	562.5	599.6	518.2	791.2	491.1	10,569.3
1982	472.2	529.8	462.8	425.9	1,806.9	631.8	599.9	481.6	453.2	545.7	420.5	425.1	7,255.2
1983	413.8	438.3	439.6	468.7	899.3	473.8	438.2	431.0	460.3	732.0	450.1	407.6	6,052.6
1984	396.9	365.3	1,164.8	1,736.8	536.5	544.9	478.2	407.3	434.2	605.3	412.5	1,794.8	8,877.4
1985	448.7	404.4	432.3	3,184.6	547.7	1,768.6	1,048.9	638.0	626.3	2,478.0	554.5	541.4	12,673.4
1986	507.3	444.1	497.0	901.2	470.1	657.8	906.0	1,812.6	491.7	797.1	449.1	432.9	8,366.9
1987	423.7	394.9	3,094.3	1,043.7	1,695.9	696.3	862.5	738.7	408.3	417.7	396.9	403.5	10,576.3
1988	405.1	382.0	403.6	613.0	410.1	391.0	467.9	483.2	390.1	398.6	386.5	397.1	5,128.2
1989	393.5	349.9	385.9	366.3	1,895.2	1,710.1	1,055.3	524.0	557.6	474.4	445.9	447.1	8,605.1
1990	439.5	387.6	480.7	791.3	3,996.0	567.7	482.3	1,465.2	740.3	451.7	426.0	442.2	10,670.5
1991	435.7	389.8	481.4	405.5	461.4	539.9	319.5	445.6	392.6	398.2	407.0	451.6	5,128.2
1992	421.9	357.4	390.0	361.3	717.2	2,369.1	745.4	661.8	505.2	548.6	479.1	898.5	8,455.8
1993	1,010.0	825.8	1,179.2	489.8	2,503.6	3,657.0	10,746.1	1,001.9	772.3	725.1	656.1	648.3	24,215.3
1994	589.8	500.6	527.9	729.8	509.5	487.7	711.4	482.2	467.0	528.0	455.2	471.7	6,460.8

USFWS
97-806-4

**** STORET SUMMARY SECTION ****

FOLLOWING IS A RETRIEVAL OF DATA FROM THE ENVIRONMENTAL PROTECTION AGENCY'S STORET SYSTEM, A DATABASE OF SAMPLING SITES AND THEIR ASSOCIATED QUALITY DATA. THE INFORMATION WAS RETRIEVED USING SPECIFIC STORET INSTRUCTION SETS IN COMBINATION TO SELECT ONLY THE DATA REQUESTED FOR THIS RETRIEVAL. BRIEF EXPLANATIONS OF THE INSTRUCTION SETS ARE INCLUDED BELOW.

QUESTIONS MAY BE DIRECTED TO THE STORET USER ASSISTANCE SECTION AT
(800) 424-9067.

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FOLLOWING IS THE FORMAT FOR THE STATION HEADER INFORMATION WHICH APPEARS
ON EACH PAGE OF THE RETRIEVAL UNLESS STATION AGGREGATION WAS PERFORMED

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*****************************************************************************************
*                                                                                       *
*                                       STATION NUMBER(S)                               *
*                                       LATITUDE/LONGITUDE PRECISION CODE               *
*                                       STATION LOCATION                                *
*                                       STATE/COUNTY CODE STATE NAME COUNTY NAME        *
*                                       MAJOR BASIN NAME MAJ/MIN/SUB BASIN CODE         *
*                                       MINOR BASIN NAME                                *
*STATION TYPE                           AGENCY CODE  STORED DATE  HYDROLOGIC UNIT       *
*                                       STATION DEPTH     ELEVATION                     *
*                                       ECOREGION                                       *
*                                       WATER BODY                                      *
*                                       AQUIFERS                                        *
*                                       LOCKED DATE                                     *
*                                                                                       *
*RIVER MILE INDEX                                                                       *
*                                                                                       *
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CONTINUED ON NEXT PAGE(S)

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 RETRIEVAL PROGRAM
0    PGM=INVENT
        THIS IS AN INVENTORY RETRIEVAL SHOWING SUMMARY STATISTICS FOR ALL PARAMETERS
0    NO BEGINNING DATE WAS REQUESTED -- STORET ASSUMED THE BEGINNING DATE WAS THAT OF THE OLDEST DATA VALUE FOUND
     NO ENDING DATE WAS REQUESTED -- STORET ASSUMED THE ENDING DATE WAS THAT OF THE MOST RECENT DATA VALUE FOUND
-STATION SELECTION WAS BY:

     AGENCY CODE(S) AND STATION NUMBER(S) FOR THE FOLLOWING AGENCY(S):
        112WRD        21KAN001      1117MBR
-STATIONS SELECTED WERE RESTRICTED TO:

     AGENCIES WHOSE DATA HAS NOT BEEN 'RETIRED'
-CONTACTS FOR AGENCY CODES RETRIEVED:

      AGENCY        PRIMARY CONTACT NAME                ORGANIZATION                      PHONE NUMBER(S)
     --------     -------------------------     -------------------------     -----------------------------
     112WRD       WILLIAMS, OWEN                US GEOLOGICAL SURVEY          (703)648-5610
     21KAN001     BROWN, STEVE                  KANSAS DEPT HEALTH & ENV      (913)862-9360
     1117MBR      CRISP, NORM                   USEPA REGION 7                (913)236-3884
-DATA RESTRICTIONS:

     **NOTE**
        NO DEPTH INDICATOR RESTRICTIONS WERE SPECIFIED - COMPUTATIONS WILL
        BE PERFORMED WITHOUT REGARD TO DEPTH INDICATORS

     **NOTE**
        NO GRAB/COMPOSITE RESTRICTIONS WERE UTILIZED, SO BOTH GRAB AND COMPOSITE SAMPLE TYPES MAY HAVE
        BEEN INCLUDED - COMPUTATIONS WILL BE PERFORMED WITHOUT REGARD TO SAMPLE TYPE

     **NOTE**
        NO COMPOSITE SAMPLE RESTRICTIONS WERE SPECIFIED - COMPUTATIONS WILL INCLUDE STATISTICAL FEATURES OF
        THE COMPOSITING PROCESS, PRODUCING VALID RESULTS ONLY WHEN SOPHISTICATED COMPOSITES ARE NOT ENCOUNTERED.
        SPECIFY COMPOSITE HANDLING KEYWORDS "ANC" AND/OR "DSROC" IF NEEDED

                                              ***** END OF SUMMARY SECTION *****
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07141300
38 21 11.0 098 45 50.0 2
ARKANSAS R AT GREAT BEND, KS
20009 KANSAS BARTON
100291

/TYPA/AMBNT/STREAM

112WRD 11030004
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		340	15.00200	77.85400	8.823500	33.0	.0	58/10/14	95/08/08
00011	WATER	TEMP	FAHN	WATER	$	340	59.00200	252.3500	15.88600	91.4	32.0	58/10/14	95/08/08
00027	COLLECT	AGENCY	CODE	WATER		134	1028.000	1.082700	1.040500	1028	1028	74/10/18	95/08/08
00028	ANALYZE	AGENCY	CODE	WATER		134	2909.100	12908000	3592.800	9720	1028	74/10/18	95/08/08
00049	SURFACE	AREA	SQ. MI.	WATER		52	34356.00	.0000000	.0000000	34356.00	34356.00	57/07/11	62/09/12
00060	STREAM	FLOW	CFS	WATER		287	1166.200	13113000	3621.200	27400	2	44/06/03	75/05/15
00061	STREAM	FLOW,	INST-CFS	WATER		223	445.8800	1531400	1237.500	9500	.05	57/07/11	95/08/08
00063	NO. OF	SAMPLING	POINTS	WATER		47	10.85100	20.34700	4.510800	30	2	57/07/11	75/04/10
00070	TURB	JKSN	JTU	WATER		24	123.5000	169110.0	411.2300	2000.0	1.0	73/10/10	75/09/18
00075	TURB	HLGE	PPM SIO2	WATER		82	181.9600	125250.0	353.9100	1600.0	3.0	64/10/05	73/08/17
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		269	1453.800	573870.0	757.5400	7910	120	61/10/16	95/08/08
00400	PH		SU	WATER		253	7.857700	.2303800	.4799800	12.00	6.70	61/10/16	95/08/01
00405	CO2		MG/L	WATER		49	9.046900	34.83100	5.901800	36.0	1.7	71/10/05	75/09/18
00410	T ALK	CACO3	MG/L	WATER		168	198.0800	1412.200	37.58000	364	62	61/10/16	75/09/18
00440	HCO3 ION	HCO3	MG/L	WATER		168	240.3000	2254.600	47.48200	444	0	61/10/16	75/09/18
00445	CO3 ION	CO3	MG/L	WATER		168	.6976200	19.11400	4.372000	38	0	61/10/16	75/09/18
00618	NO3-N	DISS	MG/L	WATER		49	1.442500	.7415200	.8611200	3.20	.09	71/10/05	75/09/18
00650	T PO4	PO4	MG/L	WATER		138	.9292000	.4163900	.6452800	4.00	.00	62/02/20	75/09/18
00665	PHOS-TOT		MG/L P	WATER		49	.3212200	.0458190	.2140600	1.100	.050	71/10/05	75/09/18
00900	TOT HARD	CACO3	MG/L	WATER		168	551.1200	55458.00	235.5000	1110	84	61/10/16	75/09/18
00902	NC HARD	CACO3	MG/L	WATER		168	351.4900	47351.00	217.6000	920	0	61/10/16	75/09/18
00915	CALCIUM	CA,DISS	MG/L	WATER		168	142.6200	3031.100	55.05500	270.0	29.0	61/10/16	75/09/18
00925	MGNSIUM	MG,DISS	MG/L	WATER		168	47.52000	611.7800	24.73400	110.0	.0	61/10/16	75/09/18
00930	SODIUM	NA,DISS	MG/L	WATER		168	152.8200	6746.100	82.13500	350.00	5.00	61/10/16	75/09/18
00931	SODIUM	ADSBTION	RATIO	WATER		168	2.702300	.8778000	.9369100	4.6	.2	61/10/16	75/09/18
00932	PERCENT	SODIUM	%	WATER		168	35.41700	29.14200	5.398300	42	10	61/10/16	75/09/18
00933	NA+K		MG/L	WATER		2	123.0000	128.0000	11.31400	131.00	115.00	61/10/16	61/11/13
00935	PTSSIUM	K,DISS	MG/L	WATER		166	9.845000	5.431900	2.330700	16.00	4.80	61/12/14	75/09/18
00940	CHLORIDE	TOTAL	MG/L	WATER		168	67.79700	650.4000	25.50300	130	.7	61/10/16	75/09/18
00945	SULFATE	SO4-TOT	MG/L	WATER		168	571.6100	121430.0	348.4700	1500	5	61/10/16	75/09/18
00950	FLUORIDE	F,DISS	MG/L	WATER		168	.8648700	.0310420	.1761900	1.30	.30	61/10/16	75/09/18
00955	SILICA	DISOLVED	MG/L	WATER		168	13.82200	11.51000	3.392700	26.0	5.0	61/10/16	75/09/18
01020	BORON	B,DISS	UG/L	WATER		163	250.2400	9182.200	95.82400	540	80	61/10/16	75/09/18
01022	BORON	B,TOT	UG/L	WATER		12	274.1700	11027.00	105.0100	440	80	61/10/16	62/09/12
01045	IRON	FE,TOT	UG/L	WATER		12	149.1700	40317.00	200.7900	570	10	61/10/16	62/09/12
01046	IRON	FE,DISS	UG/L	WATER		42	102.1400	14827.00	121.7700	570	0	61/10/16	74/10/18
					K	1	10.00000			10	10	75/04/10	75/04/10
					TOT	43	100.0000	14672.00	121.1300	570	0	61/10/16	75/04/10
01055	MANGNESE	MN	UG/L	WATER		16	3.125000	156.2500	12.50000	50.0	.0	61/10/16	69/04/04

07141300
38 21 11.0 098 45 50.0 2
ARKANSAS R AT GREAT BEND, KS
20009 KANSAS BARTON
100291

/TYPA/AMBNT/STREAM

112WRD 11030004
0000 FEET DEPTH

PARAMETER		MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01056 MANGNESE MN,DISS	UG/L	WATER		34	12.35300	3267.000	57.15800	330.0	.0	61/10/16	72/04/12
			K	5	10.00000	.0000000	.0000000	10.0	10.0	72/10/04	75/04/10
			TOT	39	12.05100	2837.800	53.27100	330.0	.0	61/10/16	75/04/10
01300 OIL-GRSE	SEVERITY	WATER		4	.0000000	.0000000	.0000000	0	0	86/07/02	93/03/08
01305 DET SUDS	SEVERITY	WATER		4	.0000000	.0000000	.0000000	0	0	86/07/02	93/03/08
01310 GAS BBLE	SEVERITY	WATER		4	.0000000	.0000000	.0000000	0	0	86/07/02	93/03/08
01315 FLOATING SLUDGE	SEVERITY	WATER		3	.0000000	.0000000	.0000000	0	0	87/04/16	93/03/08
01320 FLOATING GARBAGE	SEVERITY	WATER		4	.0000000	.0000000	.0000000	0	0	86/07/02	93/03/08
01325 FLOATING ALG MAT	SEVERITY	WATER		4	.0000000	.0000000	.0000000	0	0	86/07/02	93/03/08
01330 ODOR ATMOSPH	SEVERITY	WATER		4	.0000000	.0000000	.0000000	0	0	86/07/02	93/03/08
01340 DEAD FISH	SEVERITY	WATER		4	.0000000	.0000000	.0000000	0	0	86/07/02	93/03/08
01345 FLOATING DEBRIS	SEVERITY	WATER		4	.0000000	.0000000	.0000000	0	0	86/07/02	93/03/08
01355 ICE COVER	SEVERITY	WATER		4	.0000000	.0000000	.0000000	0	0	86/07/02	93/03/08
46570 CAL HARD CA MG	MG/L	WATER	$	168	551.8000	55817.00	236.2600	1127	84	61/10/16	75/09/18
70300 RESIDUE DISS-180 C	MG/L	WATER		168	1166.300	319640.0	565.3700	2550	133	61/10/16	75/09/18
70301 DISS SOL SUM	MG/L	WATER		122	1232.100	324330.0	569.5000	2500	138	63/03/06	75/09/18
70302 DISS SOL TONS/DAY		WATER		168	885.4900	7443500	2728.300	29450.00	3.53	61/10/16	75/09/18
70303 DISS SOL TONS PER	ACRE-FT	WATER		168	1.575200	.5725100	.7566400	3.47	.18	61/10/16	75/09/18
70326 SUSP SED PARTSIZE	%<.002MM	WATER		6	25.83300	335.7700	18.32400	49	2	57/09/16	65/06/23
70327 SUSP SED PARTSIZE	%<.004MM	WATER		6	44.66700	888.6700	29.81100	73	2	57/09/16	65/06/23
70329 SUSP SED PARTSIZE	%<.016MM	WATER		6	82.00000	110.8000	10.52600	96	69	57/09/16	65/06/23
70331 SUSP SED PARTSIZE	%<.062MM	WATER		15	84.51100	176.5800	13.28800	99	55	57/09/16	93/03/08
70332 SUSP SED PARTSIZE	%<.125MM	WATER		10	90.90000	89.43800	9.457100	99	74	57/09/16	65/06/23
70333 SUSP SED PARTSIZE	%<.250MM	WATER		10	95.00000	30.88900	5.557800	100	84	57/09/16	65/06/23
70334 SUSP SED PARTSIZE	%<.500MM	WATER		9	99.66700	.2578100	.5077500	100	99	57/09/16	65/06/23
70335 SUSP SED PARTSIZE	%<1.00MM	WATER		3	100.0000	.0000000	.0000000	100	100	57/09/16	58/07/30
70337 SUSP SED PARTSIZE	%<.002MM	WATER		31	69.22600	256.9700	16.03000	88	25	57/07/11	86/07/02
70338 SUSP SED PARTSIZE	%<.004MM	WATER		33	76.72700	265.2600	16.28700	94	30	57/07/11	87/06/02
70339 SUSP SED PARTSIZE	%<.008MM	WATER		1	92.00000			92	92	61/06/08	61/06/08
70340 SUSP SED PARTSIZE	%<.016MM	WATER		29	77.72400	901.0600	30.01800	98	0	57/09/16	86/07/02
70341 SUSP SED PARTSIZE	%<.031MM	WATER		1	96.00000			96	96	61/06/08	61/06/08
70342 SUSP SED PARTSIZE	%<.062MM	WATER		32	91.62500	183.5900	13.55000	100	34	57/07/11	81/06/16
70343 SUSP SED PARTSIZE	%<.125MM	WATER		27	88.22200	244.6400	15.64100	100	34	57/07/11	87/06/02
70344 SUSP SED PARTSIZE	%<.250MM	WATER		26	90.92300	220.7100	14.85600	100	38	57/07/11	87/06/02
70345 SUSP SED PARTSIZE	%<.500MM	WATER		23	96.47800	94.26100	9.708800	100	59	57/07/11	87/06/02
70346 SUSP SED PARTSIZE	%<1.00MM	WATER		8	95.62500	153.1300	12.37400	100	65	57/09/16	87/06/02
71830 OH ION OH	MG/L	WATER		1	91.00000			91.0	91.0	63/11/02	63/11/02
71850 NITRATE TOT-NO3	MG/L	WATER		12	5.141700	13.48100	3.671600	11.0	.4	61/10/16	62/09/12
71851 NITRATE DISS-NO3	MG/L	WATER		168	6.163000	14.16600	3.763700	16.0	.1	61/10/16	75/09/18

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ARKANSAS R AT GREAT BEND, KS
20009 KANSAS BARTON
100291

/TYPA/AMBNT/STREAM

112WRD 11030004
0000 FEET DEPTH

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
72000 LND SURF DATUM FT	WATER		52	1839.800	.0000000	.0000000	1839.8	1839.8	57/07/11	62/09/12
80154 SUSP SED CONC MG/L	WATER		209	620.4600	1444800	1202.000	8300	0	44/06/03	93/03/08
80155 SUSP SED DISCHARG TONS/DAY	WATER		205	8411.100	1243E+06	35268.00	423000.0	.00	44/06/03	81/06/16
80158 BED MATL PARTSIZE %<.062MM	WATER		8	1.500000	12.00000	3.464100	10	0	58/07/29	73/11/13
80159 BED MATL PARTSIZE %<.125MM	WATER		52	.4038500	2.480800	1.575100	10	0	57/07/11	75/04/10
80160 BED MATL PARTSIZE %<.250MM	WATER		54	5.018500	18.84900	4.341500	22	0	57/07/11	75/04/10
80161 BED MATL PARTSIZE %<.500MM	WATER		54	35.42600	109.3800	10.45800	69	17	57/07/11	75/04/10
80162 BED MATL PARTSIZE %<1.00MM	WATER		54	61.40700	123.8300	11.12800	90	40	57/07/11	75/04/10
80163 BED MATL PARTSIZE %<2.00MM	WATER		45	77.24500	96.69200	9.833200	95	55	57/07/11	68/09/11
80165 BED MATL PARTSIZE %<.125MM	WATER		11	.1818200	.3636400	.6030200	2	0	60/07/13	62/07/24
80166 BED MATL PARTSIZE %<.250MM	WATER		11	4.727300	26.41800	5.139900	20	2	60/07/13	62/07/24
80167 BED MATL PARTSIZE %<.500MM	WATER		11	32.09100	77.09200	8.780200	45	21	60/07/13	62/07/24
80168 BED MATL PARTSIZE %<1.00MM	WATER		11	52.72700	45.62000	6.754300	64	40	60/07/13	62/07/24
80169 BED MATL PARTSIZE %<2.00MM	WATER		20	72.70000	70.00300	8.366800	90	55	60/07/13	75/04/10
80170 BED MATL PARTSIZE %<4.00MM	WATER		60	90.88300	39.46500	6.282100	99	74	57/07/11	75/04/10
80171 BED MATL PARTSIZE %<8.00MM	WATER		60	96.91600	13.81800	3.717200	100	85	57/07/11	75/04/10
80172 BED MATL PARTSIZE %<16.0MM	WATER		39	99.10300	3.988500	1.997100	100	91	57/07/11	75/04/10
80173 BED MATL PARTSIZE %<32.0MM	WATER		10	99.30000	4.909700	2.215800	100	93	59/08/11	68/09/11

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ARKANSAS R NR KINSLEY, KS
20047 KANSAS EDWARDS
100291

/TYPA/AMBNT/STREAM

112WRD 11030004
0000 FEET DEPTH

PARAMETER		MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER TEMP CENT	WATER		200	16.68900	76.40300	8.740900	35.0	.0	58/05/05	95/08/25
00011	WATER TEMP FAHN	WATER	$	200	62.03900	247.7100	15.73900	95.0	32.0	58/05/05	95/08/25
00025	BAROMTRC PRESSURE MM OF HG	WATER		4	700.2500	34.33300	5.859500	707	693	84/12/12	85/05/09
00027	COLLECT AGENCY CODE	WATER		99	1028.000	.0000000	.0000000	1028	1028	79/06/13	95/08/25
00028	ANALYZE AGENCY CODE	WATER		99	2696.200	11837000	3440.400	9720	1028	79/06/13	95/08/25
00049	SURFACE AREA SQ. MI.	WATER		43	31066.00	.0000000	.0000000	31066.00	31066.00	58/05/05	62/09/12
00060	STREAM FLOW CFS	WATER		107	1563.800	47994000	6927.800	49300	12	58/05/05	72/09/12
00061	STREAM FLOW, INST-CFS	WATER		196	225.5400	502750.0	709.0500	6190	.08	58/05/05	95/08/25
00063	NO. OF SAMPLING POINTS	WATER		59	9.779600	5.692200	2.385800	16	1	60/12/05	80/11/14
00075	TURB HLGE PPM SIO2	WATER		12	138.5000	54361.00	233.1600	800.0	8.0	64/11/20	68/01/09
00095	CNDUCTVY AT 25C MICROMHO	WATER		127	1543.600	405720.0	636.9600	4100	185	63/10/17	95/08/25
00300	DO MG/L	WATER		4	11.65000	6.230100	2.496000	14.8	8.7	84/12/12	85/05/09
00301	DO SATUR PERCENT	WATER	$	4	107.9800	463.3500	21.52600	139.6	91.4	84/12/12	85/05/09
00400	PH SU	WATER		100	7.832500	.1121400	.3348700	8.60	7.00	63/10/17	95/08/25
00410	T ALK CACO3 MG/L	WATER		32	211.0900	1440.100	37.94900	280	130	63/10/17	68/01/09
00440	HCO3 ION HCO3 MG/L	WATER		32	249.3400	1834.000	42.82500	322	159	63/10/17	68/01/09
00445	CO3 ION CO3 MG/L	WATER		32	4.062500	82.38300	9.076500	34	0	63/10/17	68/01/09
00650	T PO4 PO4 MG/L	WATER		5	1.260000	.2180000	.4669100	2.00	.80	66/01/19	68/01/09
00900	TOT HARD CACO3 MG/L	WATER		32	583.3400	69368.00	263.3800	1170	190	63/10/17	68/01/09
00902	NC HARD CACO3 MG/L	WATER		32	371.8400	59603.00	244.1400	952	48	63/10/17	68/01/09
00915	CALCIUM CA,DISS MG/L	WATER		32	153.1300	3335.300	57.75200	290.0	62.0	63/10/17	68/01/09
00925	MGNSIUM MG,DISS MG/L	WATER		32	49.30000	837.9900	28.94800	115.0	8.6	63/10/17	68/01/09
00930	SODIUM NA,DISS MG/L	WATER		32	152.6600	9385.500	96.87900	385.00	16.00	63/10/17	68/01/09
00931	SODIUM ADSBTION RATIO	WATER		32	2.593800	1.121300	1.058900	4.9	.5	63/10/17	68/01/09
00932	PERCENT SODIUM %	WATER		32	33.50000	32.33100	5.686000	41	15	63/10/17	68/01/09
00935	PTSSIUM K,DISS MG/L	WATER		32	11.16300	4.107900	2.026800	15.00	8.00	63/10/17	68/01/09
00940	CHLORIDE TOTAL MG/L	WATER		32	58.98400	933.4800	30.55300	124	4	63/10/17	68/01/09
00945	SULFATE SO4-TOT MG/L	WATER		32	604.8700	155470.0	394.3000	1550	88	63/10/17	68/01/09
00950	FLUORIDE F,DISS MG/L	WATER		32	.9156200	.0303970	.1743500	1.20	.50	63/10/17	68/01/09
00955	SILICA DISOLVED MG/L	WATER		32	14.85900	12.08600	3.476500	21.0	7.5	63/10/17	68/01/09
01020	BORON B,DISS UG/L	WATER		32	274.3700	15033.00	122.6100	560	100	63/10/17	68/01/09
01046	IRON FE,DISS UG/L	WATER		4	22.50000	291.6700	17.07800	40	.0	64/04/13	67/11/07
01055	MANGNESE MN UG/L	WATER		1	.0000000			.0	.0	67/11/07	67/11/07
01056	MANGNESE MN,DISS UG/L	WATER		3	.0000000	.0000000	.0000000	.0	.0	64/04/13	65/04/14
01300	OIL-GRSE SEVERITY	WATER		7	.0000000	.0000000	.0000000	0	0	84/12/12	87/05/27
01305	DET SUDS SEVERITY	WATER		7	.0000000	.0000000	.0000000	0	0	84/12/12	87/05/27
01310	GAS BBLE SEVERITY	WATER		7	.0000000	.0000000	.0000000	0	0	84/12/12	87/05/27
01315	FLOATING SLUDGE SEVERITY	WATER		7	.0000000	.0000000	.0000000	0	0	84/12/12	87/05/27
01320	FLOATING GARBAGE SEVERITY	WATER		7	.0000000	.0000000	.0000000	0	0	84/12/12	87/05/27

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ARKANSAS R NR KINSLEY, KS
20047 KANSAS EDWARDS
100291

/TYPA/AMBNT/STREAM

112WRD 11030004
0000 FEET DEPTH

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01325 FLOATING ALG MAT SEVERITY	WATER		7	.8571400	.8095300	.8997400	2	0	84/12/12	87/05/27
01330 ODOR ATMOSPH SEVERITY	WATER		7	.0000000	.0000000	.0000000	0	0	84/12/12	87/05/27
01340 DEAD FISH SEVERITY	WATER		7	.0000000	.0000000	.0000000	0	0	84/12/12	87/05/27
01345 FLOATING DEBRIS SEVERITY	WATER		7	.0000000	.0000000	.0000000	0	0	84/12/12	87/05/27
01355 ICE COVER SEVERITY	WATER		7	.0000000	.0000000	.0000000	0	0	84/12/12	87/05/27
46570 CAL HARD CA MG MG/L	WATER	$	32	585.3700	68518.00	261.7600	1173	190	63/10/17	68/01/09
70300 RESIDUE DISS-180 C MG/L	WATER		32	1209.200	419450.0	647.6500	2730	298	63/10/17	68/01/09
70301 DISS SOL SUM MG/L	WATER		15	1617.300	418690.0	647.0600	2630	990	63/10/17	68/01/09
70302 DISS SOL TONS/DAY	WATER		32	2161.200	51535000	7178.800	39680.00	38.20	63/10/17	68/01/09
70303 DISS SOL TONS PER ACRE-FT	WATER		32	1.624100	.7453000	.8633100	3.62	.41	63/10/17	68/01/09
70326 SUSP SED PARTSIZE %<.002MM	WATER		1	2.000000			2	2	65/06/21	65/06/21
70327 SUSP SED PARTSIZE %<.004MM	WATER		1	3.000000			3	3	65/06/21	65/06/21
70329 SUSP SED PARTSIZE %<.016MM	WATER		1	96.00000			96	96	65/06/21	65/06/21
70331 SUSP SED PARTSIZE %<.062MM	WATER		18	97.11100	9.051500	3.008600	100	90	61/05/26	87/05/27
70332 SUSP SED PARTSIZE %<.125MM	WATER		11	96.09100	6.900000	2.626800	99	91	61/05/26	65/06/21
70333 SUSP SED PARTSIZE %<.250MM	WATER		11	97.45500	5.681300	2.383500	100	93	61/05/26	65/06/21
70334 SUSP SED PARTSIZE %<.500MM	WATER		9	99.44500	.5312500	.7288700	100	98	61/05/26	65/06/21
70335 SUSP SED PARTSIZE %<1.00MM	WATER		4	100.0000	.0000000	.0000000	100	100	61/08/15	62/07/07
70337 SUSP SED PARTSIZE %<.002MM	WATER		28	70.46400	149.1400	12.21300	87	46	61/06/07	79/07/25
70338 SUSP SED PARTSIZE %<.004MM	WATER		29	85.03500	60.46200	7.775700	95	68	61/06/07	87/05/27
70340 SUSP SED PARTSIZE %<.016MM	WATER		22	91.45500	48.25900	6.946900	99	69	61/07/15	79/07/25
70342 SUSP SED PARTSIZE %<.062MM	WATER		24	95.58300	29.99200	5.476500	100	75	61/02/09	79/07/25
70343 SUSP SED PARTSIZE %<.125MM	WATER		17	95.17700	15.40600	3.925100	100	85	61/02/09	79/07/25
70344 SUSP SED PARTSIZE %<.250MM	WATER		15	96.60000	9.973200	3.158000	100	91	61/02/09	71/11/18
70345 SUSP SED PARTSIZE %<.500MM	WATER		13	99.69200	.4010400	.6332800	100	98	61/02/09	65/06/22
70346 SUSP SED PARTSIZE %<1.00MM	WATER		3	100.0000	.0000000	.0000000	100	100	61/08/15	64/06/05
71851 NITRATE DISS-NO3 MG/L	WATER		32	7.025000	26.99000	5.195200	17.0	.0	63/10/17	68/01/09
72000 LND SURF DATUM FT	WATER		43	2144.600	.0000000	.0000000	2144.6	2144.6	58/05/05	62/09/12
80154 SUSP SED CONC MG/L	WATER		97	682.1400	1507700	1227.900	7690	6	58/05/05	87/05/27
80155 SUSP SED DISCHARG TONS/DAY	WATER		78	19046.00	1346E+07	116060.0	938000.0	.12	58/05/05	81/10/14
80158 BED MATL PARTSIZE %<.062MM	WATER		15	2.600000	35.97200	5.997600	24	0	64/06/04	85/06/07
80159 BED MATL PARTSIZE %<.125MM	WATER		63	.9682500	11.93500	3.454600	26	0	61/02/09	85/06/07
80160 BED MATL PARTSIZE %<.250MM	WATER		65	5.107700	35.12900	5.927000	34	0	60/12/05	85/06/07
80161 BED MATL PARTSIZE %<.500MM	WATER		65	30.24600	100.2900	10.01400	64	8	60/12/05	85/06/07
80162 BED MATL PARTSIZE %<1.00MM	WATER		65	57.03100	165.8700	12.87900	85	12	60/12/05	85/06/07
80163 BED MATL PARTSIZE %<2.00MM	WATER		49	77.18400	89.73800	9.473000	93	49	60/12/05	68/09/10
80165 BED MATL PARTSIZE %<.125MM	WATER		16	.0000000	.0000000	.0000000	0	0	61/02/09	62/09/12
80166 BED MATL PARTSIZE %<.250MM	WATER		17	2.176500	1.029400	1.014600	4	1	60/12/05	62/09/12
80167 BED MATL PARTSIZE %<.500MM	WATER		17	27.00000	56.87500	7.541600	40	14	60/12/05	62/09/12

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ARKANSAS R NR KINSLEY, KS
20047 KANSAS EDWARDS
100291

/TYPA/AMBNT/STREAM

112WRD 11030004
0000 FEET DEPTH

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
80168 BED MATL PARTSIZE %<1.00MM	WATER		17	57.94100	113.6900	10.66200	71	30	60/12/05	62/09/12
80169 BED MATL PARTSIZE %<2.00MM	WATER		33	68.93900	251.9900	15.87400	89	15	60/12/05	85/06/07
80170 BED MATL PARTSIZE %<4.00MM	WATER		78	88.84600	154.5400	12.43100	99	24	60/12/05	85/06/07
80171 BED MATL PARTSIZE %<8.00MM	WATER		78	94.69200	112.3700	10.60100	100	35	60/12/05	85/06/07
80172 BED MATL PARTSIZE %<16.0MM	WATER		41	95.00000	85.04900	9.222200	100	59	61/02/09	85/06/07
80173 BED MATL PARTSIZE %<32.0MM	WATER		17	98.94100	19.05900	4.365600	100	82	64/06/06	84/12/12
80174 BED MATL PARTSIZE %<64.0MM	WATER		1	100.0000			100	100	78/08/30	78/08/30

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RATTLESNAKE C NR HAVILAND, KS
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/TYPA/AMBNT/STREAM

112WRD 11030009003 0045.950 ON
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		17	13.01200	57.87100	7.607300	24.0	1.7	70/03/24	79/11/15
00011	WATER	TEMP	FAHN	WATER	$	17	55.42100	187.5100	13.69400	75.2	35.1	70/03/24	79/11/15
00027	COLLECT	AGENCY	CODE	WATER		8	1028.000	2.000000	1.414200	1028	1028	74/10/04	78/10/30
00028	ANALYZE	AGENCY	CODE	WATER		10	9720.000	170.6700	13.06400	9720	9720	74/10/04	78/10/30
00060	STREAM	FLOW	CFS	WATER		2	.0400000	.0018000	.0424260	.07	.01	70/03/24	71/12/15
00061	STREAM	FLOW,	INST-CFS	WATER		14	7.082100	55.86800	7.474500	27	.3	73/02/13	79/11/15
00070	TURB	JKSN	JTU	WATER		1	13.00000			13.0	13.0	75/10/07	75/10/07
00075	TURB	HLGE	PPM SIO2	WATER		1	15.00000			15.0	15.0	73/12/12	73/12/12
00076	TURB	TRBIDMTR	HACH FTU	WATER		1	7.600000			7.6	7.6	78/10/30	78/10/30
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		17	288.2400	978.1900	31.27600	320	190	70/03/24	79/11/15
00400	PH		SU	WATER		16	7.706200	.0726560	.2695500	8.40	7.30	70/03/24	79/11/15
00405	CO2		MG/L	WATER		15	6.133300	11.06100	3.325800	13.0	1.1	71/12/15	79/11/15
00410	T ALK	CACO3	MG/L	WATER		17	129.1200	378.7400	19.46100	150	64	70/03/24	79/11/15
00440	HCO3 ION	HCO3	MG/L	WATER		17	157.5900	559.3900	23.65200	180	78	70/03/24	79/11/15
00445	CO3 ION	CO3	MG/L	WATER		17	.0000000	.0000000	.0000000	0	0	70/03/24	79/11/15
00618	NO3-N	DISS	MG/L	WATER		16	1.111300	1.333200	1.154700	4.70	.00	71/12/15	79/11/15
00650	T PO4	PO4	MG/L	WATER		13	.5023100	.1098900	.3314900	1.30	.05	70/03/24	76/08/11
00665	PHOS-TOT		MG/L P	WATER		16	.1606300	.0096730	.0983510	.420	.020	71/12/15	79/11/15
00900	TOT HARD	CACO3	MG/L	WATER		17	130.4700	492.2600	22.18700	150	52	70/03/24	79/11/15
00902	NC HARD	CACO3	MG/L	WATER		17	3.764700	20.44100	4.521200	16	0	70/03/24	79/11/15
00915	CALCIUM	CA,DISS	MG/L	WATER		17	45.58800	68.14400	8.255000	54.0	19.0	70/03/24	79/11/15
00925	MGNSIUM	MG,DISS	MG/L	WATER		17	3.970600	1.879700	1.371000	6.8	1.1	70/03/24	79/11/15
00930	SODIUM	NA,DISS	MG/L	WATER		17	7.358800	1.695100	1.302000	9.00	3.80	70/03/24	79/11/15
00931	SODIUM	ADSBTION	RATIO	WATER		17	.2882400	.0011031	.0332120	.3	.2	70/03/24	79/11/15
00932	PERCENT	SODIUM	%	WATER		17	10.70600	1.470600	1.212700	12	7	70/03/24	79/11/15
00935	PTSSIUM	K,DISS	MG/L	WATER		17	3.552900	3.480200	1.865500	8.40	2.00	70/03/24	79/11/15
00940	CHLORIDE	TOTAL	MG/L	WATER		17	7.294100	2.345600	1.531500	10	5	70/03/24	79/11/15
00945	SULFATE	SO4-TOT	MG/L	WATER		17	9.182300	20.02200	4.474600	24	4	70/03/24	79/11/15
00950	FLUORIDE	F,DISS	MG/L	WATER		17	.3117600	.0061030	.0781220	.50	.20	70/03/24	79/11/15
00955	SILICA	DISOLVED	MG/L	WATER		17	15.98200	58.63600	7.657400	26.0	2.3	70/03/24	79/11/15
01020	BORON	B,DISS	UG/L	WATER		10	68.00000	906.6800	30.11100	140	40	71/12/15	75/08/12
46570	CAL HARD	CA MG	MG/L	WATER	$	17	130.1900	497.0300	22.29400	148	52	70/03/24	79/11/15
70300	RESIDUE	DISS-180 C	MG/L	WATER		17	180.0000	848.6600	29.13200	205	83	70/03/24	79/11/15
70301	DISS SOL	SUM	MG/L	WATER		16	176.4400	726.4100	26.95200	195	82	71/12/15	79/11/15
70302	DISS SOL	TONS/DAY		WATER		16	3.172500	15.34800	3.917700	14.00	.00	70/03/24	79/11/15
70303	DISS SOL	TONS PER	ACRE-FT	WATER		17	.2447100	.0016392	.0404870	.28	.11	70/03/24	79/11/15
71851	NITRATE	DISS-NO3	MG/L	WATER		17	4.676500	26.17800	5.116500	21.0	.0	70/03/24	79/11/15

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20097 KANSAS KIOWA

/TYPA/AMBNT/STREAM

112WRD 780114 11030009
0000 FEET DEPTH

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010 WATER TEMP CENT	WATER		1	21.00000			21.0	21.0	77/05/23	77/05/23
00011 WATER TEMP FAHN	WATER	$	1	69.80000			69.8	69.8	77/05/23	77/05/23
00061 STREAM FLOW, INST-CFS	WATER		1	86.00000			86	86	77/05/23	77/05/23
00095 CNDUCTVY AT 25C MICROMHO	WATER		1	72.00000			72	72	77/05/23	77/05/23
80154 SUSP SED CONC MG/L	WATER		1	892.0000			892	892	77/05/23	77/05/23
80155 SUSP SED DISCHARG TONS/DAY	WATER		1	207.0000			207.00	207.00	77/05/23	77/05/23

STORET RETRIEVAL DATE 97/07/28 PGM=INVENT PAGE: 9

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ARKANSAS R NR HUTCHINSON, KS
20155 KANSAS RENO
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/TYPA/AMBNT/STREAM

112WRD 11030010
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00008	LAB	IDENT.	NUMBER	WATER		12	63727.00	4677E+07	216280.0	750495	139	73/05/11	74/08/08
00010	WATER	TEMP	CENT	WATER		435	15.80700	79.37700	8.909400	34.0	.0	59/09/26	95/08/09
00011	WATER	TEMP	FAHN	WATER	$	435	60.45200	257.1900	16.03700	93.2	32.0	59/09/26	95/08/09
00020	AIR	TEMP	CENT	WATER		7	12.35700	78.80900	8.877500	29.5	1.0	74/03/05	77/11/08
00027	COLLECT	AGENCY	CODE	WATER		165	16624.00	1308E+06	36169.00	99999	1028	74/10/10	95/08/09
00028	ANALYZE	AGENCY	CODE	WATER		168	19204.00	1317E+06	36296.00	99999	1028	74/10/10	95/08/09
00049	SURFACE	AREA	SQ. MI.	WATER		69	38910.00	.0000000	.0000000	38910.00	38910.00	59/09/26	62/09/21
00060	STREAM	FLOW	CFS	WATER		249	1065.600	4799100	2190.700	15300	38	59/09/26	72/09/05
00061	STREAM	FLOW,	INST-CFS	WATER		354	876.7300	3490400	1868.300	16200	41	59/09/26	95/08/09
00063	NO. OF	SAMPLING	POINTS	WATER		67	11.35800	27.26400	5.221500	29	1	60/06/02	85/06/15
00065	STREAM	STAGE	FEET	WATER		14	4.502100	.1763100	.4198900	5.42	3.90	74/03/05	74/09/19
00070	TURB	JKSN	JTU	WATER		74	152.5100	193920.0	440.3600	3400.0	5.0	73/10/15	77/12/06
00075	TURB	HLGE	PPM SIO2	WATER		83	252.2400	263280.0	513.1100	3200.0	1.0	64/10/06	73/09/17
00076	TURB	TRBIDMTR	HACH FTU	WATER		11	32.81800	1599.400	39.99200	140.0	4.0	77/10/04	78/09/06
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		401	2527.700	906480.0	952.0900	5900	300	61/10/19	95/08/09
00300	DO		MG/L	WATER		66	9.922600	3.879400	1.969600	13.6	1.3	74/03/05	78/09/06
00301	DO	SATUR	PERCENT	WATER	$	66	94.93600	283.6600	16.84200	128.0	9.7	74/03/05	78/09/06
00340	COD	HI LEVEL	MG/L	WATER		37	51.97300	749.1400	27.37000	160	17	75/07/10	78/09/06
00400	PH		SU	WATER		343	7.828800	.1721300	.4148800	9.10	6.90	61/10/19	95/08/09
00405	CO2		MG/L	WATER		120	8.217400	38.95000	6.241000	33.0	.7	71/10/08	78/09/06
00410	T ALK	CACO3	MG/L	WATER		245	188.9200	1645.700	40.56700	279	74	61/10/19	78/09/06
00440	HCO3 ION	HCO3	MG/L	WATER		245	229.3000	2430.500	49.30000	340	90	61/10/19	78/09/06
00445	CO3 ION	CO3	MG/L	WATER		245	.4816300	8.111300	2.848000	24	0	61/10/19	78/09/06
00500	RESIDUE	TOTAL	MG/L	WATER		37	1847.600	215330.0	464.0400	2910	450	75/07/10	78/09/06
00515	RESIDUE	DISS-105 C	MG/L	WATER		31	1531.600	489560.0	699.6800	3500	260	71/10/13	74/08/08
00530	RESIDUE	TOT NFLT	MG/L	WATER		31	263.2300	122120.0	349.4600	1200	3	71/10/13	74/08/08
00600	TOTAL N	N	MG/L	WATER		37	2.913500	1.022900	1.011400	5.30	1.60	75/07/10	78/09/06
00605	ORG N	N	MG/L	WATER		36	1.608100	1.008100	1.004000	4.400	.030	75/07/10	78/09/06
00608	NH3+NH4-	N DISS	MG/L	WATER		1	1.100000			1.100	1.100	77/10/04	77/10/04
00610	NH3+NH4-	N TOTAL	MG/L	WATER		35	.5260000	.2209400	.4700500	1.800	.010	75/07/10	78/09/06
					K	1	.0100000			.010	.010	76/11/03	76/11/03
					TOT	36	.5116700	.2220300	.4712000	1.800	.010	75/07/10	78/09/06
00612	UN-IONZD	NH3-N	MG/L	WATER	$	37	.0126890	.0007097	.0266410	.158	.00009	75/07/10	78/09/06
00618	NO3-N	DISS	MG/L	WATER		52	1.151700	.3959300	.6292300	3.20	.02	71/10/08	75/09/11
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	37	.0154280	.0010493	.0323930	.193	.0001	75/07/10	78/09/06
00625	TOT KJEL	N	MG/L	WATER		37	2.095700	.8947100	.9458900	4.600	.240	75/07/10	78/09/06
00630	NO2&NO3	N-TOTAL	MG/L	WATER		37	.8091900	.2471400	.4971400	1.70	.02	75/07/10	78/09/06
00650	T PO4	PO4	MG/L	WATER		140	1.219200	.2888300	.5374300	3.00	.50	62/02/19	75/09/11
00665	PHOS-TOT		MG/L P	WATER		89	.4260600	.0242190	.1556300	.980	.170	71/10/08	78/09/06

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ARKANSAS R NR HUTCHINSON, KS
20155 KANSAS RENO
100291

/TYPA/AMBNT/STREAM

112WRD 11030010
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00900	TOT HARD	CACO3	MG/L	WATER		178	408.7800	27846.00	166.8700	805	0	61/10/19	75/09/11
00902	NC HARD	CACO3	MG/L	WATER		178	224.0400	17474.00	132.1900	574	0	61/10/19	75/09/11
00915	CALCIUM	CA,DISS	MG/L	WATER		177	112.7300	1653.700	40.66500	214.0	22.0	61/10/19	75/09/11
00916	CALCIUM	CA-TOT	MG/L	WATER		37	114.2300	14235.00	119.3100	800.0	7.6	75/07/10	78/09/06
00925	MGNSIUM	MG,DISS	MG/L	WATER		177	31.57300	252.0600	15.87600	72.0	3.5	61/10/19	75/09/11
00927	MGNSIUM	MG,TOT	MG/L	WATER		37	27.91900	1183.500	34.40200	230.0	13.0	75/07/10	78/09/06
00929	SODIUM	NA,TOT	MG/L	WATER		37	492.8700	38945.00	197.3500	910.00	36.00	75/07/10	78/09/06
00930	SODIUM	NA,DISS	MG/L	WATER		177	371.4000	34501.00	185.7400	1110.00	23.00	61/10/19	75/09/11
00931	SODIUM	ADSBTION	RATIO	WATER		177	7.803300	11.45700	3.384700	22.0	.9	61/10/19	75/09/11
00932	PERCENT	SODIUM	%	WATER		177	62.70600	110.0700	10.49100	82	24	61/10/19	75/09/11
00933	NA+K		MG/L	WATER		3	351.6700	582.5000	24.13500	372.00	325.00	61/10/19	61/12/04
00935	PTSSIUM	K,DISS	MG/L	WATER		174	11.44400	7.559100	2.749400	23.00	6.20	62/01/12	75/09/11
00937	PTSSIUM	K,TOT	MG/L	WATER		37	7.567600	7.803600	2.793500	18.00	.20	75/07/10	78/09/06
00940	CHLORIDE	TOTAL	MG/L	WATER		255	563.7700	77409.00	278.2300	1700	27	61/10/19	92/04/01
00945	SULFATE	SO4-TOT	MG/L	WATER		214	291.5200	39324.00	198.3000	918	18	61/10/19	78/09/06
00950	FLUORIDE	F,DISS	MG/L	WATER		177	.6118600	.0220750	.1485800	1.20	.20	61/10/19	75/09/11
00955	SILICA	DISOLVED	MG/L	WATER		177	12.80300	15.00000	3.873000	28.0	3.3	61/10/19	75/09/11
01000	ARSENIC	AS,DISS	UG/L	WATER		1	2.000000			2	2	70/10/06	70/10/06
01020	BORON	B,DISS	UG/L	WATER		173	372.2300	3848300	1961.700	26000	.2	61/10/19	75/09/11
01022	BORON	B,TOT	UG/L	WATER		11	295.4600	9467.400	97.30000	410	80	61/10/19	62/09/12
01025	CADMIUM	CD,DISS	UG/L	WATER		1	.0000000			0	0	70/10/06	70/10/06
01032	CHROMIUM	HEX-VAL	UG/L	WATER		1	.0000000			0	0	70/10/06	70/10/06
01034	CHROMIUM	CR,TOT	UG/L	WATER		1	.0000000			0	0	70/10/06	70/10/06
01035	COBALT	CO,DISS	UG/L	WATER		1	.0000000			0	0	70/10/06	70/10/06
01045	IRON	FE,TOT	UG/L	WATER		11	217.2700	82182.00	286.6700	800	10	61/10/19	62/09/12
01046	IRON	FE,DISS	UG/L	WATER		41	161.7100	45375.00	213.0100	1000	0	61/10/19	75/04/08
01049	LEAD	PB,DISS	UG/L	WATER		1	5.000000			5	5	70/10/06	70/10/06
01055	MANGNESE	MN	UG/L	WATER		13	2.307700	69.23100	8.320500	30.0	.0	61/10/19	68/10/07
01056	MANGNESE	MN,DISS	UG/L	WATER		35	4.000000	142.3500	11.93100	50.0	.0	61/10/19	72/04/05
					K	4	10.00000	.0000000	.0000000	10.0	10.0	72/10/02	75/04/08
					TOT	39	4.615400	130.7700	11.43600	50.0	.0	61/10/19	75/04/08
01090	ZINC	ZN,DISS	UG/L	WATER		1	199.0000			199	199	70/10/06	70/10/06
01300	OIL-GRSE		SEVERITY	WATER		54	.0000000	.0000000	.0000000	0	0	74/10/03	81/04/02
01305	DET SUDS		SEVERITY	WATER		54	.0740740	.0698810	.2643500	1	0	74/10/03	81/04/02
01310	GAS BBLE		SEVERITY	WATER		54	.0000000	.0000000	.0000000	0	0	74/10/03	81/04/02
01315	FLOATING	SLUDGE	SEVERITY	WATER		54	.0000000	.0000000	.0000000	0	0	74/10/03	81/04/02
01320	FLOATING	GARBAGE	SEVERITY	WATER		54	.0000000	.0000000	.0000000	0	0	74/10/03	81/04/02
01325	FLOATING	ALG MAT	SEVERITY	WATER		54	.1851900	.1914700	.4375800	2	0	74/10/03	81/04/02
01330	ODOR	ATMOSPH	SEVERITY	WATER		54	.0185190	.0185190	.1360800	1	0	74/10/03	81/04/02

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ARKANSAS R NR HUTCHINSON, KS
20155 KANSAS RENO
100291

/TYPA/AMBNT/STREAM

112WRD 11030010
0000 FEET DEPTH

PARAMETER		MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01340	DEAD FISH SEVERITY	WATER		54	.0000000	.0000000	.0000000	0	0	74/10/03	81/04/02
01345	FLOATING DEBRIS SEVERITY	WATER		54	.0555560	.0534590	.2312100	1	0	74/10/03	81/04/02
01355	ICE COVER SEVERITY	WATER		54	.1666700	.2547200	.5047000	2	0	74/10/03	81/04/02
01515	ALPHA-D AS U-NAT PC/L	WATER		10	9.400000	29.45100	5.426900	19.0	1.2	71/12/01	72/10/02
			K	3	6.066700	16.01400	4.001700	10.0	2.0	71/10/13	72/05/04
			TOT	13	8.630800	26.89400	5.185900	19.0	1.2	71/10/13	72/10/02
01516	ALPHA-S AS U-NAT PC/L	WATER		13	7.700000	121.8800	11.04000	37.0	.2	71/10/13	72/10/02
03515	BETA-D AS CS137 PC/L	WATER		31	13.71000	20.46800	4.524200	20.0	1.1	71/10/13	74/08/08
03516	BETA-S AS CS137 PC/L	WATER		31	15.21600	298.7900	17.28600	58.0	.7	71/10/13	74/08/08
09510	RA-226-D PLCHT CT PC/L	WATER		1	.2000000			.2	.2	72/10/02	72/10/02
			K	1	.1000000			.1	.1	72/09/05	72/09/05
			TOT	2	.1500000	.0050000	.0707110	.2	.1	72/09/05	72/10/02
09511	RA-226-D RADON MT PC/L	WATER		29	.1458600	.0005466	.0233800	.19	.10	71/10/13	74/08/08
22703	U-NAT DISOLVED UG/L	WATER		30	8.330000	17.30000	4.159300	20.000	.600	71/10/13	74/08/08
			K	1	.4000000			.400	.400	72/09/05	72/09/05
			TOT	31	8.074200	18.75100	4.330300	20.000	.400	71/10/13	74/08/08
31616	FEC COLI MFM-FCBR /100ML	WATER		53	23130.00	2711E+06	52068.00	280000	110	74/03/05	77/09/12
			B	3	13467.00	2243E+05	14979.00	30000	800	75/03/19	76/03/03
			L	1	60000.00			60000	60000	76/07/07	76/07/07
			TOT	57	23268.00	2554E+06	50544.00	280000	110	74/03/05	77/09/12
31625	FEC COLI M-FCAGAD /100 ML	WATER		10	75140.00	3044E+06	55176.00	170000	5300	77/10/04	78/09/06
			B	1	2000.000			2000	2000	78/04/03	78/04/03
			TOT	11	68491.00	3226E+06	56800.00	170000	2000	77/10/04	78/09/06
46570	CAL HARD CA MG MG/L	WATER	$	214	409.5400	40940.00	202.3400	2076	74	61/10/19	78/09/06
70300	RESIDUE DISS-180 C MG/L	WATER		214	1547.400	396640.0	629.8000	3470	208	61/10/19	78/09/06
70301	DISS SOL SUM MG/L	WATER		151	1577.200	347110.0	589.1600	3420	216	62/11/20	75/09/11
70302	DISS SOL TONS/DAY	WATER		213	1904.800	4097600	2024.300	16610.00	222.00	61/10/19	78/09/06
70303	DISS SOL TONS PER ACRE-FT	WATER		214	2.093800	.7228700	.8502200	4.65	.28	61/10/19	78/09/06
70326	SUSP SED PARTSIZE %<.002MM	WATER		6	20.00000	238.4000	15.44000	44	3	60/03/21	68/07/29
70327	SUSP SED PARTSIZE %<.004MM	WATER		6	31.66700	605.4700	24.60600	71	5	60/03/21	68/07/29
70329	SUSP SED PARTSIZE %<.016MM	WATER		6	80.50000	172.3000	13.12600	90	57	60/03/21	68/07/29
70331	SUSP SED PARTSIZE %<.062MM	WATER		24	84.83300	377.0200	19.41700	99	27	60/03/21	85/06/15
70332	SUSP SED PARTSIZE %<.125MM	WATER		23	86.52200	356.6300	18.88500	100	32	60/03/21	68/07/29
70333	SUSP SED PARTSIZE %<.250MM	WATER		22	91.27300	262.3100	16.19600	100	41	60/03/21	65/06/25
70334	SUSP SED PARTSIZE %<.500MM	WATER		16	98.68800	7.829200	2.798100	100	92	60/03/21	65/06/25
70335	SUSP SED PARTSIZE %<1.00MM	WATER		4	100.0000	.0000000	.0000000	100	100	61/04/11	65/06/25
70337	SUSP SED PARTSIZE %<.002MM	WATER		63	64.71400	259.3900	16.10600	87	13	60/03/21	85/06/15
70338	SUSP SED PARTSIZE %<.004MM	WATER		64	72.53100	289.5000	17.01500	91	20	60/03/21	85/06/15
70339	SUSP SED PARTSIZE %<.008MM	WATER		2	66.50000	24.50000	4.949800	70	63	61/05/05	61/05/06

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ARKANSAS R NR HUTCHINSON, KS
20155 KANSAS RENO
100291

/TYPA/AMBNT/STREAM

112WRD 11030010
0000 FEET DEPTH

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
70340 SUSP SED PARTSIZE %<.016MM	WATER		65	78.67600	407.2600	20.18100	97	0	60/03/21	85/06/15
70341 SUSP SED PARTSIZE %<.031MM	WATER		2	79.00000	50.00000	7.071100	84	74	61/05/05	61/05/06
70342 SUSP SED PARTSIZE %<.062MM	WATER		55	85.96300	305.7900	17.48700	100	27	60/03/21	81/06/26
70343 SUSP SED PARTSIZE %<.125MM	WATER		49	87.30600	281.4500	16.77700	100	32	60/03/21	81/06/26
70344 SUSP SED PARTSIZE %<.250MM	WATER		45	92.84400	159.7300	12.63800	100	41	60/03/21	81/06/26
70345 SUSP SED PARTSIZE %<.500MM	WATER		38	99.05300	4.045600	2.011400	100	92	60/03/21	81/06/26
70346 SUSP SED PARTSIZE %<1.00MM	WATER		13	99.92300	.0729170	.2700300	100	99	61/04/11	81/06/19
71845 AMMONIA TOT-NH4 MG/L	WATER		1	.3000000			.3	.3	77/10/04	77/10/04
71846 AMMONIA DISS-NH4 MG/L	WATER		1	1.400000			1.40	1.40	77/10/04	77/10/04
71850 NITRATE TOT-NO3 MG/L	WATER		11	2.918200	3.353700	1.831300	5.3	.4	61/10/19	62/09/12
71851 NITRATE DISS-NO3 MG/L	WATER		177	4.553000	6.532600	2.555900	14.0	.1	61/10/19	75/09/11
71887 TOTAL N AS NO3 MG/L	WATER		37	12.81600	19.67300	4.435400	23.0	6.9	75/07/10	78/09/06
71900 MERCURY HG,TOTAL UG/L	WATER		1	2.100000			2.1	2.1	70/10/06	70/10/06
72000 LND SURF DATUM FT	WATER		69	1454.100	.0000000	.0000000	1454.1	1454.1	59/09/26	62/09/21
80030 ALPHA-D AS U-NAT UG/L	WATER		27	35.61100	364.1600	19.08300	90.000	3.500	71/12/01	74/05/06
		K	4	17.77500	106.8000	10.33500	31.000	6.100	71/10/13	74/08/08
		TOT	31	33.31000	363.2300	19.05900	90.000	3.500	71/10/13	74/08/08
80040 ALPHA-S AS U-NAT UG/L	WATER		30	18.48300	757.7600	27.52700	110.000	.400	71/10/13	74/08/08
		K	1	.4000000			.400	.400	72/12/06	72/12/06
		TOT	31	17.90000	743.0500	27.25900	110.000	.400	71/10/13	74/08/08
80050 BETA-D AS SR-Y- 90, PC/L	WATER		31	11.22900	13.80800	3.715900	17.000	.900	71/10/13	74/08/08
80060 BETA-S AS SR-Y- 90, PC/L	WATER		31	12.49700	190.1000	13.78800	46.000	.500	71/10/13	74/08/08
80154 SUSP SED CONC MG/L	WATER		182	762.5100	1323800	1150.600	6120	5	59/09/26	85/07/27
80155 SUSP SED DISCHARG TONS/DAY	WATER		165	6796.600	2708E+05	16459.00	109000.0	2.70	59/09/26	82/08/19
80158 BED MATL PARTSIZE %<.062MM	WATER		9	.0000000	.0000000	.0000000	0	0	61/02/09	71/09/13
80159 BED MATL PARTSIZE %<.125MM	WATER		78	.0769230	.0719280	.2681900	1	0	60/06/02	85/06/15
80160 BED MATL PARTSIZE %<.250MM	WATER		80	9.987500	27.25300	5.220500	21	1	60/06/02	85/06/15
80161 BED MATL PARTSIZE %<.500MM	WATER		80	47.70000	143.8500	11.99400	76	13	60/06/02	85/06/15
80162 BED MATL PARTSIZE %<1.00MM	WATER		80	74.88700	86.56700	9.304100	91	34	60/06/02	85/06/15
80163 BED MATL PARTSIZE %<2.00MM	WATER		53	87.20800	66.17600	8.134800	97	46	60/06/02	68/07/29
80164 BED MATL PARTSIZE %<.062MM	WATER		4	.5000000	1.000000	1.000000	2	0	61/02/09	62/09/21
80165 BED MATL PARTSIZE %<.125MM	WATER		20	.3000000	.5368400	.7327000	3	0	60/07/04	62/09/21
80166 BED MATL PARTSIZE %<.250MM	WATER		20	8.400000	18.77900	4.333500	21	3	60/07/04	62/09/21
80167 BED MATL PARTSIZE %<.500MM	WATER		20	48.70000	103.1700	10.15700	76	32	60/07/04	62/09/21
80168 BED MATL PARTSIZE %<1.00MM	WATER		20	76.10000	67.04600	8.188200	91	59	60/07/04	62/09/21
80169 BED MATL PARTSIZE %<2.00MM	WATER		47	86.57400	38.19800	6.180500	97	72	60/07/04	85/06/15
80170 BED MATL PARTSIZE %<4.00MM	WATER		92	96.17300	17.84800	4.224600	100	69	60/06/02	85/06/15
80171 BED MATL PARTSIZE %<8.00MM	WATER		85	99.36400	1.964300	1.401500	100	92	60/06/02	85/06/15
80172 BED MATL PARTSIZE %<16.0MM	WATER		25	99.76000	.4375000	.6614400	100	98	60/06/02	85/06/15

07143330
37 56 47.0 097 46 29.0 2
ARKANSAS R NR HUTCHINSON, KS
20155 KANSAS RENO
100291

/TYPA/AMBNT/STREAM

112WRD 11030010
0000 FEET DEPTH

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
80173 BED MATL PARTSIZE %<32.0MM	WATER		2	100.0000	.0039063	.0625000	100	100	60/07/04	71/06/23

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SALT C NR HUTCHINSON, KS
20155 KANSAS RENO
100291

/TYPA/AMBNT/STREAM

112WRD 11030010007 0002.740 ON
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		44	16.75000	91.37900	9.559200	30.5	1.0	71/09/09	88/06/22
00011	WATER	TEMP	FAHN	WATER	$	44	62.15000	296.0500	17.20600	86.9	33.8	71/09/09	88/06/22
00025	BAROMTRC	PRESSURE	MM OF HG	WATER		10	715.9000	181.2200	13.46200	725	679	85/03/14	88/06/22
00027	COLLECT	AGENCY	CODE	WATER		29	1028.000	.5714300	.7559300	1028	1028	74/10/04	88/06/22
00028	ANALYZE	AGENCY	CODE	WATER		32	36378.00	1355E+06	36824.00	80020	1028	74/10/04	88/06/22
00060	STREAM	FLOW	CFS	WATER		5	3.000000	.6700000	.8185300	4	2	71/09/09	72/08/07
00061	STREAM	FLOW,	INST-CFS	WATER		39	17.23500	2661.200	51.58700	325	2	73/02/12	88/06/22
00070	TURB	JKSN	JTU	WATER		1	7.000000			7.0	7.0	75/10/06	75/10/06
00075	TURB	HLGE	PPM SIO2	WATER		1	15.00000			15.0	15.0	73/12/14	73/12/14
00076	TURB	TRBIDMTR	HACH FTU	WATER		2	6.500000	24.50000	4.949700	10.0	3.0	77/04/13	78/10/31
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		36	4035.300	1051700	1025.500	5740	1080	71/09/09	88/06/22
00300	DO		MG/L	WATER		9	9.543300	4.010000	2.002500	12.8	6.9	85/03/14	88/06/22
00301	DO	SATUR	PERCENT	WATER	$	9	88.18400	234.4500	15.31200	109.2	70.7	85/03/14	88/06/22
00400	PH		SU	WATER		37	7.814000	.1414900	.3761600	8.60	6.90	71/09/09	88/06/22
00403	PH	LAB	SU	WATER		15	7.884000	.0500310	.2236800	8.3	7.3	84/09/26	87/12/10
00405	CO2		MG/L	WATER		19	8.679000	11.63100	3.410400	15.0	3.8	71/12/14	79/11/14
00410	T ALK	CACO3	MG/L	WATER		35	223.7700	1176.000	34.29300	281	122	71/09/09	87/08/11
00440	HCO3 ION	HCO3	MG/L	WATER		22	269.3600	742.7200	27.25300	300	190	71/09/09	79/11/14
00445	CO3 ION	CO3	MG/L	WATER		22	.0000000	.0000000	.0000000	0	0	71/09/09	79/11/14
00453	BICARB.	WTR DISS	FLD MG/L	WATER		2	299.5000	612.5000	24.74900	317	282	88/03/01	88/06/22
00618	NO3-N	DISS	MG/L	WATER		20	.3560000	.1417600	.3765100	1.20	.00	71/12/14	79/11/14
00631	NO2&NO3	N-DISS	MG/L	WATER		1	.2000000			.2	.2	82/08/24	82/08/24
00650	T PO4	PO4	MG/L	WATER		16	.2668800	.0222230	.1490700	.60	.00	71/09/09	76/08/11
00665	PHOS-TOT		MG/L P	WATER		20	.0930000	.0022958	.0479150	.200	.030	71/12/14	79/11/14
					K	1	.0100000			.010	.010	75/10/06	75/10/06
					TOT	21	.0890470	.0025091	.0500910	.200	.010	71/12/14	79/11/14
00900	TOT HARD	CACO3	MG/L	WATER		23	364.8200	1584.100	39.80100	430	260	71/09/09	82/08/24
00902	NC HARD	CACO3	MG/L	WATER		22	145.9600	1297.300	36.01800	220	91	71/09/09	79/11/14
00915	CALCIUM	CA,DISS	MG/L	WATER		23	105.4400	158.1600	12.57600	120.0	74.0	71/09/09	82/08/24
00925	MGNSIUM	MG,DISS	MG/L	WATER		23	24.91300	14.90700	3.860900	33.0	17.0	71/09/09	82/08/24
00930	SODIUM	NA,DISS	MG/L	WATER		23	823.0400	19162.00	138.4300	1060.00	590.00	71/09/09	82/08/24
00931	SODIUM	ADSBTION	RATIO	WATER		23	18.78300	6.905400	2.627800	23.0	14.0	71/09/09	82/08/24
00932	PERCENT	SODIUM	%	WATER		23	82.47800	3.173300	1.781400	85	78	71/09/09	82/08/24
00935	PTSSIUM	K,DISS	MG/L	WATER		23	7.034800	4.845100	2.201200	13.00	5.00	71/09/09	82/08/24
00940	CHLORIDE	TOTAL	MG/L	WATER		45	1114.800	127650.0	357.2700	1660	34	71/09/09	88/06/22
00945	SULFATE	SO4-TOT	MG/L	WATER		44	140.7500	1213.800	34.84000	220	37	71/09/09	88/06/22
00950	FLUORIDE	F,DISS	MG/L	WATER		22	.3454500	.0140260	.1184300	.60	.10	71/09/09	82/08/24
00955	SILICA	DISOLVED	MG/L	WATER		22	11.63200	32.01300	5.658000	22.0	.4	71/09/09	82/08/24
01020	BORON	B,DISS	UG/L	WATER		15	175.3300	1141.000	33.77900	230	110	71/09/09	79/09/07

STORET RETRIEVAL DATE 97/07/28 PGM=INVENT

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SALT C NR HUTCHINSON, KS
20155 KANSAS RENO
100291

/TYPA/AMBNT/STREAM

112WRD 11030010007 0002.740 ON
0000 FEET DEPTH

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01300 OIL-GRSE SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01305 DET SUDS SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01310 GAS BBLE SEVERITY	WATER		14	.1428600	.1318700	.3631400	1	0	85/03/14	88/06/22
01315 FLOATING SLUDGE SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01320 FLOATING GARBAGE SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01325 FLOATING ALG MAT SEVERITY	WATER		14	.1428600	.1318700	.3631400	1	0	85/03/14	88/06/22
01330 ODOR ATMOSPH SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01340 DEAD FISH SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01345 FLOATING DEBRIS SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01355 ICE COVER SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
39086 ALKLNITY WTR DISS FLD MG/L	WATER		3	255.6700	520.3800	22.81200	276	231	87/12/10	88/06/22
46570 CAL HARD CA MG MG/L	WATER	$	23	365.8600	1823.500	42.70200	436	255	71/09/09	82/08/24
70300 RESIDUE DISS-180 C MG/L	WATER		17	2630.000	148450.0	385.3000	3200	2070	71/09/09	83/12/13
70301 DISS SOL SUM MG/L	WATER		21	2504.900	137720.0	371.1100	3190	1870	71/12/14	82/08/24
70302 DISS SOL TONS/DAY	WATER		22	150.7000	211790.0	460.2100	2180.00	15.90	71/09/09	82/08/24
70303 DISS SOL TONS PER ACRE-FT	WATER		23	3.504400	.2779400	.5272000	4.35	2.54	71/09/09	82/08/24
71850 NITRATE TOT-NO3 MG/L	WATER		1	1.000000			1.0	1.0	76/08/11	76/08/11
71851 NITRATE DISS-NO3 MG/L	WATER		21	1.633300	2.705400	1.644800	5.3	.0	71/09/09	79/11/14

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ARKANSAS R AT HUTCHINSON, KS
20155 KANSAS RENO
100291

/TYPA/AMBNT/STREAM

112WRD 11030010
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00060	STREAM	FLOW	CFS	WATER		2	9010.000	125010.0	353.5700	9260	8760	44/05/06	44/05/07
80154	SUSP SED	CONC	MG/L	WATER		2	2450.000	245000.0	494.9800	2800	2100	44/05/06	44/05/07
80155	SUSP SED	DISCHARG	TONS/DAY	WATER		2	59850.00	2060E+05	14354.00	70000.00	49700.00	44/05/06	44/05/07

07142700
38 02 22.0 098 05 13.0 2
SALT C NR PARTRIDGE, KS
20155 KANSAS RENO

/TYPA/AMBNT/STREAM

112WRD 970719 11030010
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		2	18.50000	60.50000	7.778200	24.0	13.0	85/06/05	89/08/28
00011	WATER	TEMP	FAHN	WATER	$	2	65.30000	196.0200	14.00100	75.2	55.4	85/06/05	89/08/28
00027	COLLECT	AGENCY	CODE	WATER		2	1028.000	.0000000	.0000000	1028	1028	85/06/05	89/08/28
00028	ANALYZE	AGENCY	CODE	WATER		2	1028.000	.0000000	.0000000	1028	1028	85/06/05	89/08/28
00061	STREAM	FLOW,	INST-CFS	WATER		2	261.0000	7938.000	89.09600	324	198	85/06/05	89/08/28
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		2	333.0000	40328.00	200.8200	475	191	85/06/05	89/08/28
00400	PH		SU	WATER		2	7.450000	.2450100	.4949900	7.80	7.10	85/06/05	89/08/28

07142620
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RATTLESNAKE C NR RAYMOND, KS
20159 KANSAS RICE
100291

/TYPA/AMBNT/STREAM

112WRD 11030009
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		178	15.98500	92.57000	9.621300	33.8	.0	60/10/13	95/08/30
00011	WATER	TEMP	FAHN	WATER	$	178	60.77100	300.0800	17.32300	92.9	32.0	60/10/13	95/08/30
00027	COLLECT	AGENCY	CODE	WATER		99	1028.000	.0000000	.0000000	1028	1028	81/10/29	95/08/30
00028	ANALYZE	AGENCY	CODE	WATER		99	2967.300	69894000	8360.300	80020	1028	81/10/29	95/08/30
00049	SURFACE	AREA	SQ. MI.	WATER		29	1167.000	.0000000	.0000000	1167.01	1167.01	60/03/21	62/09/12
00060	STREAM	FLOW	CFS	WATER		117	52.32000	7727.500	87.90600	750	.01	60/03/21	70/09/09
00061	STREAM	FLOW,	INST-CFS	WATER		130	70.39100	27512.00	165.8700	1470	.4	60/03/21	95/08/30
00063	NO. OF	SAMPLING	POINTS	WATER		2	11.00000	2.000000	1.414200	12	10	63/03/06	63/06/07
00075	TURB	HLGE	PPM SIO2	WATER		46	51.00000	2918.700	54.02500	200.0	3.0	64/10/23	70/09/09
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		198	7622.700	16408000	4050.700	18600	770	61/10/16	95/08/30
00400	PH		SU	WATER		179	7.849700	.1977700	.4447100	8.80	6.30	61/10/16	95/08/30
00405	CO2		MG/L	WATER		1	1.800000			1.8	1.8	80/08/21	80/08/21
00410	T ALK	CACO3	MG/L	WATER		109	187.3600	984.5600	31.37800	276	102	61/10/16	80/08/21
00440	HCO3 ION	HCO3	MG/L	WATER		109	228.2500	1463.000	38.24900	337	124	61/10/16	80/08/21
00445	CO3 ION	CO3	MG/L	WATER		109	.1559600	2.651400	1.628300	17	0	61/10/16	80/08/21
00618	NO3-N	DISS	MG/L	WATER		1	.1000000			.10	.10	80/08/21	80/08/21
00650	T PO4	PO4	MG/L	WATER		81	.2540700	.0702200	.2649900	2.10	.00	62/02/19	70/09/09
00900	TOT HARD	CACO3	MG/L	WATER		109	400.0300	24945.00	157.9400	930	84	61/10/16	80/08/21
00902	NC HARD	CACO3	MG/L	WATER		109	213.0600	22004.00	148.3400	734	0	61/10/16	80/08/21
00915	CALCIUM	CA,DISS	MG/L	WATER		109	102.8800	1223.300	34.97600	221.0	24.0	61/10/16	80/08/21
00925	MGNSIUM	MG,DISS	MG/L	WATER		109	34.88200	367.3000	19.16500	100.0	5.8	61/10/16	80/08/21
00927	MGNSIUM	MG,TOT	MG/L	WATER		1	64.00000			64.0	64.0	92/06/22	92/06/22
00930	SODIUM	NA,DISS	MG/L	WATER		109	1247.300	618070.0	786.1800	3750.01	92.00	61/10/16	80/08/21
00931	SODIUM	ADSBTION	RATIO	WATER		109	25.77200	133.6600	11.56100	60.0	3.3	61/10/16	80/08/21
00932	PERCENT	SODIUM	%	WATER		109	84.50400	36.37600	6.031200	93	47	61/10/16	80/08/21
00933	NA+K		MG/L	WATER		2	713.0000	2888.000	53.74000	751.00	675.00	61/10/16	61/11/13
00935	PTSSIUM	K,DISS	MG/L	WATER		107	13.76200	23.98300	4.897300	34.00	4.60	61/12/14	80/08/21
00940	CHLORIDE	TOTAL	MG/L	WATER		109	1933.900	1423900	1193.300	5750	139	61/10/16	80/08/21
00945	SULFATE	SO4-TOT	MG/L	WATER		109	234.6200	23001.00	151.6600	764	22	61/10/16	80/08/21
00950	FLUORIDE	F,DISS	MG/L	WATER		108	.4916700	.0063786	.0798660	.80	.30	61/10/16	70/09/09
00955	SILICA	DISOLVED	MG/L	WATER		109	12.42400	13.41400	3.662500	23.0	2.2	61/10/16	80/08/21
01020	BORON	B,DISS	UG/L	WATER		108	241.6700	7491.300	86.55200	540	90	61/10/16	70/09/09
01022	BORON	B,TOT	UG/L	WATER		12	261.6700	4033.400	63.50900	360	160	61/10/16	62/09/12
01034	CHROMIUM	CR,TOT	UG/L	WATER		1	20.00000			20	20	92/06/22	92/06/22
01042	COPPER	CU,TOT	UG/L	WATER		1	20.00000			20	20	92/06/22	92/06/22
01045	IRON	FE,TOT	UG/L	WATER		14	130.7200	19115.00	138.2600	440	10	61/10/16	92/06/22
01046	IRON	FE,DISS	UG/L	WATER		36	129.1700	12231.00	110.5900	440	0	61/10/16	70/04/06
01051	LEAD	PB,TOT	UG/L	WATER	K	1	100.0000			100	100	92/06/22	92/06/22
01055	MANGNESE	MN	UG/L	WATER		17	16.47100	2961.800	54.42200	220.0	.0	61/10/16	92/06/22

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RATTLESNAKE C NR RAYMOND, KS
20159 KANSAS RICE
100291

/TYPA/AMBNT/STREAM

112WRD 11030009
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01056	MANGNESE	MN,DISS	UG/L	WATER		32	12.50000	2445.200	49.44900	220.0	.0	61/10/16	70/04/06
01067	NICKEL	NI,TOTAL	UG/L	WATER	K	1	100.0000			100	100	92/06/22	92/06/22
01092	ZINC	ZN,TOT	UG/L	WATER		1	30.00000			30	30	92/06/22	92/06/22
01105	ALUMINUM	AL,TOT	UG/L	WATER		1	80.00000			80	80	92/06/22	92/06/22
46570	CAL HARD	CA MG	MG/L	WATER	$	109	400.5400	25015.00	158.1600	931	84	61/10/16	80/08/21
70300	RESIDUE	DISS-180 C	MG/L	WATER		108	3730.000	4810300	2193.300	10800	446	61/10/16	70/09/09
70301	DISS SOL	SUM	MG/L	WATER		94	3983.000	4845400	2201.200	10600	995	62/10/02	80/08/21
70302	DISS SOL	TONS/DAY		WATER		109	315.9500	77571.00	278.5200	1630.01	.03	61/10/16	80/08/21
70303	DISS SOL	TONS PER	ACRE-FT	WATER		109	5.105800	8.951700	2.992000	14.70	.61	61/10/16	80/08/21
70331	SUSP SED	PARTSIZE	%<.062MM	WATER		1	54.00000			54	54	85/05/02	85/05/02
70337	SUSP SED	PARTSIZE	%<.002MM	WATER		1	49.00000			49	49	63/06/07	63/06/07
70338	SUSP SED	PARTSIZE	%<.004MM	WATER		1	52.00000			52	52	63/06/07	63/06/07
70340	SUSP SED	PARTSIZE	%<.016MM	WATER		1	68.00000			68	68	63/06/07	63/06/07
70342	SUSP SED	PARTSIZE	%<.062MM	WATER		1	86.00000			86	86	63/06/07	63/06/07
70343	SUSP SED	PARTSIZE	%<.125MM	WATER		2	73.00000	722.0000	26.87000	92	54	63/06/07	85/05/02
70344	SUSP SED	PARTSIZE	%<.250MM	WATER		2	90.50000	180.5000	13.43500	100	81	63/06/07	85/05/02
70345	SUSP SED	PARTSIZE	%<.500MM	WATER		1	98.00000			98	98	85/05/02	85/05/02
70346	SUSP SED	PARTSIZE	%<1.00MM	WATER		1	100.0000			100	100	85/05/02	85/05/02
71850	NITRATE	TOT-NO3	MG/L	WATER		12	1.066700	.6024200	.7761600	2.6	.4	61/10/16	62/09/12
71851	NITRATE	DISS-NO3	MG/L	WATER		109	1.846800	2.013600	1.419000	7.0	.2	61/10/16	80/08/21
72000	LND SURF	DATUM	FT	WATER		29	1701.600	.0000000	.0000000	1701.6	1701.6	60/03/21	62/09/12
80154	SUSP SED	CONC	MG/L	WATER		21	465.3800	132660.0	364.2200	1520	35	60/03/21	85/05/02
80155	SUSP SED	DISCHARG	TONS/DAY	WATER		20	271.8400	362580.0	602.1400	2260.00	.60	60/03/21	77/02/15
80158	BED MATL	PARTSIZE	%<.062MM	WATER		2	.5000000	.5000000	.7071100	1	0	63/03/06	63/06/07
80159	BED MATL	PARTSIZE	%<.125MM	WATER		2	5.500000	24.50000	4.949800	9	2	63/03/06	63/06/07
80160	BED MATL	PARTSIZE	%<.250MM	WATER		2	48.50000	840.5000	28.99100	69	28	63/03/06	63/06/07
80161	BED MATL	PARTSIZE	%<.500MM	WATER		2	90.00000	18.00000	4.242600	93	87	63/03/06	63/06/07
80162	BED MATL	PARTSIZE	%<1.00MM	WATER		2	97.50000	4.500000	2.121300	99	96	63/03/06	63/06/07
80163	BED MATL	PARTSIZE	%<2.00MM	WATER		2	99.00000	2.000000	1.414200	100	98	63/03/06	63/06/07
80164	BED MATL	PARTSIZE	%<.062MM	WATER		2	.5000000	.5000000	.7071100	1	0	61/04/19	61/07/12
80165	BED MATL	PARTSIZE	%<.125MM	WATER		3	3.666700	10.33300	3.214600	6	0	61/04/19	61/09/07
80166	BED MATL	PARTSIZE	%<.250MM	WATER		3	29.00000	507.0000	22.51700	42	3	61/04/19	61/09/07
80167	BED MATL	PARTSIZE	%<.500MM	WATER		3	68.33300	1046.300	32.34700	88	31	61/04/19	61/09/07
80168	BED MATL	PARTSIZE	%<1.00MM	WATER		3	94.00000	37.00000	6.082800	98	87	61/04/19	61/09/07
80169	BED MATL	PARTSIZE	%<2.00MM	WATER		3	98.33300	1.347700	1.160900	99	97	61/04/19	61/09/07
80170	BED MATL	PARTSIZE	%<4.00MM	WATER		4	99.75000	.2500000	.5000000	100	99	61/04/19	63/03/06
80171	BED MATL	PARTSIZE	%<8.00MM	WATER		1	100.0000			100	100	63/03/06	63/03/06
82398	SAMPLING	METHOD	(CODES)	WATER		1	70.00000			70	70	92/06/22	92/06/22
84164	SAMPLER	TYPE	C ODE	WATER	TXT	1	TEXT	TEXT	TEXT	TEXT	TEXT	92/06/22	92/06/22

07142300
37 52 20.0 098 52 30.0 2
RATTLESNAKE C NR MACKSVILLE, KS
20185 KANSAS STAFFORD
100291

/TYPA/AMBNT/STREAM

112WRD 11030009
0000 FEET DEPTH

	PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER TEMP CENT	WATER		130	15.66000	64.46300	8.028900	32.0	.5	66/03/22	95/08/16
00011	WATER TEMP FAHN	WATER	$	130	60.18700	208.9800	14.45600	89.6	32.9	66/03/22	95/08/16
00025	BAROMTRC PRESSURE MM OF HG	WATER		5	702.0000	94.50000	9.721100	716	693	84/12/12	85/05/09
00027	COLLECT AGENCY CODE	WATER		118	1028.000	.0000000	.0000000	1028	1028	81/10/29	95/08/16
00028	ANALYZE AGENCY CODE	WATER		118	2427.600	10294000	3208.300	9720	1028	81/10/29	95/08/16
00060	STREAM FLOW CFS	WATER		7	21.00000	90.00000	9.486800	33	10	62/11/14	69/06/17
00061	STREAM FLOW, INST-CFS	WATER		135	54.39600	46974.00	216.7400	2160	.04	73/10/01	95/08/16
00075	TURB HLGE PPM SIO2	WATER		1	250.0000			250.0	250.0	73/10/01	73/10/01
00095	CNDUCTVY AT 25C MICROMHO	WATER		118	491.9900	15159.00	123.1200	813	124	62/11/14	95/08/16
00300	DO MG/L	WATER		5	11.48000	8.572200	2.927800	15.8	7.8	84/12/12	85/05/09
00301	DO SATUR PERCENT	WATER	$	5	100.8200	1282.200	35.80800	162.9	74.6	84/12/12	85/05/09
00400	PH SU	WATER		95	8.057700	.2350800	.4848500	9.30	6.91	62/11/14	95/08/16
00405	CO2 MG/L	WATER		1	7.900000			7.9	7.9	73/10/01	73/10/01
00410	T ALK CACO3 MG/L	WATER		9	160.6700	1804.300	42.47700	192	80	62/11/14	82/05/26
00440	HCO3 ION HCO3 MG/L	WATER		8	199.5000	2010.600	44.84000	234	98	62/11/14	73/10/01
00445	CO3 ION CO3 MG/L	WATER		8	3.375000	47.69600	6.906300	19	0	62/11/14	73/10/01
00618	NO3-N DISS MG/L	WATER		1	.3800000			.38	.38	73/10/01	73/10/01
00650	T PO4 PO4 MG/L	WATER		6	.3633300	.0784670	.2801200	.88	.20	62/11/14	73/10/01
00665	PHOS-TOT MG/L P	WATER		1	.2900000			.290	.290	73/10/01	73/10/01
00900	TOT HARD CACO3 MG/L	WATER		8	163.5000	1166.600	34.15600	184	80	62/11/14	73/10/01
00902	NC HARD CACO3 MG/L	WATER		8	1.250000	12.50000	3.535500	10	0	62/11/14	73/10/01
00915	CALCIUM CA,DISS MG/L	WATER		8	55.87500	142.1300	11.92200	64.0	27.0	62/11/14	73/10/01
00925	MGNSIUM MG,DISS MG/L	WATER		8	5.887500	3.401300	1.844300	9.0	3.0	62/11/14	73/10/01
00930	SODIUM NA,DISS MG/L	WATER		8	21.75000	53.92800	7.343600	28.00	6.00	62/11/14	73/10/01
00931	SODIUM ADSBTION RATIO	WATER		8	.7250000	.0478580	.2187600	.9	.3	62/11/14	73/10/01
00932	PERCENT SODIUM %	WATER		8	21.25000	21.64400	4.652300	26	13	62/11/14	73/10/01
00935	PTSSIUM K,DISS MG/L	WATER		8	4.112500	3.355600	1.831800	8.50	3.00	62/11/14	73/10/01
00940	CHLORIDE TOTAL MG/L	WATER		8	17.25000	22.78600	4.773500	23	7	62/11/14	73/10/01
00945	SULFATE SO4-TOT MG/L	WATER		8	17.70000	31.74900	5.634600	26	7	62/11/14	73/10/01
00950	FLUORIDE F,DISS MG/L	WATER		8	.4000000	.0057144	.0755940	.50	.30	62/11/14	73/10/01
00955	SILICA DISOLVED MG/L	WATER		8	15.12500	4.125000	2.031000	18.0	12.0	62/11/14	73/10/01
01020	BORON B,DISS UG/L	WATER		7	102.8600	990.5000	31.47200	150	70	62/11/14	73/10/01
01300	OIL-GRSE SEVERITY	WATER		30	.0000000	.0000000	.0000000	0	0	84/12/12	88/05/24
01305	DET SUDS SEVERITY	WATER		30	.0000000	.0000000	.0000000	0	0	84/12/12	88/05/24
01310	GAS BBLE SEVERITY	WATER		29	.0000000	.0000000	.0000000	0	0	84/12/12	88/05/24
01315	FLOATING SLUDGE SEVERITY	WATER		30	.0000000	.0000000	.0000000	0	0	84/12/12	88/05/24
01320	FLOATING GARBAGE SEVERITY	WATER		29	.0000000	.0000000	.0000000	0	0	84/12/12	88/05/24
01325	FLOATING ALG MAT SEVERITY	WATER		30	.3000000	.5620700	.7497100	3	0	84/12/12	88/05/24
01330	ODOR ATMOSPH SEVERITY	WATER		29	.0000000	.0000000	.0000000	0	0	84/12/12	88/05/24

07142300
37 52 20.0 098 52 30.0 2
RATTLESNAKE C NR MACKSVILLE, KS
20185 KANSAS STAFFORD
100291

/TYPA/AMBNT/STREAM

112WRD 11030009
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01340	DEAD	FISH	SEVERITY	WATER		30	.0000000	.0000000	.0000000	0	0	84/12/12	88/05/24
01345	FLOATING	DEBRIS	SEVERITY	WATER		27	.0000000	.0000000	.0000000	0	0	84/12/12	88/05/24
01355	ICE	COVER	SEVERITY	WATER		28	.0000000	.0000000	.0000000	0	0	84/12/12	88/05/24
46570	CAL HARD	CA MG	MG/L	WATER	$	8	163.7700	1180.600	34.36000	184	80	62/11/14	73/10/01
70300	RESIDUE	DISS-180 C	MG/L	WATER		9	247.5600	1936.800	44.00900	282	137	62/11/14	82/05/26
70301	DISS SOL	SUM	MG/L	WATER		1	123.0000			123	123	73/10/01	73/10/01
70302	DISS SOL	TONS/DAY		WATER		9	39.41700	5918.000	76.92900	244.00	7.15	62/11/14	82/05/26
70303	DISS SOL	TONS PER	ACRE-FT	WATER		9	.3366700	.0033504	.0578830	.38	.19	62/11/14	82/05/26
70331	SUSP SED	PARTSIZE	%<.062MM	WATER		3	79.00000	711.0000	26.66500	100	49	87/03/26	87/07/07
70337	SUSP SED	PARTSIZE	%<.002MM	WATER		3	84.00000	28.00200	5.291700	90	80	75/06/25	87/03/26
70338	SUSP SED	PARTSIZE	%<.004MM	WATER		3	86.33300	50.34600	7.095500	94	80	75/06/25	87/07/07
70340	SUSP SED	PARTSIZE	%<.016MM	WATER		3	86.66700	36.34600	6.028700	93	81	75/06/25	87/03/26
70342	SUSP SED	PARTSIZE	%<.062MM	WATER		2	91.50000	24.50000	4.949800	95	88	75/06/25	75/06/27
70343	SUSP SED	PARTSIZE	%<.125MM	WATER		4	96.25000	12.26300	3.501900	100	92	75/06/25	87/03/31
70344	SUSP SED	PARTSIZE	%<.250MM	WATER		3	99.66700	.3574200	.5978500	100	99	75/06/25	87/03/31
70345	SUSP SED	PARTSIZE	%<.500MM	WATER		1	100.0000			100	100	75/06/25	75/06/25
71851	NITRATE	DISS-NO3	MG/L	WATER		8	5.175000	5.665100	2.380100	8.0	1.7	62/11/14	73/10/01
80154	SUSP SED	CONC	MG/L	WATER		68	161.0700	50648.00	225.0500	988	1	75/06/25	88/03/30
80155	SUSP SED	DISCHARG	TONS/DAY	WATER		27	272.0700	1225700	1107.100	5760.00	.23	75/06/25	82/09/01
80158	BED MATL	PARTSIZE	%<.062MM	WATER		1	13.00000			13	13	84/12/12	84/12/12
80159	BED MATL	PARTSIZE	%<.125MM	WATER		1	29.00000			29	29	84/12/12	84/12/12
80160	BED MATL	PARTSIZE	%<.250MM	WATER		1	64.00000			64	64	84/12/12	84/12/12
80161	BED MATL	PARTSIZE	%<.500MM	WATER		1	89.00000			89	89	84/12/12	84/12/12
80162	BED MATL	PARTSIZE	%<1.00MM	WATER		1	92.00000			92	92	84/12/12	84/12/12
80169	BED MATL	PARTSIZE	%<2.00MM	WATER		1	97.00000			97	97	84/12/12	84/12/12
80170	BED MATL	PARTSIZE	%<4.00MM	WATER		1	100.0000			100	100	84/12/12	84/12/12

(8)

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RATTLESNAKE C NR HUDSON, KS
20185 KANSAS STAFFORD
100291

/TYPA/AMBNT/STREAM

112WRD 11030009001 0015.370 ON
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		1	8.278000			8.3	8.3	66/03/24	66/03/24
00011	WATER	TEMP	FAHN	WATER	$	1	46.90000			46.9	46.9	66/03/24	66/03/24
00060	STREAM	FLOW	CFS	WATER		7	30.48700	194.7700	13.95600	47	9	62/04/02	69/06/17
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		7	2877.200	357330.0	597.7700	3580	2000	62/04/02	69/06/17
00400	PH		SU	WATER		7	7.685700	.0981850	.3133500	8.30	7.40	62/04/02	69/06/17
00410	T ALK	CACO3	MG/L	WATER		7	190.2900	85.93800	9.270300	204	178	62/04/02	69/06/17
00440	HCO3 ION	HCO3	MG/L	WATER		7	225.7200	303.9800	17.43500	249	195	62/04/02	69/06/17
00445	CO3 ION	CO3	MG/L	WATER		7	3.142900	69.14300	8.315200	22	0	62/04/02	69/06/17
00650	T PO4	PO4	MG/L	WATER		6	.3133300	.0066668	.0816500	.40	.18	62/04/02	69/06/17
00900	TOT HARD	CACO3	MG/L	WATER		7	266.4300	497.2800	22.30000	294	232	62/04/02	69/06/17
00902	NC HARD	CACO3	MG/L	WATER		7	76.14300	464.1700	21.54500	105	50	62/04/02	69/06/17
00915	CALCIUM	CA,DISS	MG/L	WATER		7	79.71400	38.25400	6.185000	90.0	70.0	62/04/02	69/06/17
00925	MGNSIUM	MG,DISS	MG/L	WATER		7	16.42900	16.95300	4.117400	23.0	12.0	62/04/02	69/06/17
00930	SODIUM	NA,DISS	MG/L	WATER		7	490.5700	13994.00	118.3000	630.00	330.00	62/04/02	69/06/17
00931	SODIUM	ADSBTION	RATIO	WATER		7	13.01400	7.141600	2.672400	16.0	9.4	62/04/02	69/06/17
00932	PERCENT	SODIUM	%	WATER		7	79.00000	9.011700	3.002000	82	75	62/04/02	69/06/17
00935	PTSSIUM	K,DISS	MG/L	WATER		7	8.728600	.6658100	.8159700	10.00	7.40	62/04/02	69/06/17
00940	CHLORIDE	TOTAL	MG/L	WATER		7	760.7100	33421.00	182.8200	980	515	62/04/02	69/06/17
00945	SULFATE	SO4-TOT	MG/L	WATER		7	87.71400	246.2700	15.69300	106	67	62/04/02	69/06/17
00950	FLUORIDE	F,DISS	MG/L	WATER		7	.4000000	.0100000	.1000000	.50	.20	62/04/02	69/06/17
00955	SILICA	DISOLVED	MG/L	WATER		7	10.97200	13.09900	3.619300	14.0	6.0	62/04/02	69/06/17
01020	BORON	B,DISS	UG/L	WATER		6	148.3300	1776.700	42.15100	210	90	62/04/02	69/06/17
46570	CAL HARD	CA MG	MG/L	WATER	$	7	266.7000	494.5800	22.23900	294	232	62/04/02	69/06/17
70300	RESIDUE	DISS-180 C	MG/L	WATER		7	1590.600	110500.0	332.4200	1964	1130	62/04/02	69/06/17
70301	DISS SOL	SUM	MG/L	WATER		2	1405.000	151250.0	388.9100	1680	1130	63/11/20	66/03/24
70302	DISS SOL	TONS/DAY		WATER		7	126.1600	3423.900	58.51400	202.10	45.70	62/04/02	69/06/17
70303	DISS SOL	TONS PER	ACRE-FT	WATER		7	2.157200	.2017900	.4492100	2.67	1.54	62/04/02	69/06/17
71851	NITRATE	DISS-NO3	MG/L	WATER		7	1.957200	.5628500	.7502400	2.9	.9	62/04/02	69/06/17

(9)

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37 50 33.0 098 59 09.0 2
RATTLESNAKE C TR NR HOPEWELL, KS
20185 KANSAS STAFFORD
100291

/TYPA/AMBNT/STREAM

112WRD 11030009003 0027.690 ON
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		11	12.40900	78.84100	8.879200	24.0	.0	71/09/09	77/04/12
00011	WATER	TEMP	FAHN	WATER	$	11	54.33600	255.4500	15.98300	75.2	32.0	71/09/09	77/04/12
00027	COLLECT	AGENCY	CODE	WATER		3	1028.000	.0000000	.0000000	1028	1028	74/10/04	77/04/12
00028	ANALYZE	AGENCY	CODE	WATER		4	9720.000	.0000000	.0000000	9720	9720	74/10/04	77/04/12
00060	STREAM	FLOW	CFS	WATER		3	1.106700	2.980100	1.726300	3	.1	71/09/09	72/02/29
00061	STREAM	FLOW,	INST-CFS	WATER		8	.6437500	.7792800	.8827700	3	.03	73/02/13	77/04/12
00075	TURB	HLGE	PPM SIO2	WATER		1	15.00000			15.0	15.0	73/12/12	73/12/12
00076	TURB	TRBIDMTR	HACH FTU	WATER		1	31.00000			31.0	31.0	77/04/12	77/04/12
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		11	701.8200	19919.00	141.1300	890	420	71/09/09	77/04/12
00400	PH		SU	WATER		10	7.830000	.0334740	.1829600	8.20	7.60	71/09/09	75/05/01
00405	CO2		MG/L	WATER		9	8.066700	16.90800	4.111900	16.0	1.7	71/12/15	75/05/01
00410	T ALK	CACO3	MG/L	WATER		11	268.2700	3411.400	58.40800	402	172	71/09/09	77/04/12
00440	HCO3 ION	HCO3	MG/L	WATER		11	317.7300	7102.100	84.27400	490	170	71/09/09	77/04/12
00445	CO3 ION	CO3	MG/L	WATER		11	.0000000	.0000000	.0000000	0	0	71/09/09	77/04/12
00618	NO3-N	DISS	MG/L	WATER		10	.2760000	.0870710	.2950800	.95	.07	71/12/15	77/04/12
00650	T PO4	PO4	MG/L	WATER		10	.4380000	.0918620	.3030900	.91	.08	71/09/09	75/05/01
00665	PHOS-TOT		MG/L P	WATER		10	.1350000	.0097389	.0986860	.300	.030	71/12/15	77/04/12
00900	TOT HARD	CACO3	MG/L	WATER		11	262.7300	3101.900	55.69500	370	190	71/09/09	77/04/12
00902	NC HARD	CACO3	MG/L	WATER		11	12.09100	510.0900	22.58500	74	0	71/09/09	77/04/12
00915	CALCIUM	CA,DISS	MG/L	WATER		11	85.36300	527.8600	22.97500	130.0	58.0	71/09/09	77/04/12
00925	MGNSIUM	MG,DISS	MG/L	WATER		11	11.89100	5.411000	2.326200	16.0	8.8	71/09/09	77/04/12
00930	SODIUM	NA,DISS	MG/L	WATER		11	52.27300	315.8300	17.77200	81.00	16.00	71/09/09	77/04/12
00931	SODIUM	ADSBTION	RATIO	WATER		11	1.409100	.2529100	.5029000	2.3	.5	71/09/09	77/04/12
00932	PERCENT	SODIUM	%	WATER		11	29.00000	56.00000	7.483300	42	15	71/09/09	77/04/12
00935	PTSSIUM	K,DISS	MG/L	WATER		11	5.500000	5.018000	2.240100	9.80	1.80	71/09/09	77/04/12
00940	CHLORIDE	TOTAL	MG/L	WATER		11	32.63600	154.0600	12.41200	58	16	71/09/09	77/04/12
00945	SULFATE	SO4-TOT	MG/L	WATER		11	62.54500	1512.100	38.88600	150	19	71/09/09	77/04/12
00950	FLUORIDE	F,DISS	MG/L	WATER		10	.6700000	.0134450	.1159500	.80	.40	71/09/09	75/05/01
00955	SILICA	DISOLVED	MG/L	WATER		11	20.94600	104.9100	10.24300	45.0	6.4	71/09/09	77/04/12
01020	BORON	B,DISS	UG/L	WATER		10	87.00000	378.9000	19.46600	110	40	71/09/09	75/05/01
46570	CAL HARD	CA MG	MG/L	WATER	$	11	262.1200	3142.400	56.05800	366	186	71/09/09	77/04/12
70300	RESIDUE	DISS-180 C	MG/L	WATER		11	443.8200	9946.600	99.73300	596	250	71/09/09	77/04/12
70301	DISS SOL	SUM	MG/L	WATER		10	453.7000	5983.900	77.35600	579	334	71/12/15	77/04/12
70302	DISS SOL	TONS/DAY		WATER		11	.8209100	1.373400	1.171900	3.83	.04	71/09/09	77/04/12
70303	DISS SOL	TONS PER	ACRE-FT	WATER		11	.6036400	.0185060	.1360400	.81	.34	71/09/09	77/04/12
71851	NITRATE	DISS-NO3	MG/L	WATER		11	1.490900	2.336900	1.528700	4.2	.3	71/09/09	77/04/12

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RATTLESNAKE C AB L SALT MARSH NR HUDSON, KS
20185 KANSAS STAFFORD
100291

/TYPA/AMBNT/STREAM

112WRD 11030009001 0025.020 ON
0000 FEET DEPTH

	PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER TEMP CENT	WATER		27	18.61100	98.98800	9.949300	32.0	.0	71/09/09	88/06/22
00011	WATER TEMP FAHN	WATER	$	27	65.50000	320.7200	17.90900	89.6	32.0	71/09/09	88/06/22
00025	BAROMTRC PRESSURE MM OF HG	WATER		11	716.5500	548.8000	23.42700	775	672	85/03/14	88/06/22
00027	COLLECT AGENCY CODE	WATER		22	1028.000	.7619100	.8728700	1028	1028	74/10/04	88/06/22
00028	ANALYZE AGENCY CODE	WATER		22	46090.00	1456E+06	38161.00	80020	1028	74/10/04	88/06/22
00060	STREAM FLOW CFS	WATER		4	16.50000	113.6700	10.66200	29	3	71/09/09	72/08/08
00061	STREAM FLOW, INST-CFS	WATER		23	26.63500	317.7100	17.82500	60	.6	73/02/13	88/06/22
00095	CNDUCTVY AT 25C MICROMHO	WATER		26	3620.400	2621000	1618.900	7650	1700	71/09/09	88/06/22
00300	DO MG/L	WATER		11	10.24600	4.388800	2.095000	13.0	7.5	85/03/14	88/06/22
00301	DO SATUR PERCENT	WATER	$	11	102.4900	185.9600	13.63700	131.2	89.6	85/03/14	88/06/22
00400	PH SU	WATER		28	7.992500	.2711700	.5207400	8.90	7.00	71/09/09	88/06/22
00403	PH LAB SU	WATER		14	7.865700	.1165100	.3413400	8.6	7.4	84/09/26	87/12/09
00405	CO2 MG/L	WATER		10	9.040000	52.99400	7.279700	22.0	2.9	72/03/01	78/08/01
00410	T ALK CACO3 MG/L	WATER		23	185.6100	950.4200	30.82900	255	115	71/09/09	87/08/10
00440	HCO3 ION HCO3 MG/L	WATER		11	209.6400	1052.900	32.44800	260	140	71/09/09	78/08/01
00445	CO3 ION CO3 MG/L	WATER		11	.0000000	.0000000	.0000000	0	0	71/09/09	78/08/01
00453	BICARB. WTR DISS FLD MG/L	WATER		2	194.5000	3444.500	58.69000	236	153	88/02/29	88/06/22
00618	NO3-N DISS MG/L	WATER		9	.5911100	.1564100	.3954900	1.10	.00	72/03/01	78/08/01
00650	T PO4 PO4 MG/L	WATER		10	.2800000	.0136230	.1167200	.47	.07	71/09/09	76/08/10
00665	PHOS-TOT MG/L P	WATER		10	.0890000	.0020322	.0450800	.160	.020	72/03/01	78/08/01
00900	TOT HARD CACO3 MG/L	WATER		11	248.7300	1549.900	39.36800	350	190	71/09/09	78/08/01
00902	NC HARD CACO3 MG/L	WATER		11	77.18200	1782.400	42.21800	190	34	71/09/09	78/08/01
00915	CALCIUM CA,DISS MG/L	WATER		11	75.54500	136.1000	11.66600	98.0	51.0	71/09/09	78/08/01
00925	MGNSIUM MG,DISS MG/L	WATER		11	14.72700	17.61800	4.197400	25.0	10.0	71/09/09	78/08/01
00930	SODIUM NA,DISS MG/L	WATER		11	539.6400	101100.0	317.9500	1400.00	260.00	71/09/09	78/08/01
00931	SODIUM ADSBTION RATIO	WATER		11	14.57300	53.10800	7.287500	33.0	7.8	71/09/09	78/08/01
00932	PERCENT SODIUM %	WATER		11	79.81800	28.36900	5.326200	89	72	71/09/09	78/08/01
00935	PTSSIUM K,DISS MG/L	WATER		11	6.845400	10.06700	3.172800	15.00	4.20	71/09/09	78/08/01
00940	CHLORIDE TOTAL MG/L	WATER		27	1045.200	358730.0	598.9400	2600	400	71/09/09	88/06/22
00945	SULFATE SO4-TOT MG/L	WATER		27	124.2600	2786.700	52.78900	250	49	71/09/09	88/06/22
00950	FLUORIDE F,DISS MG/L	WATER		11	.4272700	.0061819	.0786250	.50	.30	71/09/09	78/08/01
00955	SILICA DISOLVED MG/L	WATER		10	16.60000	52.58700	7.251700	29.0	1.8	71/09/09	78/08/01
01020	BORON B,DISS UG/L	WATER		9	165.5600	1352.800	36.78000	240	120	71/09/09	75/08/11
01300	OIL-GRSE SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01305	DET SUDS SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01310	GAS BBLE SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01315	FLOATING SLUDGE SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01320	FLOATING GARBAGE SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01325	FLOATING ALG MAT SEVERITY	WATER		14	.0714290	.0714290	.2672600	1	0	85/03/14	88/06/22

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RATTLESNAKE C AB L SALT MARSH NR HUDSON, KS
20185 KANSAS STAFFORD
100291

/TYPA/AMBNT/STREAM

112WRD 11030009001 0025.020 ON
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01330	ODOR	ATMOSPH	SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01340	DEAD	FISH	SEVERITY	WATER		14	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01345	FLOATING	DEBRIS	SEVERITY	WATER		13	.0000000	.0000000	.0000000	0	0	85/03/14	88/06/22
01355	ICE	COVER	SEVERITY	WATER		13	.3846200	1.256400	1.120900	4	0	85/03/14	88/06/22
39086	ALKLNITY	WTR DISS	FLD MG/L	WATER		3	182.3300	2894.400	53.79900	230	124	87/12/09	88/06/22
46570	CAL HARD	CA MG	MG/L	WATER	$	11	249.2800	1533.100	39.15500	348	189	71/09/09	78/08/01
70300	RESIDUE	DISS-180 C	MG/L	WATER		10	1635.200	758220.0	870.7600	4000	932	71/09/09	76/08/10
70301	DISS SOL	SUM	MG/L	WATER		9	1449.800	170240.0	412.6000	2270	928	72/03/01	78/08/01
70302	DISS SOL	TONS/DAY		WATER		10	121.0900	3631.600	60.26300	219.00	32.40	71/09/09	76/08/10
70303	DISS SOL	TONS PER	ACRE-FT	WATER		11	2.302700	1.329400	1.153000	5.44	1.27	71/09/09	78/08/01
71850	NITRATE	TOT-NO3	MG/L	WATER		1	4.100000			4.1	4.1	76/08/10	76/08/10
71851	NITRATE	DISS-NO3	MG/L	WATER		10	2.450000	2.856100	1.690000	4.8	.0	71/09/09	78/08/01

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RATTLESNAKE C NR ZENITH, KS
20185 KANSAS STAFFORD
100291

/TYPA/AMBNT/STREAM

112WRD 11030009
0000 FEET DEPTH

	PARAMETER			MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		120	16.43800	108.3000	10.40700	37.0	.0	73/10/01	95/08/09
00011	WATER	TEMP	FAHN	WATER	$	120	61.58700	350.9800	18.73400	98.6	32.0	73/10/01	95/08/09
00027	COLLECT	AGENCY	CODE	WATER		119	1028.000	1.762700	1.327700	1028	1028	77/04/11	95/08/09
00028	ANALYZE	AGENCY	CODE	WATER		119	2196.700	8866800	2977.700	9720	1028	77/04/11	95/08/09
00061	STREAM	FLOW,	INST-CFS	WATER		122	87.52500	90231.00	300.3900	2520	.1	73/10/01	95/08/09
00075	TURB	HLGE	PPM SIO2	WATER		1	500.0000			500.0	500.0	73/10/01	73/10/01
00076	TURB	TRBIDMTR	HACH FTU	WATER		2	15.95000	202.0100	14.21300	26.0	5.9	77/04/11	78/10/31
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		105	4646.800	7450200	2729.500	11700	200	73/10/01	95/08/09
00400	PH		SU	WATER		86	8.179400	.2701800	.5197800	9.60	6.90	73/10/01	95/08/09
00405	CO2		MG/L	WATER		4	7.950000	14.81000	3.848400	11.0	3.0	73/10/01	79/11/15
00410	T ALK	CACO3	MG/L	WATER		5	135.0000	1881.000	43.37100	180	68	73/10/01	79/11/15
00440	HCO3 ION	HCO3	MG/L	WATER		5	164.6000	2805.900	52.97000	220	83	73/10/01	79/11/15
00445	CO3 ION	CO3	MG/L	WATER		5	.0000000	.0000000	.0000000	0	0	73/10/01	79/11/15
00618	NO3-N	DISS	MG/L	WATER		5	.3920000	.1593200	.3991500	1.00	.10	73/10/01	79/11/15
00631	NO2&NO3	N-DISS	MG/L	WATER		1	.2000000			.2	.2	82/08/25	82/08/25
00650	T PO4	PO4	MG/L	WATER		1	.6600000			.66	.66	73/10/01	73/10/01
00665	PHOS-TOT		MG/L P	WATER		5	.0900000	.0058000	.0761580	.220	.020	73/10/01	79/11/15
00900	TOT HARD	CACO3	MG/L	WATER		6	252.3300	13633.00	116.7600	400	64	73/10/01	82/08/25
00902	NC HARD	CACO3	MG/L	WATER		5	88.00000	4078.000	63.85900	160	0	73/10/01	79/11/15
00915	CALCIUM	CA,DISS	MG/L	WATER		6	70.50000	939.5200	30.65200	110.0	22.0	73/10/01	82/08/25
00925	MGNSIUM	MG,DISS	MG/L	WATER		6	18.53300	109.3900	10.45900	32.0	2.2	73/10/01	82/08/25
00930	SODIUM	NA,DISS	MG/L	WATER		6	813.8300	387030.0	622.1100	1800.00	13.00	73/10/01	82/08/25
00931	SODIUM	ADSBTION	RATIO	WATER		6	20.28300	173.0000	13.15300	39.0	.7	73/10/01	82/08/25
00932	PERCENT	SODIUM	%	WATER		6	76.66700	577.0700	24.02200	90	28	73/10/01	82/08/25
00935	PTSSIUM	K,DISS	MG/L	WATER		6	5.866700	.6667000	.8165200	7.20	5.00	73/10/01	82/08/25
00940	CHLORIDE	TOTAL	MG/L	WATER		10	1791.700	1082900	1040.600	3300	17	73/10/01	83/08/31
00945	SULFATE	SO4-TOT	MG/L	WATER		9	162.3900	7229.000	85.02400	260	5	73/10/01	83/08/31
00950	FLUORIDE	F,DISS	MG/L	WATER		5	.4400000	.0130000	.1140200	.60	.30	73/10/01	82/08/25
00955	SILICA	DISOLVED	MG/L	WATER		6	8.733300	8.026800	2.833200	13.0	5.0	73/10/01	82/08/25
01020	BORON	B,DISS	UG/L	WATER		2	140.0000	12800.00	113.1400	220	60	73/10/01	79/09/11
01300	OIL-GRSE		SEVERITY	WATER		2	.0000000	.0000000	.0000000	0	0	86/07/02	87/03/27
01305	DET SUDS		SEVERITY	WATER		2	.0000000	.0000000	.0000000	0	0	86/07/02	87/03/27
01310	GAS BBLE		SEVERITY	WATER		2	.0000000	.0000000	.0000000	0	0	86/07/02	87/03/27
01315	FLOATING	SLUDGE	SEVERITY	WATER		2	.0000000	.0000000	.0000000	0	0	86/07/02	87/03/27
01320	FLOATING	GARBAGE	SEVERITY	WATER		2	.0000000	.0000000	.0000000	0	0	86/07/02	87/03/27
01325	FLOATING	ALG MAT	SEVERITY	WATER		2	.0000000	.0000000	.0000000	0	0	86/07/02	87/03/27
01330	ODOR	ATMOSPH	SEVERITY	WATER		2	.0000000	.0000000	.0000000	0	0	86/07/02	87/03/27
01340	DEAD	FISH	SEVERITY	WATER		2	.0000000	.0000000	.0000000	0	0	86/07/02	87/03/27
01345	FLOATING	DEBRIS	SEVERITY	WATER		2	.0000000	.0000000	.0000000	0	0	86/07/02	87/03/27

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RATTLESNAKE C NR ZENITH, KS
20185 KANSAS STAFFORD
100291

/TYPA/AMBNT/STREAM

112WRD 11030009
0000 FEET DEPTH

PARAMETER		MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01355	ICE COVER SEVERITY	WATER		2	.0000000	.0000000	.0000000	0	0	86/07/02	87/03/27
46570	CAL HARD CA MG MG/L	WATER	$	6	252.3600	14149.00	118.9500	406	64	73/10/01	82/08/25
70300	RESIDUE DISS-180 C MG/L	WATER		1	125.0000			125	125	73/10/01	73/10/01
70301	DISS SOL SUM MG/L	WATER		6	2388.500	2963100	1721.400	5035	116	73/10/01	82/08/25
70302	DISS SOL TONS/DAY	WATER		6	226.1800	97234.00	311.8200	850.00	51.20	73/10/01	82/08/25
70303	DISS SOL TONS PER ACRE-FT	WATER		6	3.250000	5.469700	2.338700	6.85	.17	73/10/01	82/08/25
70331	SUSP SED PARTSIZE %<.062MM	WATER		3	56.00000	111.0000	10.53600	67	46	85/05/01	87/03/27
70337	SUSP SED PARTSIZE %<.002MM	WATER		1	48.00000			48	48	86/07/02	86/07/02
70338	SUSP SED PARTSIZE %<.004MM	WATER		1	49.00000			49	49	86/07/02	86/07/02
70340	SUSP SED PARTSIZE %<.016MM	WATER		1	50.00000			50	50	86/07/02	86/07/02
70343	SUSP SED PARTSIZE %<.125MM	WATER		3	67.66700	90.33600	9.504500	77	58	85/05/01	87/03/27
70344	SUSP SED PARTSIZE %<.250MM	WATER		3	87.00000	208.0000	14.42200	99	71	85/05/01	87/03/27
70345	SUSP SED PARTSIZE %<.500MM	WATER		3	100.0000	.0000000	.0000000	100	100	85/05/01	87/03/27
71851	NITRATE DISS-NO3 MG/L	WATER		5	1.720000	3.167000	1.779600	4.4	.4	73/10/01	79/11/15
80154	SUSP SED CONC MG/L	WATER		4	565.0000	67285.00	259.3900	739	189	85/05/01	87/03/27

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ARKANSAS R. NR GREAT BEND, KS.
20009 KANSAS BARTON
ARKANSAS R. BASIN. 100202
LOWER ARKANSAS UNIT.
21KAN001 11030004001 0025.420 ON
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00005	VSAMPLOC	DEPTH	% OF TOT	WATER		6	.1133300	.0053066	.0728470	.3	.06	95/01/25	95/11/29
00010	WATER	TEMP	CENT	WATER		212	13.26000	66.38300	8.147600	30.0	-2.0	73/11/27	96/12/18
00011	WATER	TEMP	FAHN	WATER	$	212	55.86500	215.2400	14.67100	86.0	28.4	73/11/27	96/12/18
00060	STREAM	FLOW	CFS	WATER		128	111.1900	216270.0	465.0400	4967	3	73/11/27	88/09/21
00070	TURB	JKSN	JTU	WATER		16	116.3100	17376.00	131.8200	450.0	8.0	73/11/27	75/07/08
00076	TURB	TRBIDMTR	HACH FTU	WATER		193	31.62400	5214.400	72.21100	680.0	1.8	75/08/05	96/12/18
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		213	1297.900	156770.0	395.9400	3100	200	73/11/27	96/12/18
00300	DO		MG/L	WATER		214	8.526100	9.325400	3.053800	19.3	3.1	73/11/27	96/12/18
00301	DO	SATUR	PERCENT	WATER	$	209	80.50900	917.8100	30.29500	207.8	24.7	73/11/27	96/12/18
00310	BOD	5 DAY	MG/L	WATER		202	4.733400	22.35400	4.728000	50.4	.3	73/11/27	95/11/29
					K	4	.0100000	.0000000	.0000000	.01	.01	86/10/08	88/12/14
					TOT	206	4.641700	22.34500	4.727000	50.4	.01	73/11/27	95/11/29
00335	COD	LOWLEVEL	MG/L	WATER		174	24.69000	314.9900	17.74800	122.0	.0	73/11/27	89/11/15
					K	1	1.000000			1.0	1.0	88/06/22	88/06/22
					TOT	175	24.55400	316.3900	17.78700	122.0	.0	73/11/27	89/11/15
00400	PH		SU	WATER		75	7.838600	.8840300	.9402300	8.70	.00	86/04/22	96/12/18
00403	PH	LAB	SU	WATER		140	7.938000	.1137000	.3372000	8.9	6.8	73/11/27	96/08/28
00410	T ALK	CACO3	MG/L	WATER		214	210.0800	1383.400	37.19300	289	70	73/11/27	96/12/18
00440	HCO3 ION	HCO3	MG/L	WATER		97	128.2500	15295.00	123.6700	290	0	75/04/29	90/04/25
00445	CO3 ION	CO3	MG/L	WATER		52	.3807700	3.699200	1.923300	12	0	75/04/29	82/02/17
00530	RESIDUE	TOT NFLT	MG/L	WATER		202	73.15800	23972.00	154.8300	1500	2	73/11/27	96/12/18
					K	1	1.000000			1	1	85/11/13	85/11/13
					TOT	203	72.80300	23879.00	154.5300	1500	1	73/11/27	96/12/18
00535	RESIDUE	VOL NFLT	MG/L	WATER		5	32.20000	334.7000	18.29500	50	6	73/11/27	74/07/23
00540	RESIDUE	FIX NFLT	MG/L	WATER		5	96.80000	5049.700	71.06100	202	42	73/11/27	74/07/23
00547	RESIDUE	TOT NSET	MG/L	WATER		33	764.0900	10956.00	104.6700	941	461	74/06/18	77/12/13
00610	NH3+NH4-	N TOTAL	MG/L	WATER		204	1.264900	1.683600	1.297600	5.650	.000	73/11/27	96/12/18
					K	10	.0260000	.0004266	.0206560	.050	.010	84/09/19	93/05/12
					TOT	214	1.207000	1.673300	1.293600	5.650	.000	73/11/27	96/12/18
00612	UN-IONZD	NH3-N	MG/L	WATER	$	210	.0253590	.0014461	.0380270	.253	.000	73/11/27	96/12/18
00613	NO2-N	DISS	MG/L	WATER		2	.1400000	.0018000	.0424270	.170	.110	96/02/28	96/04/24
					K	4	.0500000	.0000000	.0000000	.050	.050	96/06/26	96/12/18
					TOT	6	.0800000	.0025200	.0502000	.170	.050	96/02/28	96/12/18
00618	NO3-N	DISS	MG/L	WATER		12	1.098300	.3199300	.5656200	2.17	.36	95/01/25	96/12/18
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	210	.0308340	.0021378	.0462370	.307	.000	73/11/27	96/12/18
00630	NO2&NO3	N-TOTAL	MG/L	WATER		166	1.579600	.9363900	.9676700	6.00	.08	77/06/06	94/10/19
00650	T PO4	PO4	MG/L	WATER		36	2.102200	1.858600	1.363300	6.20	.89	73/11/27	77/04/12
00665	PHOS-TOT		MG/L P	WATER		177	1.284700	1.289400	1.135500	11.000	.030	77/05/10	96/12/18
00671	PHOS-DIS	ORTHO	MG/L P	WATER		12	.4366700	.1519300	.3897900	1.150	.080	95/01/25	96/12/18

000284 331
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ARKANSAS R. NR GREAT BEND, KS.
20009 KANSAS BARTON
ARKANSAS R. BASIN. 100202
/TYPA/AMBNT/STREAM LOWER ARKANSAS UNIT.
21KAN001 11030004001 0025.420 ON
0000 FEET DEPTH

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00900 TOT HARD CACO3	MG/L	WATER		213	374.8800	15179.00	123.2100	1111	65	73/11/27	96/12/18
00901 C HARD CACO3	MG/L	WATER		139	210.0100	1238.300	35.18900	286	65	77/05/10	90/04/25
00902 NC HARD CACO3	MG/L	WATER		175	168.7200	12286.00	110.8400	873	0	73/11/27	90/04/25
00916 CALCIUM CA-TOT	MG/L	WATER		213	105.2200	787.9300	28.07000	259.0	22.0	73/11/27	96/12/18
00927 MGNSIUM MG,TOT	MG/L	WATER		212	27.51500	184.5400	13.58500	113.0	2.5	73/11/27	96/12/18
00929 SODIUM NA,TOT	MG/L	WATER		212	132.4900	2377.900	48.76400	330.00	3.80	73/11/27	96/12/18
00937 PTSSIUM K,TOT	MG/L	WATER		211	8.740100	3.546200	1.883100	19.60	5.30	73/11/27	96/12/18
00940 CHLORIDE TOTAL	MG/L	WATER		202	129.1900	3805.300	61.68700	565	4	73/11/27	94/10/19
00941 CHLORIDE DISS IN WTR	MG/L	WATER		12	113.7800	4878.000	69.84300	202	13	95/01/25	96/12/18
00945 SULFATE SO4-TOT	MG/L	WATER		202	268.0000	23215.00	152.3700	1274	15	73/11/27	94/10/19
00946 SULFATE SO4-DISS	MG/L	WATER		12	331.0600	103920.0	322.3600	1058.0	23.8	95/01/25	96/12/18
00950 FLUORIDE F,DISS	MG/L	WATER		12	.5141700	.0605540	.2460800	.91	.11	95/01/25	96/12/18
00951 FLUORIDE F,TOTAL	MG/L	WATER		5	.6000000	.0046005	.0678270	.66	.49	93/11/17	94/10/19
00955 SILICA DISOLVED	MG/L	WATER		64	13.58300	35.39300	5.949200	52.7	5.3	74/06/18	95/11/29
00956 SILICA TOTAL	MG/L	WATER		143	16.73000	218.0800	14.76800	127.0	1.0	79/07/17	96/12/18
01000 ARSENIC AS,DISS	UG/L	WATER		8	.0000000	.0000000	.0000000	0	0	74/12/10	78/07/10
01002 ARSENIC AS,TOT	UG/L	WATER		33	5.442400	45.47100	6.743200	34	0	79/04/10	96/12/18
			K	16	23.81300	202.5600	14.23300	50	1	88/06/22	93/05/12
			TOT	49	11.44100	169.3700	13.01400	50	0	79/04/10	96/12/18
01007 BARIUM BA,TOT	UG/L	WATER		49	124.5100	6250.600	79.06100	511	30	79/04/10	96/12/18
01012 BERYLIUM BE,TOT	UG/L	WATER		2	1.500000	.5000000	.7071100	2.00	1.00	93/05/12	96/06/26
			K	35	1.485700	2.610100	1.615600	10.00	1.00	90/04/25	96/12/18
			TOT	37	1.486500	2.479000	1.574500	10.00	1.00	90/04/25	96/12/18
01022 BORON B,TOT	UG/L	WATER		196	203.3700	5534.500	74.39400	530	.2	74/06/18	96/12/18
			K	3	10.00000	.0001220	.0110490	10	10	85/05/22	86/01/15
			TOT	199	200.4500	6008.600	77.51500	530	.2	74/06/18	96/12/18
01025 CADMIUM CD,DISS	UG/L	WATER		9	1.111100	11.11100	3.333300	10	0	74/12/10	78/07/10
01027 CADMIUM CD,TOT	UG/L	WATER		11	1.181800	2.163600	1.470900	5	0	79/04/10	96/06/26
			K	38	1.773700	1.878200	1.370500	5	.1	84/06/20	96/12/18
			TOT	49	1.640800	1.960800	1.400300	5	0	79/04/10	96/12/18
01032 CHROMIUM HEX-VAL	UG/L	WATER		3	.0000000	.0000000	.0000000	0	0	74/12/10	75/06/03
01034 CHROMIUM CR,TOT	UG/L	WATER		39	5.874400	47.74000	6.909400	37	0	75/12/16	96/12/18
			K	16	9.250000	4.333300	2.081700	10	3	84/06/20	94/10/19
			TOT	55	6.856400	37.19300	6.098600	37	0	75/12/16	96/12/18
01037 COBALT CO,TOTAL	UG/L	WATER		1	15.00000			15	15	96/06/26	96/06/26
			K	35	7.600000	8.894200	2.982300	10	4	90/06/25	96/12/18
			TOT	36	7.805600	10.16100	3.187700	15	4	90/06/25	96/12/18
01040 COPPER CU,DISS	UG/L	WATER		9	18.88900	361.1100	19.00300	50	0	74/12/10	78/07/10
01042 COPPER CU,TOT	UG/L	WATER		44	20.64300	318.4700	17.84600	100	0	79/04/10	96/12/18

000284 331
38 21 20.7 098 39 50.4 1
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21KAN001 11030004001 0025.420 ON
0000 FEET DEPTH

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PARAMETER			MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01042 COPPER	CU,TOT	UG/L	WATER	K	5	10.00000	.0000000	.0000000	10	10	84/06/20	94/08/24
01042 COPPER	CU,TOT	UG/L	WATER	TOT	49	19.55700	295.8900	17.20200	100	0	79/04/10	96/12/18
01045 IRON	FE,TOT	UG/L	WATER		51	1814.100	9560100	3091.900	15100	20	74/12/10	96/12/18
01046 IRON	FE,DISS	UG/L	WATER		6	53.33300	5386.700	73.39400	200	10	75/12/16	78/07/10
01049 LEAD	PB,DISS	UG/L	WATER		9	10.00000	150.0000	12.24800	30	0	74/12/10	78/07/10
01051 LEAD	PB,TOT	UG/L	WATER		28	9.871400	421.9800	20.54200	108	0	79/04/10	96/12/18
				K	13	10.69200	335.2300	18.30900	50	1	84/06/20	95/11/29
				TOT	41	10.13200	385.5600	19.63600	108	0	79/04/10	96/12/18
01055 MANGNESE	MN	UG/L	WATER		51	294.5300	146260.0	382.4400	2460.0	.0	74/12/10	96/12/18
01056 MANGNESE	MN,DISS	UG/L	WATER		6	61.66700	5936.700	77.05000	190.0	.0	75/12/16	78/07/10
01059 THALLIUM	TL,TOTAL	UG/L	WATER		2	79.50000	7812.500	88.38800	142	17	92/06/24	95/11/29
				K	34	37.20600	274.5300	16.56900	50	15	90/06/25	96/12/18
				TOT	36	39.55600	578.6000	24.05400	142	15	90/06/25	96/12/18
01062 MOLY	MO,TOT	UG/L	WATER		9	3.555600	3.527800	1.878300	7	1	91/05/22	93/01/27
				K	27	9.333300	17.30800	4.160300	20	1	90/06/25	96/12/18
				TOT	36	7.888900	20.10200	4.483500	20	1	90/06/25	96/12/18
01067 NICKEL	NI,TOTAL	UG/L	WATER		19	9.110500	77.98100	8.830700	42	3	90/04/25	96/12/18
				K	18	25.77800	497.3600	22.30200	50	5	90/08/27	94/10/19
				TOT	37	17.21900	345.1800	18.57900	50	3	90/04/25	96/12/18
01075 SILVER	AG,DISS	UG/L	WATER		8	.0000000	.0000000	.0000000	.0	.0	74/12/10	78/07/10
01077 SILVER	AG,TOT	UG/L	WATER		8	1.425000	6.245000	2.499000	7.0	.0	79/04/10	96/02/28
				K	41	4.536600	13.30500	3.647600	10.0	1.0	84/06/20	96/12/18
				TOT	49	4.028600	13.34800	3.653500	10.0	.0	79/04/10	96/12/18
01087 VANADIUM	V,TOT	UG/L	WATER		17	18.00000	312.8800	17.68800	66	3	90/06/25	96/08/28
				K	19	4.052600	1.052600	1.026000	5	3	90/08/27	96/12/18
				TOT	36	10.63900	193.4400	13.90800	66	3	90/06/25	96/12/18
01090 ZINC	ZN,DISS	UG/L	WATER		9	17.77800	419.4400	20.48000	70	0	74/12/10	78/07/10
01092 ZINC	ZN,TOT	UG/L	WATER		49	64.93900	8894.700	94.31100	592	10	79/04/10	96/12/18
01097 ANTIMONY	SB,TOT	UG/L	WATER		10	63.20000	2939.700	54.21900	177	10	90/12/10	96/10/23
				K	26	36.92300	318.1600	17.83700	50	10	90/06/25	96/12/18
				TOT	36	44.22200	1125.700	33.55100	177	10	90/06/25	96/12/18
01105 ALUMINUM	AL,TOT	UG/L	WATER		37	2977.500	24516000	4951.300	23300	120	90/04/25	96/12/18
01147 SELENIUM	SE,TOT	UG/L	WATER		26	3.653900	4.510600	2.123800	10	1	79/04/10	96/12/18
				K	15	12.93300	422.2100	20.54800	50	1	85/05/22	96/08/28
				TOT	41	7.048800	171.0700	13.07900	50	1	79/04/10	96/12/18
31501 TOT COLI	MFIMENDO	/100ML	WATER		98	65793.00	7777E+06	88189.00	390000	65	73/11/27	83/03/16
				L	3	56000.00	1728E+06	41569.00	80000	8000	77/04/12	78/01/09
				TOT	101	65502.00	7581E+06	87071.00	390000	65	73/11/27	83/03/16
31616 FEC COLI	MFM-FCBR	/100ML	WATER		194	11703.00	7073E+05	26596.00	230000	10	73/11/27	96/12/18

000284 331
38 21 20.7 098 39 50.4 1
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31616 FEC COLI MFM-FCBR	/100ML	WATER	K	15	148.0000	56546.00	237.7900	1000	10	74/04/09	91/11/20
			L	5	27600.00	8748E+05	29577.00	60000	6000	78/01/09	95/11/29
			TOT	214	11265.00	6724E+05	25932.00	230000	10	73/11/27	96/12/18
31673 FECSTREP MFKFAGAR	/100ML	WATER		190	3864.900	2667E+05	16333.00	220000	20	73/11/27	96/12/18
			K	22	222.7300	99935.00	316.1300	1000	100	77/08/09	91/11/20
			L	1	6000.000			6000	6000	90/12/10	90/12/10
			TOT	213	3498.700	2391E+05	15463.00	220000	20	73/11/27	96/12/18
34259 DELTABHC	TOTUG/L	WATER	K	2	.0500000	.0000000	.0000000	.050	.050	96/04/24	96/08/28
34351 ENDSULSF	TOTUG/L	WATER	K	2	.1000000	.0000000	.0000000	.100	.100	96/04/24	96/08/28
34356 B-ENDO SULFAN	TOTWUG/L	WATER	K	2	.0200000	.0000000	.0000000	.020	.020	96/04/24	96/08/28
34361 A-ENDO SULFAN	TOTWUG/L	WATER	K	2	.0200000	.0000000	.0000000	.020	.020	96/04/24	96/08/28
34671 PCB 1016	TOTWUG/L	WATER	K	19	.6052600	.2105300	.4588300	2.500	.500	90/04/25	96/08/28
38260 MBAS	MG/L	WATER		1	.2000000			.20	.20	91/01/29	91/01/29
39024 PROPAZIN WTR CCM	UG/L	WATER	K	19	1.473700	4.675400	2.162300	8.40	.30	90/04/25	96/08/28
39033 ATRZ WHL SMPL	UG/L	WATER		10	1.964000	5.749700	2.397900	8.400	.360	83/06/22	96/08/28
			K	21	1.252400	1.383600	1.176300	6.000	.300	78/12/05	96/04/24
			TOT	31	1.481900	2.761700	1.661800	8.400	.300	78/12/05	96/08/28
39045 2,4,5-TP WTR SMPL	UG/L	WATER	K	31	.3225800	.0098066	.0990280	.400	.200	78/12/05	96/08/28
39055 SIMAZINE WH.WATER	(UG/L)	WATER	K	6	.3000000	.0000000	.0000000	.3	.3	94/10/19	96/08/28
39300 P,P'DDT	TOT UG/L	WATER	K	14	.1000000	.0000000	.0000000	.100	.100	78/12/05	96/08/28
39305 O,P' DDT WHL SMPL	UG/L	WATER	K	12	.1000000	.0000000	.0000000	.100	.100	78/12/05	89/06/21
39310 P,P'DDD	TOT UG/L	WATER	K	2	.0400000	.0000000	.0000000	.040	.040	96/04/24	96/08/28
39320 P,P'DDE	TOT UG/L	WATER	K	2	.0200000	.0000000	.0000000	.020	.020	96/04/24	96/08/28
39330 ALDRIN	TOT UG/L	WATER	K	53	.2239600	.0552830	.2351200	.500	.025	73/11/27	96/08/28
39337 ALPHABHC	TOTUG/L	WATER	K	2	.0250000	.0000000	.0000000	.025	.025	96/04/24	96/08/28
39338 BETA BHC	TOTUG/L	WATER	K	2	.0500000	.0000000	.0000000	.050	.050	96/04/24	96/08/28
39340 GAMMABHC LINDANE	TOT.UG/L	WATER	K	13	.0396150	.0012728	.0356760	.120	.025	90/04/25	94/06/29
39350 CHLRDANE TECH&MET	TOT UG/L	WATER	K	53	.5341500	.1576700	.3970800	1.000	.120	73/11/27	96/08/28
39356 METOCLR (DUAL)	UG/L	WATER		9	1.742200	8.932800	2.988800	9.60	.36	85/10/23	95/03/29
			K	19	.2500000	.0000000	.0000000	.25	.25	82/06/16	96/08/28
			TOT	28	.7296400	3.150400	1.774900	9.60	.25	82/06/16	96/08/28
39370 DDT WHL SMPL	UG/L	WATER	K	22	10.00000	.0000000	.0000000	10.000	10.000	73/11/27	78/07/10
39380 DIELDRIN	TOTUG/L	WATER	K	53	.2367900	.0501110	.2238600	.500	.050	73/11/27	96/08/28
39390 ENDRIN	TOT UG/L	WATER	K	53	.1830200	.0098980	.0994890	.300	.100	73/11/27	96/08/28
39400 TOXAPHEN	TOTUG/L	WATER	K	31	2.000000	.0000000	.0000000	2.000	2.000	78/12/05	96/08/28
39410 HEPTCHLR	TOTUG/L	WATER	K	41	.5458500	.2447900	.4947600	1.000	.020	73/11/27	96/08/28
39420 HPCHLREP	TOTUG/L	WATER	K	41	.5458500	.2447900	.4947600	1.000	.020	73/11/27	96/08/28
39480 MTHXYCLR WHL SMPL	UG/L	WATER	K	53	20.87700	613.4800	24.76900	50.000	.200	73/11/27	96/08/28
39488 PCB-1221	TOTUG/L	WATER	K	19	2.342100	.2236900	.4729600	2.500	1.000	90/04/25	96/08/28

000284 331
38 21 20.7 098 39 50.4 1
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39492	PCB-1232		TOTUG/L	WATER	K	19	.5000000	.0000000	.0000000	.500	.500	90/04/25	96/08/28
39496	PCB-1242		TOTUG/L	WATER	K	19	.6052600	.2105300	.4588300	2.500	.500	90/04/25	96/08/28
39500	PCB-1248		TOTUG/L	WATER	K	19	.5000000	.0000000	.0000000	.500	.500	90/04/25	96/08/28
39504	PCB-1254		TOTUG/L	WATER	K	19	.5000000	.0000000	.0000000	.500	.500	90/04/25	96/08/28
39508	PCB-1260		TOTUG/L	WATER	K	19	.5000000	.0000000	.0000000	.500	.500	90/04/25	96/08/28
39516	PCBS	WHL SMPL	UG/L	WATER	K	11	.5000000	.0000000	.0000000	.500	.500	78/12/05	89/06/21
39700	HCB		TOT UG/L	WATER	K	6	.1000000	.0000000	.0000000	.100	.100	94/10/19	96/08/28
39720	PICLORAM	WHL SMPL	UG/L	WATER	K	19	.8000000	.0000000	.0000000	.800	.800	90/04/25	96/08/28
39730	2,4-D	WHL SMPL	UG/L	WATER		5	2.012000	4.960500	2.227200	5.900	.480	82/06/16	91/03/27
					K	26	.6769200	.0354480	.1882800	.800	.400	78/12/05	96/08/28
					TOT	31	.8922600	.9401000	.9695900	5.900	.400	78/12/05	96/08/28
39740	2,4,5-T	WHL SMPL	UG/L	WATER	K	30	.3266700	.0096093	.0980270	.400	.200	79/12/11	96/08/28
39770	DACTHAL	WHL SMPL	UG/L	WATER	K	30	.0566660	.0013334	.0365160	.250	.050	79/12/11	96/08/28
39782	LINDANE	WHL SMPL	UG/L	WATER	K	40	5.511300	25.25800	5.025700	10.000	.025	73/11/27	96/08/28
46570	CAL HARD	CA MG	MG/L	WATER	$	212	376.0100	15270.00	123.5700	1112	65	73/11/27	96/12/18
49259	ACTOCHLR	UNFLTR	RECVUG/L	WATER	K	2	.1000000	.0000000	.0000000	.1	.1	96/04/24	96/08/28
70301	DISS SOL	SUM	MG/L	WATER		175	832.5200	85628.00	292.6200	2281	165	77/05/10	96/12/18
70507	PHOS-T	ORTHO	MG/L P	WATER		1	1.100000			1.100	1.100	77/12/13	77/12/13
71851	NITRATE	DISS-NO3	MG/L	WATER		37	5.054100	10.11900	3.181000	13.0	.2	73/11/27	77/05/10
71890	MERCURY	HG,DISS	UG/L	WATER		8	.0000000	.0000000	.0000000	.0	.0	74/12/10	78/07/10
71900	MERCURY	HG,TOTAL	UG/L	WATER		7	.2142900	.1547600	.3934000	1.0	.0	79/04/10	94/10/19
					K	25	.5000000	.0000000	.0000000	.5	.5	84/06/20	96/12/18
					TOT	32	.4375000	.0443550	.2106100	1.0	.0	79/04/10	96/12/18
74021	EXCESS	ALKALNTY	MG/L	WATER		93	.0537640	.2688200	.5184800	5	0	77/05/10	85/10/23
74041	WQF	SAMPLE	UPDATED	WATER		101	912870.0	5927E+05	24346.00	970626	860912	78/07/10	96/12/18
77729	RAMROD	TOTAL	UG/L	WATER	K	30	.3166700	.0645400	.2540500	1.300	.250	79/12/11	96/08/28
77780	BLADEX	TOTAL	UG/L	WATER		1	3.100000			3.100	3.100	93/05/12	93/05/12
					K	18	.5000000	.0000000	.0000000	.500	.500	90/04/25	96/08/28
					TOT	19	.6368400	.3557900	.5964800	3.100	.500	90/04/25	96/08/28
77825	ALACHLOR	TOTAL	UG/L	WATER		3	2.206700	8.738400	2.956100	5.600	.190	91/03/27	94/10/19
					K	27	.2055600	.0048717	.0697970	.250	.100	79/12/11	96/08/28
					TOT	30	.4056700	.9798500	.9898700	5.600	.100	79/12/11	96/08/28
77860	BUTACHLO	TOTAL	UG/L	WATER	K	6	.5000000	.0000000	.0000000	.500	.500	94/10/19	96/08/28
81405	CRBFURAN	TOT	UG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	96/04/24	96/08/28
81408	MTRBUZIN	TOT	UG/L	WATER	K	30	.1000000	.0000000	.0000000	.100	.100	79/12/11	96/08/28
82028	RATIO	FEC COL	FEC STRP	WATER	$	213	11.99000	3855.200	62.09000	886	.03	73/11/27	96/12/18
82298	BROMIDE	DISS.BR	UG/L	WATER		12	.2675000	.0258210	.1606900	.570	.080	95/01/25	96/12/18

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ARKANSAS RIVER NEAR GREAT BEND
20009 KANSAS BARTON
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/TYPA/AMBNT/STREAM
LOWER ARKANSAS BASIN
21KAN001 790818 11030004001 0025.420 ON
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		14	18.21400	13.25900	3.641300	24.0	12.0	72/06/21	75/04/29
00011	WATER	TEMP	FAHN	WATER	$	14	64.78600	42.96900	6.555100	75.2	53.6	72/06/21	75/04/29
00060	STREAM	FLOW	CFS	WATER		14	154.2900	15977.00	126.4000	361	35	72/06/21	75/04/29
00070	TURB	JKSN	JTU	WATER		7	260.0000	11200.00	105.8300	500.0	220.0	72/06/21	72/06/27
00076	TURB	TRBIDMTR	HACH FTU	WATER		7	66.42900	480.9600	21.93100	95.0	25.0	75/04/23	75/04/29
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		14	985.7200	54581.00	233.6300	1230	700	72/06/21	75/04/29
00300	DO		MG/L	WATER		14	6.957100	1.328800	1.152700	10.6	5.9	72/06/21	75/04/29
00301	DO	SATUR	PERCENT	WATER	$	14	73.05100	146.2800	12.09500	112.8	62.2	72/06/21	75/04/29
00310	BOD	5 DAY	MG/L	WATER		14	4.757100	2.788800	1.670000	8.5	2.8	72/06/21	75/04/29
00403	PH	LAB	SU	WATER		14	7.717900	.2275400	.4770100	8.1	6.6	72/06/21	75/04/29
00410	T ALK	CACO3	MG/L	WATER		14	214.7200	1517.300	38.95300	264	160	72/06/21	75/04/29
00440	HCO3 ION	HCO3	MG/L	WATER		14	243.7900	997.2700	31.58000	290	195	72/06/21	75/04/29
00445	CO3 ION	CO3	MG/L	WATER		14	9.000000	118.7700	10.89800	34	0	72/06/21	75/04/29
00530	RESIDUE	TOT NFLT	MG/L	WATER		7	44.71400	321.2400	17.92300	70	18	75/04/23	75/04/29
00610	NH3+NH4-	N TOTAL	MG/L	WATER		6	.4100000	.0493210	.2220800	.800	.220	72/06/21	75/04/29
00612	UN-IONZD	NH3-N	MG/L	WATER	$	6	.0076623	.0000362	.0060237	.017	.0007	72/06/21	75/04/29
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	6	.0093165	.0000536	.0073241	.020	.0008	72/06/21	75/04/29
00650	T PO4	PO4	MG/L	WATER		14	1.890700	.4236700	.6509000	3.00	.57	72/06/21	75/04/29
00900	TOT HARD	CACO3	MG/L	WATER		14	372.0000	3958.200	62.91400	456	268	72/06/21	75/04/29
00902	NC HARD	CACO3	MG/L	WATER		7	176.0000	385.3300	19.63000	196	140	75/04/23	75/04/29
00915	CALCIUM	CA,DISS	MG/L	WATER		14	103.2200	241.5700	15.54300	134.0	83.0	72/06/21	75/04/29
00925	MGNSIUM	MG,DISS	MG/L	WATER		14	27.57200	133.5000	11.55400	47.0	7.0	72/06/21	75/04/29
00940	CHLORIDE	TOTAL	MG/L	WATER		14	60.71400	549.6100	23.44400	88	31	72/06/21	75/04/29
00945	SULFATE	SO4-TOT	MG/L	WATER		14	233.5700	4376.600	66.15600	308	144	72/06/21	75/04/29
01000	ARSENIC	AS,DISS	UG/L	WATER		4	.0000000	.0000000	.0000000	0	0	72/06/21	75/04/29
01025	CADMIUM	CD,DISS	UG/L	WATER		4	.0000000	.0000000	.0000000	0	0	72/06/21	75/04/29
01032	CHROMIUM	HEX-VAL	UG/L	WATER		4	.0000000	.0000000	.0000000	0	0	72/06/21	75/04/29
01040	COPPER	CU,DISS	UG/L	WATER		4	25.00000	833.3300	28.86800	50	0	72/06/21	75/04/29
01049	LEAD	PB,DISS	UG/L	WATER		4	.0000000	.0000000	.0000000	0	0	72/06/21	75/04/29
01090	ZINC	ZN,DISS	UG/L	WATER		4	5.000000	100.0000	10.00000	20	0	72/06/21	75/04/29
31501	TOT COLI	MFIMENDO	/100ML	WATER		13	249080.0	8062E+07	283950.0	990000	10000	72/06/21	75/04/29
					L	1	8000.000			8000	8000	72/06/26	72/06/26
					TOT	14	231860.0	7857E+07	280320.0	990000	8000	72/06/21	75/04/29
31616	FEC COLI	MFM-FCBR	/100ML	WATER		14	35764.00	2594E+06	50935.00	200000	1800	72/06/21	75/04/29
31673	FECSTREP	MFKFAGAR	/100ML	WATER		14	12750.00	4686E+05	21649.00	87000	2600	72/06/21	75/04/29
39330	ALDRIN		TOT UG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	72/06/27	75/04/29
39350	CHLRDANE	TECH&MET	TOT UG/L	WATER	K	1	1.000000			1.000	1.000	75/04/29	75/04/29
39370	DDT	WHL SMPL	UG/L	WATER	K	1	10.00000			10.000	10.000	75/04/29	75/04/29
39380	DIELDRIN		TOTUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	72/06/27	75/04/29

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ARKANSAS RIVER NEAR GREAT BEND
20009 KANSAS BARTON
ARKANSAS 100210
/TYPA/AMBNT/STREAM
LOWER ARKANSAS BASIN
21KAN001 790818 11030004001 0025.420 ON
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
39390	ENDRIN		TOT UG/L	WATER	K	1	.3000000			.300	.300	75/04/29	75/04/29
39410	HEPTCHLR		TOTUG/L	WATER	K	1	1.000000			1.000	1.000	75/04/29	75/04/29
39420	HPCHLREP		TOTUG/L	WATER	K	1	1.000000			1.000	1.000	75/04/29	75/04/29
39480	MTHXYCLR	WHL SMPL	UG/L	WATER	K	1	50.00000			50.000	50.000	75/04/29	75/04/29
39782	LINDANE	WHL SMPL	UG/L	WATER	K	2	10.00000	.0000000	.0000000	10.000	10.000	72/06/27	75/04/29
46570	CAL HARD	CA MG	MG/L	WATER	$	14	371.2700	5472.900	73.97900	457	254	72/06/21	75/04/29
71851	NITRATE	DISS-NO3	MG/L	WATER		14	4.242900	1.739600	1.318900	6.6	2.4	72/06/21	75/04/29
71900	MERCURY	HG,TOTAL	UG/L	WATER		2	.5000000	.5000000	.7071100	1.0	.0	75/04/23	75/04/29
74041	WQF	SAMPLE	UPDATED	WATER		3	890210.0	.0000000	.0000000	890207	890207	72/06/27	75/04/29
82028	RATIO	FEC COL	FEC STRP	WATER	$	14	5.289200	38.55500	6.209300	25	.03	72/06/21	75/04/29

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ARKANSAS RIVER NEAR GREAT BEND
20009 KANSAS BARTON
ARKANSAS 100210
/TYPA/AMBNT/STREAM LOWER ARKANSAS BASIN
21KAN001 790818 HQ 11030008
0999 FEET DEPTH

	PARAMETER			MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		21	17.00000	19.80000	4.449700	23.0	10.0	71/04/21	77/06/21
00011	WATER	TEMP	FAHN	WATER	$	21	62.60000	64.15600	8.009800	73.4	50.0	71/04/21	77/06/21
00060	STREAM	FLOW	CFS	WATER		21	208.1400	83361.00	288.7200	1080	14	71/04/21	77/06/21
00070	TURB	JKSN	JTU	WATER		14	856.4300	323580.0	568.8400	1900.0	15.0	71/04/21	73/09/18
00076	TURB	TRBIDMTR	HACH FTU	WATER		7	63.14300	3297.500	57.42400	190.0	24.0	77/06/15	77/06/21
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		21	864.8600	169300.0	411.4700	1920	470	71/04/21	77/06/21
00300	DO		MG/L	WATER		21	6.685700	2.551300	1.597300	9.0	4.2	71/04/21	77/06/21
00301	DO	SATUR	PERCENT	WATER	$	21	67.73500	160.6300	12.67400	81.1	43.4	71/04/21	77/06/21
00310	BOD	5 DAY	MG/L	WATER		21	3.685700	3.012300	1.735600	7.5	1.3	71/04/21	77/06/21
00403	PH	LAB	SU	WATER		21	7.823800	.0199340	.1411900	8.0	7.6	71/04/21	77/06/21
00410	T ALK	CACO3	MG/L	WATER		21	157.6200	1454.300	38.13500	246	96	71/04/21	77/06/21
00440	HCO3 ION	HCO3	MG/L	WATER		21	189.6200	1646.900	40.58200	254	117	71/04/21	77/06/21
00445	CO3 ION	CO3	MG/L	WATER		13	3.692300	87.95100	9.378200	34	0	71/04/21	73/09/18
00530	RESIDUE	TOT NFLT	MG/L	WATER		7	115.0000	15667.00	125.1700	390	25	77/06/15	77/06/21
00610	NH3+NH4-	N TOTAL	MG/L	WATER		13	.6261500	.0854260	.2922800	1.200	.220	71/04/21	77/06/21
00612	UN-IONZD	NH3-N	MG/L	WATER	$	13	.0127040	.0000631	.0079468	.031	.004	71/04/21	77/06/21
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	13	.0154460	.0000933	.0096624	.038	.005	71/04/21	77/06/21
00650	T PO4	PO4	MG/L	WATER		21	1.789500	1.067700	1.033300	5.20	.76	71/04/21	77/06/21
00900	TOT HARD	CACO3	MG/L	WATER		21	323.3300	24066.00	155.1300	748	184	71/04/21	77/06/21
00902	NC HARD	CACO3	MG/L	WATER		7	120.5700	1031.600	32.11900	156	70	77/06/15	77/06/21
00915	CALCIUM	CA,DISS	MG/L	WATER		21	87.33300	1075.700	32.79900	166.0	50.0	71/04/21	77/06/21
00925	MGNSIUM	MG,DISS	MG/L	WATER		21	25.76200	345.1900	18.57900	81.0	9.0	71/04/21	77/06/21
00940	CHLORIDE	TOTAL	MG/L	WATER		21	74.95200	1809.800	42.54100	160	22	71/04/21	77/06/21
00945	SULFATE	SO4-TOT	MG/L	WATER		21	226.3800	29608.00	172.0700	684	106	71/04/21	77/06/21
01000	ARSENIC	AS,DISS	UG/L	WATER		4	.0000000	.0000000	.0000000	0	0	73/09/12	77/06/21
01025	CADMIUM	CD,DISS	UG/L	WATER		4	.0000000	.0000000	.0000000	0	0	73/09/12	77/06/21
01032	CHROMIUM	HEX-VAL	UG/L	WATER		4	.0000000	.0000000	.0000000	0	0	73/09/12	77/06/21
01040	COPPER	CU,DISS	UG/L	WATER		4	5.000000	100.0000	10.00000	20	0	73/09/12	77/06/21
01049	LEAD	PB,DISS	UG/L	WATER		4	35.00000	3300.000	57.44600	120	0	73/09/12	77/06/21
01075	SILVER	AG,DISS	UG/L	WATER		2	.0000000	.0000000	.0000000	.0	.0	77/06/15	77/06/21
01090	ZINC	ZN,DISS	UG/L	WATER		4	10.00000	400.0000	20.00000	40	0	73/09/12	77/06/21
31501	TOT COLI	MFIMENDO	/100ML	WATER		21	205630.0	6586E+07	256650.0	920000	940	71/04/21	77/06/21
31616	FEC COLI	MFM-FCBR	/100ML	WATER		19	34629.00	2610E+06	51089.00	231000	40	71/04/21	77/06/21
					K	2	5005.000	49900000	7064.000	10000	10	71/04/22	71/04/24
					TOT	21	31807.00	2430E+06	49305.00	231000	10	71/04/21	77/06/21
31673	FECSTREP	MFKFAGAR	/100ML	WATER		21	52441.00	1968E+07	140310.0	550000	600	71/04/21	77/06/21
39330	ALDRIN		TOT UG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	73/09/18	77/06/21
39350	CHLRDANE	TECH&MET	TOT UG/L	WATER	K	2	1.000000	.0000000	.0000000	1.000	1.000	73/09/18	77/06/21
39370	DDT	WHL SMPL	UG/L	WATER	K	2	10.00000	.0000000	.0000000	10.000	10.000	73/09/18	77/06/21

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ARKANSAS RIVER NEAR GREAT BEND
20009 KANSAS BARTON
ARKANSAS 100210
LOWER ARKANSAS BASIN
21KAN001 790818 HQ 11030008
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/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
39380	DIELDRIN		TOTUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	73/09/18	77/06/21
39390	ENDRIN		TOT UG/L	WATER	K	2	.3000000	.0000000	.0000000	.300	.300	73/09/18	77/06/21
39410	HEPTCHLR		TOTUG/L	WATER	K	2	1.000000	.0000000	.0000000	1.000	1.000	73/09/18	77/06/21
39420	HPCHLREP		TOTUG/L	WATER	K	2	1.000000	.0000000	.0000000	1.000	1.000	73/09/18	77/06/21
39480	MTHXYCLR	WHL SMPL	UG/L	WATER	K	2	50.00000	.0000000	.0000000	50.000	50.000	73/09/18	77/06/21
39782	LINDANE	WHL SMPL	UG/L	WATER	K	2	10.00000	.0000000	.0000000	10.000	10.000	73/09/18	77/06/21
46570	CAL HARD	CA MG	MG/L	WATER	$	21	324.1600	23846.00	154.4200	748	187	71/04/21	77/06/21
71851	NITRATE	DISS-NO3	MG/L	WATER		21	3.623800	5.030900	2.243000	9.3	1.1	71/04/21	77/06/21
71900	MERCURY	HG,TOTAL	UG/L	WATER		2	.0000000	.0000000	.0000000	.0	.0	77/06/15	77/06/21
74041	WQF	SAMPLE	UPDATED	WATER		2	890120.0	.0000000	.0000000	890117	890117	77/06/15	77/06/21
82028	RATIO	FEC COL	FEC STRP	WATER	$	21	8.405500	206.1100	14.35700	57	.005	71/04/21	77/06/21

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ARKANSAS RIVER NEAR DUNDEE
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0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00005	VSAMPLOC	DEPTH	% OF TOT	WATER		4	.0650000	.0005666	.0238050	.1	.05	95/05/24	95/11/29
00010	WATER	TEMP	CENT	WATER		19	14.42100	71.81300	8.474300	27.0	.0	90/04/23	96/12/18
00011	WATER	TEMP	FAHN	WATER	$	19	57.95800	232.6800	15.25400	80.6	32.0	90/04/23	96/12/18
00076	TURB	TRBIDMTR	HACH FTU	WATER		18	97.18900	36843.00	191.9500	810.0	.7	90/06/25	96/12/18
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		19	1053.900	452360.0	672.5700	2770	245	90/04/23	96/12/18
00300	DO		MG/L	WATER		19	9.015800	4.833700	2.198600	13.2	5.1	90/04/23	96/12/18
00301	DO	SATUR	PERCENT	WATER	$	19	86.02400	447.1600	21.14600	161.8	58.6	90/04/23	96/12/18
00310	BOD	5 DAY	MG/L	WATER		14	4.142900	7.984200	2.825600	10.7	1.1	90/04/23	95/11/29
					K	1	1.000000			1.0	1.0	93/11/17	93/11/17
					TOT	15	3.933300	8.072400	2.841200	10.7	1.0	90/04/23	95/11/29
00400	PH		SU	WATER		19	7.579000	3.464000	1.861200	8.70	.00	90/04/23	96/12/18
00403	PH	LAB	SU	WATER		1	7.820000			7.8	7.8	96/08/28	96/08/28
00410	T ALK	CACO3	MG/L	WATER		19	164.5500	2567.700	50.67300	259	74	90/04/23	96/12/18
00530	RESIDUE	TOT NFLT	MG/L	WATER		19	177.0500	136060.0	368.8600	1590	3	90/04/23	96/12/18
00610	NH3+NH4-	N TOTAL	MG/L	WATER		10	.1235000	.0159430	.1262700	.445	.010	90/08/27	96/10/23
					K	9	.0377780	.0003444	.0185590	.050	.010	90/04/23	96/12/18
					TOT	19	.0828950	.0100580	.1002900	.445	.010	90/04/23	96/12/18
00612	UN-IONZD	NH3-N	MG/L	WATER	$	19	.0022008	.0000084	.0029000	.012	4580E-15	90/04/23	96/12/18
00613	NO2-N	DISS	MG/L	WATER		1	.0700000			.070	.070	96/06/26	96/06/26
					K	3	.0500000	.0000000	.0000000	.050	.050	96/08/28	96/12/18
					TOT	4	.0550000	.0001000	.0100000	.070	.050	96/06/26	96/12/18
00618	NO3-N	DISS	MG/L	WATER		8	.7062500	.2617100	.5115800	1.54	.11	95/05/24	96/12/18
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	19	.0026759	.0000124	.0035260	.015	5569E-15	90/04/23	96/12/18
00630	NO2&NO3	N-TOTAL	MG/L	WATER		11	.9527300	.7612200	.8724800	3.01	.01	90/04/23	94/06/29
00665	PHOS-TOT		MG/L P	WATER		15	.4590700	.1727800	.4156700	1.540	.050	90/06/25	96/12/18
					K	4	.0300000	.0005333	.0230940	.050	.010	90/04/23	95/11/29
					TOT	19	.3687400	.1667700	.4083700	1.540	.010	90/04/23	96/12/18
00671	PHOS-DIS	ORTHO	MG/L P	WATER		6	.2016700	.0158170	.1257700	.400	.080	95/05/24	96/12/18
					K	2	.0100000	.0000000	.0000000	.010	.010	95/09/27	95/11/29
					TOT	8	.1537500	.0191700	.1384600	.400	.010	95/05/24	96/12/18
00900	TOT HARD	CACO3	MG/L	WATER		19	348.5300	36503.00	191.0600	842	122	90/04/23	96/12/18
00916	CALCIUM	CA-TOT	MG/L	WATER		19	95.04700	1866.800	43.20600	206.0	40.7	90/04/23	96/12/18
00927	MGNSIUM	MG,TOT	MG/L	WATER		19	27.10100	419.4600	20.48100	79.4	4.9	90/04/23	96/12/18
00929	SODIUM	NA,TOT	MG/L	WATER		19	73.11800	3251.800	57.02500	215.00	4.99	90/04/23	96/12/18
00937	PTSSIUM	K,TOT	MG/L	WATER		19	10.76700	13.86800	3.723900	18.60	5.95	90/04/23	96/12/18
00940	CHLORIDE	TOTAL	MG/L	WATER		11	50.30000	594.9400	24.39200	83	7	90/04/23	94/06/29
00941	CHLORIDE	DISS IN WTR	MG/L	WATER		8	53.08400	1336.100	36.55300	98	5	95/05/24	96/12/18
00945	SULFATE	SO4-TOT	MG/L	WATER		11	197.6400	12068.00	109.8600	335	19	90/04/23	94/06/29
00946	SULFATE	SO4-DISS	MG/L	WATER		8	382.7500	156730.0	395.8900	1075.0	13.2	95/05/24	96/12/18

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ARKANSAS RIVER NEAR DUNDEE
20009 KANSAS BARTON
ARKANSAS RIVER 100203
ARKANSAS UNIT
21KAN001 900908 11030004002 0012.140 ON
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00950	FLUORIDE	F,DISS	MG/L	WATER		8	.4787500	.0551560	.2348500	.74	.15	95/05/24	96/12/18
00951	FLUORIDE	F,TOTAL	MG/L	WATER		3	.8500000	.0268000	.1637100	1.03	.71	93/11/17	94/06/29
00955	SILICA	DISOLVED	MG/L	WATER		4	30.77000	847.0900	29.10500	73.1	9.9	95/05/24	95/11/29
00956	SILICA	TOTAL	MG/L	WATER		15	36.41300	1040.100	32.25000	117.0	10.2	90/04/23	96/12/18
01002	ARSENIC	AS,TOT	UG/L	WATER		12	4.000000	7.338200	2.708900	11	1	93/07/28	96/10/23
					K	7	21.71400	406.9100	20.17200	50	1	90/04/23	96/12/18
					TOT	19	10.52600	217.1900	14.73800	50	1	90/04/23	96/12/18
01007	BARIUM	BA,TOT	UG/L	WATER		19	153.6300	9035.000	95.05300	497	88	90/04/23	96/12/18
01012	BERYLIUM	BE,TOT	UG/L	WATER		1	2.000000			2.00	2.00	96/06/26	96/06/26
					K	18	1.333300	.5882400	.7669700	3.00	1.00	90/04/23	96/12/18
					TOT	19	1.368400	.5789500	.7608900	3.00	1.00	90/04/23	96/12/18
01022	BORON	B,TOT	UG/L	WATER		19	139.1600	4215.400	64.92600	261	49	90/04/23	96/12/18
01027	CADMIUM	CD,TOT	UG/L	WATER		3	1.033300	.0033341	.0577410	1	1	94/06/29	96/06/26
					K	16	2.018800	3.121600	1.766800	5	.1	90/04/23	96/12/18
					TOT	19	1.863200	2.738000	1.654700	5	.1	90/04/23	96/12/18
01034	CHROMIUM	CR,TOT	UG/L	WATER		10	7.000000	26.75100	5.172200	15	2	92/08/19	96/12/18
					K	9	7.333300	11.50000	3.391200	10	1	90/04/23	95/09/27
					TOT	19	7.157900	18.51600	4.303000	15	1	90/04/23	96/12/18
01037	COBALT	CO,TOTAL	UG/L	WATER		1	13.00000			13	13	96/06/26	96/06/26
					K	17	8.941200	5.558800	2.357700	10	4	90/06/25	96/12/18
					TOT	18	9.166700	6.147100	2.479300	13	4	90/06/25	96/12/18
01042	COPPER	CU,TOT	UG/L	WATER		17	16.22900	212.7000	14.58400	67	5	90/04/23	96/12/18
					K	2	10.00000	.0000000	.0000000	10	10	93/11/17	94/06/29
					TOT	19	15.57400	192.9200	13.89000	67	5	90/04/23	96/12/18
01045	IRON	FE,TOT	UG/L	WATER		19	3146.300	18323000	4280.500	14400	95	90/04/23	96/12/18
01051	LEAD	PB,TOT	UG/L	WATER		13	6.969200	58.54100	7.651200	30	3	90/08/27	96/12/18
					K	3	17.33300	800.3300	28.29000	50	1	90/04/23	95/09/27
					TOT	16	8.912500	171.0000	13.07700	50	1	90/04/23	96/12/18
01055	MANGNESE	MN	UG/L	WATER		19	257.0000	35893.00	189.4600	740.0	59.0	90/04/23	96/12/18
01059	THALLIUM	TL,TOTAL	UG/L	WATER	K	19	43.42100	172.3700	13.12900	50	15	90/04/23	96/12/18
01062	MOLY	MO,TOT	UG/L	WATER		1	6.000000			6	6	90/06/25	90/06/25
					K	17	10.35300	18.99300	4.358100	20	1	90/08/27	96/12/18
					TOT	18	10.11100	18.92800	4.350700	20	1	90/06/25	96/12/18
01067	NICKEL	NI,TOTAL	UG/L	WATER		8	10.85000	119.5900	10.93600	37	2	92/08/19	96/12/18
					K	11	33.54600	523.0800	22.87100	50	1	90/04/23	95/09/27
					TOT	19	23.99000	469.6400	21.67100	50	1	90/04/23	96/12/18
01077	SILVER	AG,TOT	UG/L	WATER	K	19	5.105300	16.87700	4.108200	10.0	1.0	90/04/23	96/12/18
01087	VANADIUM	V,TOT	UG/L	WATER		11	16.72700	127.2200	11.27900	45	5	92/08/19	96/12/18
					K	7	4.428600	.9524000	.9759100	5	3	90/06/25	95/11/29

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ARKANSAS RIVER NEAR DUNDEE
20009 KANSAS BARTON
ARKANSAS RIVER 100203
/TYPA/AMBNT/STREAM ARKANSAS UNIT
21KAN001 900908 11030004002 0012.140 ON
0000 FEET DEPTH

PARAMETER		MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01087 VANADIUM V,TOT	UG/L	WATER	TOT	18	11.94500	113.2300	10.64100	45	3	90/06/25	96/12/18
01092 ZINC ZN,TOT	UG/L	WATER		19	163.9000	115460.0	339.7900	1410	10	90/04/23	96/12/18
01097 ANTIMONY SB,TOT	UG/L	WATER		5	111.6000	5024.800	70.88600	213	20	92/08/19	96/12/18
			K	14	45.71400	72.52900	8.516400	50	30	90/04/23	95/11/29
			TOT	19	63.05300	2057.500	45.36000	213	20	90/04/23	96/12/18
01105 ALUMINUM AL,TOT	UG/L	WATER		18	4679.700	40632000	6374.300	22000	50	90/04/23	96/12/18
			K	1	50.00000			50	50	95/11/29	95/11/29
			TOT	19	4436.100	39502000	6285.100	22000	50	90/04/23	96/12/18
01147 SELENIUM SE,TOT	UG/L	WATER		12	4.900000	11.91100	3.451200	10	1	90/04/23	96/12/18
			K	4	14.00000	576.0000	24.00000	50	2	93/05/12	96/08/28
			TOT	16	7.175000	140.5000	11.85300	50	1	90/04/23	96/12/18
31616 FEC COLI MFM-FCBR	/100ML	WATER		17	3117.100	56650000	7526.700	31000	30	90/08/27	96/12/18
			K	2	100.0000	.0000000	.0000000	100	100	90/04/23	90/06/25
			TOT	19	2799.500	51261000	7159.700	31000	30	90/04/23	96/12/18
31673 FECSTREP MFKFAGAR	/100ML	WATER		18	2904.100	38489000	6203.900	26000	40	90/06/25	96/12/18
			K	1	100.0000			100	100	90/04/23	90/04/23
			TOT	19	2756.500	36764000	6063.400	26000	40	90/04/23	96/12/18
34259 DELTABHC	TOTUG/L	WATER	K	1	.0500000			.050	.050	96/08/28	96/08/28
34351 ENDSULSF	TOTUG/L	WATER	K	1	.1000000			.100	.100	96/08/28	96/08/28
34356 B-ENDO SULFAN	TOTWUG/L	WATER	K	1	.0200000			.020	.020	96/08/28	96/08/28
34361 A-ENDO SULFAN	TOTWUG/L	WATER	K	1	.0200000			.020	.020	96/08/28	96/08/28
34671 PCB 1016	TOTWUG/L	WATER	K	8	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/08/28
39024 PROPAZIN WTR CCM	UG/L	WATER	K	8	.5250000	.1735700	.4166200	1.20	.30	90/04/23	96/08/28
39033 ATRZ WHL SMPL	UG/L	WATER		4	.9700000	.8116700	.9009300	2.300	.340	93/05/12	96/08/28
			K	4	.7500000	.2700000	.5196200	1.200	.300	90/04/23	95/11/29
			TOT	8	.8600000	.4774000	.6909400	2.300	.300	90/04/23	96/08/28
39045 2,4,5-TP WTR SMPL	UG/L	WATER	K	8	.4000000	.0000000	.0000000	.400	.400	90/04/23	96/08/28
39055 SIMAZINE WH.WATER	(UG/L)	WATER	K	3	.3000000	.0000000	.0000000	.3	.3	95/07/26	96/08/28
39300 P,P'DDT	TOT UG/L	WATER	K	1	.1000000			.100	.100	96/08/28	96/08/28
39310 P,P'DDD	TOT UG/L	WATER	K	1	.0400000			.040	.040	96/08/28	96/08/28
39320 P,P'DDE	TOT UG/L	WATER	K	1	.0200000			.020	.020	96/08/28	96/08/28
39330 ALDRIN	TOT UG/L	WATER	K	8	.0250000	.0000000	.0000000	.025	.025	90/04/23	96/08/28
39337 ALPHABHC	TOTUG/L	WATER	K	1	.0250000			.025	.025	96/08/28	96/08/28
39338 BETA BHC	TOTUG/L	WATER	K	1	.0500000			.050	.050	96/08/28	96/08/28
39340 GAMMABHC LINDANE	TOT.UG/L	WATER	K	5	.0250000	.0000000	.0000000	.025	.025	90/04/23	94/04/27
39350 CHLRDANE TECH&MET	TOT UG/L	WATER	K	8	.2000000	.0000000	.0000000	.200	.200	90/04/23	96/08/28
39356 METOCLR (DUAL)	UG/L	WATER	K	8	.2500000	.0000000	.0000000	.25	.25	90/04/23	96/08/28
39380 DIELDRIN	TOTUG/L	WATER	K	8	.0500000	.0000000	.0000000	.050	.050	90/04/23	96/08/28
39390 ENDRIN	TOT UG/L	WATER	K	8	.1000000	.0000000	.0000000	.100	.100	90/04/23	96/08/28

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39400	TOXAPHEN		TOTUG/L	WATER	K	8	2.000000	.0000000	.0000000	2.000	2.000	90/04/23	96/08/28
39410	HEPTCHLR		TOTUG/L	WATER	K	8	.0200000	.0000000	.0000000	.020	.020	90/04/23	96/08/28
39420	HPCHLREP		TOTUG/L	WATER	K	8	.0200000	.0000000	.0000000	.020	.020	90/04/23	96/08/28
39480	MTHXYCLR	WHL SMPL	UG/L	WATER	K	8	.2000000	.0000000	.0000000	.200	.200	90/04/23	96/08/28
39488	PCB-1221		TOTUG/L	WATER	K	8	2.312500	.2812500	.5303300	2.500	1.000	90/04/23	96/08/28
39492	PCB-1232		TOTUG/L	WATER	K	8	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/08/28
39496	PCB-1242		TOTUG/L	WATER	K	8	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/08/28
39500	PCB-1248		TOTUG/L	WATER	K	8	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/08/28
39504	PCB-1254		TOTUG/L	WATER	K	8	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/08/28
39508	PCB-1260		TOTUG/L	WATER	K	8	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/08/28
39700	HCB		TOT UG/L	WATER	K	3	.1000000	.0000000	.0000000	.100	.100	95/07/26	96/08/28
39720	PICLORAM	WHL SMPL	UG/L	WATER	K	8	.8000000	.0000000	.0000000	.800	.800	90/04/23	96/08/28
39730	2,4-D	WHL SMPL	UG/L	WATER	K	8	.8000000	.0000000	.0000000	.800	.800	90/04/23	96/08/28
39740	2,4,5-T	WHL SMPL	UG/L	WATER	K	8	.4000000	.0000000	.0000000	.400	.400	90/04/23	96/08/28
39770	DACTHAL	WHL SMPL	UG/L	WATER	K	8	.0500000	.0000000	.0000000	.050	.050	90/04/23	96/08/28
39782	LINDANE	WHL SMPL	UG/L	WATER	K	3	.0250000	.0000000	.0000000	.025	.025	95/07/26	96/08/28
46570	CAL HARD	CA MG	MG/L	WATER	$	19	348.9300	36462.00	190.9500	841	122	90/04/23	96/12/18
49259	ACTOCHLR	UNFLTR	RECVUG/L	WATER	K	1	.1000000			.1	.1	96/08/28	96/08/28
70301	DISS SOL	SUM	MG/L	WATER		19	672.5300	182720.0	427.4600	1827	166	90/04/23	96/12/18
71900	MERCURY	HG,TOTAL	UG/L	WATER	K	9	.5000000	.0000000	.0000000	.5	.5	90/04/23	96/12/18
74041	WQF	SAMPLE	UPDATED	WATER		19	943780.0	4376E+05	20919.00	970626	911018	90/04/23	96/12/18
77729	RAMROD	TOTAL	UG/L	WATER	K	8	.2500000	.0000000	.0000000	.250	.250	90/04/23	96/08/28
77780	BLADEX	TOTAL	UG/L	WATER	K	8	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/08/28
77825	ALACHLOR	TOTAL	UG/L	WATER	K	8	.1375000	.0048215	.0694370	.250	.100	90/04/23	96/08/28
77860	BUTACHLO	TOTAL	UG/L	WATER	K	3	.5000000	.0000000	.0000000	.500	.500	95/07/26	96/08/28
81405	CRBFURAN	TOT	UG/L	WATER	K	1	.5000000			.500	.500	96/08/28	96/08/28
81408	MTRBUZIN	TOT	UG/L	WATER	K	8	.1000000	.0000000	.0000000	.100	.100	90/04/23	96/08/28
82028	RATIO	FEC COL	FEC STRP	WATER	$	19	1.497600	5.595200	2.365400	10	.08	90/04/23	96/12/18
82079	TURBIDTY	LAB	NTU	WATER		1	3.000000			3.0	3.0	90/04/23	90/04/23
82298	BROMIDE	DISS.BR	UG/L	WATER		8	.2450000	.0402290	.2005700	.570	.050	95/05/24	96/12/18

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ARKANSAS RIVER NEAR KINSLEY
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PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		12	17.33300	15.87900	3.984900	22.0	10.0	72/06/21	75/04/29
00011	WATER	TEMP	FAHN	WATER	$	12	63.20000	51.46300	7.173800	71.6	50.0	72/06/21	75/04/29
00060	STREAM	FLOW	CFS	WATER		14	79.64300	541.0200	23.26000	111	55	72/06/21	75/04/29
00070	TURB	JKSN	JTU	WATER		7	177.1400	657.1600	25.63500	200.0	150.0	72/06/21	72/06/27
00076	TURB	TRBIDMTR	HACH FTU	WATER		7	31.71400	5512.900	74.24900	200.0	1.0	75/04/23	75/04/29
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		14	1410.000	7768.600	88.14000	1590	1270	72/06/21	75/04/29
00300	DO		MG/L	WATER		14	7.514300	5.172100	2.274200	14.9	5.9	72/06/21	75/04/29
00301	DO	SATUR	PERCENT	WATER	$	12	79.56100	693.0200	26.32500	156.9	57.9	72/06/21	75/04/29
00310	BOD	5 DAY	MG/L	WATER		14	3.678600	5.069500	2.251600	9.3	1.0	72/06/21	75/04/29
00403	PH	LAB	SU	WATER		14	8.017900	.0929800	.3049300	8.3	7.2	72/06/21	75/04/29
00410	T ALK	CACO3	MG/L	WATER		14	269.5700	246.3500	15.69600	288	240	72/06/21	75/04/29
00440	HCO3 ION	HCO3	MG/L	WATER		14	310.7200	475.7700	21.81200	346	278	72/06/21	75/04/29
00445	CO3 ION	CO3	MG/L	WATER		15	8.173300	86.96500	9.325500	26	0	72/06/21	75/04/29
00530	RESIDUE	TOT NFLT	MG/L	WATER		7	27.14300	3436.500	58.62200	160	2	75/04/23	75/04/29
00650	T PO4	PO4	MG/L	WATER		14	2.210000	.5595700	.7480400	3.50	.54	72/06/21	75/04/29
00900	TOT HARD	CACO3	MG/L	WATER		14	564.8600	4513.400	67.18200	660	416	72/06/21	75/04/29
00902	NC HARD	CACO3	MG/L	WATER		7	247.7200	1780.600	42.19700	300	176	75/04/23	75/04/29
00915	CALCIUM	CA,DISS	MG/L	WATER		14	128.5000	1771.200	42.08600	179.0	14.0	72/06/21	75/04/29
00925	MGNSIUM	MG,DISS	MG/L	WATER		14	51.71400	527.1400	22.96000	119.0	21.0	72/06/21	75/04/29
00940	CHLORIDE	TOTAL	MG/L	WATER		14	68.78600	176.5000	13.28500	110	57	72/06/21	75/04/29
00945	SULFATE	SO4-TOT	MG/L	WATER		14	429.5000	3312.200	57.55100	530	290	72/06/21	75/04/29
31501	TOT COLI	MFIMENDO	/100ML	WATER		13	25912.00	3515E+06	59293.00	219000	160	72/06/21	75/04/29
					K	1	100.0000			100	100	75/04/23	75/04/23
					TOT	14	24068.00	3292E+06	57383.00	219000	100	72/06/21	75/04/29
31616	FEC COLI	MFM-FCBR	/100ML	WATER		8	1130.000	4241000	2059.400	5900	50	72/06/21	75/04/29
					K	6	40.00000	2160.000	46.47600	100	10	72/06/27	75/04/28
					TOT	14	662.8600	2597800	1611.800	5900	10	72/06/21	75/04/29
31673	FECSTREP	MFKFAGAR	/100ML	WATER		14	6649.300	2495E+05	15796.00	59000	80	72/06/21	75/04/29
46570	CAL HARD	CA MG	MG/L	WATER	$	14	533.8200	10666.00	103.2800	660	253	72/06/21	75/04/29
71851	NITRATE	DISS-NO3	MG/L	WATER		14	5.850000	8.924300	2.987400	11.0	2.2	72/06/21	75/04/29
74041	WQF	SAMPLE	UPDATED	WATER		1	860620.0			860624	860624	75/04/29	75/04/29
82028	RATIO	FEC COL	FEC STRP	WATER	$	14	.2141300	.0780060	.2793000	1	.02	72/06/21	75/04/29

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ARKANSAS RIVER NEAR KINSLEY
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PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00005	VSAMPLOC	DEPTH	% OF TOT	WATER		4	.0675000	.0002916	.0170790	.09	.05	95/05/24	95/11/29
					K	1	.0500000			.05	.05	95/03/29	95/03/29
					TOT	5	.0640000	.0002800	.0167330	.09	.05	95/03/29	95/11/29
00010	WATER	TEMP	CENT	WATER		37	12.64900	66.62300	8.162300	27.0	.0	90/04/23	96/12/18
00011	WATER	TEMP	FAHN	WATER	$	37	54.76800	215.8600	14.69200	80.6	32.0	90/04/23	96/12/18
00057	IND OF	FLOW	CHECKED	WATER		15	.0000000	.0000000	.0000000	0	0	90/04/23	92/08/19
00060	STREAM	FLOW	CFS	WATER		15	2.016000	25.05700	5.005700	20	.1	90/04/23	92/08/19
00076	TURB	TRBIDMTR	HACH FTU	WATER		37	8.118100	128.7200	11.34600	45.0	.9	90/04/23	96/12/18
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		37	1789.300	283200.0	532.1600	3880	1330	90/04/23	96/12/18
00300	DO		MG/L	WATER		37	6.932400	13.02400	3.608900	13.2	.8	90/04/23	96/12/18
00301	DO	SATUR	PERCENT	WATER	$	37	63.45600	1271.400	35.65700	163.0	8.9	90/04/23	96/12/18
00310	BOD	5 DAY	MG/L	WATER		27	2.526700	2.668300	1.633500	9.2	1.1	90/04/23	95/11/29
					K	2	1.000000	.0000000	.0000000	1.0	1.0	93/11/17	95/09/27
					TOT	29	2.421400	2.632700	1.622600	9.2	1.0	90/04/23	95/11/29
00400	PH		SU	WATER		37	7.545900	1.770500	1.330600	8.90	.00	90/04/23	96/12/18
00403	PH	LAB	SU	WATER		1	7.800000			7.8	7.8	96/08/28	96/08/28
00410	T ALK	CACO3	MG/L	WATER		37	226.3000	877.0300	29.61500	271	132	90/04/23	96/12/18
00440	HCO3 ION	HCO3	MG/L	WATER		1	.0000000			0	0	90/04/23	90/04/23
00530	RESIDUE	TOT NFLT	MG/L	WATER		37	27.89200	1941.600	44.06300	220	2	90/04/23	96/12/18
00610	NH3+NH4-	N TOTAL	MG/L	WATER		23	.0959130	.0067406	.0821010	.350	.010	90/06/25	96/10/23
					K	14	.0450000	.0001653	.0128600	.050	.010	90/04/23	96/12/18
					TOT	37	.0766490	.0048056	.0693220	.350	.010	90/04/23	96/12/18
00612	UN-IONZD	NH3-N	MG/L	WATER	$	37	.0025824	.0000666	.0081624	.049	2931E-14	90/04/23	96/12/18
00613	NO2-N	DISS	MG/L	WATER		2	.0650000	.0004500	.0212140	.080	.050	96/02/28	96/04/24
					K	4	.0500000	.0000000	.0000000	.050	.050	96/06/26	96/12/18
					TOT	6	.0550000	.0001500	.0122480	.080	.050	96/02/28	96/12/18
00618	NO3-N	DISS	MG/L	WATER		11	1.296400	.6442900	.8026700	2.55	.14	95/03/29	96/12/18
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	37	.0031399	.0000984	.0099246	.060	3564E-14	90/04/23	96/12/18
00630	NO2&NO3	N-TOTAL	MG/L	WATER		26	1.137700	.7206500	.8489100	2.78	.01	90/04/23	94/10/19
00665	PHOS-TOT		MG/L P	WATER		24	.1300800	.0256190	.1600600	.670	.016	90/04/23	96/12/18
					K	13	.0500000	.0000000	.0000000	.050	.050	91/09/25	94/04/27
					TOT	37	.1019500	.0178700	.1336800	.670	.016	90/04/23	96/12/18
00671	PHOS-DIS	ORTHO	MG/L P	WATER		5	.0660000	.0020300	.0450560	.130	.020	95/09/27	96/12/18
					K	6	.0100000	.0000000	.0000000	.010	.010	95/03/29	96/04/24
					TOT	11	.0354550	.0016673	.0408320	.130	.010	95/03/29	96/12/18
00900	TOT HARD	CACO3	MG/L	WATER		36	583.7800	27416.00	165.5800	1275	402	90/04/23	96/12/18
00901	C HARD	CACO3	MG/L	WATER		1	205.0000			205	205	90/04/23	90/04/23
00902	NC HARD	CACO3	MG/L	WATER		1	367.0000			367	367	90/04/23	90/04/23
00916	CALCIUM	CA-TOT	MG/L	WATER		36	147.9700	1167.400	34.16700	290.0	103.0	90/04/23	96/12/18

000587
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ARKANSAS RIVER NEAR KINSLEY
20047 KANSAS EDWARDS
ARKANSAS RIVER 100203
ARKANSAS UNIT
21KAN001 900908 11030004010 0013.240 ON
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00927	MGNSIUM	MG,TOT	MG/L	WATER		36	52.31600	403.3900	20.08500	134.0	32.3	90/04/23	96/12/18
00929	SODIUM	NA,TOT	MG/L	WATER		36	147.2100	2518.000	50.18000	334.00	89.50	90/04/23	96/12/18
00937	PTSSIUM	K,TOT	MG/L	WATER		36	7.566100	4.438700	2.106800	15.20	4.41	90/04/23	96/12/18
00940	CHLORIDE	TOTAL	MG/L	WATER		26	54.21200	35.25500	5.937600	70	45	90/04/23	94/10/19
00941	CHLORIDE	DISS IN WTR	MG/L	WATER		11	67.14500	792.4000	28.15000	124	46	95/03/29	96/12/18
00945	SULFATE	SO4-TOT	MG/L	WATER		26	541.8900	962.4400	31.02300	607	476	90/04/23	94/10/19
00946	SULFATE	SO4-DISS	MG/L	WATER		11	815.1800	213870.0	462.4600	1768.0	357.0	95/03/29	96/12/18
00950	FLUORIDE	F,DISS	MG/L	WATER		11	1.146400	.0918080	.3030000	1.57	.64	95/03/29	96/12/18
00951	FLUORIDE	F,TOTAL	MG/L	WATER		5	1.426000	.1695300	.4117400	1.73	.71	93/11/17	94/10/19
00955	SILICA	DISOLVED	MG/L	WATER		7	14.25300	18.45100	4.295400	20.6	8.5	94/08/24	95/11/29
00956	SILICA	TOTAL	MG/L	WATER		29	13.74700	24.42900	4.942600	30.5	4.8	90/04/23	96/12/18
01002	ARSENIC	AS,TOT	UG/L	WATER		12	3.150000	8.700900	2.949700	12	1	90/10/22	96/08/28
					K	24	16.57500	244.5300	15.63700	50	.9	90/04/23	96/12/18
					TOT	36	12.10000	204.6200	14.30500	50	.9	90/04/23	96/12/18
01007	BARIUM	BA,TOT	UG/L	WATER		36	55.91700	884.5400	29.74100	204	23	90/04/23	96/12/18
01012	BERYLIUM	BE,TOT	UG/L	WATER	K	36	1.472200	2.542100	1.594400	10.00	1.00	90/04/23	96/12/18
01022	BORON	B,TOT	UG/L	WATER		36	211.8300	6589.300	81.17500	456	98	90/04/23	96/12/18
01027	CADMIUM	CD,TOT	UG/L	WATER		2	3.000000	2.000000	1.414200	4	2	90/08/27	91/03/26
					K	34	1.805900	2.004800	1.415900	5	.1	90/04/23	96/12/18
					TOT	36	1.872200	2.024400	1.422800	5	.1	90/04/23	96/12/18
01034	CHROMIUM	CR,TOT	UG/L	WATER		16	3.525000	2.743400	1.656300	7	1	90/10/22	96/12/18
					K	20	6.400000	15.09500	3.885200	10	1	90/04/23	96/06/26
					TOT	36	5.122200	11.46900	3.386600	10	1	90/04/23	96/12/18
01037	COBALT	CO,TOTAL	UG/L	WATER		1	10.00000			10	10	96/12/18	96/12/18
					K	34	7.529400	8.984000	2.997300	10	4	90/06/25	96/10/23
					TOT	35	7.600000	8.894200	2.982300	10	4	90/06/25	96/12/18
01042	COPPER	CU,TOT	UG/L	WATER		32	14.24400	165.7400	12.87400	80	3	90/04/23	96/12/18
					K	4	10.00000	.0000000	.0000000	10	10	93/09/29	94/10/19
					TOT	36	13.77200	148.6300	12.19100	80	3	90/04/23	96/12/18
01045	IRON	FE,TOT	UG/L	WATER		36	425.0000	212030.0	460.4700	2640	95	90/04/23	96/12/18
01051	LEAD	PB,TOT	UG/L	WATER		11	2.836400	1.292600	1.136900	6	1	90/12/10	96/12/18
					K	17	10.74100	371.9300	19.28600	50	.9	90/04/23	96/06/26
					TOT	28	7.635700	236.3400	15.37300	50	.9	90/04/23	96/12/18
01055	MANGNESE	MN	UG/L	WATER		36	271.4700	42161.00	205.3300	964.0	28.0	90/04/23	96/12/18
01059	THALLIUM	TL,TOTAL	UG/L	WATER	K	35	36.57200	280.5500	16.75000	50	15	90/06/25	96/12/18
01062	MOLY	MO,TOT	UG/L	WATER		6	2.500000	3.500000	1.870800	6	1	90/06/25	92/08/19
					K	29	8.620700	22.31500	4.723900	20	1	90/08/27	96/12/18
					TOT	35	7.571400	24.37000	4.936600	20	1	90/06/25	96/12/18
01067	NICKEL	NI,TOTAL	UG/L	WATER		8	8.087500	73.32100	8.562800	29	3	92/06/24	96/12/18

000587
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ARKANSAS RIVER NEAR KINSLEY
20047 KANSAS EDWARDS
ARKANSAS RIVER 100203
ARKANSAS UNIT
21KAN001 900908 11030004010 0013.240 ON
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01067	NICKEL	NI,TOTAL	UG/L	WATER	K	28	18.10700	427.2100	20.66900	50	1	90/04/23	96/06/26
01067	NICKEL	NI,TOTAL	UG/L	WATER	TOT	36	15.88100	362.0800	19.02800	50	1	90/04/23	96/12/18
01077	SILVER	AG,TOT	UG/L	WATER	K	36	4.777800	12.86400	3.586600	10.0	1.0	90/04/23	96/12/18
01087	VANADIUM	V,TOT	UG/L	WATER		3	4.333300	2.333400	1.527500	6	3	91/03/26	96/04/24
					K	32	4.250000	.9677400	.9837400	5	3	90/06/25	96/12/18
					TOT	35	4.257200	1.020200	1.010000	6	3	90/06/25	96/12/18
01092	ZINC	ZN,TOT	UG/L	WATER		36	35.50000	2126.600	46.11500	226	7	90/04/23	96/12/18
01097	ANTIMONY	SB,TOT	UG/L	WATER		10	76.90000	4461.900	66.79700	192	10	91/03/26	96/12/18
					K	25	35.60000	317.3300	17.81400	50	10	90/06/25	95/11/29
					TOT	35	47.40000	1763.400	41.99300	192	10	90/06/25	96/12/18
01105	ALUMINUM	AL,TOT	UG/L	WATER		35	332.0900	240770.0	490.6800	2920	40	90/04/23	96/12/18
					K	1	50.00000			50	50	95/07/26	95/07/26
					TOT	36	324.2500	236100.0	485.9000	2920	40	90/04/23	96/12/18
01147	SELENIUM	SE,TOT	UG/L	WATER		17	5.676500	7.029400	2.651300	12	2	91/03/26	96/12/18
					K	11	12.83600	410.5400	20.26200	50	1	90/04/23	96/06/26
					TOT	28	8.489300	168.9000	12.99600	50	1	90/04/23	96/12/18
31616	FEC COLI	MFM-FCBR	/100ML	WATER		28	12964.00	4161E+06	64510.00	342000	10	90/06/25	96/12/18
					K	9	60.00000	2250.000	47.43400	100	10	90/04/23	96/02/28
					TOT	37	9825.400	3152E+06	56148.00	342000	10	90/04/23	96/12/18
31673	FECSTREP	MFKFAGAR	/100ML	WATER		33	1464.100	18655000	4319.100	19000	10	90/06/25	96/12/18
					K	4	32.50000	2025.000	45.00000	100	10	90/04/23	96/02/28
					TOT	37	1309.400	16786000	4097.000	19000	10	90/04/23	96/12/18
34259	DELTABHC		TOTUG/L	WATER	K	3	.0500000	.0000000	.0000000	.050	.050	96/02/28	96/10/23
34351	ENDSULSF		TOTUG/L	WATER	K	3	.1000000	.0000000	.0000000	.100	.100	96/02/28	96/10/23
34356	B-ENDO	SULFAN	TOTWUG/L	WATER	K	3	.0200000	.0000000	.0000000	.020	.020	96/02/28	96/10/23
34361	A-ENDO	SULFAN	TOTWUG/L	WATER	K	3	.0200000	.0000000	.0000000	.020	.020	96/02/28	96/10/23
34671	PCB	1016	TOTWUG/L	WATER	K	20	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/10/23
39024	PROPAZIN	WTR CCM	UG/L	WATER		1	.3200000			.32	.32	95/03/29	95/03/29
					K	19	.7736800	.2131600	.4616900	1.20	.30	90/04/23	96/10/23
					TOT	20	.7510000	.2122300	.4606900	1.20	.30	90/04/23	96/10/23
39033	ATRZ	WHL SMPL	UG/L	WATER		1	.3300000			.330	.330	96/06/26	96/06/26
					K	19	.7736800	.2131600	.4616900	1.200	.300	90/04/23	96/10/23
					TOT	20	.7515000	.2117800	.4602000	1.200	.300	90/04/23	96/10/23
39045	2,4,5-TP	WTR SMPL	UG/L	WATER	K	20	.4000000	.0000000	.0000000	.400	.400	90/04/23	96/10/23
39055	SIMAZINE	WH.WATER	(UG/L)	WATER	K	7	.3000000	.0000000	.0000000	.3	.3	94/08/24	96/10/23
39300	P,P'DDT		TOT UG/L	WATER	K	3	.1000000	.0000000	.0000000	.100	.100	96/02/28	96/10/23
39310	P,P'DDD		TOT UG/L	WATER	K	3	.0400000	.0000000	.0000000	.040	.040	96/02/28	96/10/23
39320	P,P'DDE		TOT UG/L	WATER	K	3	.0200000	.0000000	.0000000	.020	.020	96/02/28	96/10/23
39330	ALDRIN		TOT UG/L	WATER	K	20	.0250000	.0000000	.0000000	.025	.025	90/04/23	96/10/23

000587
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ARKANSAS RIVER NEAR KINSLEY
20047 KANSAS EDWARDS
ARKANSAS RIVER 100203
ARKANSAS UNIT
21KAN001 900908 11030004010 0013.240 ON
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER			MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
39337 ALPHABHC		TOTUG/L	WATER	K	3	.0250000	.0000000	.0000000	.025	.025	96/02/28	96/10/23
39338 BETA BHC		TOTUG/L	WATER	K	3	.0500000	.0000000	.0000000	.050	.050	96/02/28	96/10/23
39340 GAMMABHC	LINDANE	TOT.UG/L	WATER	K	13	.0250000	.0000000	.0000000	.025	.025	90/04/23	94/04/27
39350 CHLRDANE	TECH&MET	TOT UG/L	WATER	K	20	.2000000	.0000000	.0000000	.200	.200	90/04/23	96/10/23
39356 METOCLR	(DUAL)	UG/L	WATER		1	.9900000			.99	.99	96/06/26	96/06/26
				K	19	.2500000	.0000000	.0000000	.25	.25	90/04/23	96/10/23
				TOT	20	.2870000	.0273800	.1654700	.99	.25	90/04/23	96/10/23
39380 DIELDRIN		TOTUG/L	WATER	K	20	.0500000	.0000000	.0000000	.050	.050	90/04/23	96/10/23
39390 ENDRIN		TOT UG/L	WATER	K	20	.1000000	.0000000	.0000000	.100	.100	90/04/23	96/10/23
39400 TOXAPHEN		TOTUG/L	WATER	K	20	2.000000	.0000000	.0000000	2.000	2.000	90/04/23	96/10/23
39410 HEPTCHLR		TOTUG/L	WATER	K	20	.0200000	.0000000	.0000000	.020	.020	90/04/23	96/10/23
39420 HPCHLREP		TOTUG/L	WATER	K	20	.0200000	.0000000	.0000000	.020	.020	90/04/23	96/10/23
39480 MTHXYCLR	WHL SMPL	UG/L	WATER	K	20	.2000000	.0000000	.0000000	.200	.200	90/04/23	96/10/23
39488 PCB-1221		TOTUG/L	WATER	K	20	2.275000	.3019800	.5495300	2.500	1.000	90/04/23	96/10/23
39492 PCB-1232		TOTUG/L	WATER	K	20	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/10/23
39496 PCB-1242		TOTUG/L	WATER	K	20	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/10/23
39500 PCB-1248		TOTUG/L	WATER	K	20	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/10/23
39504 PCB-1254		TOTUG/L	WATER	K	20	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/10/23
39508 PCB-1260		TOTUG/L	WATER	K	20	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/10/23
39700 HCB		TOT UG/L	WATER	K	7	.1000000	.0000000	.0000000	.100	.100	94/08/24	96/10/23
39720 PICLORAM	WHL SMPL	UG/L	WATER	K	20	.8000000	.0000000	.0000000	.800	.800	90/04/23	96/10/23
39730 2,4-D	WHL SMPL	UG/L	WATER	K	20	.8000000	.0000000	.0000000	.800	.800	90/04/23	96/10/23
39740 2,4,5-T	WHL SMPL	UG/L	WATER	K	20	.4000000	.0000000	.0000000	.400	.400	90/04/23	96/10/23
39770 DACTHAL	WHL SMPL	UG/L	WATER	K	20	.0500000	.0000000	.0000000	.050	.050	90/04/23	96/10/23
39782 LINDANE	WHL SMPL	UG/L	WATER	K	7	.0250000	.0000000	.0000000	.025	.025	94/08/24	96/10/23
46373 DETHATRZ	WATER	TOT UG/L	WATER		1	.5400000			.540	.540	96/02/28	96/02/28
46374 DISPRATR	WATER	TOT UG/L	WATER	K	1	.3000000			.300	.300	96/02/28	96/02/28
46570 CAL HARD	CA MG	MG/L	WATER	$	36	584.9200	27360.00	165.4100	1276	403	90/04/23	96/12/18
49259 ACTOCHLR	UNFLTR	RECVUG/L	WATER	K	3	.1000000	.0000000	.0000000	.1	.1	96/02/28	96/10/23
70301 DISS SOL	SUM	MG/L	WATER		36	1194.500	163160.0	403.9300	2846	795	90/04/23	96/12/18
71900 MERCURY	HG,TOTAL	UG/L	WATER		1	.5000000			.5	.5	90/04/23	90/04/23
				K	19	.5263200	.0131580	.1147100	1.0	.5	90/08/27	96/10/23
				TOT	20	.5250000	.0125000	.1118000	1.0	.5	90/04/23	96/10/23
74041 WQF	SAMPLE	UPDATED	WATER		37	936890.0	4734E+05	21760.00	970626	911003	90/04/23	96/12/18
77729 RAMROD	TOTAL	UG/L	WATER	K	20	.2500000	.0000000	.0000000	.250	.250	90/04/23	96/10/23
77780 BLADEX	TOTAL	UG/L	WATER	K	20	.5000000	.0000000	.0000000	.500	.500	90/04/23	96/10/23
77825 ALACHLOR	TOTAL	UG/L	WATER		2	.2500000	.0338000	.1838500	.380	.120	95/11/29	96/02/28
				K	18	.1833300	.0058825	.0766970	.250	.100	90/04/23	96/10/23
				TOT	20	.1900000	.0074633	.0863900	.380	.100	90/04/23	96/10/23

000587
37 55 40.5 099 22 31.6 1
ARKANSAS RIVER NEAR KINSLEY
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77860	BUTACHLO	TOTAL	UG/L	WATER	K	7	.5000000	.0000000	.0000000	.500	.500	94/08/24	96/10/23
81405	CRBFURAN	TOT	UG/L	WATER	K	3	.5000000	.0000000	.0000000	.500	.500	96/02/28	96/10/23
81408	MTRBUZIN	TOT	UG/L	WATER	K	20	.1000000	.0000000	.0000000	.100	.100	90/04/23	96/10/23
82028	RATIO	FEC COL	FEC STRP	WATER	$	37	2.507300	48.83800	6.988400	40	.1	90/04/23	96/12/18
82298	BROMIDE	DISS.BR	UG/L	WATER		11	.4236400	.0383860	.1959200	.810	.210	95/03/29	96/12/18

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ARKANSAS RIVER NEAR LARNED
20145 KANSAS PAWNEE
ARKANSAS 100210
/TYPA/AMBNT/STREAM UPPER ARKANSAS BASIN
21KAN001 790818 11030004005 0001.540 ON
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		14	18.14300	12.44000	3.527000	23.0	12.0	72/06/21	75/04/29
00011	WATER	TEMP	FAHN	WATER	$	14	64.65700	40.31700	6.349600	73.4	53.6	72/06/21	75/04/29
00060	STREAM	FLOW	CFS	WATER		14	120.3600	7991.200	89.39300	264	36	72/06/21	75/04/29
00070	TURB	JKSN	JTU	WATER		7	594.2900	153830.0	392.2100	1000.0	220.0	72/06/21	72/06/27
00076	TURB	TRBIDMTR	HACH FTU	WATER		7	10.28600	21.23800	4.608500	15.0	4.0	75/04/23	75/04/29
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		14	1070.000	53708.00	231.7500	1290	670	72/06/21	75/04/29
00300	DO		MG/L	WATER		14	7.164300	.7778500	.8819600	9.1	5.9	72/06/21	75/04/29
00301	DO	SATUR	PERCENT	WATER	$	14	74.86200	46.93300	6.850800	85.1	62.1	72/06/21	75/04/29
00310	BOD	5 DAY	MG/L	WATER		14	4.250000	4.236600	2.058300	8.0	2.0	72/06/21	75/04/29
00403	PH	LAB	SU	WATER		14	7.917900	.0536920	.2317200	8.3	7.4	72/06/21	75/04/29
00410	T ALK	CACO3	MG/L	WATER		14	230.0000	1136.000	33.70500	266	158	72/06/21	75/04/29
00440	HCO3 ION	HCO3	MG/L	WATER		14	264.3600	1235.900	35.15600	310	193	72/06/21	75/04/29
00445	CO3 ION	CO3	MG/L	WATER		14	8.057100	118.4000	10.88100	36	0	72/06/21	75/04/29
00530	RESIDUE	TOT NFLT	MG/L	WATER		7	12.42900	6.285800	2.507200	15	10	75/04/23	75/04/29
00650	T PO4	PO4	MG/L	WATER		14	1.957100	.4995700	.7068000	3.00	1.20	72/06/21	75/04/29
00900	TOT HARD	CACO3	MG/L	WATER		14	422.8600	4646.200	68.16300	504	308	72/06/21	75/04/29
00902	NC HARD	CACO3	MG/L	WATER		7	223.7200	303.2500	17.41400	252	206	75/04/23	75/04/29
00915	CALCIUM	CA,DISS	MG/L	WATER		14	113.3600	227.1800	15.07300	131.0	91.0	72/06/21	75/04/29
00925	MGNSIUM	MG,DISS	MG/L	WATER		14	32.14300	165.8300	12.87700	49.0	2.0	72/06/21	75/04/29
00940	CHLORIDE	TOTAL	MG/L	WATER		14	55.28600	379.1500	19.47200	78	21	72/06/21	75/04/29
00945	SULFATE	SO4-TOT	MG/L	WATER		14	285.2200	4802.000	69.29700	344	150	72/06/21	75/04/29
31501	TOT COLI	MFIMENDO	/100ML	WATER		14	83286.00	1149E+07	107210.0	290000	4700	72/06/21	75/04/29
31616	FEC COLI	MFM-FCBR	/100ML	WATER		12	4228.300	14650000	3827.500	14000	100	72/06/22	75/04/29
					K	2	1000.000	.0000000	.0000000	1000	1000	72/06/21	72/06/23
					TOT	14	3767.200	13770000	3710.800	14000	100	72/06/21	75/04/29
31673	FECSTREP	MFKFAGAR	/100ML	WATER		14	4655.000	32643000	5713.400	18000	100	72/06/21	75/04/29
46570	CAL HARD	CA MG	MG/L	WATER	$	14	415.4200	6848.900	82.75800	506	235	72/06/21	75/04/29
71851	NITRATE	DISS-NO3	MG/L	WATER		14	3.985700	1.926000	1.387800	6.2	2.3	72/06/21	75/04/29
82028	RATIO	FEC COL	FEC STRP	WATER	$	14	5.724300	76.74400	8.760400	27	.009	72/06/21	75/04/29

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ARKANSAS R. NR HAVEN (HUTCH.).
20155 KANSAS RENO
ARKANSAS R. BASIN. 100202
LOWER ARKANSAS UNIT.
21KAN001 11030010001 0036.400 ON
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		177	14.67200	77.52800	8.805000	33.0	.0	73/11/27	89/10/24
00011	WATER	TEMP	FAHN	WATER	$	177	58.40900	251.3300	15.85300	91.4	32.0	73/11/27	89/10/24
00057	IND OF	FLOW	CHECKED	WATER		60	.0000000	.0000000	.0000000	0	0	84/10/30	89/11/28
00060	STREAM	FLOW	CFS	WATER		179	415.0800	532070.0	729.4300	7170	.5	73/11/27	89/11/28
00070	TURB	JKSN	JTU	WATER		16	216.8800	66300.00	257.4900	1000.0	45.0	73/11/27	75/07/08
00076	TURB	TRBIDMTR	HACH FTU	WATER		159	60.07800	16209.00	127.3200	1200.0	2.3	75/08/05	89/11/28
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		177	2570.700	552810.0	743.5100	4300	253	73/11/27	89/11/28
00300	DO		MG/L	WATER		178	9.637000	3.540200	1.881500	16.8	4.7	73/11/27	89/11/28
00301	DO	SATUR	PERCENT	WATER	$	176	93.20200	412.0800	20.30000	198.2	58.8	73/11/27	89/10/24
00310	BOD	5 DAY	MG/L	WATER		174	4.762600	5.546500	2.355100	13.2	.3	73/11/27	89/11/28
					K	1	.0100000			.01	.01	89/01/24	89/01/24
					TOT	175	4.735400	5.643800	2.375700	13.2	.01	73/11/27	89/11/28
00335	COD	LOWLEVEL	MG/L	WATER		176	35.43800	383.8700	19.59300	105.0	4.0	73/11/27	89/11/28
					K	1	1.000000			1.0	1.0	89/01/24	89/01/24
					TOT	177	35.24300	388.3900	19.70800	105.0	1.0	73/11/27	89/11/28
00400	PH		SU	WATER		40	8.330000	.0578360	.2404900	8.70	7.60	86/03/18	89/10/24
00403	PH	LAB	SU	WATER		140	7.964200	.0786030	.2803600	8.7	7.1	73/11/27	86/09/30
00410	T ALK	CACO3	MG/L	WATER		177	189.7000	1543.600	39.28900	254	33	73/11/27	89/11/28
00440	HCO3 ION	HCO3	MG/L	WATER		99	114.8800	13642.00	116.8000	296	0	77/05/25	89/11/28
00445	CO3 ION	CO3	MG/L	WATER		51	.0000000	.0000000	.0000000	0	0	77/05/25	82/02/24
00530	RESIDUE	TOT NFLT	MG/L	WATER		165	118.3300	47885.00	218.8300	2180	5	73/11/27	89/11/28
00535	RESIDUE	VOL NFLT	MG/L	WATER		5	55.00000	363.0000	19.05300	86	35	73/11/27	74/07/23
00540	RESIDUE	FIX NFLT	MG/L	WATER		5	192.4000	6086.800	78.01800	290	90	73/11/27	74/07/23
00547	RESIDUE	TOT NSET	MG/L	WATER		32	1686.700	161730.0	402.1600	2510	569	74/06/18	77/12/28
00610	NH3+NH4-	N TOTAL	MG/L	WATER		162	.4680800	.1613300	.4016600	1.800	.010	73/11/27	89/11/28
					K	16	.0100000	.0000000	.0000000	.010	.010	84/05/22	89/09/26
					TOT	178	.4269100	.1640100	.4049800	1.800	.010	73/11/27	89/11/28
00612	UN-IONZD	NH3-N	MG/L	WATER	$	176	.0115090	.0001876	.0137000	.085	.0001	73/11/27	89/10/24
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	176	.0139940	.0002774	.0166570	.103	.0002	73/11/27	89/10/24
00630	NO2&NO3	N-TOTAL	MG/L	WATER		141	1.459100	.6760600	.8222300	3.99	.00	77/06/21	89/11/28
					K	1	.0100000			.01	.01	87/07/28	87/07/28
					TOT	142	1.448900	.6860500	.8282800	3.99	.00	77/06/21	89/11/28
00650	T PO4	PO4	MG/L	WATER		34	1.137900	.2157000	.4644300	2.60	.30	73/11/27	77/03/30
00665	PHOS-TOT		MG/L P	WATER		143	.5745400	.0511040	.2260600	2.000	.150	77/04/27	89/11/28
00900	TOT HARD	CACO3	MG/L	WATER		178	338.7300	7978.900	89.32500	712	60	73/11/27	89/11/28
00901	C HARD	CACO3	MG/L	WATER		141	187.7900	1753.300	41.87300	272	33	77/04/27	89/11/28
00902	NC HARD	CACO3	MG/L	WATER		177	148.2500	4321.200	65.73600	488	2	73/11/27	89/11/28
00916	CALCIUM	CA-TOT	MG/L	WATER		178	96.34100	523.8900	22.88900	176.0	17.0	73/11/27	89/11/28
00927	MGNSIUM	MG,TOT	MG/L	WATER		178	23.94700	75.09000	8.665400	66.4	3.2	73/11/27	89/11/28

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ARKANSAS R. NR HAVEN (HUTCH.).
20155 KANSAS RENO
ARKANSAS R. BASIN. 100202
/TYPA/AMBNT/STREAM LOWER ARKANSAS UNIT.
21KAN001 11030010001 0036.400 ON
0000 FEET DEPTH

PARAMETER			MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00929 SODIUM	NA,TOT	MG/L	WATER		177	426.0500	19729.00	140.4600	770.00	14.00	73/11/27	89/11/28
00937 PTSSIUM	K,TOT	MG/L	WATER		176	7.474300	2.088700	1.445300	15.00	5.10	73/11/27	89/11/28
00940 CHLORIDE	TOTAL	MG/L	WATER		177	629.4400	50356.00	224.4000	1190	23	73/11/27	89/11/28
00945 SULFATE	SO4-TOT	MG/L	WATER		178	179.8500	8918.300	94.43700	736	14	73/11/27	89/11/28
00955 SILICA	DISOLVED	MG/L	WATER		54	11.20200	11.02200	3.319900	19.0	1.4	74/06/18	79/06/26
00956 SILICA	TOTAL	MG/L	WATER		118	12.46300	134.0700	11.57900	87.0	1.0	79/07/30	89/11/28
				K	1	.1000000			.1	.1	88/05/24	88/05/24
				TOT	119	12.35900	134.2200	11.58500	87.0	.1	79/07/30	89/11/28
01000 ARSENIC	AS,DISS	UG/L	WATER		9	1.111100	11.11100	3.333300	10	0	74/06/18	78/07/25
01002 ARSENIC	AS,TOT	UG/L	WATER		11	6.909100	14.69100	3.832900	10	0	79/05/29	89/05/23
				K	1	10.00000			10	10	84/05/22	84/05/22
				TOT	12	7.166700	14.15200	3.761900	10	0	79/05/29	89/05/23
01007 BARIUM	BA,TOT	UG/L	WATER		11	190.0000	6500.000	80.62300	300	100	79/05/29	89/05/23
				K	1	10.00000			10	10	86/05/27	86/05/27
				TOT	12	175.0000	8609.100	92.78500	300	10	79/05/29	89/05/23
01022 BORON	B,TOT	UG/L	WATER		163	184.4800	5838.400	76.41000	450	0	74/06/18	89/11/28
				K	2	10.00000	.0002441	.0156250	10	10	85/07/30	86/02/25
				TOT	165	182.3600	6134.000	78.32000	450	0	74/06/18	89/11/28
01025 CADMIUM	CD,DISS	UG/L	WATER		10	1.000000	10.00000	3.162300	10	0	74/06/18	78/07/25
01027 CADMIUM	CD,TOT	UG/L	WATER		8	1.000000	1.142900	1.069100	3	0	79/05/29	88/04/26
				K	4	1.000000	.0000000	.0000000	1	1	84/05/22	89/05/23
				TOT	12	1.000000	.7272700	.8528000	3	0	79/05/29	89/05/23
01032 CHROMIUM	HEX-VAL	UG/L	WATER		3	.0000000	.0000000	.0000000	0	0	74/06/18	75/06/03
01034 CHROMIUM	CR,TOT	UG/L	WATER		15	4.000000	40.00000	6.324600	20	0	75/12/10	86/05/27
				K	4	10.00000	.0000000	.0000000	10	10	84/05/22	89/05/23
				TOT	19	5.263200	37.42700	6.117800	20	0	75/12/10	89/05/23
01040 COPPER	CU,DISS	UG/L	WATER		10	37.00000	2067.800	45.47300	150	0	74/06/18	78/07/25
01042 COPPER	CU,TOT	UG/L	WATER		12	26.66700	387.8800	19.69500	60	0	79/05/29	89/05/23
01045 IRON	FE,TOT	UG/L	WATER		15	3203.300	22937000	4789.300	17000	40	74/06/18	89/05/23
01046 IRON	FE,DISS	UG/L	WATER		6	341.6700	511220.0	714.9900	1800	0	75/12/10	78/07/25
01049 LEAD	PB,DISS	UG/L	WATER		10	53.00000	8712.200	93.33900	300	0	74/06/18	78/07/25
01051 LEAD	PB,TOT	UG/L	WATER		11	8.000000	26.80000	5.176900	17	0	79/05/29	89/05/23
				K	1	10.00000			10	10	84/05/22	84/05/22
				TOT	12	8.166700	24.69700	4.969600	17	0	79/05/29	89/05/23
01055 MANGNESE	MN	UG/L	WATER		15	190.6700	37564.00	193.8100	560.0	.0	74/06/18	89/05/23
01056 MANGNESE	MN,DISS	UG/L	WATER		6	16.66700	226.6700	15.05600	40.0	.0	75/12/10	78/07/25
01075 SILVER	AG,DISS	UG/L	WATER		10	.0000000	.0000000	.0000000	.0	.0	74/06/18	78/07/25
01077 SILVER	AG,TOT	UG/L	WATER		8	4.625000	25.41100	5.040900	10.0	.0	79/05/29	87/06/23
				K	4	3.250000	20.25000	4.500000	10.0	1.0	84/05/22	89/05/23

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ARKANSAS R. NR HAVEN (HUTCH.).
20155 KANSAS RENO
ARKANSAS R. BASIN. 100202
LOWER ARKANSAS UNIT.
21KAN001 11030010001 0036.400 ON
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01077	SILVER	AG,TOT	UG/L	WATER	TOT	12	4.166700	22.15200	4.706500	10.0	.0	79/05/29	89/05/23
01090	ZINC	ZN,DISS	UG/L	WATER		10	23.00000	1290.000	35.91700	110	0	74/06/18	78/07/25
01092	ZINC	ZN,TOT	UG/L	WATER		12	75.00000	3990.900	63.17400	260	30	79/05/29	89/05/23
01147	SELENIUM	SE,TOT	UG/L	WATER		9	3.777800	5.944500	2.438100	7	1	79/05/29	86/05/27
					K	3	1.000000	.0000000	.0000000	1	1	87/06/23	89/05/23
					TOT	12	3.083300	5.901500	2.429300	7	1	79/05/29	89/05/23
31501	TOT COLI	MFIMENDO	/100ML	WATER		80	123200.0	3268E+07	180790.0	880000	60	73/11/27	83/03/22
					L	20	47600.00	1350E+06	36750.00	80000	8000	75/11/12	78/12/20
					TOT	100	108080.0	2726E+07	165120.0	880000	60	73/11/27	83/03/22
31616	FEC COLI	MFM-FCBR	/100ML	WATER		154	22314.00	1663E+06	40792.00	310000	70	73/11/27	89/11/28
					K	11	5537.300	3262E+05	18063.00	60000	10	74/04/09	89/04/25
					L	12	28500.00	7731E+05	27806.00	60000	6000	75/11/12	78/12/20
					TOT	177	21691.00	1533E+06	39156.00	310000	10	73/11/27	89/11/28
31673	FECSTREP	MFKFAGAR	/100ML	WATER		156	10930.00	7793E+05	27917.00	310000	90	73/11/27	89/11/28
					K	16	94.37500	506.2500	22.50000	100	10	75/05/21	89/10/24
					L	3	39333.00	2761E+06	52549.00	100000	8000	76/02/25	78/12/20
					TOT	175	10426.00	7504E+05	27394.00	310000	10	73/11/27	89/11/28
39024	PROPAZIN	WTR CCM	UG/L	WATER		1	.9200000			.92	.92	81/06/24	81/06/24
39033	ATRZ	WHL SMPL	UG/L	WATER		2	1.800000	.0000000	.0000000	1.800	1.800	84/07/31	87/07/28
					K	8	1.200000	.0000000	.0000000	1.200	1.200	79/07/30	89/09/26
					TOT	10	1.320000	.0639990	.2529800	1.800	1.200	79/07/30	89/09/26
39045	2,4,5-TP	WTR SMPL	UG/L	WATER	K	10	.2000000	.0000000	.0000000	.200	.200	79/07/30	89/09/26
39300	P,P'DDT		TOT UG/L	WATER	K	10	.1000000	.0000000	.0000000	.100	.100	79/07/30	89/09/26
39305	O,P' DDT	WHL SMPL	UG/L	WATER	K	10	.1000000	.0000000	.0000000	.100	.100	79/07/30	89/09/26
39330	ALDRIN		TOT UG/L	WATER	K	17	.2205900	.0580650	.2409700	.500	.025	76/04/14	89/09/26
39350	CHLRDANE	TECH&MET	TOT UG/L	WATER	K	17	.5300000	.1662800	.4077700	1.000	.120	76/04/14	89/09/26
39356	METOCLR	(DUAL)	UG/L	WATER		1	.4400000			.44	.44	81/06/24	81/06/24
					K	7	.2500000	.0000000	.0000000	.25	.25	82/05/25	89/09/26
					TOT	8	.2737500	.0045125	.0671750	.44	.25	81/06/24	89/09/26
39365	DDE	WHL SMPL	UG/L	WATER		1	.4400000			.440	.440	81/06/24	81/06/24
39370	DDT	WHL SMPL	UG/L	WATER	K	7	10.00000	.0000000	.0000000	10.000	10.000	76/04/14	78/09/27
39380	DIELDRIN		TOTUG/L	WATER	K	17	.2352900	.0521140	.2282900	.500	.050	76/04/14	89/09/26
39390	ENDRIN		TOT UG/L	WATER	K	17	.1823500	.0102940	.1014600	.300	.100	76/04/14	89/09/26
39400	TOXAPHEN		TOTUG/L	WATER	K	10	2.000000	.0000000	.0000000	2.000	2.000	79/07/30	89/09/26
39410	HEPTCHLR		TOTUG/L	WATER	K	7	1.000000	.0000000	.0000000	1.000	1.000	76/04/14	78/09/27
39420	HPCHLREP		TOTUG/L	WATER	K	7	1.000000	.0000000	.0000000	1.000	1.000	76/04/14	78/09/27
39480	MTHXYCLR	WHL SMPL	UG/L	WATER	K	17	20.70600	638.2500	25.26400	50.000	.200	76/04/14	89/09/26
39516	PCBS	WHL SMPL	UG/L	WATER	K	10	.5000000	.0000000	.0000000	.500	.500	79/07/30	89/09/26
39730	2,4-D	WHL SMPL	UG/L	WATER	K	10	.4000000	.0000000	.0000000	.400	.400	79/07/30	89/09/26

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37 56 47.0 097 46 30.4 1
ARKANSAS R. NR HAVEN (HUTCH.).
20155 KANSAS RENO
ARKANSAS R. BASIN. 100202
/TYPA/AMBNT/STREAM
LOWER ARKANSAS UNIT.
21KAN001 11030010001 0036.400 ON
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
39740	2,4,5-T	WHL SMPL	UG/L	WATER	K	10	.2000000	.0000000	.0000000	.200	.200	79/07/30	89/09/26
39770	DACTHAL	WHL SMPL	UG/L	WATER	K	10	.0500000	.0000000	.0000000	.050	.050	79/07/30	89/09/26
39782	LINDANE	WHL SMPL	UG/L	WATER	K	17	4.132400	25.60700	5.060300	10.000	.025	76/04/14	89/09/26
46570	CAL HARD	CA MG	MG/L	WATER	$	178	339.1700	8019.300	89.55000	713	60	73/11/27	89/11/28
70301	DISS SOL	SUM	MG/L	WATER		140	1459.800	171860.0	414.5600	2227	240	77/04/27	89/11/28
70507	PHOS-T	ORTHO	MG/L P	WATER		1	.3900000			.390	.390	77/12/28	77/12/28
71851	NITRATE	DISS-NO3	MG/L	WATER		36	3.250000	5.354000	2.313900	8.9	.1	73/11/27	77/05/25
71890	MERCURY	HG,DISS	UG/L	WATER		9	.0000000	.0000000	.0000000	.0	.0	74/06/18	78/07/25
71900	MERCURY	HG,TOTAL	UG/L	WATER		6	.0000000	.0000000	.0000000	.0	.0	79/05/29	83/05/24
					K	6	.5000000	.0000000	.0000000	.5	.5	84/05/22	89/05/23
					TOT	12	.2500000	.0681820	.2611200	.5	.0	79/05/29	89/05/23
74021	EXCESS	ALKALNTY	MG/L	WATER		92	.0000000	.0000000	.0000000	0	0	77/04/27	85/10/29
74041	WQF	SAMPLE	UPDATED	WATER		50	885060.0	1807E+05	13446.00	921015	860602	85/06/25	89/11/28
77729	RAMROD	TOTAL	UG/L	WATER	K	10	.2500000	.0000000	.0000000	.250	.250	79/07/30	89/09/26
77825	ALACHLOR	TOTAL	UG/L	WATER	K	10	.2500000	.0000000	.0000000	.250	.250	79/07/30	89/09/26
81408	MTRBUZIN	TOT	UG/L	WATER	K	9	.1000000	.0000000	.0000000	.100	.100	79/07/30	89/09/26
82028	RATIO	FEC COL	FEC STRP	WATER	$	175	9.267200	978.4000	31.28000	330	.03	73/11/27	89/11/28

002214 AR-34
37 57 10.0 097 45 45.0 5
ARKANSAS RIVER NEAR HAVEN
20155 KANSAS RENO
ARKANSAS 100210
/TYPA/AMBNT/STREAM LOWER ARKANSAS BASIN
21KAN001 790818 11030010001 0036.100 ON
0999 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		20	18.20000	15.53700	3.941700	23.0	11.0	71/04/21	77/06/21
00011	WATER	TEMP	FAHN	WATER	$	20	64.76000	50.34200	7.095200	73.4	51.8	71/04/21	77/06/21
00060	STREAM	FLOW	CFS	WATER		21	502.0000	68460.00	261.6500	1120	231	71/04/21	77/06/21
00070	TURB	JKSN	JTU	WATER		14	813.4300	456050.0	675.3200	1800.0	8.0	71/04/21	73/09/18
00076	TURB	TRBIDMTR	HACH FTU	WATER		7	86.42900	484.2900	22.00700	112.0	54.0	77/06/15	77/06/21
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		21	2135.700	593020.0	770.0800	3360	960	71/04/21	77/06/21
00300	DO		MG/L	WATER		21	8.000000	3.468000	1.862300	12.1	5.6	71/04/21	77/06/21
00301	DO	SATUR	PERCENT	WATER	$	20	82.77700	288.9300	16.99800	121.8	64.0	71/04/21	77/06/21
00310	BOD	5 DAY	MG/L	WATER		21	5.761900	6.700500	2.588500	11.8	2.5	71/04/21	77/06/21
00403	PH	LAB	SU	WATER		21	8.000000	.1010500	.3178800	8.5	7.3	71/04/21	77/06/21
00410	T ALK	CACO3	MG/L	WATER		21	171.2400	1159.800	34.05600	234	124	71/04/21	77/06/21
00440	HCO3 ION	HCO3	MG/L	WATER		21	200.8100	1087.100	32.97100	266	152	71/04/21	77/06/21
00445	CO3 ION	CO3	MG/L	WATER		14	5.314300	57.75800	7.599900	17	0	71/04/21	73/09/18
00530	RESIDUE	TOT NFLT	MG/L	WATER		7	154.2900	1695.300	41.17400	200	100	77/06/15	77/06/21
00610	NH3+NH4-	N TOTAL	MG/L	WATER		13	.4638500	.0157430	.1254700	.710	.250	71/04/21	77/06/21
00612	UN-IONZD	NH3-N	MG/L	WATER	$	12	.0174580	.0002046	.0143060	.047	.002	71/04/21	77/06/21
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	12	.0212270	.0003025	.0173950	.058	.003	71/04/21	77/06/21
00650	T PO4	PO4	MG/L	WATER		21	1.492400	1.330900	1.153700	4.80	.25	71/04/21	77/06/21
00900	TOT HARD	CACO3	MG/L	WATER		21	339.0500	14790.00	121.6200	608	204	71/04/21	77/06/21
00902	NC HARD	CACO3	MG/L	WATER		7	133.4300	250.3000	15.82100	166	120	77/06/15	77/06/21
00915	CALCIUM	CA,DISS	MG/L	WATER		21	92.23800	1048.300	32.37800	149.0	13.0	71/04/21	77/06/21
00925	MGNSIUM	MG,DISS	MG/L	WATER		21	24.23800	209.2900	14.46700	58.0	9.0	71/04/21	77/06/21
00940	CHLORIDE	TOTAL	MG/L	WATER		21	480.9100	36704.00	191.5800	760	213	71/04/21	77/06/21
00945	SULFATE	SO4-TOT	MG/L	WATER		21	211.2400	22660.00	150.5300	520	106	71/04/21	77/06/21
01000	ARSENIC	AS,DISS	UG/L	WATER		4	2.500000	25.00000	5.000000	10	0	73/09/12	77/06/21
01025	CADMIUM	CD,DISS	UG/L	WATER		4	5.000000	33.33300	5.773500	10	0	73/09/12	77/06/21
01032	CHROMIUM	HEX-VAL	UG/L	WATER		6	.0000000	.0000000	.0000000	0	0	71/04/23	77/06/21
01040	COPPER	CU,DISS	UG/L	WATER		6	5.000000	150.0000	12.24800	30	0	71/04/23	77/06/21
01049	LEAD	PB,DISS	UG/L	WATER		6	50.00000	15000.00	122.4800	300	0	71/04/23	77/06/21
01075	SILVER	AG,DISS	UG/L	WATER		2	.0000000	.0000000	.0000000	.0	.0	77/06/15	77/06/21
01090	ZINC	ZN,DISS	UG/L	WATER		6	11.66700	376.6700	19.40800	50	0	71/04/23	77/06/21
31501	TOT COLI	MFIMENDO	/100ML	WATER		20	159230.0	3898E+07	197450.0	880000	1700	71/04/21	77/06/21
31616	FEC COLI	MFM-FCBR	/100ML	WATER		19	23472.00	4933E+05	22211.00	77000	10	71/04/21	77/06/21
					K	2	100.0000	.0000000	.0000000	100	100	71/04/24	77/06/15
					TOT	21	21246.00	4933E+05	22213.00	77000	10	71/04/21	77/06/21
31673	FECSTREP	MFKFAGAR	/100ML	WATER		21	28243.00	6833E+06	82664.00	380000	400	71/04/21	77/06/21
39330	ALDRIN		TOT UG/L	WATER	K	1	.5000000			.500	.500	77/06/21	77/06/21
39350	CHLRDANE	TECH&MET	TOT UG/L	WATER	K	1	1.000000			1.000	1.000	77/06/21	77/06/21
39370	DDT	WHL SMPL	UG/L	WATER	K	1	10.00000			10.000	10.000	77/06/21	77/06/21

002214 AR-34
37 57 10.0 097 45 45.0 5
ARKANSAS RIVER NEAR HAVEN
20155 KANSAS RENO
ARKANSAS 100210
/TYPA/AMBNT/STREAM
LOWER ARKANSAS BASIN
21KAN001 790818 11030010001 0036.100 ON
0999 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
39380	DIELDRIN		TOTUG/L	WATER	K	1	.5000000			.500	.500	77/06/21	77/06/21
39390	ENDRIN		TOT UG/L	WATER	K	1	.3000000			.300	.300	77/06/21	77/06/21
39410	HEPTCHLR		TOTUG/L	WATER	K	1	1.000000			1.000	1.000	77/06/21	77/06/21
39420	HPCHLREP		TOTUG/L	WATER	K	1	1.000000			1.000	1.000	77/06/21	77/06/21
39480	MTHXYCLR	WHL SMPL	UG/L	WATER	K	1	50.00000			50.000	50.000	77/06/21	77/06/21
39782	LINDANE	WHL SMPL	UG/L	WATER	K	1	10.00000			10.000	10.000	77/06/21	77/06/21
46570	CAL HARD	CA MG	MG/L	WATER	$	21	330.1300	12729.00	112.8200	606	197	71/04/21	77/06/21
71851	NITRATE	DISS-NO3	MG/L	WATER		21	2.436700	6.306800	2.511300	8.4	.0	71/04/21	77/06/21
71900	MERCURY	HG,TOTAL	UG/L	WATER		2	.0000000	.0000000	.0000000	.0	.0	77/06/15	77/06/21
74041	WQF	SAMPLE	UPDATED	WATER		3	890120.0	.0000000	.0000000	890117	890117	71/04/23	77/06/21
82028	RATIO	FEC COL	FEC STRP	WATER	$	21	2.854300	13.05500	3.613200	15	.01	71/04/21	77/06/21

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002216 AR-36
38 03 15.0 097 58 58.0 5
ARKANSAS RIVER NEAR HUTCHINSON
20155 KANSAS RENO
ARKANSAS 100210
/TYPA/AMBNT/STREAM
LOWER ARKANSAS BASIN
21KAN001 790818 11030010003 0002.300 ON
0999 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		14	19.78600	23.56700	4.854600	28.0	10.0	73/09/12	77/06/21
00011	WATER	TEMP	FAHN	WATER	$	14	67.61400	76.36700	8.738800	82.4	50.0	73/09/12	77/06/21
00060	STREAM	FLOW	CFS	WATER		14	403.7200	34065.00	184.5700	630	217	73/09/12	77/06/21
00070	TURB	JKSN	JTU	WATER		7	1257.200	176190.0	419.7500	1800.0	500.0	73/09/12	73/09/18
00076	TURB	TRBIDMTR	HACH FTU	WATER		7	91.14300	1128.200	33.58800	160.0	63.0	77/06/15	77/06/21
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		14	1614.300	578720.0	760.7400	2670	780	73/09/12	77/06/21
00300	DO		MG/L	WATER		14	7.650000	1.287300	1.134600	9.9	6.0	73/09/12	77/06/21
00301	DO	SATUR	PERCENT	WATER	$	14	83.39000	233.8400	15.29200	126.2	55.6	73/09/12	77/06/21
00310	BOD	5 DAY	MG/L	WATER		13	3.738500	1.799300	1.341400	7.0	1.8	73/09/12	77/06/21
00403	PH	LAB	SU	WATER		14	8.064300	.0255790	.1599300	8.5	7.8	73/09/12	77/06/21
00410	T ALK	CACO3	MG/L	WATER		14	157.2900	1031.200	32.11200	200	116	73/09/12	77/06/21
00440	HCO3 ION	HCO3	MG/L	WATER		14	189.8600	1351.200	36.75900	244	142	73/09/12	77/06/21
00445	CO3 ION	CO3	MG/L	WATER		8	1.750000	24.50000	4.949800	14	0	73/09/12	77/06/15
00530	RESIDUE	TOT NFLT	MG/L	WATER		7	163.5700	2531.000	50.30900	260	105	77/06/15	77/06/21
00650	T PO4	PO4	MG/L	WATER		14	1.182200	.6871300	.8289300	2.50	.30	73/09/12	77/06/21
00900	TOT HARD	CACO3	MG/L	WATER		14	250.2900	2625.800	51.24200	320	188	73/09/12	77/06/21
00902	NC HARD	CACO3	MG/L	WATER		7	108.8600	105.1600	10.25500	124	94	77/06/15	77/06/21
00915	CALCIUM	CA,DISS	MG/L	WATER		14	74.00000	209.3900	14.47000	93.0	53.0	73/09/12	77/06/21
00925	MGNSIUM	MG,DISS	MG/L	WATER		14	15.85700	17.97800	4.240100	23.0	9.0	73/09/12	77/06/21
00940	CHLORIDE	TOTAL	MG/L	WATER		14	347.8600	54388.00	233.2100	705	107	73/09/12	77/06/21
00945	SULFATE	SO4-TOT	MG/L	WATER		14	126.6400	291.7900	17.08200	149	98	73/09/12	77/06/21
31501	TOT COLI	MFIMENDO	/100ML	WATER		13	71415.00	6510E+06	80689.00	247000	1300	73/09/12	77/06/20
					L	1	80000.00			80000	80000	77/06/21	77/06/21
					TOT	14	72029.00	6015E+06	77557.00	247000	1300	73/09/12	77/06/21
31616	FEC COLI	MFM-FCBR	/100ML	WATER		14	12300.00	3390E+05	18412.00	62000	100	73/09/12	77/06/21
31673	FECSTREP	MFKFAGAR	/100ML	WATER		14	8921.400	4767E+05	21835.00	84000	300	73/09/12	77/06/21
46570	CAL HARD	CA MG	MG/L	WATER	$	14	250.0800	2501.000	50.01000	319	188	73/09/12	77/06/21
71851	NITRATE	DISS-NO3	MG/L	WATER		14	1.628600	2.476100	1.573600	4.1	.0	73/09/12	77/06/21
82028	RATIO	FEC COL	FEC STRP	WATER	$	14	2.593700	16.24600	4.030600	16	.2	73/09/12	77/06/21

15

002227 AR-10
38 01 31.0 097 54 34.0 5
ARKANSAS RIVER AT HUTCHINSON
20155 KANSAS RENO
ARKANSAS 100210
/TYPA/AMBNT/STREAM LOWER ARKANSAS BASIN
21KAN001 790818 11030010001 0047.230 ON
0999 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		7	13.85700	.8095700	.8997600	15.0	13.0	71/04/21	71/04/27
00011	WATER	TEMP	FAHN	WATER	$	7	56.94300	2.629600	1.621600	59.0	55.4	71/04/21	71/04/27
00060	STREAM	FLOW	CFS	WATER		7	496.0000	124640.0	353.0400	1095	210	71/04/21	71/04/27
00070	TURB	JKSN	JTU	WATER		7	424.2900	424610.0	651.6200	1600.0	15.0	71/04/21	71/04/27
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		7	2162.900	746860.0	864.2100	3070	880	71/04/21	71/04/27
00300	DO		MG/L	WATER		7	8.214300	4.404800	2.098800	10.1	3.8	71/04/21	71/04/27
00301	DO	SATUR	PERCENT	WATER	$	7	79.09700	404.5900	20.11500	95.8	36.7	71/04/21	71/04/27
00310	BOD	5 DAY	MG/L	WATER		7	4.571400	7.485800	2.736000	10.0	2.3	71/04/21	71/04/27
00403	PH	LAB	SU	WATER		7	8.157100	.0829260	.2879700	8.4	7.7	71/04/21	71/04/27
00410	T ALK	CACO3	MG/L	WATER		7	188.2900	2111.300	45.94800	238	120	71/04/21	71/04/27
00440	HCO3 ION	HCO3	MG/L	WATER		7	198.2900	1359.900	36.87700	239	146	71/04/21	71/04/27
00445	CO3 ION	CO3	MG/L	WATER		7	12.68600	118.4900	10.88500	26	0	71/04/21	71/04/27
00650	T PO4	PO4	MG/L	WATER		7	1.582900	2.040700	1.428500	4.20	.68	71/04/21	71/04/27
00900	TOT HARD	CACO3	MG/L	WATER		7	461.1400	20601.00	143.5300	596	248	71/04/21	71/04/27
00915	CALCIUM	CA,DISS	MG/L	WATER		7	98.71400	2399.900	48.98900	146.0	15.0	71/04/21	71/04/27
00925	MGNSIUM	MG,DISS	MG/L	WATER		7	40.28600	212.9100	14.59100	56.0	18.0	71/04/21	71/04/27
00940	CHLORIDE	TOTAL	MG/L	WATER		7	438.5700	14556.00	120.6500	590	250	71/04/21	71/04/27
00945	SULFATE	SO4-TOT	MG/L	WATER		7	377.1400	38669.00	196.6500	550	94	71/04/21	71/04/27
31501	TOT COLI	MFIMENDO	/100ML	WATER		7	144530.0	5479E+07	234080.0	530000	100	71/04/21	71/04/27
31616	FEC COLI	MFM-FCBR	/100ML	WATER		7	30392.00	5606E+06	74876.00	200000	10	71/04/21	71/04/27
31673	FECSTREP	MFKFAGAR	/100ML	WATER		7	22872.00	1337E+06	36574.00	100000	2700	71/04/21	71/04/27
46570	CAL HARD	CA MG	MG/L	WATER	$	7	412.3900	22624.00	150.4100	595	246	71/04/21	71/04/27
71851	NITRATE	DISS-NO3	MG/L	WATER		7	5.542900	15.52300	3.939900	13.0	1.5	71/04/21	71/04/27
82028	RATIO	FEC COL	FEC STRP	WATER	$	7	.8174900	3.416500	1.848400	5	.004	71/04/21	71/04/27

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ARKANSAS RIVER NEAR HUTCHINSON
20155 KANSAS RENO
ARKANSAS RIVER 100202
ARKANSAS UNIT
21KAN001 900714 11030010
0000 FEET DEPTH

(58)

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00005	VSAMPLOC	DEPTH	% OF TOT	WATER	K	6	.0500000	.0000000	.0000000	.05	.05	95/02/06	95/12/04
00010	WATER	TEMP	CENT	WATER		41	13.90300	63.59100	7.974400	26.0	-1.0	90/03/19	96/11/04
00011	WATER	TEMP	FAHN	WATER	$	41	57.02400	206.0200	14.35400	78.8	30.2	90/03/19	96/11/04
00076	TURB	TRBIDMTR	HACH FTU	WATER		41	38.43900	10202.00	101.0100	465.0	.9	90/03/19	96/11/04
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		40	2398.300	439370.0	662.8500	3600	742	90/05/14	96/11/04
00300	DO		MG/L	WATER		41	10.23900	4.078500	2.019500	13.4	5.2	90/03/19	96/11/04
00301	DO	SATUR	PERCENT	WATER	$	40	96.91000	209.4500	14.47200	125.0	61.9	90/03/19	96/11/04
00310	BOD	5 DAY	MG/L	WATER		34	2.914700	2.514600	1.585800	6.2	1.0	90/05/14	96/01/08
					K	1	1.000000			1.0	1.0	95/12/04	95/12/04
					TOT	35	2.860000	2.545400	1.595400	6.2	1.0	90/05/14	96/01/08
00400	PH		SU	WATER		41	8.282900	.0629880	.2509800	8.70	7.40	90/03/19	96/11/04
00410	T ALK	CACO3	MG/L	WATER		40	194.2500	1766.200	42.02600	248	39	90/05/14	96/11/04
00440	HCO3 ION	HCO3	MG/L	WATER		2	.0000000	.0000000	.0000000	0	0	90/03/19	90/05/14
00530	RESIDUE	TOT NFLT	MG/L	WATER		41	63.04900	14652.00	121.0500	520	1	90/03/19	96/11/04
00610	NH3+NH4-	N TOTAL	MG/L	WATER		16	.0998750	.0067973	.0824460	.287	.015	90/03/19	96/11/04
					K	25	.0436000	.0002240	.0149670	.050	.010	90/05/14	94/11/07
					TOT	41	.0655610	.0034558	.0587860	.287	.010	90/03/19	96/11/04
00612	UN-IONZD	NH3-N	MG/L	WATER	$	41	.0040222	.0000554	.0074462	.046	.0003	90/03/19	96/11/04
00613	NO2-N	DISS	MG/L	WATER	K	6	.0500000	.0000000	.0000000	.050	.050	96/01/08	96/11/04
00618	NO3-N	DISS	MG/L	WATER		12	1.877500	1.720100	1.311500	3.96	.06	95/02/06	96/11/04
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	41	.0048905	.0000819	.0090537	.056	.0004	90/03/19	96/11/04
00630	NO2&NO3	N-TOTAL	MG/L	WATER		29	1.987600	.6191900	.7868900	3.33	.62	90/03/19	94/11/07
00665	PHOS-TOT		MG/L P	WATER		36	.3226100	.1584700	.3980800	2.340	.020	90/03/19	96/11/04
					K	5	.0500000	.0000000	.0000000	.050	.050	91/08/05	92/05/04
					TOT	41	.2893700	.1468200	.3831700	2.340	.020	90/03/19	96/11/04
00671	PHOS-DIS	ORTHO	MG/L P	WATER		8	.1122500	.0038977	.0624310	.230	.030	95/02/06	96/11/04
					K	4	.0200000	.0004000	.0200000	.050	.010	95/05/01	96/07/08
					TOT	12	.0815000	.0046525	.0682090	.230	.010	95/02/06	96/11/04
00900	TOT HARD	CACO3	MG/L	WATER		40	327.6300	7022.100	83.79800	583	117	90/05/14	96/11/04
00901	C HARD	CACO3	MG/L	WATER		2	192.0000	1058.000	32.52700	215	169	90/03/19	90/05/14
00902	NC HARD	CACO3	MG/L	WATER		2	157.5000	5304.500	72.83200	209	106	90/03/19	90/05/14
00916	CALCIUM	CA-TOT	MG/L	WATER		40	95.62500	500.1400	22.36400	149.0	31.7	90/05/14	96/11/04
00927	MGNSIUM	MG,TOT	MG/L	WATER		40	21.67800	58.47800	7.647100	51.3	9.1	90/05/14	96/11/04
00929	SODIUM	NA,TOT	MG/L	WATER		40	320.7900	10230.00	101.1400	506.00	63.50	90/05/14	96/11/04
00937	PTSSIUM	K,TOT	MG/L	WATER		40	7.108000	9.552100	3.090700	17.20	3.00	90/05/14	96/11/04
00940	CHLORIDE	TOTAL	MG/L	WATER		28	524.1800	21753.00	147.4900	762	160	90/05/14	94/11/07
00941	CHLORIDE	DISS IN WTR	MG/L	WATER		12	483.8300	58818.00	242.5300	848	64	95/02/06	96/11/04
00945	SULFATE	S04-TOT	MG/L	WATER		28	154.1100	1897.000	43.55500	223	40	90/05/14	94/11/07
00946	SULFATE	S04-DISS	MG/L	WATER		12	234.0100	28775.00	169.6300	602.0	69.1	95/02/06	96/11/04

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ARKANSAS RIVER NEAR HUTCHINSON
20155 KANSAS RENO
ARKANSAS RIVER 100202
ARKANSAS UNIT
21KAN001 900714 11030010
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER			MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00950 FLUORIDE	F,DISS	MG/L	WATER		12	.3783300	.0085245	.0923280	.57	.23	95/02/06	96/11/04
00951 FLUORIDE	F,TOTAL	MG/L	WATER		7	.5185700	.0030144	.0549040	.60	.42	93/12/06	94/11/07
00955 SILICA	DISOLVED	MG/L	WATER		9	17.36700	43.82300	6.619900	28.2	10.7	94/07/11	95/12/04
00956 SILICA	TOTAL	MG/L	WATER		31	24.41900	570.0400	23.87600	101.0	7.2	90/05/14	96/11/04
01002 ARSENIC	AS,TOT	UG/L	WATER		17	3.100000	2.120000	1.456000	7	1	90/03/19	96/11/04
				K	24	18.24600	222.0900	14.90300	50	.9	90/05/14	96/03/11
				TOT	41	11.96600	185.6200	13.62400	50	.9	90/03/19	96/11/04
01007 BARIUM	BA,TOT	UG/L	WATER		40	137.4800	2930.200	54.13100	333	86	90/03/19	96/11/04
01012 BERYLIUM	BE,TOT	UG/L	WATER		2	4.000000	18.00000	4.242600	7.00	1.00	95/06/12	96/09/09
				K	38	1.394700	2.353500	1.534100	10.00	1.00	90/05/14	96/11/04
				TOT	40	1.525000	3.025000	1.739300	10.00	1.00	90/05/14	96/11/04
01022 BORON	B,TOT	UG/L	WATER		40	139.1300	1545.300	39.31000	239	54	90/05/14	96/11/04
01027 CADMIUM	CD,TOT	UG/L	WATER		2	1.150000	.0450000	.2121300	1	1	93/08/09	95/12/04
				K	39	1.653900	1.562600	1.250000	5	.1	90/03/19	96/11/04
				TOT	41	1.629300	1.497600	1.223800	5	.1	90/03/19	96/11/04
01034 CHROMIUM	CR,TOT	UG/L	WATER		18	7.677800	64.08500	8.005300	35	1	90/05/14	96/11/04
				K	23	6.173900	15.05900	3.880600	10	1	90/03/19	96/07/08
				TOT	41	6.834200	36.09000	6.007500	35	1	90/03/19	96/11/04
01037 COBALT	CO,TOTAL	UG/L	WATER		2	9.000000	18.00000	4.242600	12	6	92/07/06	96/09/09
				K	37	7.729700	8.702800	2.950100	10	4	90/07/23	96/11/04
				TOT	39	7.794900	8.799000	2.966300	12	4	90/07/23	96/11/04
01042 COPPER	CU,TOT	UG/L	WATER		37	16.38700	90.67000	9.522100	37	3	90/03/19	96/11/04
				K	4	8.250000	12.25000	3.500000	10	3	90/09/17	94/11/07
				TOT	41	15.59300	88.49600	9.407200	37	3	90/03/19	96/11/04
01045 IRON	FE,TOT	UG/L	WATER		41	1476.000	8625200	2936.900	13140	54	90/03/19	96/11/04
01051 LEAD	PB,TOT	UG/L	WATER		15	6.500000	20.43200	4.520100	19	1	93/08/09	96/11/04
				K	17	8.994100	277.3500	16.65400	50	.9	90/03/19	96/05/06
				TOT	32	7.825000	153.9800	12.40900	50	.9	90/03/19	96/11/04
01055 MANGNESE	MN	UG/L	WATER		41	127.0300	14241.00	119.3400	535.0	32.0	90/03/19	96/11/04
01059 THALLIUM	TL,TOTAL	UG/L	WATER		1	30.00000			30	30	90/09/17	90/09/17
				K	38	37.36900	282.0800	16.79500	50	15	90/07/23	96/11/04
				TOT	39	37.18000	276.0500	16.61500	50	15	90/07/23	96/11/04
01062 MOLY	MO,TOT	UG/L	WATER		8	10.87500	571.5500	23.90700	70	1	90/07/23	92/11/02
				K	31	8.871000	20.51600	4.529500	20	1	90/09/17	96/11/04
				TOT	39	9.282100	122.1600	11.05200	70	1	90/07/23	96/11/04
01067 NICKEL	NI,TOTAL	UG/L	WATER		11	6.454600	43.63900	6.606000	19	1	90/05/14	96/11/04
				K	29	19.41400	439.1100	20.95500	50	1	90/07/23	96/05/06
				TOT	40	15.85000	360.7900	18.99500	50	1	90/05/14	96/11/04
01077 SILVER	AG,TOT	UG/L	WATER		1	2.000000			2.0	2.0	90/03/19	90/03/19

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ARKANSAS RIVER NEAR HUTCHINSON
20155 KANSAS RENO
ARKANSAS RIVER 100202
/TYPA/AMBNT/STREAM ARKANSAS UNIT
21KAN001 900714 11030010
0000 FEET DEPTH

PARAMETER		MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01077 SILVER AG,TOT	UG/L	WATER	K	40	4.900000	13.32300	3.650100	10.0	1.0	90/05/14	96/11/04
01077 SILVER AG,TOT	UG/L	WATER	TOT	41	4.829300	13.19500	3.632500	10.0	1.0	90/03/19	96/11/04
01087 VANADIUM V,TOT	UG/L	WATER		21	10.19100	69.96200	8.364300	31	3	90/07/23	96/11/04
			K	18	4.111100	1.045800	1.022600	5	3	90/09/17	96/05/06
			TOT	39	7.384600	46.71700	6.835000	31	3	90/07/23	96/11/04
01092 ZINC ZN,TOT	UG/L	WATER		41	60.80500	9087.600	95.32900	481	6	90/03/19	96/11/04
01097 ANTIMONY SB,TOT	UG/L	WATER		6	74.16700	1495.800	38.67500	129	20	91/12/16	96/11/04
			K	33	34.84900	350.7600	18.72900	50	10	90/07/23	96/05/06
			TOT	39	40.89800	698.7300	26.43400	129	10	90/07/23	96/11/04
01105 ALUMINUM AL,TOT	UG/L	WATER		39	2088.100	20653000	4544.500	20190	40	90/05/14	96/11/04
			K	1	50.00000			50	50	95/02/06	95/02/06
			TOT	40	2037.200	20227000	4497.400	20190	40	90/05/14	96/11/04
01147 SELENIUM SE,TOT	UG/L	WATER		17	4.311800	1.924900	1.387400	6	1	91/04/08	96/11/04
			K	16	12.96300	336.1500	18.33400	50	1	90/03/19	96/05/06
			TOT	33	8.506100	177.8100	13.33500	50	1	90/03/19	96/11/04
31616 FEC COLI MFM-FCBR	/100ML	WATER		28	255.3900	196220.0	442.9700	1700	1	90/05/14	96/11/04
			K	13	30.76900	1557.700	39.46800	100	10	90/03/19	96/05/06
			TOT	41	184.1700	144120.0	379.6300	1700	1	90/03/19	96/11/04
31673 FECSTREP MFKFAGAR	/100ML	WATER		35	384.6000	732030.0	855.5900	3900	10	90/03/19	96/11/04
			K	6	40.00000	2160.000	46.47600	100	10	91/08/05	95/10/09
			TOT	41	334.1700	637700.0	798.5600	3900	10	90/03/19	96/11/04
34259 DELTABHC	TOTUG/L	WATER	K	3	.0500000	.0000000	.0000000	.050	.050	96/03/11	96/11/04
34351 ENDSULSF	TOTUG/L	WATER	K	3	.1000000	.0000000	.0000000	.100	.100	96/03/11	96/11/04
34356 B-ENDO SULFAN	TOTWUG/L	WATER	K	3	.0200000	.0000000	.0000000	.020	.020	96/03/11	96/11/04
34361 A-ENDO SULFAN	TOTWUG/L	WATER	K	3	.0200000	.0000000	.0000000	.020	.020	96/03/11	96/11/04
34671 PCB 1016	TOTWUG/L	WATER	K	21	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39024 PROPAZIN WTR CCM	UG/L	WATER	K	21	.6857100	.2082900	.4563800	1.20	.30	90/03/19	96/11/04
39033 ATRZ WHL SMPL	UG/L	WATER		2	1.715000	3.302500	1.817300	3.000	.430	95/08/14	96/07/08
			K	19	.7263200	.2131600	.4616900	1.200	.300	90/03/19	96/11/04
			TOT	21	.8204800	.4454100	.6673900	3.000	.300	90/03/19	96/11/04
39045 2,4,5-TP WTR SMPL	UG/L	WATER	K	21	.4000000	.0000000	.0000000	.400	.400	90/03/19	96/11/04
39055 SIMAZINE WH.WATER	(UG/L)	WATER	K	7	.3000000	.0000000	.0000000	.3	.3	94/09/12	96/11/04
39300 P,P'DDT	TOT UG/L	WATER	K	3	.1000000	.0000000	.0000000	.100	.100	96/03/11	96/11/04
39310 P,P'DDD	TOT UG/L	WATER	K	3	.0400000	.0000000	.0000000	.040	.040	96/03/11	96/11/04
39320 P,P'DDE	TOT UG/L	WATER	K	3	.0200000	.0000000	.0000000	.020	.020	96/03/11	96/11/04
39330 ALDRIN	TOT UG/L	WATER	K	21	.0250000	.0000000	.0000000	.025	.025	90/03/19	96/11/04
39337 ALPHABHC	TOTUG/L	WATER	K	3	.0250000	.0000000	.0000000	.025	.025	96/03/11	96/11/04
39338 BETA BHC	TOTUG/L	WATER	K	3	.0500000	.0000000	.0000000	.050	.050	96/03/11	96/11/04
39340 GAMMABHC LINDANE	TOT.UG/L	WATER	K	14	.0250000	.0000000	.0000000	.025	.025	90/03/19	94/05/09

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ARKANSAS RIVER NEAR HUTCHINSON
20155 KANSAS RENO
ARKANSAS RIVER 100202
ARKANSAS UNIT
21KAN001 900714 11030010
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
39350 CHLRDANE TECH&MET TOT UG/L	WATER	K	21	.2000000	.0000000	.0000000	.200	.200	90/03/19	96/11/04
39356 METOCLR (DUAL) UG/L	WATER		2	.3350000	.0004499	.0212120	.35	.32	91/04/08	96/07/08
		K	19	.2500000	.0000000	.0000000	.25	.25	90/03/19	96/11/04
		TOT	21	.2581000	.0006762	.0260050	.35	.25	90/03/19	96/11/04
39380 DIELDRIN TOTUG/L	WATER	K	21	.0500000	.0000000	.0000000	.050	.050	90/03/19	96/11/04
39390 ENDRIN TOT UG/L	WATER	K	21	.1000000	.0000000	.0000000	.100	.100	90/03/19	96/11/04
39400 TOXAPHEN TOTUG/L	WATER	K	21	2.000000	.0000000	.0000000	2.000	2.000	90/03/19	96/11/04
39410 HEPTCHLR TOTUG/L	WATER	K	21	.0200000	.0000000	.0000000	.020	.020	90/03/19	96/11/04
39420 HPCHLREP TOTUG/L	WATER	K	21	.0200000	.0000000	.0000000	.020	.020	90/03/19	96/11/04
39480 MTHXYCLR WHL SMPL UG/L	WATER	K	21	.2000000	.0000000	.0000000	.200	.200	90/03/19	96/11/04
39488 PCB-1221 TOTUG/L	WATER	K	21	2.285700	.2892900	.5378600	2.500	1.000	90/03/19	96/11/04
39492 PCB-1232 TOTUG/L	WATER	K	21	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39496 PCB-1242 TOTUG/L	WATER	K	21	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39500 PCB-1248 TOTUG/L	WATER	K	21	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39504 PCB-1254 TOTUG/L	WATER	K	21	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39508 PCB-1260 TOTUG/L	WATER	K	21	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39700 HCB TOT UG/L	WATER	K	7	.1000000	.0000000	.0000000	.100	.100	94/09/12	96/11/04
39720 PICLORAM WHL SMPL UG/L	WATER	K	21	.8000000	.0000000	.0000000	.800	.800	90/03/19	96/11/04
39730 2,4-D WHL SMPL UG/L	WATER	K	21	.8000000	.0000000	.0000000	.800	.800	90/03/19	96/11/04
39740 2,4,5-T WHL SMPL UG/L	WATER	K	21	.4000000	.0000000	.0000000	.400	.400	90/03/19	96/11/04
39770 DACTHAL WHL SMPL UG/L	WATER	K	21	.0500000	.0000000	.0000000	.050	.050	90/03/19	96/11/04
39782 LINDANE WHL SMPL UG/L	WATER	K	7	.0250000	.0000000	.0000000	.025	.025	94/09/12	96/11/04
46373 DETHATRZ WATER TOT UG/L	WATER		1	.3100000			.310	.310	96/07/08	96/07/08
46374 DISPRATR WATER TOT UG/L	WATER	K	1	.3000000			.300	.300	96/07/08	96/07/08
46570 CAL HARD CA MG MG/L	WATER	$	40	328.0400	7055.200	83.99500	583	117	90/05/14	96/11/04
49259 ACTOCHLR UNFLTR RECVUG/L	WATER	K	3	.1000000	.0000000	.0000000	.1	.1	96/03/11	96/11/04
70301 DISS SOL SUM MG/L	WATER		41	1276.600	98140.00	313.2700	1823	558	90/03/19	96/11/04
71900 MERCURY HG,TOTAL UG/L	WATER		1	.5000000			.5	.5	92/05/04	92/05/04
		K	20	.5250000	.0125000	.1118000	1.0	.5	90/03/19	96/11/04
		TOT	21	.5238100	.0119050	.1091100	1.0	.5	90/03/19	96/11/04
74041 WQF SAMPLE UPDATED	WATER		41	937250.0	4383E+05	20936.00	970626	911018	90/03/19	96/11/04
77729 RAMROD TOTAL UG/L	WATER	K	21	.2500000	.0000000	.0000000	.250	.250	90/03/19	96/11/04
77780 BLADEX TOTAL UG/L	WATER	K	21	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
77825 ALACHLOR TOTAL UG/L	WATER	K	21	.1714300	.0058930	.0767660	.250	.100	90/03/19	96/11/04
77860 BUTACHLO TOTAL UG/L	WATER	K	7	.5000000	.0000000	.0000000	.500	.500	94/09/12	96/11/04
81405 CRBFURAN TOT UG/L	WATER	K	3	.5000000	.0000000	.0000000	.500	.500	96/03/11	96/11/04
81408 MTRBUZIN TOT UG/L	WATER	K	21	.1000000	.0000000	.0000000	.100	.100	90/03/19	96/11/04
82028 RATIO FEC COL FEC STRP	WATER	$	41	1.588700	6.055300	2.460800	10	.02	90/03/19	96/11/04
82298 BROMIDE DISS.BR UG/L	WATER		12	.2450000	.0064092	.0800580	.400	.100	95/02/06	96/11/04

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/TYPA/AMBNT/STREAM ARKANSAS UNIT
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PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00005	VSAMPLOC	DEPTH	% OF TOT	WATER		2	.0800000	.0002000	.0141420	.09	.07	94/01/03	95/05/01
					K	6	.0500000	.0000000	.0000000	.05	.05	95/02/06	95/12/04
					TOT	8	.0575000	.0002214	.0148810	.09	.05	94/01/03	95/12/04
00010	WATER	TEMP	CENT	WATER		43	14.76800	63.89700	7.993600	28.0	.0	90/03/19	96/11/04
00011	WATER	TEMP	FAHN	WATER	$	43	58.58100	207.0200	14.38800	82.4	32.0	90/03/19	96/11/04
00076	TURB	TRBIDMTR	HACH FTU	WATER		43	40.63700	8278.700	90.98700	470.0	1.0	90/03/19	96/11/04
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		43	2446.400	563980.0	750.9900	4180	433	90/03/19	96/11/04
00300	DO		MG/L	WATER		43	10.56300	4.622500	2.150000	15.1	5.9	90/03/19	96/11/04
00301	DO	SATUR	PERCENT	WATER	$	43	101.8200	302.0800	17.38000	155.3	65.3	90/03/19	96/11/04
00310	BOD	5 DAY	MG/L	WATER		36	3.297200	2.558600	1.599600	7.6	1.1	90/03/19	96/01/08
					K	1	1.000000			1.0	1.0	95/12/04	95/12/04
					TOT	37	3.235100	2.630100	1.621800	7.6	1.0	90/03/19	96/01/08
00400	PH		SU	WATER		43	8.348800	.0694060	.2634500	9.00	7.60	90/03/19	96/11/04
00410	T ALK	CACO3	MG/L	WATER		43	194.9800	1933.500	43.97100	249	22	90/03/19	96/11/04
00440	HCO3 ION	HCO3	MG/L	WATER		2	.0000000	.0000000	.0000000	0	0	90/03/19	90/05/14
00530	RESIDUE	TOT NFLT	MG/L	WATER		43	68.09300	13627.00	116.7300	640	2	90/03/19	96/11/04
00610	NH3+NH4-	N TOTAL	MG/L	WATER		27	.1859600	.0375860	.1938700	.730	.010	90/03/19	96/11/04
					K	16	.0450000	.0001866	.0136630	.050	.010	90/05/14	94/11/07
					TOT	43	.1335100	.0280870	.1675900	.730	.010	90/03/19	96/11/04
00612	UN-IONZD	NH3-N	MG/L	WATER	$	43	.0087399	.0001886	.0137340	.071	.0004	90/03/19	96/11/04
00613	NO2-N	DISS	MG/L	WATER		1	.0600000			.060	.060	96/07/08	96/07/08
					K	6	.0500000	.0000000	.0000000	.050	.050	96/01/08	96/11/04
					TOT	7	.0514290	.0000142	.0037801	.060	.050	96/01/08	96/11/04
00618	NO3-N	DISS	MG/L	WATER		14	2.336400	2.183400	1.477600	4.68	.31	95/02/06	96/11/04
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	43	.0106270	.0002788	.0166990	.086	.0005	90/03/19	96/11/04
00630	NO2&NO3	N-TOTAL	MG/L	WATER		29	2.620700	1.124100	1.060200	5.24	.98	90/03/19	94/11/07
00665	PHOS-TOT		MG/L P	WATER		43	.5287000	.0524950	.2291200	1.060	.190	90/03/19	96/11/04
00671	PHOS-DIS	ORTHO	MG/L P	WATER		14	.2099300	.0049986	.0707010	.280	.020	95/02/06	96/11/04
00900	TOT HARD	CACO3	MG/L	WATER		43	330.6500	7438.400	86.24600	541	74	90/03/19	96/11/04
00901	C HARD	CACO3	MG/L	WATER		2	197.0000	1250.000	35.35500	222	172	90/03/19	90/05/14
00902	NC HARD	CACO3	MG/L	WATER		2	157.5000	2112.500	45.96200	190	125	90/03/19	90/05/14
00916	CALCIUM	CA-TOT	MG/L	WATER		43	96.24100	533.7100	23.10200	140.0	21.2	90/03/19	96/11/04
00927	MGNSIUM	MG,TOT	MG/L	WATER		43	22.08900	60.82200	7.798900	46.4	5.2	90/03/19	96/11/04
00929	SODIUM	NA,TOT	MG/L	WATER		43	329.7100	16055.00	126.7100	760.00	53.98	90/03/19	96/11/04
00937	PTSSIUM	K,TOT	MG/L	WATER		43	7.973900	8.332900	2.886700	18.49	4.71	90/03/19	96/11/04
00940	CHLORIDE	TOTAL	MG/L	WATER		29	554.5000	41151.00	202.8600	1190	88	90/03/19	94/11/07
00941	CHLORIDE	DISS IN WTR	MG/L	WATER		14	471.3300	52454.00	229.0300	771	89	95/02/06	96/11/04
00945	SULFATE	SO4-TOT	MG/L	WATER		29	148.3800	1694.100	41.15900	200	21	90/03/19	94/11/07
00946	SULFATE	SO4-DISS	MG/L	WATER		14	233.8200	29411.00	171.5000	547.0	35.6	95/02/06	96/11/04

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ARKANSAS RIVER NEAR YODER
20155 KANSAS RENO
ARKANSAS RIVER 100202
ARKANSAS UNIT
21KAN001 900714 11030010001 0043.830 ON
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00950	FLUORIDE	F,DISS	MG/L	WATER		14	.3677100	.0096448	.0982080	.56	.14	95/02/06	96/11/04
00951	FLUORIDE	F,TOTAL	MG/L	WATER		7	.5014300	.0027479	.0524200	.58	.42	93/12/06	94/11/07
00955	SILICA	DISOLVED	MG/L	WATER		10	19.91000	124.9600	11.17800	43.1	11.6	94/07/11	95/12/04
00956	SILICA	TOTAL	MG/L	WATER		33	26.04000	613.5400	24.77000	118.0	9.6	90/03/19	96/11/04
01002	ARSENIC	AS,TOT	UG/L	WATER		21	5.138100	42.20700	6.496700	25	1	90/03/19	96/11/04
					K	22	18.90500	228.2600	15.10800	50	.9	90/07/23	95/12/04
					TOT	43	12.18100	182.7100	13.51700	50	.9	90/03/19	96/11/04
01007	BARIUM	BA,TOT	UG/L	WATER		42	135.2400	2579.700	50.79100	340	77	90/03/19	96/11/04
01012	BERYLIUM	BE,TOT	UG/L	WATER		3	1.666700	1.333300	1.154700	3.00	1.00	91/08/05	96/09/09
					K	39	1.384600	2.295600	1.515100	10.00	1.00	90/05/14	96/11/04
					TOT	42	1.404800	2.198000	1.482600	10.00	1.00	90/05/14	96/11/04
01022	BORON	B,TOT	UG/L	WATER		43	160.2600	2764.500	52.57900	278	43	90/03/19	96/11/04
01027	CADMIUM	CD,TOT	UG/L	WATER		1	3.000000			3	3	95/12/04	95/12/04
					K	42	1.585700	1.523200	1.234200	5	.1	90/03/19	96/11/04
					TOT	43	1.618600	1.533500	1.238300	5	.1	90/03/19	96/11/04
01034	CHROMIUM	CR,TOT	UG/L	WATER		21	5.100000	11.88600	3.447600	15	1	90/07/23	96/11/04
					K	22	7.363600	13.67100	3.697400	10	1	90/03/19	96/11/04
					TOT	43	6.258100	13.80600	3.715700	15	1	90/03/19	96/11/04
01037	COBALT	CO,TOTAL	UG/L	WATER		1	5.000000			5	5	92/07/06	92/07/06
					K	40	7.900000	8.400100	2.898300	10	4	90/07/23	96/11/04
					TOT	41	7.829300	8.395200	2.897500	10	4	90/07/23	96/11/04
01042	COPPER	CU,TOT	UG/L	WATER		38	15.15800	68.56700	8.280500	38	4	90/03/19	96/11/04
					K	5	10.00000	.0000000	.0000000	10	10	93/06/07	94/11/07
					TOT	43	14.55800	63.20300	7.950000	38	4	90/03/19	96/11/04
01045	IRON	FE,TOT	UG/L	WATER		43	1873.600	9093100	3015.500	12700	61	90/03/19	96/11/04
01051	LEAD	PB,TOT	UG/L	WATER		20	5.065000	25.43600	5.043400	23	1	91/04/08	96/11/04
					K	14	10.70700	323.4500	17.98500	50	.9	90/03/19	95/10/09
					TOT	34	7.388200	150.0100	12.24800	50	.9	90/03/19	96/11/04
01055	MANGNESE	MN	UG/L	WATER		43	270.2600	276260.0	525.6000	3211.0	38.0	90/03/19	96/11/04
01059	THALLIUM	TL,TOTAL	UG/L	WATER		1	30.00000			30	30	91/04/08	91/04/08
					K	40	38.12500	270.1100	16.43500	50	15	90/07/23	96/11/04
					TOT	41	37.92700	264.9700	16.27800	50	15	90/07/23	96/11/04
01062	MOLY	MO,TOT	UG/L	WATER		9	2.222200	.9444500	.9718300	4	1	91/02/11	92/09/14
					K	32	9.625000	19.79000	4.448600	20	1	90/07/23	96/11/04
					TOT	41	8.000000	25.15000	5.015000	20	1	90/07/23	96/11/04
01067	NICKEL	NI,TOTAL	UG/L	WATER		12	6.975000	30.11300	5.487500	20	1	90/05/14	96/11/04
					K	30	18.60000	441.3500	21.00800	50	1	90/07/23	96/03/11
					TOT	42	15.27900	348.5100	18.66800	50	1	90/05/14	96/11/04
01077	SILVER	AG,TOT	UG/L	WATER		3	5.333300	4.333400	2.081700	7.0	3.0	90/03/19	92/09/14

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ARKANSAS RIVER NEAR YODER
20155 KANSAS RENO
ARKANSAS RIVER 100202
ARKANSAS UNIT
21KAN001 900714 11030010001 0043.830 ON
0000 FEET DEPTH

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PARAMETER		MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01077 SILVER AG,TOT	UG/L	WATER	K	40	4.750000	14.03900	3.746800	10.0	1.0	90/05/14	96/11/04
01077 SILVER AG,TOT	UG/L	WATER	TOT	43	4.790700	13.26500	3.642100	10.0	1.0	90/03/19	96/11/04
01087 VANADIUM V,TOT	UG/L	WATER		21	11.23800	60.79100	7.796800	34	4	90/07/23	96/11/04
			K	20	4.200000	1.010500	1.005300	5	3	90/09/17	96/11/04
			TOT	41	7.804900	43.56100	6.600100	34	3	90/07/23	96/11/04
01092 ZINC ZN,TOT	UG/L	WATER		43	40.79100	2334.100	48.31200	247	5	90/03/19	96/11/04
01097 ANTIMONY SB,TOT	UG/L	WATER		10	55.70000	1204.000	34.69900	129	10	91/02/11	96/11/04
			K	31	36.45200	330.3200	18.17500	50	10	90/07/23	96/07/08
			TOT	41	41.14600	588.6800	24.26300	129	10	90/07/23	96/11/04
01105 ALUMINUM AL,TOT	UG/L	WATER		42	2497.400	20734000	4553.500	20300	40	90/05/14	96/11/04
01147 SELENIUM SE,TOT	UG/L	WATER		24	5.595800	53.24600	7.297000	39	1	91/04/08	96/11/04
			K	11	13.56400	319.0200	17.86100	50	1	90/03/19	95/06/12
			TOT	35	8.100000	143.9300	11.99700	50	1	90/03/19	96/11/04
31616 FEC COLI MFM-FCBR	/100ML	WATER		33	828.4900	6597600	2568.600	14000	10	90/05/14	96/11/04
			K	9	50.00000	2250.000	47.43400	100	10	90/03/19	96/11/04
			L	1	600.0000			600	600	96/03/11	96/03/11
			TOT	43	660.2300	5129300	2264.800	14000	10	90/03/19	96/11/04
31673 FECSTREP MFKFAGAR	/100ML	WATER		35	847.4900	4552100	2133.600	10000	10	90/05/14	96/11/04
			K	7	48.57200	2314.300	48.10700	100	10	90/03/19	96/11/04
			O	1	3.000000			3	3	95/12/04	95/12/04
			TOT	43	697.7900	3785800	1945.700	10000	3	90/03/19	96/11/04
34259 DELTABHC	TOTUG/L	WATER	K	4	.0500000	.0000000	.0000000	.050	.050	96/03/11	96/11/04
34351 ENDSULSF	TOTUG/L	WATER	K	4	.1000000	.0000000	.0000000	.100	.100	96/03/11	96/11/04
34356 B-ENDO SULFAN	TOTWUG/L	WATER	K	4	.0200000	.0000000	.0000000	.020	.020	96/03/11	96/11/04
34361 A-ENDO SULFAN	TOTWUG/L	WATER	K	4	.0200000	.0000000	.0000000	.020	.020	96/03/11	96/11/04
34671 PCB 1016	TOTWUG/L	WATER	K	23	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39024 PROPAZIN WTR CCM	UG/L	WATER	K	23	.6521700	.2017000	.4491100	1.20	.30	90/03/19	96/11/04
39033 ATRZ WHL SMPL	UG/L	WATER		4	.6725000	.3066300	.5537400	1.500	.330	93/02/08	96/07/08
			K	19	.7263200	.2131600	.4616900	1.200	.300	90/03/19	96/11/04
			TOT	23	.7169600	.2166500	.4654600	1.500	.300	90/03/19	96/11/04
39045 2,4,5-TP WTR SMPL	UG/L	WATER	K	23	.4000000	.0000000	.0000000	.400	.400	90/03/19	96/11/04
39055 SIMAZINE WH.WATER	(UG/L)	WATER	K	9	.3000000	.0000000	.0000000	.3	.3	94/09/12	96/11/04
39300 P,P'DDT	TOT UG/L	WATER	K	4	.1000000	.0000000	.0000000	.100	.100	96/03/11	96/11/04
39310 P,P'DDD	TOT UG/L	WATER	K	4	.0400000	.0000000	.0000000	.040	.040	96/03/11	96/11/04
39320 P,P'DDE	TOT UG/L	WATER	K	4	.0200000	.0000000	.0000000	.020	.020	96/03/11	96/11/04
39330 ALDRIN	TOT UG/L	WATER	K	23	.0250000	.0000000	.0000000	.025	.025	90/03/19	96/11/04
39337 ALPHABHC	TOTUG/L	WATER	K	4	.0250000	.0000000	.0000000	.025	.025	96/03/11	96/11/04
39338 BETA BHC	TOTUG/L	WATER	K	4	.0500000	.0000000	.0000000	.050	.050	96/03/11	96/11/04
39340 GAMMABHC LINDANE	TOT.UG/L	WATER	K	14	.0250000	.0000000	.0000000	.025	.025	90/03/19	94/05/09

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ARKANSAS RIVER NEAR YODER
20155 KANSAS RENO
ARKANSAS RIVER 100202
/TYPA/AMBNT/STREAM
ARKANSAS UNIT
21KAN001 900714 11030010001 0043.830 ON
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
39350	CHLRDANE	TECH&MET	TOT UG/L	WATER	K	23	.2000000	.0000000	.0000000	.200	.200	90/03/19	96/11/04
39356	METOCLR	(DUAL)	UG/L	WATER		2	.4750000	.0112500	.1060700	.55	.40	90/07/23	96/07/08
					K	21	.2500000	.0000000	.0000000	.25	.25	90/03/19	96/11/04
					TOT	23	.2695700	.0047135	.0686550	.55	.25	90/03/19	96/11/04
39380	DIELDRIN		TOTUG/L	WATER	K	23	.0500000	.0000000	.0000000	.050	.050	90/03/19	96/11/04
39390	ENDRIN		TOT UG/L	WATER	K	23	.1000000	.0000000	.0000000	.100	.100	90/03/19	96/11/04
39400	TOXAPHEN		TOTUG/L	WATER	K	23	2.000000	.0000000	.0000000	2.000	2.000	90/03/19	96/11/04
39410	HEPTCHLR		TOTUG/L	WATER	K	23	.0200000	.0000000	.0000000	.020	.020	90/03/19	96/11/04
39420	HPCHLREP		TOTUG/L	WATER	K	23	.0200000	.0000000	.0000000	.020	.020	90/03/19	96/11/04
39480	MTHXYCLR	WHL SMPL	UG/L	WATER	K	23	.2000000	.0000000	.0000000	.200	.200	90/03/19	96/11/04
39488	PCB-1221		TOTUG/L	WATER	K	23	2.239100	.3379500	.5813300	2.500	1.000	90/03/19	96/11/04
39492	PCB-1232		TOTUG/L	WATER	K	23	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39496	PCB-1242		TOTUG/L	WATER	K	23	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39500	PCB-1248		TOTUG/L	WATER	K	23	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39504	PCB-1254		TOTUG/L	WATER	K	23	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39508	PCB-1260		TOTUG/L	WATER	K	23	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39700	HCB		TOT UG/L	WATER	K	9	.1000000	.0000000	.0000000	.100	.100	94/09/12	96/11/04
39720	PICLORAM	WHL SMPL	UG/L	WATER	K	23	.8000000	.0000000	.0000000	.800	.800	90/03/19	96/11/04
39730	2,4-D	WHL SMPL	UG/L	WATER	K	23	.8000000	.0000000	.0000000	.800	.800	90/03/19	96/11/04
39740	2,4,5-T	WHL SMPL	UG/L	WATER	K	23	.4000000	.0000000	.0000000	.400	.400	90/03/19	96/11/04
39770	DACTHAL	WHL SMPL	UG/L	WATER	K	23	.0500000	.0000000	.0000000	.050	.050	90/03/19	96/11/04
39782	LINDANE	WHL SMPL	UG/L	WATER	K	9	.0250000	.0000000	.0000000	.025	.025	94/09/12	96/11/04
46570	CAL HARD	CA MG	MG/L	WATER	$	43	331.2800	7463.900	86.39400	541	75	90/03/19	96/11/04
49259	ACTOCHLR	UNFLTR	RECVUG/L	WATER	K	4	.1000000	.0000000	.0000000	.1	.1	96/03/11	96/11/04
70301	DISS SOL	SUM	MG/L	WATER		43	1314.000	147090.0	383.5200	2456	273	90/03/19	96/11/04
71900	MERCURY	HG,TOTAL	UG/L	WATER		2	1.250000	.6050000	.7778200	1.8	.7	90/07/23	96/11/04
					K	22	.5454600	.0216450	.1471200	1.0	.5	90/03/19	96/11/04
					TOT	24	.6041700	.0856340	.2926300	1.8	.5	90/03/19	96/11/04
74041	WQF	SAMPLE	UPDATED	WATER		43	938120.0	4757E+05	21812.00	970626	911004	90/03/19	96/11/04
77729	RAMROD	TOTAL	UG/L	WATER	K	23	.2500000	.0000000	.0000000	.250	.250	90/03/19	96/11/04
77780	BLADEX	TOTAL	UG/L	WATER	K	23	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
77825	ALACHLOR	TOTAL	UG/L	WATER	K	23	.1652200	.0057808	.0760310	.250	.100	90/03/19	96/11/04
77860	BUTACHLO	TOTAL	UG/L	WATER	K	9	.5000000	.0000000	.0000000	.500	.500	94/09/12	96/11/04
81405	CRBFURAN	TOT	UG/L	WATER	K	4	.5000000	.0000000	.0000000	.500	.500	96/03/11	96/11/04
81408	MTRBUZIN	TOT	UG/L	WATER	K	23	.1000000	.0000000	.0000000	.100	.100	90/03/19	96/11/04
82028	RATIO	FEC COL	FEC STRP	WATER	$	43	2.170700	19.20600	4.382400	27	.02	90/03/19	96/11/04
82298	BROMIDE	DISS.BR	UG/L	WATER		14	.2790000	.0092942	.0964070	.400	.090	95/02/06	96/11/04

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RATTLESNAKE CREEK NEAR RAYMOND
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LOWER ARKANSAS UNIT
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0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00005	VSAMPLOC	DEPTH	% OF TOT	WATER	K	6	.0500000	.0000000	.0000000	.05	.05	95/02/06	95/12/04
00010	WATER	TEMP	CENT	WATER		199	12.37200	70.41700	8.391500	30.0	-2.0	75/11/18	96/11/04
00011	WATER	TEMP	FAHN	WATER	$	199	54.26800	228.2700	15.10900	86.0	28.4	75/11/18	96/11/04
00057	IND OF	FLOW	CHECKED	WATER		69	.0000000	.0000000	.0000000	0	0	79/10/09	93/08/09
00060	STREAM	FLOW	CFS	WATER		180	31.32500	1567.500	39.59200	221	.7	75/11/18	93/08/09
00076	TURB	TRBIDMTR	HACH FTU	WATER		194	25.88300	1567.700	39.59500	250.0	1.2	75/11/18	96/11/04
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		199	8903.300	13679000	3698.600	16250	711	75/11/18	96/11/04
00300	DO		MG/L	WATER		199	10.38100	6.085700	2.466900	18.5	5.5	75/11/18	96/11/04
00301	DO	SATUR	PERCENT	WATER	$	190	98.29800	605.5600	24.60800	182.9	57.5	75/11/18	96/11/04
00310	BOD	5 DAY	MG/L	WATER		192	3.116600	3.535400	1.880300	13.8	.3	75/11/18	95/12/04
					K	1	1.000000			1.0	1.0	93/10/11	93/10/11
					TOT	193	3.105600	3.540200	1.881600	13.8	.3	75/11/18	95/12/04
00335	COD	LOWLEVEL	MG/L	WATER		154	47.61000	1772.600	42.10200	275.0	2.0	75/11/18	89/11/15
					K	1	.0100000			.01	.01	85/10/23	85/10/23
					TOT	155	47.30300	1775.700	42.13900	275.0	.01	75/11/18	89/11/15
00400	PH		SU	WATER		81	8.167800	.0401370	.2003400	8.60	7.60	86/04/22	96/11/04
00403	PH	LAB	SU	WATER		119	8.016700	.0557470	.2361100	8.6	7.4	75/11/18	86/09/24
00410	T ALK	CACO3	MG/L	WATER		199	202.9500	1827.800	42.75300	570	40	75/11/18	96/11/04
					K	1	1.000000			1	1	85/08/14	85/08/14
					TOT	200	201.9400	2022.500	44.97300	570	1	75/11/18	96/11/04
00440	HCO3 ION	HCO3	MG/L	WATER		99	126.1700	15662.00	125.1500	327	0	77/06/06	90/05/14
00445	CO3 ION	CO3	MG/L	WATER		51	.0000000	.0000000	.0000000	0	0	77/06/06	82/02/17
00530	RESIDUE	TOT NFLT	MG/L	WATER		187	53.19800	4564.300	67.56000	400	1	75/11/18	96/11/04
					K	3	1.000000	.0000000	.0000000	1	1	89/03/01	92/11/02
					TOT	190	52.37400	4534.400	67.33800	400	1	75/11/18	96/11/04
00547	RESIDUE	TOT NSET	MG/L	WATER		20	2911.300	1550000	1245.000	5660	1450	75/11/18	77/12/14
00610	NH3+NH4-	N TOTAL	MG/L	WATER		145	.1221700	.0177630	.1332800	.960	.000	75/11/18	96/11/04
					K	53	.0250940	.0003831	.0195750	.050	.010	84/04/18	94/11/07
					TOT	198	.0961860	.0149420	.1222400	.960	.000	75/11/18	96/11/04
00612	UN-IONZD	NH3-N	MG/L	WATER	$	196	.0035033	.0000404	.0063599	.043	.000	75/11/18	96/11/04
00613	NO2-N	DISS	MG/L	WATER		1	.5500000			.550	.550	96/11/04	96/11/04
					K	5	.0500000	.0000000	.0000000	.050	.050	96/03/11	96/09/09
					TOT	6	.1333300	.0416670	.2041300	.550	.050	96/03/11	96/11/04
00618	NO3-N	DISS	MG/L	WATER		11	.3965500	.4682100	.6842600	2.42	.02	95/02/06	96/11/04
					K	1	.0100000			.01	.01	95/05/01	95/05/01
					TOT	12	.3643300	.4381000	.6618900	2.42	.01	95/02/06	96/11/04
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	196	.0042596	.0000597	.0077330	.052	.000	75/11/18	96/11/04
00630	NO2&NO3	N-TOTAL	MG/L	WATER		156	.2569200	.0918890	.3031300	1.70	.00	77/06/06	94/11/07
					K	12	.0125000	.0000204	.0045227	.02	.01	84/08/22	92/07/06

000030
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RATTLESNAKE CREEK NEAR RAYMOND
20159 KANSAS RICE
ARKANSAS 100202
LOWER ARKANSAS UNIT
21KAN001 760326 11030009001 0004.200 ON
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER			MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00630 NO2&NO3	N-TOTAL	MG/L	WATER	TOT	168	.2394600	.0892730	.2987900	1.70	.00	77/06/06	94/11/07
00650 T PO4	PO4	MG/L	WATER		18	.5511100	1.795200	1.339900	5.90	.09	75/11/18	77/04/12
00665 PHOS-TOT		MG/L P	WATER		165	.1216100	.0112530	.1060800	.700	.000	77/05/10	96/11/04
				K	16	.0375000	.0003666	.0191490	.050	.010	84/12/12	94/01/03
				TOT	181	.1141800	.0108560	.1041900	.700	.000	77/05/10	96/11/04
00671 PHOS-DIS	ORTHO	MG/L P	WATER		2	1.930000	6.624800	2.573900	3.750	.110	95/06/12	96/11/04
				K	10	.0180000	.0002844	.0168660	.050	.010	95/02/06	96/09/09
				TOT	12	.3366700	1.156400	1.075400	3.750	.010	95/02/06	96/11/04
00900 TOT HARD	CACO3	MG/L	WATER		200	491.2900	21928.00	148.0800	907	167	75/11/18	96/11/04
00901 C HARD	CACO3	MG/L	WATER		142	204.8000	2624.500	51.23000	570	0	77/05/10	90/05/14
00902 NC HARD	CACO3	MG/L	WATER		161	285.4700	20793.00	144.2000	665	11	75/11/18	90/05/14
00916 CALCIUM	CA-TOT	MG/L	WATER		200	116.9100	869.8900	29.49400	212.0	48.3	75/11/18	96/11/04
00927 MGNSIUM	MG,TOT	MG/L	WATER		200	48.61300	369.0200	19.21000	92.0	11.3	75/11/18	96/11/04
00929 SODIUM	NA,TOT	MG/L	WATER		199	2041.700	1947200	1395.400	9623.00	305.00	75/11/18	96/11/04
00937 PTSSIUM	K,TOT	MG/L	WATER		199	7.758000	3.159700	1.777600	17.00	.40	75/11/18	96/11/04
00940 CHLORIDE	TOTAL	MG/L	WATER		188	2848.300	1440400	1200.200	5780	670	75/11/18	94/11/07
00941 CHLORIDE	DISS IN WTR	MG/L	WATER		12	3348.500	1611600	1269.500	5192	565	95/02/06	96/11/04
00945 SULFATE	SO4-TOT	MG/L	WATER		188	346.5500	26768.00	163.6100	760	74	75/11/18	94/11/07
00946 SULFATE	SO4-DISS	MG/L	WATER		12	430.1400	65861.00	256.6300	1032.0	57.7	95/02/06	96/11/04
00950 FLUORIDE	F,DISS	MG/L	WATER		2	.5650000	.2664500	.5161900	.93	.20	95/06/12	96/11/04
				K	10	.0500000	.0000000	.0000000	.05	.05	95/02/06	96/09/09
				TOT	12	.1358300	.0644080	.2537900	.93	.05	95/02/06	96/11/04
00951 FLUORIDE	F,TOTAL	MG/L	WATER		7	.4471400	.0050575	.0711160	.56	.36	93/12/06	94/11/07
00955 SILICA	DISOLVED	MG/L	WATER		51	13.93900	18.79100	4.334900	24.0	3.2	75/11/18	95/12/04
00956 SILICA	TOTAL	MG/L	WATER		146	11.83100	33.46800	5.785200	33.0	.7	79/07/17	96/11/04
				K	1	.1000000			.1	.1	85/08/14	85/08/14
				TOT	147	11.75200	34.17500	5.846000	33.0	.1	79/07/17	96/11/04
01000 ARSENIC	AS,DISS	UG/L	WATER		5	6.000000	30.00000	5.477200	10	0	75/12/16	78/07/10
01002 ARSENIC	AS,TOT	UG/L	WATER		27	13.31900	356.3000	18.87600	67	1	79/04/10	96/11/04
				K	25	17.55600	224.7300	14.99100	50	.9	88/06/22	96/07/08
				TOT	52	15.35600	291.9700	17.08700	67	.9	79/04/10	96/11/04
01007 BARIUM	BA,TOT	UG/L	WATER		51	147.6700	5582.400	74.71600	410	20	79/04/10	96/11/04
01012 BERYLIUM	BE,TOT	UG/L	WATER	K	40	1.375000	2.240400	1.496800	10.00	1.00	90/05/14	96/11/04
01022 BORON	B,TOT	UG/L	WATER		191	268.7300	10616.00	103.0400	560	.2	75/11/18	96/11/04
				K	1	10.00000			10	10	86/01/15	86/01/15
				TOT	192	267.3900	10909.00	104.4500	560	.2	75/11/18	96/11/04
01025 CADMIUM	CD,DISS	UG/L	WATER		6	1.666700	16.66700	4.082500	10	0	75/12/16	78/07/10
01027 CADMIUM	CD,TOT	UG/L	WATER		8	.7500000	1.071400	1.035100	3	0	79/04/10	91/08/05
				K	44	1.536400	1.469800	1.212400	5	.1	84/06/20	96/11/04

000030
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RATTLESNAKE CREEK NEAR RAYMOND
20159 KANSAS RICE
ARKANSAS 100202
LOWER ARKANSAS UNIT
21KAN001 760326 11030009001 0004.200 ON
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01027	CADMIUM	CD,TOT	UG/L	WATER	TOT	52	1.415400	1.468400	1.211800	5	0	79/04/10	96/11/04
01034	CHROMIUM	CR,TOT	UG/L	WATER		28	3.803600	29.86600	5.465000	20	0	75/12/16	96/11/04
					K	30	6.300000	15.32100	3.914200	10	1	85/05/22	96/07/08
					TOT	58	5.094800	23.52600	4.850300	20	0	75/12/16	96/11/04
01037	COBALT	CO,TOTAL	UG/L	WATER	K	39	7.692300	8.745000	2.957200	10	4	90/07/23	96/11/04
01040	COPPER	CU,DISS	UG/L	WATER		6	33.33300	1066.700	32.66000	90	0	75/12/16	78/07/10
01042	COPPER	CU,TOT	UG/L	WATER		46	17.07200	202.1700	14.21900	80	2	79/04/10	96/11/04
					K	6	7.666700	13.06700	3.614800	10	3	90/09/17	94/11/07
					TOT	52	15.98700	188.8700	13.74300	80	2	79/04/10	96/11/04
01045	IRON	FE,TOT	UG/L	WATER		52	685.4000	1379200	1174.400	7710	60	79/04/10	96/11/04
01046	IRON	FE,DISS	UG/L	WATER		6	195.0000	89230.00	298.7100	790	20	75/12/16	78/07/10
01049	LEAD	PB,DISS	UG/L	WATER		6	18.33300	736.6700	27.14200	70	0	75/12/16	78/07/10
01051	LEAD	PB,TOT	UG/L	WATER		21	7.338100	234.1800	15.30300	70	0	79/04/10	96/11/04
					K	22	7.177300	223.0700	14.93600	50	.9	84/06/20	96/09/09
					TOT	43	7.255800	223.0600	14.93500	70	0	79/04/10	96/11/04
01055	MANGNESE	MN	UG/L	WATER		52	223.3500	63268.00	251.5300	1580.0	10.0	79/04/10	96/11/04
01056	MANGNESE	MN,DISS	UG/L	WATER		6	40.00000	1720.000	41.47300	90.0	.0	75/12/16	78/07/10
01059	THALLIUM	TL,TOTAL	UG/L	WATER		1	30.00000			30	30	91/04/08	91/04/08
					K	38	37.50000	276.6900	16.63400	50	15	90/07/23	96/11/04
					TOT	39	37.30800	270.8500	16.45800	50	15	90/07/23	96/11/04
01062	MOLY	MO,TOT	UG/L	WATER		1	10.00000			10	10	94/09/12	94/09/12
					K	38	7.289500	26.15700	5.114400	20	1	90/07/23	96/11/04
					TOT	39	7.359000	25.65700	5.065300	20	1	90/07/23	96/11/04
01067	NICKEL	NI,TOTAL	UG/L	WATER		11	19.90000	1323.600	36.38100	107	1	90/05/14	96/11/04
					K	29	19.20700	445.6700	21.11100	50	1	90/07/23	96/05/06
					TOT	40	19.39800	659.4500	25.68000	107	1	90/05/14	96/11/04
01075	SILVER	AG,DISS	UG/L	WATER		6	1.666700	16.66700	4.082500	10.0	.0	75/12/16	78/07/10
01077	SILVER	AG,TOT	UG/L	WATER		11	9.000000	112.0000	10.58300	31.0	.0	79/04/10	92/01/13
					K	41	4.731700	13.70100	3.701500	10.0	1.0	88/06/22	96/11/04
					TOT	52	5.634600	35.80500	5.983700	31.0	.0	79/04/10	96/11/04
01087	VANADIUM	V,TOT	UG/L	WATER		10	6.500000	4.055600	2.013900	10	4	90/07/23	96/07/08
					K	29	4.103500	1.024600	1.012300	5	3	90/09/17	96/11/04
					TOT	39	4.718000	2.839400	1.685100	10	3	90/07/23	96/11/04
01090	ZINC	ZN,DISS	UG/L	WATER		6	18.33300	296.6700	17.22400	40	0	75/12/16	78/07/10
01092	ZINC	ZN,TOT	UG/L	WATER		52	61.71200	10166.00	100.8300	545	7	79/04/10	96/11/04
01097	ANTIMONY	SB,TOT	UG/L	WATER		8	63.25000	1102.500	33.20400	96	10	91/08/05	96/11/04
					K	31	35.16100	345.8100	18.59600	50	10	90/07/23	96/07/08
					TOT	39	40.92300	608.1300	24.66000	96	10	90/07/23	96/11/04
01105	ALUMINUM	AL,TOT	UG/L	WATER		40	527.2300	378890.0	615.5400	2708	40	90/05/14	96/11/04

000030
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RATTLESNAKE CREEK NEAR RAYMOND
20159 KANSAS RICE
ARKANSAS 100202
/TYPA/AMBNT/STREAM
LOWER ARKANSAS UNIT
21KAN001 760326 11030009001 0004.200 ON
0000 FEET DEPTH

PARAMETER		MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01147 SELENIUM SE,TOT	UG/L	WATER		19	14.34200	315.7600	17.77000	66	1	79/04/10	96/09/09
			K	25	9.008000	239.1000	15.46300	50	1	89/05/17	96/11/04
			TOT	44	11.31100	272.7800	16.51600	66	1	79/04/10	96/11/04
31501 TOT COLI MFIMENDO	/100ML	WATER		66	1062.600	2504000	1582.400	8000	20	75/11/18	83/02/16
			K	15	148.0000	56546.00	237.7900	1000	10	76/01/27	83/03/16
			L	2	95.00000	50.00000	7.071100	100	90	79/06/12	80/07/15
			TOT	83	873.9800	2134400	1461.000	8000	10	75/11/18	83/03/16
31616 FEC COLI MFM-FCBR	/100ML	WATER		136	450.6300	486410.0	697.4300	4500	10	75/11/18	96/11/04
			K	64	91.28100	14891.00	122.0300	1000	1	75/12/16	95/02/06
			TOT	200	335.6400	362930.0	602.4400	4500	1	75/11/18	96/11/04
31673 FECSTREP MFKFAGAR	/100ML	WATER		163	2018.600	30271000	5501.900	38000	10	75/11/18	96/11/04
			K	35	94.60000	496.4900	22.28200	100	1	76/02/10	94/01/03
			L	1	6000.000			6000	6000	95/08/14	95/08/14
			TOT	199	1700.200	25400000	5039.800	38000	1	75/11/18	96/11/04
34259 DELTABHC	TOTUG/L	WATER	K	4	.0500000	.0000000	.0000000	.050	.050	96/03/11	96/11/04
34351 ENDSULSF	TOTUG/L	WATER	K	4	.1000000	.0000000	.0000000	.100	.100	96/03/11	96/11/04
34356 B-ENDO SULFAN	TOTWUG/L	WATER	K	4	.0200000	.0000000	.0000000	.020	.020	96/03/11	96/11/04
34361 A-ENDO SULFAN	TOTWUG/L	WATER	K	4	.0200000	.0000000	.0000000	.020	.020	96/03/11	96/11/04
34671 PCB 1016	TOTWUG/L	WATER	K	22	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39024 PROPAZIN WTR CCM	UG/L	WATER	K	22	.6681800	.2051300	.4529100	1.20	.30	90/03/19	96/11/04
39033 ATRZ WHL SMPL	UG/L	WATER		1	.3100000			.310	.310	93/06/07	93/06/07
			K	32	.8625000	.1959700	.4426900	1.200	.300	78/11/14	96/11/04
			TOT	33	.8457500	.1991000	.4462100	1.200	.300	78/11/14	96/11/04
39045 2,4,5-TP WTR SMPL	UG/L	WATER	K	33	.3333300	.0091668	.0957430	.400	.200	78/11/14	96/11/04
39055 SIMAZINE WH.WATER	(UG/L)	WATER	K	8	.3000000	.0000000	.0000000	.3	.3	94/09/12	96/11/04
39300 P,P'DDT	TOT UG/L	WATER	K	15	.1000000	.0000000	.0000000	.100	.100	78/11/14	96/11/04
39305 O,P' DDT WHL SMPL	UG/L	WATER	K	11	.1000000	.0000000	.0000000	.100	.100	78/11/14	89/04/19
39310 P,P'DDD	TOT UG/L	WATER	K	4	.0400000	.0000000	.0000000	.040	.040	96/03/11	96/11/04
39320 P,P'DDE	TOT UG/L	WATER	K	4	.0200000	.0000000	.0000000	.020	.020	96/03/11	96/11/04
39330 ALDRIN	TOT UG/L	WATER	K	38	.0875000	.0264780	.1627200	.500	.025	75/11/18	96/11/04
39337 ALPHABHC	TOTUG/L	WATER	K	4	.0250000	.0000000	.0000000	.025	.025	96/03/11	96/11/04
39338 BETA BHC	TOTUG/L	WATER	K	4	.0500000	.0000000	.0000000	.050	.050	96/03/11	96/11/04
39340 GAMMABHC LINDANE	TOT.UG/L	WATER	K	14	.0250000	.0000000	.0000000	.025	.025	90/03/19	94/05/09
39350 CHLRDANE TECH&MET	TOT UG/L	WATER	K	38	.3068400	.0756870	.2751100	1.000	.120	75/11/18	96/11/04
39356 METOCLR (DUAL)	UG/L	WATER	K	30	.2500000	.0000000	.0000000	.25	.25	82/07/21	96/11/04
39370 DDT WHL SMPL	UG/L	WATER	K	5	10.00000	.0000000	.0000000	10.000	10.000	75/11/18	78/05/09
39380 DIELDRIN	TOTUG/L	WATER	K	38	.1092100	.0237640	.1541600	.500	.050	75/11/18	96/11/04
39390 ENDRIN	TOT UG/L	WATER	K	38	.1263200	.0046943	.0685150	.300	.100	75/11/18	96/11/04
39400 TOXAPHEN	TOTUG/L	WATER	K	33	2.000000	.0000000	.0000000	2.000	2.000	78/11/14	96/11/04

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RATTLESNAKE CREEK NEAR RAYMOND
20159 KANSAS RICE
ARKANSAS 100202
LOWER ARKANSAS UNIT
21KAN001 760326 11030009001 0004.200 ON
0000 FEET DEPTH

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PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
39410	HEPTCHLR		TOTUG/L	WATER	K	27	.2014800	.1504900	.3879300	1.000	.020	75/11/18	96/11/04
39420	HPCHLREP		TOTUG/L	WATER	K	27	.2014800	.1504900	.3879300	1.000	.020	75/11/18	96/11/04
39480	MTHXYCLR	WHL SMPL	UG/L	WATER	K	38	6.752600	291.0400	17.06000	50.000	.200	75/11/18	96/11/04
39488	PCB-1221		TOTUG/L	WATER	K	22	2.227300	.3506500	.5921600	2.500	1.000	90/03/19	96/11/04
39492	PCB-1232		TOTUG/L	WATER	K	22	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39496	PCB-1242		TOTUG/L	WATER	K	22	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39500	PCB-1248		TOTUG/L	WATER	K	22	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39504	PCB-1254		TOTUG/L	WATER	K	22	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39508	PCB-1260		TOTUG/L	WATER	K	22	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
39516	PCBS	WHL SMPL	UG/L	WATER	K	11	.5000000	.0000000	.0000000	.500	.500	78/11/14	89/04/19
39700	HCB		TOT UG/L	WATER	K	8	.1000000	.0000000	.0000000	.100	.100	94/09/12	96/11/04
39720	PICLORAM	WHL SMPL	UG/L	WATER	K	22	.8000000	.0000000	.0000000	.800	.800	90/03/19	96/11/04
39730	2,4-D	WHL SMPL	UG/L	WATER	K	33	.7151500	.0875820	.2959400	2.000	.400	78/11/14	96/11/04
39740	2,4,5-T	WHL SMPL	UG/L	WATER	K	33	.3333300	.0091668	.0957430	.400	.200	78/11/14	96/11/04
39770	DACTHAL	WHL SMPL	UG/L	WATER	K	32	.0500000	.0000000	.0000000	.050	.050	79/11/13	96/11/04
39782	LINDANE	WHL SMPL	UG/L	WATER	K	24	2.103100	17.12400	4.138100	10.000	.025	75/11/18	96/11/04
46570	CAL HARD	CA MG	MG/L	WATER	$	200	492.0900	22033.00	148.4300	908	167	75/11/18	96/11/04
49259	ACTOCHLR	UNFLTR	RECVUG/L	WATER	K	4	.1000000	.0000000	.0000000	.1	.1	96/03/11	96/11/04
70301	DISS SOL	SUM	MG/L	WATER		177	5910.900	7366600	2714.200	14501	15	77/05/10	96/11/04
70507	PHOS-T	ORTHO	MG/L P	WATER		1	.1000000			.100	.100	77/12/14	77/12/14
71851	NITRATE	DISS-NO3	MG/L	WATER		19	2.063200	2.314700	1.521400	5.3	.1	75/11/18	77/05/10
71890	MERCURY	HG,DISS	UG/L	WATER		6	.0000000	.0000000	.0000000	.0	.0	75/12/16	78/07/10
71900	MERCURY	HG,TOTAL	UG/L	WATER		6	.0833330	.0416670	.2041300	.5	.0	79/04/10	85/05/22
					K	26	.5384600	.0184620	.1358700	1.0	.5	84/06/20	96/11/04
					TOT	32	.4531300	.0541840	.2327700	1.0	.0	79/04/10	96/11/04
74021	EXCESS	ALKALNTY	MG/L	WATER		93	.0000000	.0000000	.0000000	0	0	77/05/10	85/10/23
74041	WQF	SAMPLE	UPDATED	WATER		99	908200.0	8395E+05	28975.00	970626	880603	84/10/24	96/11/04
77729	RAMROD	TOTAL	UG/L	WATER	K	32	.2500000	.0000000	.0000000	.250	.250	79/11/13	96/11/04
77780	BLADEX	TOTAL	UG/L	WATER	K	22	.5000000	.0000000	.0000000	.500	.500	90/03/19	96/11/04
77825	ALACHLOR	TOTAL	UG/L	WATER	K	32	.1937500	.0054434	.0737790	.250	.100	79/11/13	96/11/04
77860	BUTACHLO	TOTAL	UG/L	WATER	K	8	.5000000	.0000000	.0000000	.500	.500	94/09/12	96/11/04
81405	CRBFURAN	TOT	UG/L	WATER	K	4	.5000000	.0000000	.0000000	.500	.500	96/03/11	96/11/04
81408	MTRBUZIN	TOT	UG/L	WATER	K	31	.1000000	.0000000	.0000000	.100	.100	79/11/13	96/11/04
81480	HCARBON	C 30	TOT UG/L	WATER	K	1	.1000000			.100	.100	94/01/03	94/01/03
82028	RATIO	FEC COL	FEC STRP	WATER	$	199	1.234500	4.385000	2.094000	20	.004	75/11/18	96/11/04
82298	BROMIDE	DISS.BR	UG/L	WATER		12	.6287500	.1232600	.3510800	1.500	.150	95/02/06	96/11/04

(17)

002217 AR-37
38 12 50.0 098 18 52.0 5
ARKANSAS RIVER NEAR ALDEN
20159 KANSAS RICE
ARKANSAS 100210
/TYPA/AMBNT/STREAM
LOWER ARKANSAS BASIN
21KAN001 790818 11030010005 0005.520 ON
0999 FEET DEPTH

PARAMETER			MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010 WATER	TEMP	CENT	WATER		21	16.85700	26.12900	5.111700	24.0	10.0	71/04/21	77/06/21
00011 WATER	TEMP	FAHN	WATER	$	21	62.34300	84.66300	9.201200	75.2	50.0	71/04/21	77/06/21
00060 STREAM	FLOW	CFS	WATER		21	346.9100	63293.00	251.5800	1090	130	71/04/21	77/06/21
00070 TURB	JKSN	JTU	WATER		14	821.4300	646690.0	804.1700	2800.0	15.0	71/04/21	73/09/18
00076 TURB	TRBIDMTR	HACH FTU	WATER		7	127.1400	3656.200	60.46600	256.0	75.0	77/06/15	77/06/21
00095 CNDUCTVY	AT 25C	MICROMHO	WATER		21	2335.200	5128300	2264.600	8950	570	71/04/21	77/06/21
00300 DO		MG/L	WATER		21	7.847600	.6796300	.8244000	9.4	6.6	71/04/21	77/06/21
00301 DO	SATUR	PERCENT	WATER	$	21	80.10400	26.06900	5.105800	89.5	64.3	71/04/21	77/06/21
00310 BOD	5 DAY	MG/L	WATER		21	3.414300	3.998300	1.999600	9.3	.2	71/04/21	77/06/21
00403 PH	LAB	SU	WATER		21	7.971400	.0251710	.1586500	8.3	7.7	71/04/21	77/06/21
00410 T ALK	CACO3	MG/L	WATER		21	158.2900	1466.900	38.30000	242	104	71/04/21	77/06/21
00440 HCO3 ION	HCO3	MG/L	WATER		21	188.0500	1608.100	40.10100	256	127	71/04/21	77/06/21
00445 CO3 ION	CO3	MG/L	WATER		14	3.771400	42.28200	6.502500	19	0	71/04/21	73/09/18
00530 RESIDUE	TOT NFLT	MG/L	WATER		7	212.1400	13241.00	115.0700	460	125	77/06/15	77/06/21
00650 T PO4	PO4	MG/L	WATER		21	1.397600	1.341600	1.158300	5.10	.18	71/04/21	77/06/21
00900 TOT HARD	CACO3	MG/L	WATER		21	304.1900	17476.00	132.2000	612	180	71/04/21	77/06/21
00902 NC HARD	CACO3	MG/L	WATER		7	102.0000	136.0000	11.66200	116	80	77/06/15	77/06/21
00915 CALCIUM	CA,DISS	MG/L	WATER		21	85.90500	808.3900	28.43200	154.0	56.0	71/04/21	77/06/21
00925 MGNSIUM	MG,DISS	MG/L	WATER		21	21.66700	243.6300	15.60900	61.0	3.0	71/04/21	77/06/21
00940 CHLORIDE	TOTAL	MG/L	WATER		21	372.1000	69127.00	262.9200	835	47	71/04/21	77/06/21
00945 SULFATE	SO4-TOT	MG/L	WATER		21	204.0000	22196.00	148.9900	556	88	71/04/21	77/06/21
31501 TOT COLI	MFIMENDO	/100ML	WATER		21	109370.0	1171E+07	108230.0	390000	1900	71/04/21	77/06/21
31616 FEC COLI	MFM-FCBR	/100ML	WATER		18	9401.700	1347E+05	11607.00	50000	230	71/04/21	77/06/21
				K	3	3700.000	29970000	5474.500	10000	100	71/04/22	71/04/27
				TOT	21	8587.200	1216E+05	11031.00	50000	100	71/04/21	77/06/21
31673 FECSTREP	MFKFAGAR	/100ML	WATER		19	24770.00	7055E+06	84000.00	370000	100	71/04/21	77/06/21
				K	2	1000.000	.0000000	.0000000	1000	1000	71/04/23	77/06/16
				TOT	21	22506.00	6401E+06	80009.00	370000	100	71/04/21	77/06/21
46570 CAL HARD	CA MG	MG/L	WATER	$	21	303.7300	17397.00	131.9000	611	180	71/04/21	77/06/21
71851 NITRATE	DISS-NO3	MG/L	WATER		21	2.628600	5.401200	2.324100	9.7	.0	71/04/21	77/06/21
82028 RATIO	FEC COL	FEC STRP	WATER	$	21	2.664100	15.69800	3.962000	17	.1	71/04/21	77/06/21

002218 RC-38
38 13 43.0 098 24 23.0 5
RATTLESNAKE CREEK NEAR RAYMOND
20159 KANSAS RICE
ARKANSAS 100250
LOWER ARKANSAS BASIN
21KAN001 790818 11030009001 0003.550 ON
0999 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		21	16.14300	29.42900	5.424900	24.0	9.0	71/04/21	77/06/21
00011	WATER	TEMP	FAHN	WATER	$	21	61.05700	95.35600	9.765100	75.2	48.2	71/04/21	77/06/21
00060	STREAM	FLOW	CFS	WATER		21	52.14300	202.4300	14.22800	78	22	71/04/21	77/06/21
00070	TURB	JKSN	JTU	WATER		14	159.5000	21856.00	147.8400	550.0	8.0	71/04/21	73/09/18
00076	TURB	TRBIDMTR	HACH FTU	WATER		7	138.4300	3456.600	58.79300	210.0	48.0	77/06/15	77/06/21
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		21	4778.100	6358800	2521.700	8950	2090	71/04/21	77/06/21
00300	DO		MG/L	WATER		21	7.776200	.9169300	.9575700	9.5	6.1	71/04/21	77/06/21
00301	DO	SATUR	PERCENT	WATER	$	21	78.87000	33.71300	5.806300	97.4	69.7	71/04/21	77/06/21
00310	BOD	5 DAY	MG/L	WATER		21	3.833300	1.248400	1.117300	6.3	2.0	71/04/21	77/06/21
00403	PH	LAB	SU	WATER		21	7.957100	.0165770	.1287500	8.2	7.7	71/04/21	77/06/21
00410	T ALK	CACO3	MG/L	WATER		21	172.1000	505.4000	22.48100	210	130	71/04/21	77/06/21
00440	HCO3 ION	HCO3	MG/L	WATER		21	203.6700	441.7800	21.01900	234	159	71/04/21	77/06/21
00445	CO3 ION	CO3	MG/L	WATER		14	5.314300	32.94600	5.739900	12	0	71/04/21	73/09/18
00530	RESIDUE	TOT NFLT	MG/L	WATER		7	235.7200	3786.900	61.53800	300	165	77/06/15	77/06/21
00650	T PO4	PO4	MG/L	WATER		21	.4285700	.0515330	.2270100	.89	.14	71/04/21	77/06/21
00900	TOT HARD	CACO3	MG/L	WATER		21	331.2400	11979.00	109.4500	512	196	71/04/21	77/06/21
00902	NC HARD	CACO3	MG/L	WATER		7	106.2900	204.5800	14.30300	130	88	77/06/15	77/06/21
00915	CALCIUM	CA,DISS	MG/L	WATER		21	82.09500	742.0900	27.24100	141.0	11.0	71/04/21	77/06/21
00925	MGNSIUM	MG,DISS	MG/L	WATER		21	26.47600	231.0600	15.20100	56.0	5.0	71/04/21	77/06/21
00940	CHLORIDE	TOTAL	MG/L	WATER		21	1380.100	1041200	1020.400	3250	171	71/04/21	77/06/21
00945	SULFATE	SO4-TOT	MG/L	WATER		21	167.8100	8852.900	94.09000	334	76	71/04/21	77/06/21
31501	TOT COLI	MFIMENDO	/100ML	WATER		21	36905.00	2333E+06	48310.00	178000	23	71/04/21	77/06/21
31616	FEC COLI	MFM-FCBR	/100ML	WATER		18	503.3300	177850.0	421.7200	1800	60	71/04/21	77/06/21
					K	3	100.0000	.0000000	.0000000	100	100	71/04/24	71/04/27
					TOT	21	445.7200	172090.0	414.8300	1800	60	71/04/21	77/06/21
31673	FECSTREP	MFKFAGAR	/100ML	WATER		20	1569.500	4858000	2204.100	8700	100	71/04/21	77/06/21
					K	1	100.0000			100	100	71/04/27	71/04/27
					TOT	21	1499.500	4717900	2172.100	8700	100	71/04/21	77/06/21
46570	CAL HARD	CA MG	MG/L	WATER	$	21	314.0200	10162.00	100.8100	500	195	71/04/21	77/06/21
71851	NITRATE	DISS-NO3	MG/L	WATER		21	1.466700	1.579400	1.256700	4.9	.0	71/04/21	77/06/21
82028	RATIO	FEC COL	FEC STRP	WATER	$	21	1.225500	2.927600	1.711000	6	.03	71/04/21	77/06/21

198

002219 RC-39
38 03 15.0 098 44 04.0 5
RATTLESNAKE CREEK NEAR ST JOHN
20185 KANSAS STAFFORD
ARKANSAS 100250
/TYPA/AMBNT/STREAM LOWER ARKANSAS BASIN
21KAN001 790818 11030009001 0036.990 ON
0999 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		14	19.57200	23.95700	4.894600	25.0	10.0	73/09/12	77/06/21
00011	WATER	TEMP	FAHN	WATER	$	14	67.22900	77.62800	8.810700	77.0	50.0	73/09/12	77/06/21
00060	STREAM	FLOW	CFS	WATER		14	55.85700	730.1300	27.02100	142	40	73/09/12	77/06/21
00070	TURB	JKSN	JTU	WATER		7	351.4300	49414.00	222.2900	800.0	160.0	73/09/12	73/09/18
00076	TURB	TRBIDMTR	HACH FTU	WATER		7	157.1400	5808.500	76.21400	285.0	52.0	77/06/15	77/06/21
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		14	497.8600	165760.0	407.1300	1900	280	73/09/12	77/06/21
00300	DO		MG/L	WATER		14	6.721400	1.249600	1.117800	8.8	5.3	73/09/12	77/06/21
00301	DO	SATUR	PERCENT	WATER	$	14	71.89300	39.65900	6.297500	84.4	62.4	73/09/12	77/06/21
00310	BOD	5 DAY	MG/L	WATER		14	3.028600	2.185300	1.478300	7.3	1.3	73/09/12	77/06/21
00403	PH	LAB	SU	WATER		14	7.914300	.0397760	.1994400	8.2	7.5	73/09/12	77/06/21
00410	T ALK	CACO3	MG/L	WATER		14	154.1400	283.3700	16.83400	180	120	73/09/12	77/06/21
00440	HCO3 ION	HCO3	MG/L	WATER		14	187.9300	426.3900	20.64900	220	146	73/09/12	77/06/21
00445	CO3 ION	CO3	MG/L	WATER		7	.0000000	.0000000	.0000000	0	0	73/09/12	73/09/18
00530	RESIDUE	TOT NFLT	MG/L	WATER		7	240.0000	12167.00	110.3000	450	95	77/06/15	77/06/21
00650	T PO4	PO4	MG/L	WATER		14	.7435700	.1004700	.3169700	1.30	.34	73/09/12	77/06/21
00900	TOT HARD	CACO3	MG/L	WATER		14	170.0000	907.6900	30.12800	224	124	73/09/12	77/06/21
00902	NC HARD	CACO3	MG/L	WATER		7	32.57200	240.9500	15.52300	52	16	77/06/15	77/06/21
00915	CALCIUM	CA,DISS	MG/L	WATER		14	56.78600	123.5700	11.11600	75.0	40.0	73/09/12	77/06/21
00925	MGNSIUM	MG,DISS	MG/L	WATER		14	7.571400	9.186900	3.031000	13.0	2.0	73/09/12	77/06/21
00940	CHLORIDE	TOTAL	MG/L	WATER		14	57.92900	13792.00	117.4400	465	12	73/09/12	77/06/21
00945	SULFATE	SO4-TOT	MG/L	WATER		14	25.00000	119.5400	10.93300	59	12	73/09/12	77/06/21
31501	TOT COLI	MFIMENDO	/100ML	WATER		13	50985.00	3712E+06	60929.00	170000	1800	73/09/12	77/06/21
					K	1	20.00000			20	20	77/06/17	77/06/17
					TOT	14	47344.00	3612E+06	60103.00	170000	20	73/09/12	77/06/21
31616	FEC COLI	MFM-FCBR	/100ML	WATER		14	3582.900	14770000	3843.100	13000	200	73/09/12	77/06/21
31673	FECSTREP	MFKFAGAR	/100ML	WATER		14	5385.700	26720000	5169.100	18100	200	73/09/12	77/06/21
46570	CAL HARD	CA MG	MG/L	WATER	$	14	172.9700	951.1000	30.84000	224	125	73/09/12	77/06/21
71851	NITRATE	DISS-NO3	MG/L	WATER		14	1.792900	3.108400	1.763100	6.2	.1	73/09/12	77/06/21
82028	RATIO	FEC COL	FEC STRP	WATER	$	14	.9997800	1.311500	1.145200	5	.1	73/09/12	77/06/21

(19)

050201
38 06 03.0 098 29 09.0 4
QUIVERA LITTLE SALT MARSH STA. NO. 1
20185 KANSAS STAFFORD
ARKANSAS RIVER 100202
ARKANSAS RIVER
21KAN001 890218 11030009
0000 FEET DEPTH

/TYPA/AMBNT/LAKE

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		3	27.66700	4.334200	2.081900	30.0	26.0	88/07/18	94/06/27
00011	WATER	TEMP	FAHN	WATER	$	3	81.80000	14.03900	3.746900	86.0	78.8	88/07/18	94/06/27
00076	TURB	TRBIDMTR	HACH FTU	WATER		6	39.66700	259.0700	16.09600	60.0	21.0	88/07/18	94/06/27
00078	TRANSP	SECCHI	METERS	WATER		1	.2000000			.20	.20	91/06/18	91/06/18
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		6	6361.700	954980.0	977.2300	7430	5130	88/07/18	94/06/27
00299	DO	PROBE	MG/L	WATER		2	11.20000	2.000100	1.414300	12.2	10.2	91/06/18	94/06/27
00301	DO	SATUR	PERCENT	WATER	$	2	137.3500	261.1800	16.16100	148.8	125.9	91/06/18	94/06/27
00400	PH		SU	WATER		3	8.283300	.2409700	.4908800	8.85	8.00	88/07/18	94/06/27
00403	PH	LAB	SU	WATER		4	8.675000	.0692550	.2631600	8.9	8.4	91/06/18	94/06/27
00410	T ALK	CACO3	MG/L	WATER		4	126.5000	939.0000	30.64300	153	98	91/06/18	94/06/27
					K	2	20.00000	.0000000	.0000000	20	20	88/07/18	88/07/18
					TOT	6	91.00000	3588.000	59.90000	153	20	88/07/18	94/06/27
00530	RESIDUE	TOT NFLT	MG/L	WATER		6	81.66700	555.8700	23.57700	112	56	88/07/18	94/06/27
00610	NH3+NH4-	N TOTAL	MG/L	WATER		2	.0800000	.0002000	.0141420	.090	.070	91/06/18	91/06/18
					K	4	.0300000	.0005333	.0230940	.050	.010	88/07/18	94/06/27
					TOT	6	.0466670	.0010267	.0320420	.090	.010	88/07/18	94/06/27
00612	UN-IONZD	NH3-N	MG/L	WATER	$	1	.0007436			.0007	.0007	88/07/18	88/07/18
00618	NO3-N	DISS	MG/L	WATER	K	2	.0200000	.0000000	.0000000	.02	.02	94/06/27	94/06/27
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	1	.0009041			.0009	.0009	88/07/18	88/07/18
00625	TOT KJEL	N	MG/L	WATER		2	3.825000	1.980100	1.407100	4.820	2.830	94/06/27	94/06/27
00630	NO2&NO3	N-TOTAL	MG/L	WATER		2	.0200000	.0000000	.0000000	.02	.02	91/06/18	91/06/18
					K	2	.0100000	.0000000	.0000000	.01	.01	88/07/18	88/07/18
					TOT	4	.0150000	.0000333	.0057735	.02	.01	88/07/18	91/06/18
00665	PHOS-TOT		MG/L P	WATER		6	.2583300	.0068967	.0830460	.350	.150	88/07/18	94/06/27
00900	TOT HARD	CACO3	MG/L	WATER		6	266.1700	835.0800	28.89800	306	240	88/07/18	94/06/27
00901	C HARD	CACO3	MG/L	WATER		2	.0000000	.0000000	.0000000	0	0	88/07/18	88/07/18
00916	CALCIUM	CA-TOT	MG/L	WATER		6	67.53200	84.46900	9.190700	78.8	57.5	88/07/18	94/06/27
00927	MGNSIUM	MG,TOT	MG/L	WATER		6	23.75300	4.235700	2.058100	26.5	21.5	88/07/18	94/06/27
00929	SODIUM	NA,TOT	MG/L	WATER		6	2426.000	3597400	1896.700	4873.00	1078.00	88/07/18	94/06/27
00937	PTSSIUM	K,TOT	MG/L	WATER		6	7.610000	.9847200	.9923300	9.18	6.72	88/07/18	94/06/27
00940	CHLORIDE	TOTAL	MG/L	WATER		4	1924.800	77917.00	279.1400	2200	1670	88/07/18	91/06/18
00941	CHLORIDE	DISS IN	WTR MG/L	WATER		2	1770.000	.0000000	.0000000	1770	1770	94/06/27	94/06/27
00945	SULFATE	SO4-TOT	MG/L	WATER		4	190.2500	725.5800	26.93700	216	166	88/07/18	91/06/18
00946	SULFATE	SO4-DISS	MG/L	WATER		2	195.0000	2.000000	1.414200	196.0	194.0	94/06/27	94/06/27
00950	FLUORIDE	F,DISS	MG/L	WATER		2	.4400000	.0000000	.0000000	.44	.44	94/06/27	94/06/27
00951	FLUORIDE	F,TOTAL	MG/L	WATER		4	.5350000	.0001672	.0129310	.55	.52	88/07/18	91/06/18
00955	SILICA	DISOLVED	MG/L	WATER		4	17.43800	9.437000	3.072000	20.6	14.2	88/07/18	91/06/18
00956	SILICA	TOTAL	MG/L	WATER		2	18.00000	.7204600	.8488000	18.6	17.4	94/06/27	94/06/27
01002	ARSENIC	AS,TOT	UG/L	WATER		4	4.250000	1.583300	1.258300	6	3	88/07/18	94/06/27

050201
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QUIVERA LITTLE SALT MARSH STA. NO. 1
20185 KANSAS STAFFORD
ARKANSAS RIVER 100202
ARKANSAS RIVER
21KAN001 890218 11030009
0000 FEET DEPTH

/TYPA/AMBNT/LAKE

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01002	ARSENIC	AS,TOT	UG/L	WATER	K	2	21.00000	.0000000	.0000000	21	21	91/06/18	91/06/18
01002	ARSENIC	AS,TOT	UG/L	WATER	TOT	6	9.833300	75.76700	8.704400	21	3	88/07/18	94/06/27
01007	BARIUM	BA,TOT	UG/L	WATER		6	239.0000	3094.000	55.62400	320	196	88/07/18	94/06/27
01012	BERYLIUM	BE,TOT	UG/L	WATER	K	4	1.000000	.0000000	.0000000	1.00	1.00	91/06/18	94/06/27
01022	BORON	B,TOT	UG/L	WATER		6	255.8300	2459.800	49.59600	340	209	88/07/18	94/06/27
01027	CADMIUM	CD,TOT	UG/L	WATER	K	6	2.666700	3.466700	1.861900	5	1	88/07/18	94/06/27
01034	CHROMIUM	CR,TOT	UG/L	WATER	K	6	7.666700	13.06700	3.614800	10	3	88/07/18	94/06/27
01037	COBALT	CO,TOTAL	UG/L	WATER	K	4	7.000000	12.00000	3.464100	10	4	91/06/18	94/06/27
01042	COPPER	CU,TOT	UG/L	WATER		2	14.50000	84.50000	9.192400	21	8	91/06/18	91/06/18
					K	4	10.00000	.0000000	.0000000	10	10	88/07/18	94/06/27
					TOT	6	11.50000	22.30000	4.722300	21	8	88/07/18	94/06/27
01045	IRON	FE,TOT	UG/L	WATER		4	1260.000	562840.0	750.2300	1990	553	91/06/18	94/06/27
01046	IRON	FE,DISS	UG/L	WATER		2	1840.000	12800.00	113.1400	1920	1760	88/07/18	88/07/18
01051	LEAD	PB,TOT	UG/L	WATER		5	1.600000	.3000000	.5477300	2	1	88/07/18	94/06/27
					K	1	1.000000			1	1	88/07/18	88/07/18
					TOT	6	1.500000	.3000000	.5477200	2	1	88/07/18	94/06/27
01055	MANGNESE	MN	UG/L	WATER		4	149.7500	1626.900	40.33500	185.0	110.0	91/06/18	94/06/27
01056	MANGNESE	MN,DISS	UG/L	WATER		2	165.0000	50.00000	7.071100	170.0	160.0	88/07/18	88/07/18
01059	THALLIUM	TL,TOTAL	UG/L	WATER	K	4	32.50000	408.3300	20.20700	50	15	91/06/18	94/06/27
01062	MOLY	MO,TOT	UG/L	WATER		2	2.500000	.5000000	.7071100	3	2	91/06/18	91/06/18
					K	2	10.00000	.0000000	.0000000	10	10	94/06/27	94/06/27
					TOT	4	6.250000	18.91700	4.349300	10	2	91/06/18	94/06/27
01067	NICKEL	NI,TOTAL	UG/L	WATER	K	4	28.50000	616.3300	24.82600	50	7	91/06/18	94/06/27
01077	SILVER	AG,TOT	UG/L	WATER		2	1.000000	.0000000	.0000000	1.0	1.0	88/07/18	88/07/18
					K	4	7.000000	12.00000	3.464100	10.0	4.0	91/06/18	94/06/27
					TOT	6	5.000000	16.80000	4.098800	10.0	1.0	88/07/18	94/06/27
01087	VANADIUM	V,TOT	UG/L	WATER		4	8.000000	2.000000	1.414200	9	6	91/06/18	94/06/27
01092	ZINC	ZN,TOT	UG/L	WATER		5	29.00000	298.0000	17.26300	50	6	88/07/18	94/06/27
01097	ANTIMONY	SB,TOT	UG/L	WATER	K	4	30.00000	533.3300	23.09400	50	10	91/06/18	94/06/27
01105	ALUMINUM	AL,TOT	UG/L	WATER		4	1317.300	787260.0	887.2800	2180	469	91/06/18	94/06/27
01147	SELENIUM	SE,TOT	UG/L	WATER		1	3.000000			3	3	94/06/27	94/06/27
					K	5	10.80000	480.2000	21.91400	50	1	88/07/18	94/06/27
					TOT	6	9.500000	394.3000	19.85700	50	1	88/07/18	94/06/27
31616	FEC COLI	MFM-FCBR	/100ML	WATER		3	70.00000	700.0000	26.45800	100	50	88/07/18	91/06/18
					K	1	10.00000			10	10	91/06/18	91/06/18
					TOT	4	55.00000	1366.700	36.96900	100	10	88/07/18	91/06/18
31673	FECSTREP	MFKFAGAR	/100ML	WATER		1	60.00000			60	60	91/06/18	91/06/18
					K	1	10.00000			10	10	91/06/18	91/06/18
					TOT	2	35.00000	1250.000	35.35500	60	10	91/06/18	91/06/18

050201
38 06 03.0 098 29 09.0 4
QUIVERA LITTLE SALT MARSH STA. NO. 1
20185 KANSAS STAFFORD
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ARKANSAS RIVER
21KAN001 890218 11030009
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PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
32211	CHLRPHYL	A UG/L	CORRECTD	WATER		6	99.03300	586.4400	24.21700	129.20	64.10	88/07/18	94/06/27
34671	PCB	1016	TOTWUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
39024	PROPAZIN	WTR CCM	UG/L	WATER	K	2	.7500000	.4050000	.6364000	1.20	.30	91/06/18	94/06/27
39033	ATRZ	WHL SMPL	UG/L	WATER	K	4	.9750000	.2025000	.4500000	1.200	.300	88/07/18	94/06/27
39045	2,4,5-TP	WTR SMPL	UG/L	WATER	K	4	.3000000	.0133330	.1154700	.400	.200	88/07/18	94/06/27
39300	P,P'DDT		TOT UG/L	WATER	K	2	.1000000	.0000000	.0000000	.100	.100	88/07/18	88/07/18
39305	O,P' DDT	WHL SMPL	UG/L	WATER	K	2	.1000000	.0000000	.0000000	.100	.100	88/07/18	88/07/18
39330	ALDRIN		TOT UG/L	WATER	K	4	.0250000	.0000000	.0000000	.025	.025	88/07/18	94/06/27
39340	GAMMABHC	LINDANE	TOT.UG/L	WATER	K	1	.0250000			.025	.025	94/06/27	94/06/27
39350	CHLRDANE	TECH&MET	TOT UG/L	WATER	K	4	.2000000	.0000000	.0000000	.200	.200	88/07/18	94/06/27
39356	METOCLR	(DUAL)	UG/L	WATER	K	4	.2500000	.0000000	.0000000	.25	.25	88/07/18	94/06/27
39380	DIELDRIN		TOTUG/L	WATER	K	4	.0500000	.0000000	.0000000	.050	.050	88/07/18	94/06/27
39390	ENDRIN		TOT UG/L	WATER	K	4	.1000000	.0000000	.0000000	.100	.100	88/07/18	94/06/27
39400	TOXAPHEN		TOTUG/L	WATER	K	4	2.000000	.0000000	.0000000	2.000	2.000	88/07/18	94/06/27
39410	HEPTCHLR		TOTUG/L	WATER	K	2	.0200000	.0000000	.0000000	.020	.020	91/06/18	94/06/27
39420	HPCHLREP		TOTUG/L	WATER	K	2	.0200000	.0000000	.0000000	.020	.020	91/06/18	94/06/27
39480	MTHXYCLR	WHL SMPL	UG/L	WATER	K	4	.2000000	.0000000	.0000000	.200	.200	88/07/18	94/06/27
39488	PCB-1221		TOTUG/L	WATER	K	2	2.500000	.0000000	.0000000	2.500	2.500	91/06/18	94/06/27
39492	PCB-1232		TOTUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
39496	PCB-1242		TOTUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
39500	PCB-1248		TOTUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
39504	PCB-1254		TOTUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
39508	PCB-1260		TOTUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
39516	PCBS	WHL SMPL	UG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	88/07/18	88/07/18
39720	PICLORAM	WHL SMPL	UG/L	WATER	K	2	.8000000	.0000000	.0000000	.800	.800	91/06/18	94/06/27
39730	2,4-D	WHL SMPL	UG/L	WATER	K	4	.6000000	.0533340	.2309400	.800	.400	88/07/18	94/06/27
39740	2,4,5-T	WHL SMPL	UG/L	WATER	K	4	.3000000	.0133330	.1154700	.400	.200	88/07/18	94/06/27
39770	DACTHAL	WHL SMPL	UG/L	WATER	K	4	.0500000	.0000000	.0000000	.050	.050	88/07/18	94/06/27
39782	LINDANE	WHL SMPL	UG/L	WATER	K	3	.0250000	.0000000	.0000000	.025	.025	88/07/18	91/06/18
46570	CAL HARD	CA MG	MG/L	WATER	$	6	266.4400	826.0900	28.74200	306	240	88/07/18	94/06/27
70301	DISS SOL	SUM	MG/L	WATER		6	4658.800	3452500	1858.100	7008	3027	88/07/18	94/06/27
71900	MERCURY	HG,TOTAL	UG/L	WATER	K	6	.5000000	.0000000	.0000000	.5	.5	88/07/18	94/06/27
74041	WQF	SAMPLE	UPDATED	WATER		9	917560.0	7138E+05	26717.00	951122	890224	88/07/18	94/06/27
77729	RAMROD	TOTAL	UG/L	WATER	K	4	.2500000	.0000000	.0000000	.250	.250	88/07/18	94/06/27
77780	BLADEX	TOTAL	UG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
77825	ALACHLOR	TOTAL	UG/L	WATER	K	4	.2125000	.0056250	.0750000	.250	.100	88/07/18	94/06/27
81408	MTRBUZIN	TOT	UG/L	WATER	K	4	.1000000	.0000000	.0000000	.100	.100	88/07/18	94/06/27
82028	RATIO	FEC COL	FEC STRP	WATER	$	2	5.083300	48.34700	6.953200	10	.2	91/06/18	91/06/18

20

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050601
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QUIVERA BIG SALT MARSH STA. NO. 1
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ARKANSAS RIVER
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PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		3	28.33300	2.333900	1.527700	30.0	27.0	88/07/18	94/06/27
00011	WATER	TEMP	FAHN	WATER	$	3	83.00000	7.558600	2.749300	86.0	80.6	88/07/18	94/06/27
00076	TURB	TRBIDMTR	HACH FTU	WATER		6	27.81700	683.8900	26.15100	61.0	5.6	88/07/18	94/06/27
00078	TRANSP	SECCHI	METERS	WATER		1	.2000000			.20	.20	91/06/18	91/06/18
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		6	10295.00	63252000	7953.100	18980	1080	88/07/18	94/06/27
00299	DO	PROBE	MG/L	WATER		2	12.40000	33.62000	5.798300	16.5	8.3	91/06/18	94/06/27
00301	DO	SATUR	PERCENT	WATER	$	2	155.6700	5659.600	75.23000	208.9	102.5	91/06/18	94/06/27
00400	PH		SU	WATER		3	9.600000	.2701400	.5197500	9.90	9.00	88/07/18	94/06/27
00403	PH	LAB	SU	WATER		4	9.200000	.0135090	.1162300	9.3	9.1	91/06/18	94/06/27
00410	T ALK	CACO3	MG/L	WATER		4	217.7500	3178.900	56.38200	269	166	91/06/18	94/06/27
					K	2	20.00000	.0000000	.0000000	20	20	88/07/18	88/07/18
					TOT	6	151.8300	12335.00	111.0700	269	20	88/07/18	94/06/27
00530	RESIDUE	TOT NFLT	MG/L	WATER		6	74.66700	6227.100	78.91200	180	14	88/07/18	94/06/27
00610	NH3+NH4-	N TOTAL	MG/L	WATER		5	.0540000	.0001300	.0114020	.070	.040	88/07/18	94/06/27
					K	1	.0500000			.050	.050	94/06/27	94/06/27
					TOT	6	.0533330	.0001066	.0103280	.070	.040	88/07/18	94/06/27
00612	UN-IONZD	NH3-N	MG/L	WATER	$	1	.0345420			.035	.035	88/07/18	88/07/18
00618	NO3-N	DISS	MG/L	WATER	K	2	.0200000	.0000000	.0000000	.02	.02	94/06/27	94/06/27
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	1	.0419990			.042	.042	88/07/18	88/07/18
00625	TOT KJEL	N	MG/L	WATER		2	6.405000	.1740400	.4171800	6.700	6.110	94/06/27	94/06/27
00630	NO2&NO3	N-TOTAL	MG/L	WATER		2	.0200000	.0000000	.0000000	.02	.02	91/06/18	91/06/18
					K	2	.0100000	.0000000	.0000000	.01	.01	88/07/18	88/07/18
					TOT	4	.0150000	.0000333	.0057735	.02	.01	88/07/18	91/06/18
00665	PHOS-TOT		MG/L P	WATER		6	.2083300	.0224970	.1499900	.410	.090	88/07/18	94/06/27
00900	TOT HARD	CACO3	MG/L	WATER		6	361.0000	6203.600	78.76300	452	265	88/07/18	94/06/27
00901	C HARD	CACO3	MG/L	WATER		2	.0000000	.0000000	.0000000	0	0	88/07/18	88/07/18
00916	CALCIUM	CA-TOT	MG/L	WATER		6	58.17000	21.00400	4.583000	64.4	52.1	88/07/18	94/06/27
00927	MGNSIUM	MG,TOT	MG/L	WATER		6	52.52000	403.4200	20.08500	76.8	29.6	88/07/18	94/06/27
00929	SODIUM	NA,TOT	MG/L	WATER		6	4934.200	8938600	2989.800	8724.00	2330.00	88/07/18	94/06/27
00937	PTSSIUM	K,TOT	MG/L	WATER		6	13.27700	1.912800	1.383000	15.51	12.00	88/07/18	94/06/27
00940	CHLORIDE	TOTAL	MG/L	WATER		4	4875.000	2126600	1458.300	6150	3495	88/07/18	91/06/18
00941	CHLORIDE	DISS IN	WTR MG/L	WATER		2	3390.000	3200.000	56.56900	3430	3350	94/06/27	94/06/27
00945	SULFATE	SO4-TOT	MG/L	WATER		4	444.5000	14942.00	122.2400	547	297	88/07/18	91/06/18
00946	SULFATE	SO4-DISS	MG/L	WATER		2	293.5000	144.5000	12.02100	302.0	285.0	94/06/27	94/06/27
00950	FLUORIDE	F,DISS	MG/L	WATER		2	1.070000	.0050001	.0707120	1.12	1.02	94/06/27	94/06/27
00951	FLUORIDE	F,TOTAL	MG/L	WATER		4	.8775000	.0186250	.1364700	1.01	.75	88/07/18	91/06/18
00955	SILICA	DISOLVED	MG/L	WATER		4	10.09300	11.61000	3.407300	13.3	7.0	88/07/18	91/06/18
00956	SILICA	TOTAL	MG/L	WATER		2	15.40000	.5002500	.7072800	15.9	14.9	94/06/27	94/06/27
01002	ARSENIC	AS,TOT	UG/L	WATER		4	7.000000	16.66700	4.082500	11	3	88/07/18	94/06/27

050601
38 11 01.0 098 32 04.0 4
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PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01002	ARSENIC	AS,TOT	UG/L	WATER	K	2	21.00000	.0000000	.0000000	21	21	91/06/18	91/06/18
01002	ARSENIC	AS,TOT	UG/L	WATER	TOT	6	11.66700	62.26700	7.890900	21	3	88/07/18	94/06/27
01007	BARIUM	BA,TOT	UG/L	WATER		6	256.0000	6230.000	78.93000	370	168	88/07/18	94/06/27
01012	BERYLIUM	BE,TOT	UG/L	WATER	K	4	1.000000	.0000000	.0000000	1.00	1.00	91/06/18	94/06/27
01022	BORON	B,TOT	UG/L	WATER		6	393.0000	2941.600	54.23700	451	320	88/07/18	94/06/27
01027	CADMIUM	CD,TOT	UG/L	WATER		1	1.000000			1	1	88/07/18	88/07/18
					K	5	3.000000	3.500000	1.870800	5	1	88/07/18	94/06/27
					TOT	6	2.666700	3.466700	1.861900	5	1	88/07/18	94/06/27
01034	CHROMIUM	CR,TOT	UG/L	WATER		1	3.000000			3	3	91/06/18	91/06/18
					K	5	8.600000	9.800100	3.130500	10	3	88/07/18	94/06/27
					TOT	6	7.666700	13.06700	3.614800	10	3	88/07/18	94/06/27
01037	COBALT	CO,TOTAL	UG/L	WATER	K	4	7.000000	12.00000	3.464100	10	4	91/06/18	94/06/27
01042	COPPER	CU,TOT	UG/L	WATER		4	20.50000	3.000000	1.732100	23	19	88/07/18	91/06/18
					K	2	10.00000	.0000000	.0000000	10	10	94/06/27	94/06/27
					TOT	6	17.00000	31.20000	5.585700	23	10	88/07/18	94/06/27
01045	IRON	FE,TOT	UG/L	WATER		4	682.5000	426720.0	653.2400	1330	114	91/06/18	94/06/27
01046	IRON	FE,DISS	UG/L	WATER		2	325.0000	1250.000	35.35500	350	300	88/07/18	88/07/18
01051	LEAD	PB,TOT	UG/L	WATER		4	2.250000	3.583300	1.893000	5	1	91/06/18	94/06/27
					K	2	1.000000	.0000000	.0000000	1	1	88/07/18	88/07/18
					TOT	6	1.833300	2.566700	1.602100	5	1	88/07/18	94/06/27
01055	MANGNESE	MN	UG/L	WATER		4	81.00000	2654.000	51.51700	130.0	36.0	91/06/18	94/06/27
01056	MANGNESE	MN,DISS	UG/L	WATER		2	135.0000	8450.000	91.92400	200.0	70.0	88/07/18	88/07/18
01059	THALLIUM	TL,TOTAL	UG/L	WATER	K	4	32.50000	408.3300	20.20700	50	15	91/06/18	94/06/27
01062	MOLY	MO,TOT	UG/L	WATER		2	3.000000	.0000000	.0000000	3	3	91/06/18	91/06/18
					K	2	10.00000	.0000000	.0000000	10	10	94/06/27	94/06/27
					TOT	4	6.500000	16.33300	4.041500	10	3	91/06/18	94/06/27
01067	NICKEL	NI,TOTAL	UG/L	WATER	K	4	28.50000	616.3300	24.82600	50	7	91/06/18	94/06/27
01077	SILVER	AG,TOT	UG/L	WATER		2	1.500000	.5000000	.7071100	2.0	1.0	88/07/18	88/07/18
					K	4	7.000000	12.00000	3.464100	10.0	4.0	91/06/18	94/06/27
					TOT	6	5.166700	15.36700	3.920000	10.0	1.0	88/07/18	94/06/27
01087	VANADIUM	V,TOT	UG/L	WATER		4	12.75000	60.91700	7.804900	20	6	91/06/18	94/06/27
01092	ZINC	ZN,TOT	UG/L	WATER		6	144.0000	69956.00	264.4900	680	17	88/07/18	94/06/27
01097	ANTIMONY	SB,TOT	UG/L	WATER	K	4	30.00000	533.3300	23.09400	50	10	91/06/18	94/06/27
01105	ALUMINUM	AL,TOT	UG/L	WATER		4	715.0000	488830.0	699.1700	1430	110	91/06/18	94/06/27
01147	SELENIUM	SE,TOT	UG/L	WATER		2	5.500000	24.50000	4.949800	9	2	91/06/18	94/06/27
					K	4	13.25000	600.2500	24.50000	50	1	88/07/18	94/06/27
					TOT	6	10.66700	381.0700	19.52100	50	1	88/07/18	94/06/27
31616	FEC COLI	MFM-FCBR	/100ML	WATER	K	4	10.00000	.0000000	.0000000	10	10	88/07/18	91/06/18
31673	FECSTREP	MFKFAGAR	/100ML	WATER	L	2	6000.000	.0000000	.0000000	6000	6000	91/06/18	91/06/18

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QUIVERA BIG SALT MARSH STA. NO. 1
20185 KANSAS STAFFORD
ARKANSAS RIVER 100202
/TYPA/AMBNT/LAKE ARKANSAS RIVER
21KAN001 890218 11030009
0000 FEET DEPTH

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
32211 CHLRPHYL A UG/L CORRECTD	WATER		6	143.8700	35216.00	187.6600	426.10	14.09	88/07/18	94/06/27
34671 PCB 1016 TOTWUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
39024 PROPAZIN WTR CCM UG/L	WATER	K	2	.7500000	.4050000	.6364000	1.20	.30	91/06/18	94/06/27
39033 ATRZ WHL SMPL UG/L	WATER	K	4	.9750000	.2025000	.4500000	1.200	.300	88/07/18	94/06/27
39045 2,4,5-TP WTR SMPL UG/L	WATER	K	4	.3000000	.0133330	.1154700	.400	.200	88/07/18	94/06/27
39300 P,P'DDT TOT UG/L	WATER	K	2	.1000000	.0000000	.0000000	.100	.100	88/07/18	88/07/18
39305 O,P' DDT WHL SMPL UG/L	WATER	K	2	.1000000	.0000000	.0000000	.100	.100	88/07/18	88/07/18
39330 ALDRIN TOT UG/L	WATER	K	4	.0250000	.0000000	.0000000	.025	.025	88/07/18	94/06/27
39340 GAMMABHC LINDANE TOT.UG/L	WATER	K	1	.0250000			.025	.025	94/06/27	94/06/27
39350 CHLRDANE TECH&MET TOT UG/L	WATER	K	4	.2000000	.0000000	.0000000	.200	.200	88/07/18	94/06/27
39356 METOCLR (DUAL) UG/L	WATER	K	4	.2500000	.0000000	.0000000	.25	.25	88/07/18	94/06/27
39380 DIELDRIN TOTUG/L	WATER	K	4	.0500000	.0000000	.0000000	.050	.050	88/07/18	94/06/27
39390 ENDRIN TOT UG/L	WATER	K	4	.1000000	.0000000	.0000000	.100	.100	88/07/18	94/06/27
39400 TOXAPHEN TOTUG/L	WATER	K	4	2.000000	.0000000	.0000000	2.000	2.000	88/07/18	94/06/27
39410 HEPTCHLR TOTUG/L	WATER	K	2	.0200000	.0000000	.0000000	.020	.020	91/06/18	94/06/27
39420 HPCHLREP TOTUG/L	WATER	K	2	.0200000	.0000000	.0000000	.020	.020	91/06/18	94/06/27
39480 MTHXYCLR WHL SMPL UG/L	WATER	K	4	.2000000	.0000000	.0000000	.200	.200	88/07/18	94/06/27
39488 PCB-1221 TOTUG/L	WATER	K	2	2.500000	.0000000	.0000000	2.500	2.500	91/06/18	94/06/27
39492 PCB-1232 TOTUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
39496 PCB-1242 TOTUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
39500 PCB-1248 TOTUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
39504 PCB-1254 TOTUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
39508 PCB-1260 TOTUG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
39516 PCBS WHL SMPL UG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	88/07/18	88/07/18
39720 PICLORAM WHL SMPL UG/L	WATER	K	2	.8000000	.0000000	.0000000	.800	.800	91/06/18	94/06/27
39730 2,4-D WHL SMPL UG/L	WATER	K	4	.6000000	.0533340	.2309400	.800	.400	88/07/18	94/06/27
39740 2,4,5-T WHL SMPL UG/L	WATER	K	4	.3000000	.0133330	.1154700	.400	.200	88/07/18	94/06/27
39770 DACTHAL WHL SMPL UG/L	WATER	K	4	.0500000	.0000000	.0000000	.050	.050	88/07/18	94/06/27
39782 LINDANE WHL SMPL UG/L	WATER	K	3	.0250000	.0000000	.0000000	.025	.025	88/07/18	91/06/18
46570 CAL HARD CA MG MG/L	WATER	$	6	361.5300	6222.400	78.88200	453	265	88/07/18	94/06/27
70301 DISS SOL SUM MG/L	WATER		6	9932.700	8080900	2842.700	12759	6230	88/07/18	94/06/27
71900 MERCURY HG,TOTAL UG/L	WATER		1	.5000000			.5	.5	88/07/18	88/07/18
		K	5	.5000000	.0000000	.0000000	.5	.5	88/07/18	94/06/27
		TOT	6	.5000000	.0000000	.0000000	.5	.5	88/07/18	94/06/27
74041 WQF SAMPLE UPDATED	WATER		9	917560.0	7136E+05	26715.00	951122	890224	88/07/18	94/06/27
77729 RAMROD TOTAL UG/L	WATER	K	4	.2500000	.0000000	.0000000	.250	.250	88/07/18	94/06/27
77780 BLADEX TOTAL UG/L	WATER	K	2	.5000000	.0000000	.0000000	.500	.500	91/06/18	94/06/27
77825 ALACHLOR TOTAL UG/L	WATER	K	4	.2125000	.0056250	.0750000	.250	.100	88/07/18	94/06/27
81408 MTRBUZIN TOT UG/L	WATER	K	4	.1000000	.0000000	.0000000	.100	.100	88/07/18	94/06/27

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QUIVERA BIG SALT MARSH STA. NO. 1
20185 KANSAS STAFFORD
ARKANSAS RIVER 100202
ARKANSAS RIVER
21KAN001 890218 11030009
0000 FEET DEPTH

/TYPA/AMBNT/LAKE

	PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
82028	RATIO FEC COL FEC STRP	WATER	$	2	.0016667	.0000000	.0000000	.002	.002	91/06/18	91/06/18

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RATTLESNAKE CREEK NEAR HUDSON
20185 KANSAS STAFFORD
ARKANSAS RIVER 100202
ARKANSAS UNIT
21KAN001 910215 11030009001 0032.250 ON
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00010	WATER	TEMP	CENT	WATER		11	13.27300	65.61800	8.100500	25.0	2.0	92/01/13	96/11/04
00011	WATER	TEMP	FAHN	WATER	$	11	55.89100	212.6100	14.58100	77.0	35.6	92/01/13	96/11/04
00076	TURB	TRBIDMTR	HACH FTU	WATER		11	15.73600	424.1400	20.59500	59.4	3.0	92/01/13	96/11/04
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		11	4551.000	4823100	2196.200	7670	581	92/01/13	96/11/04
00300	DO		MG/L	WATER		11	10.50000	9.994100	3.161300	13.6	2.2	92/01/13	96/11/04
00301	DO	SATUR	PERCENT	WATER	$	11	97.67000	792.0300	28.14300	127.3	26.2	92/01/13	96/11/04
00310	BOD	5 DAY	MG/L	WATER		6	3.483300	1.713700	1.309100	6.0	2.4	92/01/13	92/11/02
00400	PH		SU	WATER		11	8.190900	.0749510	.2737700	8.50	7.60	92/01/13	96/11/04
00410	T ALK	CACO3	MG/L	WATER		11	190.2700	1054.000	32.46600	219	106	92/01/13	96/11/04
00530	RESIDUE	TOT NFLT	MG/L	WATER		11	37.90900	3386.300	58.19200	208	3	92/01/13	96/11/04
00610	NH3+NH4-	N TOTAL	MG/L	WATER		6	.1371700	.0037630	.0613430	.243	.067	92/11/02	96/11/04
					K	5	.0500000	.0000000	.0000000	.050	.050	92/01/13	92/09/14
					TOT	11	.0975450	.0039537	.0628790	.243	.050	92/01/13	96/11/04
00612	UN-IONZD	NH3-N	MG/L	WATER	$	11	.0040810	.0000129	.0036054	.012	.0010	92/01/13	96/11/04
00613	NO2-N	DISS	MG/L	WATER	K	5	.0500000	.0000000	.0000000	.050	.050	96/03/11	96/11/04
00618	NO3-N	DISS	MG/L	WATER		5	.9820000	.2454700	.4954500	1.71	.38	96/03/11	96/11/04
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	11	.0049620	.0000192	.0043838	.014	.001	92/01/13	96/11/04
00630	NO2&NO3	N-TOTAL	MG/L	WATER		5	.4160000	.2476300	.4976300	1.00	.03	92/01/13	92/11/02
					K	1	.0200000			.02	.02	92/07/06	92/07/06
					TOT	6	.3500000	.2242400	.4735400	1.00	.02	92/01/13	92/11/02
00665	PHOS-TOT		MG/L P	WATER		8	.2221300	.1128000	.3358600	1.030	.054	92/03/09	96/11/04
					K	3	.0500000	.0000000	.0000000	.050	.050	92/01/13	92/11/02
					TOT	11	.1751800	.0854240	.2922800	1.030	.050	92/01/13	96/11/04
00671	PHOS-DIS	ORTHO	MG/L P	WATER		1	.0500000			.050	.050	96/11/04	96/11/04
					K	4	.0300000	.0005333	.0230940	.050	.010	96/03/11	96/09/09
					TOT	5	.0340000	.0004800	.0219090	.050	.010	96/03/11	96/11/04
00900	TOT HARD	CACO3	MG/L	WATER		11	266.7300	2727.400	52.22400	323	129	92/01/13	96/11/04
00916	CALCIUM	CA-TOT	MG/L	WATER		11	79.78300	216.9800	14.73000	93.8	41.7	92/01/13	96/11/04
00927	MGNSIUM	MG,TOT	MG/L	WATER		11	16.42400	29.49400	5.430900	23.3	6.0	92/01/13	96/11/04
00929	SODIUM	NA,TOT	MG/L	WATER		11	730.0200	180070.0	424.3400	1325.00	53.17	92/01/13	96/11/04
00937	PTSSIUM	K,TOT	MG/L	WATER		11	6.084500	21.14400	4.598200	19.04	2.22	92/01/13	96/11/04
00940	CHLORIDE	TOTAL	MG/L	WATER		6	1381.700	470210.0	685.7200	1970	85	92/01/13	92/11/02
00941	CHLORIDE	DISS IN	WTR MG/L	WATER		5	1072.800	731650.0	855.3600	2546	480	96/03/11	96/11/04
00945	SULFATE	SO4-TOT	MG/L	WATER		6	155.1700	5112.600	71.50200	215	20	92/01/13	92/11/02
00946	SULFATE	SO4-DISS	MG/L	WATER		5	124.0400	3843.700	61.99700	230.0	82.1	96/03/11	96/11/04
00950	FLUORIDE	F,DISS	MG/L	WATER		4	.2950000	.0016334	.0404160	.33	.24	96/03/11	96/11/04
					K	1	.0500000			.05	.05	96/07/08	96/07/08
					TOT	5	.2460000	.0132300	.1150200	.33	.05	96/03/11	96/11/04
00956	SILICA	TOTAL	MG/L	WATER		11	20.16000	78.22500	8.844500	38.8	6.5	92/01/13	96/11/04

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RATTLESNAKE CREEK NEAR HUDSON
20185 KANSAS STAFFORD
ARKANSAS RIVER 100202
ARKANSAS UNIT
21KAN001 910215 11030009001 0032.250 ON
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01002	ARSENIC	AS,TOT	UG/L	WATER		4	2.725000	.7958300	.8920900	3	1	96/03/11	96/11/04
					K	7	18.14300	57.14300	7.559300	21	1	92/01/13	96/07/08
					TOT	11	12.53600	95.03300	9.748500	21	1	92/01/13	96/11/04
01007	BARIUM	BA,TOT	UG/L	WATER		11	152.3600	1519.900	38.98600	204	77	92/01/13	96/11/04
01012	BERYLIUM	BE,TOT	UG/L	WATER	K	11	1.000000	.0000000	.0000000	1.00	1.00	92/01/13	96/11/04
01022	BORON	B,TOT	UG/L	WATER		11	162.0000	3613.200	60.11000	246	85	92/01/13	96/11/04
01027	CADMIUM	CD,TOT	UG/L	WATER	K	11	1.545500	.2727300	.5222400	2	1	92/01/13	96/11/04
01034	CHROMIUM	CR,TOT	UG/L	WATER		6	3.333300	3.898700	1.974500	6	1	92/01/13	96/11/04
					K	5	2.200000	1.200000	1.095500	3	1	92/03/09	96/07/08
					TOT	11	2.818200	2.779700	1.667200	6	1	92/01/13	96/11/04
01037	COBALT	CO,TOTAL	UG/L	WATER	K	11	6.727300	9.818200	3.133400	10	4	92/01/13	96/11/04
01042	COPPER	CU,TOT	UG/L	WATER		11	10.98200	33.71800	5.806700	20	4	92/01/13	96/11/04
01045	IRON	FE,TOT	UG/L	WATER		11	781.8200	635660.0	797.2800	2660	145	92/01/13	96/11/04
01051	LEAD	PB,TOT	UG/L	WATER		3	5.866700	9.923400	3.150200	9	3	96/03/11	96/09/09
					K	5	8.600000	108.3000	10.40700	20	1	92/01/13	96/11/04
					TOT	8	7.575000	66.72200	8.168400	20	1	92/01/13	96/11/04
01055	MANGNESE	MN	UG/L	WATER		11	81.27300	2571.000	50.70500	213.0	27.0	92/01/13	96/11/04
01059	THALLIUM	TL,TOTAL	UG/L	WATER	K	11	30.90900	334.0900	18.27800	50	15	92/01/13	96/11/04
01062	MOLY	MO,TOT	UG/L	WATER		5	3.400000	1.300000	1.140200	5	2	92/01/13	92/11/02
					K	6	11.83300	52.16700	7.222700	20	1	92/03/09	96/11/04
					TOT	11	8.000000	46.00000	6.782300	20	1	92/01/13	96/11/04
01067	NICKEL	NI,TOTAL	UG/L	WATER		3	6.133300	7.453400	2.730100	8	3	92/07/06	96/07/08
					K	8	4.750000	9.642900	3.105300	7	1	92/01/13	96/11/04
					TOT	11	5.127300	8.658200	2.942500	8	1	92/01/13	96/11/04
01077	SILVER	AG,TOT	UG/L	WATER	K	11	2.636400	2.454600	1.566700	4.0	1.0	92/01/13	96/11/04
01087	VANADIUM	V,TOT	UG/L	WATER		7	5.714300	4.904800	2.214700	10	3	92/01/13	96/09/09
					K	4	3.500000	1.000000	1.000000	5	3	92/03/09	96/11/04
					TOT	11	4.909100	4.491000	2.119200	10	3	92/01/13	96/11/04
01092	ZINC	ZN,TOT	UG/L	WATER		11	30.63600	408.4600	20.21000	70	13	92/01/13	96/11/04
01097	ANTIMONY	SB,TOT	UG/L	WATER		1	20.00000			20	20	92/09/14	92/09/14
					K	10	30.00000	444.4500	21.08200	50	10	92/01/13	96/11/04
					TOT	11	29.09100	409.0900	20.22600	50	10	92/01/13	96/11/04
01105	ALUMINUM	AL,TOT	UG/L	WATER		11	884.7300	877980.0	937.0000	2780	140	92/01/13	96/11/04
01147	SELENIUM	SE,TOT	UG/L	WATER		1	1.600000			2	2	96/11/04	96/11/04
					K	8	12.25000	216.2200	14.70400	30	1	92/01/13	96/09/09
					TOT	9	11.06700	201.7900	14.20500	30	1	92/01/13	96/11/04
31616	FEC COLI	MFM-FCBR	/100ML	WATER		10	367.0000	374000.0	611.5600	2000	10	92/03/09	96/11/04
					K	1	100.0000			100	100	92/01/13	92/01/13
					TOT	11	342.7300	343080.0	585.7300	2000	10	92/01/13	96/11/04

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RATTLESNAKE CREEK NEAR HUDSON
20185 KANSAS STAFFORD
ARKANSAS RIVER 100202
ARKANSAS UNIT
21KAN001 910215 11030009001 0032.250 ON
0000 FEET DEPTH

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PARAMETER		MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
31673 FECSTREP MFKFAGAR	/100ML	WATER		10	393.3000	224950.0	474.2900	1400	20	92/03/09	96/11/04
			K	1	100.0000			100	100	92/01/13	92/01/13
			TOT	11	366.6400	210280.0	458.5600	1400	20	92/01/13	96/11/04
34259 DELTABHC	TOTUG/L	WATER	K	3	.0500000	.0000000	.0000000	.050	.050	96/03/11	96/11/04
34351 ENDSULSF	TOTUG/L	WATER	K	3	.1000000	.0000000	.0000000	.100	.100	96/03/11	96/11/04
34356 B-ENDO SULFAN	TOTWUG/L	WATER	K	3	.0200000	.0000000	.0000000	.020	.020	96/03/11	96/11/04
34361 A-ENDO SULFAN	TOTWUG/L	WATER	K	3	.0200000	.0000000	.0000000	.020	.020	96/03/11	96/11/04
34671 PCB 1016	TOTWUG/L	WATER	K	6	.5000000	.0000000	.0000000	.500	.500	92/01/13	96/11/04
39024 PROPAZIN WTR CCM	UG/L	WATER	K	6	.7500000	.2430000	.4929500	1.20	.30	92/01/13	96/11/04
39033 ATRZ WHL SMPL	UG/L	WATER		1	1.800000			1.800	1.800	92/01/13	92/01/13
			K	5	.6600000	.2430000	.4929500	1.200	.300	92/05/04	96/11/04
			TOT	6	.8500000	.4110000	.6410900	1.800	.300	92/01/13	96/11/04
39045 2,4,5-TP WTR SMPL	UG/L	WATER	K	6	.4000000	.0000000	.0000000	.400	.400	92/01/13	96/11/04
39055 SIMAZINE WH.WATER	(UG/L)	WATER	K	3	.3000000	.0000000	.0000000	.3	.3	96/03/11	96/11/04
39300 P,P'DDT	TOT UG/L	WATER	K	3	.1000000	.0000000	.0000000	.100	.100	96/03/11	96/11/04
39310 P,P'DDD	TOT UG/L	WATER	K	3	.0400000	.0000000	.0000000	.040	.040	96/03/11	96/11/04
39320 P,P'DDE	TOT UG/L	WATER	K	3	.0200000	.0000000	.0000000	.020	.020	96/03/11	96/11/04
39330 ALDRIN	TOT UG/L	WATER	K	6	.0250000	.0000000	.0000000	.025	.025	92/01/13	96/11/04
39337 ALPHABHC	TOTUG/L	WATER	K	3	.0250000	.0000000	.0000000	.025	.025	96/03/11	96/11/04
39338 BETA BHC	TOTUG/L	WATER	K	3	.0500000	.0000000	.0000000	.050	.050	96/03/11	96/11/04
39340 GAMMABHC LINDANE	TOT.UG/L	WATER	K	3	.0250000	.0000000	.0000000	.025	.025	92/01/13	92/09/14
39350 CHLRDANE TECH&MET	TOT UG/L	WATER	K	6	.2000000	.0000000	.0000000	.200	.200	92/01/13	96/11/04
39356 METOCLR (DUAL)	UG/L	WATER	K	6	.2500000	.0000000	.0000000	.25	.25	92/01/13	96/11/04
39380 DIELDRIN	TOTUG/L	WATER	K	6	.0500000	.0000000	.0000000	.050	.050	92/01/13	96/11/04
39390 ENDRIN	TOT UG/L	WATER	K	6	.1000000	.0000000	.0000000	.100	.100	92/01/13	96/11/04
39400 TOXAPHEN	TOTUG/L	WATER	K	6	2.000000	.0000000	.0000000	2.000	2.000	92/01/13	96/11/04
39410 HEPTCHLR	TOTUG/L	WATER	K	6	.0200000	.0000000	.0000000	.020	.020	92/01/13	96/11/04
39420 HPCHLREP	TOTUG/L	WATER	K	6	.0200000	.0000000	.0000000	.020	.020	92/01/13	96/11/04
39480 MTHXYCLR WHL SMPL	UG/L	WATER	K	6	.2000000	.0000000	.0000000	.200	.200	92/01/13	96/11/04
39488 PCB-1221	TOTUG/L	WATER	K	6	1.750000	.6750000	.8215800	2.500	1.000	92/01/13	96/11/04
39492 PCB-1232	TOTUG/L	WATER	K	6	.5000000	.0000000	.0000000	.500	.500	92/01/13	96/11/04
39496 PCB-1242	TOTUG/L	WATER	K	6	.5000000	.0000000	.0000000	.500	.500	92/01/13	96/11/04
39500 PCB-1248	TOTUG/L	WATER	K	6	.5000000	.0000000	.0000000	.500	.500	92/01/13	96/11/04
39504 PCB-1254	TOTUG/L	WATER	K	6	.5000000	.0000000	.0000000	.500	.500	92/01/13	96/11/04
39508 PCB-1260	TOTUG/L	WATER	K	6	.5000000	.0000000	.0000000	.500	.500	92/01/13	96/11/04
39700 HCB	TOT UG/L	WATER	K	3	.1000000	.0000000	.0000000	.100	.100	96/03/11	96/11/04
39720 PICLORAM WHL SMPL	UG/L	WATER	K	6	.8000000	.0000000	.0000000	.800	.800	92/01/13	96/11/04
39730 2,4-D WHL SMPL	UG/L	WATER	K	6	.8000000	.0000000	.0000000	.800	.800	92/01/13	96/11/04
39740 2,4,5-T WHL SMPL	UG/L	WATER	K	6	.4000000	.0000000	.0000000	.400	.400	92/01/13	96/11/04

STORET RETRIEVAL DATE 97/07/28 PGM=INVENT

000660
38 04 49.2 098 40 27.3 1
RATTLESNAKE CREEK NEAR HUDSON
20185 KANSAS STAFFORD
ARKANSAS RIVER 100202
ARKANSAS UNIT
21KAN001 910215 11030009001 0032.250 ON
0000 FEET DEPTH

/TYPA/AMBNT/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
39770	DACTHAL	WHL SMPL	UG/L	WATER	K	6	.0500000	.0000000	.0000000	.050	.050	92/01/13	96/11/04
39782	LINDANE	WHL SMPL	UG/L	WATER	K	3	.0250000	.0000000	.0000000	.025	.025	96/03/11	96/11/04
46570	CAL HARD	CA MG	MG/L	WATER	$	11	266.8500	2727.700	52.22800	323	129	92/01/13	96/11/04
49259	ACTOCHLR	UNFLTR	RECVUG/L	WATER	K	3	.1000000	.0000000	.0000000	.1	.1	96/03/11	96/11/04
70301	DISS SOL	SUM	MG/L	WATER		11	2352.300	1509400	1228.600	4209	331	92/01/13	96/11/04
71900	MERCURY	HG,TOTAL	UG/L	WATER	K	6	.5000000	.0000000	.0000000	.5	.5	92/01/13	96/11/04
74041	WQF	SAMPLE	UPDATED	WATER		11	944270.0	6407E+05	25314.00	970626	920508	92/01/13	96/11/04
77729	RAMROD	TOTAL	UG/L	WATER	K	6	.2500000	.0000000	.0000000	.250	.250	92/01/13	96/11/04
77780	BLADEX	TOTAL	UG/L	WATER	K	6	.5000000	.0000000	.0000000	.500	.500	92/01/13	96/11/04
77825	ALACHLOR	TOTAL	UG/L	WATER	K	6	.1750000	.0067501	.0821590	.250	.100	92/01/13	96/11/04
77860	BUTACHLO	TOTAL	UG/L	WATER	K	3	.5000000	.0000000	.0000000	.500	.500	96/03/11	96/11/04
81405	CRBFURAN	TOT	UG/L	WATER	K	3	.5000000	.0000000	.0000000	.500	.500	96/03/11	96/11/04
81408	MTRBUZIN	TOT	UG/L	WATER	K	6	.1000000	.0000000	.0000000	.100	.100	92/01/13	96/11/04
82028	RATIO	FEC COL	FEC STRP	WATER	$	11	1.618600	4.180600	2.044700	7	.06	92/01/13	96/11/04
82298	BROMIDE	DISS.BR	UG/L	WATER		5	.2240000	.0012800	.0357770	.250	.180	96/03/11	96/11/04

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38 21 18.0 098 39 50.0 3
ARKANSAS RIVER EAST OF GREAT BEND, KANSAS.
20009 KANSAS BARTON

/TYPA/AMBNT/FISH/STREAM

1117MBR 890128 11030004
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00008	LAB	IDENT.	NUMBER	WATER		1	1.000000			1	1	88/10/05	88/10/05
00023	WEIGHT		POUNDS	WATER		4	3.045000	.4151000	.6442800	3.64	2.37	88/10/05	88/10/05
00024	LENGTH		INCHES	WATER		4	17.35000	1.163700	1.078700	18.50	16.20	88/10/05	88/10/05
01004	ARSENIC	TISMG/KG	WET WGT	WATER	U	1	.1000000			.10	.10	88/10/05	88/10/05
34258	BETA BHC	TISMG/KG	WET WGT	WATER	U	1	.0030000			.003	.003	88/10/05	88/10/05
34263	DELTABHC	TISMG/KG	WET WGT	WATER	U	1	.0015000			.002	.002	88/10/05	88/10/05
34355	ENDSULSF	TISMG/KG	WET WGT	WATER	U	1	.0100000			.010	.010	88/10/05	88/10/05
34360	BENDOSUL	TISMG/KG	WET WGT	WATER	U	1	.0050000			.005	.005	88/10/05	88/10/05
34365	AENDOSUL	TISMG/KG	WET WGT	WATER	U	1	.0030000			.003	.003	88/10/05	88/10/05
34370	ENDRINAL	TISMG/KG	WET WGT	WATER	U	1	.0080000			.008	.008	88/10/05	88/10/05
34669	PCB-1248	TISMG/KG	WET WGT	WATER	U	1	.0700000			.070	.070	88/10/05	88/10/05
34670	PCB-1260	TISMG/KG	WET WGT	WATER		1	.0270000			.027	.027	88/10/05	88/10/05
34680	ALDRIN	TISMG/KG	WET WGT	WATER	U	1	.0040000			.004	.004	88/10/05	88/10/05
34682	CDANEWET	TECH&MET	TISMG/KG	WATER		1	.2500000			.250	.250	88/10/05	88/10/05
34685	ENDRIN	TISMG/KG	WET WGT	WATER	U	1	.0050000			.005	.005	88/10/05	88/10/05
34686	HPCHLREP	TISMG/KG	WET WGT	WATER		1	.0078000			.008	.008	88/10/05	88/10/05
34687	HEPTCHLR	TISMG/KG	WET WGT	WATER	U	1	.0020000			.002	.002	88/10/05	88/10/05
34688	HCB	TISMG/KG	WET WGT	WATER	U	1	.0010000			.001	.001	88/10/05	88/10/05
34689	PCB-1242	TISMG/KG	WET WGT	WATER	U	1	.0700000			.070	.070	88/10/05	88/10/05
34690	PCB-1254	TISMG/KG	WET WGT	WATER	J	1	.0520000			.052	.052	88/10/05	88/10/05
34691	TOXAPHEN	TISMG/KG	WET WGT	WATER	U	1	.0400000			.040	.040	88/10/05	88/10/05
39063	CHLORDAN	C ISOMER	TIS-UG/G	WATER		1	.0230000			.023	.023	88/10/05	88/10/05
39066	CHLORDAN	T ISOMER	TIS-UG/G	WATER		1	.0130000			.013	.013	88/10/05	88/10/05
39069	NONACHLR	C ISOMER	TIS UG/G	WATER		1	.0060000			.006	.006	88/10/05	88/10/05
39072	NONCHLOR	T ISOMER	TIS-UG/G	WATER		1	.0250000			.025	.025	88/10/05	88/10/05
39074	ALPHABHC	TISMG/KG	WET WGT	WATER	U	1	.0015000			.002	.002	88/10/05	88/10/05
39105	PERCENT	FAT	HEX EXTR	WATER		1	2.900000			2.9	2.9	88/10/05	88/10/05
39302	P,P'DDT	TISMG/KG	WET WGT	WATER	U	1	.0090000			.009	.009	88/10/05	88/10/05
39307	O P DDT	TISSUE	UG/G	WATER	U	1	.0100000			.01	.01	88/10/05	88/10/05
39312	P,P'DDD	TISMG/KG	WET WGT	WATER	U	1	.0050000			.005	.005	88/10/05	88/10/05
39322	P,P'DDE	TISMG/KG	WET WGT	WATER		1	.0160000			.02	.02	88/10/05	88/10/05
39325	O,P DDD	TISSUE	UG/G	WATER	U	1	.0080000			.008	.008	88/10/05	88/10/05
39329	O,P'DDE	TISSUE	UG/G	WATER	U	1	.0150000			.015	.015	88/10/05	88/10/05
39346	METOLACH	TISSUES	MG/KG	WATER	U	1	.0500000			.050	.050	88/10/05	88/10/05
39404	DIELDRIN	TISMG/KG	WET WGT	WATER		1	.0084000			.008	.008	88/10/05	88/10/05
39785	GBHC-TIS	LINDANE	WETMG/KG	WATER		1	.0050000			.005	.005	88/10/05	88/10/05
71930	MERCURY	TISMG/KG	WET WGT	WATER		1	.0433000			.04	.04	88/10/05	88/10/05
71936	LEAD	TISMG/KG	WET WGT	WATER	U	1	.1000000			.10	.10	88/10/05	88/10/05
71940	CADMIUM	TISMG/KG	WET WGT	WATER	U	1	.0500000			.05	.05	88/10/05	88/10/05

007593
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ARKANSAS RIVER EAST OF GREAT BEND, KANSAS.
20009 KANSAS BARTON

/TYPA/AMBNT/FISH/STREAM

1117MBR 890128 11030004
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
74041	WQF	SAMPLE	UPDATED	WATER		5	890280.0	.0000000	.0000000	890606	890201	88/10/05	88/10/05
74990	FISH	SPECIES	NUMERIC	WATER		1	12.00000			12	12	88/10/05	88/10/05
74995	ANATOMY		CODE	WATER		1	59.00000			59	59	88/10/05	88/10/05
78211	ENDRINKE	TISWETWT	MG/KG	WATER	U	1	.0070000			.007	.007	88/10/05	88/10/05
80886	CYANAZIN	TIS WET	WT MG/KG	WATER	U	1	.1000000			.1	.1	88/10/05	88/10/05
81614	NO.INDV.	IN THE	SAMPLE	WATER		1	4.000000			4	4	88/10/05	88/10/05
81615	NO.DIFF.	SPECIES	IN SMPL	WATER		1	1.000000			1	1	88/10/05	88/10/05
81644	MTXCHLOR	FISH WET	WGT UG/G	WATER	U	1	.0150000			.015	.015	88/10/05	88/10/05
81652	TREFLAN	FISH WET	WGTMG/KG	WATER	U	1	.0050000			.005	.005	88/10/05	88/10/05
81823	PCA FISH	TIS WET	WGTMG/KG	WATER	J	1	.0017000			.002	.002	88/10/05	88/10/05
82029	OXYCHLRD	TISS	WETMG/KG	WATER		1	.0100000			.010	.010	88/10/05	88/10/05
82404	ATRAZINE	TISSUE	MG/KG	WATER	U	1	.3000000			.300	.300	88/10/05	88/10/05
82571	ALACHLOR	TISWETWT	MG/KG	WATER	U	1	.0130000			.013	.013	88/10/05	88/10/05
84068	SERIES	CODE	ALPHA	WATER	TXT	1	TEXT	TEXT	TEXT	TEXT	TEXT	88/10/05	88/10/05

ZB

005697
37 53 24.0 099 24 12.0 2
ARKANSAS RIVER EAST OF KINGSLEY, KANSAS.
20047 KANSAS EDWARDS
LOWER MISSISSIPPI 100200
/TYPA/AMBNT/FISH/STREAM ARKANSAS
1117MBR 810117 11030004010 0016.430 ON
0000 FEET DEPTH

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00023	WEIGHT		POUNDS	WATER		1	1.430000			1.43	1.43	80/07/01	80/07/01
00024	LENGTH		INCHES	WATER		1	13.00000			13.00	13.00	80/07/01	80/07/01
00026	TOXICS	EPA IDEN	FY	WATER		1	1980.000			1980	1980	80/07/01	80/07/01
01004	ARSENIC	TISMG/KG	WET WGT	WATER	K	1	.0400000			.04	.04	80/07/01	80/07/01
01069	NICKEL	TISMG/KG	WET WGT	WATER		1	.1860000			.19	.19	80/07/01	80/07/01
01099	ANTIMONY	TIS-WET	MG/KG	WATER	K	1	.2500000			.25	.25	80/07/01	80/07/01
01149	SELENIUM	TISMG/KG	WET WGT	WATER	K	1	.0400000			.04	.04	80/07/01	80/07/01
34204	ACNAPTHY	TISMG/KG	WET WGT	WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34209	ACNAPTHE	TISMG/KG	WET WGT	WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34214	ACROLEIN	TISMG/KG	WET WGT	WATER	K	1	.5900000			.590	.590	80/07/01	80/07/01
34219	ACRYLNIT	TISMG/KG	WET WGT	WATER	K	1	.1900000			.190	.190	80/07/01	80/07/01
34234	BENZBFLU	ORANTTIS	WETMG/KG	WATER	K	1	.5000000			.500	.500	80/07/01	80/07/01
34238	BENZENE	TISMG/KG	WET WGT	WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34241	BENZIDIN	TISMG/KG	WET WGT	WATER	K	1	2.500000			2.500	2.500	80/07/01	80/07/01
34251	BENZAPYR	TISMG/KG	WET WGT	WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34252	BERYLIUM	TISMG/KG	WET WGT	WATER	K	1	.0500000			.050	.050	80/07/01	80/07/01
34258	BETA BHC	TISMG/KG	WET WGT	WATER	K	1	.0010000			.001	.001	80/07/01	80/07/01
34263	DELTABHC	TISMG/KG	WET WGT	WATER	K	1	.0020000			.002	.002	80/07/01	80/07/01
34277	B2CETETR	TISMG/KG	WET WGT	WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34282	B2CETOXM	TISMG/KG	WET WGT	WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34287	B2CIPETR	TISMG/KG	WET WGT	WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34291	BROMOFOR	TISMG/KG	WET WGT	WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34296	NBB PHTH	TIS-WET	MG/KG	WATER	K	1	.3000000			.300	.300	80/07/01	80/07/01
34300	CARBNTET	TISMG/KG	WET WGT	WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34305	CLBENZEN	TISMG/KG	WET WGT	WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34310	CLDIBRMT	TISMG/KG	WET WGT	WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34315	CLETHANE	TISMG/KG	WET WGT	WATER	K	1	.2500000			.250	.250	80/07/01	80/07/01
34319	CHLRFORM	TISMG/KG	WET WGT	WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34324	CHRYSENE	TISMG/KG	WET WGT	WATER	K	1	.5000000			.500	.500	80/07/01	80/07/01
34331	DICLBRMT	TISMG/KG	WET WGT	WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34335	DCLDFLMT	TISMG/KG	WET WGT	WATER	K	1	.2000000			.200	.200	80/07/01	80/07/01
34340	DETHPHTH	TISMG/KG	WET WGT	WATER	K	1	.5000000			.500	.500	80/07/01	80/07/01
34345	DMETPHTH	TISMG/KG	WET WGT	WATER	K	1	.5000000			.500	.500	80/07/01	80/07/01
34350	12DPHNHY	TISMG/KG	WET WGT	WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34355	ENDSULSF	TISMG/KG	WET WGT	WATER	K	1	.0200000			.020	.020	80/07/01	80/07/01
34360	BENDOSUL	TISMG/KG	WET WGT	WATER	K	1	.0060000			.006	.006	80/07/01	80/07/01
34365	AENDOSUL	TISMG/KG	WET WGT	WATER	K	1	.0030000			.003	.003	80/07/01	80/07/01
34370	ENDRINAL	TISMG/KG	WET WGT	WATER	K	1	.0200000			.020	.020	80/07/01	80/07/01
34375	ETHYLBEN	TISMG/KG	WET WGT	WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01

005697
37 53 24.0 099 24 12.0 2
ARKANSAS RIVER EAST OF KINGSLEY, KANSAS.
20047 KANSAS EDWARDS
LOWER MISSISSIPPI 100200
ARKANSAS
1117MBR 810117 11030004010 0016.430 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER			MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
34380	FLANTENE	TISMG/KG	WET WGT WATER	K	1	.4000000			.400	.400	80/07/01	80/07/01
34385	FLUORENE	TISMG/KG	WET WGT WATER	K	1	.5000000			.500	.500	80/07/01	80/07/01
34390	HEXCLCPD	TISMG/KG	WET WGT WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34395	HEXCLBD	TISMG/KG	WET WGT WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34400	HEXACLET	TISMG/KG	WET WGT WATER	K	1	.5000000			.500	.500	80/07/01	80/07/01
34407	I123CDPR	TISMG/KG	WET WGT WATER	K	1	2.500000			2.500	2.500	80/07/01	80/07/01
34412	ISPHRONE	TISMG/KG	WET WGT WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34417	METHYLBR	TISMG/KG	WET WGT WATER	K	1	.2000000			.200	.200	80/07/01	80/07/01
34422	METHYLCL	TISMG/KG	WET WGT WATER	K	1	.2500000			.250	.250	80/07/01	80/07/01
34427	MTHLENCL	TISMG/KG	WET WGT WATER		1	.0330000			.033	.033	80/07/01	80/07/01
34432	NITDNPRA	TISMG/KG	WET WGT WATER	K	1	2.500000			2.500	2.500	80/07/01	80/07/01
34437	NITRSDPA	TISMG/KG	WET WGT WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34446	NAPTHALE	TISMG/KG	WET WGT WATER	K	1	.3000000			.300	.300	80/07/01	80/07/01
34451	NITROBEN	TISMG/KG	WET WGT WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34456	PCLMCRES	TISMG/KG	WET WGT WATER	K	1	.2000000			.200	.200	80/07/01	80/07/01
34465	PHENANTH	TISMG/KG	WET WGT WATER	K	1	.5000000			.500	.500	80/07/01	80/07/01
34468	PHENOL	TISMG/KG	WET WGT WATER	K	1	.1000000			.100	.100	80/07/01	80/07/01
34473	PYRENE	TISMG/KG	WET WGT WATER	K	1	.4000000			.400	.400	80/07/01	80/07/01
34474	SILVER	TISMG/KG	WET WGT WATER	K	1	.0500000			.050	.050	80/07/01	80/07/01
34479	TETCLETE	TISMG/KG	WET WGT WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34484	TOLUENE	TISMG/KG	WET WGT WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34492	TRCLFLMT	TISMG/KG	WET WGT WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34500	11DICLET	TISMG/KG	WET WGT WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34505	11DCETEN	TISMG/KG	WET WGT WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34510	111TCLET	TISMG/KG	WET WGT WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34515	112TCLET	TISMG/KG	WET WGT WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34520	1122TCLE	TISMG/KG	WET WGT WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34525	BZGHIPER	TISMG/KG	WET WGT WATER	K	1	2.500000			2.500	2.500	80/07/01	80/07/01
34535	12DICLET	TISMG/KG	WET WGT WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34540	12DCLBEN	TISMG/KG	WET WGT WATER	K	1	.5000000			.500	.500	80/07/01	80/07/01
34545	12DCLPRP	TISMG/KG	WET WGT WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34550	12TDCETE	TISMG/KG	WET WGT WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34555	124TCBEN	TISMG/KG	WET WGT WATER	K	1	.5000000			.500	.500	80/07/01	80/07/01
34560	DBAHANTH	TISMG/KG	WET WGT WATER	K	1	2.500000			2.500	2.500	80/07/01	80/07/01
34570	13DCLBEN	TISMG/KG	WET WGT WATER	K	1	.5000000			.500	.500	80/07/01	80/07/01
34575	14DCLBEN	TISMG/KG	WET WGT WATER	K	1	.5000000			.500	.500	80/07/01	80/07/01
34580	2CLEVETR	TISMG/KG	WET WGT WATER	K	1	.1000000			.100	.100	80/07/01	80/07/01
34585	2CLNAPTH	TISMG/KG	WET WGT WATER	K	1	.3000000			.300	.300	80/07/01	80/07/01
34590	2CLPHENO	TISMG/KG	WET WGT WATER	K	1	.1000000			.100	.100	80/07/01	80/07/01

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ARKANSAS RIVER EAST OF KINGSLEY, KANSAS.
20047 KANSAS EDWARDS
LOWER MISSISSIPPI 100200
/TYPA/AMBNT/FISH/STREAM ARKANSAS
1117MBR 810117 11030004010 0016.430 ON
0000 FEET DEPTH

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
34595 2NPHENOL TISMG/KG WET WGT	WATER	K	1	.3000000			.300	.300	80/07/01	80/07/01
34600 DINOCTPH TISMG/KG WET WGT	WATER	K	1	.5000000			.500	.500	80/07/01	80/07/01
34605 24DCPHEN TISMG/KG WET WGT	WATER	K	1	.2000000			.200	.200	80/07/01	80/07/01
34610 24DMPHEN TISMG/KG WET WGT	WATER	K	1	.2000000			.200	.200	80/07/01	80/07/01
34615 24DNTOLU TISMG/KG WET WGT	WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34620 24DNPHEN TISMG/KG WET WGT	WATER	K	1	4.000000			4.000	4.000	80/07/01	80/07/01
34625 246TCPHN TISMG/KG WET WGT	WATER	K	1	.2000000			.200	.200	80/07/01	80/07/01
34630 26DNTOLU TISMG/KG WET WGT	WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34635 33DCBNZD TISMG/KG WET WGT	WATER	K	1	2.500000			2.500	2.500	80/07/01	80/07/01
34640 4BRPPETR TISMG/KG WET WGT	WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34645 4CLPPETR TISMG/KG WET WGT	WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34650 4NPHENOL TISMG/KG WET WGT	WATER	K	1	4.000000			4.000	4.000	80/07/01	80/07/01
34661 46DNOCRE TISMG/KG WET WGT	WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34664 PCB-1221 TISMG/KG WET WGT	WATER	K	1	.0300000			.030	.030	80/07/01	80/07/01
34667 PCB-1232 TISMG/KG WET WGT	WATER	K	1	.0070000			.007	.007	80/07/01	80/07/01
34669 PCB-1248 TISMG/KG WET WGT	WATER	K	1	.0300000			.030	.030	80/07/01	80/07/01
34670 PCB-1260 TISMG/KG WET WGT	WATER	K	1	.0500000			.050	.050	80/07/01	80/07/01
34674 PCB-1016 TISMG/KG WET WGT	WATER	K	1	.0200000			.020	.020	80/07/01	80/07/01
34679 TCDD TISMG/KG WET WGT	WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34680 ALDRIN TISMG/KG WET WGT	WATER	K	1	.0020000			.002	.002	80/07/01	80/07/01
34682 CDANEWET TECH&MET TISMG/KG	WATER	K	1	.0200000			.020	.020	80/07/01	80/07/01
34683 DNB PHTH TIS-WET MG/KG	WATER	K	1	.4000000			.400	.400	80/07/01	80/07/01
34685 ENDRIN TISMG/KG WET WGT	WATER	K	1	.0050000			.005	.005	80/07/01	80/07/01
34686 HPCHLREP TISMG/KG WET WGT	WATER	K	1	.0020000			.002	.002	80/07/01	80/07/01
34687 HEPTCHLR TISMG/KG WET WGT	WATER	K	1	.0020000			.002	.002	80/07/01	80/07/01
34688 HCB TISMG/KG WET WGT	WATER	K	1	1.000000			1.000	1.000	80/07/01	80/07/01
34689 PCB-1242 TISMG/KG WET WGT	WATER	K	1	.0200000			.020	.020	80/07/01	80/07/01
34690 PCB-1254 TISMG/KG WET WGT	WATER	K	1	.0400000			.040	.040	80/07/01	80/07/01
34691 TOXAPHEN TISMG/KG WET WGT	WATER	K	1	.3000000			.300	.300	80/07/01	80/07/01
34692 TRICLETE TISMG/KG WET WGT	WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34693 VINYLCHL TISMG/KG WET WGT	WATER	K	1	.2000000			.200	.200	80/07/01	80/07/01
34698 T1,3-DCP FISH WET WGTMG/KG	WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
34703 C1,3-DCP FISH WET WGTMG/K6	WATER	K	1	.0100000			.010	.010	80/07/01	80/07/01
39060 PCP TISMG/KG WET WGT	WATER	K	1	.5000000			.500	.500	80/07/01	80/07/01
39074 ALPHABHC TISMG/KG WET WGT	WATER		1	.0023000			.002	.002	80/07/01	80/07/01
39099 B2ETHXPH TISMG/KG WET WGT	WATER	K	1	.3000000			.30	.30	80/07/01	80/07/01
39302 P,P'DDT TISMG/KG WET WGT	WATER	K	1	.0100000			.01	.01	80/07/01	80/07/01
39312 P,P'DDD TISMG/KG WET WGT	WATER	K	1	.0060000			.006	.006	80/07/01	80/07/01
39322 P,P'DDE TISMG/KG WET WGT	WATER	K	1	.0040000			.004	.004	80/07/01	80/07/01

STORET RETRIEVAL DATE 97/07/28 PGM=INVENT PAGE: 88

005697
37 53 24.0 099 24 12.0 2
ARKANSAS RIVER EAST OF KINGSLEY, KANSAS.
20047 KANSAS EDWARDS
LOWER MISSISSIPPI 100200
ARKANSAS
1117MBR 810117 11030004010 0016.430 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
39404 DIELDRIN TISMG/KG WET WGT	WATER		1	.0049000			.005	.005	80/07/01	80/07/01
39785 GBHC-TIS LINDANE WETMG/KG	WATER	K	1	.0010000			.001	.001	80/07/01	80/07/01
71930 MERCURY TISMG/KG WET WGT	WATER		1	.2000000			.20	.20	80/07/01	80/07/01
71936 LEAD TISMG/KG WET WGT	WATER	K	1	.1000000			.10	.10	80/07/01	80/07/01
71937 COPPER TISMG/KG WET WGT	WATER		1	1.240000			1.24	1.24	80/07/01	80/07/01
71938 ZINC TISMG/KG WET WGT	WATER		1	45.30000			45.30	45.30	80/07/01	80/07/01
71939 CR-FISH UG/G OR MG/KG WT	WATER	K	1	.0500000			.05	.05	80/07/01	80/07/01
71940 CADMIUM TISMG/KG WET WGT	WATER	K	1	.0500000			.05	.05	80/07/01	80/07/01
74990 FISH SPECIES NUMERIC	WATER		1	12.00000			12	12	80/07/01	80/07/01
74995 ANATOMY CODE	WATER		1	59.00000			59	59	80/07/01	80/07/01
81614 NO.INDV. IN THE SAMPLE	WATER		1	1.000000			1	1	80/07/01	80/07/01
81615 NO.DIFF. SPECIES IN SMPL	WATER		1	1.000000			1	1	80/07/01	80/07/01
81655 CA FISH WET WGT MG/KG	WATER		1	8620.000			8620.000	8620.000	80/07/01	80/07/01
81656 MG FISH WET WGT MG/KG	WATER		1	362.0000			362.000	362.000	80/07/01	80/07/01
81658 BA FISH WET WGT MG/KG	WATER		1	3.760000			3.760	3.760	80/07/01	80/07/01
81660 FE FISH WET WGT MG/KG	WATER		1	67.40000			67.400	67.400	80/07/01	80/07/01
81666 AL FISH WET WGT MG/KG	WATER		1	41.30000			41.300	41.300	80/07/01	80/07/01
81741 MANGANES FISH WET WGTMG/KG	WATER		1	23.50000			23.500	23.500	80/07/01	80/07/01
84005 FISH SPECIES F &WL	WATER	TXT	1	TEXT	TEXT	TEXT	TEXT	TEXT	80/07/01	80/07/01

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37 56 47.0 097 46 29.0 2
ARKANSAS RIVER SOUTH OF HAVEN, KANSAS.
20155 KANSAS RENO
ARKANSAS BASIN 100291
UPSTREAM OF WICHITA
1117MBR 11030010001 0036.400 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00008	LAB	IDENT.	NUMBER	WATER		10	191370.0	6977E+07	264150.0	664210	1	80/05/01	87/10/13
00010	WATER	TEMP	CENT	WATER		42	106.9300	350120.0	591.7100	3850.0	.5	74/03/05	78/08/03
00011	WATER	TEMP	FAHN	WATER	$	42	224.4700	1134400	1065.100	6962.0	32.9	74/03/05	78/08/03
00020	AIR	TEMP	CENT	WATER		4	7.750000	28.41700	5.330700	12.5	1.0	74/03/05	74/04/16
00023	WEIGHT		POUNDS	WATER		28	2.431400	1.420800	1.192000	5.25	.50	82/08/24	87/10/13
00024	LENGTH		INCHES	WATER		28	15.20400	11.44400	3.382900	21.00	8.50	82/08/24	87/10/13
00026	TOXICS	EPA IDEN	FY	WATER		5	1982.600	4.000000	2.000000	1984	1980	80/05/01	84/09/05
00060	STREAM	FLOW	CFS	WATER		1	213.0000			213	213	78/05/02	78/05/02
00061	STREAM	FLOW,	INST-CFS	WATER		35	745.4900	458520.0	677.1400	3500	113	74/01/14	78/08/03
00065	STREAM	STAGE	FEET	WATER		37	4.319500	.2087100	.4568500	5.92	3.47	74/03/05	76/02/04
00070	TURB	JKSN	JTU	WATER		24	60.25000	2964.300	54.44500	200.0	6.0	74/10/03	76/02/04
00076	TURB	TRBIDMTR	HACH FTU	WATER		24	62.28800	6083.900	78.00000	325.0	4.0	74/03/05	75/07/10
00094	CNDUCTVY	FIELD	MICROMHO	WATER		2	2450.000	1843200	1357.700	3410	1490	75/03/19	75/07/10
00095	CNDUCTVY	AT 25C	MICROMHO	WATER		40	2649.800	828270.0	910.1000	4280	108	74/03/05	78/05/02
00300	DO		MG/L	WATER		34	9.991100	3.005800	1.733700	13.9	6.4	74/03/05	76/02/04
00301	DO	SATUR	PERCENT	WATER		7	91.05700	38.17700	6.178700	99.1	80.2	74/03/05	74/06/06
					$	27	97.73500	126.9200	11.26600	124.9	81.0	74/08/21	76/02/04
					TOT	34	96.36000	114.4500	10.69800	124.9	80.2	74/03/05	76/02/04
00340	COD	HI LEVEL	MG/L	WATER		30	36.08300	350.6600	18.72600	90	11	74/04/03	75/07/10
					K	1	1.000000			1	1	74/12/05	74/12/05
					TOT	31	34.95200	378.6800	19.46000	90	1	74/04/03	75/07/10
00400	PH		SU	WATER		35	7.957100	.1438800	.3793100	8.70	7.10	74/03/05	78/08/03
00403	PH	LAB	SU	WATER		7	7.771400	.0857340	.2928000	8.3	7.5	75/06/04	76/02/04
00410	T ALK	CACO3	MG/L	WATER		29	191.1400	866.8900	29.44300	236	110	74/03/05	75/11/04
00430	CO3 ALK	CACO3	MG/L	WATER		1	.0000000			0	0	74/03/19	74/03/19
00440	HCO3 ION	HCO3	MG/L	WATER		20	231.1000	2245.700	47.38900	294	122	74/03/05	74/12/19
00445	CO3 ION	CO3	MG/L	WATER		19	.0000000	.0000000	.0000000	0	0	74/03/19	74/12/19
00515	RESIDUE	DISS-105 C	MG/L	WATER		33	1315.300	184640.0	429.7000	2270	308	74/03/05	75/07/10
00530	RESIDUE	TOT NFLT	MG/L	WATER		32	208.5600	77091.00	277.6500	1260	20	74/03/05	75/07/10
00550	OIL-GRSE	TOT-SXLT	MG/L	WATER		5	10.54000	124.2800	11.14800	28.4	1.6	74/03/05	74/05/08
00610	NH3+NH4-	N TOTAL	MG/L	WATER		32	.2293800	.0220900	.1486300	.590	.030	74/03/05	75/07/10
					K	1	.0400000			.040	.040	75/06/17	75/06/17
					TOT	33	.2236400	.0224860	.1499600	.590	.030	74/03/05	75/07/10
00612	UN-IONZD	NH3-N	MG/L	WATER	$	32	.0068790	.0000428	.0065497	.027	.0008	74/03/05	75/07/10
00619	UN-IONZD	NH3-NH3	MG/L	WATER	$	32	.0083641	.0000634	.0079637	.032	.0010	74/03/05	75/07/10
00625	TOT KJEL	N	MG/L	WATER		33	1.306400	.5652500	.7518300	4.700	.590	74/03/05	75/07/10
00630	NO2&NO3	N-TOTAL	MG/L	WATER		29	.9910300	.2939100	.5421300	1.88	.09	74/03/05	75/07/10
					K	3	.0400000	.0000000	.0000000	.04	.04	74/07/02	75/05/20
					TOT	32	.9018700	.3447900	.5871800	1.88	.04	74/03/05	75/07/10

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ARKANSAS RIVER SOUTH OF HAVEN, KANSAS.
20155 KANSAS RENO
ARKANSAS BASIN 100291
UPSTREAM OF WICHITA
1117MBR 11030010001 0036.400 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER			MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00665 PHOS-TOT		MG/L P	WATER		33	.5600000	.1075100	.3278800	1.750	.300	74/03/05	75/07/10
00680 T ORG C	C	MG/L	WATER		26	13.17300	48.70100	6.978600	28.8	4.0	74/03/05	75/07/10
				K	1	4.000000			4.0	4.0	74/12/19	74/12/19
				TOT	27	12.83300	49.94400	7.067100	28.8	4.0	74/03/05	75/07/10
00720 CYANIDE	CN-TOT	MG/L	WATER	K	1	.0030000			.003	.003	80/05/01	80/05/01
00900 TOT HARD	CACO3	MG/L	WATER		1	.0000000			0	0	74/08/21	74/08/21
00916 CALCIUM	CA-TOT	MG/L	WATER		39	92.10300	516.6800	22.73100	132.0	35.0	74/03/05	80/05/01
00927 MGNSIUM	MG,TOT	MG/L	WATER		40	24.64300	26.10400	5.109200	40.0	13.0	74/03/05	80/05/01
00929 SODIUM	NA,TOT	MG/L	WATER		39	373.9500	14225.00	119.2700	630.00	108.00	74/03/05	80/05/01
00937 PTSSIUM	K,TOT	MG/L	WATER		38	8.723400	19.35300	4.399100	22.00	4.20	74/03/05	76/11/03
00940 CHLORIDE	TOTAL	MG/L	WATER		33	524.1200	32223.00	179.5100	970	179	74/03/05	75/07/10
00945 SULFATE	SO4-TOT	MG/L	WATER		29	193.0400	2003.400	44.75900	260	38	74/03/19	75/06/17
01002 ARSENIC	AS,TOT	UG/L	WATER		20	10.16000	149.7600	12.23800	60	4	75/01/07	77/05/03
				K	4	26.25000	289.5800	17.01700	50	10	77/11/08	80/05/01
				TOT	24	12.84200	199.0100	14.10700	60	4	75/01/07	80/05/01
01004 ARSENIC	TISMG/KG	WET WGT	WATER		2	.2050000	.0040500	.0636400	.25	.16	85/10/08	85/10/08
				U	6	.0583330	.0004166	.0204130	.10	.05	82/08/24	87/10/13
				TOT	8	.0950000	.0054857	.0740660	.25	.05	82/08/24	87/10/13
01007 BARIUM	BA,TOT	UG/L	WATER		2	120.5000	1012.500	31.82000	143	98	78/08/03	80/05/01
01012 BERYLIUM	BE,TOT	UG/L	WATER	K	2	1.500000	.5000000	.7071100	2.00	1.00	78/08/03	80/05/01
01025 CADMIUM	CD,DISS	UG/L	WATER		2	9.500000	24.50000	4.949800	13	6	74/09/04	74/10/03
				K	4	5.000000	.0000000	.0000000	5	5	74/09/19	74/11/20
				TOT	6	6.500000	10.30000	3.209400	13	5	74/09/04	74/11/20
01027 CADMIUM	CD,TOT	UG/L	WATER		11	7.845500	18.82300	4.338500	13	1	74/03/05	76/11/03
				K	28	2.107200	3.543700	1.882500	5	.5	74/04/16	80/05/01
				TOT	39	3.725600	14.31500	3.783500	13	.5	74/03/05	80/05/01
01034 CHROMIUM	CR,TOT	UG/L	WATER		42	17.42900	141.7600	11.90700	63	5	74/03/05	80/05/01
				K	3	4.000000	3.000000	1.732100	5	2	76/08/03	78/08/03
				TOT	45	16.53300	143.7100	11.98800	63	2	74/03/05	80/05/01
01040 COPPER	CU,DISS	UG/L	WATER		2	16.50000	12.50000	3.535500	19	14	74/12/05	74/12/19
01042 COPPER	CU,TOT	UG/L	WATER		42	20.85700	105.6900	10.28100	54	2	74/03/05	80/05/01
				K	1	5.000000			5	5	75/03/19	75/03/19
				TOT	43	20.48800	109.0200	10.44100	54	2	74/03/05	80/05/01
01045 IRON	FE,TOT	UG/L	WATER		40	6066.600	82773000	9098.000	39410	400	74/03/05	80/05/01
01051 LEAD	PB,TOT	UG/L	WATER		37	34.85100	1298.600	36.03600	140	5	74/03/05	78/08/03
				K	8	50.00000	.0000000	.0000000	50	50	74/04/03	80/05/01
				TOT	45	37.54500	1096.800	33.11800	140	5	74/03/05	80/05/01
01055 MANGNESE	MN	UG/L	WATER		33	205.5500	59407.00	243.7400	1386.0	57.0	74/06/18	80/05/01
01059 THALLIUM	TL,TOTAL	UG/L	WATER	K	2	75.00000	1250.000	35.35500	100	50	78/08/03	80/05/01

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ARKANSAS RIVER SOUTH OF HAVEN, KANSAS.
20155 KANSAS RENO
ARKANSAS BASIN 100291
/TYPA/AMBNT/FISH/STREAM UPSTREAM OF WICHITA
1117MBR 11030010001 0036.400 ON
0000 FEET DEPTH

PARAMETER			MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
01067	NICKEL NI,TOTAL	UG/L	WATER		7	37.57200	463.9600	21.54000	70	11	74/07/17	80/05/01
				K	10	13.50000	33.61100	5.797500	20	5	74/09/04	78/08/03
				TOT	17	23.41200	342.0100	18.49400	70	5	74/07/17	80/05/01
01069	NICKEL TISMG/KG	WET WGT	WATER		4	.3520000	.0145850	.1207700	.49	.24	82/08/24	84/09/05
				U	2	.2000000	.0000000	.0000000	.20	.20	85/10/08	85/10/08
				TOT	6	.3013300	.0149120	.1221200	.49	.20	82/08/24	85/10/08
01073	THALLIUM TIS-WET	MG/KG	WATER	U	2	.0500000	.0000000	.0000000	.05	.05	85/10/08	85/10/08
01077	SILVER AG,TOT	UG/L	WATER		1	4.000000			4.0	4.0	78/08/03	78/08/03
				K	1	5.000000			5.0	5.0	80/05/01	80/05/01
				TOT	2	4.500000	.5000000	.7071100	5.0	4.0	78/08/03	80/05/01
01092	ZINC ZN,TOT	UG/L	WATER		38	73.07900	4166.700	64.55000	352	21	74/03/19	78/08/03
				K	1	20.00000			20	20	80/05/01	80/05/01
				TOT	39	71.71800	4129.300	64.25900	352	20	74/03/19	80/05/01
01097	ANTIMONY SB,TOT	UG/L	WATER	K	2	37.50000	312.5000	17.67800	50	25	78/08/03	80/05/01
01099	ANTIMONY TIS-WET	MG/KG	WATER		1	.5280000			.53	.53	84/09/05	84/09/05
				U	5	.3200000	.0607500	.2464800	.50	.05	82/08/24	85/10/08
				TOT	6	.3546700	.0558110	.2362400	.53	.05	82/08/24	85/10/08
01105	ALUMINUM AL,TOT	UG/L	WATER		2	1305.500	1079000	1038.700	2040	571	78/08/03	80/05/01
01147	SELENIUM SE,TOT	UG/L	WATER	K	2	37.50000	312.5000	17.67800	50	25	78/08/03	80/05/01
01149	SELENIUM TISMG/KG	WET WGT	WATER		6	1.131700	.0761770	.2760000	1.57	.75	82/08/24	85/10/08
01300	OIL-GRSE	SEVERITY	WATER		36	.0000000	.0000000	.0000000	0	0	74/03/05	76/02/04
01305	DET SUDS	SEVERITY	WATER		36	.3055600	.2182500	.4671800	1	0	74/03/05	76/02/04
01310	GAS BBLE	SEVERITY	WATER		36	.0000000	.0000000	.0000000	0	0	74/03/05	76/02/04
01315	FLOATING SLUDGE	SEVERITY	WATER		36	.0000000	.0000000	.0000000	0	0	74/03/05	76/02/04
01320	FLOATING GARBAGE	SEVERITY	WATER		36	.0000000	.0000000	.0000000	0	0	74/03/05	76/02/04
01325	FLOATING ALG MAT	SEVERITY	WATER		36	.0000000	.0000000	.0000000	0	0	74/03/05	76/02/04
01330	ODOR ATMOSPH	SEVERITY	WATER		36	.0555560	.0539680	.2323100	1	0	74/03/05	76/02/04
01340	DEAD FISH	SEVERITY	WATER		36	.0000000	.0000000	.0000000	0	0	74/03/05	76/02/04
01345	FLOATING DEBRIS	SEVERITY	WATER		36	.0555560	.0539680	.2323100	1	0	74/03/05	76/02/04
01355	ICE COVER	SEVERITY	WATER		36	.0555560	.0539680	.2323100	1	0	74/03/05	76/02/04
31616	FEC COLI MFM-FCBR	/100ML	WATER		37	3448.000	42048000	6484.500	36000	110	74/03/05	76/02/04
32101	DICLBRMT	TOTUG/L	WATER	K	1	1.000000			1.0	1.0	80/05/01	80/05/01
32102	CARBNTET	TOTUG/L	WATER	K	1	1.000000			1.0	1.0	80/05/01	80/05/01
32104	BROMOFRM WHL-WTR	UG/L	WATER	K	1	1.000000			1.0	1.0	80/05/01	80/05/01
32106	CHLRFORM	TOTUG/L	WATER	K	1	1.000000			1.0	1.0	80/05/01	80/05/01
32730	PHENOLS TOTAL	UG/L	WATER	K	1	5.000000			5	5	80/05/01	80/05/01
34010	TOLUENE	TOT UG/L	WATER	K	1	1.000000			1.00	1.00	80/05/01	80/05/01
34030	BENZENE	TOT UG/L	WATER	K	1	1.000000			1.00	1.00	80/05/01	80/05/01
34200	ACENAPHT HYLENE	TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01

000455
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ARKANSAS RIVER SOUTH OF HAVEN, KANSAS.
20155 KANSAS RENO
ARKANSAS BASIN 100291
UPSTREAM OF WICHITA
1117MBR 11030010001 0036.400 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
34204 ACNAPTHY TISMG/KG WET WGT	WATER	U	4	.3500000	.0100000	.1000000	.400	.200	82/08/24	84/09/05
34205 ACENAPHT HENE TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34209 ACNAPTHE TISMG/KG WET WGT	WATER	U	4	.5000000	.0400000	.2000000	.600	.200	82/08/24	84/09/05
34210 ACROLEIN TOTWUG/L	WATER	K	1	59.00000			59.000	59.000	80/05/01	80/05/01
34214 ACROLEIN TISMG/KG WET WGT	WATER	U	4	.0880000	.0026560	.0515370	.120	.012	82/08/24	84/09/05
34215 ACRYLONI TRILE TOTWUG/L	WATER	K	1	19.00000			19.000	19.000	80/05/01	80/05/01
34219 ACRYLNIT TISMG/KG WET WGT	WATER	U	4	.1655000	.0092410	.0961300	.220	.022	82/08/24	84/09/05
34224 ANTHRACE TISMG/KG WET WGT	WATER	U	4	1.000000	.0800000	.2828400	1.200	.600	82/08/24	84/09/05
34234 BENZBFLU ORANTTIS WETMG/KG	WATER	U	4	3.500000	1.000000	1.000000	4.000	2.000	82/08/24	84/09/05
34238 BENZENE TISMG/KG WET WGT	WATER	U	7	.0442860	.0002285	.0151190	.050	.010	82/08/24	86/08/26
34241 BENZIDIN TISMG/KG WET WGT	WATER	U	3	8.000000	.0000000	.0000000	8.000	8.000	83/08/23	84/09/05
34242 BENZO(K) FLUORANT TOTWUG/L	WATER	K	1	5.000000			5.000	5.000	80/05/01	80/05/01
34246 BENZKFLU TISMG/KG WET WGT	WATER	U	4	3.500000	1.000000	1.000000	4.000	2.000	82/08/24	84/09/05
34247 BENZO(A) PYRENE TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34251 BENZAPYR TISMG/KG WET WGT	WATER	U	4	1.650000	.4900000	.7000000	2.000	.600	82/08/24	84/09/05
34252 BERYLIUM TISMG/KG WET WGT	WATER	U	6	.0500000	.0000000	.0000000	.050	.050	82/08/24	85/10/08
34258 BETA BHC TISMG/KG WET WGT	WATER	U	9	.0066667	.0000402	.0063443	.020	.003	82/08/24	87/10/13
34259 DELTABHC TOTUG/L	WATER	K	1	.0200000			.020	.020	80/05/01	80/05/01
34263 DELTABHC TISMG/KG WET WGT	WATER	U	8	.0032500	.0000080	.0028284	.008	.002	83/08/23	87/10/13
34273 BIS2CHLO ROETHYLE TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34277 B2CETETR TISMG/KG WET WGT	WATER	U	4	.7000000	.0400010	.2000000	.800	.400	82/08/24	84/09/05
34278 BIS2CHLO ROETHOXY TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34282 B2CETOXM TISMG/KG WET WGT	WATER	U	4	.5000000	.0400000	.2000000	.600	.200	82/08/24	84/09/05
34283 BIS2CHLO ROISOPRO TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34287 B2CIPETR TISMG/KG WET WGT	WATER	U	4	.5250000	.0225000	.1500000	.600	.300	82/08/24	84/09/05
34291 BROMOFOR TISMG/KG WET WGT	WATER	U	7	.0092857	.0000035	.0018899	.010	.005	82/08/24	86/08/26
34292 NBB PHTH TOTAL UG/L	WATER	K	1	3.000000			3.000	3.000	80/05/01	80/05/01
34296 NBB PHTH TIS-WET MG/KG	WATER	U	4	.9250000	.1825000	.4272000	1.200	.300	82/08/24	84/09/05
34300 CARBNTET TISMG/KG WET WGT	WATER	U	7	.0091429	.0000051	.0022678	.010	.004	82/08/24	86/08/26
34301 CHLOROBE NZENE TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34305 CLBENZEN TISMG/KG WET WGT	WATER	U	7	.0431430	.0003291	.0181420	.050	.002	82/08/24	86/08/26
34306 CHLORODI BROMOMET TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34310 CLDIBRMT TISMG/KG WET WGT	WATER	U	4	.0085000	.0000090	.0030000	.010	.004	82/08/24	84/09/05
34311 CHLOROET HANE TOTWUG/L	WATER	K	1	25.00000			25.000	25.000	80/05/01	80/05/01
34315 CLETHANE TISMG/KG WET WGT	WATER	U	4	.0985000	.0035290	.0594060	.140	.014	82/08/24	84/09/05
34319 CHLRFORM TISMG/KG WET WGT	WATER	U	7	.0088571	.0000091	.0030237	.010	.002	82/08/24	86/08/26
34324 CHRYSENE TISMG/KG WET WGT	WATER	U	4	2.000000	.3200000	.5656900	2.400	1.200	82/08/24	84/09/05
34331 DICLBRMT TISMG/KG WET WGT	WATER	U	4	.0080000	.0000160	.0040000	.010	.002	82/08/24	84/09/05
34336 DIETHYLP HTHALATE TOTWUG/L	WATER	K	1	5.000000			5.000	5.000	80/05/01	80/05/01

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ARKANSAS RIVER SOUTH OF HAVEN, KANSAS.
20155 KANSAS RENO
ARKANSAS BASIN 100291
/TYPA/AMBNT/FISH/STREAM UPSTREAM OF WICHITA
1117MBR 11030010001 0036.400 ON
0000 FEET DEPTH

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
34340 DETHPHTH TISMG/KG	WET WGT WATER	U	4	.5000000	.0400000	.2000000	.600	.200	82/08/24	84/09/05
34341 DIMETHYL PHTHALAT TOTWUG/L	WATER	K	1	5.000000			5.000	5.000	80/05/01	80/05/01
		U	1	4.000000			4.000	4.000	82/08/24	82/08/24
		TOT	2	4.500000	.5000000	.7071100	5.000	4.000	80/05/01	82/08/24
34345 DMETPHTH TISMG/KG	WET WGT WATER	U	4	.3500000	.0100000	.1000000	.400	.200	82/08/24	84/09/05
34346 12DIPHEN YLHYDRAZ TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34350 12DPHNHY TISMG/KG	WET WGT WATER	U	4	.8750000	.0625000	.2500000	1.000	.500	82/08/24	84/09/05
34351 ENDSULSF TOTUG/L	WATER	K	1	.2000000			.200	.200	80/05/01	80/05/01
34355 ENDSULSF TISMG/KG	WET WGT WATER	U	8	.0250000	.0006857	.0261860	.080	.010	82/08/24	87/10/13
34356 B-ENDO SULFAN TOTWUG/L	WATER	K	1	.0600000			.060	.060	80/05/01	80/05/01
34360 BENDOSUL TISMG/KG	WET WGT WATER	U	9	.0137780	.0001497	.0122350	.034	.005	82/08/24	87/10/13
34361 A-ENDO SULFAN TOTWUG/L	WATER	K	1	.0300000			.030	.030	80/05/01	80/05/01
34363 A-ENDO SULFAN SUSPUG/L	WATER	U	1	.0100000			.010	.010	82/08/24	82/08/24
34365 AENDOSUL TISMG/KG	WET WGT WATER	U	9	.0084444	.0000580	.0076176	.020	.003	82/08/24	87/10/13
34366 ENDRINAL DEHYDE TOTWUG/L	WATER	K	1	.2000000			.200	.200	80/05/01	80/05/01
34370 ENDRINAL TISMG/KG	WET WGT WATER	U	9	.0240000	.0006240	.0249800	.080	.008	82/08/24	87/10/13
34371 ETHYLBEN ZENE TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34375 ETHYLBEN TISMG/KG	WET WGT WATER	U	7	.1075700	.0302510	.1739300	.500	.003	82/08/24	86/08/26
34376 FLUORANT HENE TOTWUG/L	WATER	K	1	4.000000			4.000	4.000	80/05/01	80/05/01
34380 FLANTENE TISMG/KG	WET WGT WATER	U	4	.7000000	.0400010	.2000000	.800	.400	82/08/24	84/09/05
34381 FLUORENE TOTWUG/L	WATER	K	1	5.000000			5.000	5.000	80/05/01	80/05/01
34385 FLUORENE TISMG/KG	WET WGT WATER	U	4	.5250000	.0225000	.1500000	.600	.300	82/08/24	84/09/05
34386 HEXACHLO ROCYCLOP TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34387 HEXACHLO ROCYCLOP DISSUG/L	WATER	U	1	.0100000			.010	.010	84/09/05	84/09/05
34390 HEXCLCPD TISMG/KG	WET WGT WATER	U	4	1.000000	.0800000	.2828400	1.200	.600	82/08/24	84/09/05
34391 HEXACHLO ROBUTADI TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34395 HEXCLBD TISMG/KG	WET WGT WATER	U	4	.7000000	.0400010	.2000000	.800	.400	82/08/24	84/09/05
34396 HEXACHLO ROETHANE TOTWUG/L	WATER	K	1	5.000000			5.000	5.000	80/05/01	80/05/01
34400 HEXACLET TISMG/KG	WET WGT WATER	U	4	.7000000	.0400010	.2000000	.800	.400	82/08/24	84/09/05
34403 INDENO(1 23CD)PYR TOTWUG/L	WATER	K	1	25.00000			25.000	25.000	80/05/01	80/05/01
34407 I123CDPR TISMG/KG	WET WGT WATER	U	4	1.450000	.3566700	.5972200	2.000	.600	82/08/24	84/09/05
34408 ISPHRONE TOTUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34412 ISPHRONE TISMG/KG	WET WGT WATER	U	4	1.400000	.4800000	.6928200	2.000	.400	82/08/24	84/09/05
34413 METHYLBR OMIDE TOTWUG/L	WATER	K	1	20.00000			20.000	20.000	80/05/01	80/05/01
34417 METHYLBR TISMG/KG	WET WGT WATER	U	4	.1655000	.0092410	.0961300	.220	.022	82/08/24	84/09/05
34418 METHYLCH LORIDE TOTWUG/L	WATER	K	1	25.00000			25.000	25.000	80/05/01	80/05/01
34422 METHYLCL TISMG/KG	WET WGT WATER	U	7	.1017200	.0016206	.0402560	.120	.012	82/08/24	86/08/26
34423 METHYLEN ECHLORID TOTWUG/L	WATER	K	1	3.000000			3.000	3.000	80/05/01	80/05/01
34427 MTHLENCL TISMG/KG	WET WGT WATER	U	4	60.07500	14388.00	119.9500	240.000	.100	82/08/24	84/09/05

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ARKANSAS RIVER SOUTH OF HAVEN, KANSAS.
20155 KANSAS RENO
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UPSTREAM OF WICHITA
1117MBR 11030010001 0036.400 ON
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PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
34428 NITROSOD IPROPYLA TOTWUG/L	WATER	K	1	25.00000			25.000	25.000	80/05/01	80/05/01
34432 NITDNPRA TISMG/KG	WET WGT WATER	U	4	3.250000	2.250000	1.500000	4.000	1.000	82/08/24	84/09/05
34433 NITROSOD IPHENYLA TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34437 NITRSDPA TISMG/KG	WET WGT WATER	U	4	.8750000	.0625000	.2500000	1.000	.500	82/08/24	84/09/05
34446 NAPTHALE TISMG/KG	WET WGT WATER	U	4	.5250000	.0225000	.1500000	.600	.300	82/08/24	84/09/05
34447 NITROBEN ZENE TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34451 NITROBEN TISMG/KG	WET WGT WATER	U	4	.5250000	.0225000	.1500000	.600	.300	82/08/24	84/09/05
34452 PARACHLO ROMETACR TOTWUG/L	WATER	K	1	2.000000			2.000	2.000	80/05/01	80/05/01
34456 PCLMCRES TISMG/KG	WET WGT WATER	U	4	1.750000	.2500000	.5000000	2.000	1.000	82/08/24	84/09/05
34461 PHENANTH RENE TOTWUG/L	WATER	K	1	5.000000			5.000	5.000	80/05/01	80/05/01
34465 PHENANTH TISMG/KG	WET WGT WATER	U	4	1.000000	.0800000	.2828400	1.200	.600	82/08/24	84/09/05
34468 PHENOL TISMG/KG	WET WGT WATER	U	4	.7000000	.0400010	.2000000	.800	.400	82/08/24	84/09/05
34469 PYRENE TOTWUG/L	WATER	K	1	4.000000			4.000	4.000	80/05/01	80/05/01
34473 PYRENE TISMG/KG	WET WGT WATER	U	4	.7000000	.0400010	.2000000	.800	.400	82/08/24	84/09/05
34474 SILVER TISMG/KG	WET WGT WATER	U	5	.0700000	.0007500	.0273860	.100	.050	82/08/24	85/10/08
34475 TETRACHL OROETHYL TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34479 TETCLETE TISMG/KG	WET WGT WATER	U	7	.0091429	.0000051	.0022678	.010	.004	82/08/24	86/08/26
34484 TOLUENE TISMG/KG	WET WGT WATER	U	7	.0438570	.0002641	.0162530	.050	.007	82/08/24	86/08/26
34488 TRICHLOR OFLUOROM TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34496 11DICHLO ROETHANE TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34500 11DICLET TISMG/KG	WET WGT WATER	U	4	.0082500	.0000122	.0035000	.010	.003	82/08/24	84/09/05
34501 11DICHLO ROETHYLE TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34505 11DCETEN TISMG/KG	WET WGT WATER	U	7	.0088571	.0000091	.0030237	.010	.002	82/08/24	86/08/26
34506 111TRICH LOROETHA TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34510 111TCLET TISMG/KG	WET WGT WATER	U	7	.0092857	.0000035	.0018899	.010	.005	82/08/24	86/08/26
34511 112TRICH LOROETHA TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34515 112TCLET TISMG/KG	WET WGT WATER	U	6	.0090000	.0000060	.0024495	.010	.004	82/08/24	85/10/08
34516 1122TETR ACHLOROE TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34520 1122TCLE TISMG/KG	WET WGT WATER	U	7	.0090000	.0000070	.0026458	.010	.003	82/08/24	86/08/26
34521 BENZO(GH I)PERYLE TOTWUG/L	WATER	K	1	25.00000			25.000	25.000	80/05/01	80/05/01
34525 BZGHIPER TISMG/KG	WET WGT WATER	U	4	1.400000	.4800000	.6928200	2.000	.400	82/08/24	84/09/05
34526 BENZO(A) ANTHRACE TOTWUG/L	WATER	K	1	5.000000			5.000	5.000	80/05/01	80/05/01
34530 BENZAANT TISMG/KG	WET WGT WATER	U	4	2.000000	.3200000	.5656900	2.400	1.200	82/08/24	84/09/05
34531 12DICHLO ROETHANE TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34535 12DICLET TISMG/KG	WET WGT WATER	U	7	.0090000	.0000070	.0026458	.010	.003	82/08/24	86/08/26
34536 12DICHLO ROBENZEN TOTWUG/L	WATER	K	1	5.000000			5.000	5.000	80/05/01	80/05/01
34540 12DCLBEN TISMG/KG	WET WGT WATER	U	7	.6428600	.8595300	.9271100	2.000	.100	82/08/24	86/08/26
34541 12DICHLO ROPROPAN TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34545 12DCLPRP TISMG/KG	WET WGT WATER	U	4	.0080000	.0000160	.0040000	.010	.002	82/08/24	84/09/05

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ARKANSAS RIVER SOUTH OF HAVEN, KANSAS.
20155 KANSAS RENO
ARKANSAS BASIN 100291
/TYPA/AMBNT/FISH/STREAM UPSTREAM OF WICHITA
1117MBR 11030010001 0036.400 ON
0000 FEET DEPTH

PARAMETER		MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
34546	12DICHLO ROETHENE TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34550	12TDCETE TISMG/KG WET WGT	WATER	U	7	.0091429	.0000051	.0022678	.010	.004	82/08/24	86/08/26
34551	124TRICH LOROBENZ TOTWUG/L	WATER	K	1	5.000000			5.000	5.000	80/05/01	80/05/01
34555	124TCBEN TISMG/KG WET WGT	WATER	U	4	.9250000	.1825000	.4272000	1.200	.300	82/08/24	84/09/05
34556	DIBENZ(A H)ANTHRA TOTWUG/L	WATER	K	1	25.00000			25.000	25.000	80/05/01	80/05/01
34560	DBAHANTH TISMG/KG WET WGT	WATER	U	4	2.500000	.5466700	.7393700	3.000	1.400	82/08/24	84/09/05
34561	13DICHLO ROPROPEN TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34566	13DICHLO ROBENZEN TOTWUG/L	WATER	K	1	5.000000			5.000	5.000	80/05/01	80/05/01
34570	13DCLBEN TISMG/KG WET WGT	WATER	U	6	.7333300	.9626700	.9811600	2.000	.100	82/08/24	85/10/08
34571	14DICHLO ROBENZEN TOTWUG/L	WATER	K	1	5.000000			5.000	5.000	80/05/01	80/05/01
34575	14DCLBEN TISMG/KG WET WGT	WATER	U	7	.6428600	.8595300	.9271100	2.000	.100	82/08/24	86/08/26
34576	2CHLOROE THYLVINY TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34580	2CLEVETR TISMG/KG WET WGT	WATER	U	4	.1445000	.0072010	.0848590	.200	.018	82/08/24	84/09/05
34581	2CHLORON APHTHALE TOTWUG/L	WATER	K	1	3.000000			3.000	3.000	80/05/01	80/05/01
34585	2CLNAPTH TISMG/KG WET WGT	WATER	U	4	.5250000	.0225000	.1500000	.600	.300	82/08/24	84/09/05
34586	2CHLOROP HENOL TOTWUG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34590	2CLPHENO TISMG/KG WET WGT	WATER	U	4	.7000000	.0400010	.2000000	.800	.400	82/08/24	84/09/05
34591	2NITROPH ENOL TOTWUG/L	WATER	K	1	3.000000			3.000	3.000	80/05/01	80/05/01
34595	2NPHENOL TISMG/KG WET WGT	WATER	U	4	1.750000	.2500000	.5000000	2.000	1.000	82/08/24	84/09/05
34596	DINOCTPH TOTUG/L	WATER	K	1	5.000000			5.000	5.000	80/05/01	80/05/01
34600	DINOCTPH TISMG/KG WET WGT	WATER	U	4	.6500000	.0900010	.3000000	.800	.200	82/08/24	84/09/05
34601	24DICHLO ROPHENOL TOTWUG/L	WATER	K	1	2.000000			2.000	2.000	80/05/01	80/05/01
34605	24DCPHEN TISMG/KG WET WGT	WATER	U	4	1.750000	.2500000	.5000000	2.000	1.000	82/08/24	84/09/05
34606	24DIMETH YLPHENOL TOTWUG/L	WATER	K	1	2.000000			2.000	2.000	80/05/01	80/05/01
34610	24DMPHEN TISMG/KG WET WGT	WATER	U	4	1.000000	.0800000	.2828400	1.200	.600	82/08/24	84/09/05
34611	24DINITR OTOLUENE TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34615	24DNTOLU TISMG/KG WET WGT	WATER	U	4	1.500000	.2533400	.5033300	2.000	.800	82/08/24	84/09/05
34616	24DINITR OPHENOL TOTWUG/L	WATER	K	1	40.00000			40.000	40.000	80/05/01	80/05/01
34620	24DNPHEN TISMG/KG WET WGT	WATER	U	4	8.250000	12.25000	3.500000	10.000	3.000	82/08/24	84/09/05
34621	246TRICH LOROPHEN TOTWUG/L	WATER	K	1	2.000000			2.000	2.000	80/05/01	80/05/01
34625	246TCPHN TISMG/KG WET WGT	WATER	U	4	1.750000	.2500000	.5000000	2.000	1.000	82/08/24	84/09/05
34626	26DINITR OTOLUENE TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34630	26DNTOLU TISMG/KG WET WGT	WATER	U	4	1.500000	.2533400	.5033300	2.000	.800	82/08/24	84/09/05
34631	33DICHLO ROBENZID TOTWUG/L	WATER	K	1	25.00000			25.000	25.000	80/05/01	80/05/01
34635	33DCBNZD TISMG/KG WET WGT	WATER	U	4	7.000000	4.000000	2.000000	8.000	4.000	82/08/24	84/09/05
34636	4BROMOPH ENYLPHEN TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34640	4BRPPETR TISMG/KG WET WGT	WATER	U	4	1.500000	.2533400	.5033300	2.000	.800	82/08/24	84/09/05
34641	4CHLOROP HENYLPHE TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34645	4CLPPETR TISMG/KG WET WGT	WATER	U	4	7.750000	20.25000	4.500000	10.000	1.000	82/08/24	84/09/05

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ARKANSAS RIVER SOUTH OF HAVEN, KANSAS.
20155 KANSAS RENO
ARKANSAS BASIN 100291
UPSTREAM OF WICHITA
1117MBR 11030010001 0036.400 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

	PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
34646	4NITROPH ENOL TOTWUG/L	WATER	K	1	40.00000			40.000	40.000	80/05/01	80/05/01
34650	4NPHENOL TISMG/KG WET WGT	WATER	U	4	7.000000	4.000000	2.000000	8.000	4.000	82/08/24	84/09/05
34657	46DINITR OORTHOCR TOTWUG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
34661	46DNOCRE TISMG/KG WET WGT	WATER	U	4	5.000000	4.000000	2.000000	6.000	2.000	82/08/24	84/09/05
34664	PCB-1221 TISMG/KG WET WGT	WATER	U	5	.1800000	.0126000	.1122500	.300	.060	82/08/24	85/02/19
34667	PCB-1232 TISMG/KG WET WGT	WATER	U	5	.0576000	.0015488	.0393550	.100	.020	82/08/24	85/02/19
34668	DICHLORO DIFLUORO TOTWUG/L	WATER	K	1	20.00000			20.000	20.000	80/05/01	80/05/01
34669	PCB-1248 TISMG/KG WET WGT	WATER		2	.1100000	.0002000	.0141420	.120	.100	85/10/08	86/08/26
			U	7	.1742900	.0197620	.1405800	.400	.070	82/08/24	87/10/13
			TOT	9	.1600000	.0156500	.1251000	.400	.070	82/08/24	87/10/13
34670	PCB-1260 TISMG/KG WET WGT	WATER		2	.0325000	.0000405	.0063642	.037	.028	85/10/08	87/10/13
			U	7	.0714290	.0045143	.0671880	.200	.020	82/08/24	86/08/26
			TOT	9	.0627780	.0036855	.0607080	.200	.020	82/08/24	87/10/13
34671	PCB 1016 TOTWUG/L	WATER	K	1	.2000000			.200	.200	80/05/01	80/05/01
34674	PCB-1016 TISMG/KG WET WGT	WATER	U	5	.2080000	.0242700	.1557900	.400	.070	82/08/24	85/02/19
34675	TCDD TOTWUG/L	WATER	K	1	.1000000			.100	.100	80/05/01	80/05/01
34679	TCDD TISMG/KG WET WGT	WATER	U	4	.0500000	.0012000	.0346410	.100	.020	82/08/24	85/02/19
34680	ALDRIN TISMG/KG WET WGT	WATER	U	9	.0095555	.0000557	.0074685	.020	.004	82/08/24	87/10/13
34682	CDANEWET TECH&MET TISMG/KG	WATER		6	.1850000	.0133900	.1157200	.380	.070	83/08/23	87/10/13
			U	3	.0973330	.0037613	.0613300	.150	.030	82/08/24	85/10/08
			TOT	9	.1557800	.0112310	.1059700	.380	.030	82/08/24	87/10/13
34683	DNB PHTH TIS-WET MG/KG	WATER	U	4	.8750000	.0625000	.2500000	1.000	.500	82/08/24	84/09/05
34685	ENDRIN TISMG/KG WET WGT	WATER		1	.0080000			.008	.008	85/02/19	85/02/19
			U	7	.0134290	.0001656	.0128690	.034	.005	82/08/24	87/10/13
			TOT	8	.0127500	.0001456	.0120680	.034	.005	82/08/24	87/10/13
34686	HPCHLREP TISMG/KG WET WGT	WATER		4	.0031500	.0000016	.0013000	.005	.002	84/09/05	87/10/13
			U	5	.0157000	.0006230	.0249620	.060	.002	82/08/24	86/08/26
			TOT	9	.0101220	.0003559	.0188660	.060	.002	82/08/24	87/10/13
34687	HEPTCHLR TISMG/KG WET WGT	WATER		1	.0030000			.003	.003	85/02/19	85/02/19
			U	7	.0042857	.0000112	.0033523	.010	.002	82/08/24	87/10/13
			TOT	8	.0041250	.0000098	.0031368	.010	.002	82/08/24	87/10/13
34688	HCB TISMG/KG WET WGT	WATER	U	4	1.500000	.2533400	.5033300	2.000	.800	82/08/24	84/09/05
34689	PCB-1242 TISMG/KG WET WGT	WATER	U	9	.1466700	.0174250	.1320100	.400	.070	82/08/24	87/10/13
34690	PCB-1254 TISMG/KG WET WGT	WATER		2	.1100000	.0002000	.0141420	.120	.100	85/10/08	87/10/13
			U	7	.1942900	.0210290	.1450100	.400	.080	82/08/24	86/08/26
			TOT	9	.1755600	.0171780	.1310700	.400	.080	82/08/24	87/10/13
34691	TOXAPHEN TISMG/KG WET WGT	WATER	U	6	.5266700	1.037100	1.018400	2.600	.040	82/08/24	87/10/13
34692	TRICLETE TISMG/KG WET WGT	WATER	U	7	.0090000	.0000070	.0026458	.010	.003	82/08/24	86/08/26
34693	VINYLCHL TISMG/KG WET WGT	WATER	U	4	.0985000	.0035290	.0594060	.140	.014	82/08/24	84/09/05

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ARKANSAS RIVER SOUTH OF HAVEN, KANSAS.
20155 KANSAS RENO
ARKANSAS BASIN 100291
UPSTREAM OF WICHITA
1117MBR 11030010001 0036.400 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
34694 PHENOL TOT UG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
34698 T1,3-DCP FISH WET WGTMG/KG	WATER	U	4	.0085000	.0000090	.0030000	.010	.004	82/08/24	84/09/05
34703 C1,3-DCP FISH WET WGTMG/K6	WATER	U	4	.0082500	.0000122	.0035000	.010	.003	82/08/24	84/09/05
39032 PCP TOT UG/L	WATER	K	1	5.000000			5.000	5.000	80/05/01	80/05/01
39060 PCP TISMG/KG WET WGT	WATER	U	7	5.657200	14.37300	3.791200	10.000	.100	82/08/24	86/08/26
39063 CHLORDAN C ISOMER TIS-UG/G	WATER		6	.0186670	.0002150	.0146650	.047	.007	83/08/23	87/10/13
		U	3	.0156670	.0001463	.0120970	.025	.002	82/08/24	85/10/08
		TOT	9	.0176670	.0001732	.0131630	.047	.002	82/08/24	87/10/13
39066 CHLORDAN T ISOMER TIS-UG/G	WATER		4	.0106750	.0000110	.0033300	.015	.007	84/09/05	87/10/13
		M	1	.0040000			.004	.004	85/02/19	85/02/19
		U	4	.0192500	.0001489	.0122030	.030	.002	82/08/24	85/10/08
		TOT	9	.0137450	.0000917	.0095780	.030	.002	82/08/24	87/10/13
39069 NONACHLR C ISOMER TIS UG/G	WATER		3	.0065000	.0000092	.0030414	.010	.005	85/10/08	87/10/13
		M	1	.0010000			.001	.001	85/02/19	85/02/19
		U	5	.0174000	.0001288	.0113490	.030	.002	82/08/24	85/10/08
		TOT	9	.0119450	.0001114	.0105550	.030	.001	82/08/24	87/10/13
39072 NONCHLOR T ISOMER TIS-UG/G	WATER		6	.0166670	.0000662	.0081405	.028	.007	83/08/23	87/10/13
		U	3	.0126670	.0000893	.0094516	.020	.002	82/08/24	85/10/08
		TOT	9	.0153330	.0000677	.0082311	.028	.002	82/08/24	87/10/13
39074 ALPHABHC TISMG/KG WET WGT	WATER	U	9	.0033333	.0000070	.0026575	.008	.002	82/08/24	87/10/13
39099 B2ETHXPH TISMG/KG WET WGT	WATER	U	4	1.500000	.2533400	.5033300	2.00	.80	82/08/24	84/09/05
39100 B2ETHHXL PHTHALAT TOT UG/L	WATER		1	33.00000			33.000	33.000	80/05/01	80/05/01
39105 PERCENT FAT HEX EXTR	WATER		8	4.758800	4.656600	2.157900	8.5	1.2	82/08/24	87/10/13
		J	1	5.000000			5.0	5.0	83/08/23	83/08/23
		TOT	9	4.785600	4.081000	2.020200	8.5	1.2	82/08/24	87/10/13
39110 DNB PHTH TOTAL UG/L	WATER	K	1	4.000000			4.000	4.000	80/05/01	80/05/01
39120 BENZIDIN TOTUG/L	WATER	K	1	25.00000			25.000	25.000	80/05/01	80/05/01
39175 VINYLCHL ORIDE TOT UG/L	WATER	K	1	20.00000			20.000	20.000	80/05/01	80/05/01
39180 TRICHLOR ETHYLENE TOT UG/L	WATER	K	1	1.000000			1.000	1.000	80/05/01	80/05/01
39250 NAPTHAL ENES, PC . UG/L	WATER	K	1	3.000000			3.00	3.00	80/05/01	80/05/01
39300 P,P'DDT TOT UG/L	WATER	K	1	.1000000			.100	.100	80/05/01	80/05/01
39302 P,P'DDT TISMG/KG WET WGT	WATER	M	1	.0060000			.006	.006	85/02/19	85/02/19
		U	8	.0251250	.0004038	.0200960	.05	.009	82/08/24	87/10/13
		TOT	9	.0230000	.0003940	.0198500	.05	.006	82/08/24	87/10/13
39307 O P DDT TISSUE UG/G	WATER	U	9	.0197780	.0003264	.0180680	.05	.004	82/08/24	87/10/13
39310 P,P'DDD TOT UG/L	WATER	K	1	.0600000			.060	.060	80/05/01	80/05/01
39312 P,P'DDD TISMG/KG WET WGT	WATER		2	.0215000	.0000605	.0077782	.03	.02	82/08/24	84/09/05
		U	6	.0125000	.0001375	.0117260	.03	.005	83/08/23	86/08/26
		TOT	8	.0147500	.0001242	.0111450	.03	.005	82/08/24	86/08/26

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ARKANSAS RIVER SOUTH OF HAVEN, KANSAS.
20155 KANSAS RENO
ARKANSAS BASIN 100291
/TYPA/AMBNT/FISH/STREAM UPSTREAM OF WICHITA
1117MBR 11030010001 0036.400 ON
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PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
39320 P,P'DDE TOT UG/L	WATER	K	1	.0400000			.040	.040	80/05/01	80/05/01
39322 P,P'DDE TISMG/KG WET WGT	WATER		6	.0196670	.0001726	.0131400	.04	.005	83/08/23	87/10/13
		U	3	.0153330	.0000973	.0098658	.02	.004	82/08/24	85/10/08
		TOT	9	.0182220	.0001369	.0117020	.04	.004	82/08/24	87/10/13
39325 O,P DDD TISSUE UG/G	WATER	U	9	.0186670	.0002680	.0163710	.040	.004	82/08/24	87/10/13
39329 O,P'DDE TISSUE UG/G	WATER	U	9	.0355560	.0006340	.0251800	.080	.015	82/08/24	87/10/13
39330 ALDRIN TOT UG/L	WATER	K	1	.0200000			.020	.020	80/05/01	80/05/01
39337 ALPHABHC TOTUG/L	WATER	K	1	.0100000			.010	.010	80/05/01	80/05/01
39338 BETA BHC TOTUG/L	WATER	K	1	.0100000			.010	.010	80/05/01	80/05/01
39346 METOLACH TISSUES MG/KG	WATER	U	4	.0500000	.0000000	.0000000	.050	.050	85/10/08	87/10/13
39350 CHLRDANE TECH&MET TOT UG/L	WATER	K	1	.2000000			.200	.200	80/05/01	80/05/01
39380 DIELDRIN TOTUG/L	WATER	K	1	.0300000			.030	.030	80/05/01	80/05/01
39390 ENDRIN TOT UG/L	WATER	K	1	.0500000			.050	.050	80/05/01	80/05/01
39400 TOXAPHEN TOTUG/L	WATER	K	1	3.000000			3.000	3.000	80/05/01	80/05/01
39404 DIELDRIN TISMG/KG WET WGT	WATER		3	.0210000	.0001080	.0103920	.03	.02	82/08/24	87/10/13
		U	6	.0183330	.0002302	.0151750	.04	.007	83/08/23	86/08/26
		TOT	9	.0192220	.0001727	.0131410	.04	.007	82/08/24	87/10/13
39410 HEPTCHLR TOTUG/L	WATER	K	1	.0200000			.020	.020	80/05/01	80/05/01
39420 HPCHLREP TOTUG/L	WATER	K	1	.0200000			.020	.020	80/05/01	80/05/01
39482 METHOXY CHLOR-FI SH-UG/KG	WATER	U	1	.2000000			.200	.200	82/08/24	82/08/24
39488 PCB-1221 TOTUG/L	WATER	K	1	.3000000			.300	.300	80/05/01	80/05/01
39492 PCB-1232 TOTUG/L	WATER	K	1	.0700000			.070	.070	80/05/01	80/05/01
39496 PCB-1242 TOTUG/L	WATER	K	1	.2000000			.200	.200	80/05/01	80/05/01
39500 PCB-1248 TOTUG/L	WATER	K	1	.3000000			.300	.300	80/05/01	80/05/01
39504 PCB-1254 TOTUG/L	WATER	K	1	.4000000			.400	.400	80/05/01	80/05/01
39508 PCB-1260 TOTUG/L	WATER	K	1	.5000000			.500	.500	80/05/01	80/05/01
39534 MALATHIN TIS WET MG/KG	WATER	U	5	.1600000	.0117500	.1084000	.300	.050	82/08/24	85/02/19
39700 HCB TOT UG/L	WATER	K	1	10.00000			10.000	10.000	80/05/01	80/05/01
39782 LINDANE WHL SMPL UG/L	WATER	K	1	.0100000			.010	.010	80/05/01	80/05/01
39785 GBHC-TIS LINDANE WETMG/KG	WATER		1	.0030000			.003	.003	85/02/19	85/02/19
		U	8	.0042500	.0000130	.0036155	.01	.002	82/08/24	87/10/13
		TOT	9	.0041111	.0000116	.0034075	.01	.002	82/08/24	87/10/13
46570 CAL HARD CA MG MG/L	WATER	$	39	332.6900	4206.700	64.85900	435	158	74/03/05	80/05/01
60819 INVALID PAR NUMBER	WATER		1	5.000000			5.000000	5.000000	76/08/03	76/08/03
61007 INVALID PAR NUMBER	WATER		1	.5000000			.5000000	.5000000	76/08/03	76/08/03
61119 INVALID PAR NUMBER	WATER	K	1	1.000000			1.000000	1.000000	76/08/03	76/08/03
71900 MERCURY HG,TOTAL UG/L	WATER		27	.8429600	.2883000	.5369400	2.6	.2	74/03/05	78/08/03
		K	7	.2000000	.0000000	.0000000	.2	.2	75/11/04	78/05/02
		TOT	34	.7105900	.2967800	.5447800	2.6	.2	74/03/05	78/08/03

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ARKANSAS RIVER SOUTH OF HAVEN, KANSAS.
20155 KANSAS RENO
ARKANSAS BASIN 100291
UPSTREAM OF WICHITA
1117MBR 11030010001 0036.400 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
71930 MERCURY TISMG/KG WET WGT	WATER		6	.0205170	.0000631	.0079445	.03	.01	82/08/24	87/10/13
71936 LEAD TISMG/KG WET WGT	WATER		1	.1400000			.14	.14	86/08/26	86/08/26
		U	7	.4428600	.0228570	.1511900	.50	.10	82/08/24	87/10/13
		TOT	8	.4050000	.0310570	.1762300	.50	.10	82/08/24	87/10/13
71937 COPPER TISMG/KG WET WGT	WATER		6	1.229300	.0723860	.2690500	1.66	.89	82/08/24	85/10/08
71938 ZINC TISMG/KG WET WGT	WATER		6	59.50000	95.47200	9.771000	72.00	46.00	82/08/24	85/10/08
71939 CR-FISH UG/G OR MG/KG WT	WATER		6	.3686700	.0044015	.0663430	.45	.26	82/08/24	85/10/08
71940 CADMIUM TISMG/KG WET WGT	WATER		3	.0740000	.0005880	.0242490	.10	.05	84/09/05	87/10/13
		U	5	.0500000	.0000000	.0000000	.05	.05	82/08/24	85/10/08
		TOT	8	.0590000	.0003222	.0179520	.10	.05	82/08/24	87/10/13
74041 WQF SAMPLE UPDATED	WATER		10	884410.0	1629E+05	12767.00	920804	880120	85/10/08	87/10/13
74990 FISH SPECIES NUMERIC	WATER		33	12.00000	.0000000	.0000000	12	12	82/08/24	87/10/13
74995 ANATOMY CODE	WATER		10	61.70000	72.90200	8.538300	86	59	82/08/24	87/10/13
78211 ENDRINKE TISWETWT MG/KG	WATER	U	2	.0070000	.0000000	.0000000	.007	.007	86/08/26	87/10/13
79020 SODIUM UG/KG	WATER		2	1250.000	5000.000	70.71100	1300.00	1200.00	85/10/08	85/10/08
80886 CYANAZIN TIS WET WT MG/KG	WATER	U	2	.1000000	.0000000	.0000000	.1	.1	86/08/26	87/10/13
81614 NO.INDV. IN THE SAMPLE	WATER		10	4.900000	.5444600	.7378700	6	4	82/08/24	87/10/13
81615 NO.DIFF. SPECIES IN SMPL	WATER		10	1.000000	.0000000	.0000000	1	1	82/08/24	87/10/13
81644 MTXCHLOR FISH WET WGT UG/G	WATER	U	8	.0317500	.0008319	.0288430	.080	.012	83/08/23	87/10/13
81645 MIREX F ISH WETW GT UG/G	WATER	U	5	.0444000	.0012683	.0356130	.100	.009	82/08/24	85/02/19
81652 TREFLAN FISH WET WGTMG/KG	WATER	U	2	.0050000	.0000000	.0000000	.005	.005	86/08/26	87/10/13
81656 MG FISH WET WGT MG/KG	WATER		6	376.1700	667.5300	25.83700	400.000	330.000	82/08/24	85/10/08
81658 BA FISH WET WGT MG/KG	WATER		6	3.106700	.3152800	.5615000	3.670	2.100	82/08/24	85/10/08
81659 CO FISH WET WGT MG/KG	WATER		4	.0802500	.0001509	.0122850	.092	.063	82/08/24	84/09/05
		U	2	.1000000	.0000000	.0000000	.100	.100	85/10/08	85/10/08
		TOT	6	.0868330	.0001945	.0139490	.100	.063	82/08/24	85/10/08
81660 FE FISH WET WGT MG/KG	WATER		6	38.41700	190.0600	13.78600	53.800	18.100	82/08/24	85/10/08
81662 MO FISH WET WGT MG/KG	WATER		4	.8775000	2.195400	1.481700	3.100	.126	83/08/23	85/10/08
		U	2	.0750000	.0012500	.0353560	.100	.050	82/08/24	85/10/08
		TOT	6	.6100000	1.489200	1.220300	3.100	.050	82/08/24	85/10/08
81664 TI FISH WET WGT MG/KG	WATER	U	1	.0500000			.050	.050	82/08/24	82/08/24
81665 V FISH WET WGT MG/KG	WATER		3	.1116700	.0003243	.0180090	.124	.091	82/08/24	85/10/08
		U	3	.1000000	.0000000	.0000000	.100	.100	84/09/05	85/10/08
		TOT	6	.1058300	.0001705	.0130600	.124	.091	82/08/24	85/10/08
81666 AL FISH WET WGT MG/KG	WATER		3	25.20000	73.51100	8.573800	35.100	20.200	83/08/23	84/09/05
		U	1	.2000000			.200	.200	82/08/24	82/08/24
		TOT	4	18.95000	205.2600	14.32700	35.100	.200	82/08/24	84/09/05
81741 MANGANES FISH WET WGTMG/KG	WATER		5	5.514000	4.833700	2.198600	8.370	2.960	82/08/24	85/10/08
		U	1	.1000000			.100	.100	85/10/08	85/10/08

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ARKANSAS RIVER SOUTH OF HAVEN, KANSAS.
20155 KANSAS RENO
ARKANSAS BASIN 100291
UPSTREAM OF WICHITA
1117MBR 11030010001 0036.400 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER		MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
81741	MANGANES FISH WET WGTMG/KG	WATER	TOT	6	4.611700	8.752200	2.958400	8.370	.100	82/08/24	85/10/08
81742	SILVER FISH WET WGTMG/KG	WATER	U	1	.0500000			.050	.050	83/08/23	83/08/23
81802	GUTHION FISH WET WGTMG/KG	WATER	U	4	40.00000	.0000000	.0000000	40.000	40.000	82/08/24	84/09/05
81807	DURSBAN FISH WET WGTMG/KG	WATER	U	5	.0960000	.0056300	.0750330	.200	.030	82/08/24	85/02/19
81810	PARATHIN FISH WET WGTMG/KG	WATER	U	5	.0480000	.0008075	.0284170	.080	.015	82/08/24	85/02/19
82029	OXYCHLRD TISS WETMG/KG	WATER		2	.0045500	.0000042	.0020506	.006	.003	85/10/08	87/10/13
			U	2	.0020000	.0000000	.0000000	.002	.002	85/10/08	86/08/26
			TOT	4	.0032750	.0000035	.0018892	.006	.002	85/10/08	87/10/13
82401	DEMETON TISSUE MG/KG	WATER	U	4	4.000000	.0000000	.0000000	4.000	4.000	82/08/24	84/09/05
82403	PROMETON TISSUE MG/KG	WATER	U	4	4.000000	.0000000	.0000000	4.000	4.000	82/08/24	84/09/05
82404	ATRAZINE TISSUE MG/KG	WATER	U	8	2.150000	3.911500	1.977700	4.000	.300	82/08/24	87/10/13
82405	METRIBUZ TISSUE MG/KG	WATER	U	4	4.000000	.0000000	.0000000	4.000	4.000	82/08/24	84/09/05
82406	SIMAZINE TISSUE MG/KG	WATER	U	4	4.000000	.0000000	.0000000	4.000	4.000	82/08/24	84/09/05
82407	FONOFOS TISSUE MG/KG	WATER	U	4	4.000000	.0000000	.0000000	4.000	4.000	82/08/24	84/09/05
82411	PENOXALI TISSUE MG/KG	WATER	U	4	4.000000	.0000000	.0000000	4.000	4.000	82/08/24	84/09/05
82413	TRICHLOR TISSUE MG/KG	WATER	U	4	.6500000	.1700000	.4123100	1.000	.200	83/08/23	85/02/19
82419	CIS-PERM TISSUE MG/KG	WATER	U	4	4.000000	.0000000	.0000000	4.000	4.000	82/08/24	84/09/05
82422	TRNS-PRM TISSUE MG/KG	WATER	U	4	4.000000	.0000000	.0000000	4.000	4.000	82/08/24	84/09/05
82533	PRORAZNE FISH TIS MG/KG	WATER	U	4	4.000000	.0000000	.0000000	4.00	4.00	82/08/24	84/09/05
82571	ALACHLOR TISWETWT MG/KG	WATER	U	4	.0105000	.0000083	.0028868	.013	.008	85/10/08	87/10/13
84014	SPECIES SEX CODE	WATER	TXT	17	TEXT	TEXT	TEXT	TEXT	TEXT	83/08/23	85/02/19
84015	AGE OF S PECIMEN YEARS	WATER	TXT	11	TEXT	TEXT	TEXT	TEXT	TEXT	82/08/24	83/08/23
84068	SERIES CODE ALPHA	WATER	TXT	5	TEXT	TEXT	TEXT	TEXT	TEXT	85/02/19	87/10/13

22

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38 10 10.5 098 12 22.5 2
ARKANSAS RIVER SOUTH OF STERLING, KANSAS.
20159 KANSAS RICE
SOUTH CENTRAL LOWER MISS 100200
/TYPA/AMBNT/FISH/STREAM
ARK R KANSAS-COLORADO STATE LINE TO TULS
1117MBR 861220 11030010004 0015.370 ON
0000 FEET DEPTH

PARAMETER			MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00008 LAB	IDENT.	NUMBER	WATER		6	8.333300	102.2700	10.11300	27	1	86/08/26	89/08/31
00023 WEIGHT		POUNDS	WATER		22	2.603200	.5465500	.7392900	3.94	1.48	87/10/13	89/08/31
00024 LENGTH		INCHES	WATER		22	17.43200	2.075000	1.440500	19.40	13.80	87/10/13	89/08/31
01004 ARSENIC	TISMG/KG	WET WGT	WATER		1	.0600000			.06	.06	86/08/26	86/08/26
				U	3	.2333300	.0533330	.2309400	.50	.10	87/10/13	89/08/31
				TOT	4	.1900000	.0430670	.2075300	.50	.06	86/08/26	89/08/31
01069 NICKEL	TISMG/KG	WET WGT	WATER	U	1	.2000000			.20	.20	89/08/31	89/08/31
01099 ANTIMONY	TIS-WET	MG/KG	WATER	U	1	.5000000			.50	.50	89/08/31	89/08/31
34238 BENZENE	TISMG/KG	WET WGT	WATER	U	2	.0350000	.0004500	.0212130	.050	.020	86/08/26	89/08/31
34258 BETA BHC	TISMG/KG	WET WGT	WATER	U	4	.0030000	.0000000	.0000000	.003	.003	86/08/26	89/08/31
34263 DELTABHC	TISMG/KG	WET WGT	WATER	U	3	.0015000	.0000000	.0000000	.002	.002	86/08/26	88/10/06
34291 BROMOFOR	TISMG/KG	WET WGT	WATER	U	1	.0100000			.010	.010	86/08/26	86/08/26
34300 CARBNTET	TISMG/KG	WET WGT	WATER	U	2	.0150000	.0000500	.0070711	.020	.010	86/08/26	89/08/31
34305 CLBENZEN	TISMG/KG	WET WGT	WATER	U	1	.0500000			.050	.050	86/08/26	86/08/26
34319 CHLRFORM	TISMG/KG	WET WGT	WATER	U	2	.0150000	.0000500	.0070711	.020	.010	86/08/26	89/08/31
34355 ENDSULSF	TISMG/KG	WET WGT	WATER	U	3	.0100000	.0000000	.0000000	.010	.010	86/08/26	88/10/06
34360 BENDOSUL	TISMG/KG	WET WGT	WATER	U	3	.0050000	.0000000	.0000000	.005	.005	86/08/26	88/10/06
34365 AENDOSUL	TISMG/KG	WET WGT	WATER	U	4	.0030000	.0000000	.0000000	.003	.003	86/08/26	89/08/31
34370 ENDRINAL	TISMG/KG	WET WGT	WATER	U	3	.0080000	.0000000	.0000000	.008	.008	86/08/26	88/10/06
34375 ETHYLBEN	TISMG/KG	WET WGT	WATER	U	1	.5000000			.500	.500	86/08/26	86/08/26
34422 METHYLCL	TISMG/KG	WET WGT	WATER	U	1	.1200000			.120	.120	86/08/26	86/08/26
34479 TETCLETE	TISMG/KG	WET WGT	WATER	U	2	.0150000	.0000500	.0070711	.020	.010	86/08/26	89/08/31
34484 TOLUENE	TISMG/KG	WET WGT	WATER	U	1	.0500000			.050	.050	86/08/26	86/08/26
34505 11DCETEN	TISMG/KG	WET WGT	WATER	U	2	.0150000	.0000500	.0070711	.020	.010	86/08/26	89/08/31
34510 111TCLET	TISMG/KG	WET WGT	WATER	U	1	.0100000			.010	.010	86/08/26	86/08/26
34515 112TCLET	TISMG/KG	WET WGT	WATER	U	1	.0200000			.020	.020	89/08/31	89/08/31
34520 1122TCLE	TISMG/KG	WET WGT	WATER	U	2	.0150000	.0000500	.0070711	.020	.010	86/08/26	89/08/31
34535 12DICLET	TISMG/KG	WET WGT	WATER	U	2	.0150000	.0000500	.0070711	.020	.010	86/08/26	89/08/31
34540 12DCLBEN	TISMG/KG	WET WGT	WATER	U	1	.1000000			.100	.100	86/08/26	86/08/26
34550 12TDCETE	TISMG/KG	WET WGT	WATER	U	1	.0100000			.010	.010	86/08/26	86/08/26
34575 14DCLBEN	TISMG/KG	WET WGT	WATER	U	1	.1000000			.100	.100	86/08/26	86/08/26
34664 PCB-1221	TISMG/KG	WET WGT	WATER	U	1	.0400000			.040	.040	89/08/31	89/08/31
34669 PCB-1248	TISMG/KG	WET WGT	WATER	M	1	.0420000			.042	.042	86/08/26	86/08/26
				U	4	.0700000	.0000000	.0000000	.070	.070	87/10/13	88/10/06
				TOT	5	.0644000	.0001568	.0125220	.070	.042	86/08/26	88/10/06
34670 PCB-1260	TISMG/KG	WET WGT	WATER		4	.0840000	.0007006	.0264700	.110	.051	88/10/06	89/08/31
				M	2	.0165000	.0000045	.0021214	.018	.015	86/08/26	87/10/13
				TOT	6	.0615000	.0016363	.0404510	.110	.015	86/08/26	89/08/31
34680 ALDRIN	TISMG/KG	WET WGT	WATER	U	4	.0040000	.0000000	.0000000	.004	.004	86/08/26	89/08/31

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ARKANSAS RIVER SOUTH OF STERLING, KANSAS.
20159 KANSAS RICE
SOUTH CENTRAL LOWER MISS 100200
ARK R KANSAS-COLORADO STATE LINE TO TULS
1117MBR 861220 11030010004 0015.370 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
34682 CDANEWET TECH&MET TISMG/KG	WATER		6	.3435000	.1209100	.3477200	.940	.051	86/08/26	89/08/31
34685 ENDRIN TISMG/KG WET WGT	WATER	U	4	.0050000	.0000000	.0000000	.005	.005	86/08/26	89/08/31
34686 HPCHLREP TISMG/KG WET WGT	WATER		4	.0070750	.0000863	.0092928	.021	.002	86/08/26	89/08/31
		U	2	.0015000	.0000000	.0000000	.002	.002	88/10/06	88/10/06
		TOT	6	.0052167	.0000601	.0077525	.021	.002	86/08/26	89/08/31
34687 HEPTCHLR TISMG/KG WET WGT	WATER		1	.0540000			.054	.054	87/10/13	87/10/13
		U	5	.0020000	.0000000	.0000000	.002	.002	86/08/26	89/08/31
		TOT	6	.0106670	.0004506	.0212290	.054	.002	86/08/26	89/08/31
34688 HCB TISMG/KG WET WGT	WATER		1	.0017000			.002	.002	88/10/06	88/10/06
		U	1	.0010000			.001	.001	89/08/31	89/08/31
		TOT	2	.0013500	.0000002	.0004949	.002	.001	88/10/06	89/08/31
34689 PCB-1242 TISMG/KG WET WGT	WATER	U	5	.0700000	.0000000	.0000000	.070	.070	86/08/26	88/10/06
34690 PCB-1254 TISMG/KG WET WGT	WATER		2	.0910000	.0000180	.0042436	.094	.088	88/10/06	89/08/31
		J	1	.0690000			.069	.069	88/10/06	88/10/06
		M	2	.0300000	.0000320	.0056569	.034	.026	86/08/26	87/10/13
		U	1	.1000000			.100	.100	88/10/06	88/10/06
		TOT	6	.0685000	.0010039	.0316850	.100	.026	86/08/26	89/08/31
34691 TOXAPHEN TISMG/KG WET WGT	WATER	U	3	.0400000	.0000000	.0000000	.040	.040	87/10/13	89/08/31
34692 TRICLETE TISMG/KG WET WGT	WATER	U	2	.0150000	.0000500	.0070711	.020	.010	86/08/26	89/08/31
34693 VINYLCHL TISMG/KG WET WGT	WATER	U	1	.0700000			.070	.070	89/08/31	89/08/31
34698 T1,3-DCP FISH WET WGTMG/KG	WATER	U	1	.0200000			.020	.020	89/08/31	89/08/31
34703 C1,3-DCP FISH WET WGTMG/K6	WATER	U	1	.0200000			.020	.020	89/08/31	89/08/31
39060 PCP TISMG/KG WET WGT	WATER	U	1	.1000000			.100	.100	86/08/26	86/08/26
39063 CHLORDAN C ISOMER TIS-UG/G	WATER		6	.0190000	.0001740	.0131910	.041	.005	86/08/26	89/08/31
39066 CHLORDAN T ISOMER TIS-UG/G	WATER		6	.0519330	.0057239	.0756560	.190	.004	86/08/26	89/08/31
39069 NONACHLR C ISOMER TIS UG/G	WATER		6	.0055833	.0000044	.0021113	.008	.002	86/08/26	89/08/31
39072 NONCHLOR T ISOMER TIS-UG/G	WATER		6	.0180000	.0000540	.0073485	.025	.004	86/08/26	89/08/31
39074 ALPHABHC TISMG/KG WET WGT	WATER	M	1	.0010000			.001	.001	86/08/26	86/08/26
		U	3	.0015000	.0000000	.0000000	.002	.002	87/10/13	89/08/31
		TOT	4	.0013750	6250E-11	.0002500	.002	.001	86/08/26	89/08/31
39105 PERCENT FAT HEX EXTR	WATER		6	5.933300	2.774700	1.665800	8.3	3.7	86/08/26	89/08/31
39302 P,P'DDT TISMG/KG WET WGT	WATER		2	.0098500	.0001328	.0115260	.02	.002	86/08/26	89/08/31
		U	2	.0090000	.0000000	.0000000	.009	.009	87/10/13	88/10/06
		TOT	4	.0094250	.0000445	.0066725	.02	.002	86/08/26	89/08/31
39307 O P DDT TISSUE UG/G	WATER	U	3	.0100000	.0000000	.0000000	.01	.01	86/08/26	88/10/06
39312 P,P'DDD TISMG/KG WET WGT	WATER	U	2	.0050000	.0000000	.0000000	.005	.005	86/08/26	88/10/06
39322 P,P'DDE TISMG/KG WET WGT	WATER		3	.0280000	.0002470	.0157160	.05	.01	87/10/13	89/08/31
		U	1	.0040000			.004	.004	86/08/26	86/08/26
		TOT	4	.0220000	.0003086	.0175690	.05	.004	86/08/26	89/08/31

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ARKANSAS RIVER SOUTH OF STERLING, KANSAS.
20159 KANSAS RICE
SOUTH CENTRAL LOWER MISS 100200
/TYPA/AMBNT/FISH/STREAM
ARK R KANSAS-COLORADO STATE LINE TO TULS
1117MBR 861220 11030010004 0015.370 ON
0000 FEET DEPTH

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
39325 O,P DDD TISSUE UG/G	WATER	U	3	.0080000	.0000000	.0000000	.008	.008	86/08/26	88/10/06
39329 O,P'DDE TISSUE UG/G	WATER	U	3	.0150000	.0000000	.0000000	.015	.015	86/08/26	88/10/06
39346 METOLACH TISSUES MG/KG	WATER	U	3	.0500000	.0000000	.0000000	.050	.050	86/08/26	88/10/06
39404 DIELDRIN TISMG/KG WET WGT	WATER		2	.0120000	.0000180	.0042426	.02	.009	87/10/13	89/08/31
		M	1	.0050000			.005	.005	86/08/26	86/08/26
		U	1	.0070000			.007	.007	88/10/06	88/10/06
		TOT	4	.0090000	.0000186	.0043205	.02	.005	86/08/26	89/08/31
39785 GBHC-TIS LINDANE WETMG/KG	WATER	M	1	.0010000			.001	.001	86/08/26	86/08/26
		U	3	.0020000	.0000000	.0000000	.002	.002	87/10/13	89/08/31
		TOT	4	.0017500	.0000002	.0005000	.002	.001	86/08/26	89/08/31
71930 MERCURY TISMG/KG WET WGT	WATER		4	.0905000	.0023134	.0480980	.15	.04	86/08/26	89/08/31
71936 LEAD TISMG/KG WET WGT	WATER		1	.2000000			.20	.20	86/08/26	86/08/26
		U	3	.2333300	.0533330	.2309400	.50	.10	87/10/13	89/08/31
		TOT	4	.2250000	.0358330	.1893000	.50	.10	86/08/26	89/08/31
71937 COPPER TISMG/KG WET WGT	WATER		1	1.000000			1.00	1.00	89/08/31	89/08/31
71938 ZINC TISMG/KG WET WGT	WATER		1	54.00000			54.00	54.00	89/08/31	89/08/31
71939 CR-FISH UG/G OR MG/KG WT	WATER		1	.3200000			.32	.32	89/08/31	89/08/31
71940 CADMIUM TISMG/KG WET WGT	WATER		3	.0933330	.0026333	.0513160	.15	.05	86/08/26	89/08/31
		U	1	.1200000			.12	.12	88/10/06	88/10/06
		TOT	4	.1000000	.0019333	.0439700	.15	.05	86/08/26	89/08/31
74041 WQF SAMPLE UPDATED	WATER		29	890490.0	73101000	8549.900	920804	880407	86/08/26	89/08/31
74990 FISH SPECIES NUMERIC	WATER		6	22.00000	240.0000	15.49200	42	12	86/08/26	89/08/31
74995 ANATOMY CODE	WATER		6	68.33300	209.0700	14.45900	87	59	86/08/26	89/08/31
76164 STYRENE TISS WET WGTMG/KG	WATER	U	1	.0200000			.020	.020	89/08/31	89/08/31
78211 ENDRINKE TISWETWT MG/KG	WATER	U	3	.0070000	.0000000	.0000000	.007	.007	86/08/26	88/10/06
80886 CYANAZIN TIS WET WT MG/KG	WATER	U	3	.1000000	.0000000	.0000000	.1	.1	86/08/26	88/10/06
81614 NO.INDV. IN THE SAMPLE	WATER		6	4.500000	.7000000	.8366600	5	3	86/08/26	89/08/31
81615 NO.DIFF. SPECIES IN SMPL	WATER		6	1.000000	.0000000	.0000000	1	1	86/08/26	89/08/31
81644 MTXCHLOR FISH WET WGT UG/G	WATER	U	3	.0150000	.0000000	.0000000	.015	.015	86/08/26	88/10/06
81652 TREFLAN FISH WET WGTMG/KG	WATER	U	3	.0050000	.0000000	.0000000	.005	.005	86/08/26	88/10/06
81658 BA FISH WET WGT MG/KG	WATER		1	2.400000			2.400	2.400	89/08/31	89/08/31
81659 CO FISH WET WGT MG/KG	WATER	U	1	.1000000			.100	.100	89/08/31	89/08/31
81662 MO FISH WET WGT MG/KG	WATER	U	1	1.000000			1.000	1.000	89/08/31	89/08/31
81665 V FISH WET WGT MG/KG	WATER		1	.1000000			.100	.100	89/08/31	89/08/31
81823 PCA FISH TIS WET WGTMG/KG	WATER		1	.0024000			.002	.002	89/08/31	89/08/31
		U	1	.0080000			.008	.008	88/10/06	88/10/06
		TOT	2	.0052000	.0000156	.0039598	.008	.002	88/10/06	89/08/31
82029 OXYCHLRD TISS WETMG/KG	WATER		2	.0031000	.0000016	.0012728	.004	.002	88/10/06	89/08/31
		U	4	.0020000	.0000000	.0000000	.002	.002	86/08/26	88/10/06

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ARKANSAS RIVER SOUTH OF STERLING, KANSAS.
20159 KANSAS RICE
SOUTH CENTRAL LOWER MISS 100200
ARK R KANSAS-COLORADO STATE LINE TO TULS
1117MBR 861220 11030010004 0015.370 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
82029	OXYCHLRD	TISS	WETMG/KG	WATER	TOT	6	.0023667	.0000006	.0008041	.004	.002	86/08/26	89/08/31
82404	ATRAZINE	TISSUE	MG/KG	WATER	U	4	.3000000	.0000000	.0000000	.300	.300	86/08/26	89/08/31
82571	ALACHLOR	TISWETWT	MG/KG	WATER	U	4	.0130000	.0000000	.0000000	.013	.013	86/08/26	89/08/31
84068	SERIES	CODE	ALPHA	WATER	TXT	6	TEXT	TEXT	TEXT	TEXT	TEXT	86/08/26	89/08/31

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37 59 58.0 098 47 45.0 2
RATTLESNAKE CREEK WEST OF ST. JOHN, KANSAS.
20185 KANSAS STAFFORD
S CEN LOWER MISSISSIPPI 100200
ARKANSAS R. KS-COL STATE LINE TO TULSA
1117MBR 840317 11030009003 0006.010 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER				MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
00008	LAB	IDENT.	NUMBER	WATER		4	97965.00	1271E+07	112760.0	195617	114	83/08/26	85/09/11
00023	WEIGHT		POUNDS	WATER		10	2.805000	1.991400	1.411200	4.80	1.00	83/08/26	84/09/05
00024	LENGTH		INCHES	WATER		10	15.91000	16.82600	4.101900	21.00	10.50	83/08/26	84/09/05
00026	TOXICS	EPA IDEN	FY	WATER		2	1983.500	1.000000	1.000000	1984	1983	83/08/26	84/09/05
01004	ARSENIC	TISMG/KG	WET WGT	WATER		2	.1600000	.0200000	.1414200	.26	.06	85/09/11	85/09/11
					U	2	.0500000	.0000000	.0000000	.05	.05	83/08/26	84/09/05
					TOT	4	.1050000	.0107000	.1034400	.26	.05	83/08/26	85/09/11
01069	NICKEL	TISMG/KG	WET WGT	WATER		2	.3685000	.0102250	.1011200	.44	.30	83/08/26	84/09/05
					U	2	.2000000	.0000000	.0000000	.20	.20	85/09/11	85/09/11
					TOT	4	.2842500	.0128720	.1134600	.44	.20	83/08/26	85/09/11
01073	THALLIUM	TIS-WET	MG/KG	WATER	U	2	.0500000	.0000000	.0000000	.05	.05	85/09/11	85/09/11
01099	ANTIMONY	TIS-WET	MG/KG	WATER	U	4	.2750000	.0675000	.2598100	.50	.05	83/08/26	85/09/11
01149	SELENIUM	TISMG/KG	WET WGT	WATER		4	.7750000	.0712330	.2669000	1.11	.56	83/08/26	85/09/11
34204	ACNAPTHY	TISMG/KG	WET WGT	WATER	U	2	.4000000	.0000000	.0000000	.400	.400	83/08/26	84/09/05
34209	ACNAPTHE	TISMG/KG	WET WGT	WATER	U	2	.6000000	.0000000	.0000000	.600	.600	83/08/26	84/09/05
34214	ACROLEIN	TISMG/KG	WET WGT	WATER	U	2	.1100000	.0002000	.0141420	.120	.100	83/08/26	84/09/05
34219	ACRYLNIT	TISMG/KG	WET WGT	WATER	U	2	.2100000	.0001999	.0141410	.220	.200	83/08/26	84/09/05
34224	ANTHRACE	TISMG/KG	WET WGT	WATER	U	2	1.100000	.0200020	.1414300	1.200	1.000	83/08/26	84/09/05
34234	BENZBFLU	ORANTTIS	WETMG/KG	WATER	U	2	4.000000	.0000000	.0000000	4.000	4.000	83/08/26	84/09/05
34238	BENZENE	TISMG/KG	WET WGT	WATER	U	4	.0500000	.0000000	.0000000	.050	.050	83/08/26	85/09/11
34241	BENZIDIN	TISMG/KG	WET WGT	WATER	U	2	8.000000	.0000000	.0000000	8.000	8.000	83/08/26	84/09/05
34246	BENZKFLU	TISMG/KG	WET WGT	WATER	U	2	4.000000	.0000000	.0000000	4.000	4.000	83/08/26	84/09/05
34251	BENZAPYR	TISMG/KG	WET WGT	WATER	U	2	2.000000	.0000000	.0000000	2.000	2.000	83/08/26	84/09/05
34252	BERYLIUM	TISMG/KG	WET WGT	WATER	U	4	.0500000	.0000000	.0000000	.050	.050	83/08/26	85/09/11
34258	BETA BHC	TISMG/KG	WET WGT	WATER	U	4	.0140000	.0001780	.0133420	.030	.003	83/08/26	85/09/11
34263	DELTABHC	TISMG/KG	WET WGT	WATER	U	4	.0065000	.0000415	.0064420	.015	.002	83/08/26	85/09/11
34277	B2CETETR	TISMG/KG	WET WGT	WATER	U	2	.8000000	.0000000	.0000000	.800	.800	83/08/26	84/09/05
34282	B2CETOXM	TISMG/KG	WET WGT	WATER	U	2	.6000000	.0000000	.0000000	.600	.600	83/08/26	84/09/05
34287	B2CIPETR	TISMG/KG	WET WGT	WATER	U	2	.6000000	.0000000	.0000000	.600	.600	83/08/26	84/09/05
34291	BROMOFOR	TISMG/KG	WET WGT	WATER	U	4	.0100000	.0000000	.0000000	.010	.010	83/08/26	85/09/11
34296	NBB PHTH	TIS-WET	MG/KG	WATER	U	2	1.100000	.0200020	.1414300	1.200	1.000	83/08/26	84/09/05
34300	CARBNTET	TISMG/KG	WET WGT	WATER	U	4	.0100000	.0000000	.0000000	.010	.010	83/08/26	85/09/11
34305	CLBENZEN	TISMG/KG	WET WGT	WATER	U	4	.0500000	.0000000	.0000000	.050	.050	83/08/26	85/09/11
34310	CLDIBRMT	TISMG/KG	WET WGT	WATER	U	2	.0100000	.0000000	.0000000	.010	.010	83/08/26	84/09/05
34315	CLETHANE	TISMG/KG	WET WGT	WATER	U	2	.1200000	.0008000	.0282850	.140	.100	83/08/26	84/09/05
34319	CHLRFORM	TISMG/KG	WET WGT	WATER	U	4	.0100000	.0000000	.0000000	.010	.010	83/08/26	85/09/11
34324	CHRYSENE	TISMG/KG	WET WGT	WATER	U	2	2.200000	.0800000	.2828400	2.400	2.000	83/08/26	84/09/05
34331	DICLBRMT	TISMG/KG	WET WGT	WATER	U	2	.0100000	.0000000	.0000000	.010	.010	83/08/26	84/09/05
34340	DETHPHTH	TISMG/KG	WET WGT	WATER	U	2	.6000000	.0000000	.0000000	.600	.600	83/08/26	84/09/05

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RATTLESNAKE CREEK WEST OF ST. JOHN, KANSAS.
20185 KANSAS STAFFORD
S CEN LOWER MISSISSIPPI 100200
ARKANSAS R. KS-COL STATE LINE TO TULSA
1117MBR 840317 11030009003 0006.010 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER			MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
34345	DMETPHTH	TISMG/KG	WET WGT WATER	U	2	.4000000	.0000000	.0000000	.400	.400	83/08/26	84/09/05
34350	12DPHNHY	TISMG/KG	WET WGT WATER	U	2	1.000000	.0000000	.0000000	1.000	1.000	83/08/26	84/09/05
34355	ENDSULSF	TISMG/KG	WET WGT WATER	U	4	.0425000	.0018250	.0427200	.100	.010	83/08/26	85/09/11
34360	BENDOSUL	TISMG/KG	WET WGT WATER	U	4	.0225000	.0004750	.0217950	.050	.005	83/08/26	85/09/11
34365	AENDOSUL	TISMG/KG	WET WGT WATER	U	4	.0140000	.0001780	.0133420	.030	.003	83/08/26	85/09/11
34370	ENDRINAL	TISMG/KG	WET WGT WATER	U	4	.0340000	.0011680	.0341760	.080	.008	83/08/26	85/09/11
34375	ETHYLBEN	TISMG/KG	WET WGT WATER	U	4	.0500000	.0000000	.0000000	.050	.050	83/08/26	85/09/11
34380	FLANTENE	TISMG/KG	WET WGT WATER	U	2	.8000000	.0000000	.0000000	.800	.800	83/08/26	84/09/05
34385	FLUORENE	TISMG/KG	WET WGT WATER	U	2	.6000000	.0000000	.0000000	.600	.600	83/08/26	84/09/05
34390	HEXCLCPD	TISMG/KG	WET WGT WATER	U	2	1.100000	.0200020	.1414300	1.200	1.000	83/08/26	84/09/05
34395	HEXCLBD	TISMG/KG	WET WGT WATER	U	2	.8000000	.0000000	.0000000	.800	.800	83/08/26	84/09/05
34400	HEXACLET	TISMG/KG	WET WGT WATER	U	2	.8000000	.0000000	.0000000	.800	.800	83/08/26	84/09/05
34407	I123CDPR	TISMG/KG	WET WGT WATER	U	2	1.800000	.0800040	.2828500	2.000	1.600	83/08/26	84/09/05
34412	ISPHRONE	TISMG/KG	WET WGT WATER	U	2	1.800000	.0800040	.2828500	2.000	1.600	83/08/26	84/09/05
34417	METHYLBR	TISMG/KG	WET WGT WATER	U	2	.2100000	.0001999	.0141410	.220	.200	83/08/26	84/09/05
34422	METHYLCL	TISMG/KG	WET WGT WATER	U	4	.1150000	.0000999	.0100000	.120	.100	83/08/26	85/09/11
34427	MTHLENCL	TISMG/KG	WET WGT WATER	U	2	.1000000	.0000000	.0000000	.100	.100	83/08/26	84/09/05
34432	NITDNPRA	TISMG/KG	WET WGT WATER	U	2	4.000000	.0000000	.0000000	4.000	4.000	83/08/26	84/09/05
34437	NITRSDPA	TISMG/KG	WET WGT WATER	U	2	1.000000	.0000000	.0000000	1.000	1.000	83/08/26	84/09/05
34446	NAPTHALE	TISMG/KG	WET WGT WATER	U	2	.6000000	.0000000	.0000000	.600	.600	83/08/26	84/09/05
34451	NITROBEN	TISMG/KG	WET WGT WATER	U	2	.6000000	.0000000	.0000000	.600	.600	83/08/26	84/09/05
34456	PCLMCRES	TISMG/KG	WET WGT WATER	U	2	2.000000	.0000000	.0000000	2.000	2.000	83/08/26	84/09/05
34465	PHENANTH	TISMG/KG	WET WGT WATER	U	2	1.100000	.0200020	.1414300	1.200	1.000	83/08/26	84/09/05
34468	PHENOL	TISMG/KG	WET WGT WATER	U	2	.8000000	.0000000	.0000000	.800	.800	83/08/26	84/09/05
34473	PYRENE	TISMG/KG	WET WGT WATER	U	2	.8000000	.0000000	.0000000	.800	.800	83/08/26	84/09/05
34474	SILVER	TISMG/KG	WET WGT WATER	U	3	.0833330	.0008333	.0288680	.100	.050	84/09/05	85/09/11
34479	TETCLETE	TISMG/KG	WET WGT WATER	U	4	.0100000	.0000000	.0000000	.010	.010	83/08/26	85/09/11
34484	TOLUENE	TISMG/KG	WET WGT WATER	U	4	.0500000	.0000000	.0000000	.050	.050	83/08/26	85/09/11
34500	11DICLET	TISMG/KG	WET WGT WATER	U	2	.0100000	.0000000	.0000000	.010	.010	83/08/26	84/09/05
34505	11DCETEN	TISMG/KG	WET WGT WATER	U	4	.0100000	.0000000	.0000000	.010	.010	83/08/26	85/09/11
34510	111TCLET	TISMG/KG	WET WGT WATER	U	4	.0100000	.0000000	.0000000	.010	.010	83/08/26	85/09/11
34515	112TCLET	TISMG/KG	WET WGT WATER	U	4	.0100000	.0000000	.0000000	.010	.010	83/08/26	85/09/11
34520	1122TCLE	TISMG/KG	WET WGT WATER	U	4	.0100000	.0000000	.0000000	.010	.010	83/08/26	85/09/11
34525	BZGHIPER	TISMG/KG	WET WGT WATER	U	2	1.800000	.0800040	.2828500	2.000	1.600	83/08/26	84/09/05
34530	BENZAANT	TISMG/KG	WET WGT WATER	U	2	2.200000	.0800000	.2828400	2.400	2.000	83/08/26	84/09/05
34535	12DICLET	TISMG/KG	WET WGT WATER	U	4	.0100000	.0000000	.0000000	.010	.010	83/08/26	85/09/11
34540	12DCLBEN	TISMG/KG	WET WGT WATER	U	4	1.050000	1.203300	1.097000	2.000	.100	83/08/26	85/09/11
34545	12DCLPRP	TISMG/KG	WET WGT WATER	U	2	.0100000	.0000000	.0000000	.010	.010	83/08/26	84/09/05
34550	12TDCETE	TISMG/KG	WET WGT WATER	U	4	.0100000	.0000000	.0000000	.010	.010	83/08/26	85/09/11

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RATTLESNAKE CREEK WEST OF ST. JOHN, KANSAS.
20185 KANSAS STAFFORD
S CEN LOWER MISSISSIPPI 100200
/TYPA/AMBNT/FISH/STREAM
ARKANSAS R. KS-COL STATE LINE TO TULSA
1117MBR 840317 11030009003 0006.010 ON
0000 FEET DEPTH

PARAMETER		MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
34555 124TCBEN	TISMG/KG	WET WGT WATER	U	2	1.100000	.0200020	.1414300	1.200	1.000	83/08/26	84/09/05
34560 DBAHANTH	TISMG/KG	WET WGT WATER	U	2	2.900000	.0199890	.1413800	3.000	2.800	83/08/26	84/09/05
34570 13DCLBEN	TISMG/KG	WET WGT WATER	U	4	1.050000	1.203300	1.097000	2.000	.100	83/08/26	85/09/11
34575 14DCLBEN	TISMG/KG	WET WGT WATER	U	4	1.050000	1.203300	1.097000	2.000	.100	83/08/26	85/09/11
34580 2CLEVETR	TISMG/KG	WET WGT WATER	U	2	.1900000	.0001999	.0141410	.200	.180	83/08/26	84/09/05
34585 2CLNAPTH	TISMG/KG	WET WGT WATER	U	2	.6000000	.0000000	.0000000	.600	.600	83/08/26	84/09/05
34590 2CLPHENO	TISMG/KG	WET WGT WATER	U	2	.8000000	.0000000	.0000000	.800	.800	83/08/26	84/09/05
34595 2NPHENOL	TISMG/KG	WET WGT WATER	U	2	2.000000	.0000000	.0000000	2.000	2.000	83/08/26	84/09/05
34600 DINOCTPH	TISMG/KG	WET WGT WATER	U	2	.8000000	.0000000	.0000000	.800	.800	83/08/26	84/09/05
34605 24DCPHEN	TISMG/KG	WET WGT WATER	U	2	2.000000	.0000000	.0000000	2.000	2.000	83/08/26	84/09/05
34610 24DMPHEN	TISMG/KG	WET WGT WATER	U	2	1.100000	.0200020	.1414300	1.200	1.000	83/08/26	84/09/05
34615 24DNTOLU	TISMG/KG	WET WGT WATER	U	2	1.800000	.0800040	.2828500	2.000	1.600	83/08/26	84/09/05
34620 24DNPHEN	TISMG/KG	WET WGT WATER	U	2	10.00000	.0000000	.0000000	10.000	10.000	83/08/26	84/09/05
34625 246TCPHN	TISMG/KG	WET WGT WATER	U	2	2.000000	.0000000	.0000000	2.000	2.000	83/08/26	84/09/05
34630 26DNTOLU	TISMG/KG	WET WGT WATER	U	2	1.800000	.0800040	.2828500	2.000	1.600	83/08/26	84/09/05
34635 33DCBNZD	TISMG/KG	WET WGT WATER	U	2	8.000000	.0000000	.0000000	8.000	8.000	83/08/26	84/09/05
34640 4BRPPETR	TISMG/KG	WET WGT WATER	U	2	1.800000	.0800040	.2828500	2.000	1.600	83/08/26	84/09/05
34645 4CLPPETR	TISMG/KG	WET WGT WATER	U	2	10.00000	.0000000	.0000000	10.000	10.000	83/08/26	84/09/05
34650 4NPHENOL	TISMG/KG	WET WGT WATER	U	2	8.000000	.0000000	.0000000	8.000	8.000	83/08/26	84/09/05
34661 46DNOCRE	TISMG/KG	WET WGT WATER	U	2	6.000000	.0000000	.0000000	6.000	6.000	83/08/26	84/09/05
34664 PCB-1221	TISMG/KG	WET WGT WATER	U	2	.4500000	.0450000	.2121300	.600	.300	83/08/26	84/09/05
34667 PCB-1232	TISMG/KG	WET WGT WATER	U	2	.1500000	.0050000	.0707110	.200	.100	83/08/26	84/09/05
34669 PCB-1248	TISMG/KG	WET WGT WATER	U	4	.3100000	.0918000	.3029900	.700	.070	83/08/26	85/09/11
34670 PCB-1260	TISMG/KG	WET WGT WATER	U	4	.0850000	.0073000	.0854400	.200	.020	83/08/26	85/09/11
34674 PCB-1016	TISMG/KG	WET WGT WATER	U	2	.5500000	.0450010	.2121300	.700	.400	83/08/26	84/09/05
34679 TCDD	TISMG/KG	WET WGT WATER	U	1	.2000000			.200	.200	84/09/05	84/09/05
34680 ALDRIN	TISMG/KG	WET WGT WATER	U	4	.0170000	.0002920	.0170880	.040	.004	83/08/26	85/09/11
34682 CDANEWET	TECH&MET	TISMG/KG WATER		1	.0310000			.031	.031	85/09/11	85/09/11
			U	3	.1766700	.0186330	.1365000	.300	.030	83/08/26	85/09/11
			TOT	4	.1402500	.0177270	.1331400	.300	.030	83/08/26	85/09/11
34683 DNB PHTH	TIS-WET	MG/KG WATER	U	2	1.000000	.0000000	.0000000	1.000	1.000	83/08/26	84/09/05
34685 ENDRIN	TISMG/KG	WET WGT WATER	U	4	.0225000	.0004750	.0217950	.050	.005	83/08/26	85/09/11
34686 HPCHLREP	TISMG/KG	WET WGT WATER	U	4	.0065000	.0000415	.0064420	.015	.002	83/08/26	85/09/11
34687 HEPTCHLR	TISMG/KG	WET WGT WATER	U	4	.0085000	.0000730	.0085440	.020	.002	83/08/26	85/09/11
34688 HCB	TISMG/KG	WET WGT WATER	U	2	1.800000	.0800040	.2828500	2.000	1.600	83/08/26	84/09/05
34689 PCB-1242	TISMG/KG	WET WGT WATER	U	4	.3100000	.0918000	.3029900	.700	.070	83/08/26	85/09/11
34690 PCB-1254	TISMG/KG	WET WGT WATER	U	4	.3400000	.1168000	.3417600	.800	.080	83/08/26	85/09/11
34691 TOXAPHEN	TISMG/KG	WET WGT WATER	U	2	.3000000	.0200000	.1414200	.400	.200	83/08/26	84/09/05
34692 TRICLETE	TISMG/KG	WET WGT WATER	U	4	.0100000	.0000000	.0000000	.010	.010	83/08/26	85/09/11

006644
37 59 58.0 098 47 45.0 2
RATTLESNAKE CREEK WEST OF ST. JOHN, KANSAS.
20185 KANSAS STAFFORD
S CEN LOWER MISSISSIPPI 100200
ARKANSAS R. KS-COL STATE LINE TO TULSA
1117MBR 840317 11030009003 0006.010 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
34693 VINYLCHL TISMG/KG WET WGT	WATER	U	2	.1200000	.0008000	.0282850	.140	.100	83/08/26	84/09/05
34698 T1,3-DCP FISH WET WGTMG/KG	WATER	U	2	.0100000	.0000000	.0000000	.010	.010	83/08/26	84/09/05
34703 C1,3-DCP FISH WET WGTMG/K6	WATER	U	2	.0100000	.0000000	.0000000	.010	.010	83/08/26	84/09/05
39060 PCP TISMG/KG WET WGT	WATER	U	4	8.000000	5.333300	2.309400	10.000	6.000	83/08/26	85/09/11
39063 CHLORDAN C ISOMER TIS-UG/G	WATER		1	.0110000			.011	.011	85/09/11	85/09/11
		U	3	.0273330	.0005813	.0241110	.050	.002	83/08/26	85/09/11
		TOT	4	.0232500	.0004542	.0213130	.050	.002	83/08/26	85/09/11
39066 CHLORDAN T ISOMER TIS-UG/G	WATER		1	.0040000			.004	.004	85/09/11	85/09/11
		U	3	.0273330	.0005813	.0241110	.050	.002	83/08/26	85/09/11
		TOT	4	.0215000	.0005236	.0228840	.050	.002	83/08/26	85/09/11
39069 NONACHLR C ISOMER TIS UG/G	WATER	U	4	.0210000	.0005480	.0234100	.050	.002	83/08/26	85/09/11
39072 NONCHLOR T ISOMER TIS-UG/G	WATER		1	.0030000			.003	.003	85/09/11	85/09/11
		U	3	.0206670	.0003613	.0190090	.040	.002	83/08/26	85/09/11
		TOT	4	.0162500	.0003189	.0178580	.040	.002	83/08/26	85/09/11
39074 ALPHABHC TISMG/KG WET WGT	WATER	U	4	.0065000	.0000415	.0064420	.015	.002	83/08/26	85/09/11
39099 B2ETHXPH TISMG/KG WET WGT	WATER		1	4.900000			4.90	4.90	84/09/05	84/09/05
		U	1	2.000000			2.00	2.00	83/08/26	83/08/26
		TOT	2	3.450000	4.205000	2.050600	4.90	2.00	83/08/26	84/09/05
39105 PERCENT FAT HEX EXTR	WATER		3	3.216700	1.755800	1.325100	4.2	1.7	84/09/05	85/09/11
		J	1	5.000000			5.0	5.0	83/08/26	83/08/26
		TOT	4	3.662500	1.965600	1.402000	5.0	1.7	83/08/26	85/09/11
39302 P,P'DDT TISMG/KG WET WGT	WATER	U	4	.0395000	.0015070	.0388200	.09	.009	83/08/26	85/09/11
39307 O P DDT TISSUE UG/G	WATER	U	4	.0395000	.0020970	.0457930	.10	.004	83/08/26	85/09/11
39312 P,P'DDD TISMG/KG WET WGT	WATER	U	4	.0225000	.0004750	.0217950	.05	.005	83/08/26	85/09/11
39322 P,P'DDE TISMG/KG WET WGT	WATER		2	.0085000	.0000245	.0049498	.01	.005	85/09/11	85/09/11
		M	1	.0300000			.03	.03	84/09/05	84/09/05
		U	1	.0200000			.02	.02	83/08/26	83/08/26
		TOT	4	.0167500	.0001155	.0107510	.03	.005	83/08/26	85/09/11
39325 O,P DDD TISSUE UG/G	WATER	U	4	.0320000	.0013120	.0362220	.080	.004	83/08/26	85/09/11
39329 O,P'DDE TISSUE UG/G	WATER	U	4	.0750000	.0029500	.0543140	.150	.035	83/08/26	85/09/11
39346 METOLACH TISSUES MG/KG	WATER	U	2	.0500000	.0000000	.0000000	.050	.050	85/09/11	85/09/11
39404 DIELDRIN TISMG/KG WET WGT	WATER	U	4	.0310000	.0009180	.0302990	.07	.007	83/08/26	85/09/11
39534 MALATHIN TIS WET MG/KG	WATER	U	2	.4000000	.0200000	.1414200	.500	.300	83/08/26	84/09/05
39785 GBHC-TIS LINDANE WETMG/KG	WATER	U	4	.0085000	.0000730	.0085440	.02	.002	83/08/26	85/09/11
71930 MERCURY TISMG/KG WET WGT	WATER		4	.0562000	.0002635	.0162340	.07	.04	83/08/26	85/09/11
71936 LEAD TISMG/KG WET WGT	WATER	U	4	.5000000	.0000000	.0000000	.50	.50	83/08/26	85/09/11
71937 COPPER TISMG/KG WET WGT	WATER		4	.8482500	.0102760	.1013700	.93	.72	83/08/26	85/09/11
71938 ZINC TISMG/KG WET WGT	WATER		4	55.87500	63.10300	7.943700	65.10	46.00	83/08/26	85/09/11
71939 CR-FISH UG/G OR MG/KG WT	WATER		4	.3882500	.0068710	.0828920	.50	.30	83/08/26	85/09/11

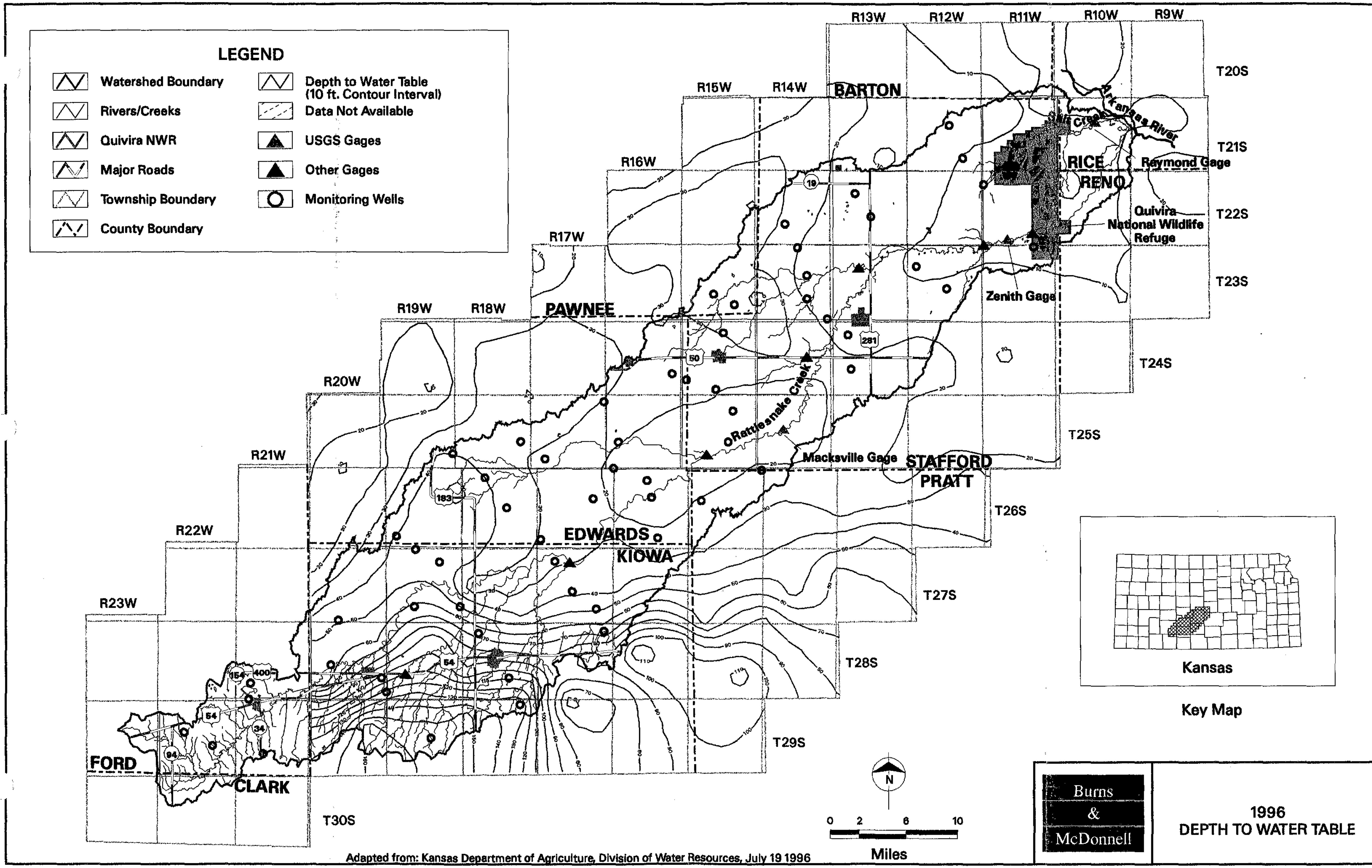
006644
37 59 58.0 098 47 45.0 2
RATTLESNAKE CREEK WEST OF ST. JOHN, KANSAS.
20185 KANSAS STAFFORD
S CEN LOWER MISSISSIPPI 100200
/TYPA/AMBNT/FISH/STREAM
ARKANSAS R. KS-COL STATE LINE TO TULSA
1117MBR- 840317 11030009003 0006.010 ON
0000 FEET DEPTH

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
71940 CADMIUM TISMG/KG WET WGT	WATER	U	4	.0500000	.0000000	.0000000	.05	.05	83/08/26	85/09/11
74041 WQF SAMPLE UPDATED	WATER		2	880120.0	.0000000	.0000000	880120	880120	85/09/11	85/09/11
74990 FISH SPECIES NUMERIC	WATER		14	12.00000	.0000000	.0000000	12	12	83/08/26	85/09/11
74995 ANATOMY CODE	WATER		4	59.00000	.0000000	.0000000	59	59	83/08/26	85/09/11
79020 SODIUM UG/KG	WATER		2	1500.000	20000.00	141.4200	1600.00	1400.00	85/09/11	85/09/11
81614 NO.INDV. IN THE SAMPLE	WATER		4	5.000000	.0000000	.0000000	5	5	83/08/26	85/09/11
81615 NO.DIFF. SPECIES IN SMPL	WATER		4	1.000000	.0000000	.0000000	1	1	83/08/26	85/09/11
81644 MTXCHLOR FISH WET WGT UG/G	WATER	U	4	.0635000	.0043530	.0659770	.150	.012	83/08/26	85/09/11
81645 MIREX F ISH WETW GT UG/G	WATER	U	2	.0700000	.0008000	.0282850	.090	.050	83/08/26	84/09/05
81656 MG FISH WET WGT MG/KG	WATER		4	426.0000	2524.700	50.24600	480.000	377.000	83/08/26	85/09/11
81658 BA FISH WET WGT MG/KG	WATER		4	7.215000	1.787300	1.336900	8.710	5.750	83/08/26	85/09/11
81659 CO FISH WET WGT MG/KG	WATER		3	.0960000	.0000210	.0045825	.100	.091	83/08/26	85/09/11
		U	1	.1000000			.100	.100	85/09/11	85/09/11
		TOT	4	.0970000	.0000180	.0042429	.100	.091	83/08/26	85/09/11
81660 FE FISH WET WGT MG/KG	WATER		4	31.80000	38.08000	6.170900	37.400	23.000	83/08/26	85/09/11
81662 MO FISH WET WGT MG/KG	WATER		2	.1285000	.0003645	.0190920	.142	.115	83/08/26	84/09/05
		U	2	.1000000	.0000000	.0000000	.100	.100	85/09/11	85/09/11
		TOT	4	.1142500	.0003922	.0198050	.142	.100	83/08/26	85/09/11
81665 V FISH WET WGT MG/KG	WATER		4	.1625000	.0022657	.0475990	.220	.110	83/08/26	85/09/11
81666 AL FISH WET WGT MG/KG	WATER		2	15.35000	.1250000	.3535500	15.600	15.100	83/08/26	84/09/05
81741 MANGANES FISH WET WGTMG/KG	WATER		4	2.725000	.4951000	.7036300	3.700	2.070	83/08/26	85/09/11
81742 SILVER FISH WET WGTMG/KG	WATER	U	1	.0500000			.050	.050	83/08/26	83/08/26
81802 GUTHION FISH WET WGTMG/KG	WATER	U	2	40.00000	.0000000	.0000000	40.000	40.000	83/08/26	84/09/05
81807 DURSBAN FISH WET WGTMG/KG	WATER		1	.1600000			.160	.160	83/08/26	83/08/26
		U	1	.3000000			.300	.300	84/09/05	84/09/05
		TOT	2	.2300000	.0098000	.0989950	.300	.160	83/08/26	84/09/05
81810 PARATHIN FISH WET WGTMG/KG	WATER	U	2	.1150000	.0024500	.0494980	.150	.080	83/08/26	84/09/05
82029 OXYCHLRD TISS WETMG/KG	WATER	U	2	.0020000	.0000000	.0000000	.002	.002	85/09/11	85/09/11
82401 DEMETON TISSUE MG/KG	WATER	U	2	4.000000	.0000000	.0000000	4.000	4.000	83/08/26	84/09/05
82403 PROMETON TISSUE MG/KG	WATER	U	2	4.000000	.0000000	.0000000	4.000	4.000	83/08/26	84/09/05
82404 ATRAZINE TISSUE MG/KG	WATER	U	4	2.150000	4.563300	2.136200	4.000	.300	83/08/26	85/09/11
82405 METRIBUZ TISSUE MG/KG	WATER	U	2	4.000000	.0000000	.0000000	4.000	4.000	83/08/26	84/09/05
82406 SIMAZINE TISSUE MG/KG	WATER	U	2	4.000000	.0000000	.0000000	4.000	4.000	83/08/26	84/09/05
82407 FONOFOS TISSUE MG/KG	WATER	U	2	4.000000	.0000000	.0000000	4.000	4.000	83/08/26	84/09/05
82411 PENOXALI TISSUE MG/KG	WATER	U	2	4.000000	.0000000	.0000000	4.000	4.000	83/08/26	84/09/05
82413 TRICHLOR TISSUE MG/KG	WATER	U	2	1.500000	.5000000	.7071100	2.000	1.000	83/08/26	84/09/05
82419 CIS-PERM TISSUE MG/KG	WATER	U	2	4.000000	.0000000	.0000000	4.000	4.000	83/08/26	84/09/05
82422 TRNS-PRM TISSUE MG/KG	WATER	U	2	4.000000	.0000000	.0000000	4.000	4.000	83/08/26	84/09/05
82533 PRORAZNE FISH TIS MG/KG	WATER	U	2	4.000000	.0000000	.0000000	4.00	4.00	83/08/26	84/09/05

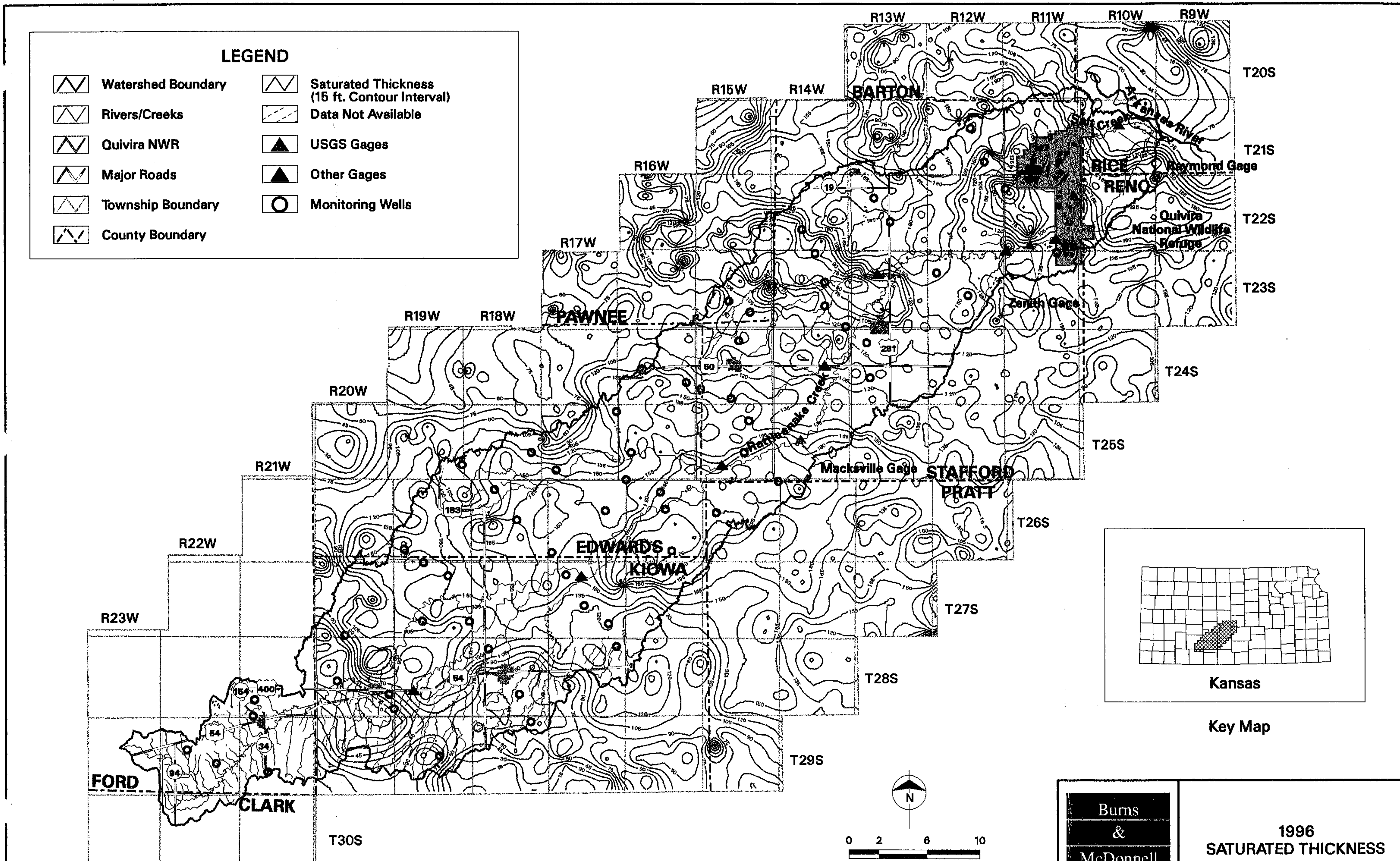
006644
37 59 58.0 098 47 45.0 2
RATTLESNAKE CREEK WEST OF ST. JOHN, KANSAS.
20185 KANSAS STAFFORD
S CEN LOWER MISSISSIPPI 100200
ARKANSAS R. KS-COL STATE LINE TO TULSA
1117MBR 840317 11030009003 0006.010 ON
0000 FEET DEPTH

/TYPA/AMBNT/FISH/STREAM

PARAMETER	MEDIUM	RMK	NUMBER	MEAN	VARIANCE	STAN DEV	MAXIMUM	MINIMUM	BEG DATE	END DATE
82571 ALACHLOR TISWETWT MG/KG	WATER	U	2	.0080000	.0000000	.0000000	.008	.008	85/09/11	85/09/11
84014 SPECIES SEX CODE	WATER	TXT	10	TEXT	TEXT	TEXT	TEXT	TEXT	83/08/26	84/09/05
84015 AGE OF S PECIMEN YEARS	WATER	TXT	5	TEXT	TEXT	TEXT	TEXT	TEXT	83/08/26	83/08/26
84068 SERIES CODE ALPHA	WATER	TXT	2	TEXT	TEXT	TEXT	TEXT	TEXT	85/09/11	85/09/11

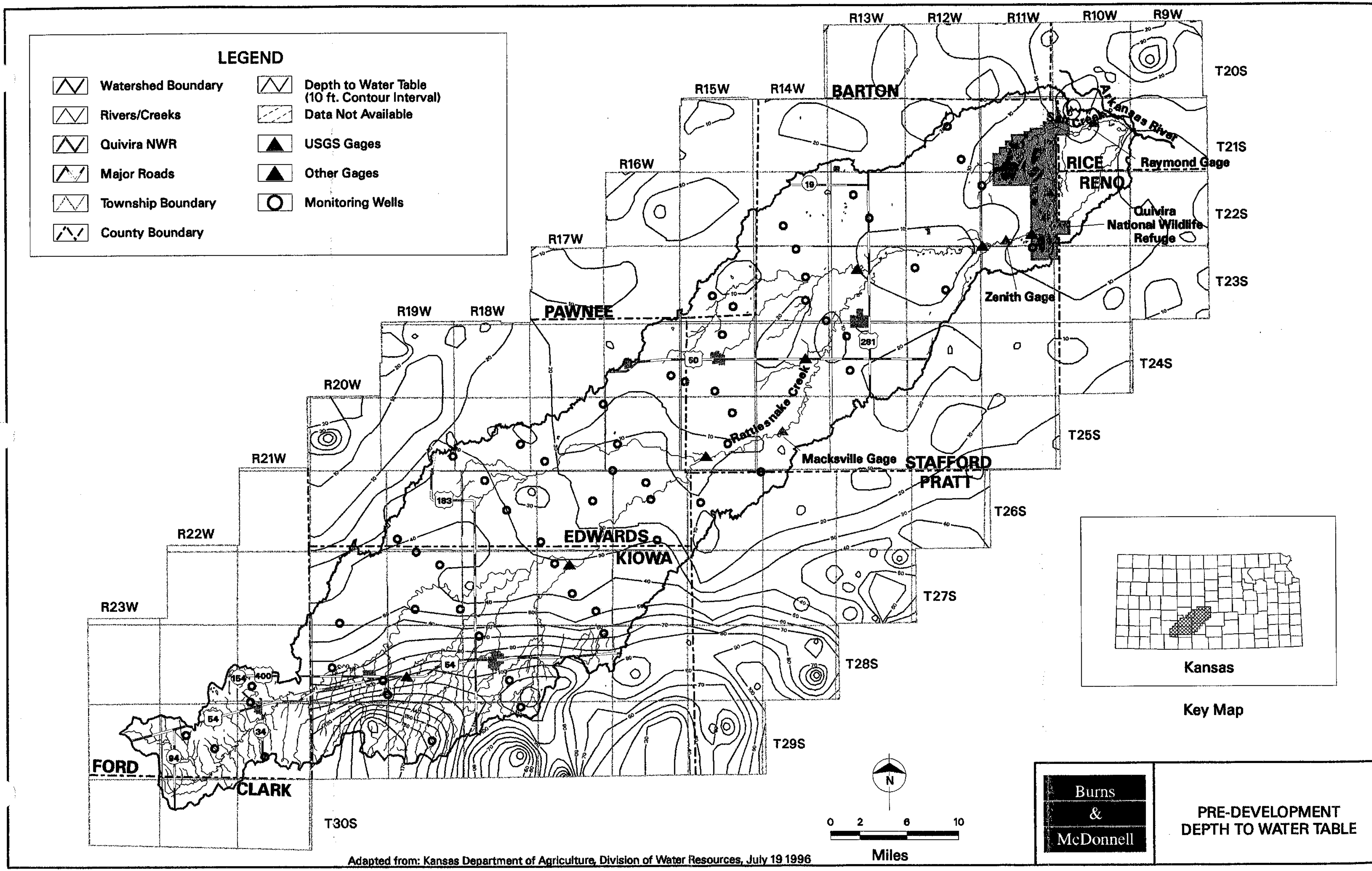


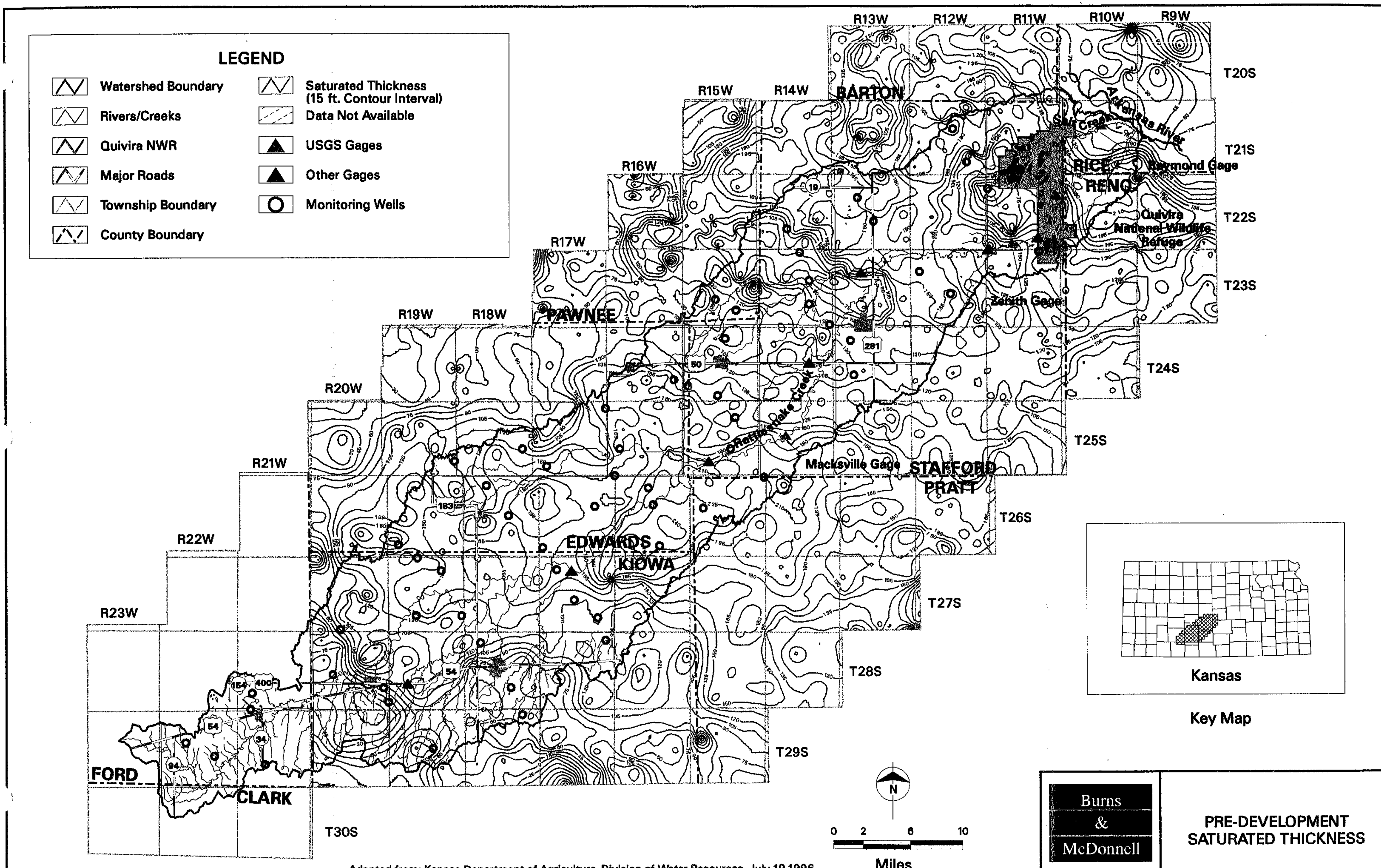
LEGEND
Watershed Boundary
Rivers/Creeks
Quivira NWR
Major Roads
Township Boundary
County Boundary
Depth to Water Table (10 ft. Contour Interval)
Data Not Available
USGS Gages
Other Gages
Monitoring Wells
R23W
R22W
R21W
R20W
R19W
R18W
R17W
R16W
R15W
R14W
R13W
R12W
R11W
R10W
R9W
T20S
T21S
T22S
T23S
T24S
T25S
T26S
T27S
T28S
T29S
T30S
BARTON
RICE
RENO
PAWNEE
STAFFORD
PRATT
EDWARDS
KIOWA
FORD
CLARK
Arkansas River
Salt Creek
Raymond Gage
Quivira National Wildlife Refuge
Zenith Gage
Rattlesnake Creek
Macksville Gage
Kansas
Key Map
0 2 6 10
Miles
N
Burns & McDonnell
1996 DEPTH TO WATER TABLE
Adapted from: Kansas Department of Agriculture, Division of Water Resources, July 19 1996



Adapted from: Kansas Department of Agriculture, Division of Water Resources, July 19 1996

1996
SATURATED THICKNESS


LEGEND
Watershed Boundary
Rivers/Creeks
Quivira NWR
Major Roads
Township Boundary
County Boundary
Depth to Water Table (10 ft. Contour Interval)
Data Not Available
USGS Gages
Other Gages
Monitoring Wells
R23W
R22W
R21W
R20W
R19W
R18W
R17W
R16W
R15W
R14W
R13W
R12W
R11W
R10W
R9W
T20S
T21S
T22S
T23S
T24S
T25S
T26S
T27S
T28S
T29S
T30S
BARTON
PAWNEE
RICE
RENO
STAFFORD
PRATT
EDWARDS
KIOWA
FORD
CLARK
Arkansas River
Salt Creek
Raymond Gage
Quivira National Wildlife Refuge
Zenith Gage
Rattlesnake Creek
Macksville Gage
Kansas
Key Map
N
0 2 6 10
Miles
Burns & McDonnell
PRE-DEVELOPMENT DEPTH TO WATER TABLE
Adapted from: Kansas Department of Agriculture, Division of Water Resources, July 19 1996



PRE-DEVELOPMENT SATURATED THICKNESS

Adapted from: Kansas Department of Agriculture, Division of Water Resources, July 19 1996

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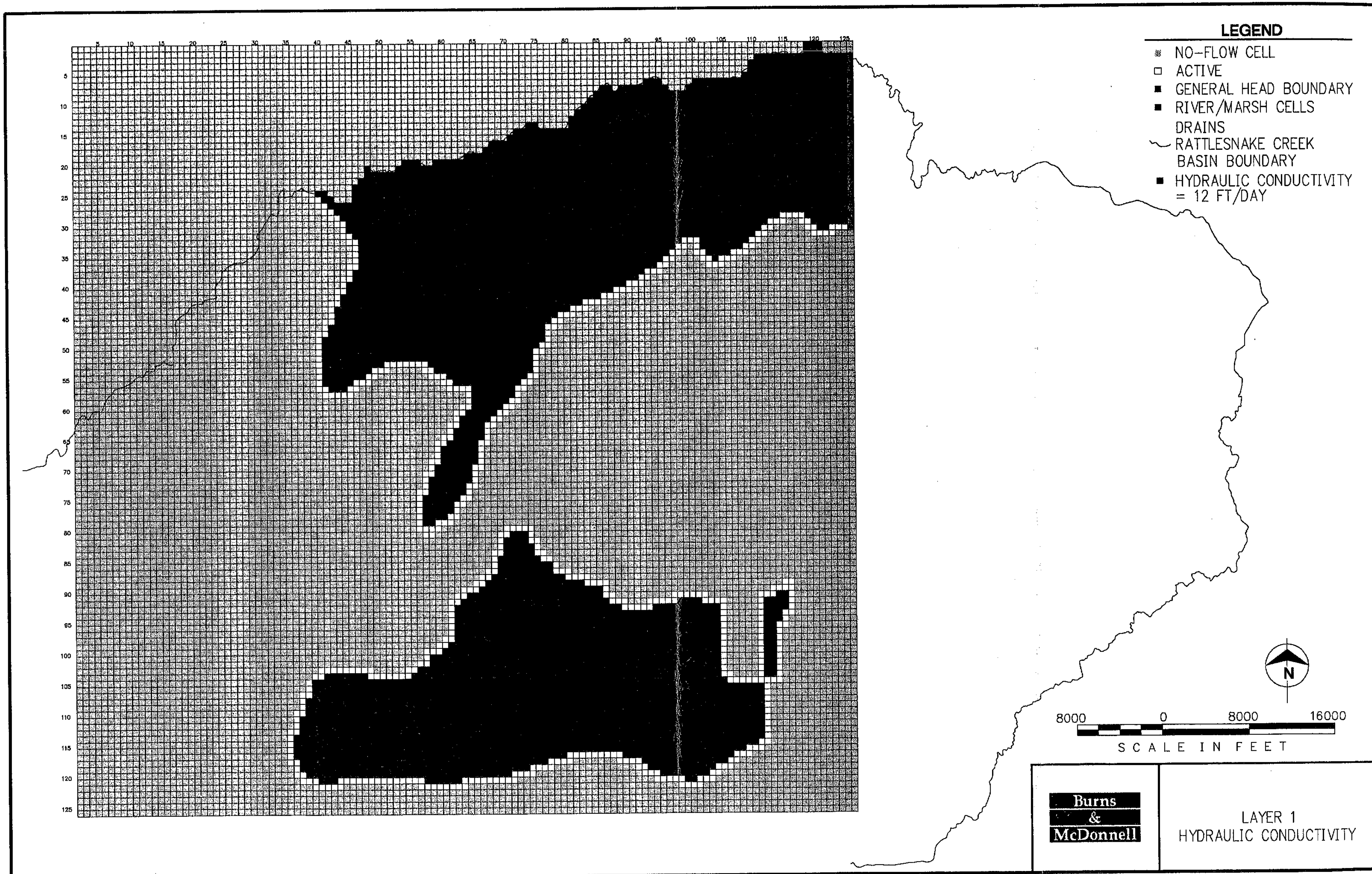
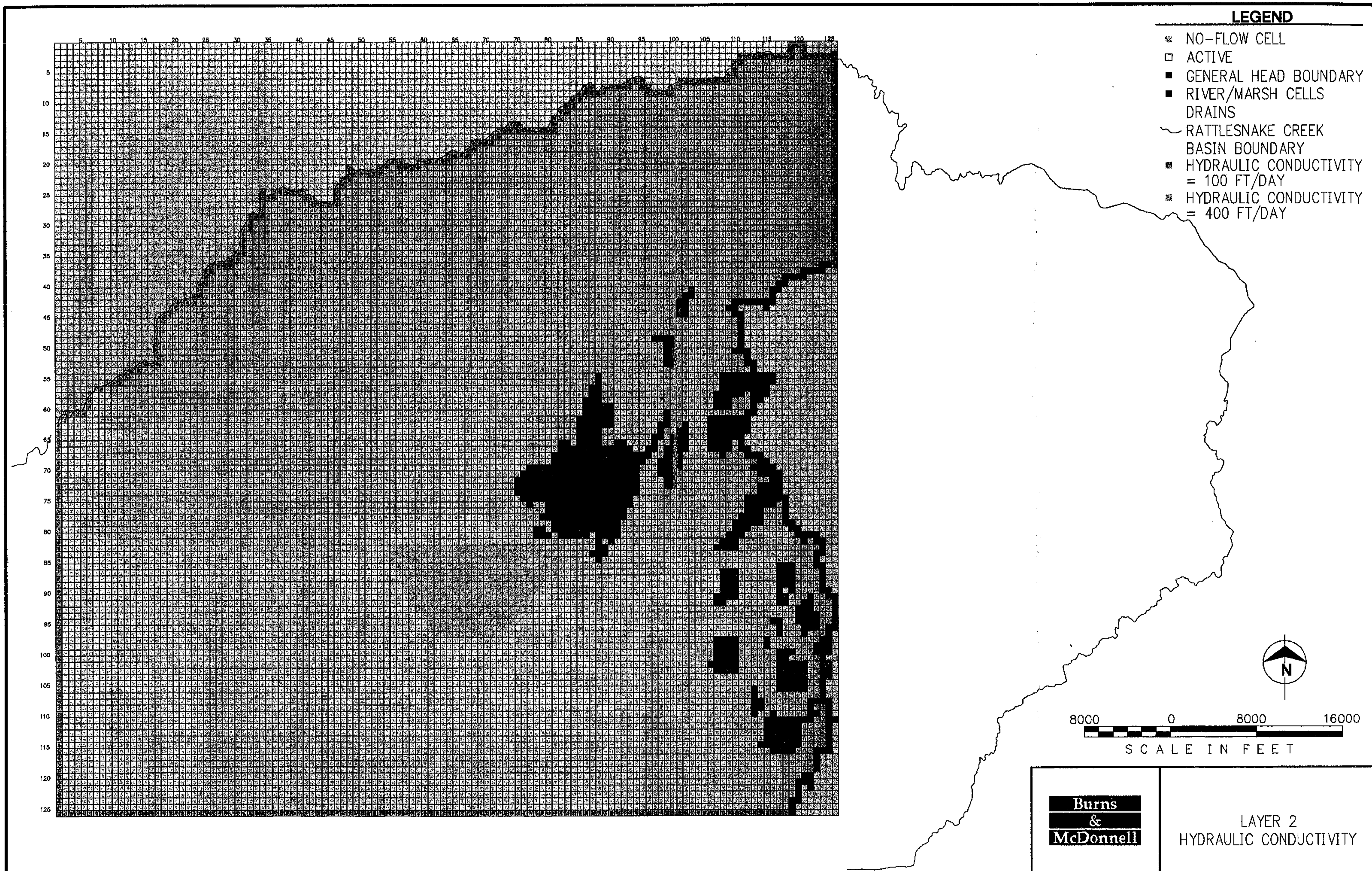


LAYER 1
HYDRAULIC CONDUCTIVITY



LAYER 2
HYDRAULIC CONDUCTIVITY

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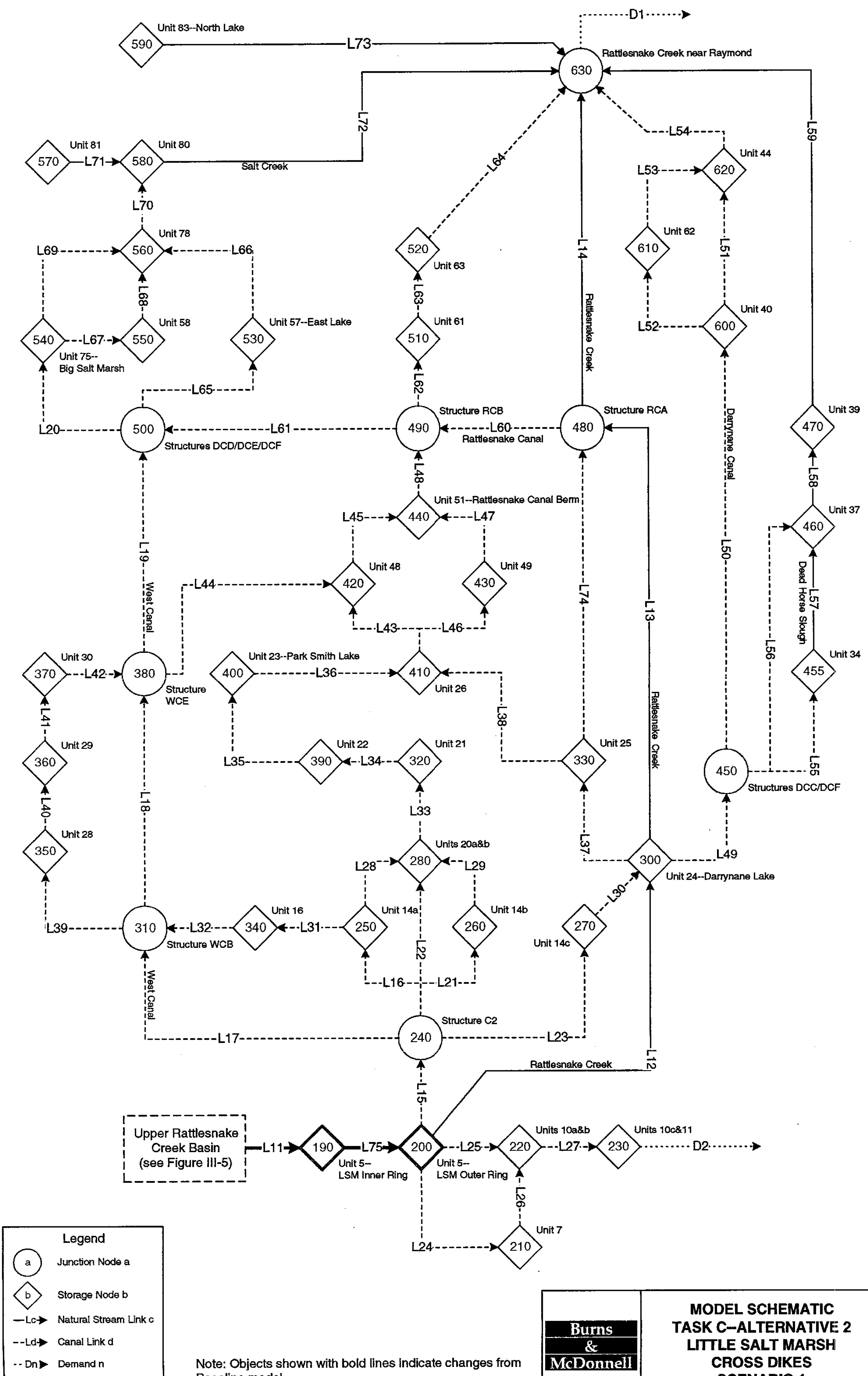
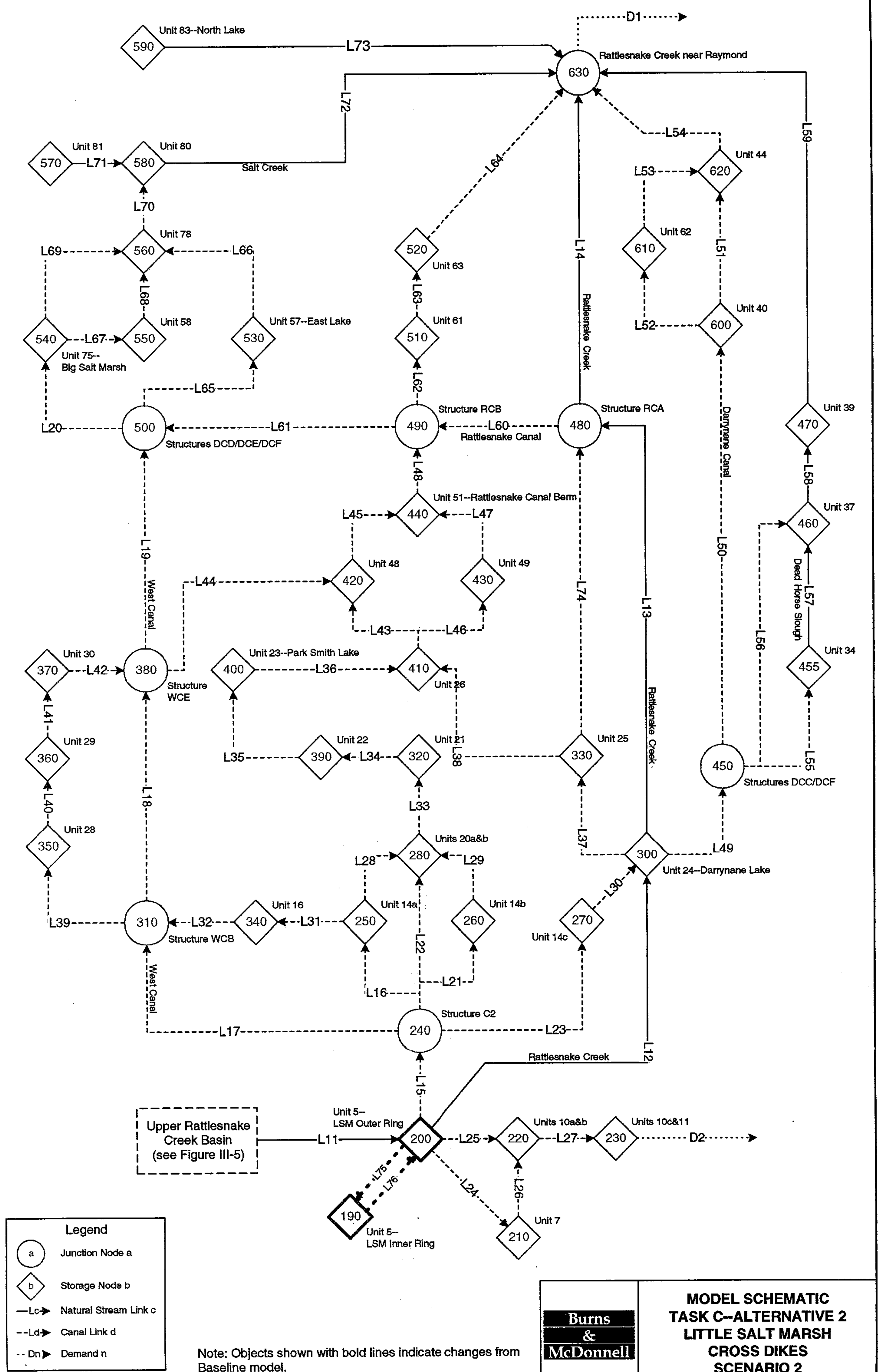


Note: Objects shown with bold lines indicate changes from Baseline model.

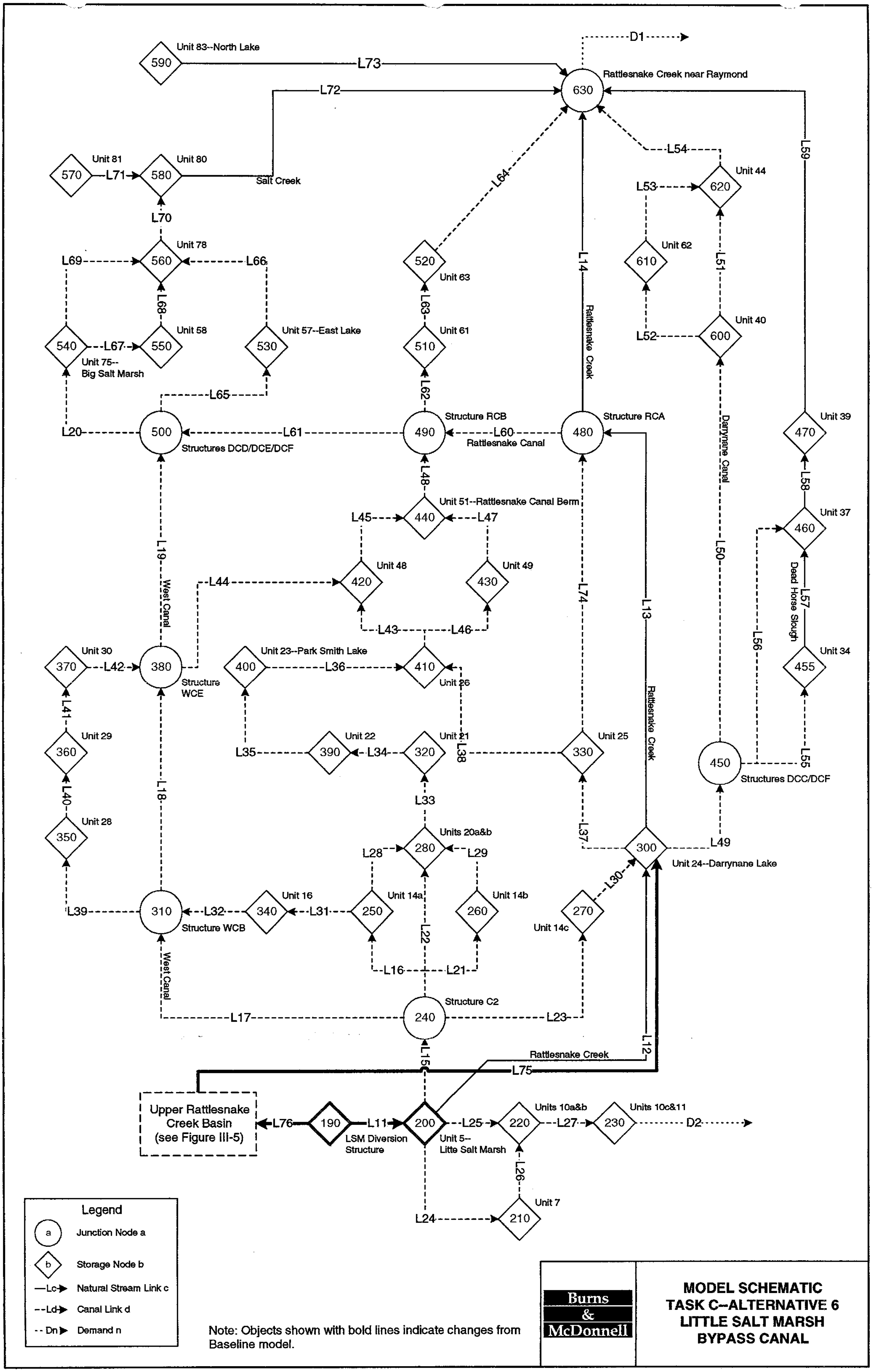
Burns & McDonnell

MODEL SCHEMATIC
TASK C--ALTERNATIVE 2
LITTLE SALT MARSH
CROSS DIKES
SCENARIO 1



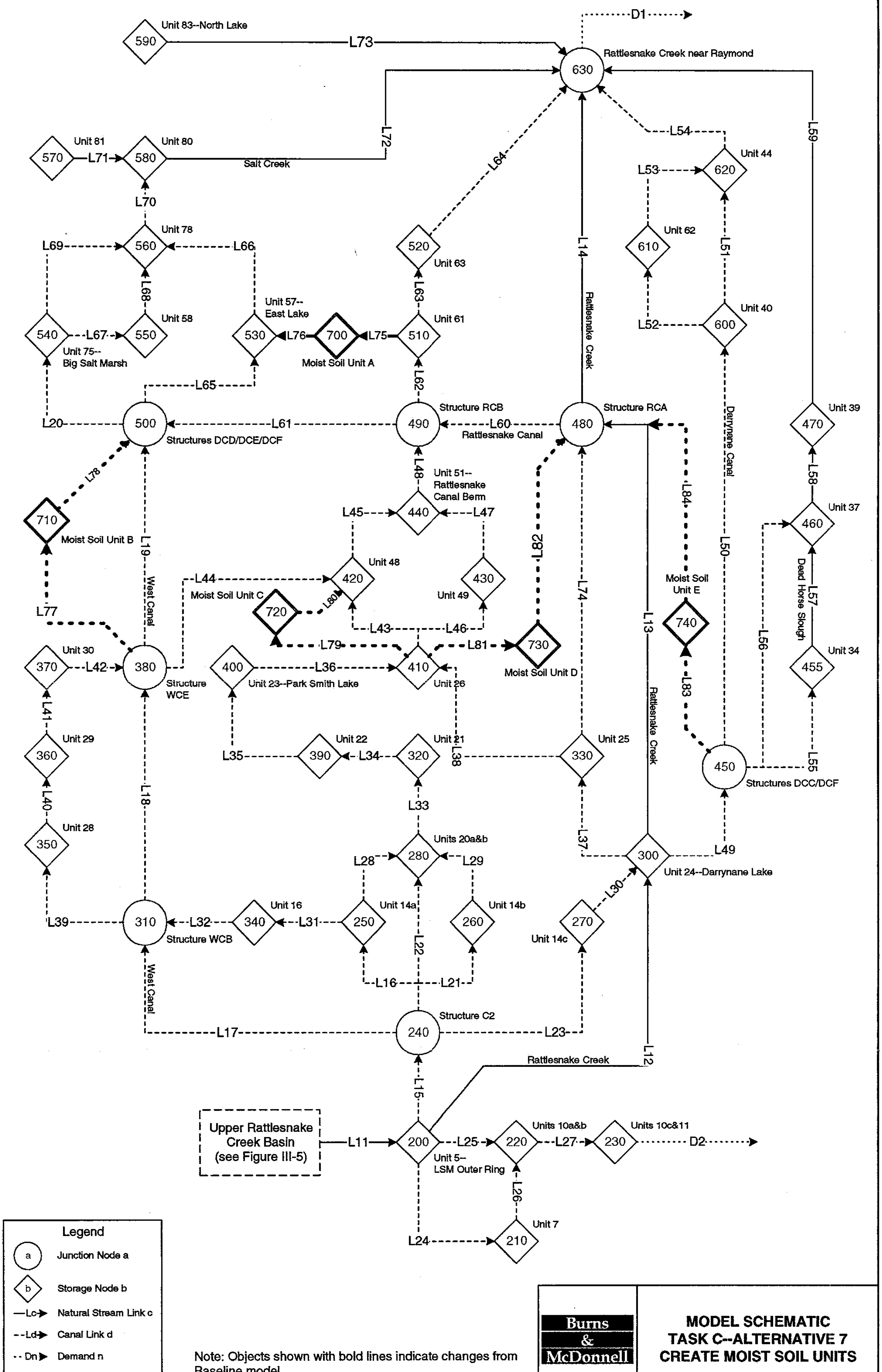
Note: Objects shown with bold lines indicate changes from Baseline model.

MODEL SCHEMATIC
TASK C--ALTERNATIVE 2
LITTLE SALT MARSH
CROSS DIKES
SCENARIO 2



Note: Objects shown with bold lines indicate changes from Baseline model.

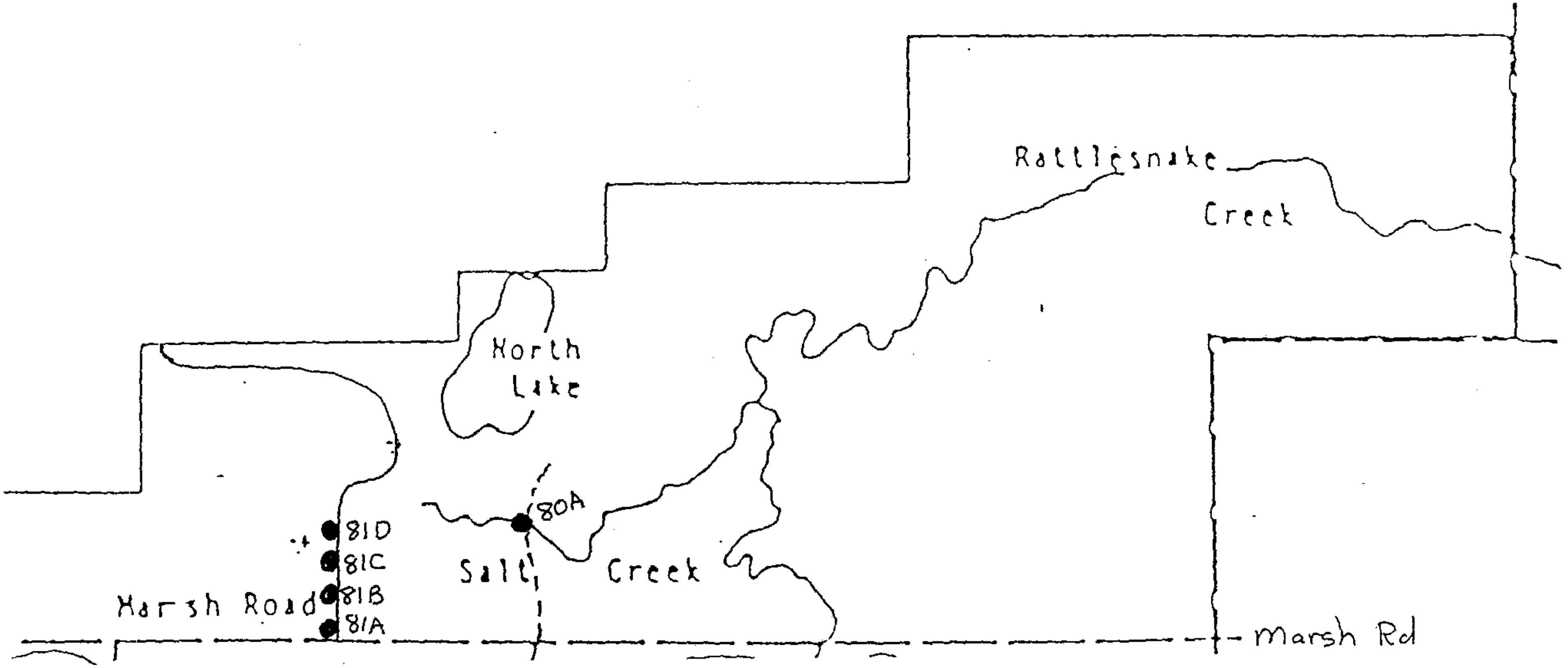
MODEL SCHEMATIC
TASK C--ALTERNATIVE 6
LITTLE SALT MARSH
BYPASS CANAL

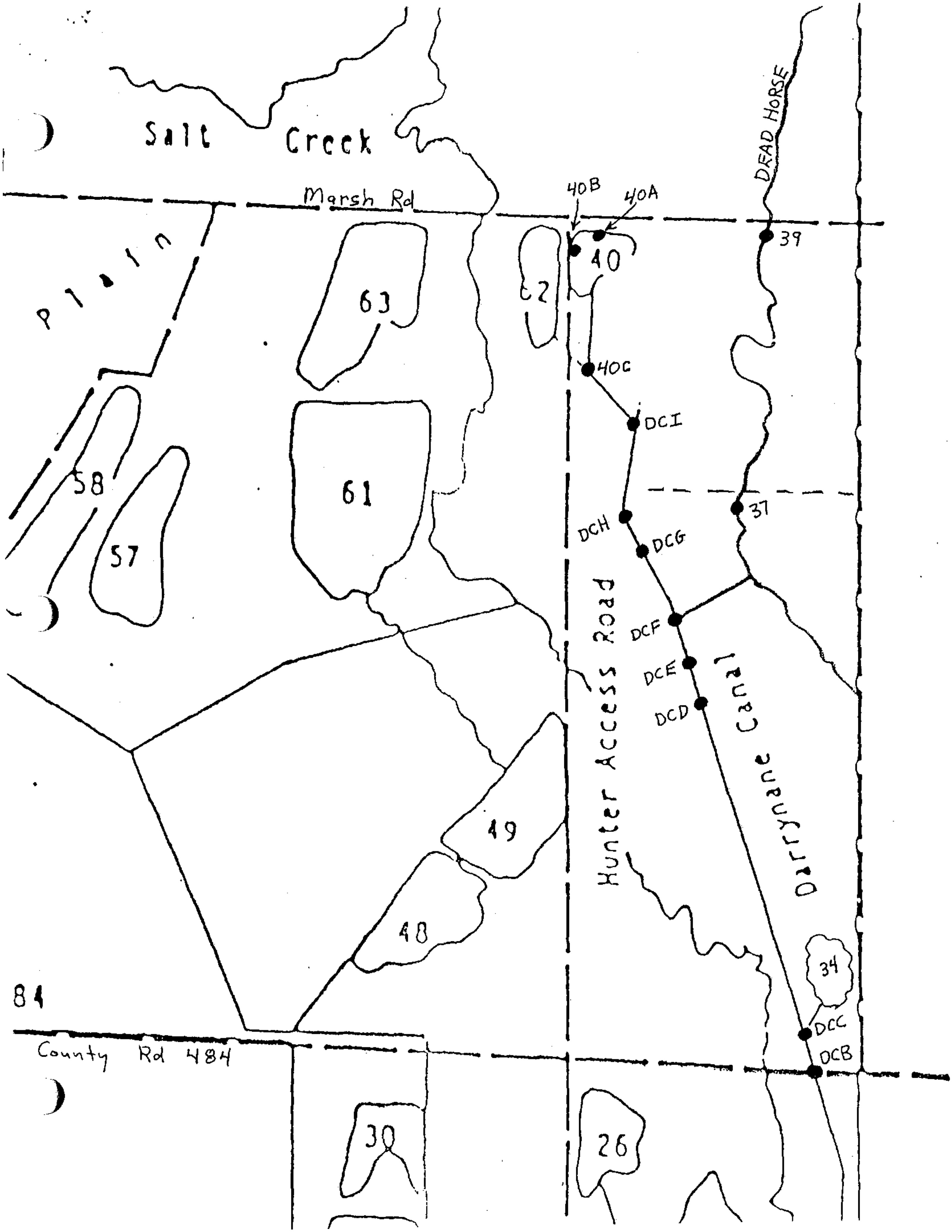


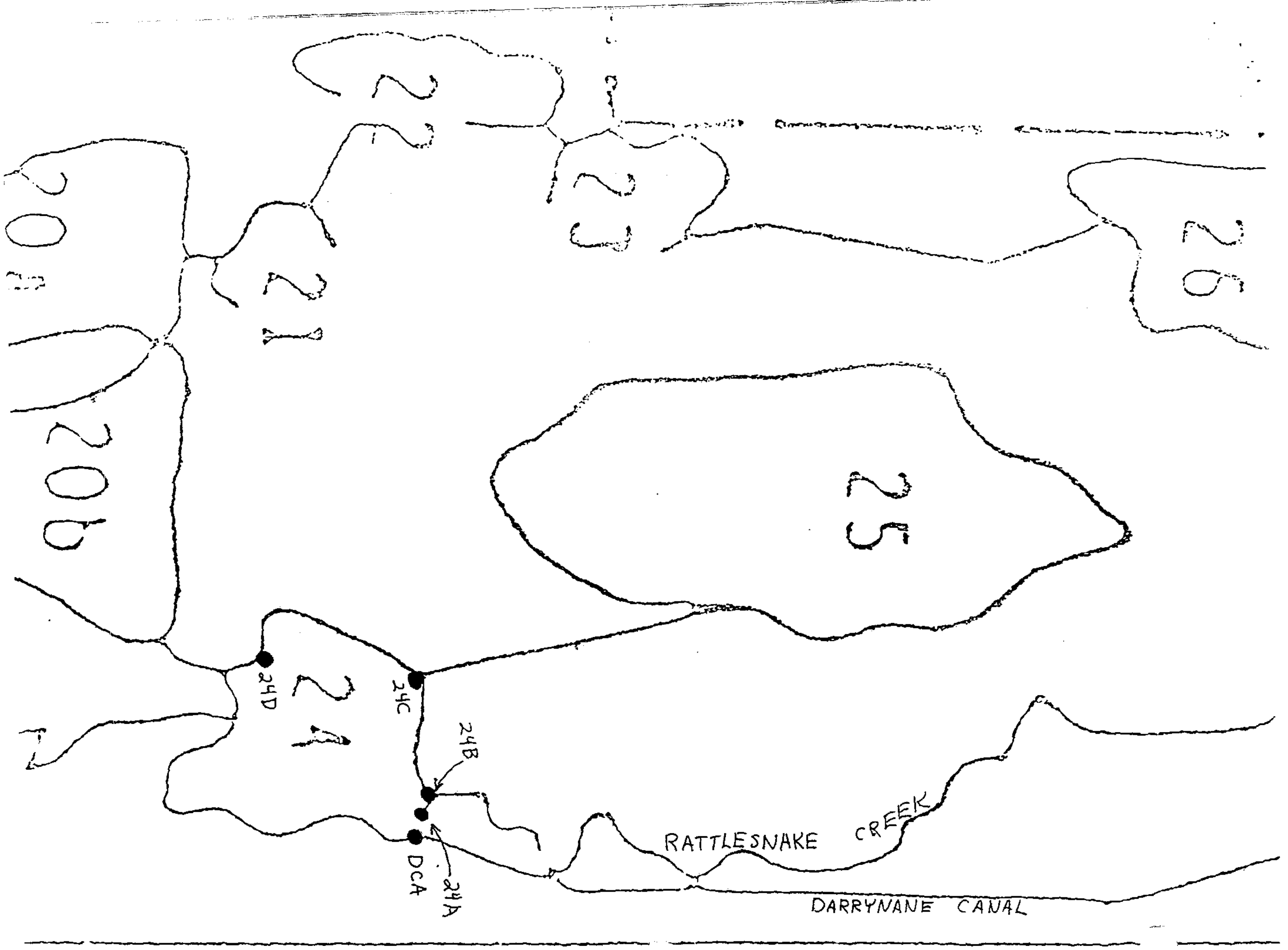
Note: Objects shown with bold lines indicate changes from Baseline model.

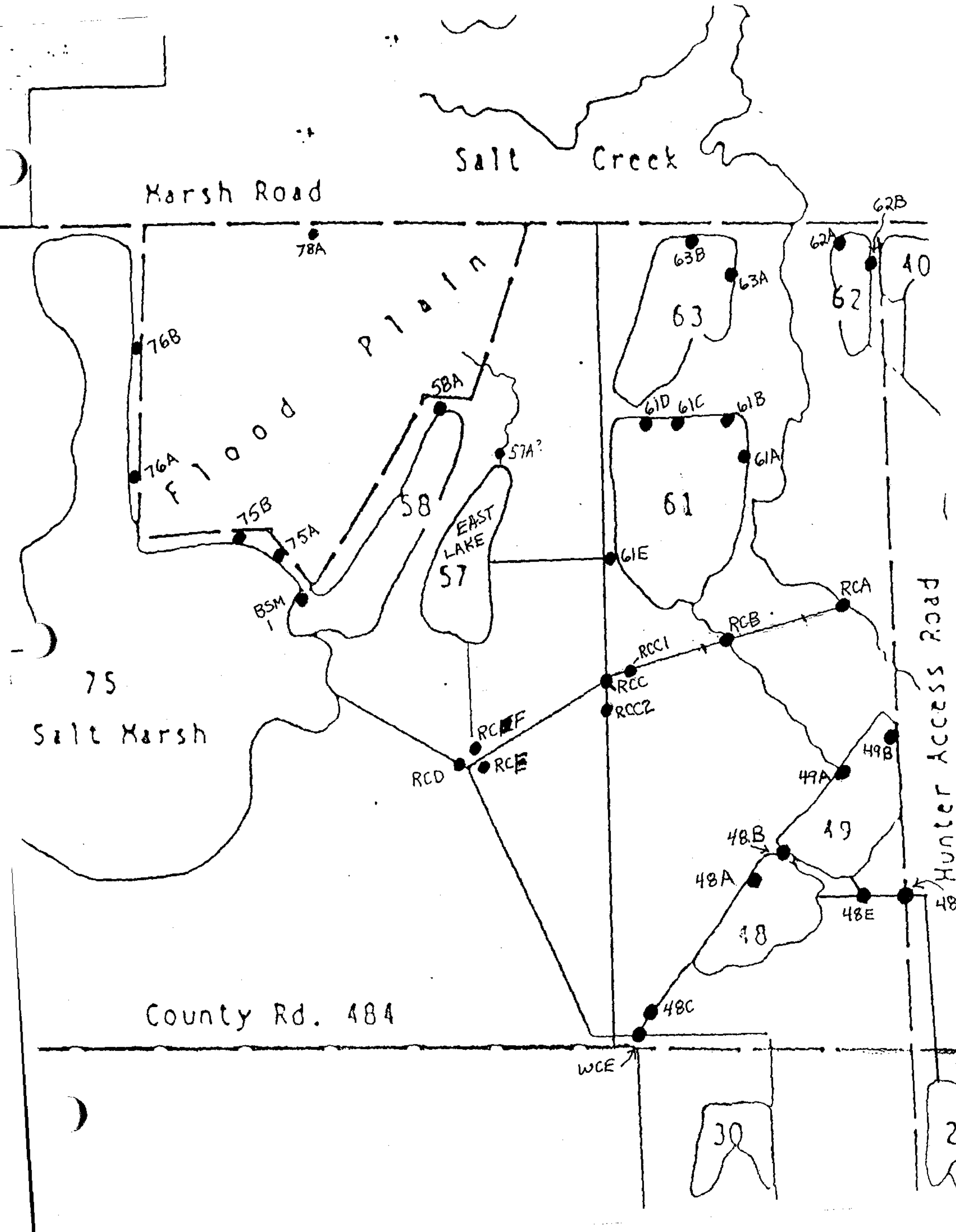
Burns & McDonnell

MODEL SCHEMATIC
TASK C--ALTERNATIVE 7
CREATE MOIST SOIL UNITS

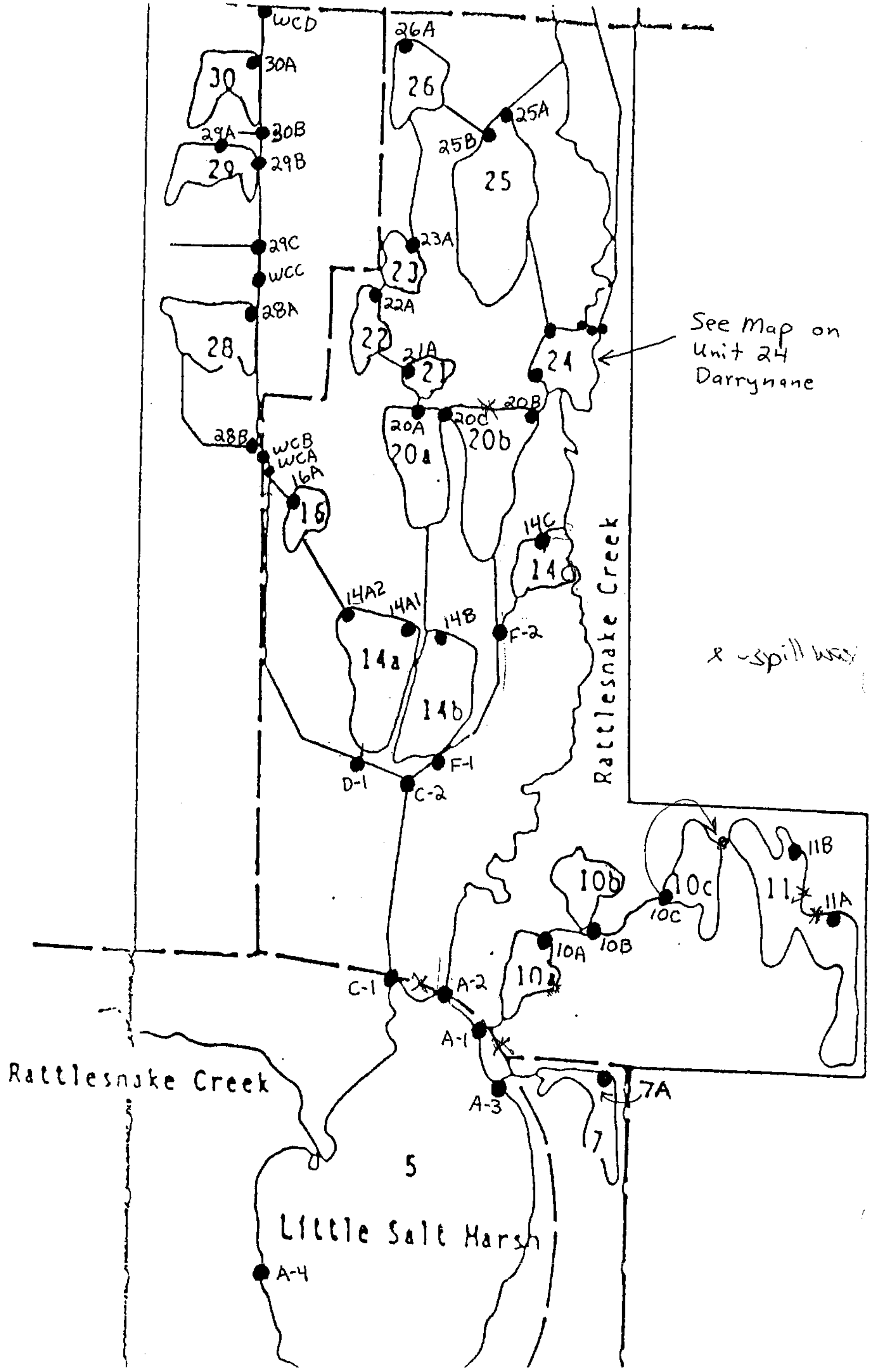

Rattlesnake
Creek
North
Lake
81D
81C
81B
81A
Marsh Road
80A
Salt
Creek
Marsh Rd


Salt Creek
Marsh Rd
Plain
40B
40A
DEAD HORSE
39
40
C2
63
40C
DCI
58
61
37
DCH
DCG
57
DCF
DCE
DCD
Hunter Access Road
Darrynane Canal
49
48
34
84
DCC
DCB
County Rd 484
30
26

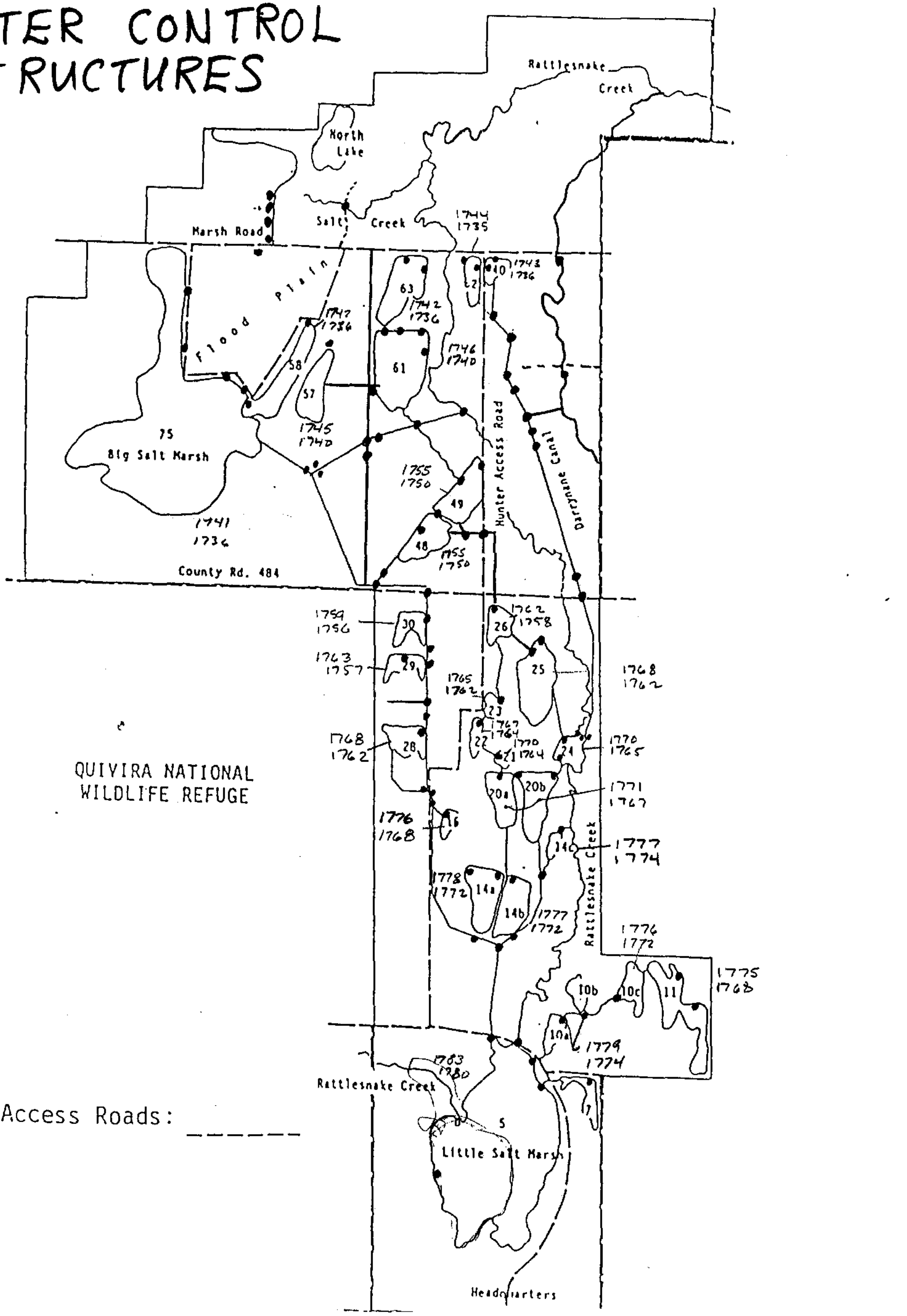

RATTLESNAKE CREEK
DARRYNANE CANAL
DCA
24A
24B
24C
24D
20b
21
22
23
24
25
26



Salt Creek
Marsh Road
62B
78A
63B
62A
63A
40
76B
63
62
Flood Plain
58A
61D
61C
61B
57A?
76A
61A
75B
58
61
EAST LAKE
75A
61E
57
BSM
RCA
RCB
RCC1
75
RCC
RCC2
Salt Marsh
RCF
RCE
RCD
49B
49A
Hunter Access Road
49
48B
48A
48E
48
48
County Rd. 484
48C
WCE
30


WCD
30A
30
29A
30B
29
29B
29C
WCC
28A
28
28B
WCB
WCA
16A
16
26A
26
25A
25B
25
23A
23
22A
22
21A
21
20A
20C
20B
20a
20b
24
See Map on Unit 24 Darrynane
14C
14c
14A2
14A1
14B
14a
14b
F-2
x -spill way
F-1
D-1
C-2
Rattlesnake Creek
11B
10b
10c
11
11A
10C
10A
10B
10a
C-1
A-2
A-1
A-3
7A
7
Rattlesnake Creek
5
Little Salt Marsh
A-4

WATER CONTROL STRUCTURES



Public Access Roads: ------

EVAPOTRANSPIRATION RATES EXTRACTED FROM THE SWATMOD MODEL
(Sophocleous, et al, 1997)

Year	Evapotranspiration Rates, mm/month												mm/year
	January	February	March	April	May	June	July	August	September	October	November	December	Total Annual
1955	28.06	20.94	13.09	35.89	95.70	132.84	40.54	16.26	51.93	86.68	5.41	1.96	529.30
1956	4.25	12.58	11.17	33.52	78.67	58.42	62.07	18.91	0.69	46.22	26.78	11.12	364.40
1957	5.90	7.99	28.58	50.21	103.84	176.75	157.04	38.33	93.91	54.24	28.63	19.97	765.39
1958	15.83	12.07	41.42	54.55	89.85	159.65	175.99	93.84	93.24	59.38	9.66	7.00	812.48
1959	9.08	14.90	27.28	33.35	77.10	113.17	124.57	105.13	52.79	76.90	22.31	7.49	664.07
1960	14.70	24.36	28.28	34.69	85.87	160.91	45.99	57.87	36.46	45.61	27.92	21.09	583.75
1961	17.25	14.18	36.48	35.30	61.83	138.95	93.23	112.99	27.75	22.18	33.57	17.22	610.93
1962	20.34	21.25	20.46	31.83	51.12	158.51	135.76	70.20	60.72	44.29	25.15	21.98	661.61
1963	13.90	4.96	18.15	15.21	50.90	121.15	117.72	40.85	76.12	36.93	16.31	8.89	521.09
1964	10.99	9.01	13.44	27.97	52.22	90.23	40.90	69.29	44.97	10.58	26.40	26.75	422.75
1965	15.04	23.54	14.68	42.84	82.96	176.52	134.58	35.18	73.05	58.42	13.41	17.51	687.73
1966	20.41	27.51	15.32	21.43	54.07	98.09	92.35	82.53	30.79	10.77	6.32	4.65	464.24
1967	10.37	6.80	6.64	41.96	51.97	191.09	115.66	22.97	55.28	53.16	17.80	12.90	586.60
1968	5.85	5.05	5.10	19.52	57.80	82.96	62.47	69.78	25.73	59.77	31.63	12.64	438.30
1969	11.06	20.13	39.77	56.79	85.98	147.85	81.79	79.48	107.49	45.16	28.88	12.74	717.12
1970	9.58	9.41	19.54	52.71	40.95	171.94	27.37	36.71	66.82	49.79	13.29	8.05	506.16
1971	15.02	19.90	24.74	32.59	75.92	119.66	78.24	61.16	33.68	44.87	34.07	24.86	564.71
1972	14.97	11.76	5.61	10.09	94.54	131.86	64.55	38.42	73.13	14.31	28.40	23.14	510.78
1973	21.41	27.16	58.76	61.04	62.43	145.01	97.38	38.45	83.85	99.12	14.24	22.51	731.36
1974	16.11	11.30	26.60	52.82	105.89	158.13	26.77	88.57	37.26	42.30	30.97	16.44	613.16
1975	16.03	23.09	26.96	33.44	71.12	129.40	31.94	49.38	39.47	7.98	33.98	23.53	486.32
1976	15.61	18.27	33.79	55.82	93.95	159.01	66.13	18.60	57.63	45.13	22.05	9.99	595.98
1977	12.17	9.47	32.89	51.59	95.43	169.70	67.96	91.29	95.79	58.70	34.59	20.08	739.66
1978	9.99	9.03	20.71	18.06	75.78	113.57	44.32	28.78	45.04	39.14	23.28	20.42	448.12
1979	13.46	14.21	49.23	38.99	61.94	121.04	56.56	83.39	31.47	15.89	32.80	12.34	531.32
1980	13.62	17.83	28.26	34.00	49.32	120.11	18.08	85.79	8.21	29.54	18.19	21.83	444.78
1981	10.98	5.26	33.46	38.26	99.30	152.46	127.23	55.30	46.13	46.09	33.38	22.56	670.41
1982	14.85	13.78	30.14	17.18	82.52	154.28	146.58	47.47	48.98	42.16	7.40	18.03	623.37
1983	10.58	24.22	29.81	52.47	65.90	126.52	35.13	22.01	28.84	39.42	30.22	19.30	484.42
1984	10.98	12.91	41.92	65.65	36.75	132.77	26.18	18.71	18.49	54.57	16.83	20.91	456.67
1985	17.55	24.70	32.63	63.10	92.83	162.79	35.69	120.37	39.94	68.30	20.21	18.68	696.79
1986	11.44	14.06	17.98	49.73	85.83	119.20	130.19	103.37	95.01	76.99	18.95	19.18	741.93
1987	24.45	23.87	55.41	38.74	95.88	166.24	121.51	90.53	39.34	18.44	14.41	18.67	707.49
1988	23.38	15.74	16.25	59.18	57.20	100.48	70.85	11.71	20.19	24.41	6.35	2.39	408.13
1989	2.75	7.01	16.16	14.66	90.20	155.10	100.76	48.76	67.09	16.55	12.91	3.45	535.40
1990	12.09	22.95	42.91	51.18	72.37	180.69	57.24	73.95	50.35	61.98	30.88	16.99	673.58
1991	15.28	11.58	25.02	49.33	73.87	76.77	19.10	24.18	20.97	3.48	29.15	21.46	370.19
1992	29.73	12.11	32.80	21.90	78.07	163.27	133.32	114.57	24.18	37.39	24.97	22.98	695.29
1993	22.72	30.92	35.54	41.75	83.96	160.02	193.26	128.67	51.34	27.81	24.99	20.23	821.21
1994	17.32	17.98	12.10	29.28	70.92	37.25	102.96	34.03	16.83	39.87	31.48	22.16	432.18
Average, mm	14.63	15.84	26.73	39.22	74.82	135.86	84.00	60.69	49.27	42.86	22.70	16.35	582.9793
Average, ft/d	0.0015	0.0019	0.0028	0.0043	0.0079	0.0149	0.0089	0.0064	0.0054	0.0045	0.0025	0.0017	0.0628
Average, in/d	0.0186	0.0223	0.0339	0.0515	0.0950	0.1783	0.1067	0.0771	0.0647	0.0544	0.0298	0.0208	0.7530
Average, in/m	0.5759	0.6238	1.0523	1.5440	2.9458	5.3490	3.3072	2.3897	1.9400	1.6876	0.8939	0.6438	22.9531

Memorandum

Burns
&
McDonnell

Date: September 25, 1997

To: Megan Estep-Johnston
Mike College
Dave Hilley
Frank Shorney
Jeff Klein
Dave Stous
Fred Pinkney
Gene Foster

From: Steve Thornhill
Tim Fobes
Christina Bolas
Mark Latham

Re: USFWS
Field screening of alternative reservoir sites
B&McD Project No. 97-806-4-001

A three day field trip to screen alternative reservoir sites for Quivira National Wildlife Refuge (Refuge) was conducted Tuesday September 9, 1997 through Thursday September 11, 1997. Present on the field trip were Fred Pinkney and Jeff Klein (September 9) and Steve Thornhill, Christina Bolas, Mark Latham and Tim Fobes of Burns & McDonnell. Also present on the trip was Karen Knight , a civil engineer with GEI Consultants.

On Tuesday morning September 9th, Burns & McDonnell and GEI representatives met at the Refuge to discuss and screen alternative reservoir sites. Karen Knight provided a 1:100,000 scale map with 18 alternative reservoir sites located within Kiowa, Edwards, Stafford, and Pawnee counties. Four sites, Sites 4, 7, 11, and 15, were screened from further consideration because of the large percentage or quantity of wetlands present, and/or GEI's evaluation of construction feasibility, estimates of construction costs, and estimates of water yield for each site. Christina Bolas provided estimates of wetland amounts for each site based upon National Wetland Inventory (NWI) maps.

Fourteen alternative sites were investigated on Tuesday and Wednesday morning. Visual surveys were performed from county roads around the alternative sites and environmental conditions were noted. These included land use, cultural resource potential, potential for threatened and endangered species or their habitats, wetlands, soils, roads, residences, utilities, and oil wells. Only that portion of the properties that was visible from the road was observed and photographed.

Steve Thornhill met with Larry Zuckerman, with the Kansas Department of Parks and Wildlife (KDWP) late Tuesday afternoon to discuss the agency's position on the water supply study and issues pertaining to threatened and endangered species. Mr. Zuckerman presented Steve Thornhill with KDWP's formal written response to the water supply project. Mr. Zuckerman indicated KDWP's primary concern was the potential impoundment of Rattlesnake Creek for a reservoir. The state endangered Arkansas darter occurs in this watershed and any impoundments would reduce habitat and cause further declines in populations. He indicated that KDWP would not permit a project that was on the main channel of Rattlesnake Creek. Mr. Zuckerman indicated that KDWP would be more inclined to permit an off channel reservoir site as long as threatened and endangered species were not a factor. A memo discussing the conversations of this meeting in more detail is included with this memorandum.

After completing the initial site visits of the retained alternative sites on Wednesday morning, Burns & McDonnell and GEI personnel conducted additional screening of the 14 sites investigated. Several variables were considered including the amount of earthwork, size and cost of the outlet works and spillway, road and utility relocations, residential relocations, water supply pipeline length, wetlands, cultural resources, threatened and endangered species potential, and distance from refuge. After discussing these variables, it was determined that Sites 5, 9, 10, 14, and 16 should be dropped from further consideration. This decision was based on different factors for each site as follows:

- Site 5 was dropped due to cost, wetlands issues, and extensive oil field development on the site.
- Sites 9 and 10 need to be built together to make either alternative viable. Due to the need to build two reservoirs, the associated costs, the high quality of Rattlesnake Creek, apparently due to inflow of springs, in the potentially impounded area, and the density of known archaeological sites in the area, these sites were dropped.

• After visiting site 14, it was determined no real differences existed in the constructability of sites 12, 13, and 14. Therefore, as site 14 was the furthest from the Refuge and provided the lowest yield, it was dropped. Site 16 was dropped due to the large amount of earthwork required compared to the yield, which was low. Sites 12 and 13 provide sufficient alternatives for this portion of the basin will be evaluated further.

Sites 1, 2, 3, 6, 8, 12, 13, 17, and 18 were retained for evaluation. An impact matrix table was created for each of these sites using the variables noted above and is included with this memorandum. Because none of these sites were considered to have any threatened or endangered species impacts, this variable was not included in the matrix. Each variable was ranked for each site on an ordinal scale in which a larger number was considered more impacting or less desirable. A total impact value was calculated for each site. The total values for the nine remaining sites were then averaged. Total scores above the average were considered more impacting and scores below average were considered less impacting. Sites 1, 17, and 18 had above average scores and were re-evaluated before they were eliminated. These sites were 1, 17, and 18.

Site 1 scored above average primarily due to its wetland impacts. This site rated better than most other sites except for wetlands. Because of the proximity of the site to the Refuge and the owner being a potential willing seller of the property to the Refuge, further discussions with the Refuge and Corps of Engineers may be warranted to determine if, through site management, wetland impacts could be reduced or reasonably mitigated to improve the feasibility of this site. Sites 17 and 18 had higher than average scores due to their higher than average rating for a variety of variables. Site 18 was therefore dropped. Site 17 was sized to provide up to 20,000 acre-feet of yield. It was the only site so designed. When reviewing the two options for Site 17, sites 17a and 17b, the impacts of both these sites were higher than average. However, a smaller alternative at this site, providing comparable yield to other sites evaluated, could avoid numerous environmental variables and potentially have significantly less impact than either site 17a or 17b. Therefore Sites 17a and 17b were eliminated and a smaller reservoir, Site 17c, will be evaluated.

The remaining sites were 2, 3, 6, 8, 12, and 13. A portion of Rattlesnake Creek downstream of Sites 12 and 13 is a losing stream. Therefore, reliable, delivery of water to the Refuge from these two sites is questionable and the sites were dropped. Site 8 was retained, although its score was roughly equal to the average, as it provided a reasonable yield and was the closest of the remaining sites to the Refuge.

Six sites were selected for a reexamination in the field. These sites included 1, 2, 3b, 6, 8, and 17. Wednesday afternoon and Thursday morning were spent in the field reevaluating these sites to verify conditions observed earlier and look more critically at each site for potential engineering and environmental conditions and concerns. No additional concerns were noted and none of these sites were removed from consideration.

Conclusion

After conducting site visits of 14 alternative reservoir sites, 4 sites were determined to be engineeringly and environmentally reasonable on a preliminary basis. These Sites include 2, 3, 6, and 8. Two additional sites, Sites 1 and 17, are recommended for further evaluation to determine alternatives to wetland impacts (Site 1) or if a downsized reservoir (Site 17c) would be feasible. If either or both of these issue are resolved positively, the respective sites should be considered reasonable and be retained in the analysis.

Φ GEI Consultants, Inc.

Client		Project	Page
Subject		Date	By
		Checked	By
		Approved	By

Notes:

1. Earthwork score based on: $\frac{\text{Volume Fill (cy)}}{\text{Storage Cap. (af)}}$

   Fill volumes est. by KAK, for

Vol. Fill (cy) / Capacity (af)	score
<10	1
10.1-20	2
20.1-30	3
etc.	⋮

2. Outlet works rank based on reservoir size, for

storage capacity	score
<2000 af	1
2000-4000 af	2
4000-10000 af	3
>10,000 af	4

3. Spillway rank based on size of drainage area above dam site

drainage area (sq. mi)	score
<10	1
10 - 30	2
30 - 50	3
large	4

4. Roads / Utilities value is approximate miles of relocations required

5. Residences is the actual number of residential homes to be removed.

6. Pipeline Length is actual number of miles of pipeline for projects requiring off-channel pumping. ~~be~~ O&M costs not considered.

Φ GEI Consultants, Inc.

Client Burns & Mac / FWS
Subject Quivira NWR KS
Project 97443 Page 1
Date 9-10-97 By KAK
Checked By
Approved By

Priority Ranking Factors for Reservoir sites based on Relative Construction Costs, Number of Relocated Residences and Wetlands and Cultural Resources Considerations

Index No.	Construction Ranking Factors: Earth work	Outlet Works	Spillway	Roads Util	Resid.	Pipeline Length (mi)	Wetlands Rank	Cultural Resource	Dist. From Ref.	Total Score
1	1	1	4	1	0	0.1	10	2	1	20.1
2	1	2	3	0	2	2.5	2	2	2	16.5
3a	2	3	—	—	—	—	—	—	—	—
3b	2	3	1	1	1	2.0	1	1	2	14.0
4	4	—	—	—	—	—	—	—	—	—
5	3	1	—	—	—	—	—	—	1	—
6a	2	2	1	—	—	1.1	—	—	2.5	—
6b	2	1	1	—	—	1.2	—	—	2.5	—
6c	2	4	1	2	1	1	2	1	2.5	16.5
7	3	—	—	—	—	—	—	—	—	—
8a	5	—	—	—	—	—	—	—	—	—
8b	2	3	4	1	2	0.4	2	2.5	1.5	18.5
9	1	—	—	—	—	—	—	—	—	—
10	1	—	—	—	—	—	—	—	—	—
11	10	—	—	—	—	—	—	—	—	—
12	1	2	3.5	1	0	0	1	2	4	14.5
13	3	3	2	1	0	0	1	2	4	16.0
14	6	—	—	—	—	—	—	—	—	—
15	7	—	—	—	—	—	—	—	—	—
16	17	—	—	—	—	—	—	—	—	—
17a	2	4	4	2	5	1.5	2	2.5	2	—
17b	2	5	4	2	5	1.5	2	2.5	2	26
18	3	3	4	2	1	0.1	2	2	3	20.1

File USFWS
96-806-4-001
Gen Corr

WORLDWIDE SERVICES
Burns & McDonnell
ENGINEERS • ARCHITECTS • CONSULTANTS

MEMORANDUM

To: **Fred Pinkney**
Jeff Klein

From: **Steve Thornhill**

Date: **September 24, 1997**

Subject: **Reservoir Site Evaluation, Quivira National Wildlife Refuge, Water Resources Study**

On September 9, 1997 I visited Larry Zuckerman with the Kansas Department of Wildlife and Parks at their office in Pratt, Kansas. The purpose of the visit was to pick up a the response Larry had prepared to our request for comments and concern regarding the water resources study for Quivira National Wildlife Refuge. Larry provided the attached response as well as threatened and endangered species information for several of the potentially affected counties.

I spoke briefly with Larry about the project, indicating we were in the process of evaluating a number of options for providing a firm supply of water to the refuge. I indicated the reservoir option was only one of several options being looked at. Other options included use of groundwater, piping water from the Arkansas River, and various on-Refuge modifications. Larry expressed concern about the reservoir option and the impounding of Rattlesnake Creek. I told him most of the sites involved off-stream storage to be facilitated by pumping of high flow from Rattlesnake Creek into the reservoir for storage. Larry said this would be more acceptable to his agency and that they would oppose any impoundment of Rattlesnake Creek.

Larry expressed particular concern for the project's impact on the state endangered Arkansas darter. He indicated this species is found in association with freshwater (as opposed to brine or saltwater) seeps and springs. They occur in portions of Rattlesnake Creek near spring inflows as well as occasionally in open fields were groundwater intersects the surface. He indicated should a reservoir option be considered, not only would the waterways need to be surveyed for Arkansas darters but the inundation area would require survey for springs.

Larry also indicated if groundwater was a selected alternative, they would be concerned about Arkansas darters due to the potential impacts on springs. With the groundwater alternative, Larry stated they would also be concerned about increased salinity in Rattlesnake Creek due to any reduction in inflows of fresh spring water.

Larry also indicated that should we start looking at options on the Refuge, it may be worthwhile to contact the law enforcement branch of the USFWS. He indicated he was aware of instances where threatened and endangered species or their habitat were affected and the local USFWS was aware and had approved the action, however, the law enforcement branch was not involved and cited individuals involved with the project.

Larry also indicated he was aware of several salt mines in the Lyons and Hutchinson areas which were being repermitted. These mines were running into problems finding ways to dispose of process water. Larry did not know how salty the water was or how much they had, but he felt if it was suitable for use by the Refuge, it presented an option for water whereby both the mines and refuge would benefit.

Lastly, Larry said he had spoke with personnel with the USFWS in the Manhattan field office and they were unaware of the project. He suggested I follow-up with them. (Note: I checked our records and we had sent and received a response from the Manhattan office. I called them to inquire why they indicated to Larry they were unaware of the project. I spoke with Dan Mulhern and he said they were aware of the project and had sent a response. I told him I wanted to be sure there was no misunderstanding and he indicated everything was fine concerning their office.)

If you have any questions regarding this memo, please call me. I am currently working with Tim Fobes on the preparation of a trip memo covering the investigation of the alternative reservoir sites. I hope to provide that memo to you within the next few days.

DRAFT

RESERVOIR YIELD ANALYSIS

RESERVOIR SITE NO. 1

RESERVOIR DATA

VOLUME	AREA	SLOPE	VOLUME	ELEVATION	SLOPE
0	1.42	0.51	0	1790	0.03
161	83.98		161	1795	

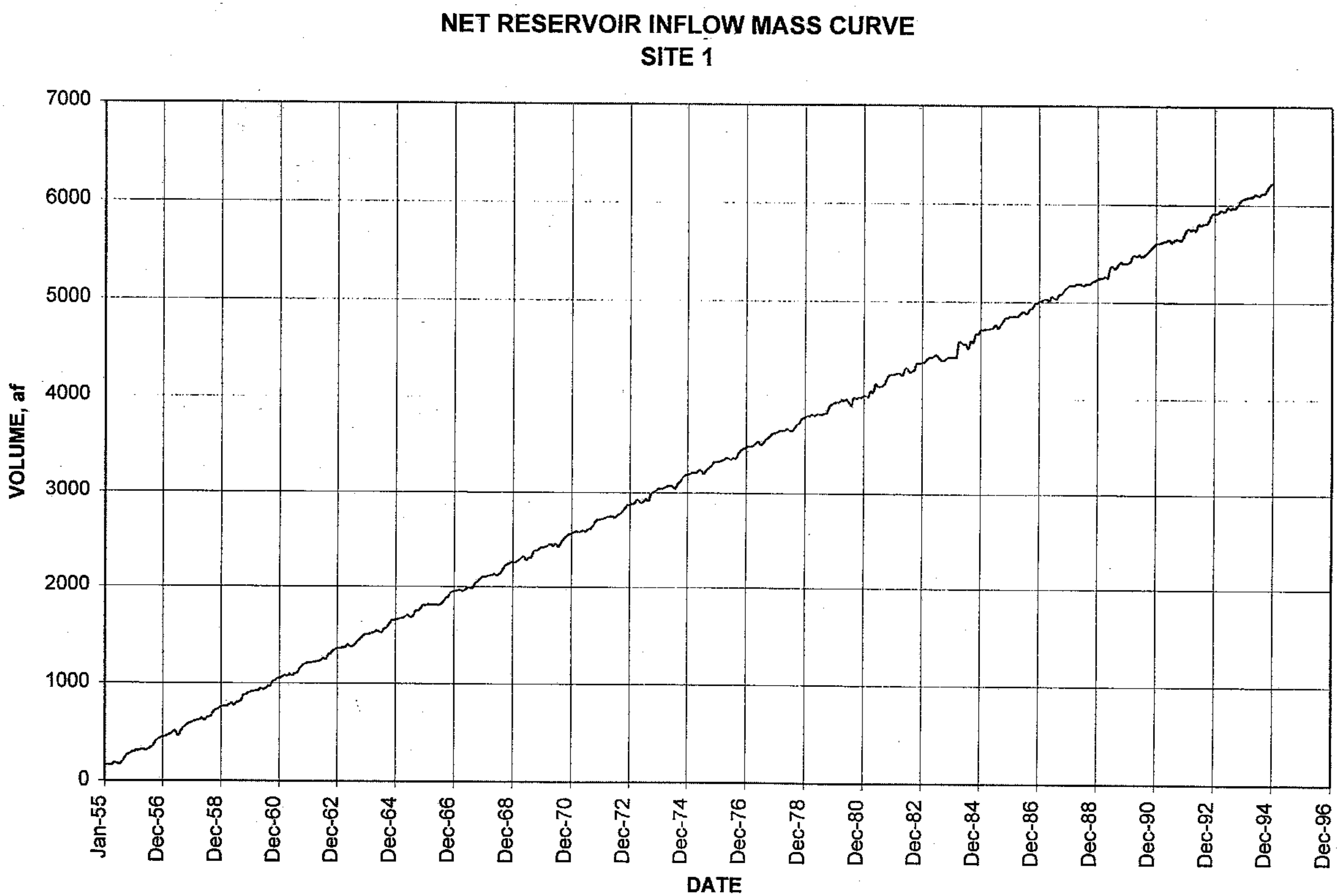
Spillway Elevation	1795	
Reservoir Volume	161	af
Annual Demand	150	af
Minimum Reservoir Volume	6.09	af
Maximum Reservoir Volume	180.67	af
Crest Length	300	ft
Permeability	8.77	ft/mo

MODELING RESULTS FROM 1955-1994:

-	af diverted from primary drainage
12,972	af diverted from Rattlesnake Cr.
12977.0	af total diversion
355,145	af from Rattlesnake Cr. that cannot be diverted or reservoir would spill
6,226	af net inflow to reservoir
6,738	af evaporation
13	af seepage
77	af spill
6,000	af demand releases

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MONTHLY WITHDRAWAL FOR QUIVIRA NATIONAL WILDLIFE REFUGE														
Percent Annual Demand		0.05	0.06	0.07	0.10	0.00	0.06	0.10	0.11	0.18	0.13	0.09	0.05	1
Demand, af/mo		7.5	9	10.5	15	0	9	15	16.5	27	19.5	13.5	7.5	150
NET MONTHLY INFLOW TO RESERVOIR														
MIN	af/yr	-8	-19	-7	-24	-23	-38	-49	-25	-20	-9	-8	-2	-232
MAX	af/yr	161	60	156	26	107	40	31	89	79	91	45	53	938
AVG	af/yr	10	8	13	1	21	-9	-1	19	26	31	21	15	156
RESERVOIR VOLUME														
MIN	af	0	15	6	81	49	111	104	51	55	28	34	30	
MAX	af	160	157	162	181	164	177	163	138	138	156	154	162	
AVG	af	135	138	137	139	125	146	127	111	114	113	124	132	

DATE	MONTH	RS. CR. BASIN 23 INFLOW af	RS. CR. DIVERTED INFLOW af	TOTAL INFLOW af	NET INFLOW af	R.S. CR. REMAINING FLOW af	EVAP. in/mo	EVAP. af	SEEPAGE af	VOLUME Start of Month af	AREA ac	ELEV	DEMAND RELEASE af	SPILL RELEASE af	NET INFLOW MASS CURVE af	Δ STORAGE af
Jan-55	1	554.7	161.0	161	161	394	1.43	0	0	**0**	1	1,790	8	0	161	0
Feb-55	2	529.7	7.5	8	6	522	0.36	2	0.04	**154**	80	1,795	9	0	167	154
Mar-55	3	541.2	10.5	11	-4	531	2.31	15	0.03	**150**	79	1,795	11	0	163	-3
Apr-55	4	577.3	25.1	25	0	552	4.16	25	0.03	**136**	71	1,794	15	0	163	-15
May-55	5	1,063.9	40.1	40	26	1,024	2.63	14	0.03	**121**	63	1,794	0	0	189	-15
Jun-55	6	3,962.1	14.1	14	-7	3,948	3.21	21	0.03	**147**	77	1,795	9	0	182	26
Jul-55	7	597.9	30.2	30	-14	568	7.70	44	0.03	**131**	69	1,794	15	0	168	-16
Aug-55	8	344.3	59.2	59	25	285	7.62	34	0.02	**102**	54	1,793	17	0	193	-29
Sep-55	9	938.7	50.7	51	34	888	3.59	17	0.02	**110**	58	1,793	27	0	227	8
Oct-55	10	420.5	43.7	44	43	377	0.18	1	0.03	**117**	62	1,794	20	0	270	7
Nov-55	11	243.0	20.3	20	6	223	2.35	14	0.03	**141**	74	1,794	14	0	276	23
Dec-55	12	237.6	27.8	28	18	210	1.74	10	0.03	**133**	70	1,794	8	0	294	-8
Jan-56	1	231.4	17.3	17	9	214	1.26	8	0.03	**144**	75	1,794	8	0	303	10
Feb-56	2	233.3	15.9	16	7	217	1.47	9	0.03	**145**	76	1,795	9	0	310	1
Mar-56	3	219.8	17.9	18	4	202	2.30	14	0.03	**143**	75	1,794	11	0	314	-2
Apr-56	4	306.8	24.4	24	9	282	2.60	15	0.03	**137**	71	1,794	15	0	323	-7
May-56	5	515.9	30.4	30	3	485	4.79	27	0.03	**131**	68	1,794	0	0	326	-6
Jun-56	6	218.7	27.5	27	-10	191	6.28	37	0.03	**134**	70	1,794	9	0	316	3
Jul-56	7	269.2	46.5	47	15	223	6.45	32	0.02	**115**	60	1,794	15	0	330	-19
Aug-56	8	174.1	46.5	47	9	128	7.63	38	0.02	**114**	60	1,794	17	0	339	0
Sep-56	9	140.7	54.0	54	25	87	6.21	29	0.02	**107**	56	1,793	27	0	364	-8
Oct-56	10	293.2	56.1	56	42	237	2.99	14	0.02	**105**	55	1,793	20	0	406	-2


NET RESERVOIR INFLOW MASS CURVE
SITE 1
VOLUME, af
7000
6000
5000
4000
3000
2000
1000
0
Jan-55
Dec-56
Dec-58
Dec-60
Dec-62
Dec-64
Dec-66
Dec-68
Dec-70
Dec-72
Dec-74
Dec-76
Dec-78
Dec-80
Dec-82
Dec-84
Dec-86
Dec-88
Dec-90
Dec-92
Dec-94
Dec-96
DATE

RESERVOIR YIELD ANALYSIS

RESERVOIR SITE NO. 2

RESERVOIR DATA

VOLUME	AREA	SLOPE	VOLUME	ELEVATION	SLOPE
0	0	1.02	0	1897	0.23
13	13.3	0.36	13	1900	0.02
278	107.5	0.20	278	1905	0.01
1271	306.7	0.12	1271	1910	0.00
3383	550		3383	1915	

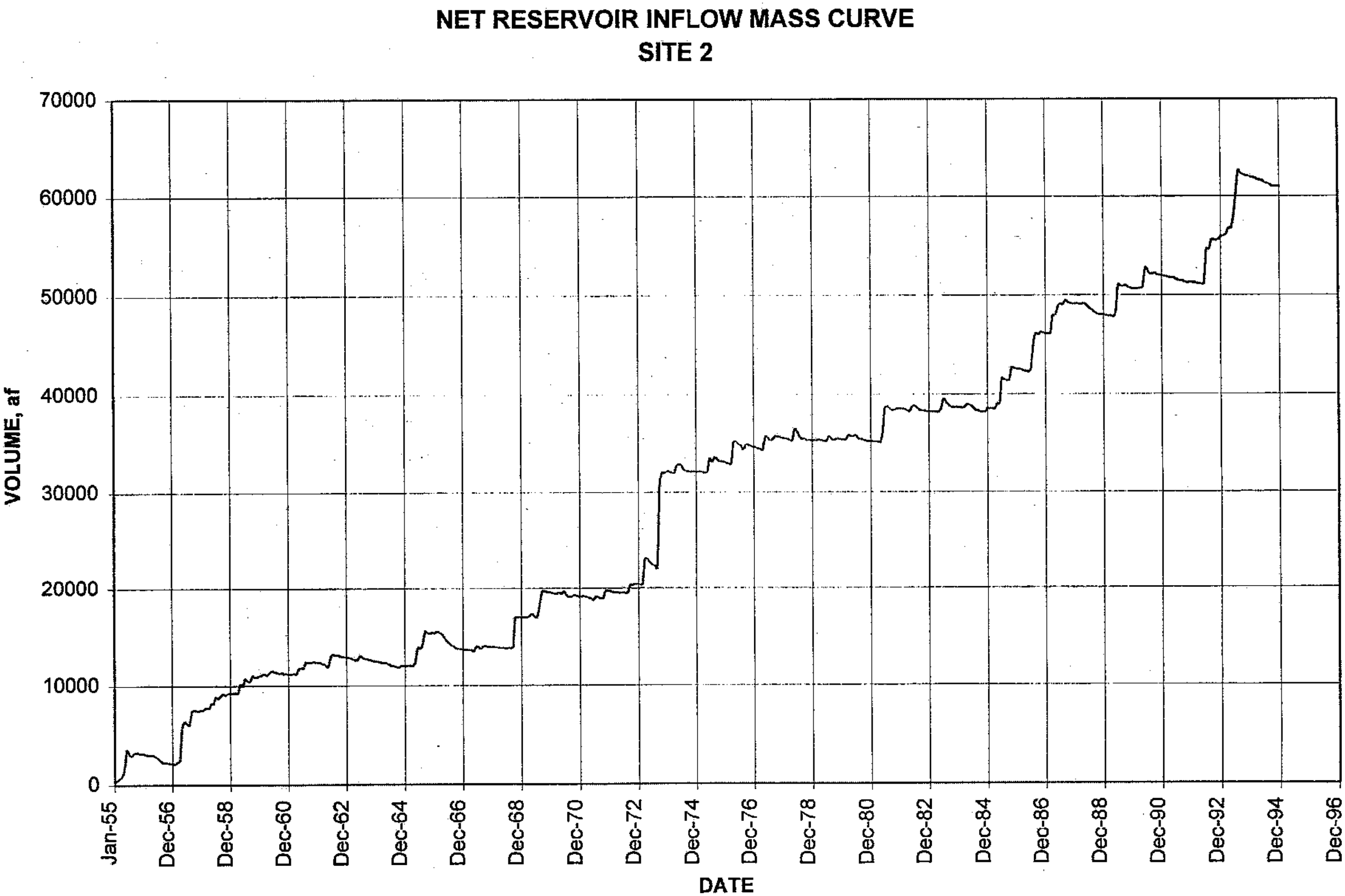
Spillway Elevation	1915	
Reservoir Volume	3383	af
Annual Demand	565	af
Minimum Reservoir Volume	6.65	af
Maximum Reservoir Volume	10,685.44	af
Crest Length	5400	ft
Permeability	8.77	ft/mo

MODELING RESULTS FROM 1955-1994:

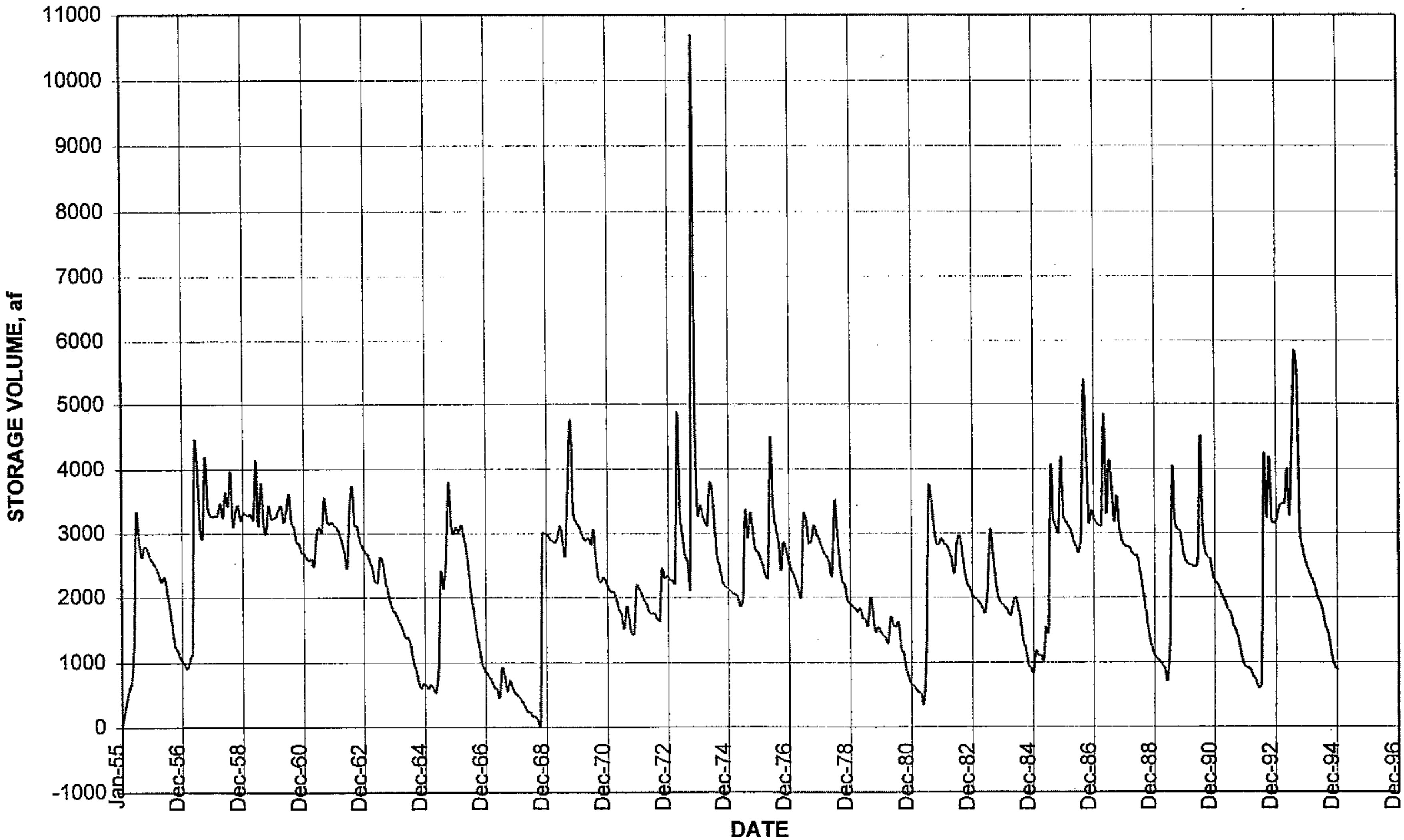
66,582	af diverted from primary drainage
38,617	af diverted from Rattlesnake Cr.
105193.0	af total diversion
131,041	af from Rattlesnake Cr. that cannot be diverted or reservoir would spill
60,972	af net inflow to reservoir
43,094	af evaporation
1,127	af seepage
37,545	af spill
22,600	af demand releases

			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MONTHLY WITHDRAWAL FOR QUIVIRA NATIONAL WILDLIFE REFUGE															
Percent Annual Demand			0.05	0.06	0.07	0.10	0.00	0.06	0.10	0.11	0.18	0.13	0.09	0.05	1
Demand, af/mo			28.25	33.9	39.55	56.5	0	33.9	56.5	62.15	101.7	73.45	50.85	28.25	565
NET MONTHLY INFLOW TO RESERVOIR															
	MIN	af/yr	-94	-110	-136	-160	-379	-340	-444	-382	-197	-219	-127	-106	-2692
	MAX	af/yr	235	229	2692	2237	3244	3543	2406	1289	8643	3071	804	357	28750
	AVG	af/yr	-15	-8	136	62	344	513	39	9	320	130	-7	2	1524
RESERVOIR VOLUME															
	MIN	af	0	207	387	323	238	238	164	161	96	7	606	532	
	MAX	af	3457	3473	3466	4866	4472	4511	5832	5541	4473	10685	4604	3300	
	AVG	af	2205	2160	2115	2209	2122	2428	2772	2601	2408	2557	2385	2253	

DATE	MONTH	BEAR CR. BASIN INFLOW	RS. CR. BASIN INFLOW	RS. CR. DIVERTED INFLOW	TOTAL INFLOW	NET INFLOW	R.S. CR. REMAINING FLOW	EVAP.	EVAP.	SEEPAGE	VOLUME Start of Month	AREA	ELEV	DEMAND RELEASE	SPILL RELEASE	NET INFLOW MASS CURVE	Δ STORAG
		af	af	af	af	af	af	in/mo	af	af	af	ac		af	af	af	af
Jan-55	1	0.0	235.3	235.3	235	235	0	1.43	0	0	0	0	1,897	28	0	235	0
Feb-55	2	3.1	228.7	228.7	232	229	0	0.36	2	0.88	207	82	1,904	34	0	464	207
Mar-55	3	0.0	246.2	246.2	246	219	0	2.31	26	1.21	402	132	1,906	40	0	683	195
Apr-55	4	7.1	251.9	251.9	259	200	0	4 16	58	1.37	581	168	1,907	57	0	883	179
May-55	5	8.1	745.8	745.8	754	710	0	2.63	43	1.49	724	197	1,907	0	0	1,592	143
Jun-55	6	49.4	3670.1	1941.1	1,991	1,902	1,729	3.21	87	2.04	1,434	325	1,910	34	0	3,494	710
Jul-55	7	0.0	228.9	31.7	32	-318	197	7.70	347	2.83	3,302	541	1,915	57	0	3,176	1,868
Aug-55	8	0.0	84.3	84.3	84	-235	0	7.62	316	2.67	2,928	498	1,914	62	0	2,942	-374
Sep-55	9	165.3	228.2	228.2	393	251	0	3.59	139	2.55	2,631	463	1,913	102	0	3,193	-297
Oct-55	10	42.9	46.6	46.6	89	79	0	0.18	7	2.61	2,781	481	1,914	73	0	3,272	150
Nov-55	11	0.0	19.7	19.7	20	-77	0	2.35	94	2.61	2,786	481	1,914	51	0	3,196	6
Dec-55	12	0.0	19.6	19.6	20	-51	0	1.74	68	2.56	2,659	467	1,913	28	0	3,145	-127
Jan-56	1	0.0	19.9	19.9	20	-31	0	1.26	48	2.53	2,580	458	1,913	28	0	3,115	-79
Feb-56	2	0.0	20.7	20.7	21	-37	0	1.47	55	2.5	2,521	451	1,913	34	0	3,078	-59
Mar-56	3	0.0	21.3	21.3	21	-66	0	2.30	85	2.47	2,451	443	1,913	40	0	3,012	-70
Apr-56	4	20.5	31.3	31.3	52	-43	0	2.60	93	2.43	2,345	430	1,913	57	0	2,968	-106
May-56	5	24.0	229.2	229.2	253	84	0	4.79	167	2.38	2,245	419	1,912	0	0	3,052	-100
Jun-56	6	0.0	23.5	23.5	24	-202	0	6.28	224	2.42	2,329	429	1,913	34	0	2,849	84
Jul-56	7	6.8	20.5	20.5	27	-191	0	6.45	216	2.32	2,092	401	1,912	57	0	2,658	-236
Aug-56	8	0.0	11.0	11.0	11	-228	0	7.63	237	2.22	1,845	373	1,911	62	0	2,430	-248
Sep-56	9	0.0	5.5	5.5	5	-173	0	6.21	176	2.09	1,554	339	1,911	102	0	2,257	-290
Oct-56	10	45.0	23.2	23.2	68	-11	0	2.99	77	1.98	1,279	308	1,910	73	0	2,246	-275
Nov-56	11	0.0	3.5	3.5	3	-52	0	2.17	53	1.91	1,195	291	1,910	51	0	2,194	-84
Dec-56	12	0.0	3.7	3.7	4	-36	0	1.69	38	1.82	1,092	271	1,909	28	0	2,158	-103
Jan-57	1	0.0	4.1	4.1	4	-25	0	1.27	27	1.76	1,028	258	1,909	28	0	2,133	-64
Feb-57	2	0.0	5.3	5.3	5	-27	0	1.44	30	1.71	975	247	1,909	34	0	2,107	-53
Mar-57	3	147.7	53.5	53.5	201	183	0	0.81	16	1.66	914	235	1,908	40	0	2,290	-61


NET RESERVOIR INFLOW MASS CURVE
SITE 2
VOLUME, af
70000
60000
50000
40000
30000
20000
10000
0
Jan-55
Dec-56
Dec-58
Dec-60
Dec-62
Dec-64
Dec-66
Dec-68
Dec-70
Dec-72
Dec-74
Dec-76
Dec-78
Dec-80
Dec-82
Dec-84
Dec-86
Dec-88
Dec-90
Dec-92
Dec-94
Dec-96
DATE

RESERVOIR VOLUME WITH [redacted] DEMAND
SITE 2



RESERVOIR YIELD ANALYSIS

RESERVOIR SITE NO. 3

RESERVOIR DATA

VOLUME	AREA	SLOPE	VOLUME	ELEVATION	SLOPE
0	0	0.90	0	1907	0.75
4	3.6	0.06	4	1910	0.25
24	4.7	0.37	24	1915	0.05
130	44.12	0.12	130	1920	0.01
746	225.83	0.30	746	1925	0.00
2138	334.48	0.16	2138	1930	0.00
4318	546		4318	1935	

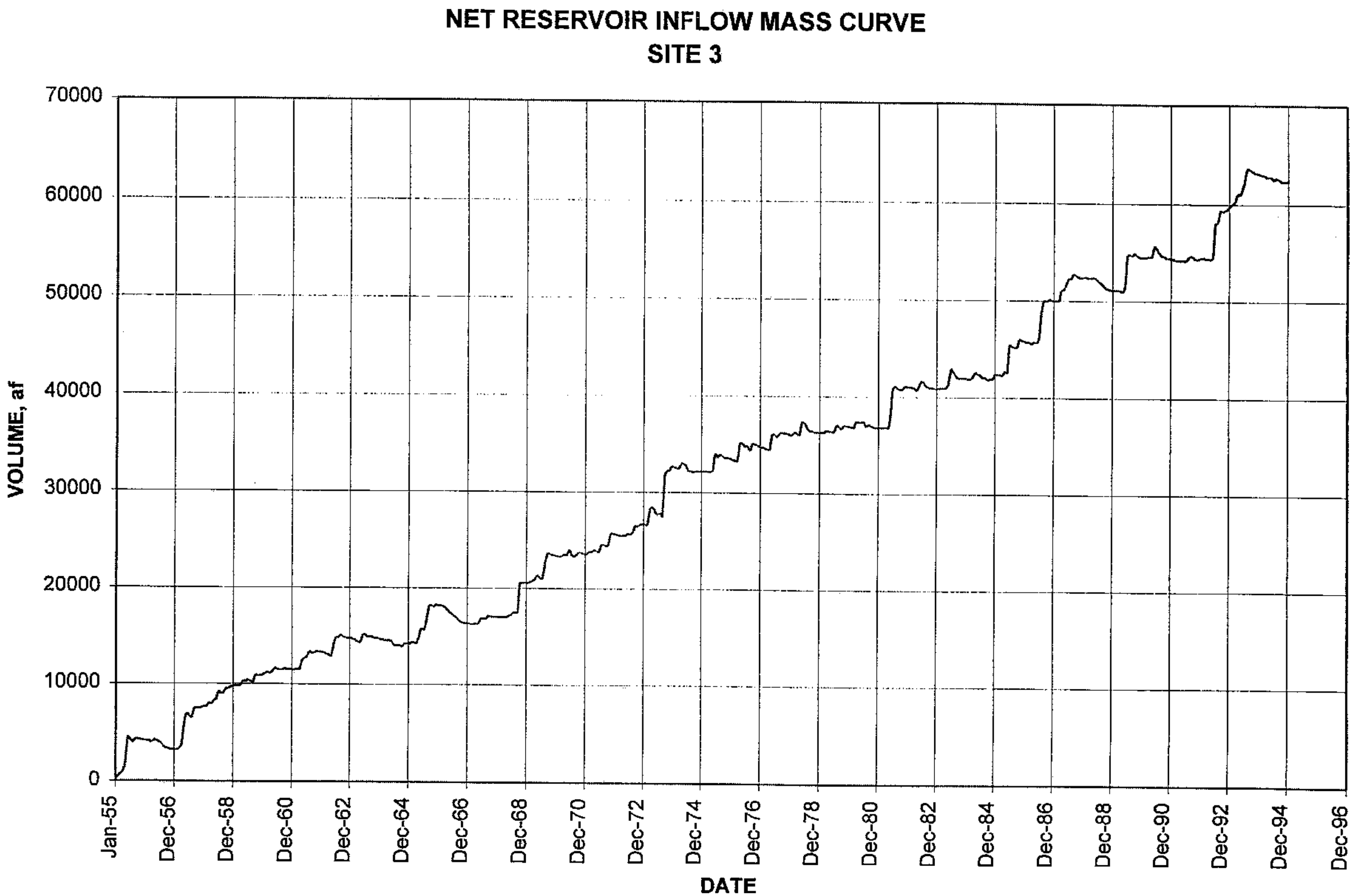
Spillway Elevation	1935	
Reservoir Volume	4318	af
Annual Demand	1120	af
Minimum Reservoir Volume	14.54	af
Maximum Reservoir Volume	7,062.02	af
Crest Length	4900	ft
Permeability	8.77	ft/mo

MODELING RESULTS FROM 1955-1994:

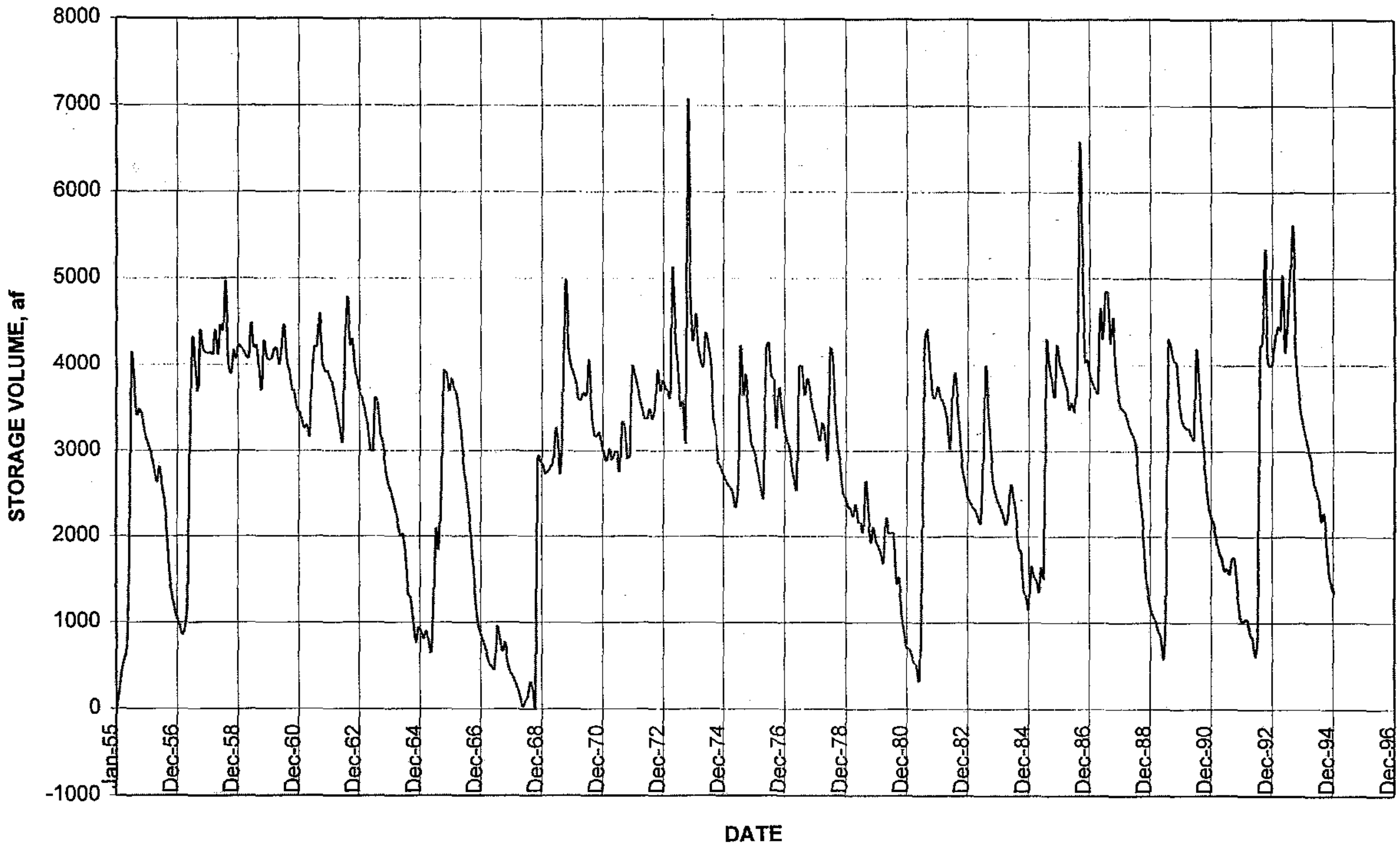
79,537	af diverted from primary drainage
35,446	af diverted from Rattlesnake Cr.
114980.0	af total diversion
134,211	af from Rattlesnake Cr. that cannot be diverted or reservoir would spill
62,324	af net inflow to reservoir
50,921	af evaporation
1,735	af seepage
16,261	af spill
44,800	af demand releases

			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MONTHLY WITHDRAWAL FOR QUIVIRA NATIONAL WILDLIFE REFUGE															
Percent Annual Demand			0.05	0.06	0.07	0.10	0.00	0.06	0.10	0.11	0.18	0.13	0.09	0.05	1
	Demand, af/mo		56	67.2	78.4	112	0	67.2	112	123.2	201.6	145.6	100.8	56	1120
NET MONTHLY INFLOW TO RESERVOIR															
	MIN	af/yr	-114	-108	-150	-173	-367	-366	-536	-440	-320	-246	-151	-120	-3092
	MAX	af/yr	235	285	1582	1838	2083	3407	2674	1335	4131	3065	1132	534	22303
	AVG	af/yr	-13	8	111	89	309	593	81	55	177	115	16	16	1558
RESERVOIR VOLUME															
	MIN	af	0	179	239	149	24	93	146	309	202	15	569	450	
	MAX	af	4590	4448	4406	5121	4391	4832	5125	6566	5342	7062	4698	4273	
	AVG	af	2774	2699	2637	2667	2596	2802	3401	3331	3145	3058	2941	2846	

DATE	MONTH	WILDHORSE CR BASIN [illegible] INFLOW af	R.S. CR. BASIN 21 INFLOW af	R.S. CR. DIVERTED INFLOW af	TOTAL INFLOW af	NET INFLOW af	R.S. CR. REMAINING FLOW af	EVAP in/mo	EVAP af	SEEPAGE af	VOLUME Start of Month af	AREA ac	ELEV	DEMAND RELEASE af	SPILL RELEASE af	NET INFLOW MASS CURVE af	Δ STORAG af
Jan-55	1	0.0	235.3	235.3	235	235	0	1.43	0	0	0	0	1,907	56	0	235	0
Feb-55	2	60.4	228.7	228.7	289	285	0	0.36	2	1.86	179	50	1,920	67	0	520	179
Mar-55	3	0.0	246.2	246.2	246	229	0	2.31	15	2.14	397	76	1,922	78	0	749	218
Apr-55	4	10.5	251.9	251.9	262	227	0	4.16	33	2.34	547	94	1,923	112	0	976	150
May-55	5	154.4	745.8	745.8	900	874	0	2.63	24	2.49	662	108	1,924	0	0	1,849	115
Jun-55	6	116.7	3,670.1	2665.8	2,782	2,654	1,004	3.21	125	3.06	1,536	465	1,928	67	0	4,503	874
Jul-55	7	226.6	228.9	0.0	227	-191	229	7.70	414	4.15	4,122	645	1,935	112	0	4,312	2,587
Aug-55	8	19.3	84.3	84.3	104	-279	0	7.62	379	4.04	3,819	597	1,934	123	0	4,033	-303
Sep-55	9	200.4	228.2	228.2	429	265	0	3.59	160	3.89	3,417	535	1,933	202	0	4,298	-402
Oct-55	10	46.9	46.6	46.6	94	82	0	0.18	8	3.91	3,480	544	1,933	146	0	4,380	64
Nov-55	11	0.0	19.7	19.7	20	-89	0	2.35	105	3.89	3,417	535	1,933	101	0	4,291	-64
Dec-55	12	0.0	19.6	19.6	20	-57	0	1.74	73	3.82	3,227	505	1,932	56	0	4,234	-190
Jan-56	1	0.0	19.9	19.9	20	-35	0	1.26	51	3.78	3,114	487	1,932	56	0	4,200	-113
Feb-56	2	18.4	20.7	20.7	39	-23	0	1.47	58	3.74	3,024	473	1,932	67	0	4,177	-91
Mar-56	3	0.0	21.3	21.3	21	-71	0	2.30	88	3.71	2,934	459	1,932	78	0	4,106	-90
Apr-56	4	26.6	31.3	31.3	58	-40	0	2.60	94	3.65	2,785	436	1,931	112	0	4,067	-149
May-56	5	122.4	229.2	229.2	352	184	0	4.79	164	3.6	2,633	412	1,931	0	0	4,251	-152
Jun-56	6	67.7	23.5	23.5	91	-144	0	6.28	231	3.67	2,817	441	1,932	67	0	4,107	184
Jul-56	7	118.7	20.5	20.5	139	-84	0	6.45	219	3.59	2,606	408	1,931	112	0	4,024	-211
Aug-56	8	0.0	11.0	11.0	11	-233	0	7.63	240	3.51	2,411	377	1,931	123	0	3,791	-196
Sep-56	9	0.0	5.5	5.5	5	-320	0	6.21	322	3.36	2,055	622	1,930	202	0	3,471	-356
Oct-56	10	26.1	23.2	23.2	49	-70	0	2.99	116	3.06	1,533	464	1,928	146	0	3,401	-522
Nov-56	11	0.0	3.5	3.5	3	-72	0	2.17	72	2.93	1,318	399	1,927	101	0	3,329	-216
Dec-56	12	0.0	3.7	3.7	4	-48	0	1.69	49	2.83	1,145	347	1,926	56	0	3,281	-173
Jan-57	1	0.0	4.1	4.1	4	-32	0	1.27	33	2.77	1,041	315	1,926	56	0	3,249	-104
Feb-57	2	0.0	5.3	5.3	5	-33	0	1.44	35	2.72	953	289	1,926	67	0	3,216	-88
Mar-57	3	150.3	53.5	53.5	204	184	0	0.81	17	2.66	853	258	1,925	78	0	3,401	-100


NET RESERVOIR INFLOW MASS CURVE
SITE 3
VOLUME, af
70000
60000
50000
40000
30000
20000
10000
0
Jan-55
Dec-56
Dec-58
Dec-60
Dec-62
Dec-64
Dec-66
Dec-68
Dec-70
Dec-72
Dec-74
Dec-76
Dec-78
Dec-80
Dec-82
Dec-84
Dec-86
Dec-88
Dec-90
Dec-92
Dec-94
Dec-96
DATE

RESERVOIR VOLUME WITH DEMAND
SITE 3



RESERVOIR YIELD ANALYSIS

RESERVOIR SITE NO. 6

RESERVOIR DATA

VOLUME	AREA	SLOPE	VOLUME	ELEVATION	SLOPE
0	0	0.71	0	1883	0.33
6	4.27	0.29	6	1885	0.09
63	20.87	0.27	63	1890	0.02
317	88.2	0.19	317	1895	0.01
1118	245.5	0.22	1118	1900	0.00
3228	627.7		3228	1905	

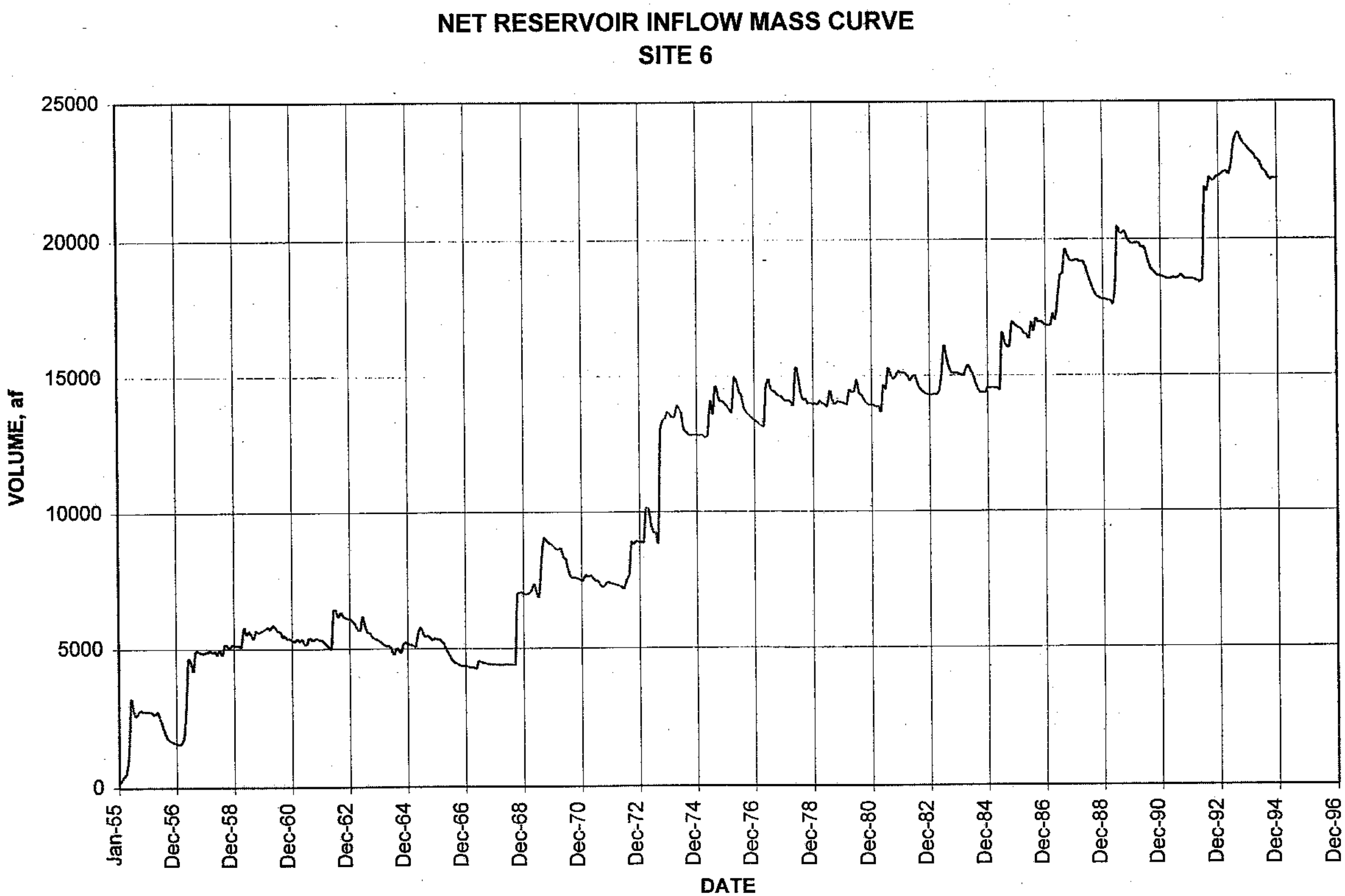
Spillway Elevation	1905	
Reservoir Volume	3228	af
Annual Demand	190	af
Minimum Reservoir Volume	8.02	af
Maximum Reservoir Volume	5,977.82	af
Crest Length	5900	ft
Permeability	8.77	ft/mo

MODELING RESULTS FROM 1955-1994:

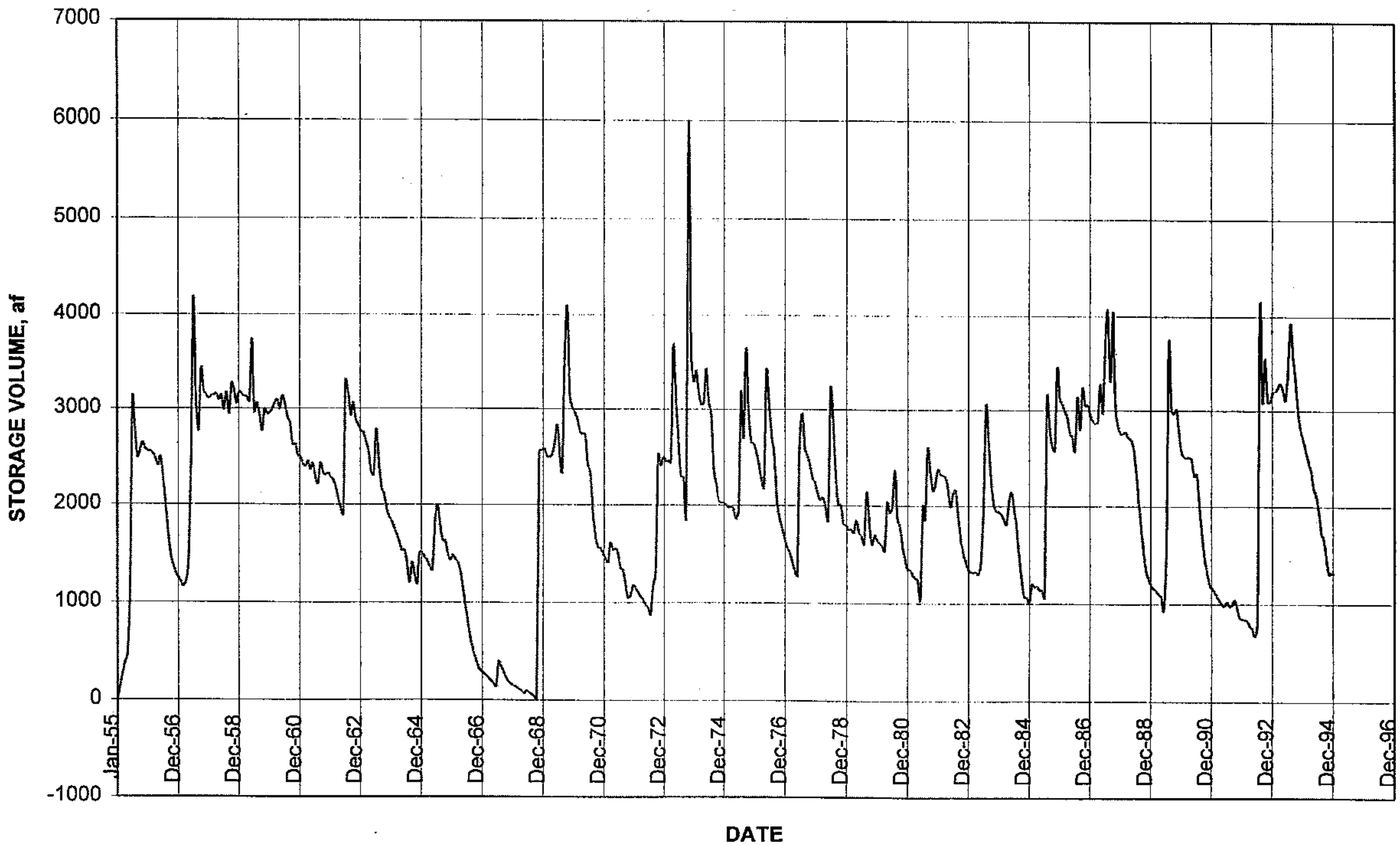
22,239	af diverted from primary drainage
47,088	af diverted from Rattlesnake Cr.
69328.0	af total diversion
113,051	af from Rattlesnake Cr. that cannot be diverted or reservoir would spill
22,187	af net inflow to reservoir
45,562	af evaporation
1,579	af seepage
13,303	af spill
7,600	af demand releases

			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MONTHLY WITHDRAWAL FOR QUIVIRA NATIONAL WILDLIFE REFUGE															
Percent Annual Demand			0.05	0.06	0.07	0.10	0.00	0.06	0.10	0.11	0.18	0.13	0.09	0.05	1
Demand, af/mo			9.5	11.4	13.3	19	0	11.4	19	20.9	34.2	24.7	17.1	9.5	190
NET MONTHLY INFLOW TO RESERVOIR															
	MIN	af/yr	-114	-132	-164	-235	-497	-355	-549	-431	-234	-279	-159	-104	-3250
	MAX	af/yr	146	214	1258	1245	1418	3319	757	1248	4130	2566	335	199	16834
	AVG	af/yr	-19	-15	43	-1	190	371	-122	-27	106	54	-14	-11	555
RESERVOIR VOLUME															
	MIN	af	0	131	113	92	65	95	76	58	39	8	189	161	
	MAX	af	3418	3257	3299	3683	3438	3747	4185	3568	4050	5978	3581	3289	
	AVG	af	1993	1959	1933	1960	1928	2109	2438	2199	2140	2160	2093	2048	

DATE	MONTH	BEAR CR. BASIN 19 INFLOW af	RS. CR. BASIN 18 INFLOW af	RS. CR. DIVERTED INFLOW af	TOTAL INFLOW af	NET INFLOW af	R.S. CR. REMAINING FLOW af	EVAP in/mo	EVAP af	SEEPAGE af	VOLUME Start of Month af	AREA ac	ELEV	DEMAND RELEASE af	SPILL RELEASE af	NET INFLOW MASS CURVE af	Δ STORAG af
Jan-55	1	0.0	146.3	146.3	146	146	0	1.43	0	0	0	0	1,883	10	0	146	0
Feb-55	2	1.9	138.5	138.5	140	138	0	0.36	1	1.29	137	40	1,891	11	0	284	137
Mar-55	3	0.0	150.4	150.4	150	134	0	2.31	14	1.76	263	74	1,894	13	0	418	126
Apr-55	4	0.0	155.1	155.1	155	118	0	4.16	35	2.05	384	101	1,895	19	0	536	121
May-55	5	28.8	653.3	653.3	682	654	0	2.63	26	2.17	483	119	1,896	0	0	1,190	99
Jun-55	6	0.0	3,689.4	2062.7	2,063	1,993	1,627	3.21	67	2.94	1,137	250	1,900	11	0	3,183	654
Jul-55	7	0.0	198.0	109.8	110	-333	88	7.70	439	3.86	3,118	685	1,905	19	0	2,850	1,982
Aug-55	8	3.3	133.2	133.2	136	-254	0	7.62	386	3.7	2,766	607	1,904	21	0	2,596	-352
Sep-55	9	34.2	248.3	248.3	282	114	0	3.59	164	3.57	2,492	547	1,903	34	0	2,711	-275
Oct-55	10	0.0	109.0	109.0	109	96	0	0.18	9	3.61	2,572	565	1,903	25	0	2,807	80
Nov-55	11	0.0	72.1	72.1	72	-46	0	2.35	114	3.64	2,644	581	1,904	17	0	2,761	72
Dec-55	12	0.0	69.4	69.4	69	-17	0	1.74	82	3.61	2,581	567	1,903	10	0	2,745	-63
Jan-56	1	0.0	67.7	67.7	68	5	0	1.26	59	3.6	2,555	561	1,903	10	0	2,750	-26
Feb-56	2	0.0	64.1	64.1	64	-9	0	1.47	69	3.6	2,551	560	1,903	11	0	2,742	-4
Mar-56	3	0.0	66.6	66.6	67	-44	0	2.30	107	3.59	2,531	556	1,903	13	0	2,698	-20
Apr-56	4	0.0	72.9	72.9	73	-49	0	2.60	118	3.56	2,474	543	1,903	19	0	2,649	-57
May-56	5	34.1	271.3	271.3	305	90	0	4.79	211	3.53	2,406	528	1,903	0	0	2,740	-68
Jun-56	6	0.0	87.6	87.6	88	-203	0	6.28	287	3.57	2,497	548	1,903	11	0	2,537	90
Jul-56	7	0.0	33.0	33.0	33	-240	0	6.45	270	3.47	2,283	501	1,903	19	0	2,297	-214
Aug-56	8	0.0	0.0	0.0	0	-285	0	7.63	282	3.35	2,023	444	1,902	21	0	2,012	-259
Sep-56	9	0.0	0.0	0.0	0	-198	0	6.21	195	3.21	1,717	377	1,901	34	0	1,813	-306
Oct-56	10	0.0	3.1	3.1	3	-81	0	2.99	81	3.1	1,485	326	1,901	25	0	1,732	-232
Nov-56	11	0.0	0.0	0.0	0	-58	0	2.17	55	3.06	1,379	303	1,901	17	0	1,674	-106
Dec-56	12	0.0	0.0	0.0	0	-43	0	1.69	40	3.02	1,304	286	1,900	10	0	1,631	-75
Jan-57	1	0.0	0.0	0.0	0	-32	0	1.27	29	3	1,251	275	1,900	10	0	1,599	-53
Feb-57	2	0.0	1.2	1.2	1	-34	0	1.44	32	2.98	1,210	266	1,900	11	0	1,565	-42
Mar-57	3	31.6	54.1	54.1	86	66	0	0.81	17	2.96	1,164	256	1,900	13	0	1,631	-45


NET RESERVOIR INFLOW MASS CURVE
SITE 6
VOLUME, af
25000
20000
15000
10000
5000
0
Jan-55
Dec-56
Dec-58
Dec-60
Dec-62
Dec-64
Dec-66
Dec-68
Dec-70
Dec-72
Dec-74
Dec-76
Dec-78
Dec-80
Dec-82
Dec-84
Dec-86
Dec-88
Dec-90
Dec-92
Dec-94
Dec-96
DATE

RESERVOIR VOLUME WITH ~~NO~~ DEMAND
SITE 6



RESERVOIR YIELD ANALYSIS

RESERVOIR SITE NO. 8

RESERVOIR DATA

VOLUME	AREA	SLOPE	VOLUME	ELEVATION	SLOPE
0	5.69	0.38	0	1855	0.04
133	56.46	0.20	133	1860	0.01
656	161.78		656	1865	

Spillway Elevation	1865	
Reservoir Volume	656	af
Annual Demand	190	af
Minimum Reservoir Volume	5.63	af
Maximum Reservoir Volume	702.03	af
Crest Length	4000	ft
Permeability	8.77	ft/mo

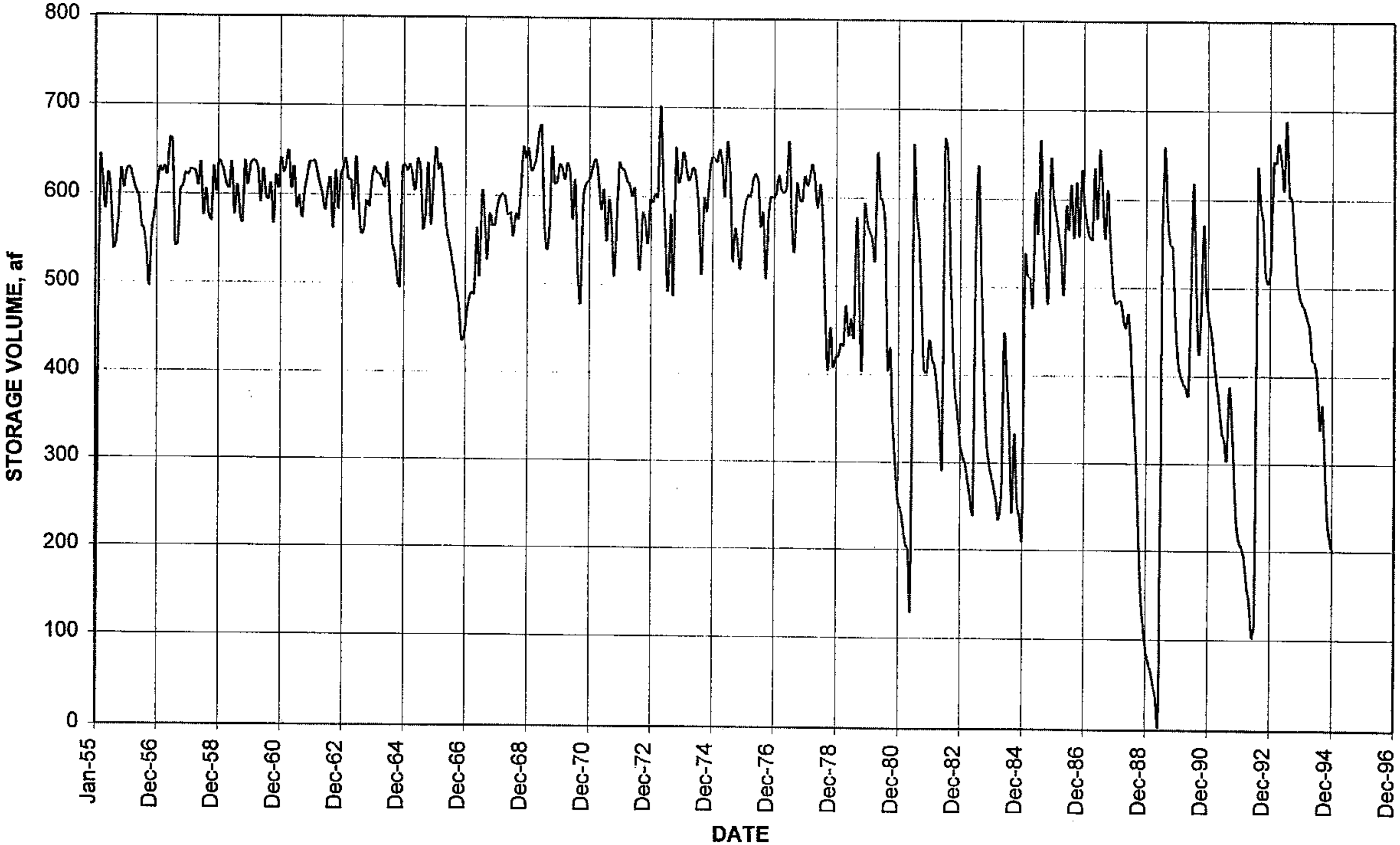
MODELING RESULTS FROM 1955-1994:

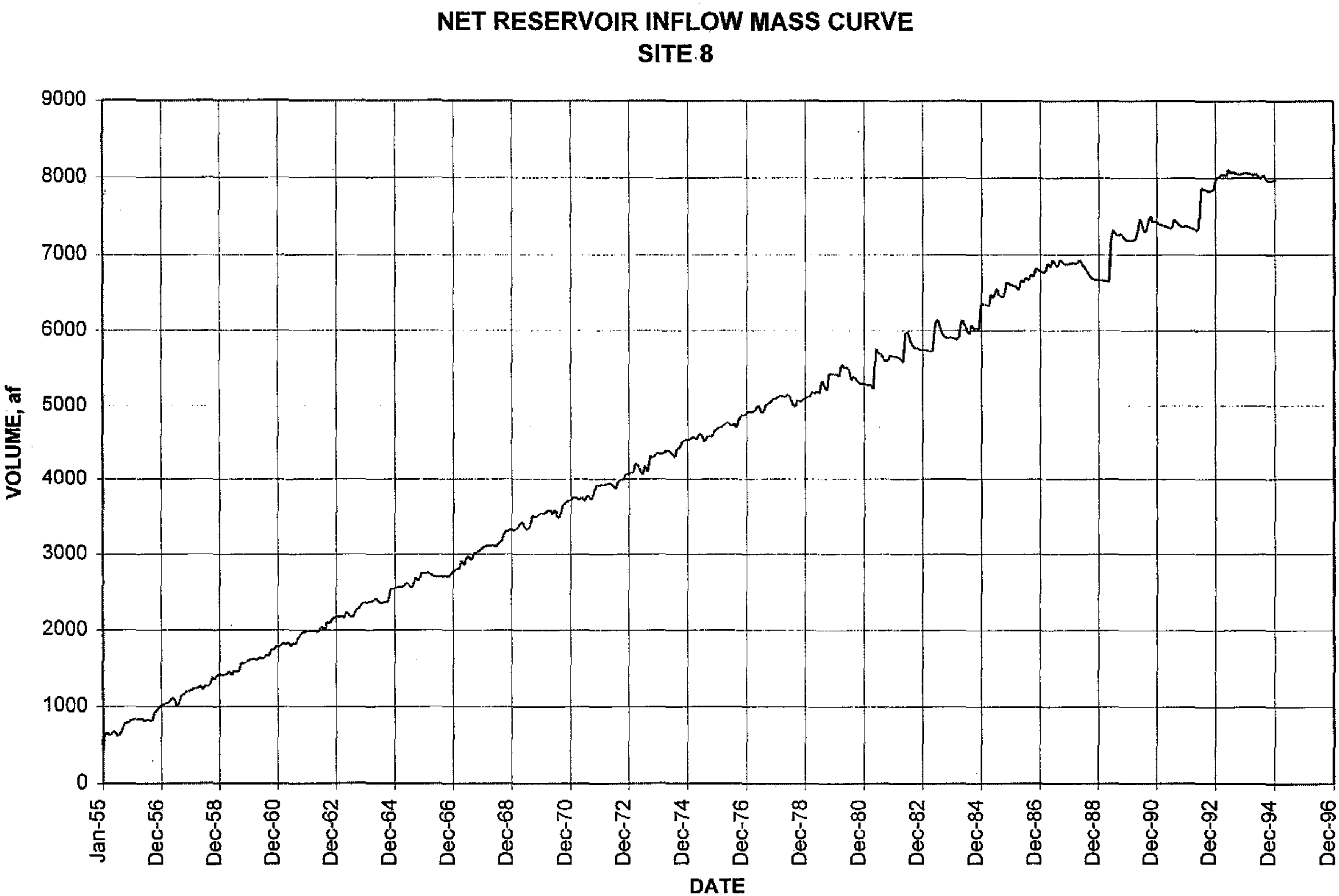
-	af diverted from primary drainage
22,455	af diverted from Rattlesnake Cr.
22444.0	af total diversion
251,686	af from Rattlesnake Cr. that cannot be diverted or reservoir would spill
7,961	af net inflow to reservoir
14,044	af evaporation
439	af seepage
173	af spill
7,600	af demand releases

			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MONTHLY WITHDRAWAL FOR QUIVIRA NATIONAL WILDLIFE REFUGE															
Percent Annual Demand			0.05	0.06	0.07	0.10	0.00	0.06	0.10	0.11	0.18	0.13	0.09	0.05	1
Demand, af/mo			9.5	11.4	13.3	19	0	11.4	19	20.9	34.2	24.7	17.1	9.5	190
NET MONTHLY INFLOW TO RESERVOIR															
	MIN	af/yr	-22	-18	-30	-46	-69	-79	-136	-90	-52	-54	-33	-13	-640
	MAX	af/yr	392	270	133	192	528	524	154	111	198	211	153	333	3201
	AVG	af/yr	15	11	13	14	53	3	-14	5	29	27	20	24	199
RESERVOIR VOLUME															
	MIN	af	0	64	49	34	6	121	306	243	224	151	113	87	
	MAX	af	653	642	663	702	671	689	667	618	620	655	655	644	
	AVG	af	522	528	528	527	521	574	563	530	513	508	510	512	

DATE	MONTH		RS. CR. BASIN 24 INFLOW af	RS. CR. DIVERTED INFLOW af	TOTAL INFLOW af	NET INFLOW af	R.S. CR. REMAINING FLOW af	EVAP. in/mo	EVAP af	SEEPAGE af	VOLUME Start of Month af	AREA ac	ELEV	DEMAND RELEASE af	SPILL RELEASE af	NET INFLOW MASS CURVE af	Δ STORAG af
Jan-55	1		392.7	392.7	393	392	0	1.43	1	0	0	6	1,855	10	0	392	0
Feb-55	2		384.5	273.5	274	270	111	0.36	3	0.74	383	107	1,862	11	0	662	383
Mar-55	3		396.9	14.6	15	-17	382	2.31	31	1.06	641	159	1,865	13	0	645	259
Apr-55	4		406.5	45.0	45	-9	361	4.16	53	1.02	611	153	1,865	19	0	636	-30
May-55	5		908.8	73.0	73	40	836	2.63	32	0.98	583	147	1,864	0	0	676	-28
Jun-55	6		3,785.1	33.0	33	-10	3,752	3.21	42	1.03	623	155	1,865	11	0	666	40
Jul-55	7		450.3	54.4	54	-44	396	7.70	97	1.01	602	151	1,864	19	0	622	-21
Aug-55	8		207.1	117.4	117	28	90	7.62	88	0.93	539	138	1,864	21	0	650	-63
Sep-55	9		551.2	110.3	110	67	441	3.59	42	0.94	546	140	1,864	34	0	717	7
Oct-55	10		207.3	77.4	77	74	130	0.18	2	0.98	579	146	1,864	25	0	791	33
Nov-55	11		123.2	28.1	28	-4	95	2.35	31	1.04	628	156	1,865	17	0	787	49
Dec-55	12		121.5	49.2	49	26	72	1.74	22	1.01	607	152	1,865	10	0	813	-21
Jan-56	1		120.1	32.7	33	16	87	1.26	16	1.03	623	155	1,865	10	0	829	16
Feb-56	2		122.0	26.3	26	6	96	1.47	19	1.04	630	156	1,865	11	0	835	6
Mar-56	3		120.2	31.7	32	1	88	2.30	30	1.04	624	155	1,865	13	0	836	-5
Apr-56	4		151.7	44.0	44	10	108	2.60	33	1.02	612	153	1,865	19	0	846	-12
May-56	5		346.9	53.1	53	-8	294	4.79	60	1.01	603	151	1,864	0	0	838	-9
Jun-56	6		127.1	61.1	61	-18	66	6.28	78	1	595	149	1,864	11	0	820	-8
Jul-56	7		146.2	90.5	90	12	56	6.45	77	0.96	566	144	1,864	19	0	832	-29
Aug-56	8		86.0	86.0	86	-5	0	7.63	90	0.95	559	142	1,864	21	0	827	-7
Sep-56	9		69.4	69.4	69	-3	0	6.21	71	0.92	533	137	1,864	34	0	824	-26
Oct-56	10		120.7	120.7	121	88	0	2.99	32	0.88	496	129	1,863	25	0	912	-37
Nov-56	11		62.7	62.7	63	36	0	2.17	26	0.96	559	142	1,864	17	0	948	63
Dec-56	12		61.9	61.9	62	40	0	1.69	21	0.98	578	146	1,864	10	0	988	19
Jan-57	1		59.6	47.5	48	31	12	1.27	16	1.02	608	152	1,865	10	0	1,019	31
Feb-57	2		54.9	26.0	26	6	29	1.44	19	1.04	630	157	1,865	11	0	1,025	21
Mar-57	3		287.3	31.5	31	20	256	0.81	10	1.04	625	155	1,865	13	0	1,045	-5

RESERVOIR VOLUME WITH DEMAND
SITE 8




NET RESERVOIR INFLOW MASS CURVE
SITE 8
VOLUME, af
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan-55
Dec-56
Dec-58
Dec-60
Dec-62
Dec-64
Dec-66
Dec-68
Dec-70
Dec-72
Dec-74
Dec-76
Dec-78
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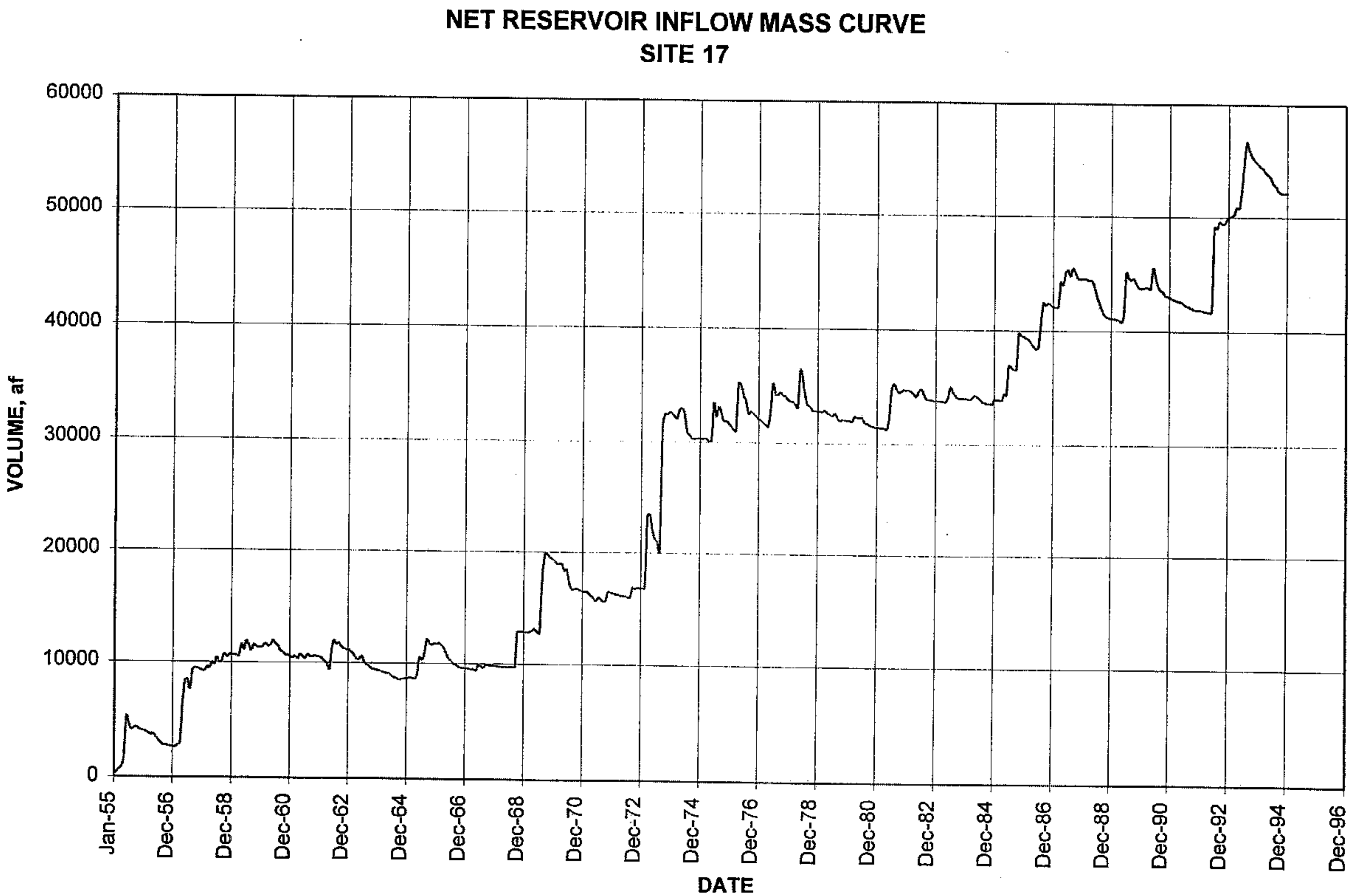
Dec-94
Dec-96
DATE


NET RESERVOIR INFLOW MASS CURVE
SITE 17
60000
50000
40000
30000
20000
10000
0
VOLUME, af
Jan-55
Dec-56
Dec-58
Dec-60
Dec-62
Dec-64
Dec-66
Dec-68
Dec-70
Dec-72
Dec-74
Dec-76
Dec-78
Dec-80
Dec-82
Dec-84
Dec-86
Dec-88
Dec-90
Dec-92
Dec-94
Dec-96
DATE

RESERVOIR YIELD ANALYSIS

RESERVOIR SITE NO. 17

RESERVOIR DATA

VOLUME	AREA	SLOPE	VOLUME	ELEVATION	SLOPE
0	0	1.58	0	1883	0.67
3	4.74	0.43	3	1885	0.03
173	77.81	0.19	173	1890	0.01
867	210.65	0.15	867	1895	0.00
3021	698.37	0.23	3021	1900	0.00
7875	1271.73		7875	1905	

Spillway Elevation	1905	
Reservoir Volume	7875	af
Annual Demand	615	af
Minimum Reservoir Volume	2.06	af
Maximum Reservoir Volume	15,306.88	af
Crest Length	6300	ft
Permeability	8.77	ft/mo

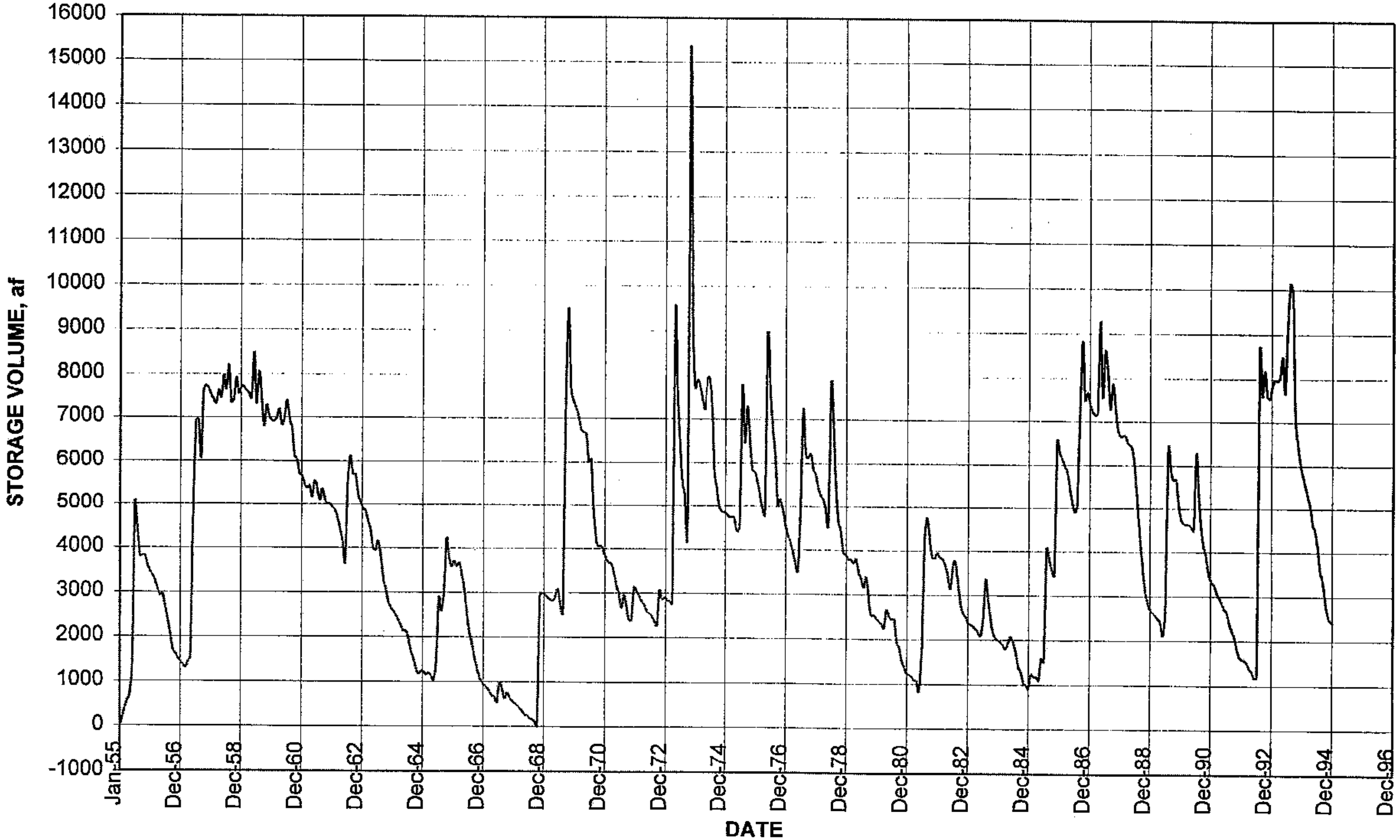
MODELING RESULTS FROM 1955-1994:

66,582	af diverted from primary drainage
79,932	af diverted from Rattlesnake Cr.
146509.0	af total diversion
89,726	af from Rattlesnake Cr. that cannot be diverted or reservoir would spill
52,150	af net inflow to reservoir
92,803	af evaporation
1,556	af seepage
25,212	af spill
24,600	af demand releases

			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MONTHLY WITHDRAWAL FOR QUIVIRA NATIONAL WILDLIFE REFUGE															
Percent Annual Demand			0.05	0.06	0.07	0.10	0.00	0.06	0.10	0.11	0.18	0.13	0.09	0.05	1
Demand, af/mo			30.75	36.9	43 05	61.5	0	36.9	61.5	67.65	110.7	79.95	55.35	30.75	615
NET MONTHLY INFLOW TO RESERVOIR															
	MIN	af/yr	-258	-298	-363	-345	-1261	-873	-1437	-1111	-618	-647	-310	-277	-7797
	MAX	af/yr	235	228	6663	4191	3271	7460	2059	4881	11179	3186	803	356	44512
	AVG	af/yr	-49	-45	211	33	328	711	-156	-63	307	113	-49	-36	1304
RESERVOIR VOLUME															
	MIN	af	0	204	395	353	263	263	185	171	99	2	660	574	
	MAX	af	7988	7944	8046	9388	8913	9207	10149	9860	8843	15307	9025	7841	
	AVG	af	4049	3966	3882	4045	3928	4229	4830	4531	4338	4502	4308	4174	

DATE	MONTH	BEAR CR. BASIN 22 INFLOW af	RS. CR. BASIN21 INFLOW af	RS. CR. DIVERTED INFLOW af	TOTAL INFLOW af	NET INFLOW af	R.S. CR. REMAINING FLOW af	EVAP in/mo	EVAP af	SEEPAGE af	VOLUME Start of Month af	AREA ac	ELEV	DEMAND RELEASE af	SPILL RELEASE af	NET INFLOW MASS CURVE af	Δ STORAG af
Jan-55	1	0.0	235.3	235.3	235	235	0	1.43	0	0	0	0	1,883	31	0	235	0
Feb-55	2	3.1	228.7	228.7	232	228	0	0.36	3	1.14	204	84	1,890	37	0	463	204
Mar-55	3	0.0	246.2	246.2	246	222	0	2.31	23	1.41	395	120	1,892	43	0	684	191
Apr-55	4	7.1	251.9	251.9	259	203	0	4.16	54	1.67	574	155	1,893	62	0	888	179
May-55	5	8.1	745.8	745.8	754	712	0	2.63	40	1.88	716	182	1,894	0	0	1,600	142
Jun-55	6	49.4	3670.1	3670.1	3,720	3,639	0	3.21	79	2.37	1,428	296	1,896	37	0	5,239	712
Jul-55	7	0.0	228.9	228.9	229	-521	0	7.70	746	3.56	5,029	1,163	1,902	62	0	4,718	3,602
Aug-55	8	0.0	84.3	84.3	84	-572	0	7.62	653	3.44	4,447	1,028	1,901	68	0	4,146	-582
Sep-55	9	165.3	228.2	228.2	393	127	0	3.59	263	3.3	3,807	880	1,901	111	0	4,272	-640
Oct-55	10	42.9	46.6	46.6	89	73	0	0.18	13	3.31	3,823	884	1,901	80	0	4,345	16
Nov-55	11	0.0	19.7	19.7	20	-156	0	2.35	173	3.3	3,816	882	1,901	55	0	4,189	-7
Dec-55	12	0.0	19.6	19.6	20	-104	0	1.74	121	3.26	3,604	833	1,901	31	0	4,084	-212
Jan-56	1	0.0	19.9	19.9	20	-67	0	1.26	84	3.23	3,469	802	1,900	31	0	4,017	-135
Feb-56	2	0.0	20.7	20.7	21	-78	0	1.47	96	3.21	3,371	779	1,900	37	0	3,939	-98
Mar-56	3	0.0	21.3	21.3	21	-126	0	2.30	144	3.18	3,256	753	1,900	43	0	3,813	-115
Apr-56	4	20.5	31.3	31.3	52	-106	0	2.60	155	3.15	3,087	714	1,900	62	0	3,707	-169
May-56	5	24.0	229.2	229.2	253	42	0	4.79	208	3.08	2,919	521	1,900	0	0	3,749	-168
Jun-56	6	0.0	23.5	23.5	24	-255	0	6.28	276	3.1	2,961	528	1,900	37	0	3,493	42
Jul-56	7	6.8	20.5	20.5	27	-236	0	6.45	260	2.96	2,669	484	1,899	62	0	3,257	-292
Aug-56	8	0.0	11.0	11.0	11	-271	0	7.63	279	2.82	2,372	438	1,898	68	0	2,987	-297
Sep-56	9	0.0	5.5	5.5	5	-198	0	6.21	200	2.66	2,033	387	1,898	111	0	2,789	-338
Oct-56	10	45.0	23.2	23.2	68	-20	0	2.99	85	2.51	1,725	341	1,897	80	0	2,769	-308
Nov-56	11	0.0	3.5	3.5	3	-58	0	2.17	59	2.46	1,626	326	1,897	55	0	2,711	-99
Dec-56	12	0.0	3.7	3.7	4	-41	0	1.69	43	2.41	1,512	308	1,896	31	0	2,670	-114
Jan-57	1	0.0	4.1	4.1	4	-29	0	1.27	31	2.37	1,440	297	1,896	31	0	2,640	-72
Feb-57	2	0.0	5.3	5.3	5	-32	0	1.44	35	2.34	1,379	288	1,896	37	0	2,608	-60
Mar-57	3	147.7	53.5	53.5	201	180	0	0.81	19	2.31	1,310	278	1,896	43	0	2,788	-69

RESERVOIR VOLUME WITH DEMAND
SITE 17



THE STATE OF KANSAS

KANSAS WATER APPROPRIATION ACT

AS AMENDED APRIL 6, 1995

David L. Pope, Chief Engineer
Division of Water Resources
Kansas Department of Agriculture

Please note: Where this document refers to the Kansas State Board of Agriculture, that reference is now deemed to apply to the Kansas Department of Agriculture, pursuant to K.S.A. 74-568(b), as amended. Effective May 4, 1995.

INDEX TO
KANSAS WATER APPROPRIATION ACT
April 6, 1995

KANSAS WATER APPROPRIATION ACT

K.S.A. 82a-701. Definitions. When used in this act, unless the context indicates otherwise, the following words shall have the following meanings:

(a) "Person" shall mean and include a natural person, a partnership, an organization, a corporation, a municipality and any agency of the state or federal government.

(b) "Chief engineer" means the chief engineer of the division of water resources of the Kansas state board of agriculture.

(c) "Domestic uses" means the use of water by any person or by a family unit or household for household purposes, or for the watering of livestock, poultry, farm and domestic animals used in operating a farm, and for the irrigation of lands not exceeding a total of two (2) acres in area for the growing of gardens, orchards and lawns.

(d) "Vested right" means the right of a person under a common law or statutory claim to continue the use of water having actually been applied to any beneficial use, including domestic use, on or before June 28, 1945, to the extent of the maximum quantity and rate of diversion for the beneficial use made thereof, and shall include the right to take and use water for beneficial purposes where a person is engaged in the construction of works for the actual application of water to a beneficial use on June 28, 1945, provided such works shall be completed and water is actually applied for such use within a reasonable time thereafter by such person, his heirs, successors or assigns. Such a right does not include, however, those common law claims under which a person has not applied water to any beneficial use within the periods of time set out in this subsection.

(e) "Appropriator" means and includes a person who has an appropriation right that has been perfected in conformity with article 7 of chapter 82a of the Kansas Statutes Annotated and acts amendatory thereof and supplemental thereto.

(f) "Appropriation right" is a right, acquired under the provisions of article 7 of chapter 82a of the Kansas Statutes Annotated and acts amendatory thereof and supplemental thereto, to divert from a definite water supply a specific quantity of water at a specific rate of diversion, provided such water is available in excess of the requirements of all vested rights that relate to such supply and all appropriation rights of earlier date that relate to such supply, and to apply such water to a specific beneficial use or uses in preference to all appropriations right of later date.

(g) "Water right" means any vested right or appropriation right under which a person may lawfully divert and use water. It is a real property right appurtenant to and severable from the land on or in connection with which the water is used and such water right passes as an appurtenance with a conveyance of the land by deed, lease, mortgage, will, or other voluntary disposal, or by inheritance. (History: L. 1945; amended 1957; amended 1977; amended 1978.)

K.S.A. 82a-702. Dedication of use of water. All water within the state of Kansas is hereby dedicated to the use of the people of the state, subject to the control and regulation of the state in the manner herein prescribed. (History: L. 1945.)

K.S.A. 82a-703. Water may be appropriated subject to vested rights. Except as provided in K.S.A. 82a-703a and subject to vested rights, all waters within the state may be appropriated for beneficial use as herein provided. Nothing contained in this act shall impair the vested right of any person except for nonuse. (History: L. 1945; amended 1980.)

K.S.A. 82a-703a. Minimum streamflows; duties of chief engineer. Whenever the legislature enacts legislation establishing a minimum desirable streamflow for any watercourse in this state, the chief engineer shall withhold from appropriation that amount of water deemed necessary to establish and maintain for the identified watercourse the desired minimum streamflow. (History: L. 1980; amended 1984; amended 1985.)

K.S.A. 82a-703b. Minimum streamflows; condition of appropriation right. (a) In addition to any other limitation or condition prescribed by law or rule and regulation of the chief engineer, it shall be an express condition of each and every appropriation right, except for use of water for domestic purposes, applied for after April 12, 1984, that such right shall be subject to any minimum desirable streamflow requirements identified and established pursuant to law on or before July 1, 1990, for the source of water supply to which such right applies.

(b) All vested rights, water appropriation rights and applications for permits to appropriate water having a priority date on or before April 12, 1984, shall not be subject to any minimum desirable streamflow requirements established pursuant to law. (History: L. 1984; amended 1987.)

K.S.A. 82a-703c. Minimum streamflows established. In accordance with the provisions of K.S.A. 82a-703a, and amendments thereto, the legislature hereby establishes the following minimum desirable streamflows:

Table—MINIMUM DESIRABLE STREAMFLOWS (cfs)

Watercourse	Month											
	J	F	M	A(a)	M(a)	J(a)	J	A	S	O	N	D
Marais des Cygnes												
Ottawa	15	15	15	15(40)	20(50)	25(50)	25	25	20	15	15	15
LaCygne	20	20	20	20(50)	20(150)	25(150)	25	25	20	20	20	20
Neosho												
Americus	5	5	5	5(20)	5(30)	5(30)	5	5	5	5	5	5
Iola	40	40	40	40(60)	40(200)	40(200)	40	40	40	40	40	40
Parsons	50	50	50	50(100)	50(300)	50(300)	50	50	50	50	50	50
Cottonwood												
Florence	10	10	10	10(30)	10(60)	10(60)	10	10	10	10	10	10
Plymouth	20	20	20	20(60)	20(150)	20(150)	20	20	20	20	20	20
Little Arkansas												
Alta Mills	8	8	8	8	8	8	8	8	8	8	8	8
Valley Center	20	20	20	20	20	20	20	20	20	20	20	20
Arkansas River												
Kinsley(b)	2	2	3	3	5	5	3	1	1	1	2	2
Great Bend(b)	3	3	3	3	10	10	5	3	2	2	2	3
Hutchinson	80	80	100	100	100	100	80	80	60	60	60	80
Rattlesnake Creek												
Macksville(b)	5	5	10	10	10	10	5	1	1	1	5	5
Zenith	15	15	15	15	15	15	5	3	3	3	10	15
North Fork Ninnescah Above												
Cheney	40	50	50	50	40	30	10	5	5	10	40	40
South Fork Ninnescah												
Pratt	10	10	10	8	8	8	5	5	5	5	10	10
Murdock	80	90	90	90	90	50	30	30	30	50	80	80
Ninnescah												
Peck	100	100	100	100	100	70	30	30	30	50	100	100
Saline												
Russell	5	5	15	15	15	12	2	2	2	5	5	5
Smoky Hill												
Ellsworth(c)	20	20	25	30	35	45	35	15	15	15	20	20
Medicine Lodge												
Kiowa	50	55	60	60	40	30	6	1	1	4	40	50
Chikaskia												
Corbin	30	45	50	45	40	30	16	5	5	8	30	30
Big Blue												
Marysville	100	100	125	150	150(d)	150(d)	80	90	65	80	80	80
Little Blue												
Barnes	100	100	125	150	150(d)	150(d)	75	80	60	80	80	80
Republican												
Concordia(e)	100	125	150	150	150	150	150	150	80	65	80	100
Clay Center	125	150	200	250	250	250	200	200	100	90	100	125
Mill Creek												
Paxico	8	8	8	25	30	35	10	5	5	2	5	8
Delaware												
Muscotah	10	10	20	20	20	20	5	3	3	2	10	10
Walnut River												
Winfield	30	35	40	65	100	100	30	25	20	20	20	30
Whitewater River												
Towanda	10	15	15	20	25	25	10	5	5	5	6	10
Spring River												
Baxter Springs(f)	175	200	250	300	450	350	200	160	120	120	150	175
Chapman Creek												
Chapman	10	15	15	15	15	15	10	10	10	10	10	10
Solomon River												
Niles	40	50	60	60	90	90	50	50	40	40	40	40

(a) Spawning flows to be managed if reservoirs in flood pool; otherwise use lower flows.
(b) Subject to subsequent assessment of lagged effects of extensive groundwater appropriations in regional aquifer.
(c) Subject to subsequent assessment of lagged effects of upstream depletions.
(d) Subject to the stateline flows contained in the Blue River Compact.
(e) Subject to subsequent assessment of Harlan County reservoir operations, development of compact stateline flows and lagged effects of upstream depletions.
(f) Flows measured at Quapah, Oklahoma; may need review if a new station is established.

(History: L. 1985; amended 1987; amended 1989.)

K.S.A. 82a-704. Repealed. (History: L. 1945; amended 1957; repealed 1978.)

K.S.A. 82a-704a. Determination of vested rights; procedure; duties of chief engineer. (a) All persons claiming a vested right for the beneficial use of water, other than for domestic use, which has not been determined pursuant to K.S.A. 82a-704, shall file by July 1, 1980, with the chief engineer a verified claim for such vested right. The chief engineer shall not accept any such claim after said date. Such verified claim shall be upon forms provided therefor by the chief engineer and shall set forth:

(1) The name and post-office address of the claimant;
(2) the source to which the claim relates;
(3) the amount of water claimed;
(4) the location of the works for the diversion and use of the claimed water;
(5) the dates of the beneficial use made; and
(6) any additional information the chief engineer may require.

(b) Upon receipt of a verified claim for a vested right for the beneficial use of water, the chief engineer shall investigate the same and shall conduct a hearing thereon. Such hearing shall be noticed by restricted mail to the claimant and to other known interested persons within a five (5) mile radius of the point of diversion of such claimed vested right at least thirty (30) days prior to the date set for the hearing. Notice shall also be given by publication in a newspaper of general circulation in the county wherein the vested right is claimed to exist at least once each week for three (3) consecutive weeks prior to the hearing. Such published notice shall contain the date and place of hearing and a general description of the area affected by the claimed vested right and shall be directed to all persons interested and concerned. At the hearing, the chief engineer shall take evidence of all persons interested and concerned and the same shall be considered in the determination of the existence of a vested right for beneficial use of water. As soon as possible thereafter the chief engineer shall make an order determining the existence or nonexistence of the claimed vested right and shall notify the claimant and contestants thereof as to the contents of such order. Service of such notice shall be deemed complete upon depositing such notice in the post office as restricted mail addressed to the vested right claimant and any contestant thereto whose address is known to the chief engineer, and upon the publication of an abstract of such order once each week for three (3) consecutive weeks in a newspaper of general circulation in the county wherein the vested right is claimed to exist.

(c) Any claimant of a vested right or person contesting the same who considers himself or herself aggrieved by the order of determination of a vested right may appeal to the district court in the manner prescribed by K.S.A. 82a-724.

(d) The order of determination of a vested right of the chief engineer shall be in full force and effect from the date of its entry in the records of his or her office unless and until its operation shall be stayed by an appeal therefrom by the claimant thereof or a contestant thereto in accordance with the provisions of K.S.A. 82a-724 except that no such determination shall be deemed an adjudication of the relation between any vested right holders with respect to the operation or exercise of their vested rights.

(e) The chief engineer shall file a copy of any order of determination of the existence of a vested right with the register of deeds of the county wherein the land is located to which such vested right is appurtenant. The register of deeds shall record the same as other instruments affecting real estate.

(f) No vested right for the beneficial use of water, other than for domestic use, shall be deemed to exist from and after July 1, 1980, unless the same has been determined to exist pursuant to the provisions of this act or pursuant to the provisions of K.S.A. 82a-704. (History: L. 1978.)

K.S.A. 82a-704b. Same; notice. The chief engineer shall provide notice throughout the state of the provisions of this act by means assuring the widest dissemination thereof as practicable. (History: L. 1978.)

K.S.A. 82a-704c. Same; supplemental to Kansas water appropriation act. The provisions of K.S.A. 82a-704a shall be a part of and supplemental to the Kansas water appropriation act. (History: L. 1978.)

K.S.A. 82a-705. Acquisition of appropriation right to use water other than domestic; approval. No person shall have the power or authority to acquire an appropriation right to the use of water for other than domestic use without first obtaining the approval of the chief engineer, and no water rights of any kind may be acquired hereafter solely by adverse use, adverse possession, or by estoppel. (History: L. 1945; amended 1957.)

K.S.A. 82a-705a. Domestic use after June 28, 1945; information to chief engineer. The use of water for domestic purposes instituted subsequently to June 28, 1945, to the extent that it is beneficial, shall constitute an appropriation right. The chief engineer, however, may require any person using water for any purpose to furnish information with regard to such use thereof. (History: L. 1957.)

K.S.A. 82a-706. Duties of chief engineer as to beneficial use and rights of priority of appropriation. The chief engineer shall enforce and administer the laws of this state pertaining to the beneficial use of water and shall control, conserve, regulate, allot and aid in the distribution of the water resources of the state for the benefits and beneficial uses of all of its inhabitants in accordance with the rights of priority of appropriation. (History: L. 1945; amended 1957.)

K.S.A. 82a-706a. Rules, regulations and standards. The chief engineer shall adopt, amend, promulgate, and enforce such reasonable rules, regulations, and standards necessary for the discharge of his or her duties and for the achievement of the purposes of this act pertaining to the control, conservation, regulation, allotment, and distribution of the water resources of the state. (History: L. 1957; amended 1977.)

K.S.A. 82a-706b. Diversion of water prohibited, when; unlawful acts; enforcement by chief engineer. It shall be unlawful for any person to prevent, by diversion or otherwise, any waters of this state from moving to a person having a prior right to use the same, or for any person without an agreement with the state of Kansas to divert or take any water that has been released from storage under authority of the state of Kansas or that has been released from storage pursuant to an agreement between the state and federal government. Upon making a determination of an unlawful diversion the chief engineer or his or her authorized agents, shall direct that the headgates, valves, or other controlling works of any ditch, canal, conduit, pipe, well, or structure be opened, closed, adjusted, or regulated as may be necessary to secure water to the person having the prior right to its use, or to secure water for the purpose for which it was released from storage under authority of the state of Kansas or pursuant to an agreement between the state and federal government. The chief engineer, or his or her authorized agents, shall deliver a copy of such a directive to the persons involved either personally or by mail or by attaching a copy thereof to such headgates, valves, or other controlling works to which it applies and such directive shall be legal notice to all persons involved in the diversion and distribution of the water of the ditch, canal, conduit, pipe, well, or structure. For the purpose of making investigations of diversions and delivering directives as provided herein and determining compliance therewith, the chief engineer or his or her authorized agents shall have the right of access and entry upon private property. (History: L. 1957; amended 1965.)

K.S.A. 82a-706c. Meters, gages and other measuring devices; waste and quality checks. The chief engineer shall have full authority to require any water user to install meters, gages, or other measuring devices, which devices he or she or his or her agents may read at any time, and to require any water user to report the reading of such meters, gages, or other measuring devices at reasonable intervals. He or she shall have full authority to make, and to require any water user to make, periodic water waste and water quality checks and to require the user making such checks to report the findings thereof. (History: L. 1957.)

K.S.A. 82a-706d. Duties of attorney general. Upon request of the chief engineer the attorney general shall bring suit in the name of the state of Kansas, in courts of competent jurisdiction to enjoin the unlawful appropriation, diversion, use of the waters of the state, and waste or loss thereof. (History: L. 1957.)

K.S.A. 82a-706e. State field offices and commissioners. The chief engineer, subject to the approval of the state board of agriculture, may establish field offices within this state to secure the best protection to all claimants of water therein and the most economical supervision thereof. Subject to the approval of the state board of agriculture, the chief engineer may appoint a water commissioner for each field office so established, in accordance with the Kansas civil service laws, who shall be his or her agent in supervising the distribution of waters within the area served by such field office, according to the rights and priorities of all parties concerned, and who shall perform such other duties as the chief engineer may direct. (History: L. 1957.)

K.S.A. 82a-707. Principles governing appropriations; priorities. (a) Surface or ground waters of the state may be appropriated as herein provided. Such appropriation shall not constitute ownership of such water, and appropriation rights shall remain subject to the principle of beneficial use.

(b) Where uses of water for different purposes conflict such uses shall conform to the following order of preference: Domestic, municipal, irrigation, industrial, recreational and water power uses. However, the date of priority of an appropriation right, and not the purpose of use, determines the right to divert and use water at any time when the supply is not sufficient to satisfy all water rights that attach to it. The holder of a water right for an inferior beneficial use of water shall not be deprived of the use of the water either temporarily or permanently as long as such holder is making proper use of it under the terms and conditions of such holder's water right and the laws of this state, other than through condemnation.

(c) As between persons with appropriation rights, the first in time is the first in right. The priority of the appropriation right to use water for any beneficial purpose except domestic purposes shall date from the time of the filing of the application therefor in the office of the chief engineer. The priority of the appropriation right to use water for domestic purposes shall date from the time of the filing of the application therefor in the office of the chief engineer or from the time the user makes actual use of water for domestic purposes, whichever is earlier.

(d) Any water right returned to the state under the provisions of K.S.A. 2-1915, and amendments thereto, shall be placed in the custodial care of the state. While in the custodial care of the state, the priority of the water right shall remain in effect and water available under the terms and conditions of the water right shall not be considered available for further appropriation. Any surface water right held in the custodial care of the state shall neither directly benefit nor impair any other surface water right within the stream reach designated for recovery. Any water right donated to the state shall be placed in the custodial care of the state or retired at the discretion of the chief engineer.

(e) Appropriation rights in excess of the reasonable needs of the appropriators shall not be allowed. (History: L. 1917; amended 1923; R.S. 1923; amended 1945; amended 1957; amended 1988.)

K.S.A. 82a-708. Repealed. (History: L. 1945; repealed 1957.)

K.S.A. 82a-708a. Applications for permits to appropriate water regardless of use by another; fee. (a) Any person may apply for a permit to appropriate water to a beneficial use, notwithstanding that the application pertains to the use of water by another, or upon or in connection with the lands of another. Any rights to the beneficial use of water perfected under such application shall attach to the lands on or in connection with which the water is used and shall remain subject to the control of the owners of the lands as in other cases provided by law.

(b) Except as otherwise provided in subsections (d) and (e), each application for a permit to appropriate water, except applications for permits for domestic use, shall be accompanied by an application fee fixed by this section for the appropriate category of acre feet in accordance with the following:

Acre Fee	Fee
0 to 100	$100
101 to 320	$150
More than 320.	$150 + $10 for each additional 100 acre feet or any part thereof

(c) Except as otherwise provided in subsections (d) and (e), each application for a permit to appropriate water for storage, except applications for permits for domestic use, shall be accompanied by an application fee fixed by this section for the appropriate category of storage-acre feet in accordance with the following:

Storage-Acre Feet	Fee
0 to 250	$100
More than 250	$100 + $10 for each additional 250 storage-acre feet or any part thereof

(d) For any application for a permit to appropriate water, except applications for permits for domestic use, which proposes to appropriate by both direct flow and storage, the fee charged shall be the fee under subsection (b) or subsection (c), whichever is larger, but not both fees.

(e) Each application for a permit to appropriate water for water power purposes shall be accompanied by an application fee of $100 plus $200 for each 100 cubic feet per second, or part thereof, of the diversion rate requested in the application for the proposed project.

(f) All fees collected by the chief engineer pursuant to this section shall be remitted to the state treasurer as provided in K.S.A. 82a-731 and amendments thereto. (History: L. 1957; amended 1973; amended 1982; amended 1985; amended 1989.)

K.S.A. 82a-708b. Same; applications to change place of use; appeal from decisions of chief engineer; fee. (a) Any owner of a water right may change the place of use, the point of diversion or the use made of the water, without losing priority of right, provided such owner shall: (1) Apply in writing to the chief engineer for approval of any proposed change; (2) demonstrate to the chief engineer that any proposed change is reasonable and will not impair existing rights; (3) demonstrate to the chief engineer that any proposed change relates to the same local source of supply as that to which the water right relates; and (4) receive the approval of the chief engineer with respect to any proposed change. The chief engineer shall approve or reject the application for change in accordance with the provisions and procedures prescribed for processing original applications for permission to appropriate water. If the chief engineer disapproves the application for change, the rights, priorities and duties of the applicant shall remain unchanged. Any person aggrieved by an order or decision by the chief engineer relating to an application for change may appeal to the district court in the manner prescribed by K.S.A. 82a-724 and amendments thereto.

(b) Each application to change the place of use, the point of diversion or the use made of the water under this section shall be accompanied by the application fee set forth in the schedule below:

(1)	Application to change a point of diversion 300 feet or less	$50
(2)	Application to change a point of diversion more than 300 feet	100
(3)	Application to change the place of use	100
(4)	Application to change the use made of the water	150

Any application submitted which requests two of the types of changes set forth above shall be accompanied by a fee of $150. Any application which requests three types of changes shall be accompanied by a fee of $250.

(c) All fees collected by the chief engineer pursuant to this section shall be remitted to the state treasurer as provided in K.S.A. 82a-731 and amendments thereto. (History: L. 1957; amended 1982; amended 1985; amended 1990.)

K.S.A. 82a-709. Same; contents; time of filing. No person may acquire an appropriation right to the use of waters of the state for other than domestic purposes without making an application to the chief engineer for a permit to make such appropriation. However, any person using water for domestic purposes subsequent to June 28, 1945, and any person intending to use water hereafter for domestic purposes may make application to the chief engineer for a permit the same as any other person. The application shall set forth (a) the name and post-office address of the applicant;

(b) the source from which said appropriation shall be made;

(c) the maximum rate at which water is to be diverted or used and the total annual quantity of water sought;

(d) the location of the works or proposed works for the diversion and use of the water;

(e) the estimated time for the completion of any proposed works;

(f) the time of the first actual application of the water to the beneficial use involved, if there was such, and the estimated time for the first actual application of the water for the beneficial use proposed;

(g) if for irrigation use, a description of the land to be irrigated by designating the number of irrigable acres in each forty (40) acre tract or fractional portion thereof;

(h) if for municipal water supply, it shall give the present population to be served and estimated future requirements of the city;

(i) any additional factors which may be required by the chief engineer.

Such application shall be filed and approved before the commencement of any work in connection with the construction, enlargement or extension of any works for the diversion, storage, and use of water. (History: L. 1945; amended 1957; amended 1977.)

K.S.A. 82a-710. Same; return for correction or completion; maps, plats, plans and drawings; default in refiling. Upon receipt of the application it shall be the duty of the chief engineer to endorse thereon the date of its receipt and assign a number to the same. If upon examination the application is found to be defective, inadequate or insufficient to enable such official to determine the nature and amount of the proposed appropriation, it shall be returned for correction or completion or for other required information. No application shall lose its priority of filing on account of such defects, provided acceptable data, proofs, maps, plats, plans and drawings are filed in the office of the chief engineer within thirty days following the date of the posting of the return of such application or such further time not exceeding one year as may be given by the chief engineer.

All maps, plats, plans and drawings shall conform to prescribed uniform standard as to materials, size, coloring and scale, and shall show: (a) The source from which the proposed appropriation is to be taken, (b) all proposed dams, dikes, reservoirs, canals, pipe lines, power houses and other structures for the purpose of storing, conveying or using water for the purpose approved and their positions or courses in connection with the boundary lines and corners of the lands which they occupy. Land listed for irrigation shall be shown in government subdivisions or fractions thereof. Default in the refiling of any application within the time limit specified shall constitute a forfeiture of priority date and the dismissal of the application. (History: L. 1945.)

K.S.A. 82a-711. Same; duties of chief engineer as to applications. (a) If a proposed use neither impairs a use under an existing water right nor prejudicially and unreasonably affects the public interest, the chief engineer shall approve all applications for such use made in good faith in proper form which contemplate the utilization of water for beneficial purpose, within reasonable limitations except that the chief engineer shall not approve any application submitted for the proposed use of fresh water in any case where other waters are available for such proposed use and the use thereof is technologically and economically feasible.

Otherwise, the chief engineer shall make an order rejecting such application or requiring its modification to conform to the public interest to the end that the highest public benefit and maximum economical development may result from the use of such water.

(b) In ascertaining whether a proposed use will prejudicially and unreasonably affect the public interest, the chief engineer shall take into consideration:

(1) Established minimum desirable streamflow requirements;

(2) the area, safe yield and recharge rate of the appropriate water supply;

(3) the priority of existing claims of all persons to use the water of the appropriate water supply;

(4) the amount of each claim to use water from the appropriate water supply; and

(5) all other matters pertaining to such question.

(c) With regard to whether a proposed use will impair a use under an existing water right, impairment shall include the unreasonable raising or lowering of the static water level or the unreasonable increase or decrease of the streamflow or the unreasonable deterioration of the water quality at the water user's point of diversion beyond a reasonable economic limit. Any person aggrieved by any order or decision by the chief engineer relating to that person's application for a permit to appropriate water may appeal to the district court in the manner prescribed by K.S.A. 82a-724, and amendments thereto. (History: L. 1945; amended 1957; amended 1977; amended 1980; amended 1986; amended 1991.)

K.S.A. 82a-711a. Same; express conditions of appropriations. It shall be an express condition of each appropriation of surface or ground water that the right of the appropriator shall relate to a specific quantity of water and that such right must allow for a reasonable raising or lowering of the static water level and for the reasonable increase or decrease of the streamflow at the appropriator's point of diversion: PROVIDED, That in determining such reasonable raising or lowering of the static water level in a particular area, the chief engineer shall consider the economics of diverting or pumping water for the water uses involved; and nothing herein shall be construed to prevent the granting of permits to applicants later in time on the ground that the diversions under such proposed later appropriations may cause the water level to be raised or lowered at the point of diversion of a prior appropriator, so long as the rights of holders of existing water rights can be satisfied under such express conditions. (History: L. 1957.)

K.S.A. 82a-712. Same; notice of approval or disapproval of application; approval constitutes permit. The chief engineer shall notify the applicant of the approval or disapproval of the application. Upon approving the application the chief engineer shall authorize the applicant to proceed with the construction of the proposed diversion works and to proceed with all steps necessary for the application of the water to the approved and proposed beneficial use and otherwise perfect his or her proposed appropriation. The chief engineer may approve an application for a smaller amount of water than requested and he or she may approve an application upon such terms, conditions, and limitations as he or she shall deem necessary for the protection of the public interest. The approval of the application by the chief engineer, subject to the terms and conditions thereof, upon issuance, constitutes a permit to proceed with construction of diversion or other authorized works and with the diversion and use of water in accordance with the terms and conditions of his or her permit and no common-law claimant without a vested right, or other person without a vested right, a prior appropriation right, or an earlier permit shall prevent, restrain, or enjoin an applicant from proceeding in accordance with the terms and conditions of his or her permit or from diminishing the water supply. (History: L. 1945; amended 1957.)

K.S.A. 82a-713. **Same; limiting time for perfection of appropriation; extension.** The chief engineer shall limit the time for the perfecting of an appropriation to a reasonable period within which the proposed works can be completed by expeditious procedure, and he or she shall for good cause shown by the applicant allow an extension of time. (History: L. 1945.)

K.S.A. 82a-714. **Same; notice of completion of works; certificate of appropriation; field inspection; fee, exception; recordation.** (a) Upon the completion of the construction of the works and the actual application of water to the proposed beneficial use within the time allowed, the applicant shall notify the chief engineer to that effect. The chief engineer or the chief engineer's duly authorized representative shall then examine and inspect the appropriation diversion works and, if it is determined that the appropriation diversion works have been completed and the appropriation right perfected in conformity with the approved application and plans, the chief engineer shall issue a certificate of appropriation in duplicate. The original of such certificate shall be sent to the owner and shall be recorded with the register of deeds in the county or counties wherein the point of diversion is located, as are other instruments affecting real estate, and the duplicate shall be made a matter of record in the office of the chief engineer.

(b) Except for works constructed to appropriate water for domestic use, each notification to the chief engineer under subsection (a) shall be accompanied by a field inspection fee of $200. Failure to pay the field inspection fee, after reasonable notice by the chief engineer of such failure, shall result in the permit to appropriate water being revoked, forfeiture of the priority date and revocation of any appropriation right that may exist. All fees collected by the chief engineer pursuant to this section shall be remitted to the state treasurer as provided in K.S.A. 82a-731 and amendments thereto.

(c) A request for an extension of time to: (1) Complete the diversion works; or (2) perfect the water right, shall be accompanied by a fee of $50.

(d) A request to reinstate a water right or a permit to appropriate water which has been dismissed shall be filed with the chief engineer within 60 days and shall be accompanied by a fee of $100. (History: L. 1945; amended 1957; amended 1985; amended 1990.)

K.S.A. 82a-715. Same; validation of certain applications. All applications for the appropriation of water to beneficial use as filed with the chief engineer, subsequent to May 5, 1941, and all processing, proceedings and certificates pertaining thereto are validated to same extent as if filed after the effective date of this act, but with priorities as of the dates of filing of applications. All subsequent processing of such applications as are still pending and undetermined shall be further considered and processed as provided in this act. (History: L. 1945.)

K.S.A. 82a-716. Common-law claimants; action for compensation; injunctions. If any appropriation, or the construction and operation of authorized diversion works results in an injury to any common-law claimant, such person shall be entitled to due compensation in a suitable action at law against the appropriator for damages proved for any property taken. Any person with a valid water right or permit to divert and use water may restrain or enjoin in any court of competent jurisdiction a subsequent diversion by a common-law claimant without vested rights without first condemning those common-law rights. An appropriator shall have the right to injunctive relief to protect his or her prior right of beneficial use as against use by an appropriator with a later priority of right. (History: L. 1945; amended 1957.)

K.S.A. 82a-717. Repealed. (History: L. 1945; repealed 1957.)

K.S.A. 82a-717a. Diversions by common-law claimants and others; injunctions. No common-law claimant without a vested right, or other person without a vested right, a prior appropriation right, or an earlier permit shall divert or threaten to divert water if such diversion or threatened diversion impairs or would impair any vested right, appropriation right, or right under a permit to appropriate water. But any common-law claimant with a vested right, or other person with a vested right, a prior appropriation right, or an earlier permit may divert water in accordance with any such right or permit although such diversion or use thereunder conflicts with the diversion, use, proposed diversion, or proposed use made or proposed by a common-law claimant who does not have a vested right, or other person who does not have a vested right, a prior appropriation right or an earlier permit. Moreover, any common-law claimant with a vested right, or other person with a vested right, a prior appropriation right, or an earlier permit may restrain or enjoin in any court of competent jurisdiction any diversion or proposed diversion that impairs or would impair such right in the event that any such diversion or proposed diversion is made or is threatened to be made by any common-law claimant, or other person who does not have a vested right, a prior appropriation right, or an earlier permit. (History: L. 1957.)

K.S.A. 82a-718. Abandonment of water rights; procedure; appeals. All appropriations of water must be for some beneficial purpose. Every water right of every kind shall be deemed abandoned and shall terminate when without due and sufficient cause no lawful, beneficial use is henceforth made of water under such right for three successive years. Before any water right shall be declared abandoned and terminated the chief engineer shall conduct a hearing thereon in accordance with the provisions of the Kansas administrative procedure act. Notice shall be served on the user at least 30 days before the date of hearing.

The verified report of the chief engineer or such engineer's authorized representative shall be prima facie evidence of the abandonment and termination of any water right. (History: L. 1945; amended 1957; amended 1988.)

K.S.A. 82a-719. Distribution of water according to decree of court. Whenever the rights for the use of waters of the state shall have been adjudicated by any court, the division of water resources with the aid of its chief engineer and other officers and employees, shall aid in the distribution of such water according to such decree and shall distribute the water among the several ditches or water users pursuant to the decree; and shall have the power to open, close or adjust the headgates and regulate the controlling works of any ditch or structure, or cause the same to be opened, closed, adjusted and regulated so as to make a distribution of the water in conformity with the decree. (History: L. 1933; amended 1945.)

K.S.A. 82a-720. Same; certified copies of decrees. The clerk of any court of this state in which a decree shall be made fixing the rights pertaining to ditches or water users to water, shall within ten days after such decree shall have been entered, forward to the chief engineer of the division of water resources, by registered mail, a certified copy of such decree. (History: L. 1933; amended 1945.)

K.S.A. 82a-721. Construction of act. This act shall be construed liberally to effectuate the purposes hereof, and the enumeration of specific powers in this act shall not operate to restrict the meaning of any general grant of power contained in this act or to exclude other powers comprehended in such general grant. (History: L. 1945.)

K.S.A. 82a-721a. Same; damages to land. Nothing in this act shall be construed as limiting any right of an owner of an estate or interest in or concerning land to recover damage for any injury done to his or her land or to any water rights appurtenant thereto. (History: L. 1957.)

K.S.A. 82a-722. Invalidity of part. If any clause, sentence, paragraph, section or part of this act shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, section or part thereof directly involved in the controversy in which such judgment shall have been rendered, and it shall be presumed that the legislature would have enacted this law with the section, subsection or clause held to be invalid, omitted. (History: L. 1945.)

K.S.A. 82a-723. Repealed. (History: L. 1955; repealed 1957.)

K.S.A. 82a-724. Appeals to district courts and supreme court; procedure. Any action of the chief engineer pursuant to K.S.A. 82a-704a, 82a-708b, 82a-711 or 82a-718, and amendments thereto, is subject to review in accordance with the act for judicial review and civil enforcement of agency actions. (History: L. 1957; amended 1978; amended 1986.)

K.S.A. 82a-725. <u>Same; reference to state division or its chief engineer; procedures; cases in federal courts</u>. In any suit to which the state is not a proper party brought in any court of competent jurisdiction in this state for determination of rights to water, the court may order a reference to the division of water resources or its chief engineer, as referee, for investigation of and report upon any or all of the physical facts involved and the division or its chief engineer shall thereupon make such an investigation and report as ordered by the court. The report shall set forth such findings of fact as may be required by the court's order of reference and may contain such opinions upon the facts as it deems proper in view of the issues submitted. Before filing its report, the division or its chief engineer shall mail notice of its report, together with a copy of it, to the parties or their attorneys of record.

Within thirty (30) days from the date of the mailing of the copy of the report, any party may file objections to it with the division of water resources or its chief engineer. After the division, or its chief engineer, has considered the objections, it shall file its report, as referee, with the clerk of the court and give notice by registered or certified mail of the filing of its report to the parties or their attorneys. The court shall review the report upon exceptions thereto filed with the clerk of the court within thirty (30) days after date of mailing registered notice of filing of the report. Except in its discretion or for good cause shown, the court shall not consider any exception to the report unless it appears that the excepting party presented the matter of the exception to the division or its chief engineer in the form of an objection. The report shall be evidence of the physical facts found therein, but the court shall hear such evidence as may be offered by any party to rebut the report or the evidence. If suit is brought in a federal court for determination of rights to water within, or partially within, the state, the division or its chief engineer may accept a reference of such suit as master or referee for the court. (History: L. 1957.)

K.S.A. 82a-726. <u>Diversion and transportation of water for use in another state; approval by chief engineer; conditions</u>. Any person intending to divert and transport water produced from a point or points of diversion located in this state for use in another state, shall make application to the chief engineer of the division of water resources of the state board of agriculture for a permit to appropriate water for beneficial use or file an application for change in point of diversion, place of use, type of use or any combination thereof. If the chief engineer of the division of water resources finds that the diversion and transportation of such water complies with the Kansas water appropriation act, and amendments thereto, the provisions of K.S.A. 82a-1501 to 82a-1506, inclusive, and amendments thereto, and any other state law pertaining to such diversion, transportation and use of water, the chief engineer shall approve such application upon such terms, conditions and limitations that the chief engineer shall deem necessary for the protection of public interest, including an express condition that should any such water be necessary to protect the public health and safety of the citizens of this state, such approved application may be suspended, modified or revoked by the chief engineer for such necessity. (History: L. 1976; amended 1984.)

K.S.A. 82a-727. Temporary permits to appropriate water; extension; fee; rules and regulations. (a) Subject to existing water rights and the principle of beneficial use, the chief engineer may grant upon application made therefor temporary permits and extensions thereof to appropriate water in any case where the public interest in such water will not be unreasonably or prejudicially affected, except that the chief engineer shall not grant any such permit to appropriate fresh water in any case where other waters are available for the proposed use and the use thereof is technologically and economically feasible. No such temporary permit or any extension thereof shall be granted for a period of time in excess of six months. Each application submitted for a temporary permit or extension thereof shall be accompanied by an application fee of $100.

(b) The chief engineer shall adopt rules and regulations to effectuate and administer the provisions of this section.

(c) Nothing in this section shall be deemed to vest in the holder of any permit granted pursuant to provisions of this section any permanent right to appropriate water except as is provided by such permit.

(d) All fees collected by the chief engineer pursuant to this section shall be remitted to the state treasurer as provided in K.S.A. 82a-731 and amendments thereto. (History: L. 1977; amended 1982; amended 1985.)

K.S.A. 82a-728. Unlawful acts; penalties. (a) Except for the appropriation of water for the purpose of domestic use, the production and return of salt water in connection with the operation of oil and gas wells in accordance with the written approval granted therefor by the Kansas corporation commission pursuant to K.S.A. 55-901, and amendments thereto, the withdrawal and use of water in accordance with provisions of K.S.A. 82a-1313, and amendments thereto, and the annual diversion and beneficial use of not more than 15 acre feet of surface water impounded in any reservoir having a total water volume of less than 15 acre feet, it shall be unlawful for any person to appropriate or threaten to appropriate water from any source without first applying for and obtaining a permit to appropriate water in accordance with the provisions of chapter 7 of article 82a of the Kansas Statutes Annotated and acts amendatory thereof or supplemental thereto or, for any person to violate any condition of a vested right, appropriation right or an approved application for a permit to appropriate water for beneficial use. As used in this subsection salt water shall mean water containing more than 5,000 milligrams per liter chlorides.

(b) (1) The violation of any provision of this section by any person is a class C misdemeanor. (2) Each day that any such violation occurs after notice of the original violation is given by the chief engineer to any such violator by restricted mail shall constitute a separate offense. (History: L. 1977; amended 1981.)

K.S.A. 82a-729. Act supplemental to article 7 of chapter 82a of the Kansas Statutes Annotated. The provisions of K.S.A. 82a-727 and 82a-728 shall be a part of and supplemental to the provisions of article 7 of chapter 82a of the Kansas Statutes Annotated and acts amendatory thereof or supplemental thereto. (History: L. 1977.)

K.S.A. 82a-730. Citation of act. K.S.A. 82a-701 to 82a-726, inclusive, and acts amendatory thereof and supplemental thereto shall be called and may be cited as the Kansas water appropriation act. (History: L. 1977; amended 1984.)

K.S.A. 82a-731. Water appropriation certification fund created; expenditures therefrom. There is hereby created in the state treasury the water appropriation certification fund. The chief engineer of the division of water resources of the state board of agriculture shall remit all moneys received under K.S.A. 82a-708a, 82a-708b and 82a-727, and any amendments to these sections, to the state treasurer at least monthly. Upon receipt of any such remittance the state treasurer shall deposit the entire amount thereof in the state treasury and the same shall be credited to the water appropriation certification fund. All expenditures from the water appropriation certification fund shall be made in accordance with appropriation acts upon warrants of the director of accounts and reports issued pursuant to vouchers approved by the secretary of the state board of agriculture or by a person designated by the secretary. (History: L. 1982.)

K.S.A. 82a-732. Annual water use reports required, contents; penalty; disposition of fines. (a) The owner of a water right or permit to appropriate water for beneficial use, except for domestic use, shall file an annual water use report on a form prescribed by the chief engineer of the division of water resources of the state board of agriculture on or before March 1 following the end of the previous calendar year. The report shall completely and accurately set forth such water use information as requested by the chief engineer.

(b) Any person failing to file a water use report or other documents required under the provisions of subsection (a) shall be subject to a civil penalty in an amount not to exceed $250. The chief engineer upon a finding that the owner of a water right or permit to appropriate water for beneficial use has failed to file such a report may impose a civil penalty as provided in this section. Any person filing a document knowing it to contain any false information as to a material matter shall be guilty of a class C misdemeanor. All fines collected by the chief engineer pursuant to this subsection shall be remitted to the state treasurer as provided in K.S.A. 82a-731, and amendments thereto. (History: L. 1988; amended 1991.)

K.S.A. 82a-733. Conservation plans and practices. (a) The chief engineer may require an applicant for a permit to appropriate water for beneficial use or the owner of a water right or permit to appropriate water for beneficial use to adopt and implement conservation plans and practices. The chief engineer shall not mandate the adoption and implementation of conservation plans and practices except pursuant to a finding that such plans and practices will assure public benefit and promote public interest. In selecting the applications, water rights or permits for which conservation plans and practices are required to be adopted and implemented, the chief engineer shall give priority to: (1) Water users that share a common source of supply that could be insufficient during times of drought; (2) water users whose use is significantly higher than their peers from the same geographical area with comparable circumstances; and (3) water users who apply for any state administered grant, loan or cost-share moneys for water-related projects. Prior to requiring the adoption and implementation of conservation plans and practices, the chief engineer shall assess the availability of technical assistance and inform the owner of a water right or permit to appropriate water for beneficial use or the applicant for such a permit who is required to adopt and implement a conservation plan and practices of the available sources of technical assistance to prepare the conservation plan.

(b) The chief engineer shall allow the owner of a water right or permit to appropriate water for beneficial use or the applicant for such a permit a minimum of 60 days to prepare a required conservation plan. The time allowed to prepare the required conservation plan may be extended by the chief engineer for good cause shown by the applicant. The chief engineer shall provide the owner of the water right or permit to appropriate water for beneficial use or the applicant for such a permit a reasonable time to implement the conservation plan and, for good cause shown, such as the need to apply extensive land treatment practices, the chief engineer may extend the time for implementation for a period of up to five years.

(c) Plans and practices required pursuant to this section shall be consistent with the guidelines for conservation plans and practices developed and maintained by the Kansas water office pursuant to subsection (c) of K.S.A. 74-2608 and amendments thereto. If requested by the owner of the water right or permit to appropriate water for beneficial use or the applicant for such a permit, the chief engineer, in consultation with the director of the Kansas water office, shall determine whether such plans and practices are consistent with the guidelines adopted by the Kansas water office. The Kansas water office shall provide, or arrange to provide, technical assistance for water users required to adopt and implement conservation plans and practices pursuant to this section.

(d) Before any state agency makes any loan or grant, or provides any cost-share funds, for any water-related projects to any person or entity, the state agency may require the person or entity to submit to, and have approved by, the chief engineer a water conservation plan consistent with the guidelines for conservation plans and practices developed and maintained by the Kansas water office pursuant to subsection (c) of K.S.A. 1990 Supp. 74-2608 and amendments thereto.

(e) As used in this section, "water-related projects" shall include, but not be limited to, the following: Interconnections between water supply systems; development of new water supply and delivery systems; improvements or repairs to an existing water supply system, sanitary sewer system or water treatment system, which would significantly increase the amount of water used; small lakes development, improvement or repair; and development of other small impoundments for public water supply or irrigation.

(f) The chief engineer may approve the conservation plans and practices required pursuant to the provisions of this section on such terms, conditions and limitations as deemed necessary to carry out the provisions of this section. The implementation of the conservation plan and practices as approved or any subsequent approved modification shall constitute a condition of the water right or permit to appropriate water for beneficial use.

(g) Any conservation plans and practices required pursuant to this section with regard to any groundwater right or permit to appropriate groundwater from within the boundaries of a groundwater management district shall be subject to approval by both the chief engineer and the board of directors of the groundwater management district unless such plans and practices are incorporated in the groundwater management district's management program which has been approved by the chief engineer pursuant to K.S.A. 82a-1029 and amendments thereto.

(h) The chief engineer may delegate authority to implement and enforce any of the provisions of this section to a groundwater management district on such terms as may be appropriate and necessary to carry out the provisions of this section within the boundaries of such district.

(i) The chief engineer may delegate to any city which has conservation plans meeting state guidelines the authority to require domestic water users within such city to adopt and implement conservation plans and practices so that such city can require compliance from private domestic well owners within the city limits.

(j) This section shall be part of and supplemental to the Kansas water appropriation act. (History: L. 1991.)

K.S.A. (#not assigned yet) House Bill No. 2476. (a) An operator will notify the chief engineer of the division of water resources of the state board of agriculture of the location and area extent of any existing or proposed sand and gravel pit to be excavated, expanded or operated by the operator.

(b) Unless the chief engineer determines that it has a substantially adverse impact on the area groundwater supply, the evaporation of water exposed as the result of the opening or operation of sand and gravel pits shall not be construed to be a beneficial use or diversion of water for the purposes of the Kansas water appropriation act, K.S.A. 82a-701 *et seq.*, and amendments thereto.

(c) Evaporation from sand and gravel pits, as calculated by the chief engineer, will be reported as an industrial use to the director of taxation for the purpose of assessing the water protection fee pursuant to K.S.A. 92a-954, and amendments thereto. (History: L. 1995)

Note: DWR interprets the above paragraph statement of "92a-954" to have been erroneous and should have stated "82a-954."