

# Web Resources for Floodplain Management

Kansas Department of Agriculture

Bill Pace, CFM

Floodplain Mapping Specialist

9/19/2024

### Agenda

- New KDA Website
  - Resource Pages
  - Mapping Project Pages
- Web Map
  - KDA Current Effective Viewer
  - KDA Floodplain Mapping Projects Viewer
  - Letter of Map Change Web Viewer
- Kansas Base Flood Elevation Portal

# **KDA Website**

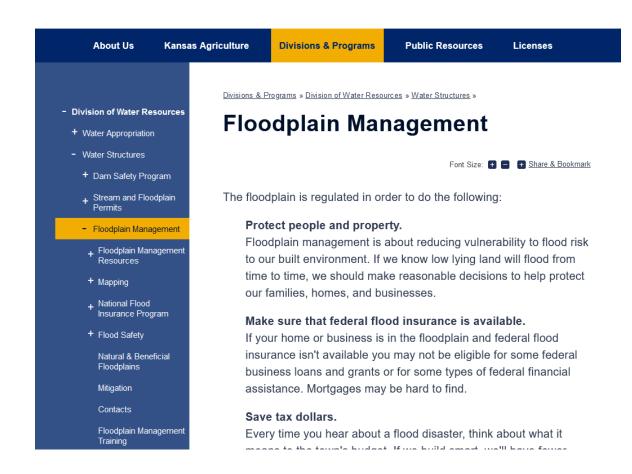
### KDA Website

- The main KDA website underwent an update in summer 2024
- Done to make the website more visually appealing and easy to navigate
- Will need to update bookmarks



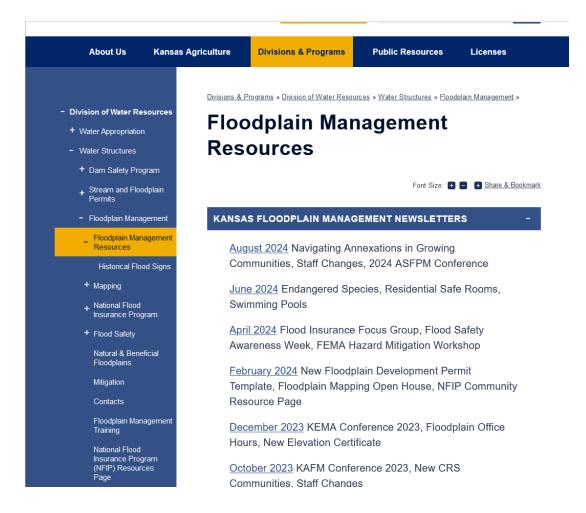
### **KDA** Website

- KDA provides information on floodplain management topics:
  - Floodplain Management Resources
  - National Flood Insurance Program
  - NFIP Resources Page
  - Floodplain Management Training Page
  - Mapping Page
  - Mitigation
  - Flood Safety
  - Natural and Beneficial Floodplains
  - Contacts



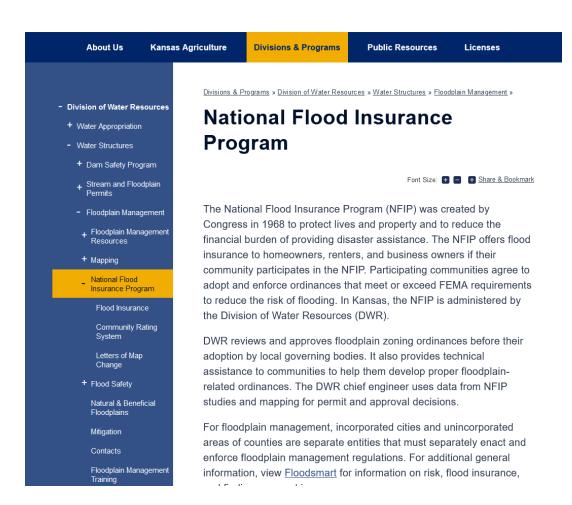
# Floodplain Management Resources Page

- Provides a list of bimonthly floodplain management newsletters
  - Reach out to our office if you would like to be added email list
- Assorted publications and additional resources
- Historical flood sign project page



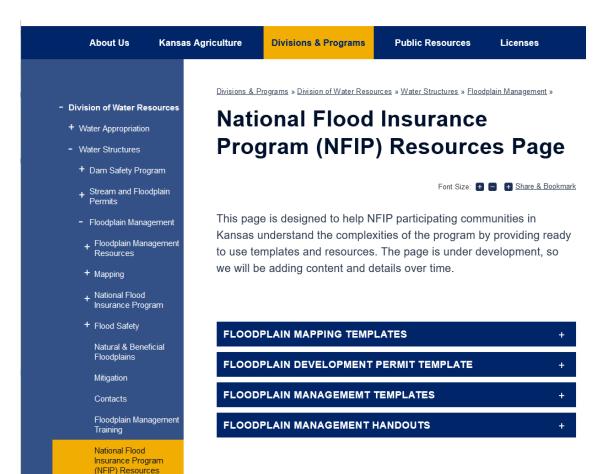
# National Flood Insurance Program Page

- Provides overview of the National Flood Insurance Program (NFIP)
- Links to information on:
  - Flood insurance
  - Community Rating System (CRS)
  - Letters of Map Change (LOMC)



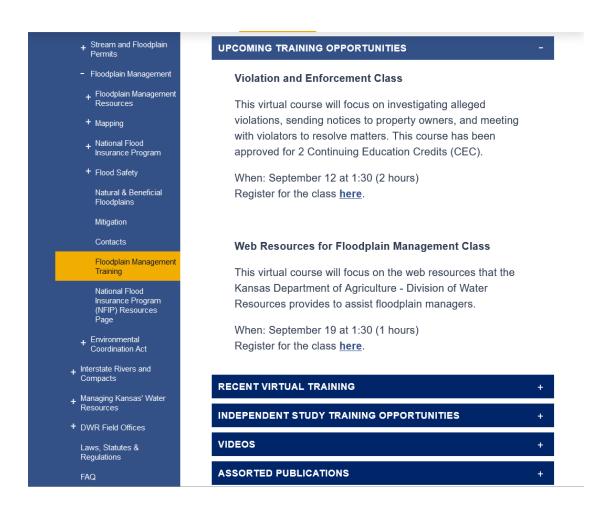
### NFIP Resources Page

- Provides communities with handouts and templates to use:
  - Floodplain Mapping Templates: open house notification, social media template, appeals information, etc.
  - Floodplain Development Permit Templates
  - Floodplain Management Templates: model ordinance template, public hearing notice, etc.
  - Floodplain Management Handouts: handouts for joining NFIP, hiring a survey, and filling for LOMA



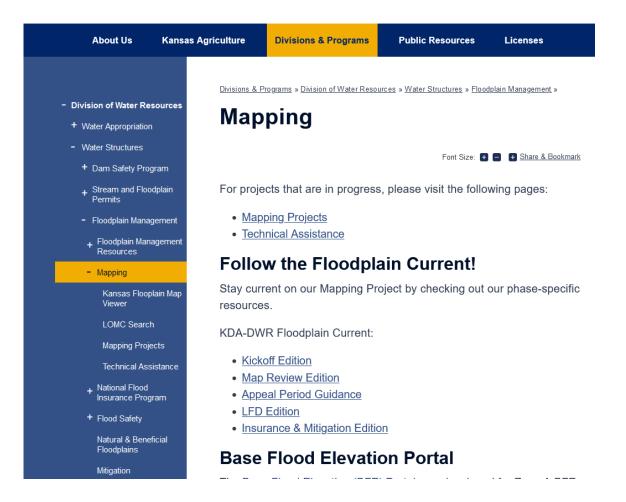
# Floodplain Management Training Page

- Upcoming training
- Recent virtual training and links to recordings
- Independent Study
  - FEMA
  - KS TRAIN
- Videos
- Assorted publications
- Updated whenever new trainings are scheduled and recordings are available

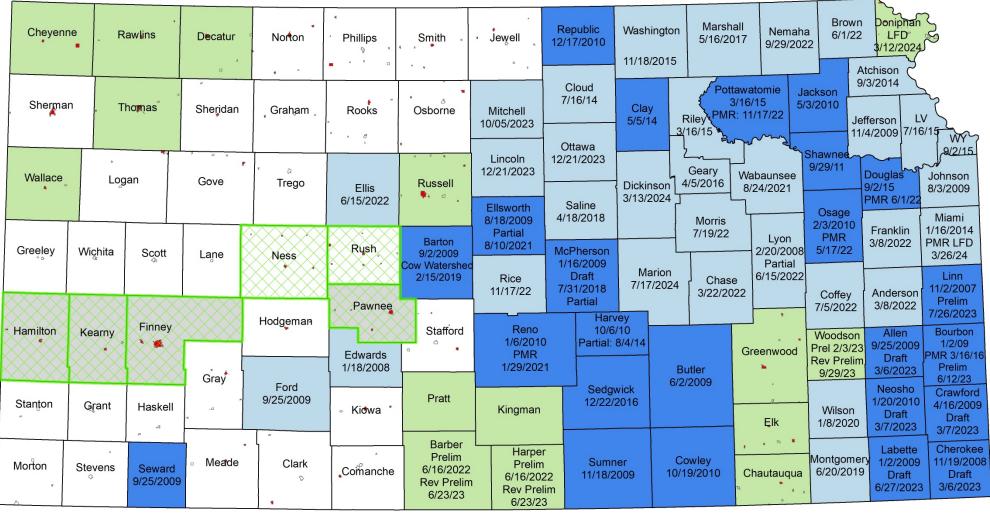


### Mapping Page

- Overview of the mapping program
- Links to the floodplain mapping projects and technical assistance projects
- Links to the Kansas BFE Portal, Kansas Current Effective Floodplain Viewer, and LOMC Viewer
- A map of the floodplain mapping status



### **Kansas Floodplain Mapping Status**



#### **Modernized DFIRM**

Effective DFIRM

Effective DFIRM with Redevelopment

DFIRM Under Development

2D Planned Development FY24

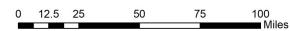
#### **Not Modernized FIRM**

County-Wide Available

Cities with SFHA Identified



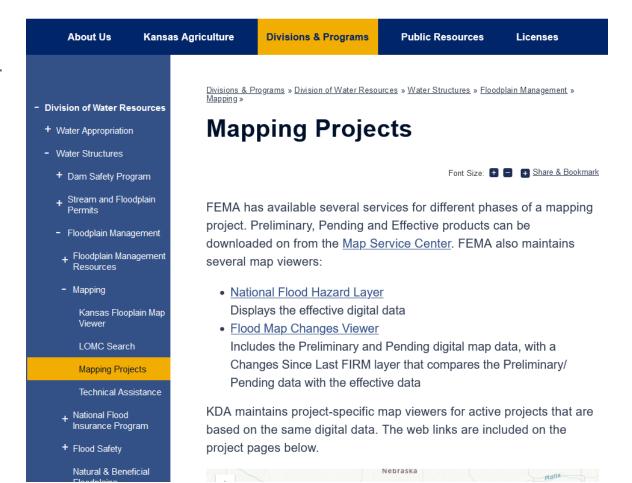
Dates reflect the most recent study and may vary by location within a county Consult the watershed map for watershed projects

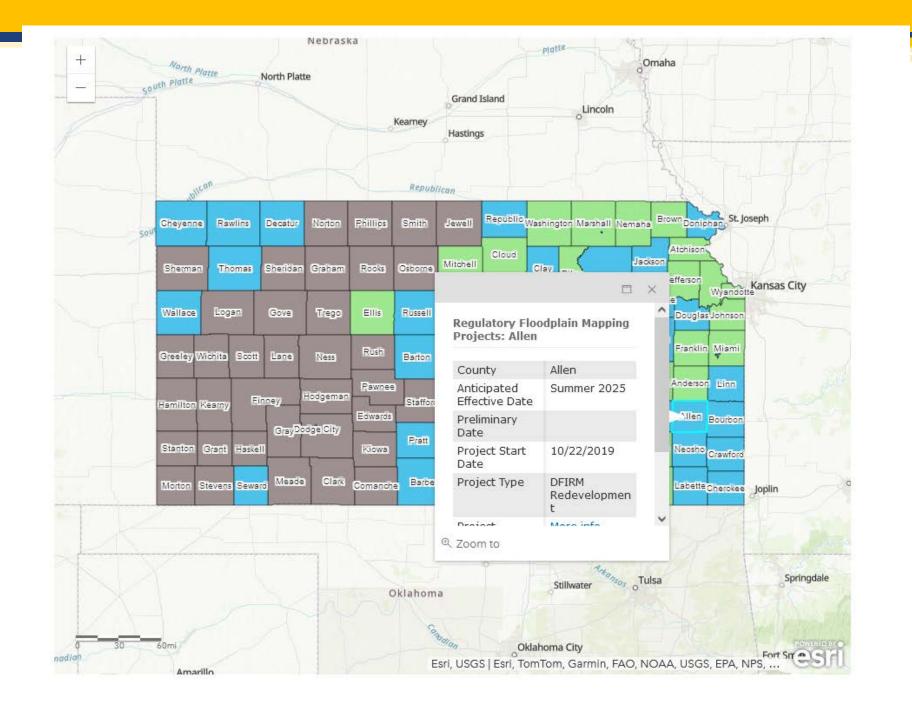


July 18, 2024

### Mapping Project Page

- Links to floodplain mapping projects
- Links to the FEMA National Flood Hazard Layer and Flood Map Changes Viewer
- Embedded project status map that you can view the status of the floodplain mapping projects by county
- Reference map of ongoing projects

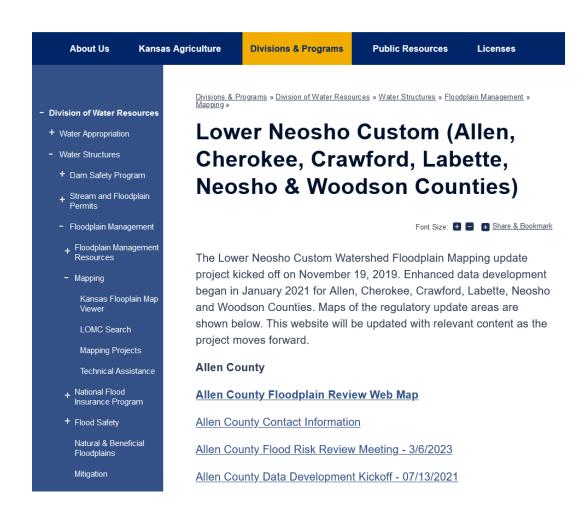


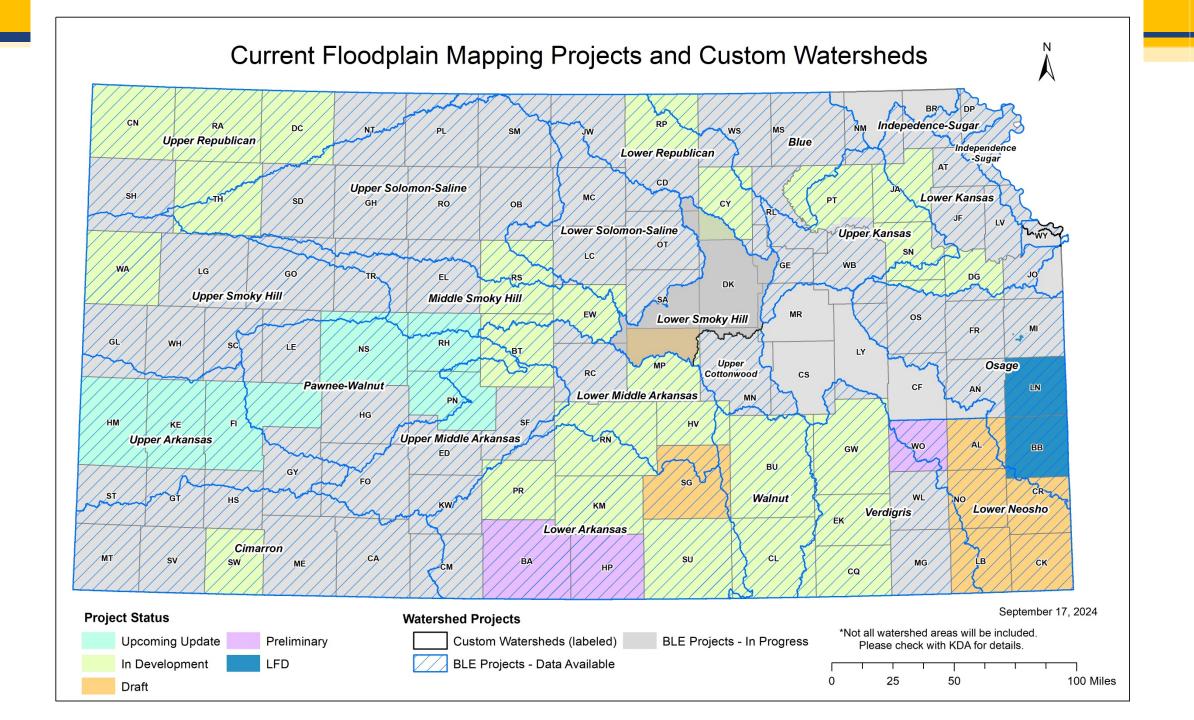




# Mapping Project Page – Project Specific Pages

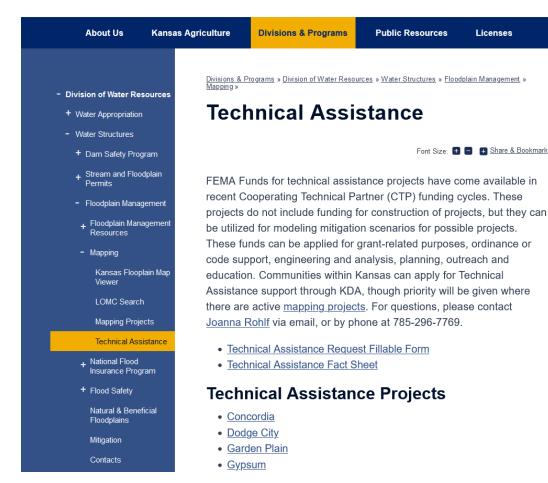
- Project web pages are updated at different stages
- Presentations
- County contact information
- Scoping maps
- Links to project web maps





### Technical Assistance Page

- KDA has FFMA funds that can be used for potential flood mitigation measures
  - Can't fund construction but can be used for modeling
- The Technical Assistance website provides links to the request form and a fact sheet about technical assistance
- Technical assistance project web pages provides an overview of the project and the final report



Licenses



#### **OVERVIEW**

Technical Assistance (TA) should be used to encourage communities to carry out hazard mitigation plans (HMPs). It can also help them advance actions that are supported by the Risk Mapping. Assessment and Planning and mitigation programs. Below are examples of TA project types and activities.

#### Please note: This is not an all-inclusive list.

Contact the Kansas Department of Agriculture's Division of Water Resources to learn more.

#### CATEGORY

#### **EXAMPLES OF ACTIVITIES**

#### ENGINEERING **ANALYSES**

- ✓ Carry out feasibility analysis and technical studies to help advance projects in the HMP.
- AND FEASIBILITY ✓ Collect data and perform modeling scenarios for theoretical flood impacts and mitigation measures for riverine storage and levee applications like:
  - · Add more detail to FEMA floodplain maps
  - · Assess hydrology methods for the 1% annual chance event
  - Detention and retention facilities that expand storage and reduce flooding
  - · Develop materials to support design plans
  - Evaluate future land use conditions on flooding
  - · Risk-based planning analysis for dams and levees
  - · Stream modifications to reduce flooding, including culvert improvements, stream restoration, and channelization
  - ✓ Complete enhanced flood risk products that include:
  - · Erosion and scouring analyses
  - · Insurance coverage heat maps
  - Sinkhole analysis
  - · Structure-based risk assessments
  - Velocity grids
  - Stormwater analysis
  - ✓ Conduct healthy soil analysis that will determine how changes in soil characteristics from regenerative agriculture practices can influence flood risk.
  - ✓ Gather data to perform modeling and hydrogeologic evaluations that support aguifer storage and recovery projects.
  - ✓ Sponsor and carry out mitigation actions through activities such as capability assessment; gap analysis; and process, change and project management.

November 2022 | 1





#### TA CONSIDERATIONS

- · Activities funded under this task are to help local governments prepare to undertake or plan for water resource-related mitigation activities.
- · They must be coordinated with state agencies and FEMA regional offices. This will ensure the technical assistance is not duplicated in other tasks within the CTP program or other mitigation planning grants.
- Recipients must ensure that proposed technical assistance activities focus on support related to community engagement, risk communication and mitigation action.
- · The funds cannot be used to develop a mitigation plan or complete an official FEMA BCA.
- · The funds cannot be used to support the construction of projects; they can be used for modeling mitigation scenarios for possible projects.
- · There is no local cost share requirement.
- · A State Contractor will be provided; recipients will not have to source or fund one.

#### CATEGORY

#### **EXAMPLES OF ACTIVITIES**

#### PLANNING AND POLICY

- ✓ Assess risk for hazard decision support, including Hazus or other methods.
- ✓ Coordinate watershed planning efforts.
- Establish floodplain ordinances with higher standards: improve building codes to include floodplain management and nature-based mitigation requirements.
- ✓ Include natural hazards in all relevant areas of community planning: comprehensive plans; capital improvement plans: stormwater management plans: parks and open space plans; and transportation plans.
- ✓ Incorporate nature-based applications into Stormwater Management Plans and floodplain management.
- ✓ Integrate the Community Rating System into mitigation plans and floodplain ordinances.

#### MITIGATION GRANT **APPLICATION** DEVELOPMENT

- ✓ Create and maintain a database of federal. and state hazard mitigation grants.
- ✓ Develop scopes of work, schedules and budgets for a successful mitigation activity grant application. Funds may not be used to develop, submit or execute a grant proposal on behalf of the community.
- ✓ Identify, capture and document the data to run a benefit cost analysis (BCA). Provide training and assistance on BCA development.

#### OUTREACH AND COORDINATION

- ✓ Produce a Story Map for flood awareness and mitigation measures.
- ✓ Provide educational material and update social media content to raise awareness and engagement on topics like:
- · Floodplain management and insurance
- · Healthy soils
- · Aquifer storage and recovery
- · Dam safety and levee protection
- · Hazard mitigation

#### TRAINING

- ✓ Host training for community officials on map changes, flood risk awareness, and mitigation options for residents.
- ✓ Offer FEMA Hazard Mitigation Assistance grant development and BCA training and technical support.

#### For more information, please contact the Kansas Department of Agriculture:

Cheyenne Sun Eagle Phone: 785-276-9359

Email: cheyenne.suneagle@ks.gov

Joanna Rohlf Phone: 785-221-3809 Email: joanna.rohlf@ks.gov

November 2022 | 2

Topeka Field Office 1131 SW Winding Rd, Suite 400 Topeka, KS 66615



Phone: 785-296-5733 www.agriculture.gov Laura Kelly, Governor

Mike Beam, Secretary

#### Risk MAP Technical Assistance Request Form

Since the Kansas Department of Agriculture (KDA) is a Cooperating Technical Partner (CTP) with FEMA, KDA can request Technical Assistance (TA) funds from FEMA to support community's planning efforts to mitigate flood risk in Kansas communities. KDA is not guaranteed a certain amount but is invested in requesting funding to consider options that support flood risk reduction efforts. To find out more about the types of technical assistance projects that are allowed, please refer to the TA Fact Sheet.

requesting funding to consider options that support flood risk reduction efforts. To find out more about the types of technical assistance projects that are allowed, please refer to the $\underline{\sf TA\ Fact\ Sheet}$ .		
Name:	Community:	
Phone:	Email:	
Address:		
Type of Technical Assistance	Notes	
Grant Assistance		
Ordinance/Code Support		
Engineering & Analysis		
Planning		
Community Outreach & Education		
Other		
M/hu is usua someonitu requesting TA su	Channel	
Why is your community requesting TA su	pports	

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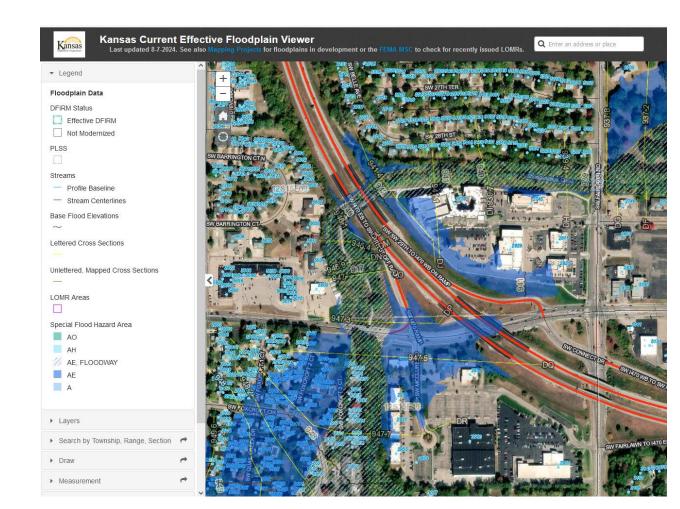
Mike Beam, Secretary Laura Kelly, Governor

Has your community had a previous TA s	
,	··
Does your community participate in the	National Flood Insurance Program? Yes No
, , ,	dinance review/discussion (Community Assistance Contact V)) with FEMA or KDA within the past three years?
Yes No	Not sure
If no or unsure, would your community b	pe open to a floodplain ordinance discussion?
	n/implementation purposes. If a feasible project is found at types of funding sources your community would consider
Funding type	Notes
Federal Grants (i.e. BRIC, HMGP)	
USACE support	
Other grants	
Community funds	
Tax levy	
Other (please describe)	
Please describe any other information th	at you feel may be relevant to this request:
Please send requests to:	
Cheyenne Sun Eagle, CFM	Joanna Rohlf, GISP, CFM
NFIP Coordinator	Floodplain Mapping
785-276-9359 cheyenne.suneagle.ks.gov	Coordinator 785-221-3809 joanna.rohlf@ks.gov

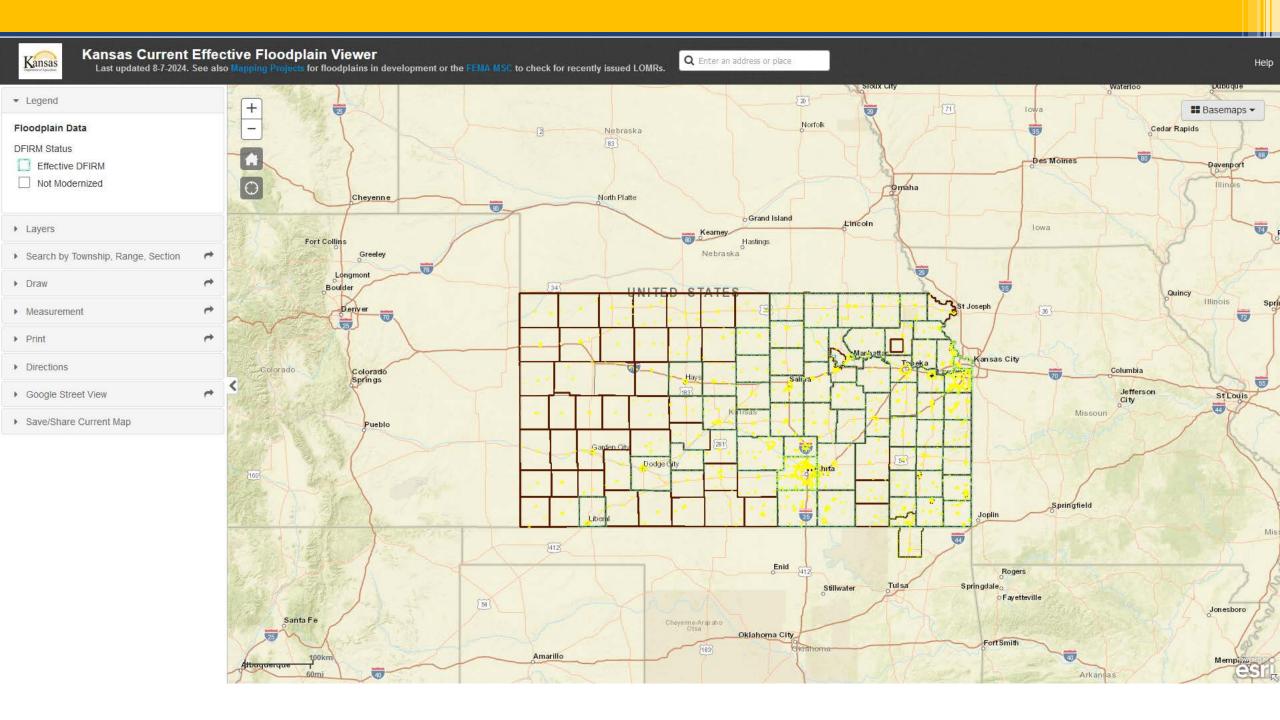
## Other Pages

- The Flood Safety page provides information on flood safety
- The Natural and Beneficial Functions page provide information on the beneficial functions of natural floodplain
- The Mitigation page provides information on flood mitigation
- The Floodplain Contacts page provide contact information for KDA and the floodplain management staff along with other important contacts

- KDA has developed web map provide flood risk information and project information
- These maps are updated periodically whenever new data is available



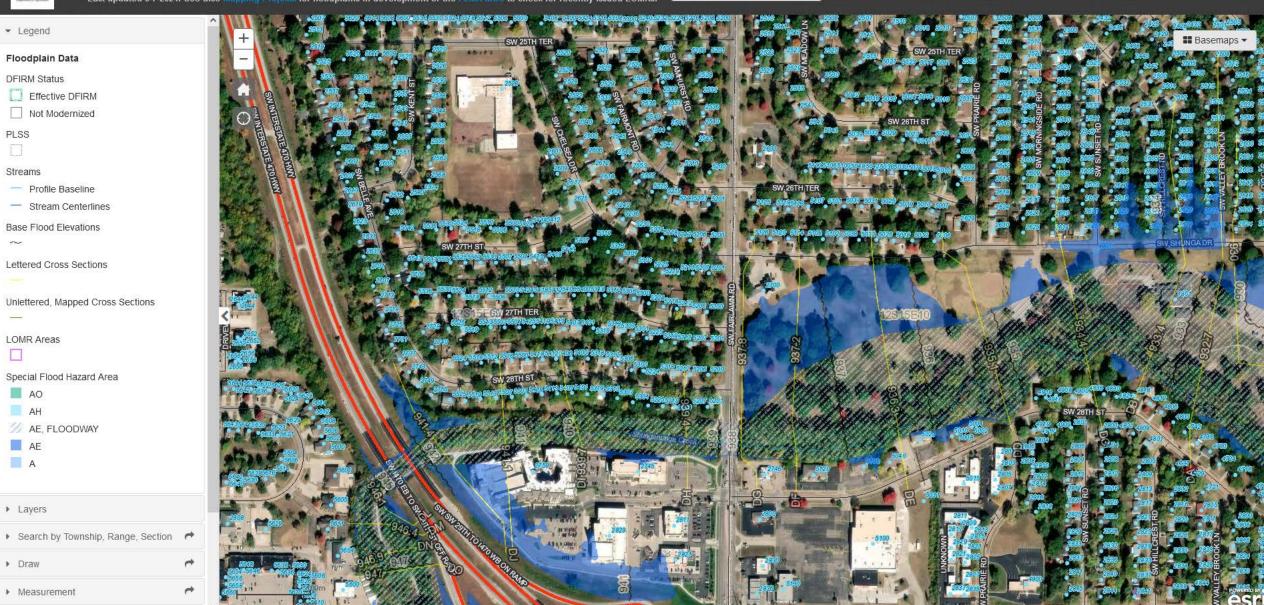
- The Kansas Current Effective Floodplain Viewer show the current effective FEMA floodplains in Kansas
- https://gis2.kda.ks.gov/gis/ksfloodplain/
- Includes the important layers: SFHA, Lettered Cross-section, LOMR areas, etc.
- Georeferenced paper FIRMs are also shows for communities without effective digital maps
- Print, draw, and measure tools and can search by address or Township Range and Section



Kansas Current Effective Floodplain Viewer

Last updated 8-7-2024. See also Mapping Projects for floodplains in development or the FEMA MSC to check for recently issued LOMRs.

Q Enter an address or place



Kansas Current Effective Floodplain Viewer

Last updated 8-7-2024. See also Mapping Projects for floodplains in development or the FEMA MSC to check for recently issued LOMRs.

24S41W11

NW CR 19

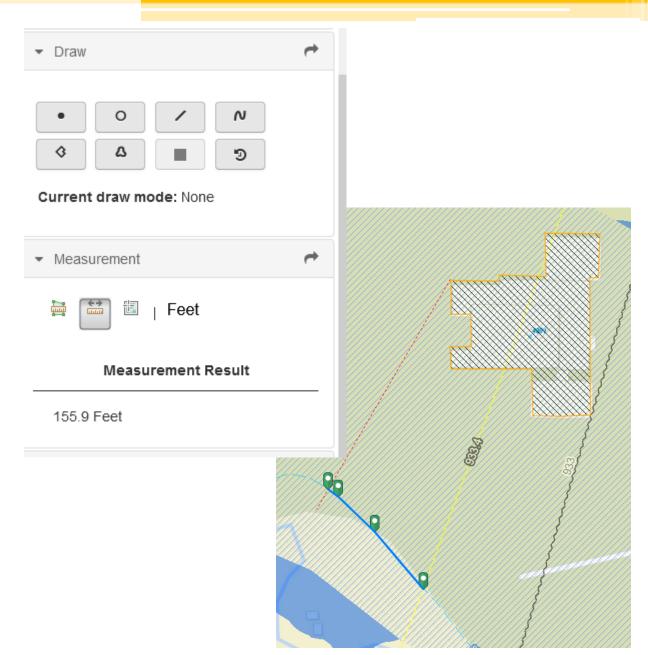
2454FW12

Q Enter an address or place Help **■ Basemaps** ▼ NE CR 19 24S40W16

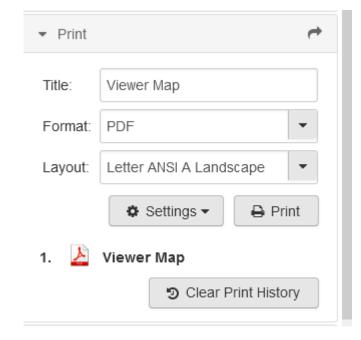
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Kansas Last updated 8-7-2024. S
▼ Legend
Floodplain Data
DFIRM Status
Effective DFIRM
Not Modernized
PLSS
Streams
Profile Baseline
Stream Centerlines
Base Flood Elevations
The second section of the second seco
Lettered Cross Sections
Unlettered, Mapped Cross Sections
LOMR Areas
Special Flood Hazard Area
■ AO
AH
AE, FLOODWAY
AE
A A
Digitized Paper Maps
Digitized Floodplains
Zone A
Zone AE (or numbered A Zone)
Floodway
Zone AH
Zone AO

- The drawing tool allows you to draw lines and polygons on the web map
- The measurement tool allows you to measure distances and areas
- You can use these tools to help with calculating a BFE using a flood insurance study report and flood profile



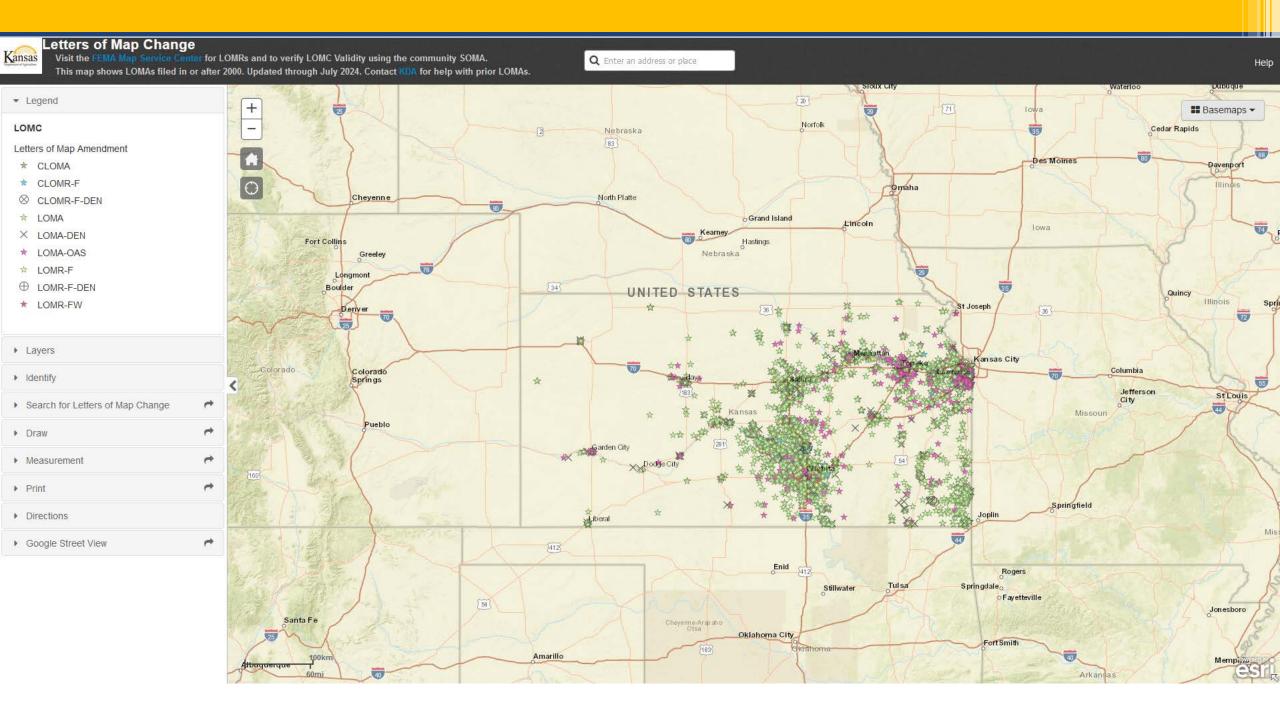
- The Print tool allows you to export a map of the area that you are viewing
  - Title the map
  - File format
  - Layout

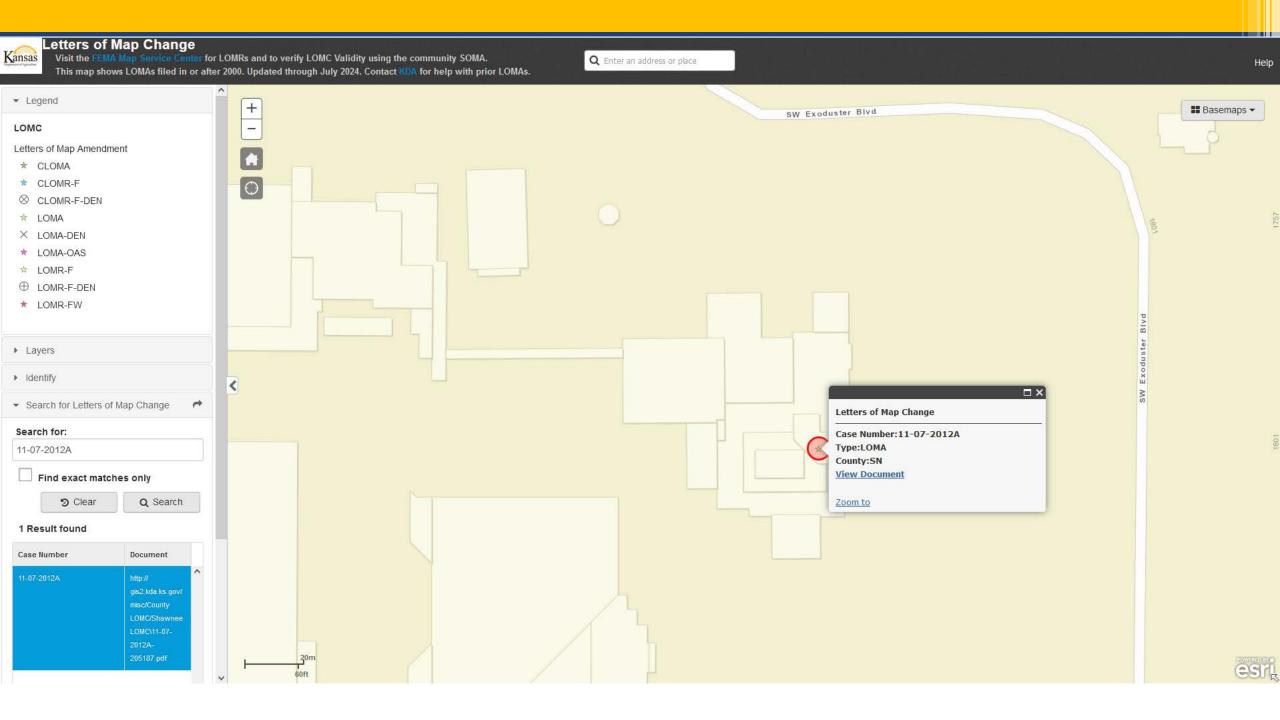


#### Viewer Map

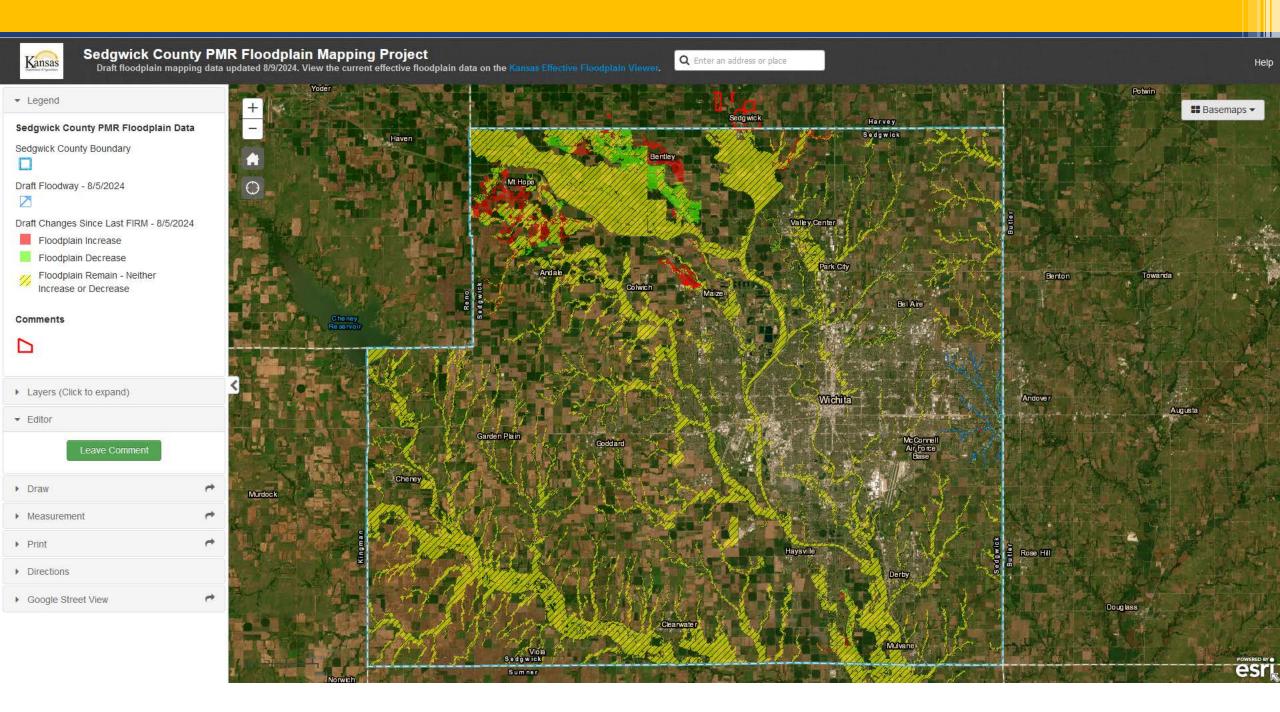


- The Letter of Map Change (LOMC) web map allows for searching and downloading LOMCs issued in Kansas
- https://gis2.kda.ks.gov/gis/kslomc/
- Can search by address or by LOMC case number

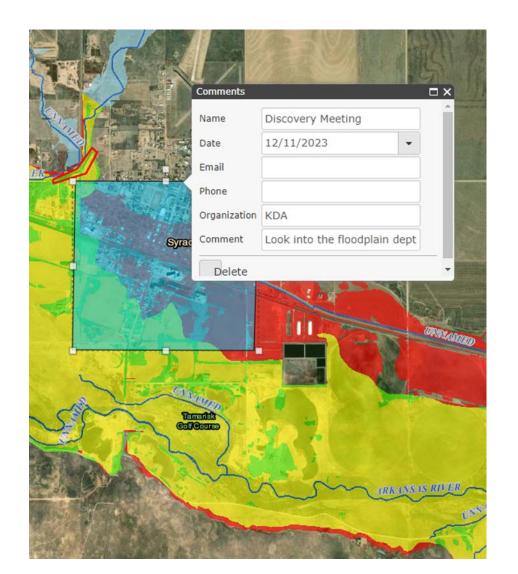




- Every KDA floodplain mapping project will have a project web map
- Allows for display draft data to communities and for taking comments
- Update throughout the lifecycle of the project whenever new data is available
- Draft data: floodplains (SFHA and 500-year), Cross-sections, Zone A BFA's, LOMC's, streams, and Change Since Last FIRM (CSLF)
- CSLF shows the changes between the effective floodplains and the draft floodplains



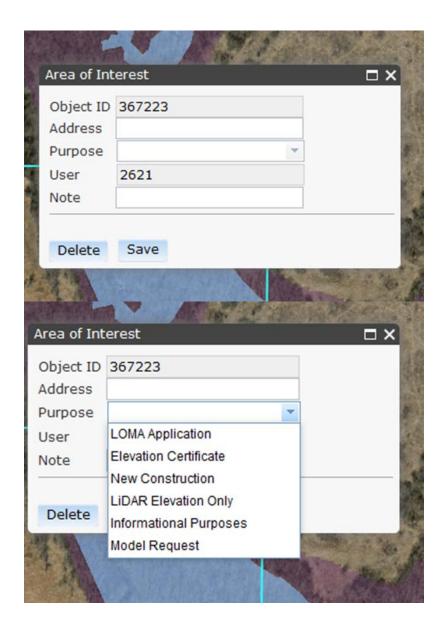
- The commenting feature is used to collect feedback on the draft floodplains:
  - Kickoff meeting
  - Flood Risk Review meeting
  - Public open house
- The comments are used to improve the floodplain modeling



- Free service to provide BFE values for Zone A floodplains
- Partnership between KDA and Kansas Data Access and Support Center (DASC)
- Launched on October 1, 2017
- http://maps.kgs.ku.edu/fpm\_bfe/login.cfm



- Requests can be for:
  - LOMA
  - Elevation Certificate
  - New Construction
  - LiDAR
  - Information Purpose
- Can request floodplain models but a new dedicated model download service is being developed



- After KDA completes the request, a letter is provided with the BFE value and the Lowest Adjacent Grade (LAG)
- The LAG is LiDAR based and is not considered survey grade accurate

Topeka Field Office 1131 SW Winding Rd, Suite 400 Topeka, KS 66615



Phone: 785-296-5733 www.agriculture.ks.gov

Mike Beam, Secretary

Laura Kelly, Governor

May 20, 2024

Re: Base Flood Elevation Determination

ear .

This is in response to your request for a Base Flood Elevation (BFE), the property at 4107 3rd St., Great Bend. The subject property is mapped within Zone A on panel 20009C0510D with fine cyrrent effective date of 9/2/2009. The base flood elevation for the subject property is 1838.3 Feet NAVD 88. At the dig A map of the property. The BFE calculation was developed using excess rainfall-on-grid hydrology and 2-D HEG-RA. hydraulics that utilized high resolution LiDAR data as the ground elevation source. This is draft data, and the BFC values are subject to increase or decrease as the mapping project progresses.

Based on the LiDAR, the approximate Lowest Adjacent Grade LA for the user drawn polygon is 1858.5 Feet NAVD 88. LiDAR data is believed to be accurate to within a foot of actual ground elevation barring any land changes. This data is provided as a reference only and is not survey grade accurate and pannot be used in FEMA Letter of Map Amendment (LOMA) Applications.

Larger floods than the 1% event are possible and the source modeling for the BFE was developed using approximate methods. Structures located above the determined BFF are configurations of guaranteed to be safe from flooding. The Kansas Department of Agriculture, Division of Water Resources, economics purchasing flood insurance. Talk to your insurance



Panel 0510 Panel Type

Firm Panel 20009C0510D Effective Date 9/2/2009

Sincerely,

Keegas Shwartz

Keegan Schwartz Floodplain Outreach Specialist Division of Water Resources

Page 1 of 1

- DASC completed updates to the Kansas BFE Portal Map
  - Makes the design cleaner
  - 2-foot LiDAR ground elevation contours

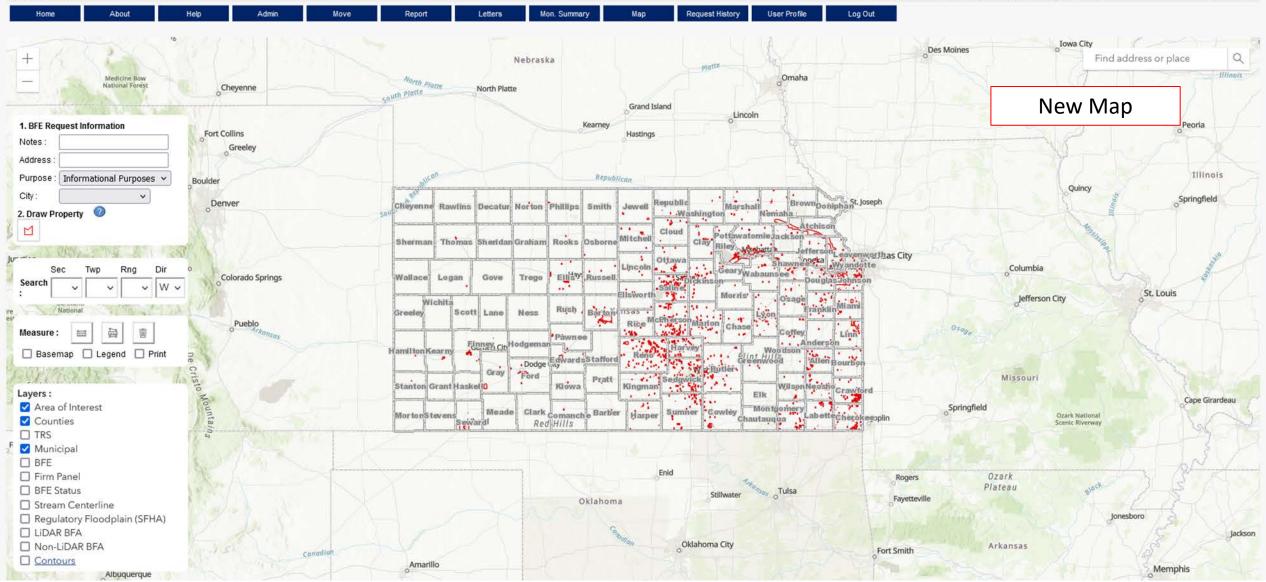


Please visit the Mapping Projects Page to view floodplains in development. About Mon. Summary Request History User Profile Log Out Letters Older Map Draw Property @ Close Find Address ▶ Switch Basemap Trace the boundary of the structure using the aerial imagery as your guide. Try to follow the boundary precisely. Find address or plac Layers Legend Search Sec, Twp, Rng Measurement ☐ Don't show again

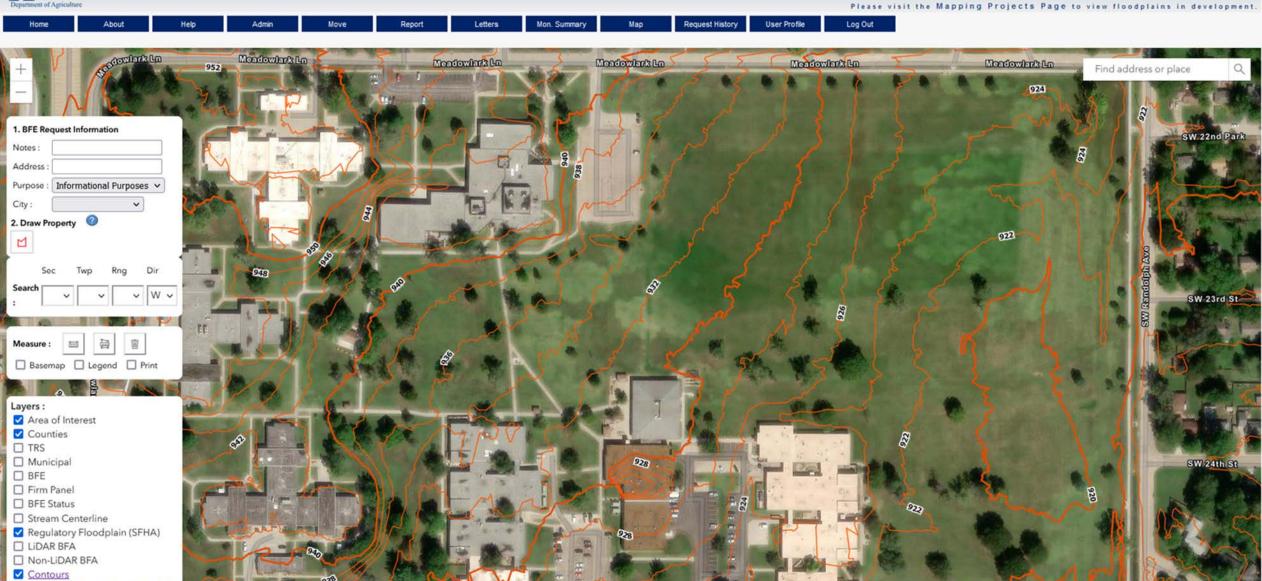
All Kansas PSAPs, NG911 Coordinating Council, DASC | Earthstar Geographics

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Please visit the Mapping Projects Page to view floodplains in development.









# THANK YOU

Bill Pace, CFM

Floodplain Mapping Specialist William.Pace@ks.gov