



SAN ANTONIO  
RIVER AUTHORITY

# Region 12 FPG: Available Models

April 20, 2021



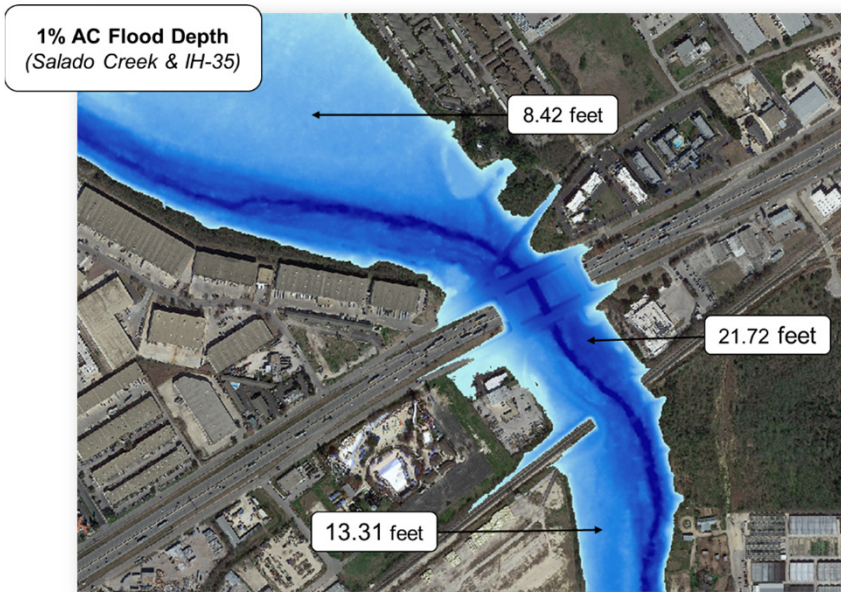
# Hydrologic and Hydraulic Study Types

- Base Level Engineering
  - Regression equations or rain-on-grid for flows
  - No structure data
- Detailed or Limited Detail Studies
  - Gauge analysis or rainfall-runoff model for flows
  - Structure surveys, field measurements, or as-builts
- Predictive Flood Model
  - Gauge-adjusted radar rainfall
  - Structure rating curves



# Flood Risk Data

## Depth of Flooding



## Percent Chance of Flooding



# Floodplain Mapping Studies Status








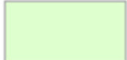

# Medina Watershed

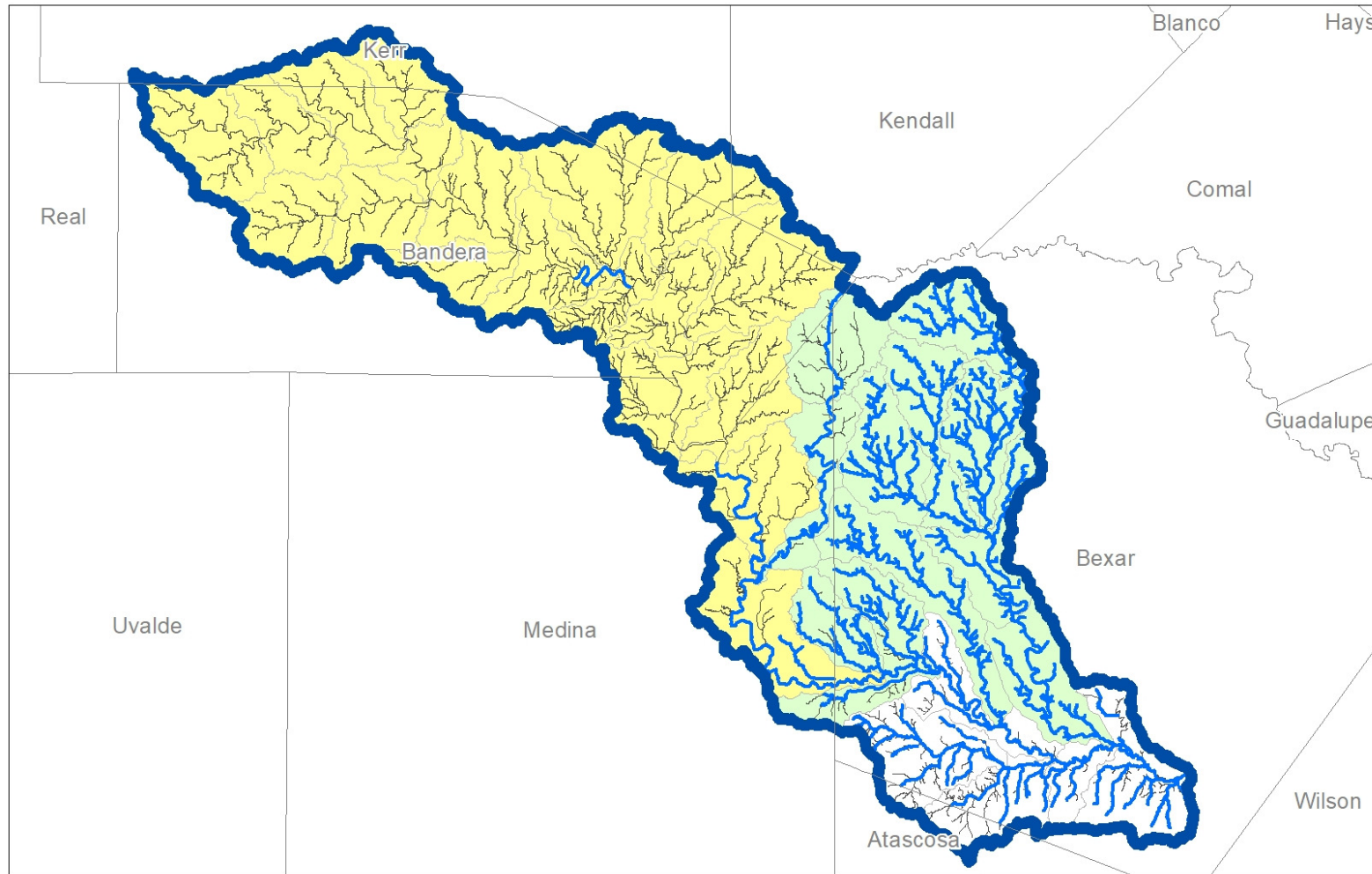
## Legend

### Study Level of Detail

-  Detailed/Limited Detail
-  Base Level Engineering

### HUC12-Study Areas



-  Complete
-  Draft to FEMA Fall 2021
-  Draft to FEMA 2022




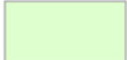

# Cibolo Watershed

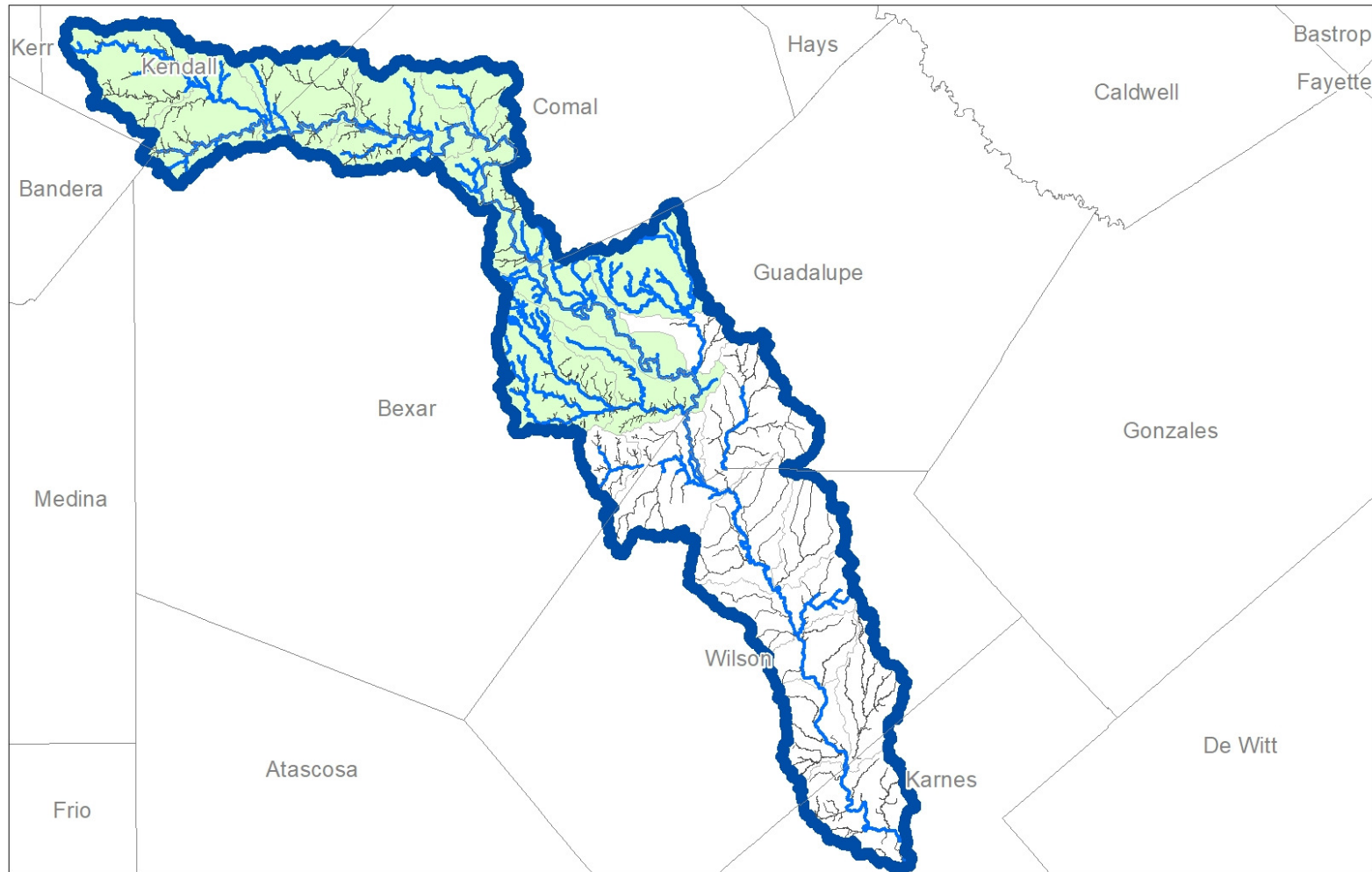
## Legend

### Study Level of Detail

-  Detailed/Limited Detail
-  Base Level Engineering

### HUC12-StudyAreas

-  Complete
-  Draft to FEMA Fall 2021
-  Draft to FEMA 2022





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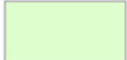

# Upper SA Watershed

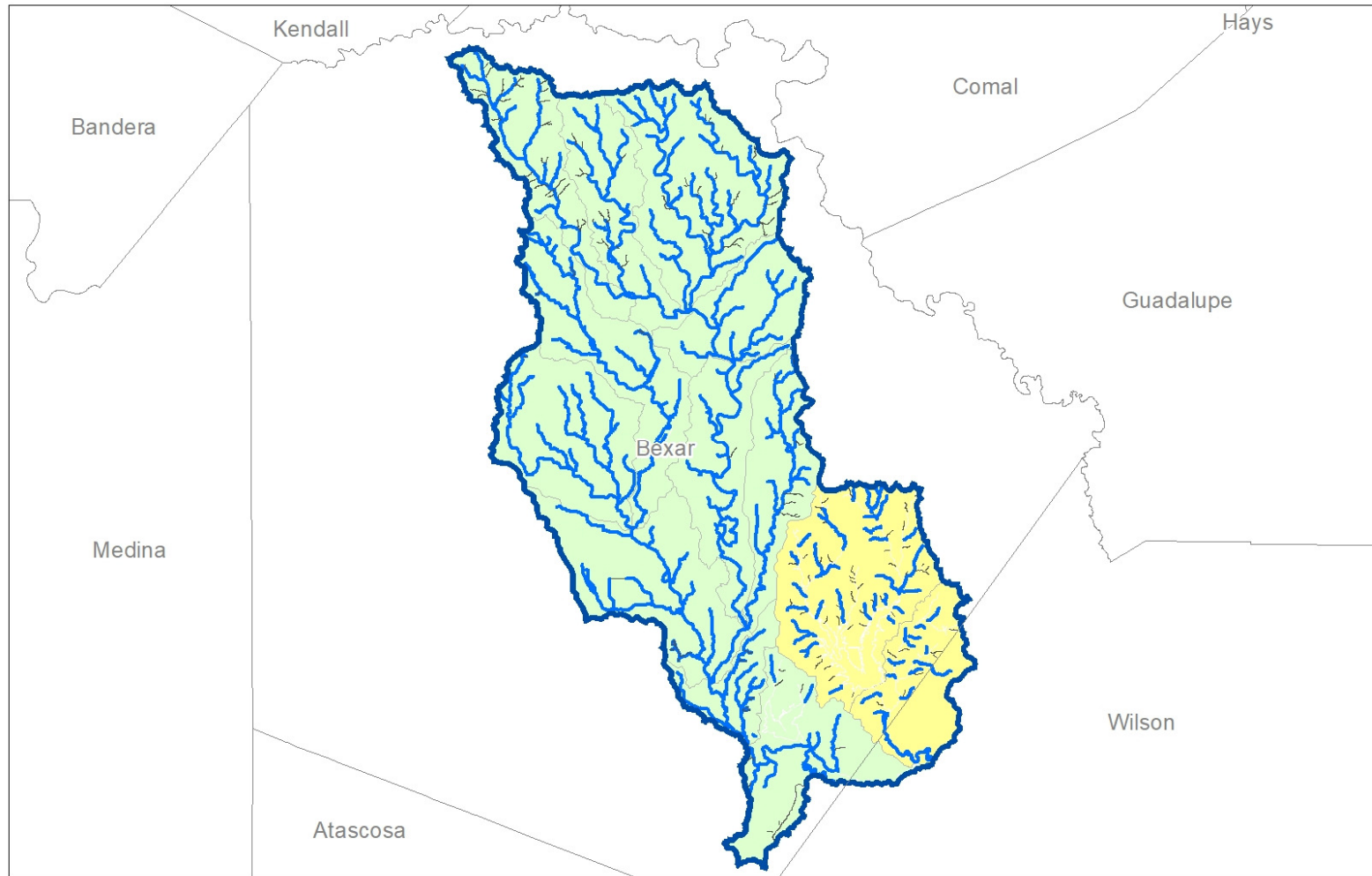
## Legend

### Study Level of Detail

-  Detailed/Limited Detail
-  Base Level Engineering

### HUC12-StudyAreas



-  Complete
-  Draft to FEMA Fall 2021
-  Draft to FEMA 2022



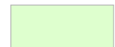
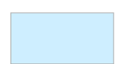
# Lower SA Watershed

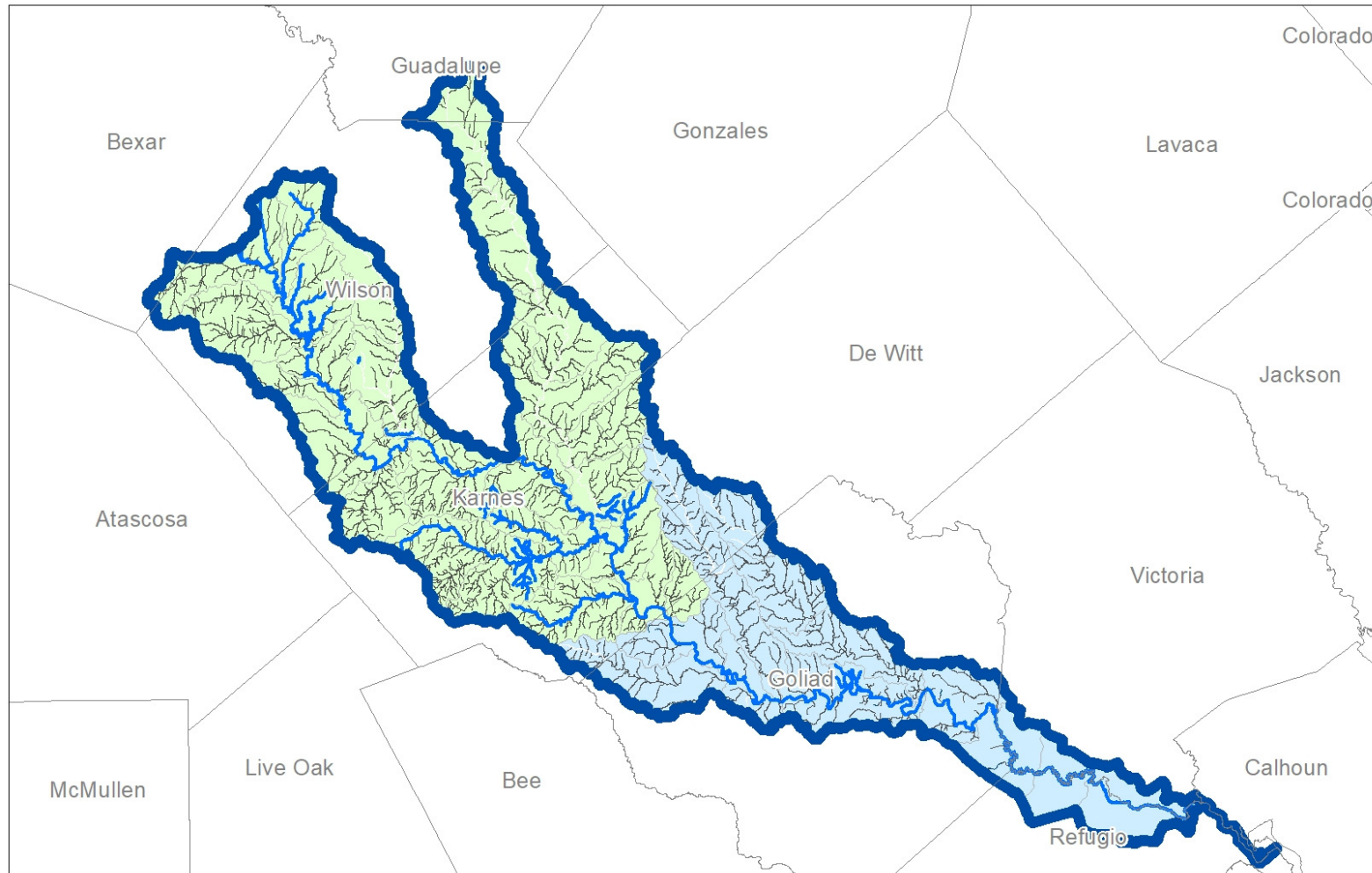
## Legend

### Study Level of Detail

-  Detailed/Limited Detail
-  Base Level Engineering

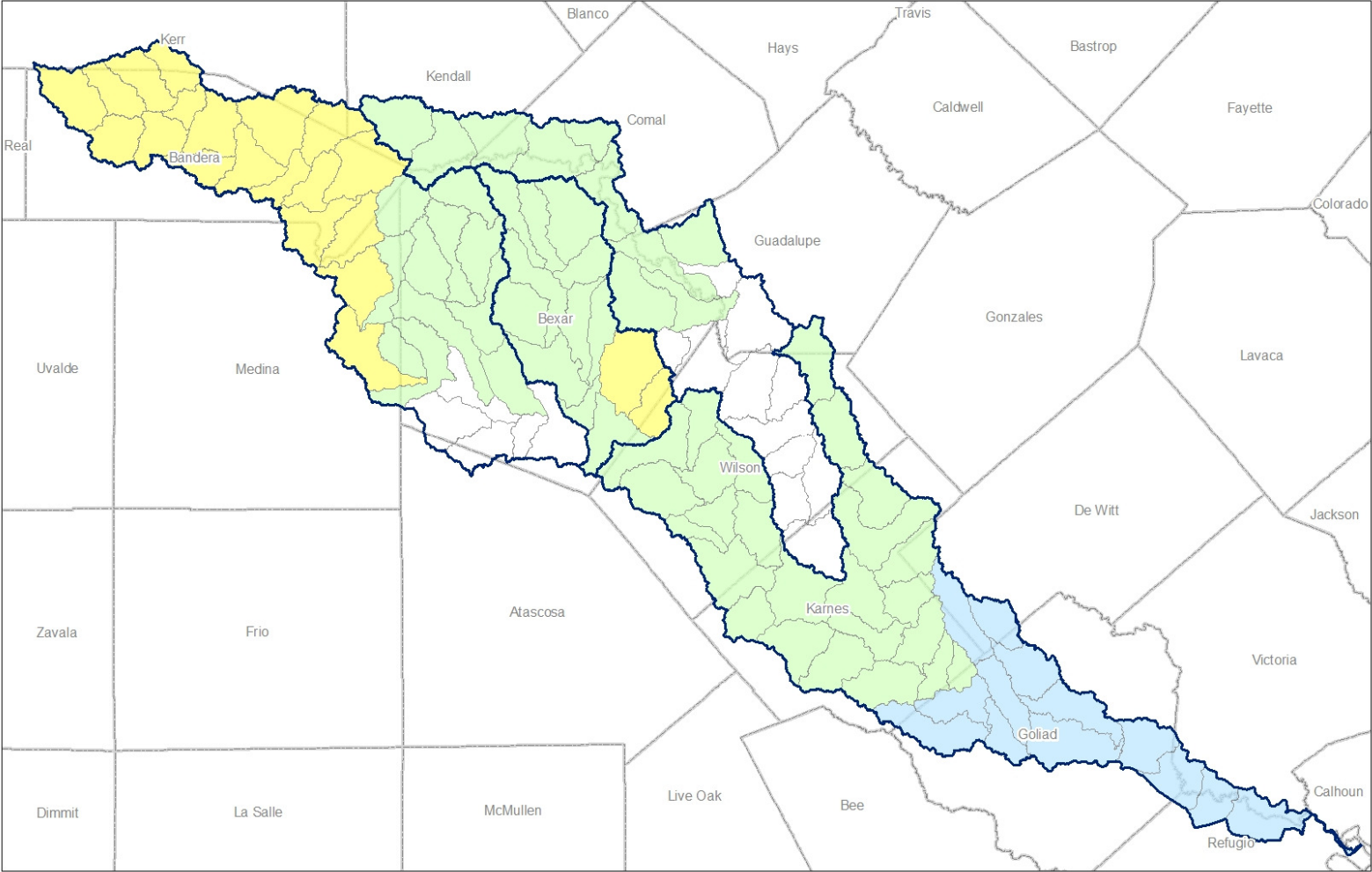
### HUC12-StudyAreas

-  Draft to FEMA Fall 2021
-  Draft to FEMA Fall 2023





# River Basin Summary



## HUC12-Study Areas

- Complete
- Draft to FEMA Fall 2021
- Draft to FEMA Fall 2022
- Draft to FEMA Fall 2023

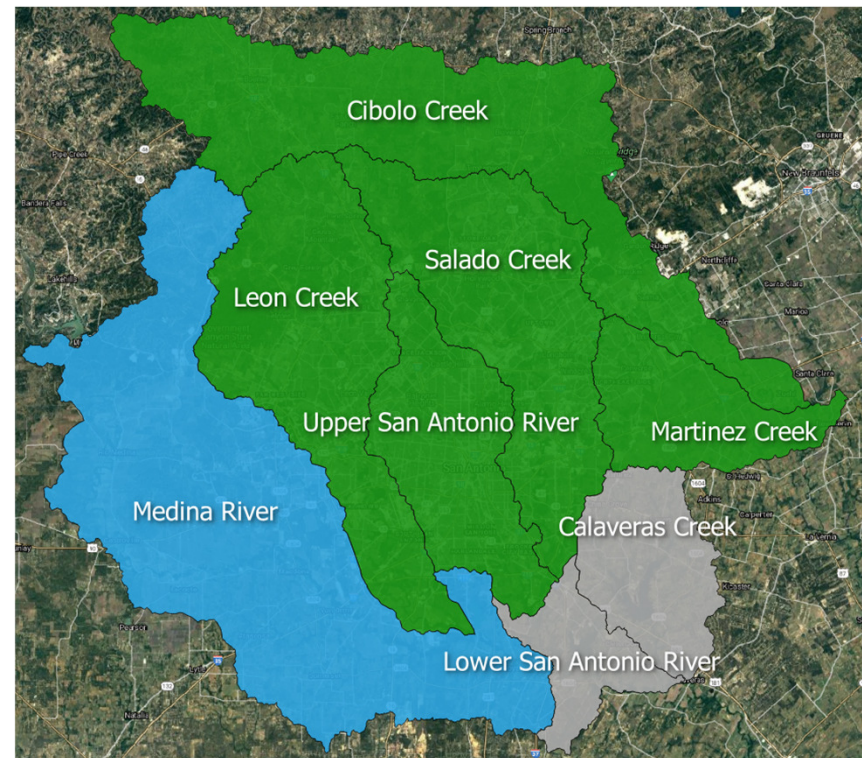


# Predictive Flood Model Status



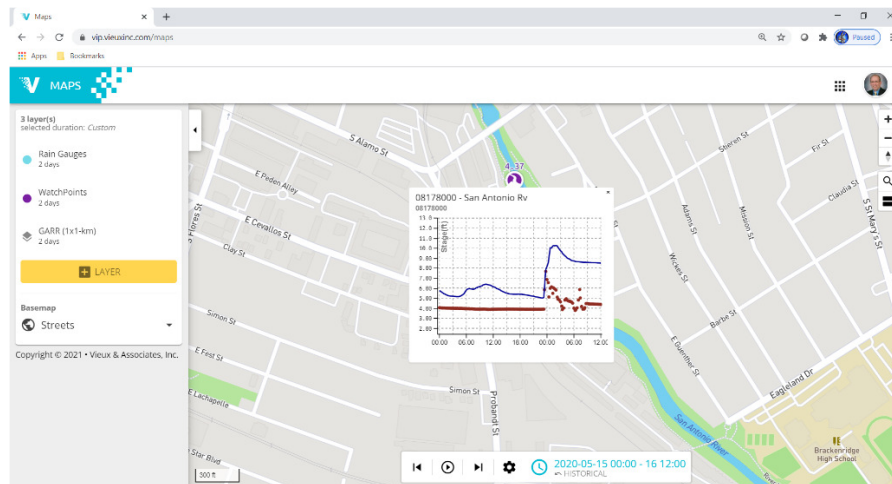
# Predictive Flood Model Progress

- Green = operational
- Blue = being validated
- Grey = close to completion
- Fully operational by end of June 2021

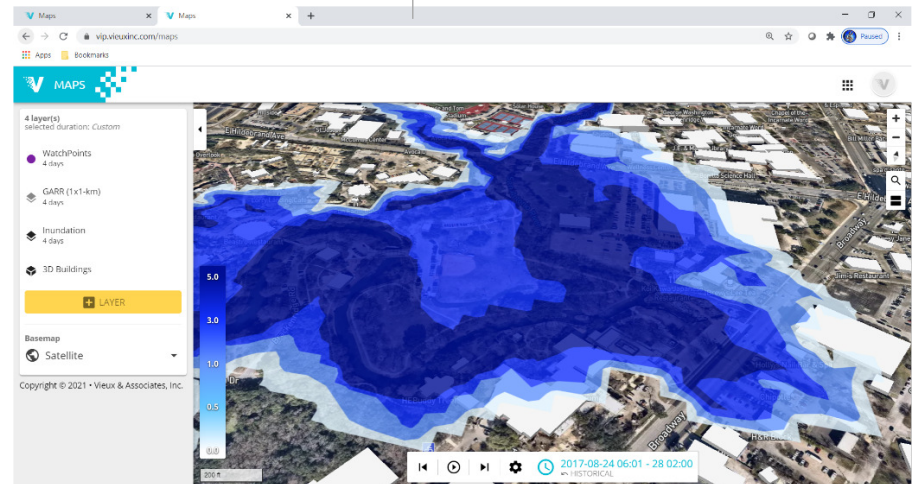


# Predictive Flood Model Output

## Gauge Data and Model Results



## Inundation Mapping



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# Public Real-time Data Available

The screenshot displays the BEXAR flood website interface. At the top left is the logo for BEXAR flood, which includes a 'STOP HALT' sign icon and the text 'BEXAR flood providing current flood information and emergency road closures'. To the right is the BEXAR COUNTY TX logo. Below the logos is a navigation bar with 'About', 'Subscribe', and 'Links' on the left, and 'Login' with a notification icon on the right. The main content area features a map of San Antonio with numerous green circular markers indicating road closures. A legend on the left side of the map lists: Closed (red circle), Open (green circle), Inactive (grey circle), Caution (yellow circle), and Subscribed (blue circle). A pop-up window for 'Nacogdoches Rd.at Bulverde' provides details: 'San Antonio, TX', 'Last Status Change: Mar 31, 2021 11:40:51 AM', and 'Last Reported: Apr 9, 2021 3:03:53 AM'. It also includes a 'SUBSCRIBE TO ALERTS' button. On the right side, there are tabs for 'ALERTS' and 'TWITTER FEED'. Under the 'ALERTS' tab, the heading 'Road Closures' is followed by the text 'TURN AROUND, DON'T DROWN!' and a warning: 'If you see water over the road, please turn around and find a different route. It is illegal to drive around barricades at low water crossings.' At the bottom right, there is a 'CONTACT US' button. The footer of the website includes logos for the City of San Antonio, the San Antonio River Authority, and the San Antonio River Authority seal, along with the text 'site managed by the San Antonio River Authority'.

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# Beyond Models



# Watershed Master Plans

← → ↻ sara-tx.maps.arcgis.com/apps/webappviewer/index.html?id=1cc5aae56ef145b69aab7dc1b6e52597

**Watershed Master Plan Viewer** a partnership with Bexar Regional Watershed Management




The San Antonio River Authority has been working with partner agencies since 2009 to complete Watershed Master Plans for the [Upper San Antonio River](#), [Leon Creek](#), [Salado Creek](#), [Medina River](#), [Lower San Antonio River](#), and Cibolo Creek watersheds.

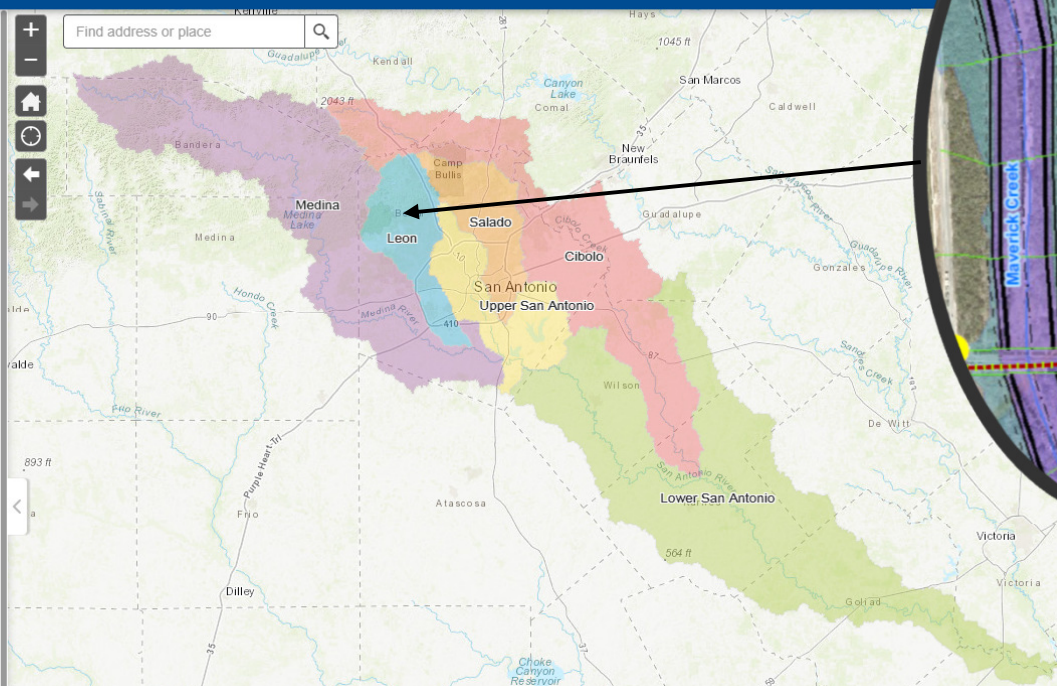
The Master Plans have two primary objectives:

- Identify needs and opportunities related to flood risk, water quality issues, low impact development, stream restoration, nature based park planning, mitigation banking, and conservation easements.
- Develop and assess proposed projects to address the identified needs and preserve identified opportunities.

The Watershed Master Plan Viewer displays data produced in the various Master Plan reports, as well as other useful reference data. It is intended to be used as a visualization tool to assist the public, stakeholders, and decision-makers in understanding both watershed issues and potential solutions. If you would like to explore our data and add it to your own maps, visit the River Authority's [Open Data Portal](#).

There are several useful tools, or "widgets," available within the Viewer:

-  Layer List: Toggle (turn on/off) data layers
-  Basemap Gallery: Choose your basemap
- 

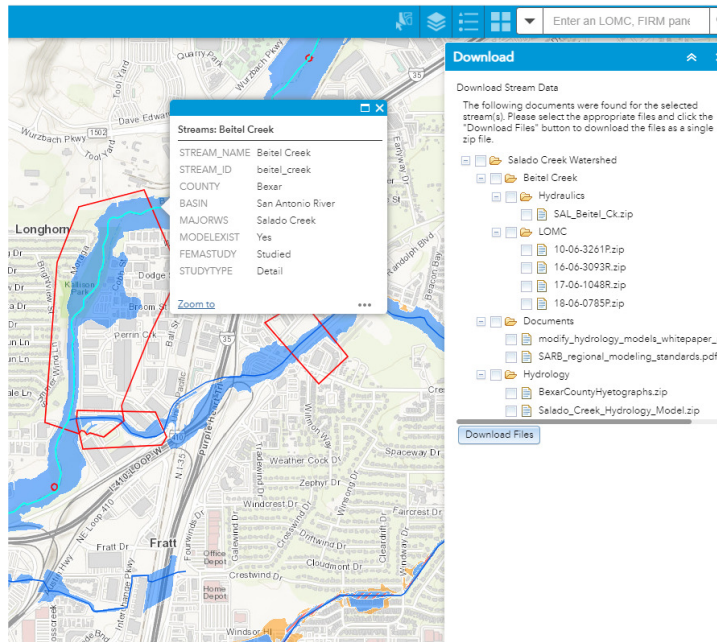


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# Making the Data Accessible

d2mr.sara-tx.org



## Risk MAP and Floodplain Viewers



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# Questions?



# Links

- Digital Data and Model Repository (D2MR)

<https://d2mr.sara-tx.org/>

- Floodplain Viewer

<https://www.arcgis.com/apps/webappviewer/index.html?id=0df17b21b28546b0874af4c89b42a553>

- Risk MAP Viewer

<https://sara-tx.maps.arcgis.com/apps/webappviewer/index.html?id=0b13614f13124257bfe589a459ba84fe>

- Estimated BFE Viewer

<https://webapps.usgs.gov/infrm/estbfe/>

- BexarFlood.org

<https://www.bexarflood.org/>

- Watershed Master Plan Viewer

<https://sara-tx.maps.arcgis.com/apps/webappviewer/index.html?id=1cc5aae56ef145b69aab7dc1b6e52597>

- Green Infrastructure Map

<https://www.sariverauthority.org/be-river-proud/sustainability>

