

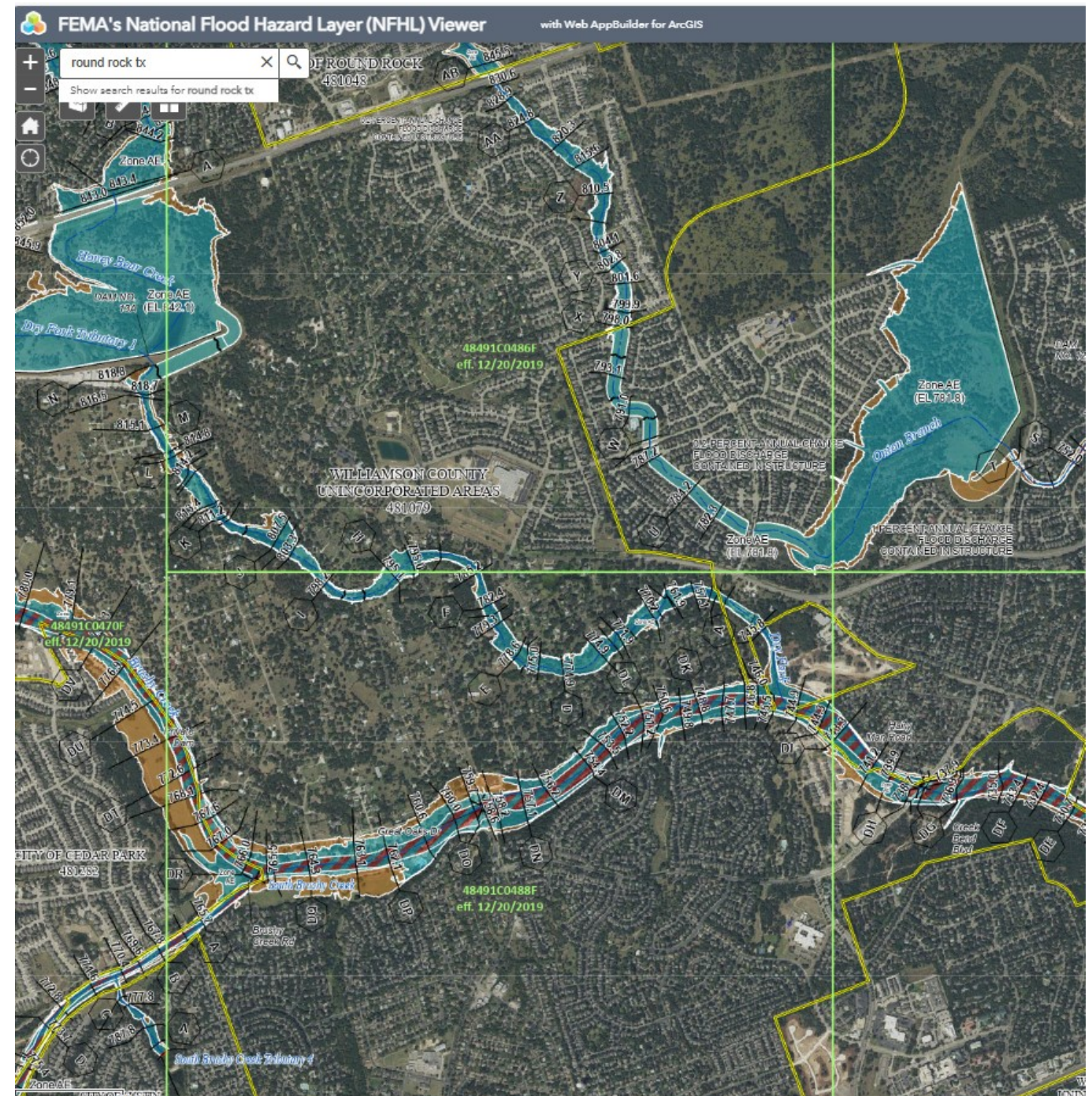


Floodplain Management Best Practices

TAWS Spring Meeting
May 14, 2025



- Who
- What
- When
- Where
- Why



Who may be affected?

It depends....how good is the effective modeling and what are you doing/changing:

Zone A (Approximate)

- *If included, likely not correct*

Zone AE (Detailed)

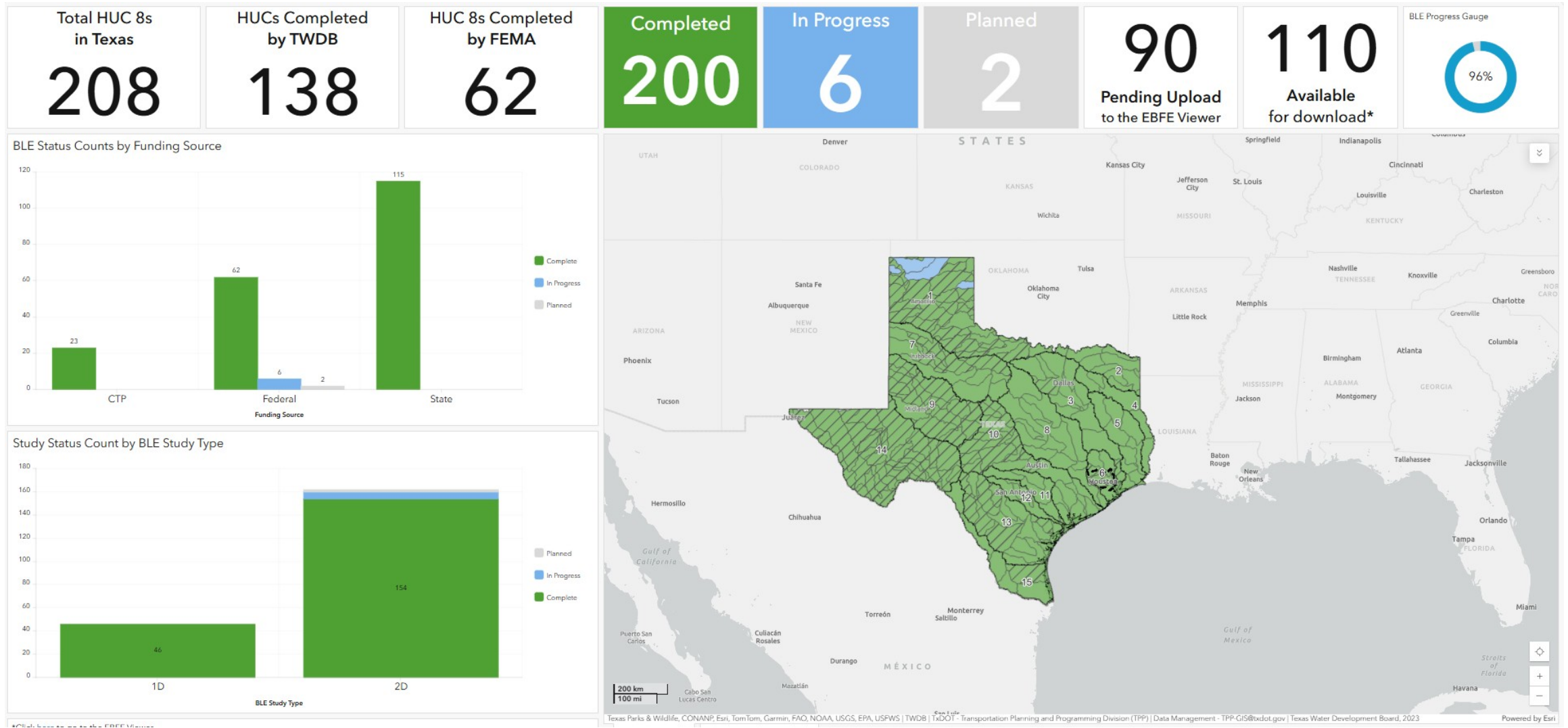
- *Depends on age of the study*
- *How well modeled SSD*

BLE (Base Level Engineering)

- *Should be included*
- *Accuracy of SSD*
- *It is everywhere**



Texas Base Level Engineering



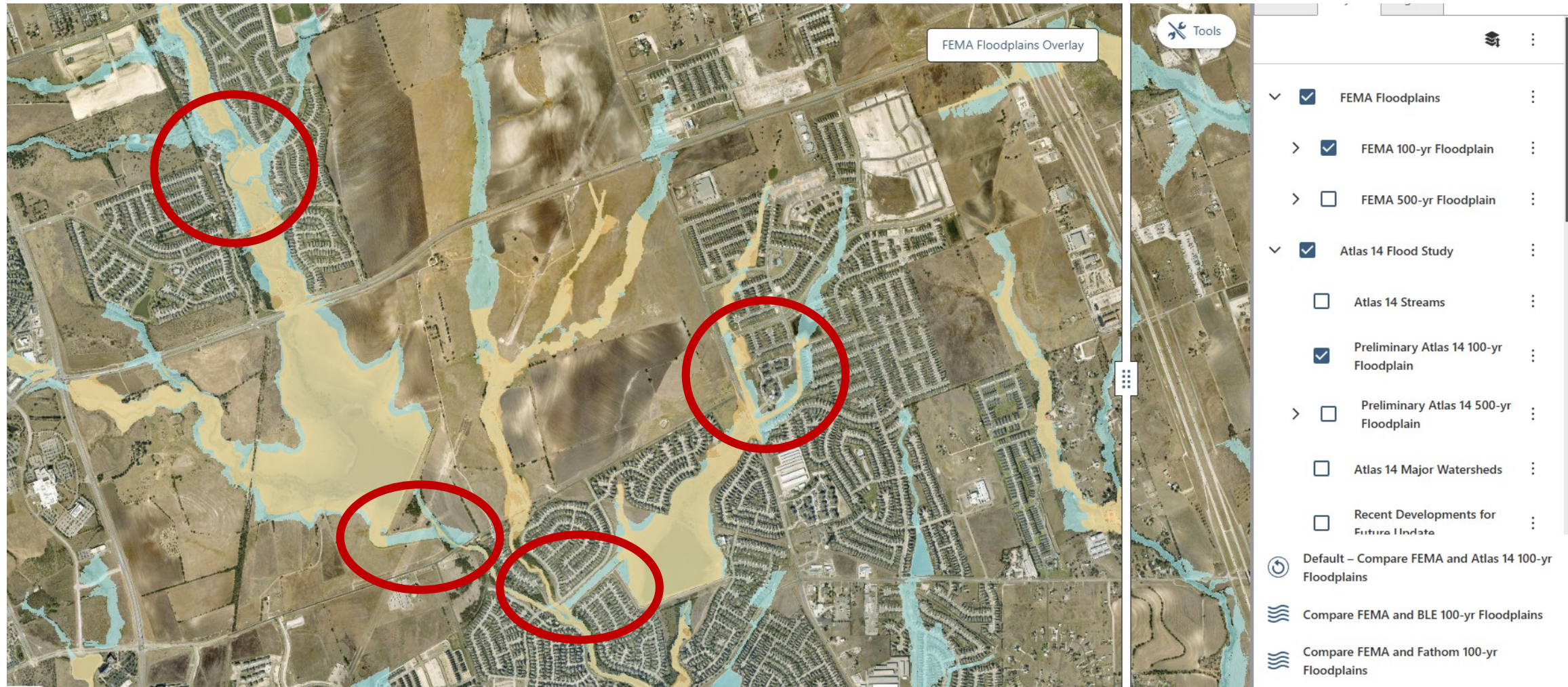
Effective Model



Preliminary Model (Atlas14 Update)



Changes in Inundation Zones



Upstream Impacts

This case due to rainfall but Rehab Projects can cause rise



Upstream Impacts

This case due to rainfall but Rehab Projects can cause rise

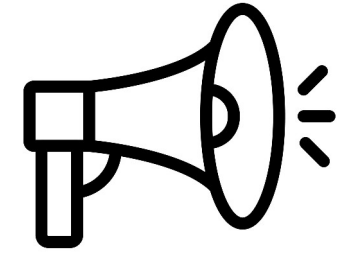


**What are others doing to
protect inundation
zones?**



Increasing awareness of dams

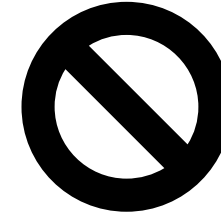
- Showing easements on plats, 811, etc.



Oklahoma NRCS

- All NRCS dams on 811 One-Call system
- Digitizing easements and critical elevations*
- Refreshing old easements to appear in searches**

Restricting Development



- Downstream in breach zones
- Upstream in inundation area

Wise County, TX

- Prohibit building within dam breach inundation zones.

City of McKinney, TX

- Prohibit upstream development below the auxiliary spillway crest elevation plus two feet, or the routed 100-year assuming fully developed conditions.
- Prohibit development with dam breach inundation zones.

In Kansas

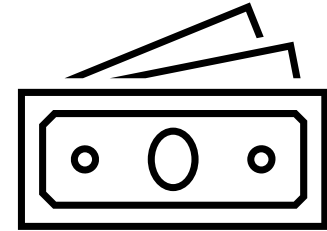
- Wet Walnut Creek Watershed counties prevent residential development in breach inundation zone

Sharing the burden of Hazard

Creep

➤ **if a development increases the hazard classification of a dam:**

- Requiring funds for breach map updates
- Requiring funds for rehabilitation



State of Virginia

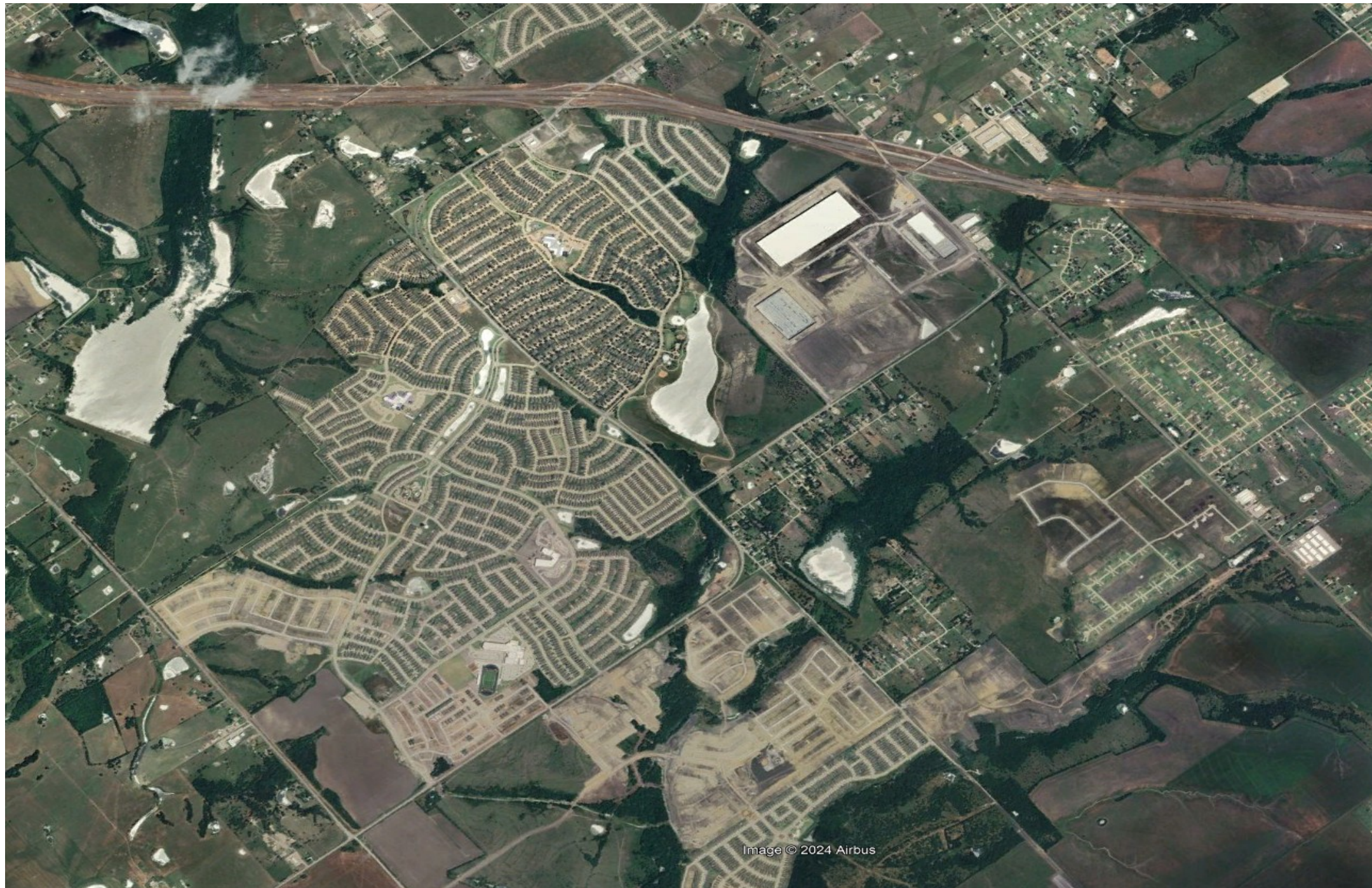
- Developer must change development or contribute up to 50% of the rehabilitation cost.

State of Georgia

- Developer must provide survey at channel including FFE and update the breach analysis.

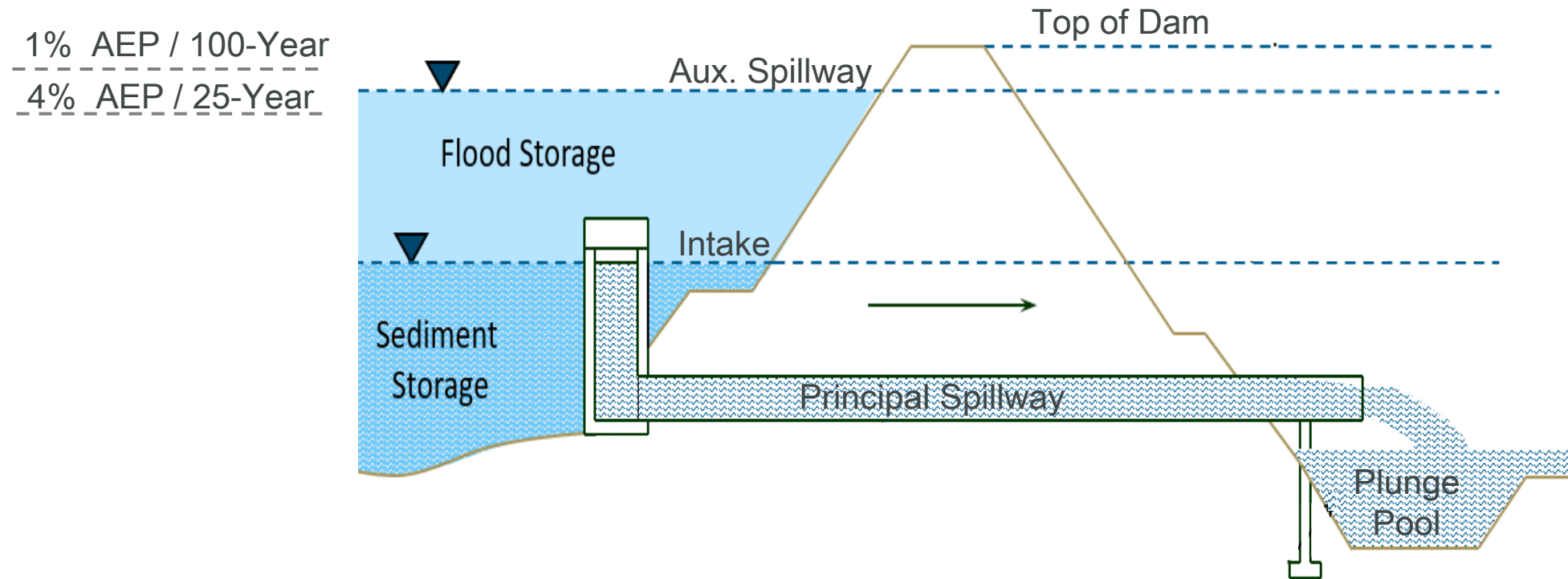


**When and
Where
will my
project
impact
floodplain
s**

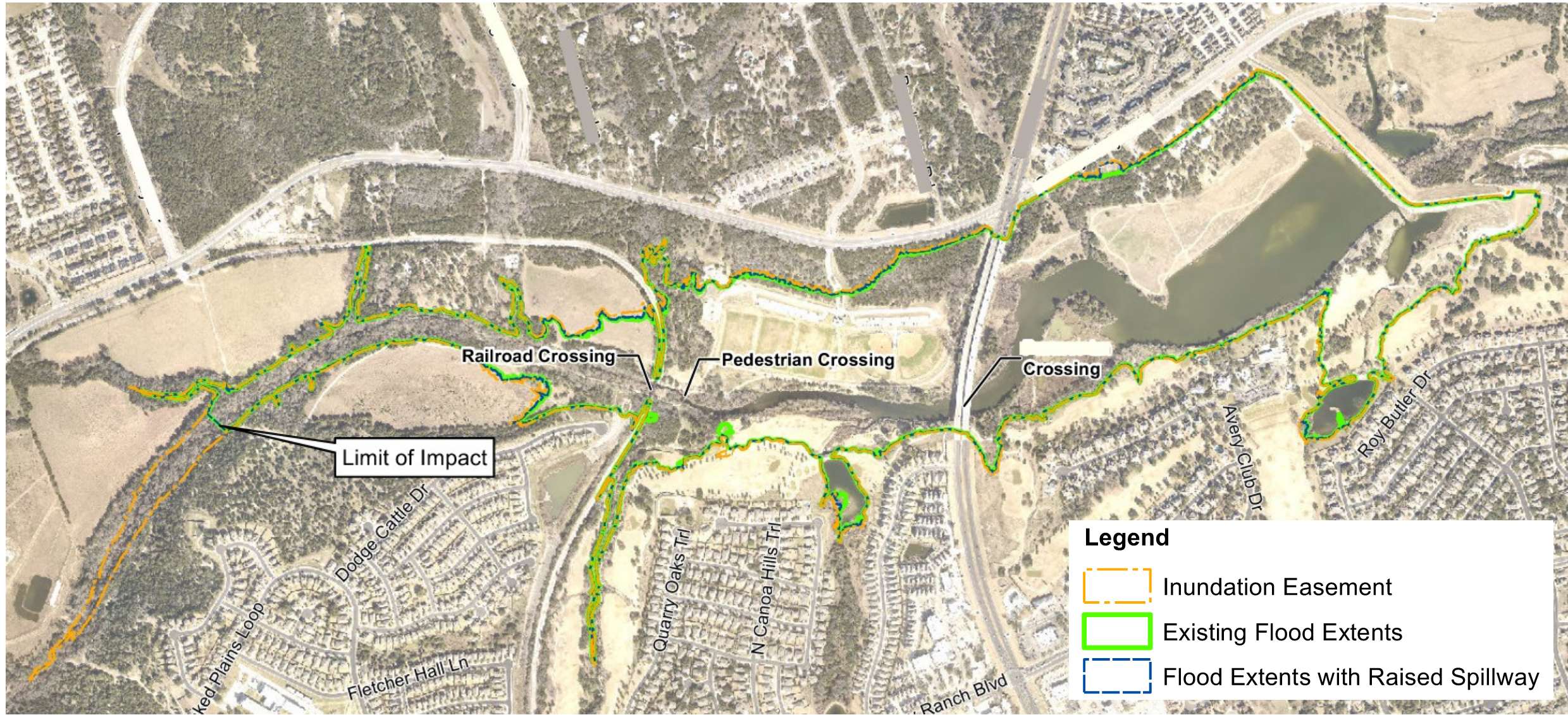


Spillway Crest Raise

- If Aux. Spillway engage prior to 100-year, raising AS crest will increase 100-year inundation upstream

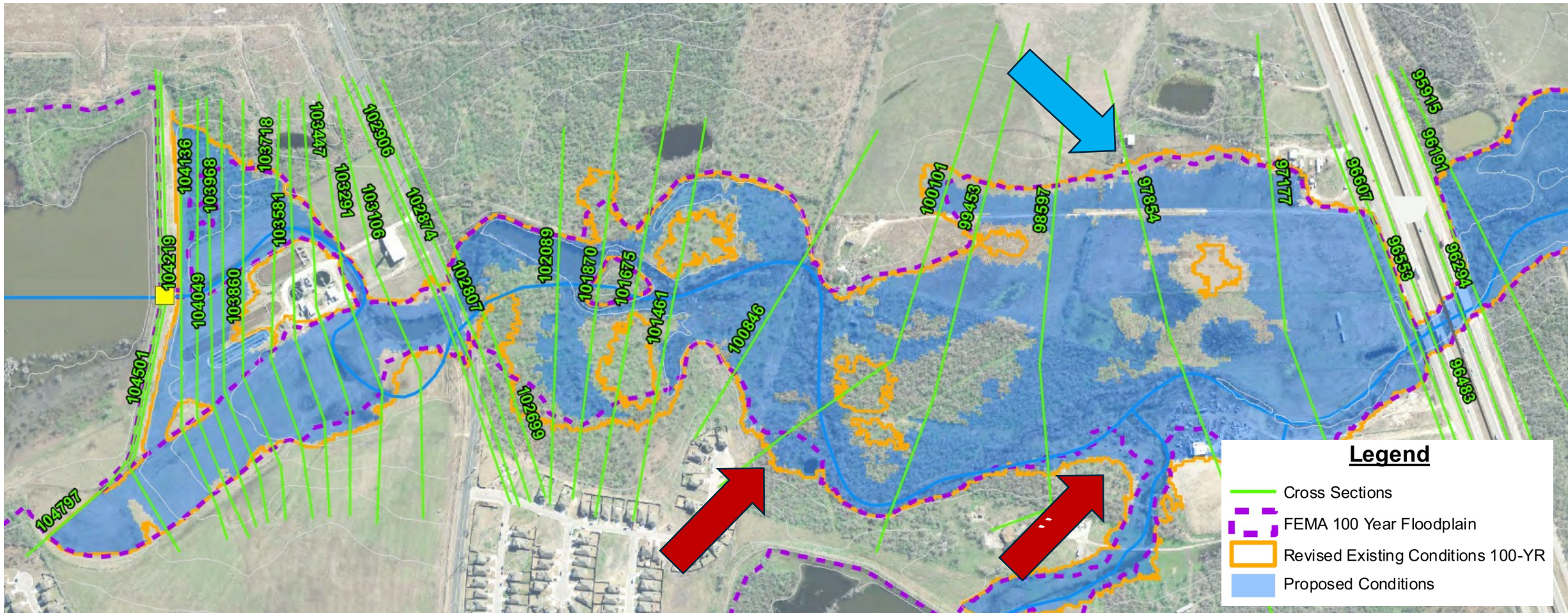


Spillway Crest Raise

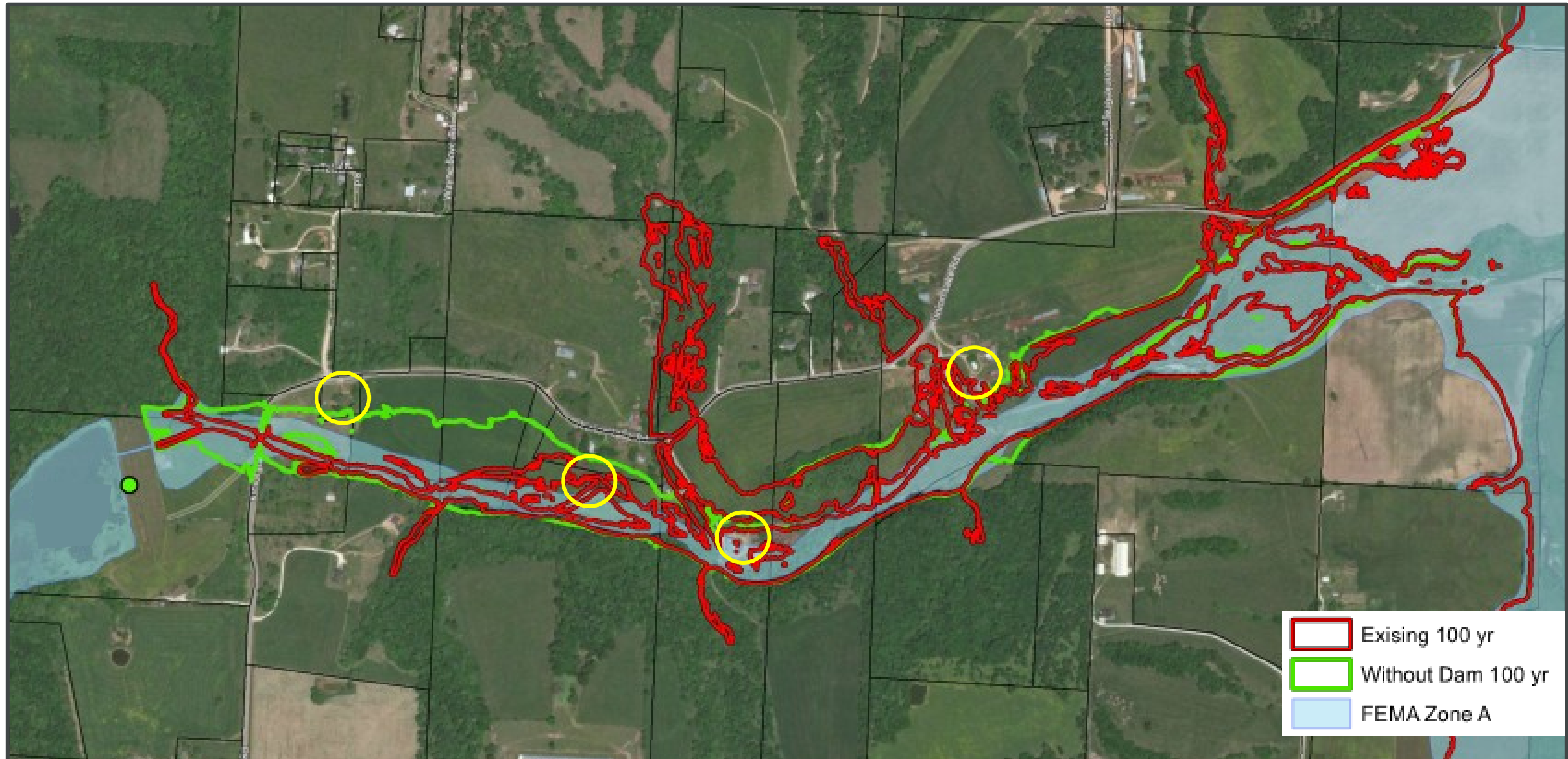


Increased Flows Downstream

- Increasing principal spillway and auxiliary spillway flows
- Required a LOMR

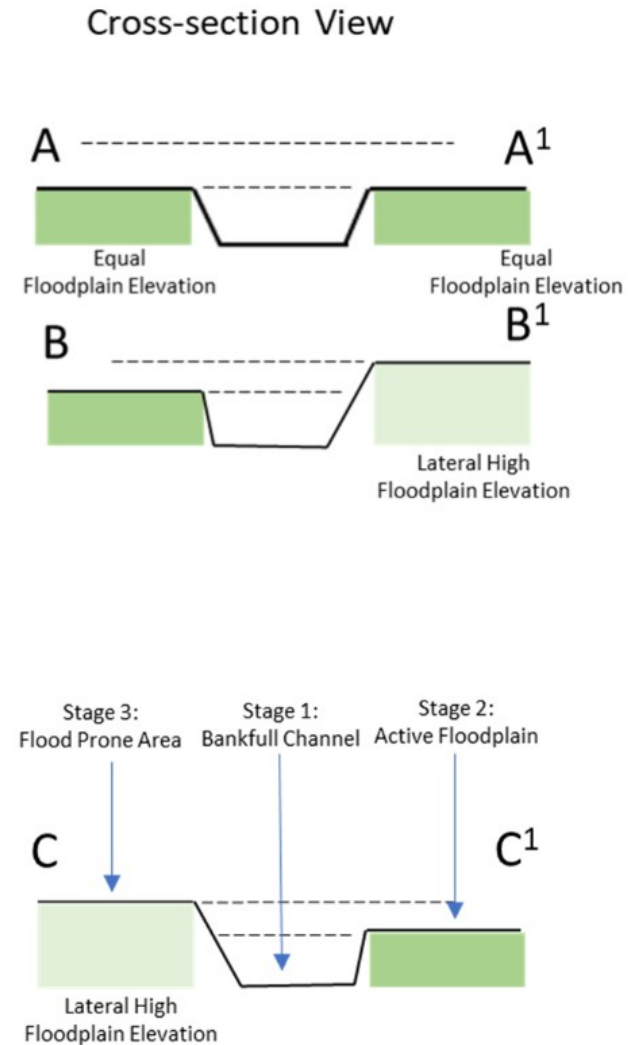


Decommissioning



Decommissioning

- Understand material and velocities
- Mitigation downstream = stream restoration and bankfull channel design





Why is floodplain management important

Why is floodplain manageme nt important

Considerations

Thank you

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