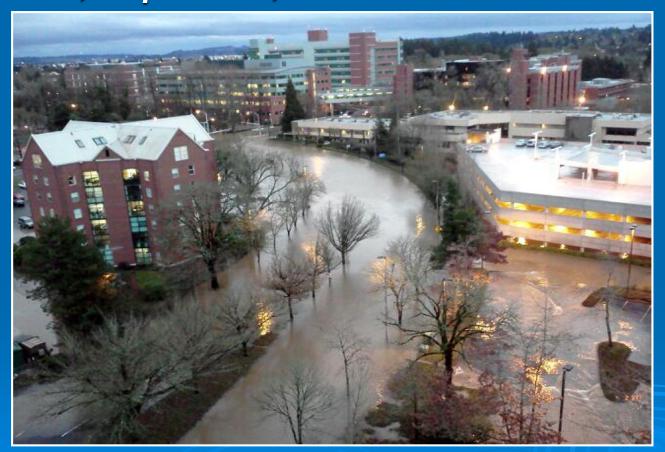


Updating Flood Maps Issues, Options, and Considerations



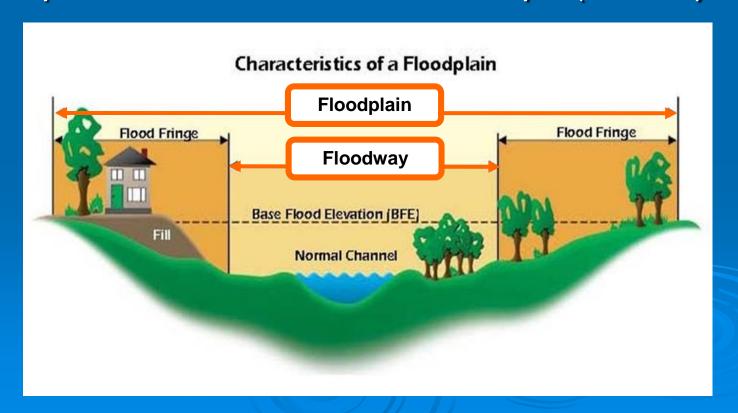
Robert Chandler, PhD, PE Assistant Public Works Director

Glenn Davis, PE, CFM
Chief Development Services Engineer



National Flood Insurance Program

- Establishes minimum requirements
- Adopts Flood Insurance Rate Maps (FIRMs)





The Regulated Floodplain Flood Insurance Rate Maps





Stormwater Master Planning

Purpose: To identify projects, programs, and policies that:

- (1) Reduce risks related to flooding, and
- (2) Mitigate the adverse impacts of stormwater on the natural environment.

















Stormwater Master Planning

Analyses: Evaluate the impacts of stormwater runoff under both current and future development conditions.

- Collect data/information
 - Rainfall, land use, soils, topography, stream gage, surveys, flood photos, etc.
- Develop the model
 - Compare model output to actual events
- Run computer simulations
 - Test scenarios, compare options









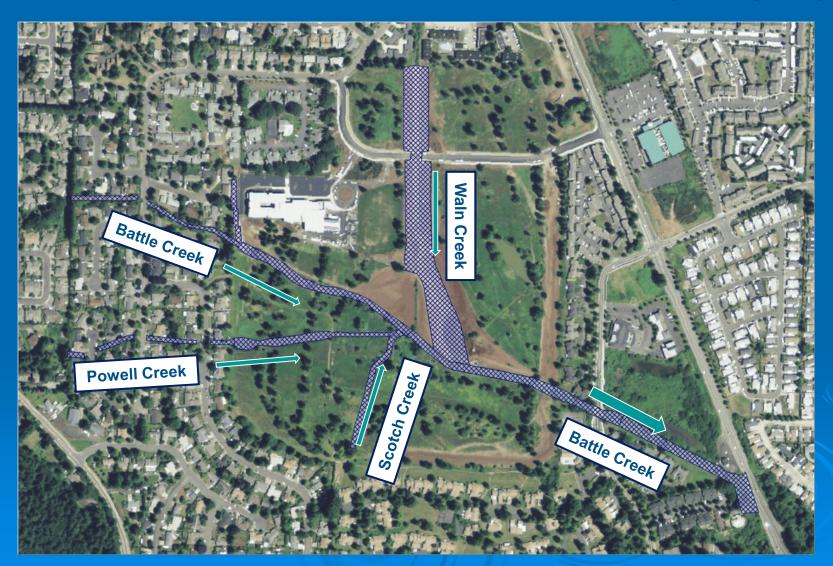






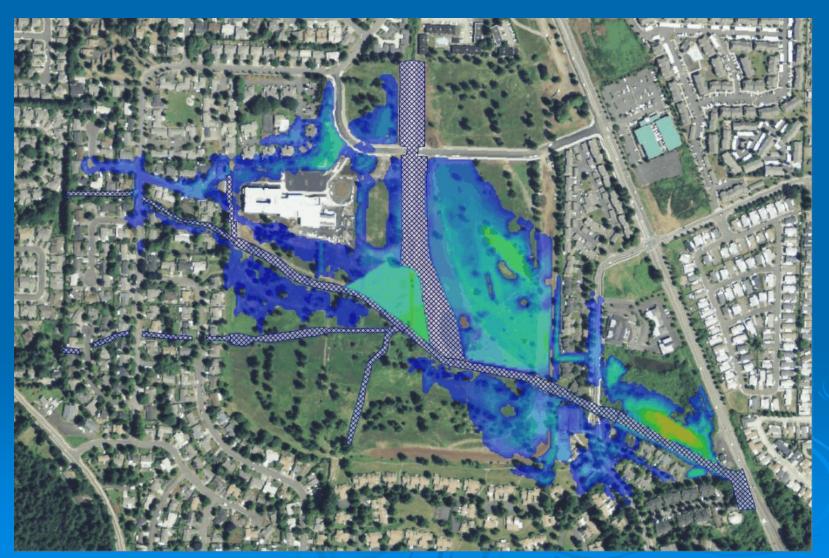


Stormwater Master Plan (Analysis)





Stormwater Master Plan (Analysis)





Issue:

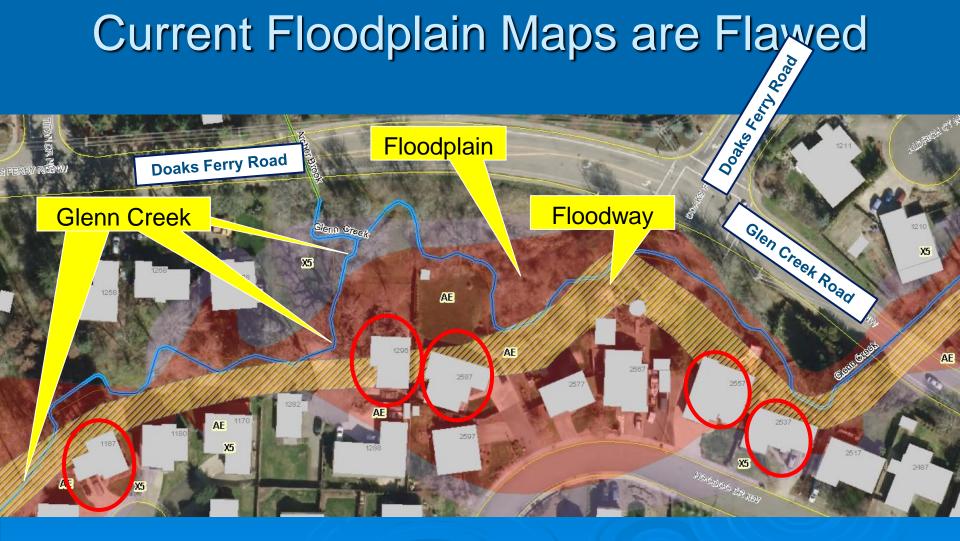
Given we have improved data and modeling methods,

Should we use the data and modeling to produce new Flood Insurance Rate Maps?

Three considerations....



Consideration #1





2018 Stormwater Master Plan

Consideration #2

Impacts to development & property owners



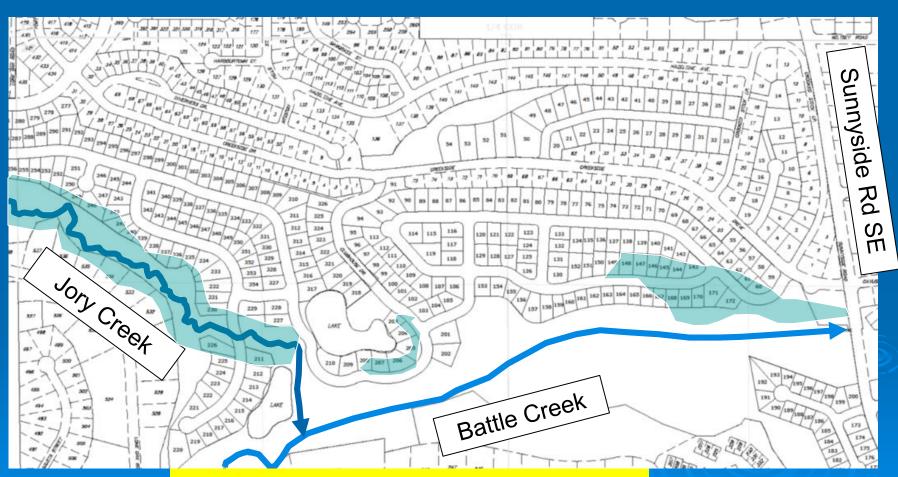
Note: For discussion purposes only. This is *entirely* a hypothetical scenario.



2018 Stormwater Master Plan

Consideration #2

Impacts to development & property owners



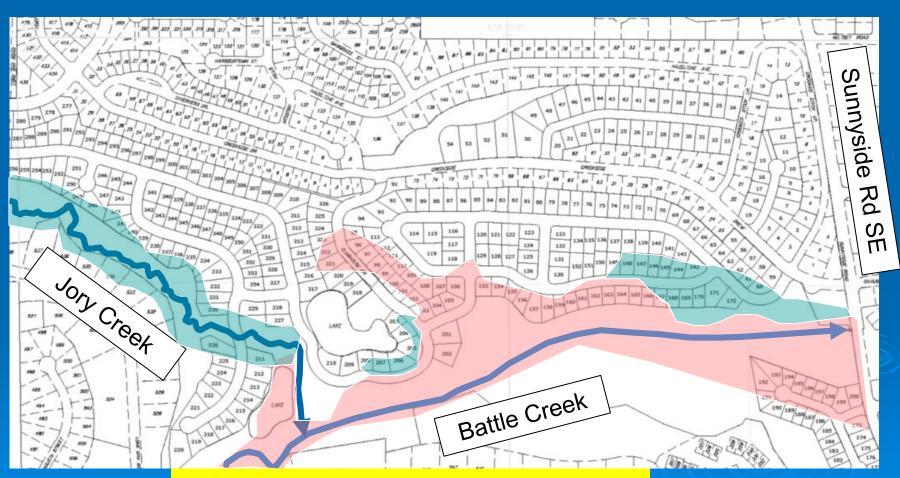
Note: For discussion purposes only. This is *entirely* a hypothetical scenario.



2018 Stormwater Master Plan

Consideration #2

Impacts to development & property owners

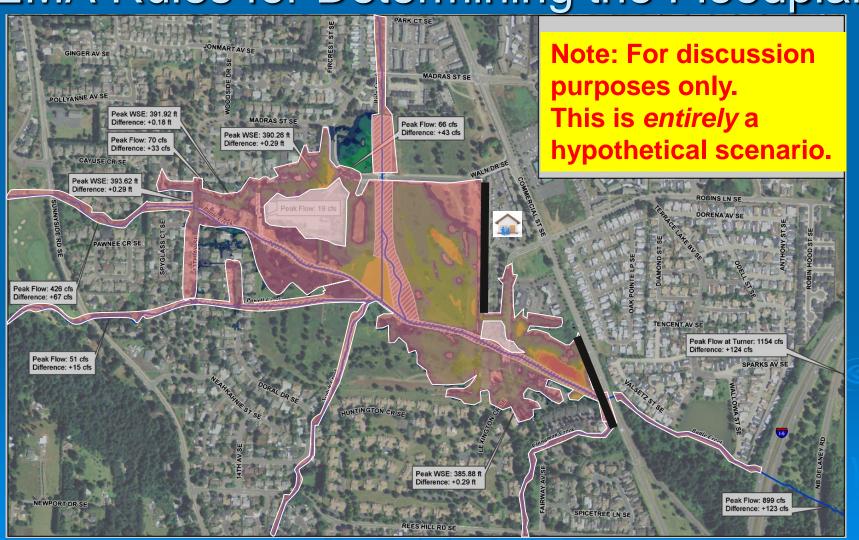


Note: For discussion purposes only. This is *entirely* a hypothetical scenario.



Consideration #3

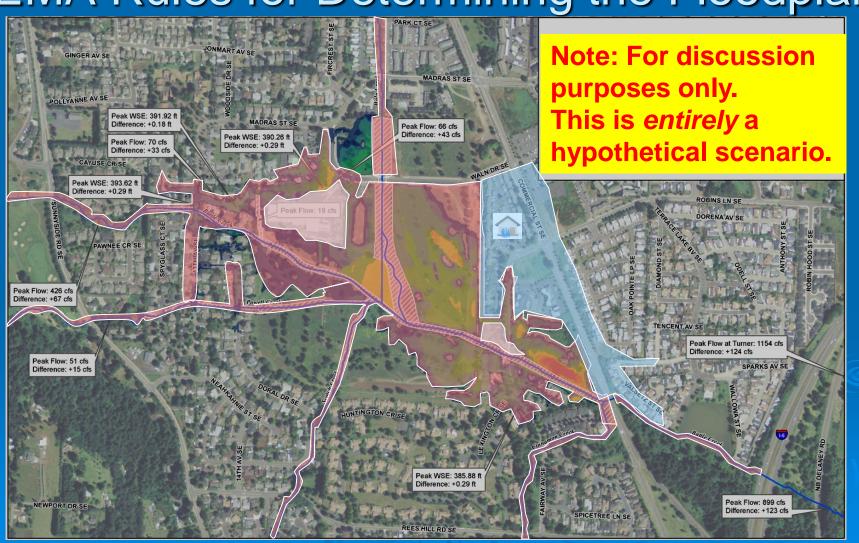
FEMA Rules for Determining the Floodplain





Consideration #3

FEMA Rules for Determining the Floodplain





Options Redefining the Floodplain

- 1. Do Not Update Flood Maps
 - Publish Stormwater Master Plan (incl. 100-year inundation)
 - Wait for FEMA to update
- 2. Update Flood Maps per FEMA (Remove berms)
 - Regulate as Interim until FEMA adopts maps
 - Submit to FEMA for adoption
- 3. Update Flood Maps per City (Retain berms)
 - Regulate as Interim until FEMA updates maps
 - Submit to FEMA for information only



Recommendation

The data and modeling methods developed for the Stormwater Master Plan should be used to update the floodplain maps in Salem.

- 1. Determine floodplains using <u>best professional judgement</u> regarding if embankments should be credited for reducing risks of flooding.
- 2. The new <u>floodplain maps will be promulgated locally</u> as Interim Flood Hazard Areas and will be regulated as such by the City.
- 3. The Federal Emergency Management Agency (FEMA) will be notified of locally promulgated floodplains.
- 4. The City will not submit the new floodplain maps for official adoption by FEMA.



How could this affect you?

[Once the analysis is completed]

- If you are in a floodplain:
 You will remain in the floodplain
 - Existing floodplains are unaffected by the City-produced maps
- If you are near a floodplain
 You might be placed in the floodplain
 - You may be required to obtain flood insurance
 - The value of your property might be affected
- If you are developing/purchasing property near the floodplain:
 - You will know whether the property is in the floodplain



Discussion