

Floodplains as Conservation Criteria

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Planner I

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Sample Conservation Criteria

Open space/woodland
Core biodiversity resources
Farming / Agricultural
Rare species habitat

Historical value
Archeological site
Wetlands
Floodplains

Stream, river, pond
Wellhead protection
Aquifer

Adjacent to protected land
Sustainable land-oriented commerce
Trails or trail potential/Greenways

Especially scenic area
Quiet, lack of traffic noise
Lack of density nearby
Dark nighttime skies
Identified "special place"

2010 URI Land & Water Summit



Floodplains as Quantifiable Criteria

- Value-Based Criteria e.g. scenic vistas, identified special place are very important.
- Quantifiable criteria such as floodplains and wetlands offer valuable regulatory clout to land protection advocacy
- Vulnerability to natural hazards and community liability

Beneficial Floodplain Functions



Natural Functions

- Slowing down floodwater
- Storing of floodwater
- Pollution control through “settling out” of sediments
- Natural vegetation filters out impurities and use excess nutrients

Beneficial Floodplain Functions



Biological Functions

- Fish and wildlife habitat
- Habitat for waterfowl
- High rate of plant growth

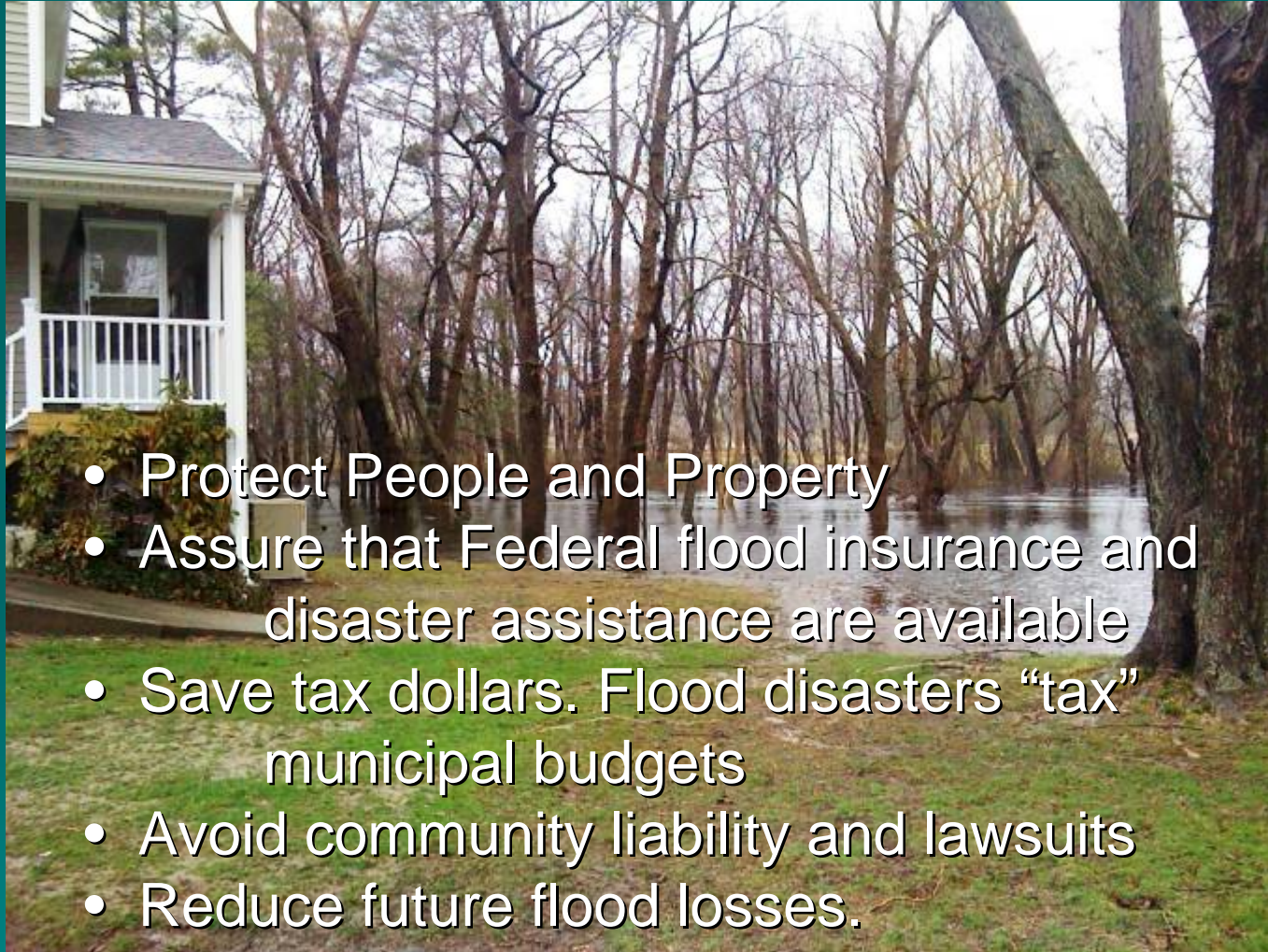
Beneficial Floodplain Functions



Societal Functions

- Open space
- Environmental studies
- Aesthetic benefit

Why is the Floodplain Regulated?



- Protect People and Property
- Assure that Federal flood insurance and disaster assistance are available
- Save tax dollars. Flood disasters “tax” municipal budgets
- Avoid community liability and lawsuits
- Reduce future flood losses.

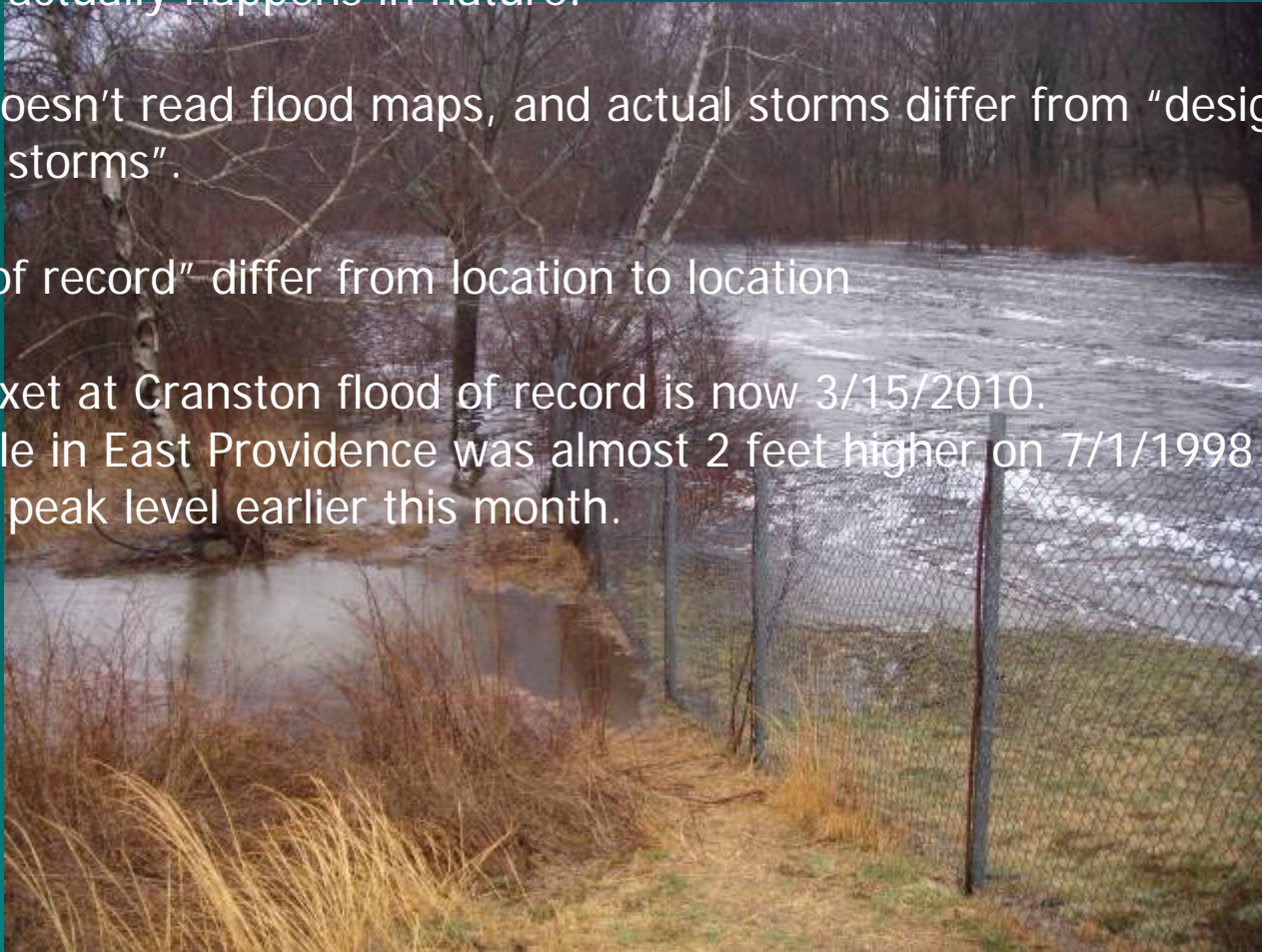
Flood Map Caveats

Flood maps are regulatory, but are simply “guidance” with respect to what actually happens in nature!

Nature doesn't read flood maps, and actual storms differ from “design storms”.

“Floods of record” differ from location to location

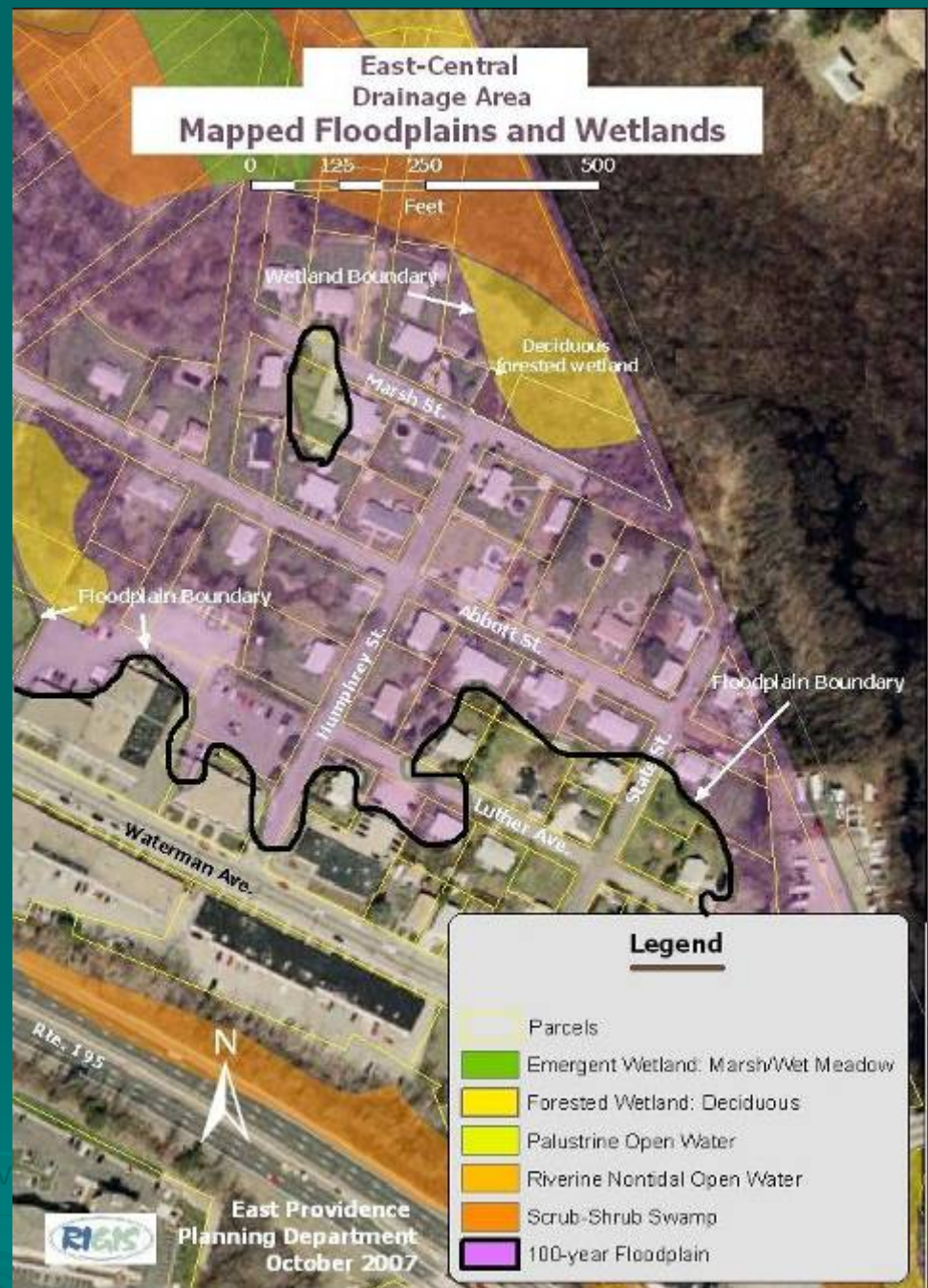
- Pawtuxet at Cranston flood of record is now 3/15/2010.
- Tenmile in East Providence was almost 2 feet higher on 7/1/1998 than peak level earlier this month.



Short-Term Conservation Planning – Immediate Issues

Presence of large floodplain was the primary factor in preventing the alteration of wetlands and subsequent additional development in this flood-prone neighborhood, accomplished via local ordinance.

Source: Conserv

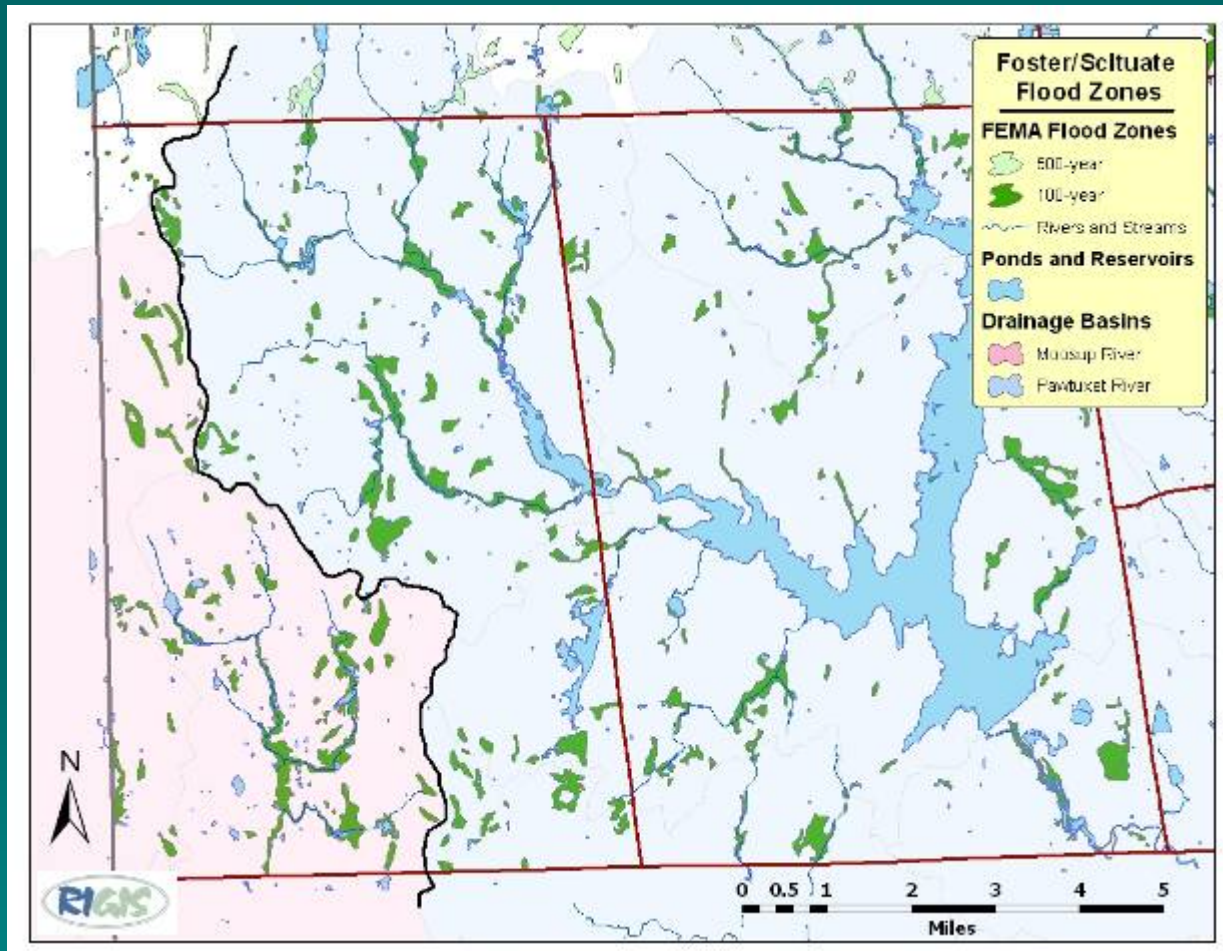


Why Be So Concerned About Such Development?

- It is difficult to maintain/restore floodplain storage capacity when a floodplain area is developed.
- Flooding may simply be transferred downstream or worsened in adjacent areas by the addition of an impediment within the floodplain.
- More “frictionless” surface (i.e. pavement, or lawn instead of woodland or field) creates faster flow in “sheet flow” situations
- Addition of structures in the floodplain places more infrastructure and people in harm’s way.

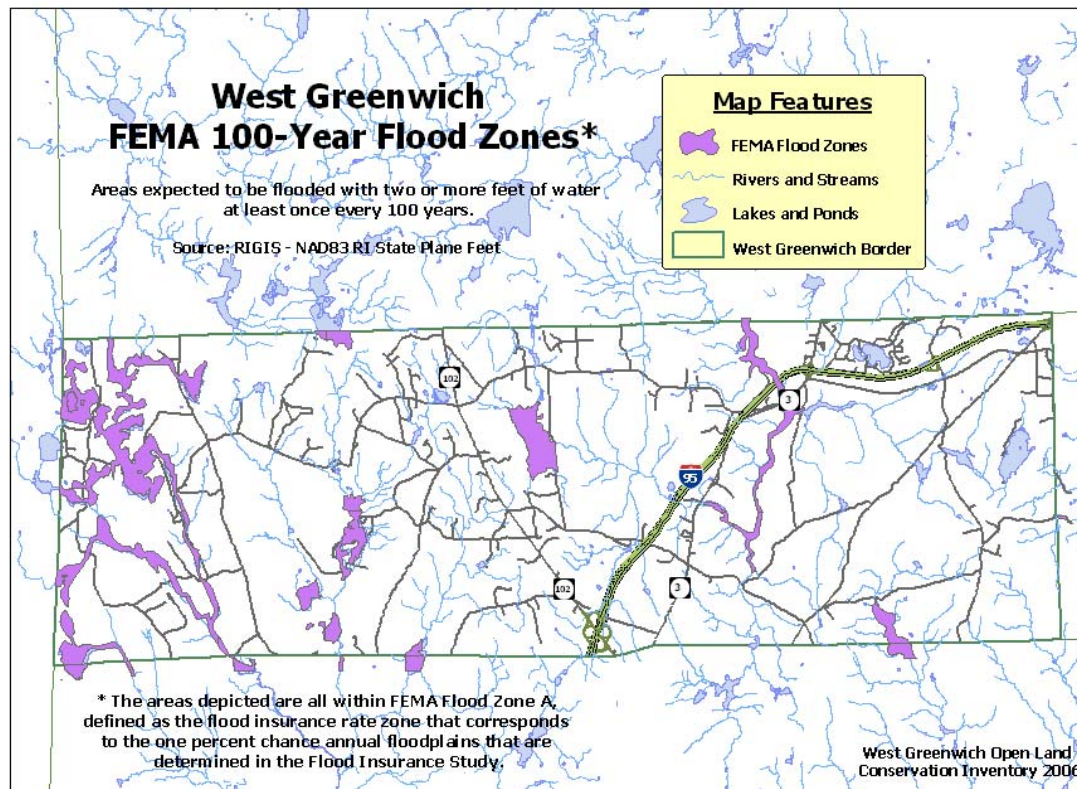
Long-Term Conservation Planning- Greenway Potential

Relatively linear flood zone areas near streams and wetlands can aid in identifying potential greenways and possibly wildlife corridors



- Municipal and Regional scale analysis
- Not necessary along one stream; may even span drainage divides.

Long-Term Conservation Planning- Municipal Scale “Big Picture”



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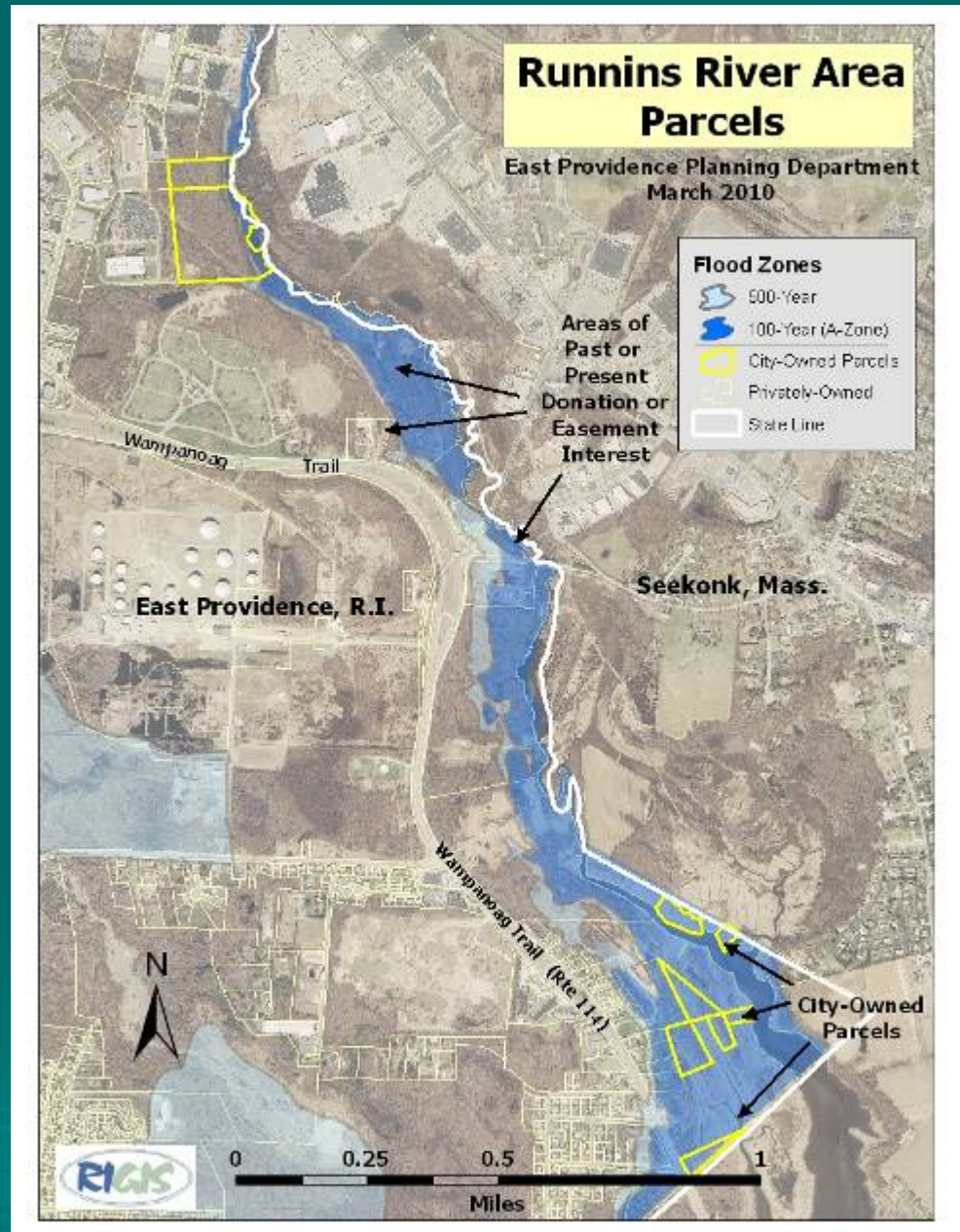


Cartography: Wayne Barnes
April 18, 2006



Long-Term Conservation Planning- Greenway Potential

Urban Area
Greenways



Recommendations

- Encourage conservation easements when possible on floodplain parcels
- Know flood zones in terms of their types, where they are located, and basic understanding of the FEMA flood maps.
- Know how to create an official customized flood map (Firmette) for a specific area of interest (covered elsewhere in this presentation).
- Know which areas are especially prone to flooding. Have evidence to back this up (pictures, DPW / Public Safety incident reports, etc.)
- Participate in your community's planning process. Many communities are updating their Comprehensive Plans and Hazard Mitigation Plans. Your input is important.
- Encourage your community's participation in the Community Rating System, which gives credit for at least 18 floodplain management activities, many of which you may already be doing. This program provides flood insurance discounts for community residents.
- Your state floodplain personnel are a valuable resource regarding floodplain areas and regulations.



Thank You!

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Rhode Island Flood Mitigation Association

<http://ri.floods.org/>

Hunt's Mill Dam, East Providence. 3/15/2010