

Proactive Planning
Be Prepared to React











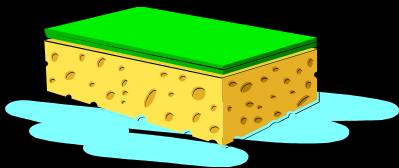
Binghamton: 2011 flood

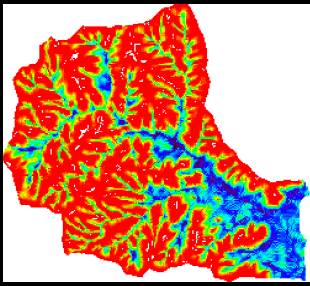


2 inches, 30 minutes, \$50 million in damages



WATERSHEDS—THE FUNNEL, THE SPONGE, AND THE SLIDE



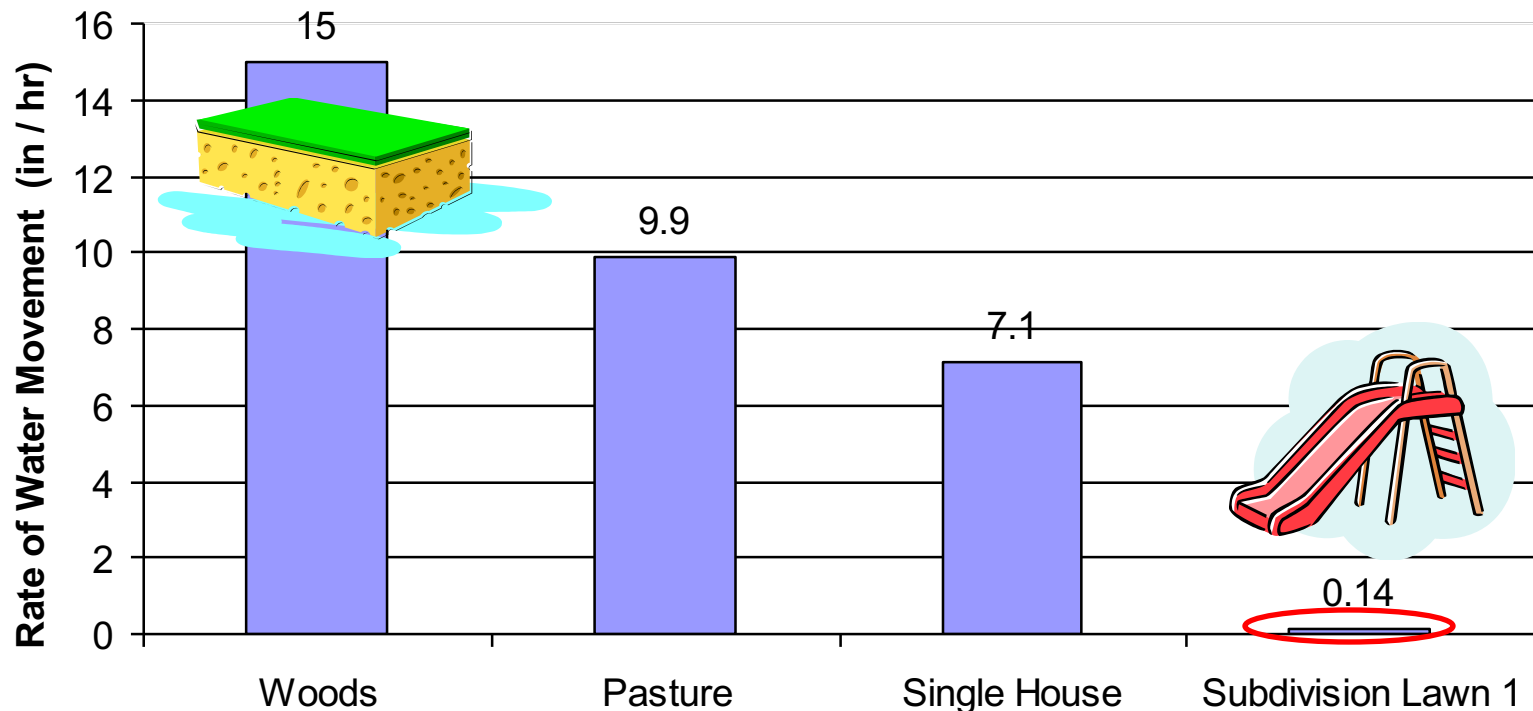


Compaction Effects

Water Movement Into Soils in Various Settings

Ocean County, NJ

Avg. Annual Precipitation = ~ 50 inches



Cumulative Effects

SCENARIO A:

Development Proposal:

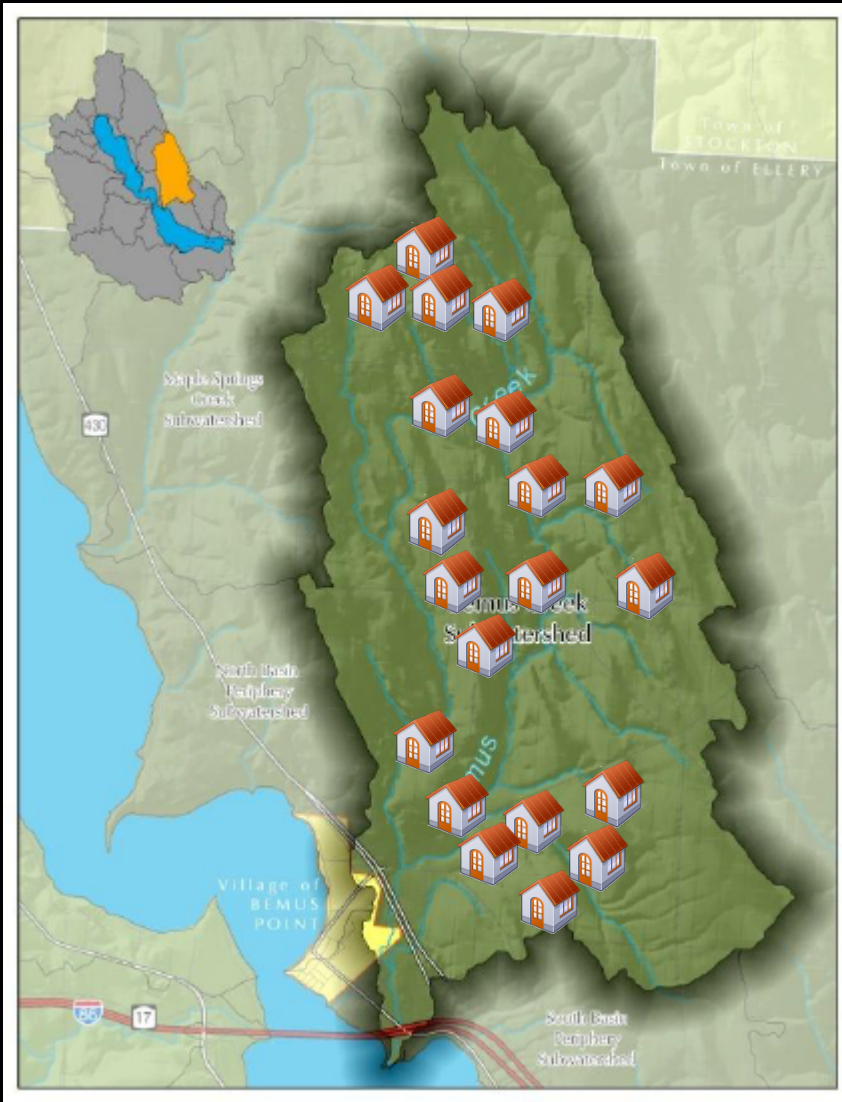
- 20 New Homes - 20 acres
- All within the same watershed
- Constructed in 2015

Triggers:

- SEQR
- NYS DEC SWPPP

Municipal Discussions?

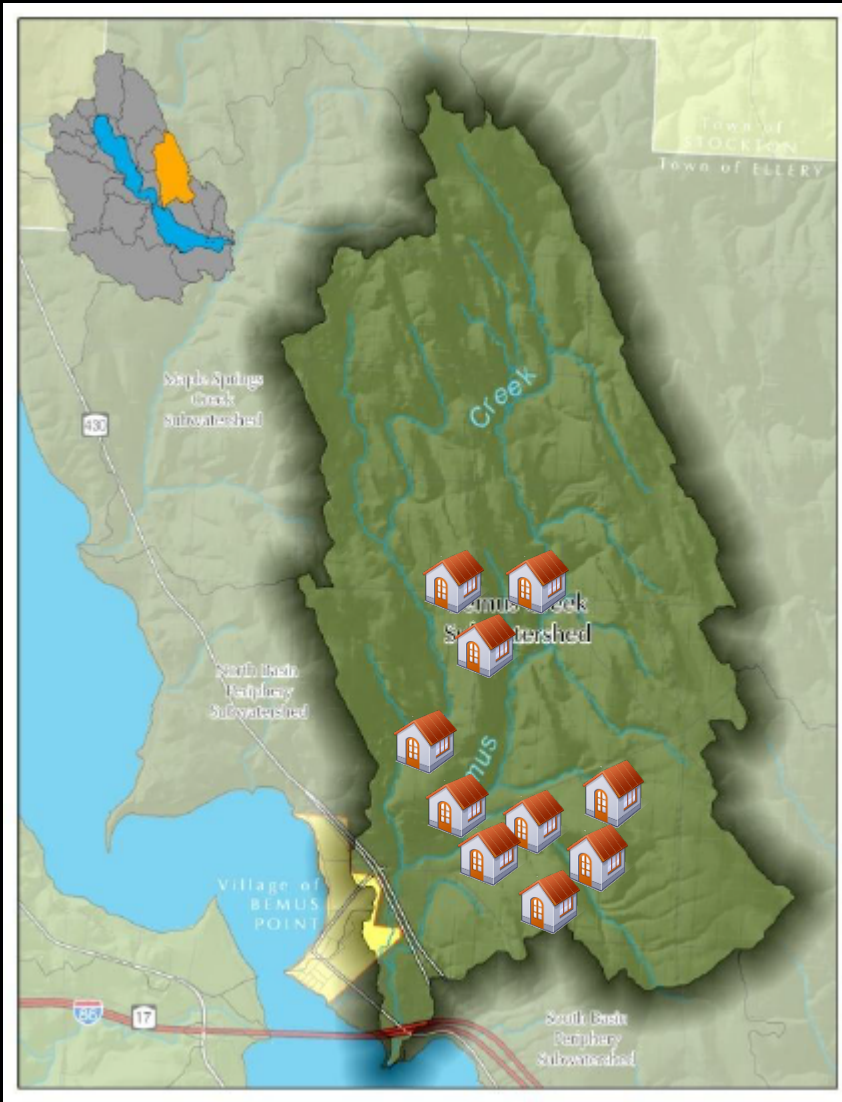
- Wastewater Management
- Emergency Services, etc.



Cumulative Effects

SCENARIO B-1 (2015):

- 10 Existing Homes – 10 acres



Cumulative Effects

SCENARIO B-2 (2017):

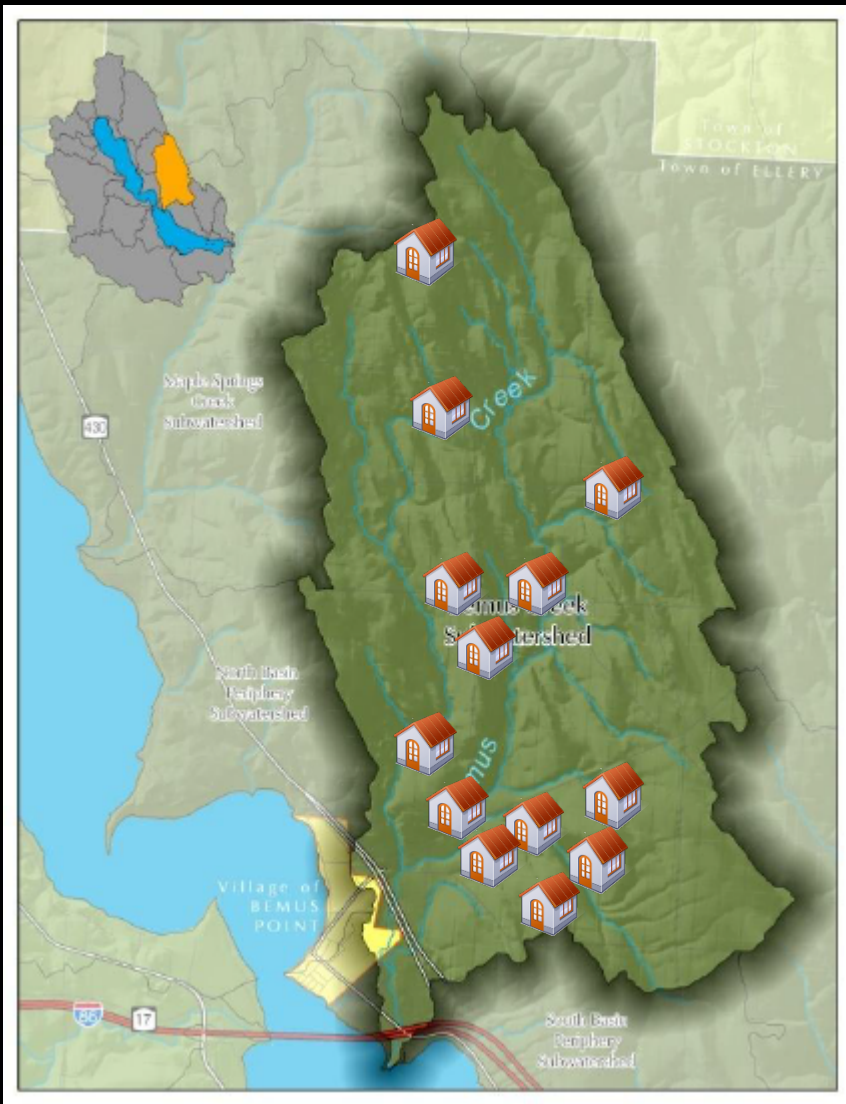
- 10 Existing Homes – 10 acres

No Proposal:

- 3 Additional Homes - 3 acres
- All within the same watershed

Triggers:

Municipal Discussions?



Cumulative Effects

SCENARIO B-3 (2020):

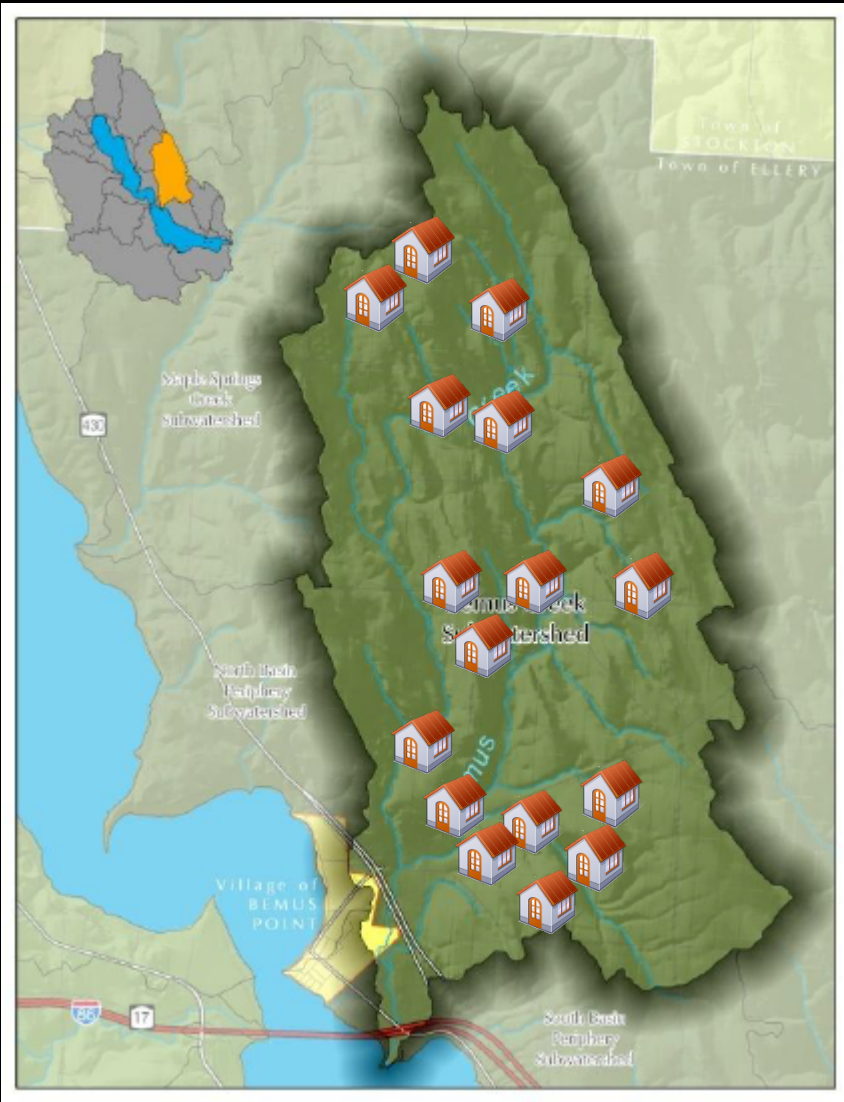
- 10 Existing Homes – 10 acres

No Proposal:

- 4 Additional Homes - 4 acres
- All within the same watershed

Triggers:

Municipal Discussions?



Cumulative Effects

SCENARIO B-4 (2023):

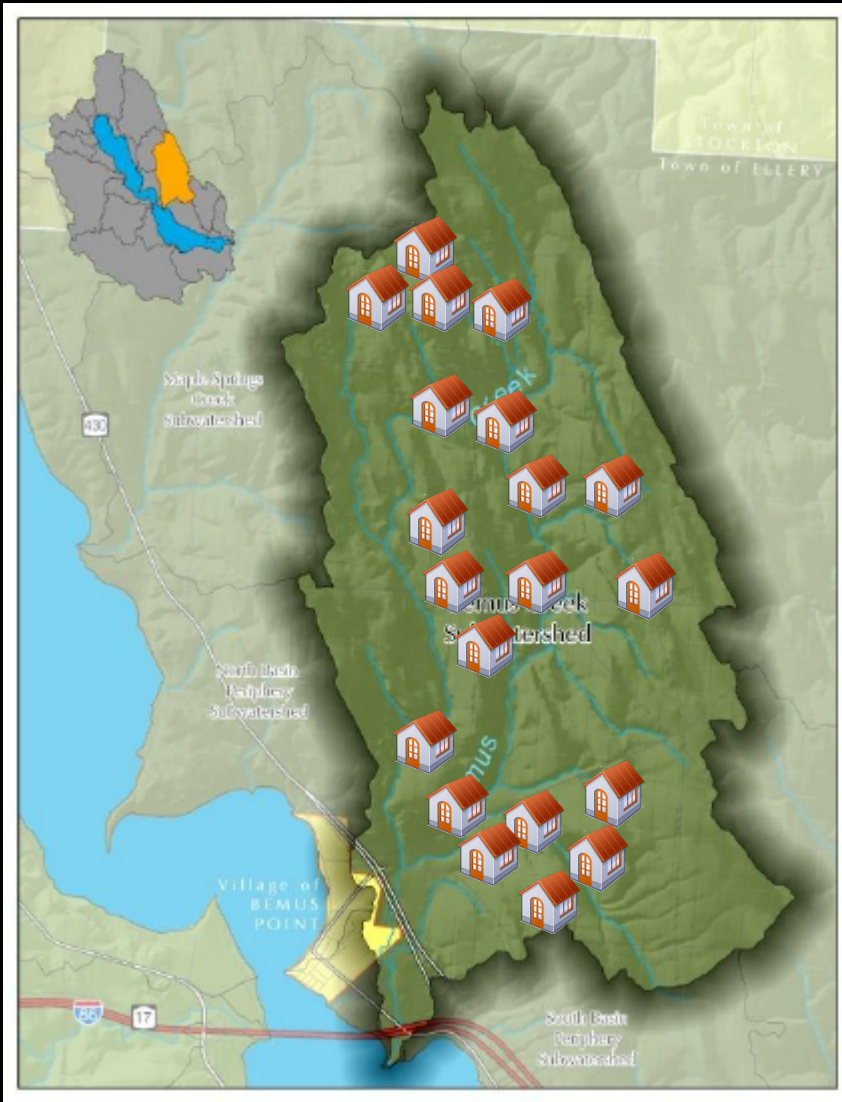
- 10 Existing Homes – 10 acres

No Proposal:

- 3 Additional Homes - 3 acres
- All within the same watershed

Triggers:

Municipal Discussions?



Who Cares?



Why You Might Care

Why You Might Care

- *Flood damage – homes, property, cropland, etc.*

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- *Landowner complaints*
- *Groundwater quality & quantity*
- *Jobs & Quality-of-life issues*
- ***MUNICIPAL COSTS***

Who's 'in-charge' -- of watershed management?



Photo: Rick Constantino

Who's 'in-charge' -- of watershed management?

- No One
- Mayors / Supervisors
- Business Owners
- Conservation Groups
- Planning / Zoning
- Highway Departments
- NYS DEC
- Private Landowners
- All Of The Above



Photo: Rick Constantino

Finance and Funding 101

Financing Strategies

- Funding vs Financing
- Provides backbone for implementation plan
- Resonates with decision-makers
- Lends credibility with funders
- Your plan cannot become a reality without it!



Effective Financing Strategies



- Community-based
- Integrated
- Mirror the resource

Components of a Financing Strategy

Cost Reducers

Revenue Generators

Market Based
Approaches



Cost Reducers

- Stormwater management planning
- Coordination with other community needs
- Effective, enforced codes and regulations
- Collaboration



Revenue Generators



- Grant and loans
- Bonds
- Sustainable, dedicated funding

Ithaca Stormwater Fee

Chautauqua County Bed Tax

Incentivizing the Private Sector

BINGHAMTON, NY

Location: Broome County, NY

Area: 11.14 square miles

Founded: 1867

Population: 46,551



SHARING THE COST

50/50

... of green stormwater projects
with residents and businesses

STORMWATER MANAGEMENT FUND

NFWF sponsored program where the City splits the cost of GI projects with developers and landowners up to \$25,000 for going above and beyond the required level stormwater management



GREEN STORMWATER AND LANDSCAPING MATCHING FUND



Local foundation sponsored program where the City provides matching funds for residents, nonprofits, and small businesses who want to install small-scale GI practices such as rain gardens, rain barrels, shade trees, and pervious paving

Incentivizing the Private Sector

- Upper Susquehanna Coalition: berm removal, constructed wetlands, buy-backs, streambed restoration...



Image courtesy Alliance for the Bay Flickr

What is
Green Infrastructure?

Re-forestation/ Re-vegetation



Vegetated Swales



For Residential Use. Keep the water from running down the driveway to the road

Rain Gardens



Rain Barrels



Cistern



Porous/Permeable Pavement Materials





Program Highlights

- 2-year planning process before any work started
- 90% locally funded
- 175+ projects completed
- More than 120 projects are private property
- 175+ million gallons runoff captured annually

Public-Private Partnerships



Stormwater management is a public 'good' but best managed by the private sector

Residents

Private businesses

Boy Scouts, CCE, Soil & Water, civic groups





Skiddy Park B-ball courts with the
Boeheim Foundation Courts 4 Kids program

What is your role and
what can you do?

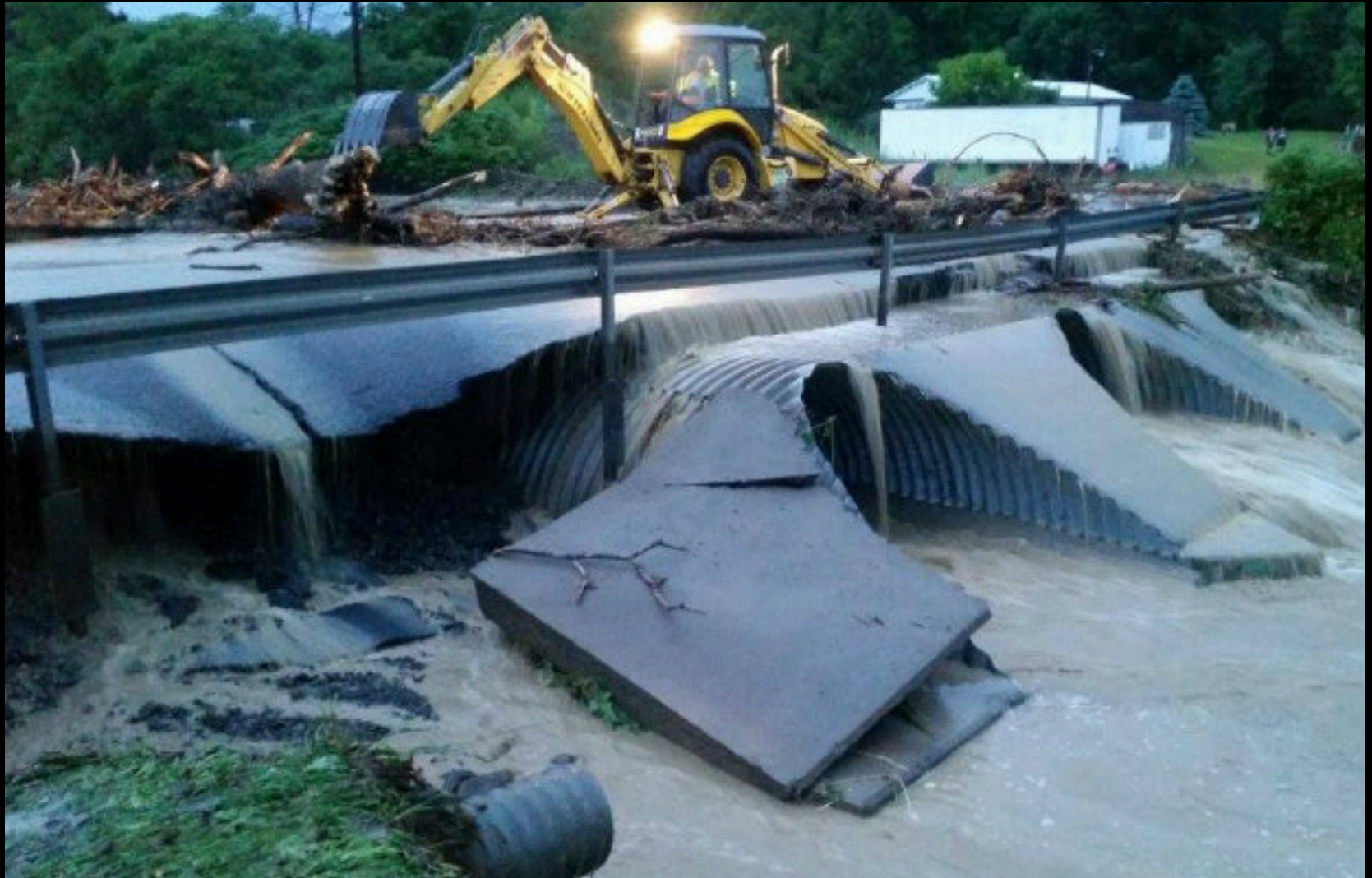
Stormwater Management Plan

1. Inventory ditches, culverts, bridges, drainage, pipes and outlets
2. What condition (probability) are they in?
3. How critical (impact) are they?
4. Rank & Prioritize
5. Capital Improvement Plan
6. Asset Advisory Committee
7. Educate-Educate-Educate

Good condition?



What's the Impact?





		Impact				
		Trivial	Minor	Moderate	Major	Extreme
Probability	Rare	Low	Low	Low	Medium	Medium
	Unlikely	Low	Low	Medium	Medium	Medium
	Moderate	Low	Medium	Medium	Medium	High
	Likely	Medium	Medium	Medium	High	High
	Very likely	Medium	Medium	High	High	High