How can we take restoration priorities identified using a watershed-based planning tool and link them back to the regulatory process?

1. ***Understand*** type and extent of potential ***project impacts*** at the site-scale
2. ***Understand*** the condition of ***key ecological processes*** at landscape scales
3. ***Identify sites*** capable of matching #1 with #2 above
4. ***Target sites maximizing long-term environmental benefits***

Target mitigation for maximum benefits

Target landscape, not artificial, storage and treatment

Engineered Flow Control

Example, stormwater detention pond

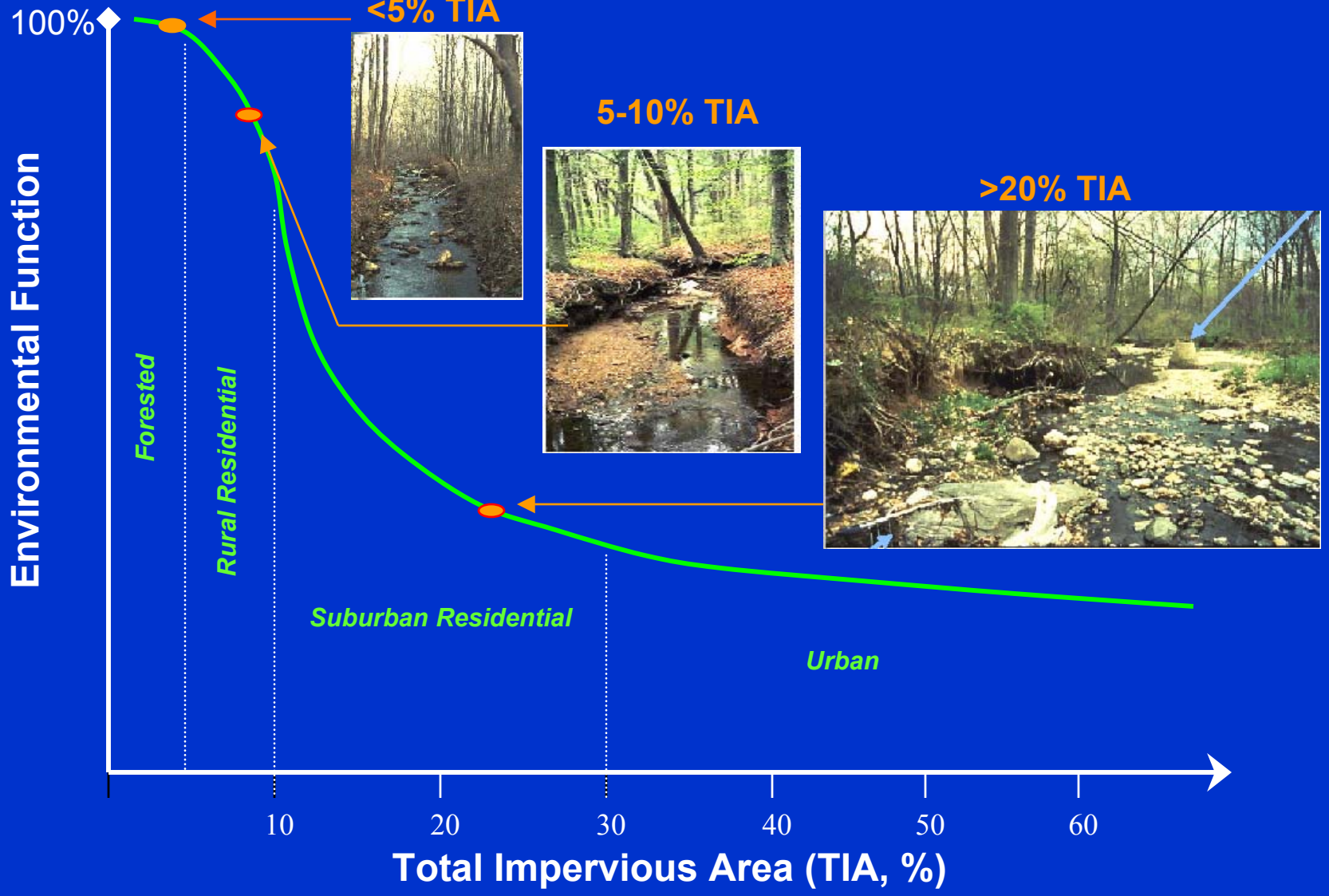
No benefits beyond water quality/quantity

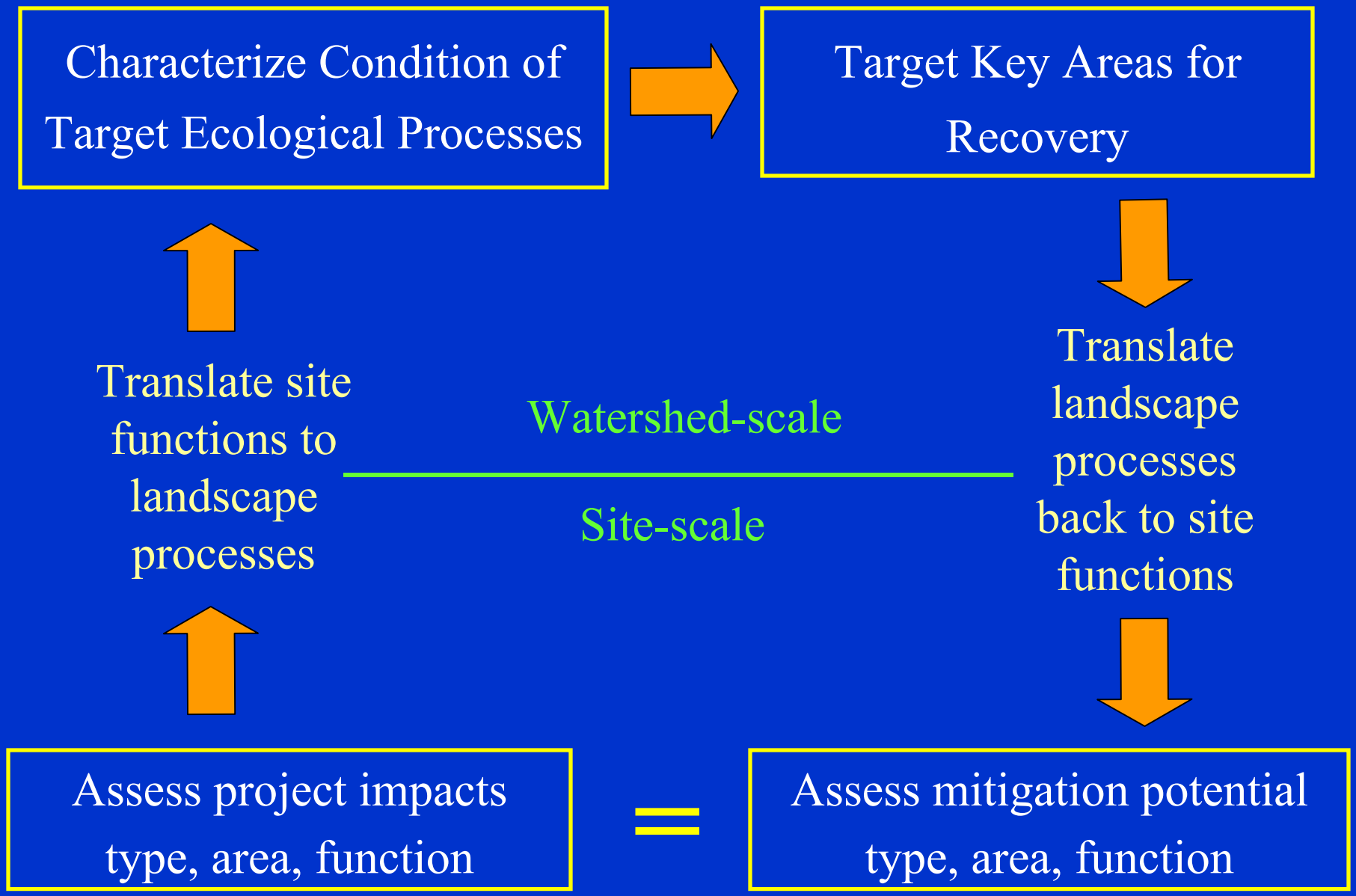
Restoring Natural Control

Example: wetlands restoration

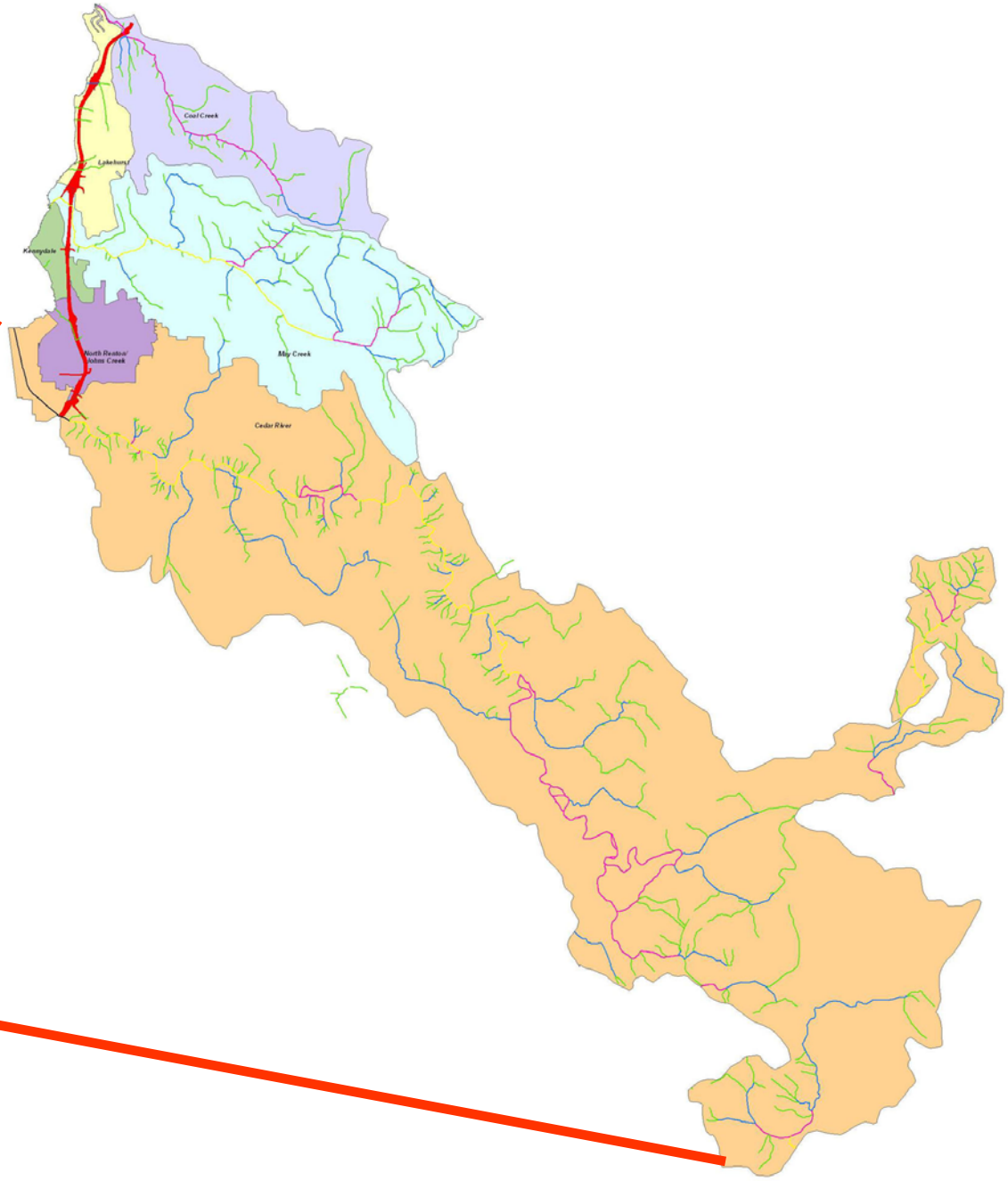
Many benefits beyond just water quality/quantity

Target mitigation where it's most effective

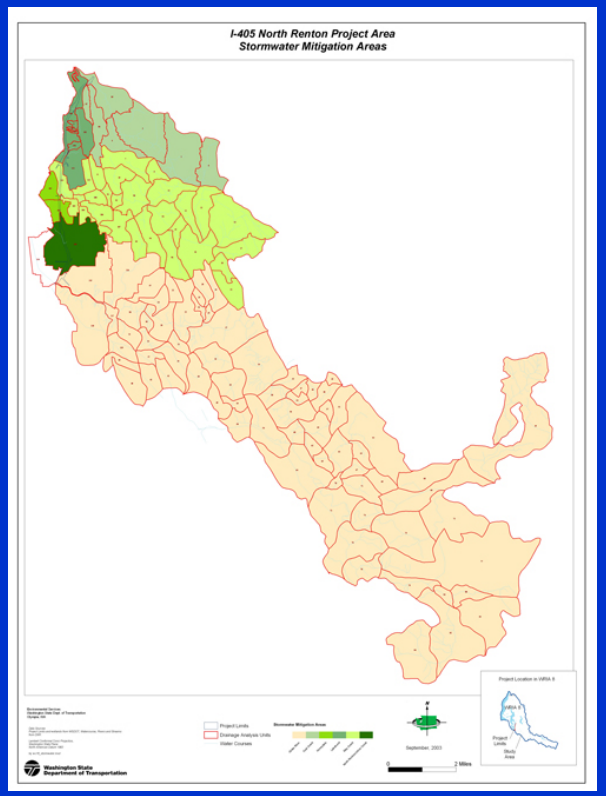


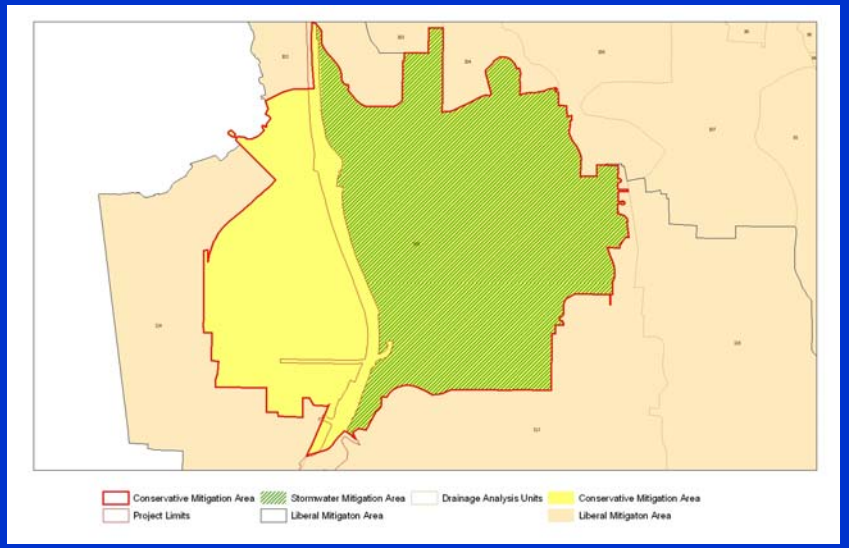

Characterize Condition of Target Ecological Processes
Target Key Areas for Recovery
Translate landscape processes back to site functions
Assess mitigation potential type, area, function
=
Assess project impacts type, area, function
Translate site functions to landscape processes
Watershed-scale
Site-scale

I-405 North Renton Study Area



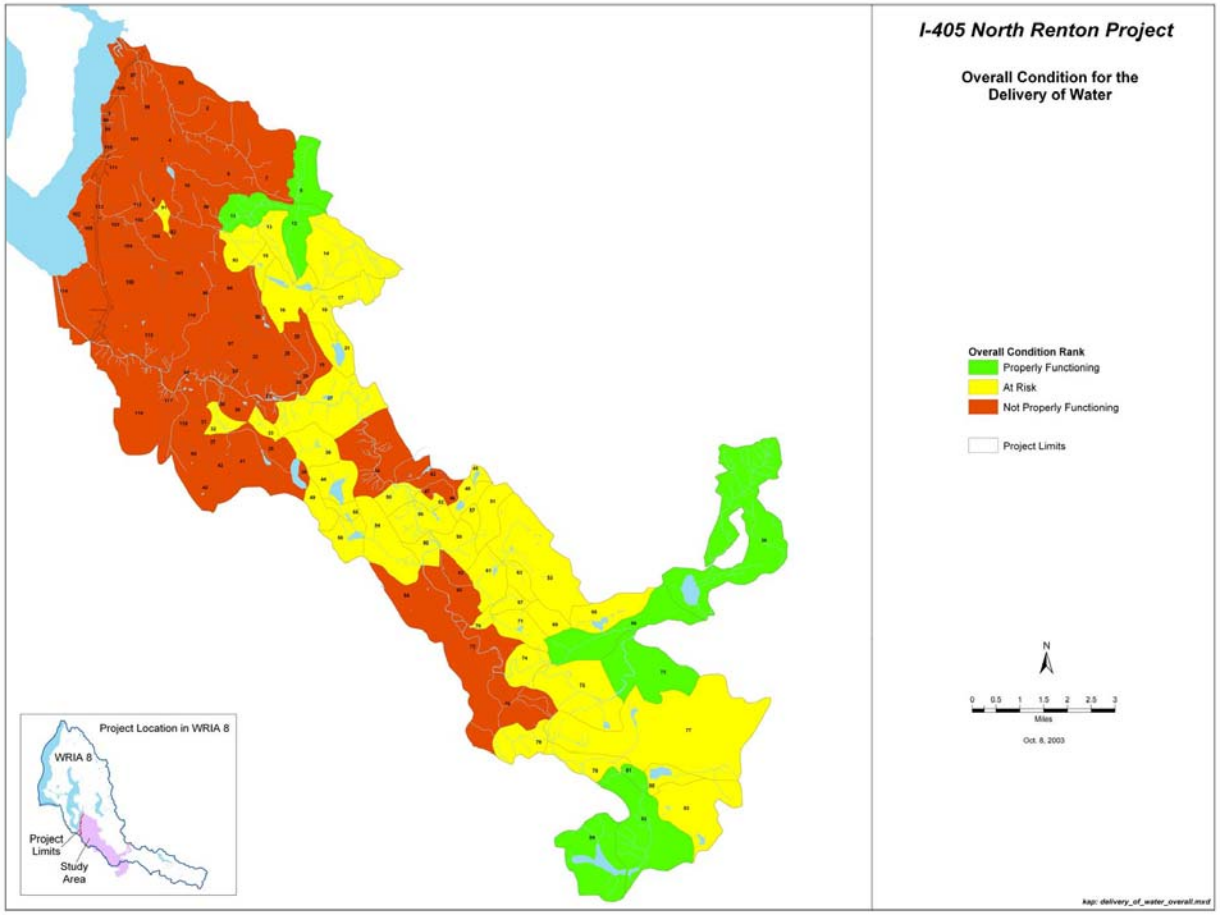
Establish Spatial Scales for Analysis and Mitigation





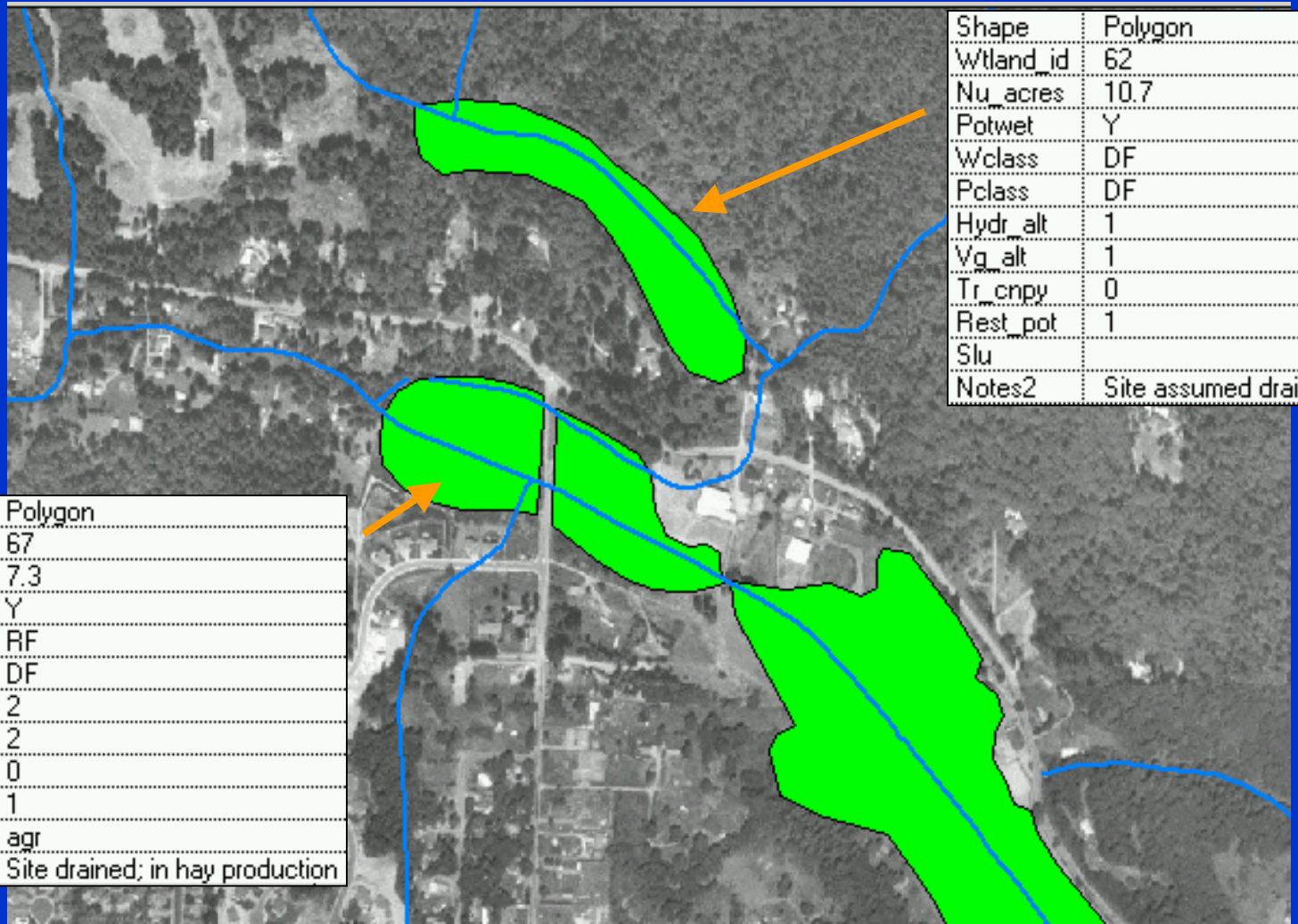
Interstate 405, North Renton

Characterize Condition of Study Area



- *Water*
- *Sediment*
- *Pollutants*
- *Wood*
- *Heat*
- *Aquatic Integrity*
- *Upland Integrity*

Develop Potential Wetland Restoration Site Database

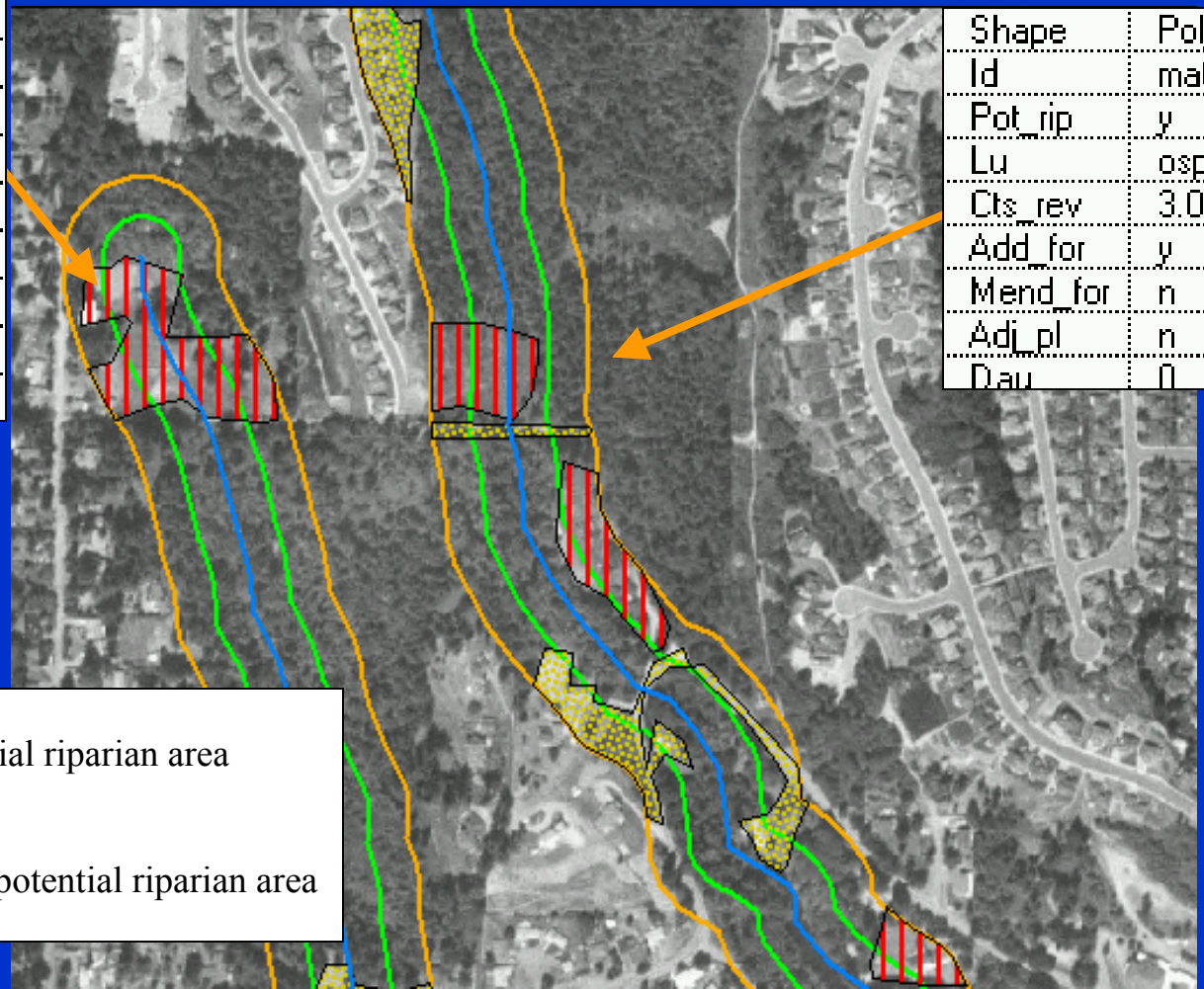


Shape	Polygon
Wtland_id	62
Nu_acres	10.7
Potwet	Y
Wclass	DF
Pclass	DF
Hydr_alt	1
Vg_alt	1
Tr_cnpy	0
Rest_pot	1
Slu	
Notes2	Site assumed drained; was

Shape	Polygon
Wtland_id	67
Nu_acres	7.3
Potwet	Y
Wclass	RF
Pclass	DF
Hydr_alt	2
Vg_alt	2
Tr_cnpy	0
Rest_pot	1
Slu	agr
Notes2	Site drained; in hay production

Develop Potential Riparian Restoration Site Database

Shape	Polygon
Id	ma022
Pot_rip	y
Lu	agr
Cts_rev	3.0
Add_for	y
Mend_for	n
Adj_pl	n
Dau	0

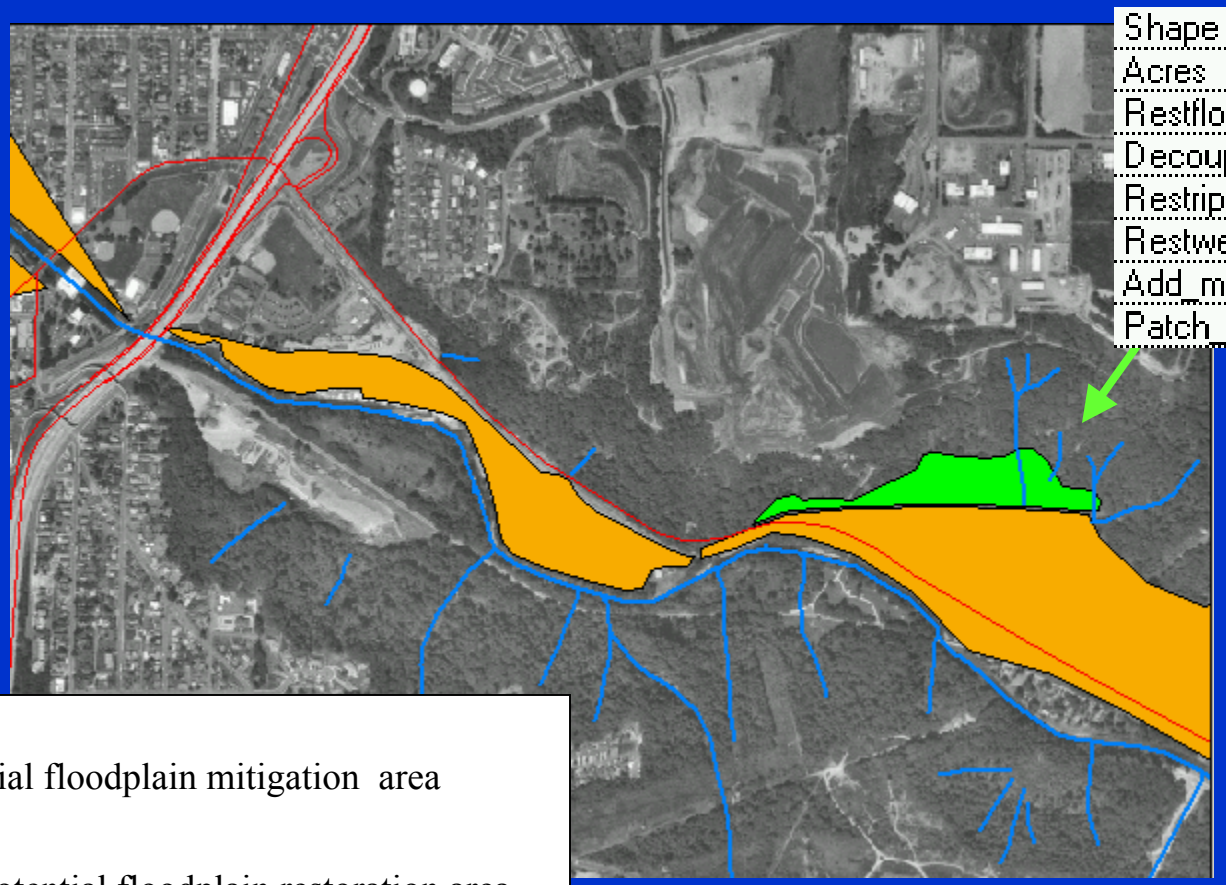


Shape	Polygon
Id	ma024
Pot_rip	y
Lu	osp
Cts_rev	3.0
Add_for	y
Mend_for	n
Adj_pl	n
Dau	0

Potential riparian area

Not a potential riparian area

Develop Potential Floodplain Restoration Site Database

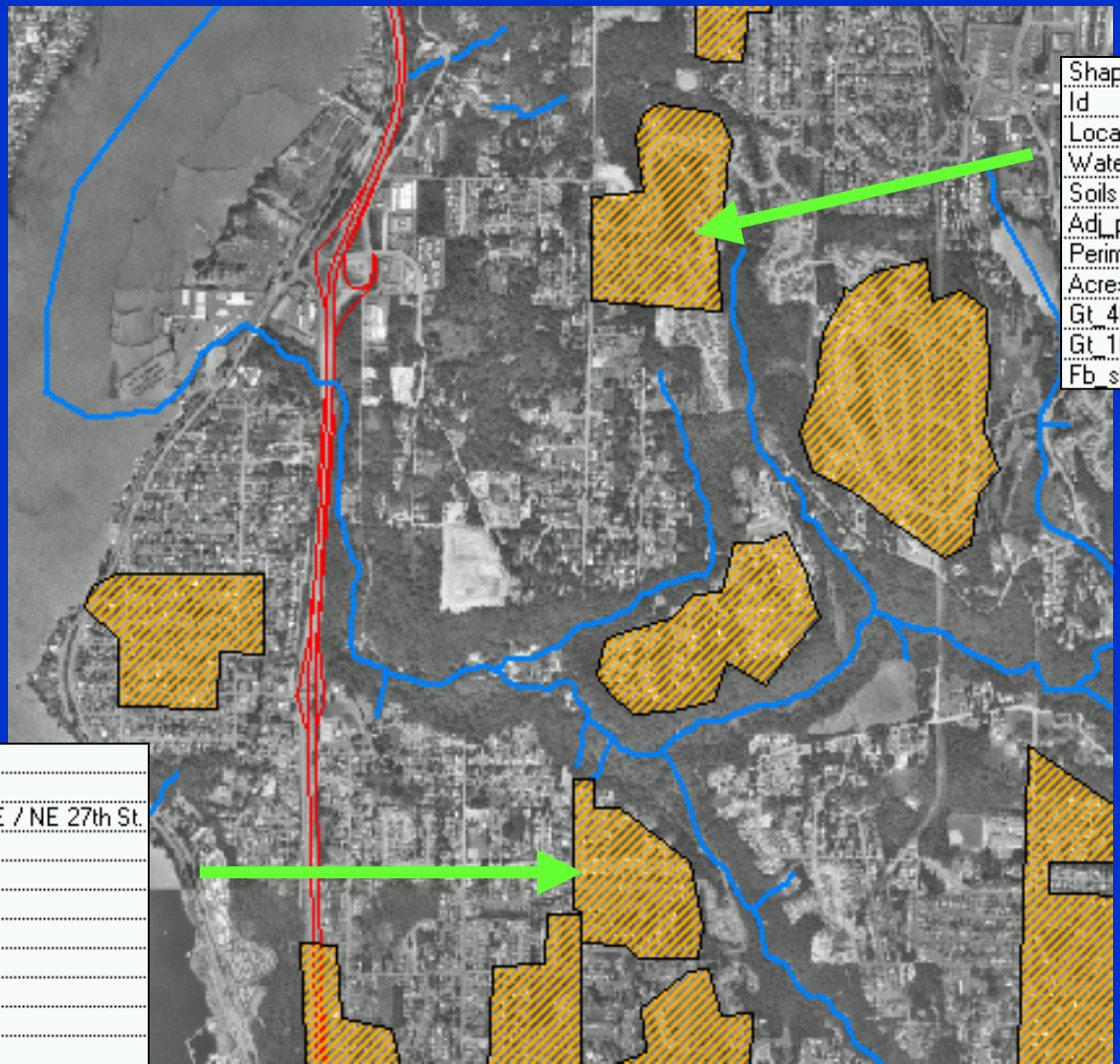


Shape	Polygon
Acres	11.787
Restflood	y
Decoupled	3
Restrip	1
Restwet	1
Add_mend	1
Patch_mk	1

Potential floodplain mitigation area

Not a potential floodplain restoration area

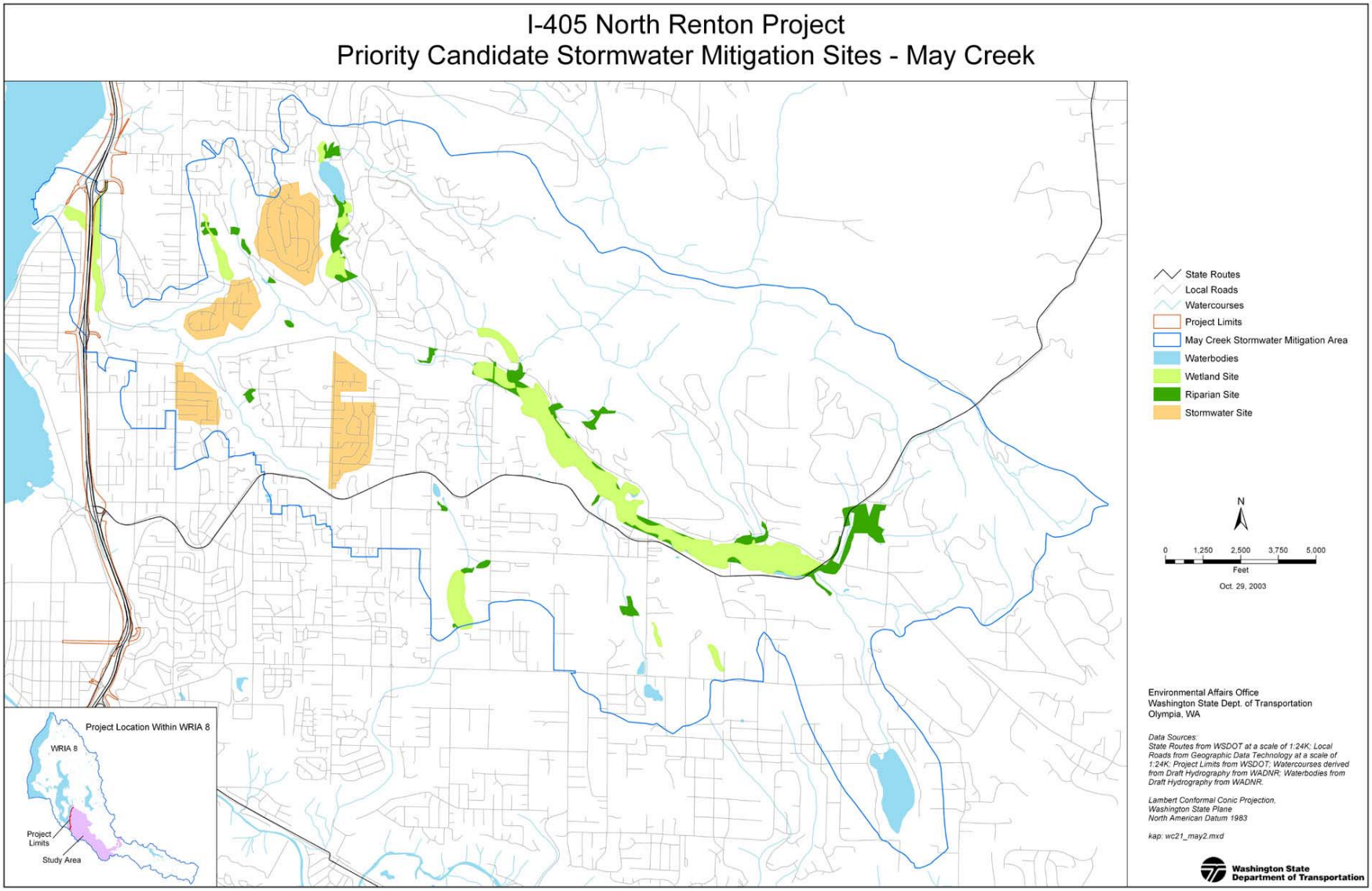
Develop Potential Stormwater Retrofit Site Database



Shape	Polygon
Id	17
Location	SE 77th Pl. / 116 Ave. SE
Watershed	Lakehurst
Soils	A/B
Adj_park	0
Perimeter	7482.342
Acres	66.706
Gt_40	1
Gt_100	0
Fb_stream	0

Shape	Polygon
Id	13
Location	Edmonds Ave NE / NE 27th St.
Watershed	North Renton
Soils	A/B
Adj_park	1
Perimeter	6350.600
Acres	48.194
Gt_40	1
Gt_100	0
Fb_stream	0

May Creek Site Locations



What challenges and opportunities did this present?

Challenges

- Multiple levels of environmental regulation
- Foundational elements to coordinated watershed planning don't exist
- Some permitting agencies embrace change best when *they* recommend the changes
- Overcoming internal and external prejudices (a.k.a. change is hard)
- Cooperation with some local jurisdictions

Opportunities

- People get excited about watershed work
- We provide project engineers with new options that they didn't have before
- New landscape data and perspectives provide opportunities to share data and develop new relationships
- Random acts of management doesn't work