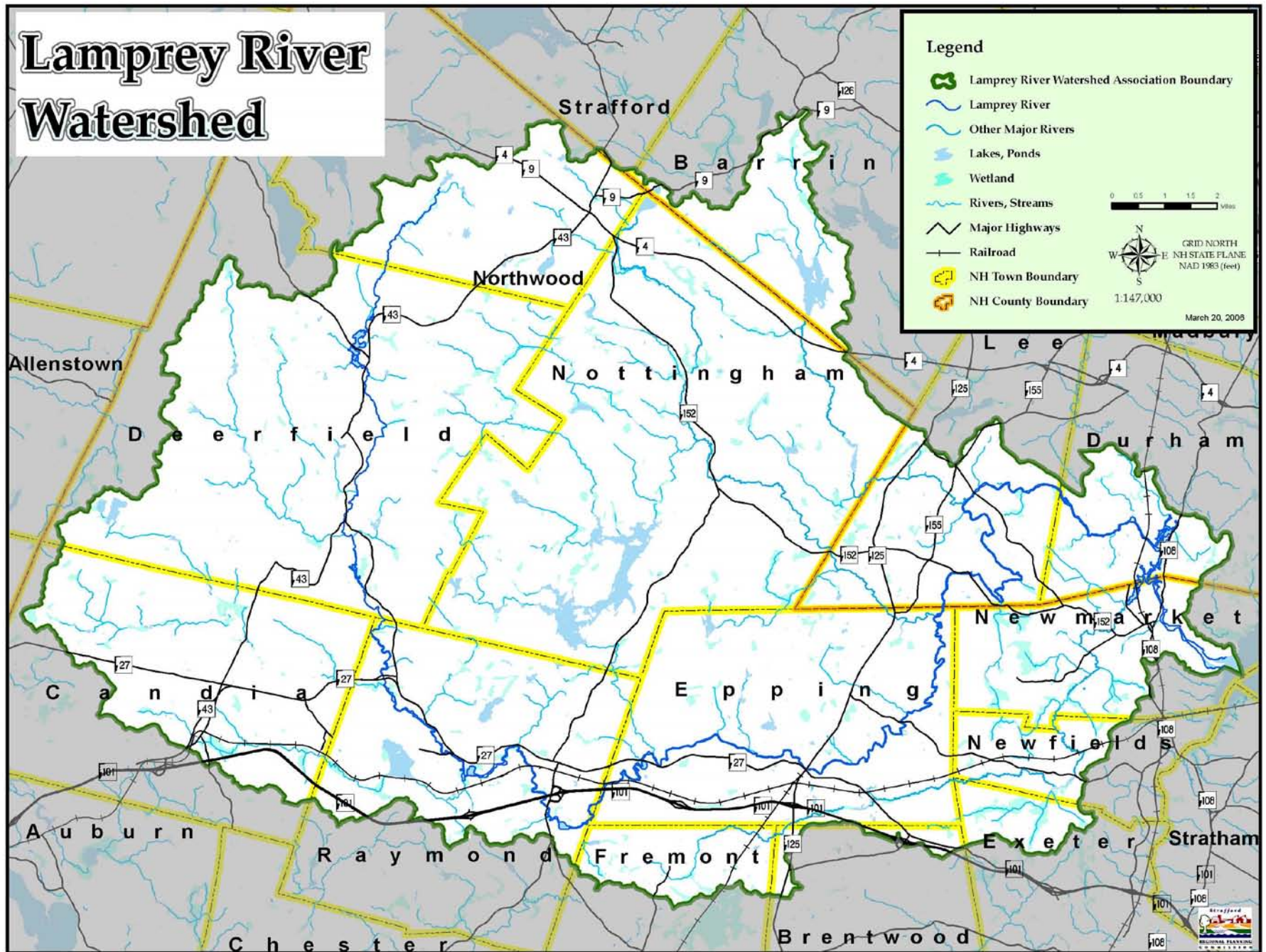


Streamwalk 2008

ASSESSMENT OF PHYSICAL FACTORS
AFFECTING WATER QUALITY IN THE LAMPREY
RIVER WATERSHED



Lamprey River Watershed



“Find it, fix it”

- Invasive species
- Erosion
- Culverts
- Stream crossings
- Stormwater outfalls
- Buffer conditions
- Trash and debris
- Channel alterations



Preliminary Results



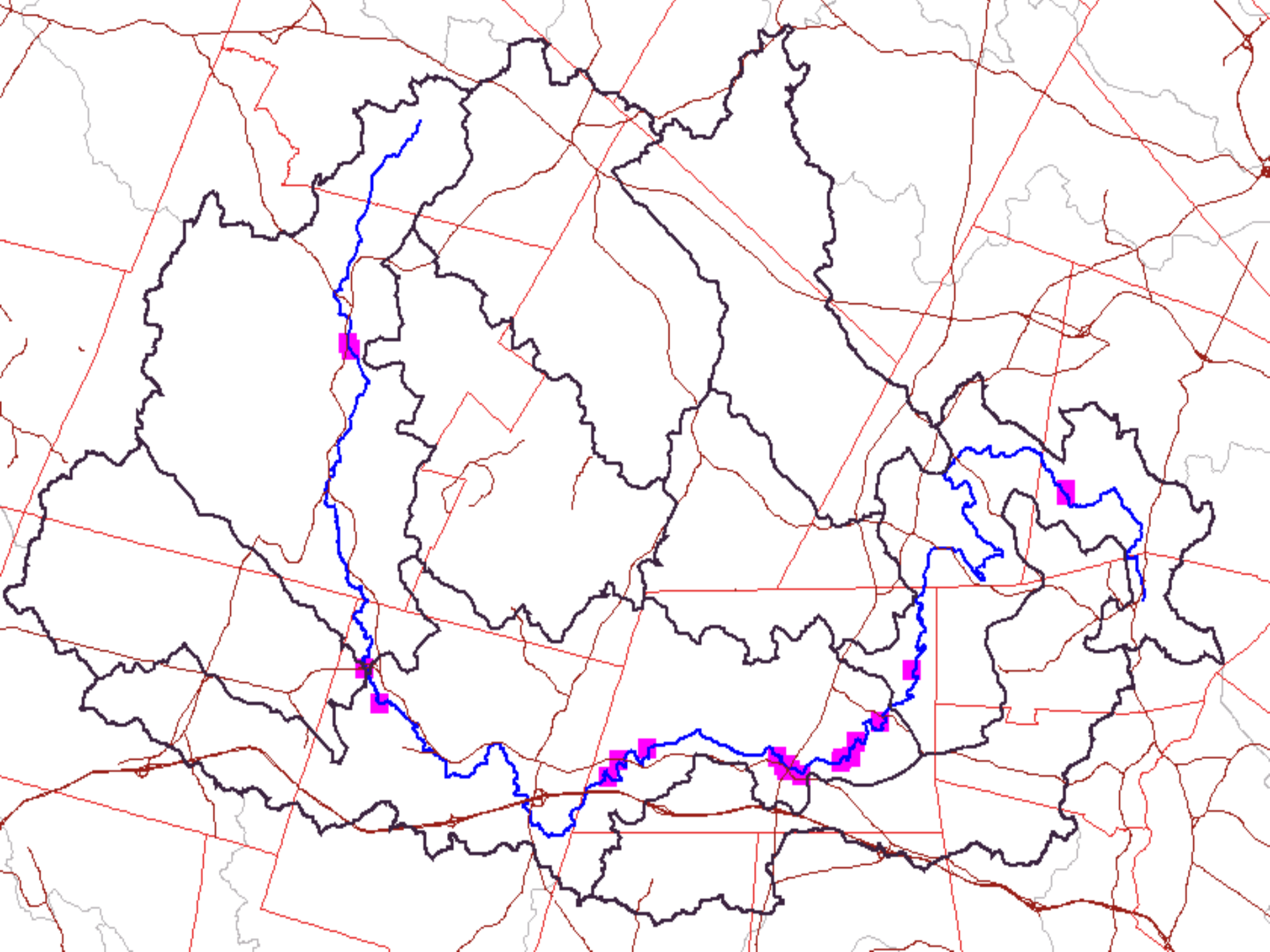
- Japanese knotweed is prevalent.
- Stormwater is going directly into the river.
- Many culverts are blocked with debris

Japanese Knotweed

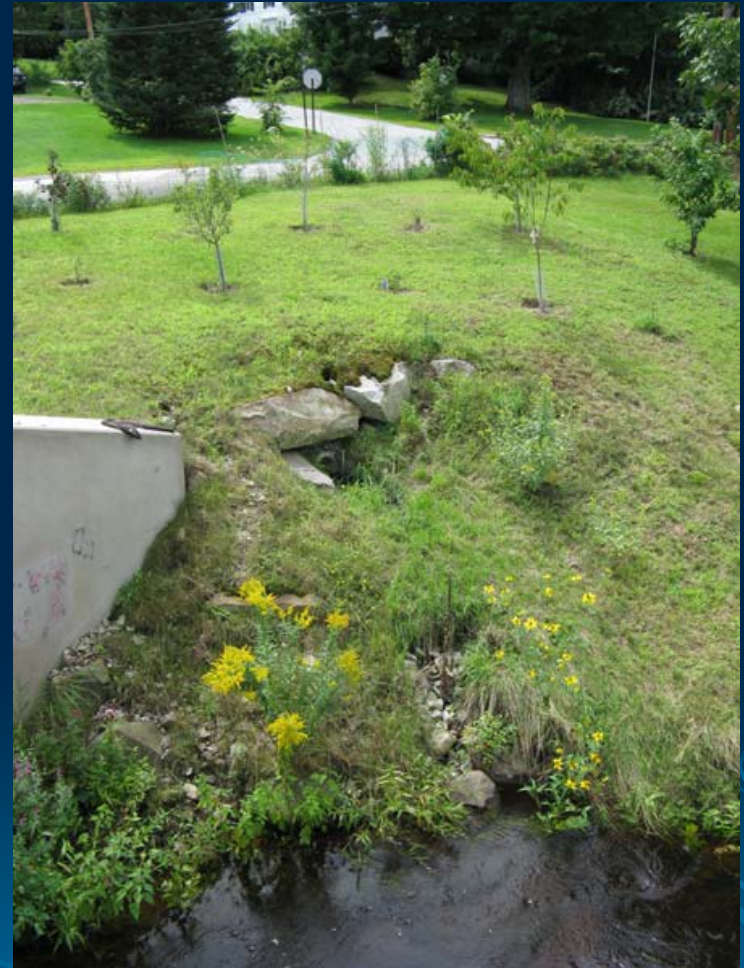
Impacted Buffer

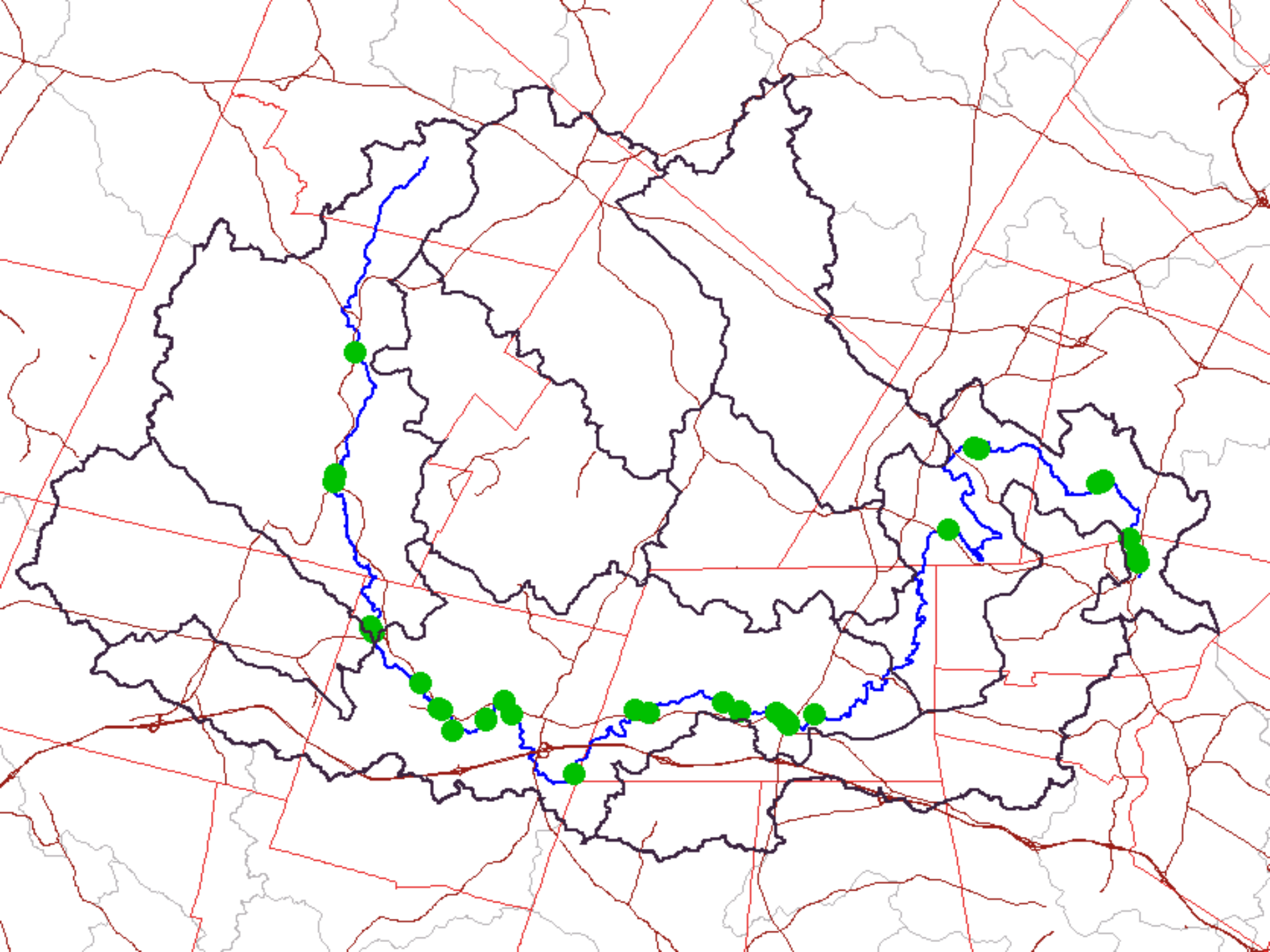
LAMPREY RIVER WATERSHED-MAINSTEM		DATE: 08/12/08	ASSESSED BY: EC + KF
SURVEY REACH: EDDING 08		PHOTO ID: (Camera Pic #) EFC10a1	LANDMARK: 46 Water Street
IMPACTED BUFFER #: 01		START LAT 43° 02' 14" LONG 71° 04' 12" #102405	END LAT 43° 02' 16" LONG 71° 04' 15"
IMPACTED BANK: (LOOKING DOWNSTREAM) <input type="checkbox"/> Left <input type="checkbox"/> Right <input checked="" type="checkbox"/> Both	REASON INADEQUATE: <input type="checkbox"/> Lack of vegetation <input checked="" type="checkbox"/> Too narrow <input type="checkbox"/> Recently planted <input type="checkbox"/> Other:		
INVASIVE PLANTS: <input type="checkbox"/> None <input type="checkbox"/> Partial <input checked="" type="checkbox"/> Widespread SPECIE(S): JAPANESE KNOTWEED			
BUFFER WIDTH: <input checked="" type="checkbox"/> <25 FEET <input type="checkbox"/> 25-50 FEET <input type="checkbox"/> 50-100 FEET <input type="checkbox"/> 100-50 FEET <input type="checkbox"/> >150 FEET			
LAND USE: (Facing downstream) Left Bank Right Bank	Private <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Institutional <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Golf Course <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>			
IS THE STREAM SHADED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Partial <input type="checkbox"/> Full			
REFORESTATION POTENTIAL: (Circle #)	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting		
	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate		
	Impacted area on private land where most building encroachment or other feature significantly limits available area for planting		
POTENTIAL CONFLICTS WITH REFORESTATION	<input checked="" type="checkbox"/> Widespread invasive plants <input type="checkbox"/> Potential contamination <input type="checkbox"/> Lack of sun		
<input type="checkbox"/> Poor/unsafe access to site	<input checked="" type="checkbox"/> Existing impervious cover <input type="checkbox"/> Severe animal impacts (deer, beaver) <input type="checkbox"/> Other:		
NOTES: RB - Japanese knotweed along both banks. Right bank steep, buildings + parking lots close. Right bank - channelized bank LB - LEFT BANK better, but still has invasives Impact is at least 100 yds			
Good buffers are wide areas of natural vegetation (i.e. not lawn) next to streams that are used to remove pollution, minimize bank erosion and serve as habitat.			





Stormwater Outfalls and Culverts





The Good News

- Buffers along most of the river are over 300 feet.
- Upper watershed has few identified problems.
- Erosion is fairly localized.

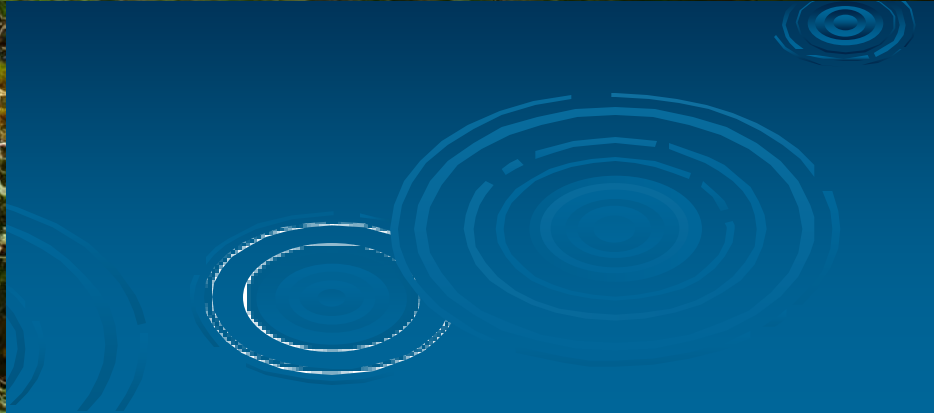
Laurel River
Whole Reach Assessment

SURVEY REACH ID: <u>5</u>		DATE: <u>8/29/08</u>	ASSESSED BY: <u>ERIC FIECKENBAUM + KATIE FIECKENBAUM</u>
START TIME: <u>3:00 AM</u> LANDMARK: <u>PACKER'S FALLS BRIDGE</u>		END TIME: <u>4:30 AM</u> LANDMARK: <u>WISCONSIN DAM</u>	
LAT <u>43° 06' 5"</u> LONG <u>70° 57' 8"</u>		LAT <u>43° 6' 16"</u> LONG <u>70° 57' 46"</u>	

RAIN IN LAST 24 HOURS <input type="checkbox"/> Heavy rain <input type="checkbox"/> Steady rain <input checked="" type="checkbox"/> None <input type="checkbox"/> Intermittent rain <input type="checkbox"/> Trace	PRESENT CONDITIONS <input type="checkbox"/> Heavy rain <input type="checkbox"/> Steady rain <input type="checkbox"/> Intermittent rain <input checked="" type="checkbox"/> Clear <input checked="" type="checkbox"/> Trace <input type="checkbox"/> Overcast <input type="checkbox"/> Partly cloudy
SURROUNDING LAND USE: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Urban/Residential <input type="checkbox"/> Suburban/Res <input checked="" type="checkbox"/> Forested <input type="checkbox"/> Institutional <input type="checkbox"/> Golf course <input type="checkbox"/> Park <input type="checkbox"/> Crop <input type="checkbox"/> Pasture <input type="checkbox"/> Wetland <input type="checkbox"/> Other:	

AVERAGE CONDITIONS (check applicable)		REACH SKETCH AND SITE IMPACT TRACKING <i>Simple planar sketch of survey reach (this can also be done on the segment base map). Track locations and IDs for all site problems within the survey reach as well as any additional features deemed appropriate. Indicate direction of flow.</i> <p style="text-align: center;">SEE ATTACHED MAP</p> <p>While no impacted buffer had significant amounts of invasive species, there was a considerable amount of buckthorn (assumed glossy) throughout this segment.</p>
FLOW AS % <input type="checkbox"/> 0-25% <input type="checkbox"/> 25-50% <input checked="" type="checkbox"/> 50%-75% <input type="checkbox"/> 75-100%		
DOMINANT SUBSTRATE <input type="checkbox"/> Silt/clay (fine or slick) <input checked="" type="checkbox"/> Sand (gritty) <input type="checkbox"/> Gravel (0.1-2.5") <input checked="" type="checkbox"/> Cobble (2.5-10") <input type="checkbox"/> Boulder (>10") <input type="checkbox"/> Bed rock		
WATER CLARITY <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid (suspended matter) <input type="checkbox"/> Stained (clear, naturally colored) <input type="checkbox"/> Opaque (milky) <input type="checkbox"/> Other (chemicals, dyes)		
AQUATIC PLANTS IN STREAM Attached: <input type="checkbox"/> none <input checked="" type="checkbox"/> some <input type="checkbox"/> lots Floating: <input type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots		
WILDLIFE IN OR AROUND STREAM (evidence of) <input checked="" type="checkbox"/> Fish <input checked="" type="checkbox"/> Beaver <input checked="" type="checkbox"/> Deer <input type="checkbox"/> Seals <input type="checkbox"/> Other:		
STREAM SHADING: What percentage of the surface of the water is shaded by vegetation (assuming a sunny day)? <u>30%</u>		
CHANNEL DYNAMICS <input type="checkbox"/> Downcutting <input type="checkbox"/> Widening <input type="checkbox"/> Headcutting <input checked="" type="checkbox"/> None/ Nothing notable		
CHANNEL DIMENSIONS Height: Left bank _____ (ft) Right bank _____ (ft) Width: Bottom _____ (ft) Top _____ (ft)		
ACCESSIBILITY Good: Open area in public ownership, easy access from a road for a car/truck to be launched or parked for a few vehicles. Fair: Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Difficult: Must cross wetland, steep slope, or sensitive areas to get to stream. Few sites to allow for road access adjacent to river.		

Trash and Debris



Erosion



“Fix it”

- Map more stormwater outfalls in more of the watershed
- More work on invasive species control and eradication
- Culvert clean-ups
- Continue to promote ways to protect the river



What did it take?

- 40 + volunteers.
- Over 400 hours of volunteer time!
- 500 data sheets
- And only one volunteer accidentally in the river!



Next Steps

- Final report out in early 2009
- Present findings to watershed towns.
- Conduct the survey on the tributaries and tidal portions of the river.



