

Transect & Trib Sampling

May 2005

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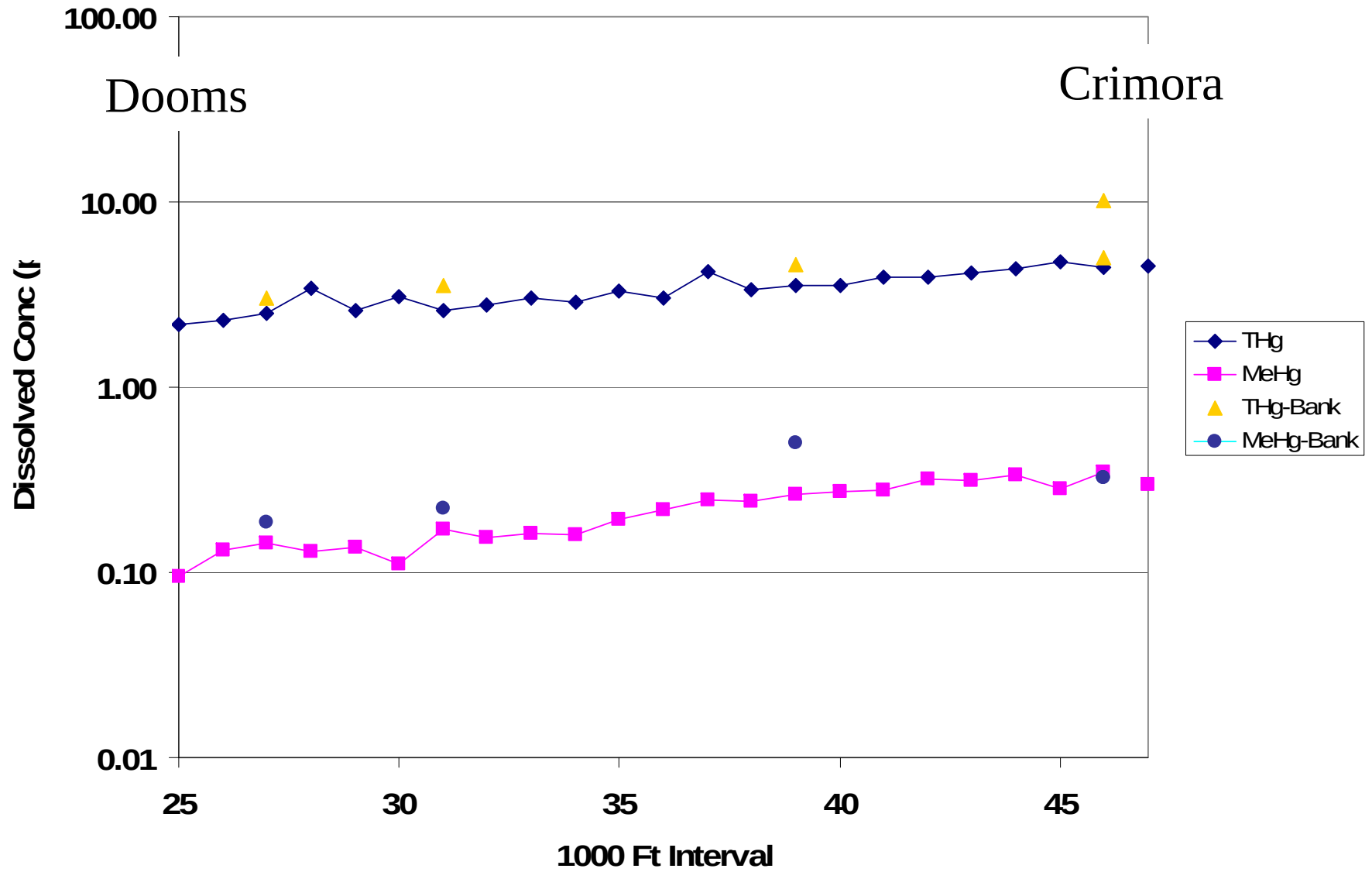
Items Covered

- Results of transect sampling
- Further results of sewer embayment (old millrace) sampling
- “Upstream” results for Steele Run
- Outline of May whole river float

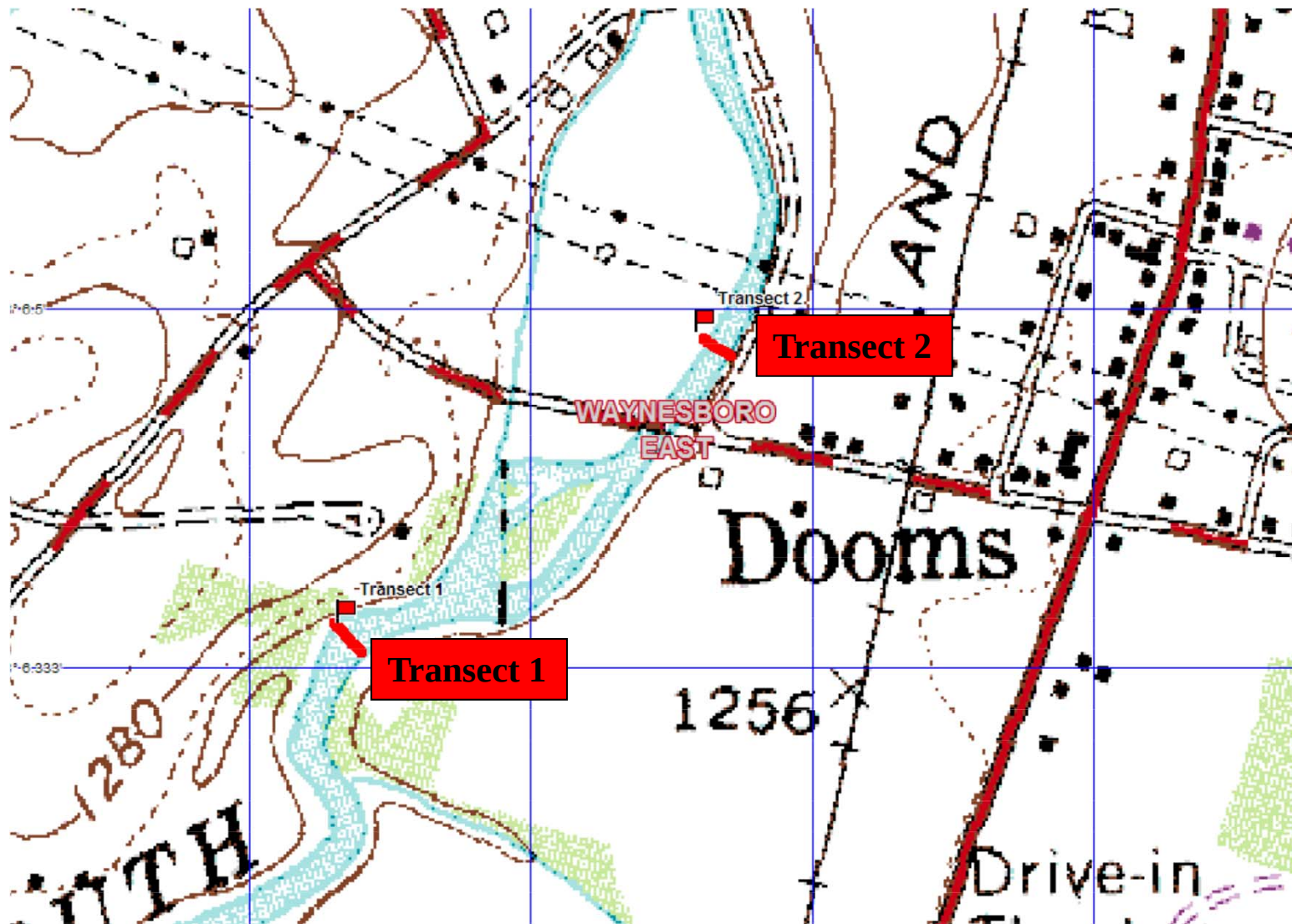
Transect Sampling

- Previously showed that near-bank dissolved Hg and MeHg concentrations were higher than mid-stream.
- Pattern enhanced near “eroding” banks.
- Is this pattern common on the South River and an indication that eroding banks are sources of soluble Hg and MeHg to the river?

Hg vs 1000 Ft Interval



May 2005 Transects

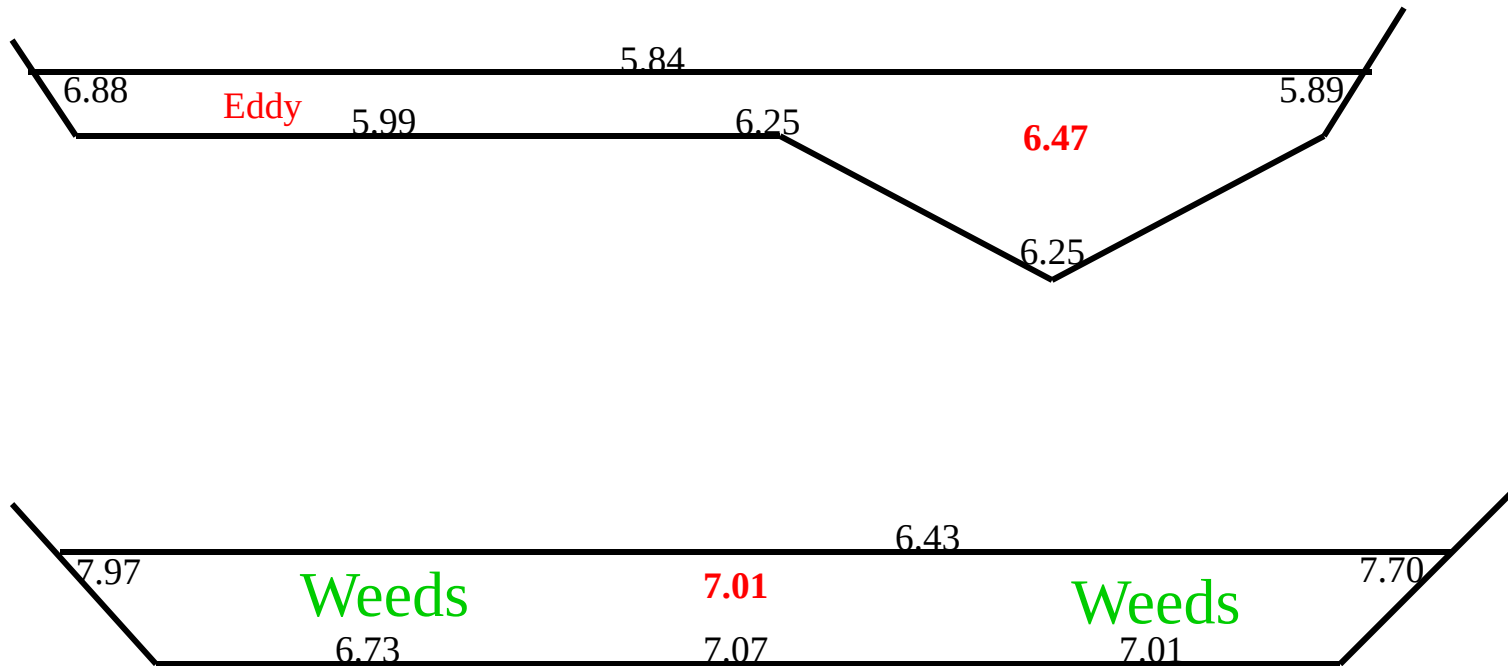


Transect Results

THg Dissolved, ppt

East

West

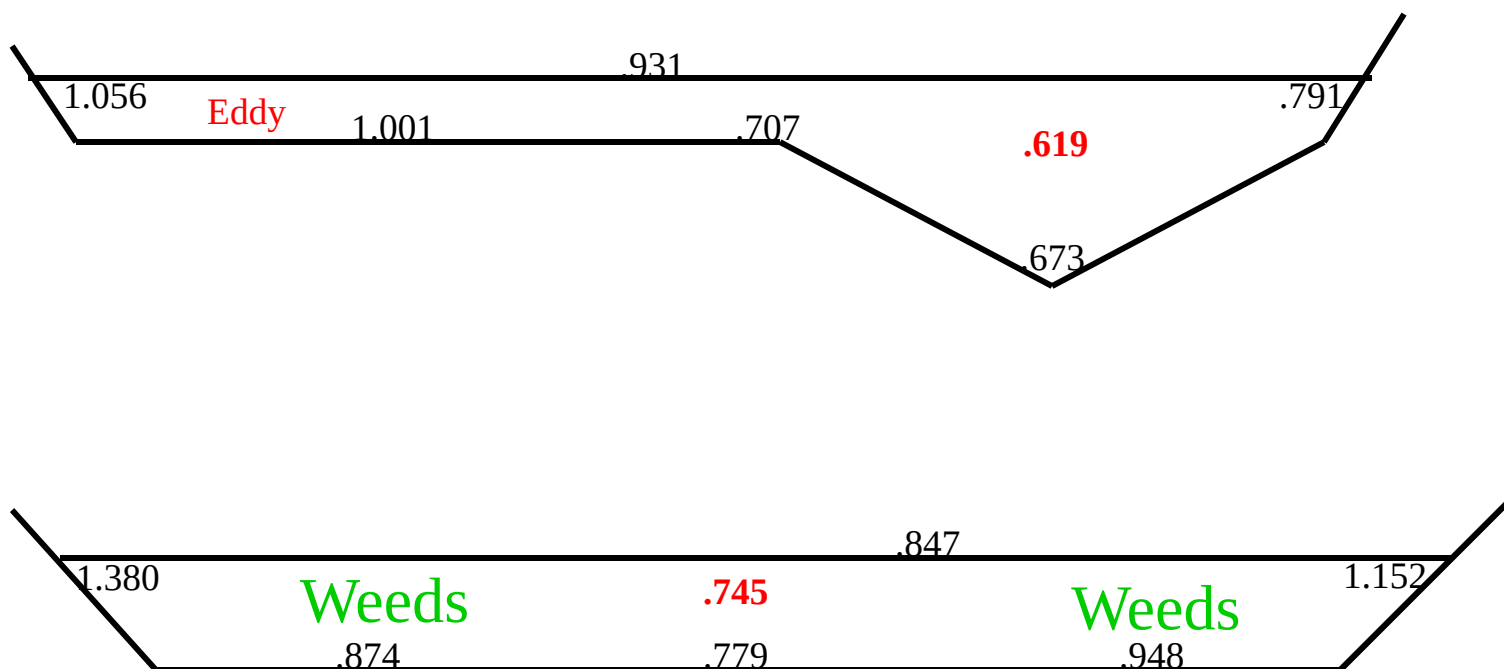


Transect Results

MeHg Dissolved

East

West



Deltas from Transect Averages

6.72/1.265 Dup

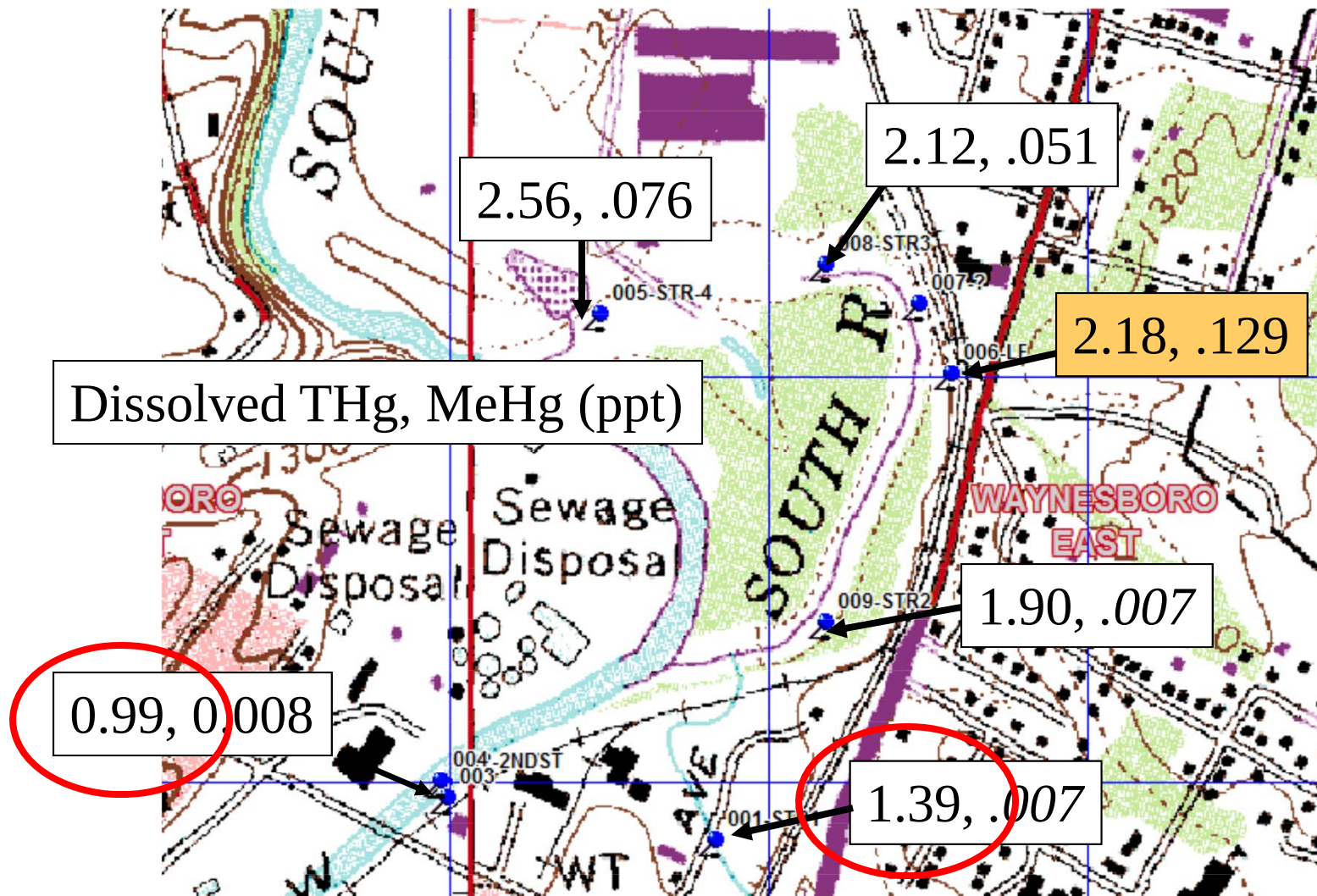
Transect 1	THg	MeHg		D-THg	D-MeHg		THg	MeHg
1	6.47	0.619		3.94767	-25.0087	Main	>	<<
2	5.89	0.791		-5.37067	-4.17099	Bank	<	<
3	6.88	1.056		10.53477	27.93354	EddyBank	>>	>>
4	6.25	0.707		0.413128	-14.3475	Bottom	>	<
5	5.99	1.001		-3.76406	21.27034	EddyBottom	<	>>
6	6.25	0.673		0.413128	-18.4666	Bottom	>	<<
7	5.84	0.931		-6.17397	12.78989	Surface	<	>>
Ave	6.224286	0.825429						
Transect 2	THg	MeHg		D-THg	D-MeHg			
1	7.01	0.745		-1.70272	-22.4535	Main	<	<<
2	7.7	1.152		7.972756	19.91078	Bank	>	>>
3	7.97	1.38		11.75881	43.64312	Bank	>>	>>
4	7.07	0.779		-0.86138	-18.9145	Bottom	<	<<
5	6.73	0.874		-5.62901	-9.02602	Bottom	<	<
6	7.01	0.948		-1.70272	-1.32342	Bottom	<	<
7	6.43	0.847		-9.83574	-11.8364	Surface	<	<<
Ave	7.131429	0.960714						

Transect Observations

- THg/MeHg vary widely in transects
 - > variation than typical analytical errors
- Things must be happening/changing locally
 - otherwise river would be better mixed/uniform
- Data may reveal nature of processes
- Banks mostly higher than river bottom
- Eddy may influence results in Dooms pool
- Surface results mixed

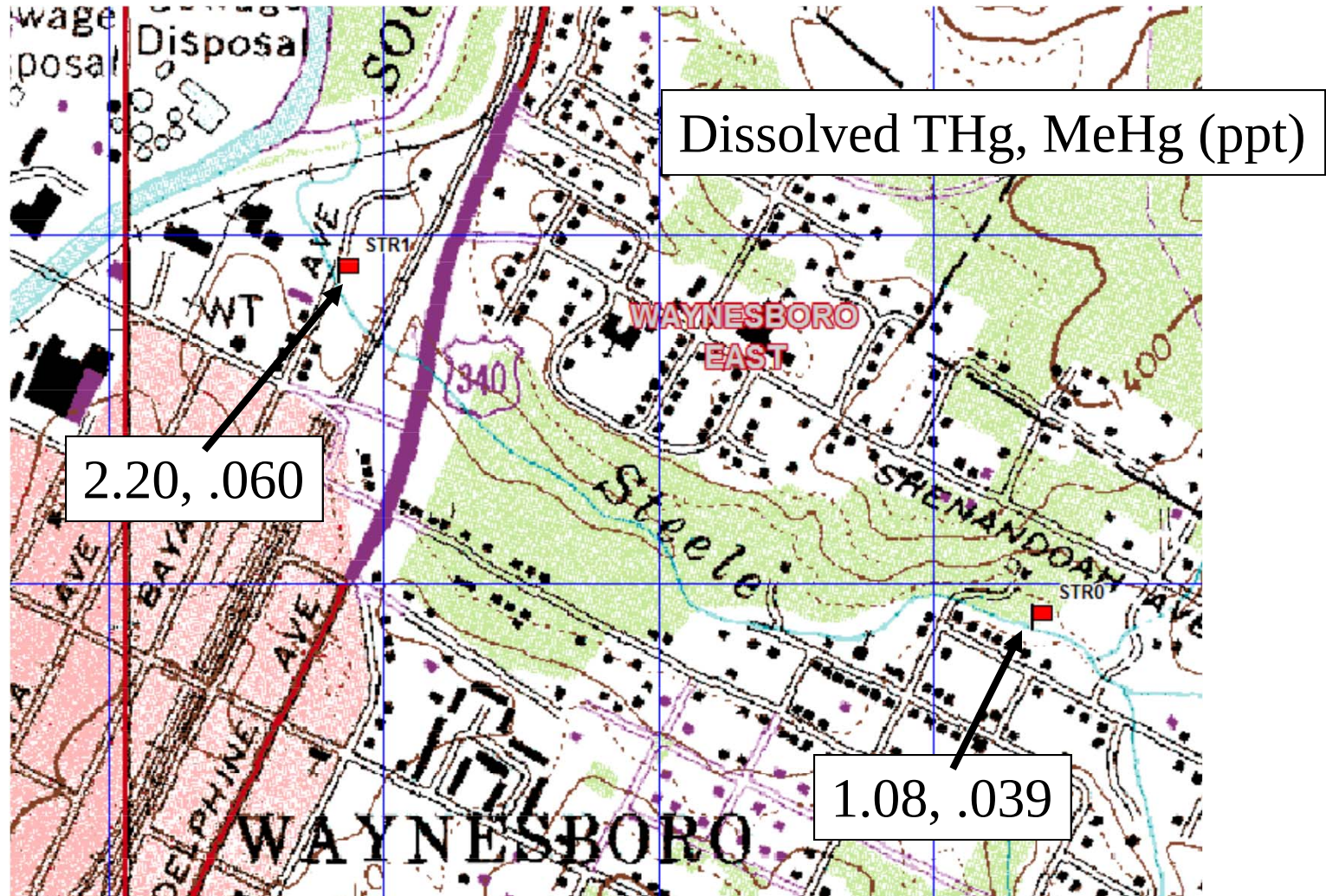
Oxbow/Steele Run Water Results

March 2005



Steele Run Upstream

May 2005



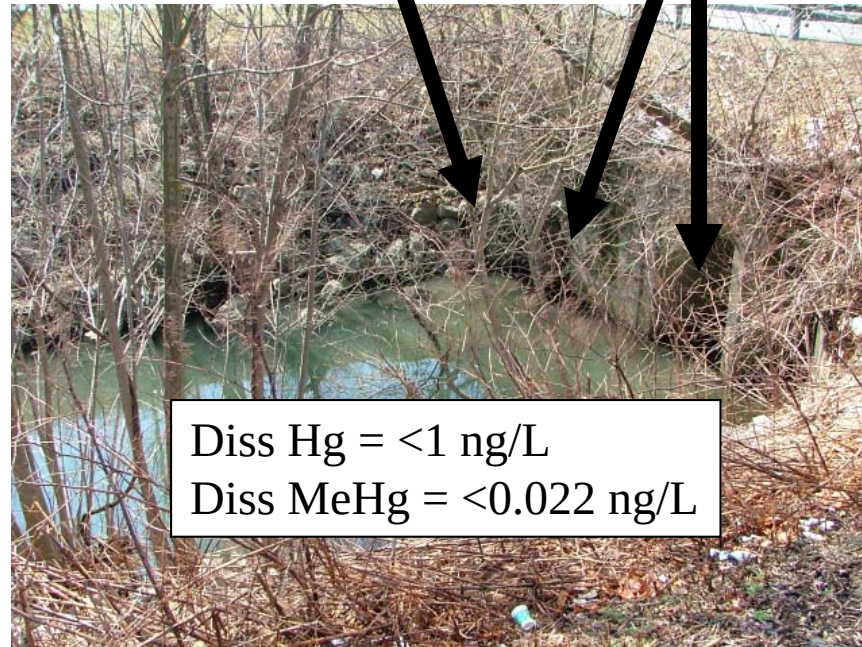
Sewer Embayment

Old Millrace Discharge Point

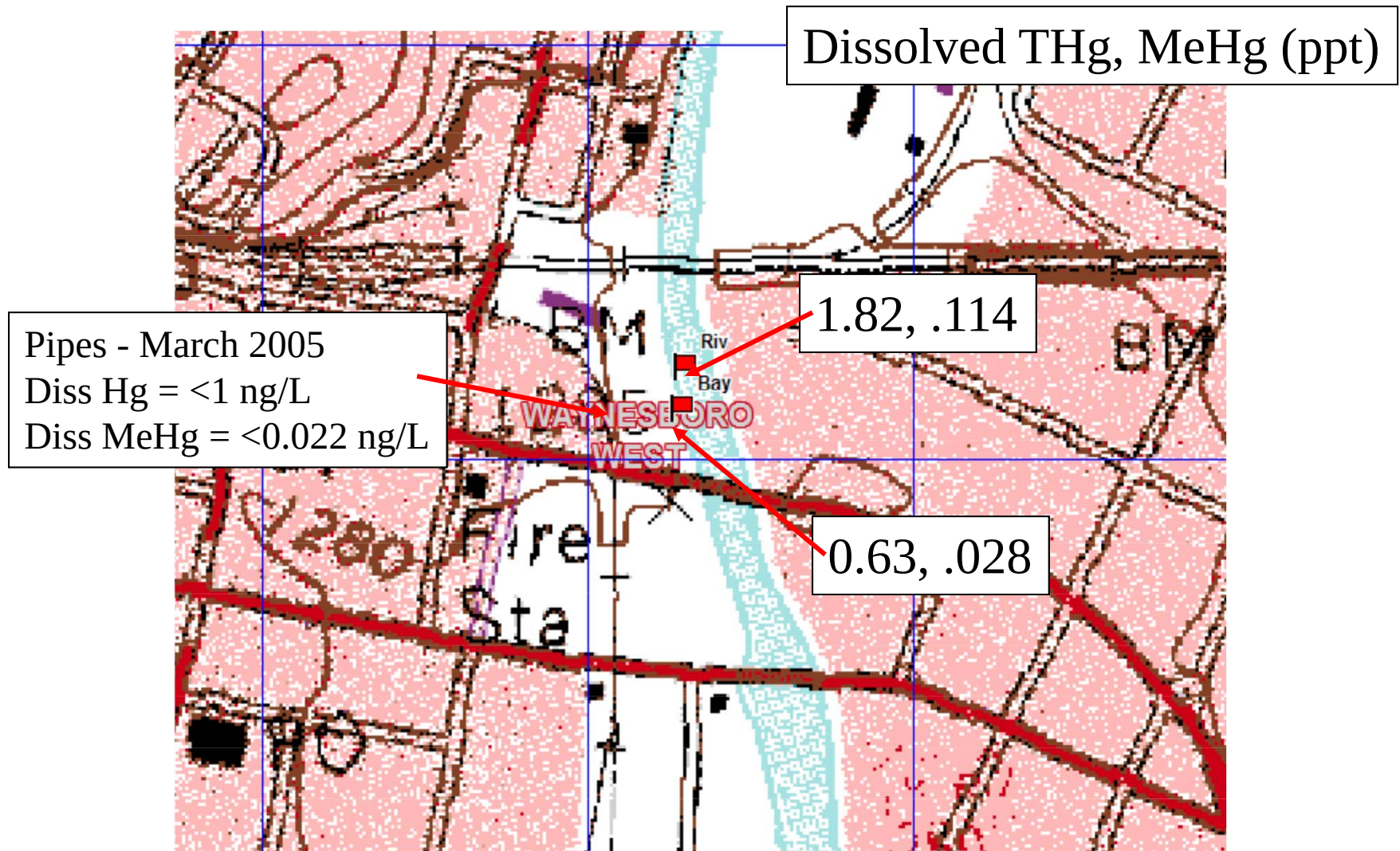


One
Round

Two
Rect.



Check Embayment as Source



May 2005 Intensive Float

Data in process

- 4000 ft interval, Plant to Crimora
 - 1000 ft interval previously obtained
- 2000 ft interval, Crimora to past Forestry
- 3000 ft interval to Port Republic
- 500 ft interval Hopeman to Genicom ditch
 - plus 2 tribs