

Fishbeck, Thompson, Carr & Huber, Inc.

Kawkawlin River WMP



October 19, 2009 - Project Update



Presentation Outline

1. Rapid Assessment
2. Detailed Assessments
 1. Erosion
 2. Ecological



Rapid Assessment

Purpose – Narrow area of focus

- Existing information
 - impacts to channels
 - land use
- Windshield survey

Rapid Assessment

Potential Problems in the Kawkawlin watershed:

- Livestock in stream
- Modified channels for agriculture
- Dense drainage network
- Lack of stream buffers
- Widespread, extensive agriculture
- Limited, locally significant streambank erosion

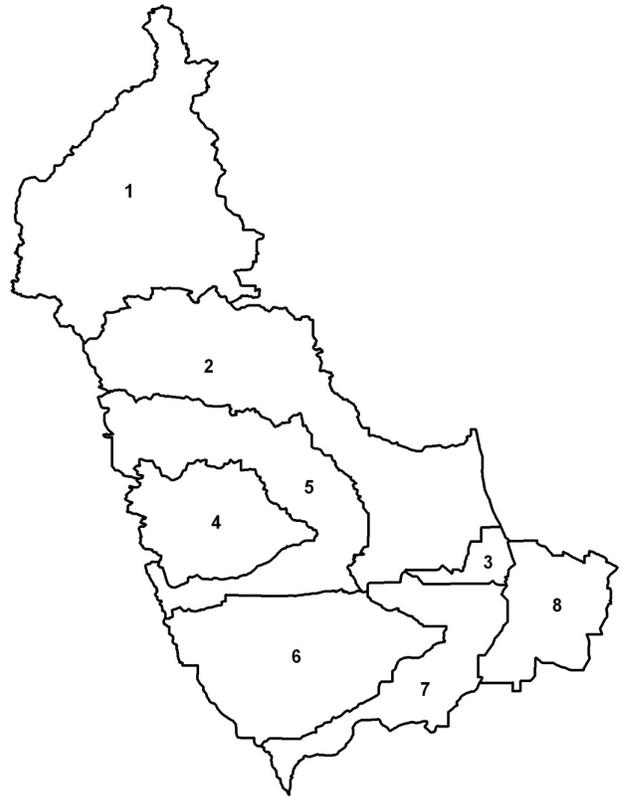
Rapid Assessment

Ranking Subwatersheds:

- Percentage of agricultural land
- Percentage of wetland
- Percentage of channel with no buffer
- Drainage density
- Obvious Problems
- Ecological score

Rapid Assessment

- Subwatersheds 7, 6 and 3 were the lowest scoring
- Subwatersheds 1 and 4 were the highest scoring



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Erosion Assessment

- BEHI (Bank Erosion Hazard Index) assessment
- NPS load calculations

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Erosion Assessment

SITE	LENGTH	HEIGHT	EROSION RATE	SEDIMENT LOAD (tons/year)	P LOAD (lbs/year)	N LOAD (lbs/year)
Watson Dr. - Klender to Rhodes	3855	4.5	0.1	135.2	148.7	297.5
Watson Dr. - Upstream of Klender	1660	5	0.21	130.7	143.8	287.6
Herner Dr. - County Line to Jefferson	1300	5.7	0.21	77.8	85.6	171.2
Herner Dr. - Upstream of County Line	500	5	0.14	17.5	19.3	38.5
Herner Dr. @ Jefferson (below culvert)	200	5	0.4	20.0	22.0	44.0
Herner Dr. - Downstream of Jefferson	1000	5	0.21	52.5	57.8	115.5
Torey Dr. - Downstream of Anderson	800	4	0.25	40.0	44.0	88.0
Kawkawlin Ck. - Upstream Circle Rd	50	10	0.4	10.0	11.0	22.0
Kawkawlin Ck. - Upstream Circle Rd	100	4	0.2	4.0	4.4	8.8
Kawkawlin River - Downstream of Beaver	850	7	0.14	41.7	45.8	91.6

TOTAL 10315.0 529.4 582.3 1164.6





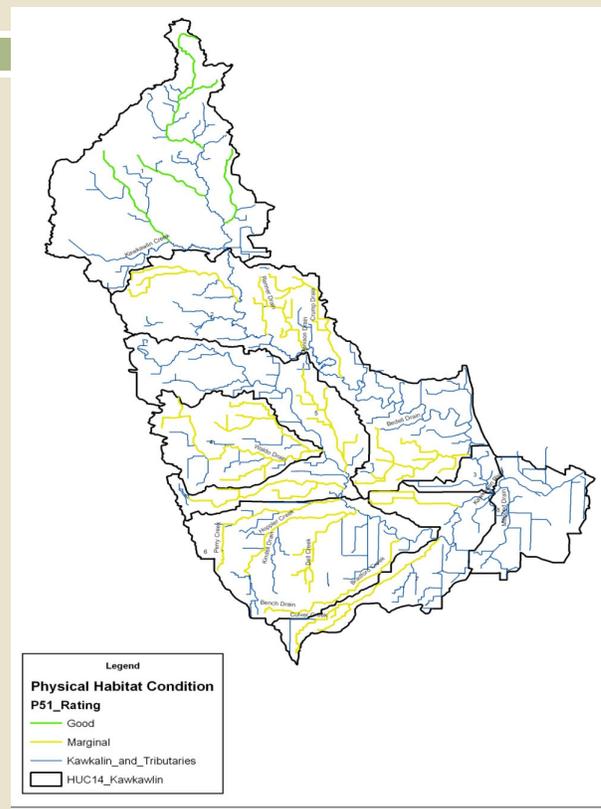
Ecological Assessment

- Existing information
- Biological sampling
- General habitat mapping

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Ecological Assessment

- 21 tributaries
- Procedure 51
- most rated as Marginal
 - highly impacted riparian areas





Summary

- Degraded habitat and bug communities
 - Sediment and nutrients
- Load estimates with site prioritization
- Information will be incorporated into WMP

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Questions?

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