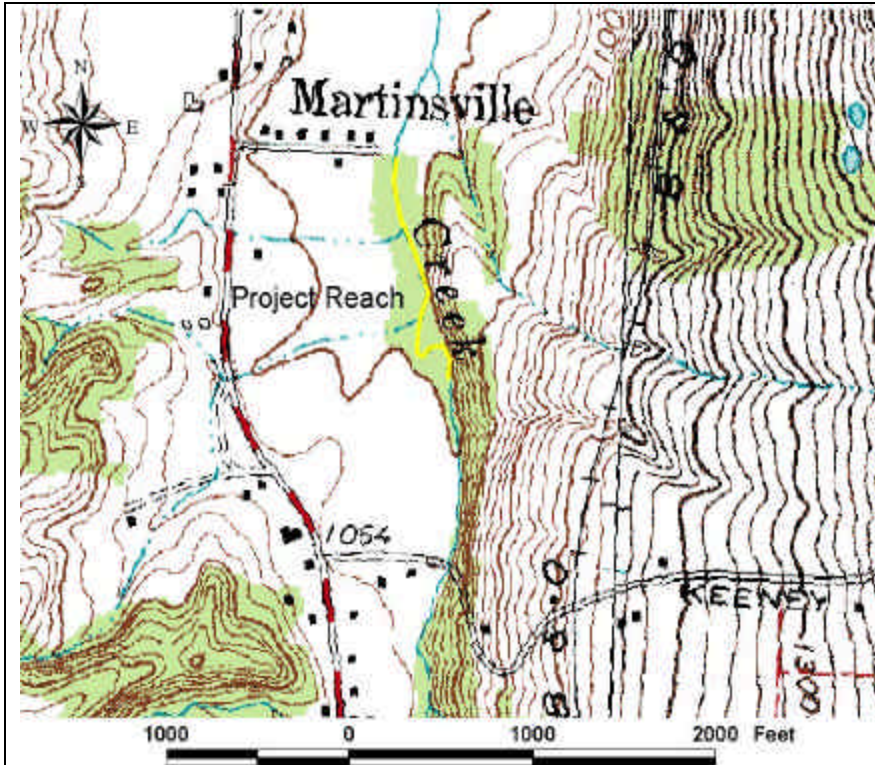


REFERENCE REACH FIELD FORM
STREAM CHANNEL CLASSIFICATION LEVEL II

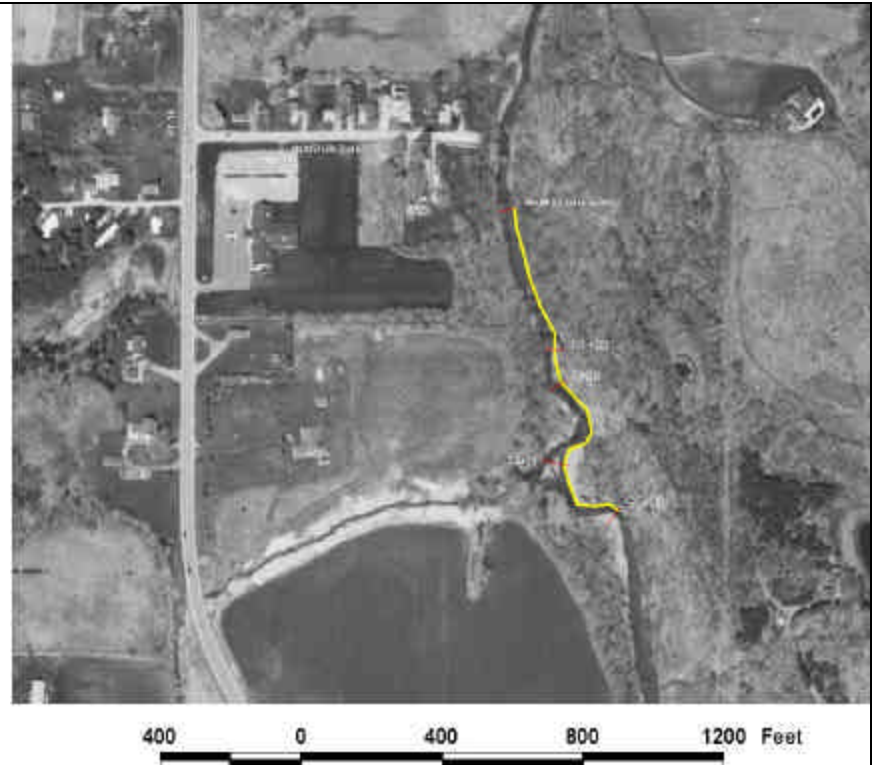
STREAM TYPE: C3

| | | | | | |
|---|------------------|------------------------------------|---------------------------------|--------------------------|--|
| STREAM NAME: <u>Oatka Creek</u> | | DRAINAGE AREA: <u>25.5 sq. mi.</u> | | BASIN NAME: <u>Oatka</u> | |
| OBSERVERS: <u>J. Hauber, F. Reese, D. Reckahn</u> | | | DATE: <u>10/13/2004</u> | | |
| LOCATION: <u>South of Martinsville Road, Town of Warsaw, Wyoming County, encompassing sites Oatm6 and Oatm7</u> | Latitude | Longitude | Mapped Soil Type(s) | K-factor(s) | |
| | <u>42°43'17"</u> | <u>78°7'45"</u> | <u>Collamer silt loam</u> | <u>0.49</u> | |
| | | | <u>Manlius shaly silt loam,</u> | <u>0.28</u> | |
| | | | <u>Varysburg gravelly loam</u> | <u>0.24</u> | |
| | | | <u>Alluvial land</u> | <u>0.32</u> | |
| | | | <u>Teel silt loam</u> | <u>0.49</u> | |

| | | |
|--|---|--|
| Bankfull WIDTH <u>62</u> Ft.(W _{bkf}) | Bankfull MAX>DEPTH <u>5.2</u> Ft.(d _{max}) | Channel SLOPE <u>0.0065</u> Ft/Ft _____ % |
| Bankfull Mean DEPTH <u>3.23</u> Ft.(d _{bkf}) | Flood Prone Area WIDTH <u>700</u> Ft.(W _{FP}) | Valley SLOPE <u>0.008</u> Ft/Ft _____ % |
| WIDTH/DEPTH Ratio <u>19.2</u> | ENTRENCHMENT Ratio <u>11.29</u> | SINUOSITY (Stream Dist/Valley Dist.) <u>1.23</u> |
| Channel MATERIALS: (Pebble Count) | D50 <u>52.5</u> mm | D84 <u>139</u> mm |



Site Oatm 6 & 7, between Martinsville Road and Keeney Road,
Town of Warsaw, Wyoming County



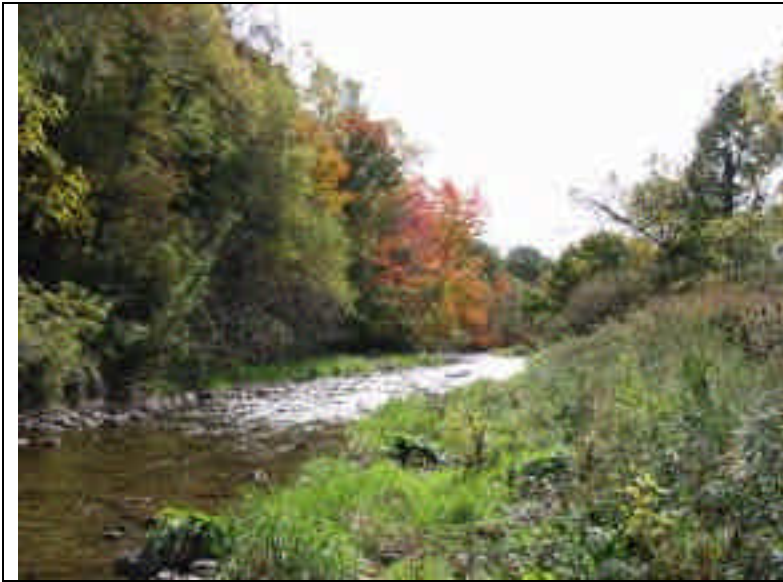
Aerial view of project reach (2002).



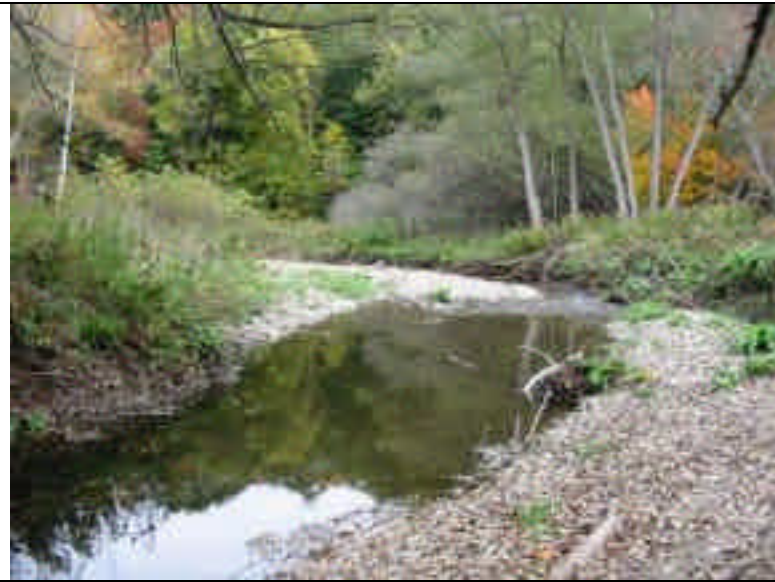
View of Oatka Creek at Martinsville Station N1+00 (approximately 400 feet south of Martinsville Road), looking south. Note high eroding bank at photo left.



Detail of eroding bank in photo at left. Deep pool in stream channel undercuts clay bank, causing rotational slumping. Re-direction of channel flow away from this bank is needed to allow stabilization.



Oatka Creek at Martinsville, 1000 feet south of Martinsville Road, looking south. Note well vegetated channel banks and good condition of channel.



Oatka Creek, approximately 800 feet south of Martinsville Road. Influent stream channel at photo right deposits large amounts of gravel, causing channel to meander.

Site Description: The project reach begins south of Martinsville Road in the Town of Warsaw, Wyoming County, and extends upstream (south) 1000 feet along the stream channel. Two intermittent streams form confluences with the main stem of Oatka Creek within this reach. The channel is classified as a Rosgen C3 channel because the dominant size of the bedload is in the small cobble range. The stream is only slightly entrenched on the west side, but a steep bank is located on the east side of the channel. The dominant mapped soil type for the east side of the channel is a Manlius shaly silt loam with a slope of 25% or greater. Clay banks are exposed along the east side of the channel within the reach. The channel gradient is approximately 0.0065 over the 1000 foot reach. Bankfull flows are estimated at 500 to 600 cfs, based on channel cross section analysis, comparison with known stream gage records for Oatka Creek in Warsaw, and anecdotal information from local residents and SWCD staff observations.

Land along the stream channel is privately owned, but access to the stream channel is available from Martinsville Road. The channel is used by local anglers. No official public access is permitted in this reach.

Statement of Problem: Site observation showed that influent streams contribute a high sediment load, resulting in the formation of mid-channel gravel bars, and divided thalwegs in the channel. Large trees have been undercut by high flows, and have fallen into the channel. Resulting log jams direct stream flow into steep, erodible, clay banks on the east side of the channel. Undercutting has caused slumping from Station N1+00 to approximately S0+60.

Proposed Restoration or Remediation Methods:

- Place approximately 160 LF of large stone (24 in.+) rip rap along eastern toe of slope from Station N1+00 to Station S0+60. Use willow stakes along with riprap to stabilize bank toe of slope.
- Utilize existing downed trees in the channel to create rootwads and embed them in the banks to deflect current away from erodible banks.
- Construct rock J-vanes to direct flow away from slumping bank areas between Station S2+71 and Station S1+00.
- Place willow stakes on slumped areas above toe of slope.

Cost Estimate:

| Item | Unit | Unit Cost | Extended Cost (\$) |
|------------------------|--------|-----------|--------------------|
| Rock riprap (160 LF) | 115 cy | 46 | 5290 |
| Rock J-vanes | 7 cy | 46 | 299 |
| Root wad anchor rocks | 2 cy | 46 | 92 |
| Excavation | 7 cy | 12 | 84 |
| Turbidity curtain | 14 sy | 30 | 420 |
| Mobilization | L.S. | 400 | 400 |
| Willow stakes | 640 ea | 8.00 | 5120 |
| Detailed stream survey | 2 | 1200 | 2400 |
| Plans and Permitting | L.S. | 8000 | 8000 |
| Total Estimated Cost | | | \$22105 |

Institutional or Land Use Recommendations to Remediate or Protect Stream Channel:

1. Monitor accumulation of log jams and develop criteria for removal before significant erosion can develop.
2. Establish a “no-mow zone” to restrict mowing and vegetation removal within 50 feet of the top of bank.
3. Seek conservation easements along the stream channel to allow access for stream monitoring and site remediation/restoration efforts.

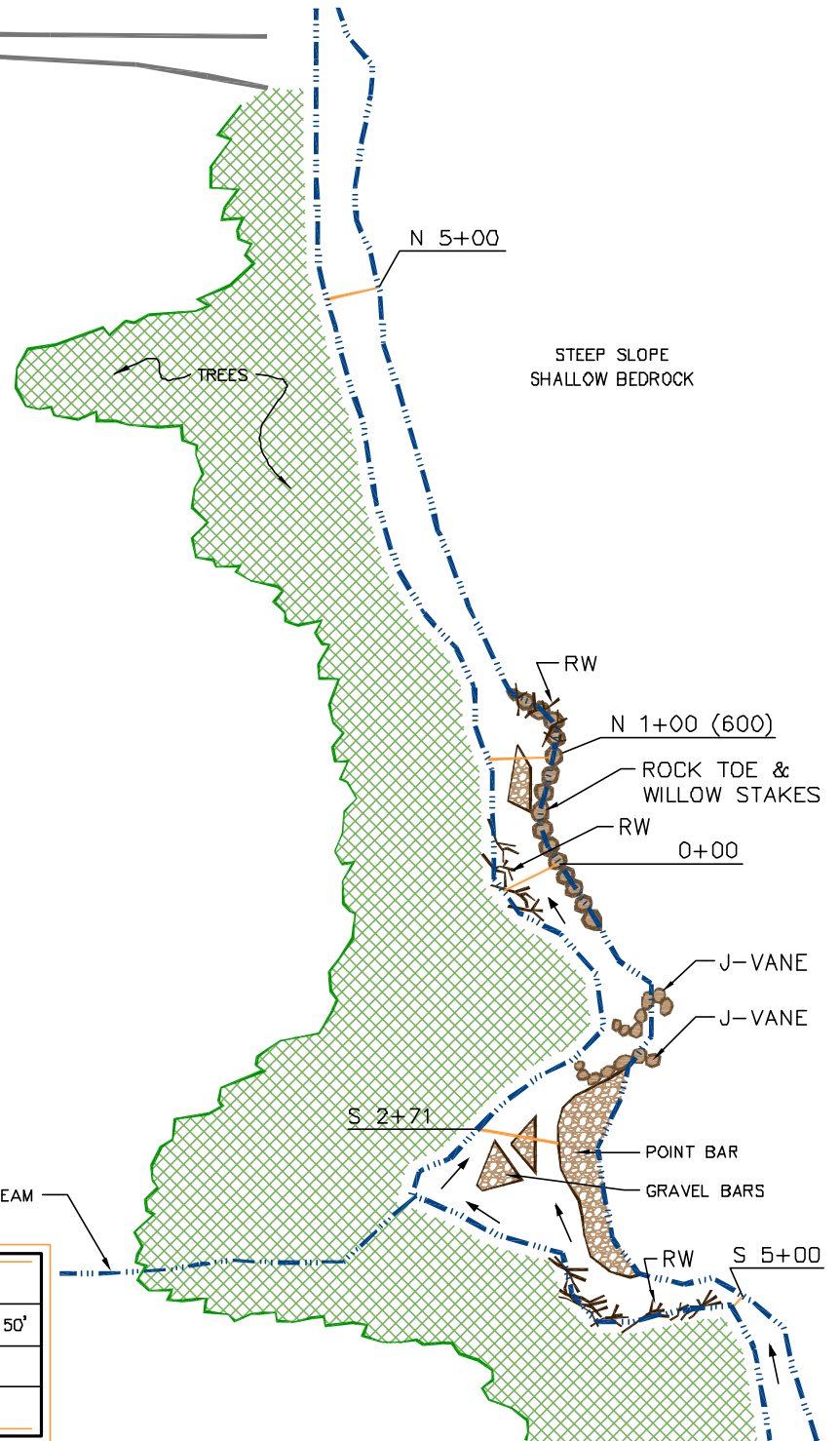
Conceptual Plans and Specifications

MARTINSVILLE ROAD

ROUTE 19

RECOMMENDATIONS:

1. ROCK TOE FROM STA. N 1+00 TO STA. S 0+60±. FIELD MEASURE FOR FINAL DESIGN. ASSUME BANKFULL ELEVATION IS 3.8 FEET ABOVE THALWEG DEPTH AT STA. N 1+00. TO BE FIELD VERIFIED.
2. USE ROOT WADS FROM ON-SITE MATERIALS. SET INTO SLOPE AT 20-30° ANGLE, FACING UPSTREAM.
3. USE J-VANES TO PROTECT OUTSIDE EDGE OF MEANDER. ASSUME BANKFULL ELEVATION AT 99.5 FT.± AT STA. S 1+100. FIELD VERIFICATION REQUIRED.



2230 FENFELD ROAD
 PENFELD, NEW YORK 14526
 TEL: 585.377.1450
 FAX: 585.377.1266

MARTINSVILLE ROAD CONCEPT PLAN
 STREAM RESTORATION STUDY AREAS

P.N. 33802

| | |
|----------------|------------|
| DATE: | MARCH 2005 |
| APPROX. SCALE: | 1" = 150' |
| DRAWN : | DLS |
| CHECKED: | FAR |