

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 5 | | | | | | | |
|---|--|----------|----------|-------------|--------------|------------|---------------------|
| Site Name: Jericho Road Pelham, NH | | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total | |
| Task 1. Construction & Permanent Easements | Construction Easement | 23.2 | Acres | \$1,000.00 | \$23,200.00 | | |
| | Permanent Easement | 23.2 | Acres | \$10,000.00 | \$232,000.00 | | |
| | | | | | | | \$255,200.00 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | | \$5,000.00 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | | | | | |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | 67.5 | CY | \$100.00 | \$6,750.00 | | \$6,750.00 |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | | | | | |
| | Channel Excavation (NHDOT Item No. 207.3) | | CY | \$12.00 | \$0.00 | | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | | |
| | | | | | | | \$0.00 |
| Task 5. Wetland Restoration | Strip Topsoil | | | | | | |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | | CY | \$8.00 | \$0.00 | | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | | |
| | Fine Grade Wetland | | SY | \$1.00 | \$46,464.00 | | |
| | Replace Topsoil | 46,464 | CY | \$20.00 | \$0.00 | | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | | |
| | | | | | | | \$46,464.00 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | | | | | |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | | CY | \$8.00 | \$0.00 | | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | | |
| | Galerucella beetle treatment | | LS | \$10,000.00 | \$0.00 | | |
| | | | | | | | \$0.00 |
| Task 7. Plantings | Aquatic Bed | | | | | | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.95 | \$0.00 | | |
| | Emergent - Deep Marsh | 5,248 | SF | \$1.65 | \$8,659.53 | | |
| | Emergent - Wet Meadow | 15,021 | SF | \$1.65 | \$24,784.16 | | |
| | Scrub/Shrub | 3,821 | SF | \$1.70 | \$6,495.87 | | |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | | |
| | Seeding | | SF | \$0.70 | \$0.00 | | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | | |
| | | | | | | | \$39,939.56 |
| Task 8. Erosion and Sediment Control | Sediment Control | | | | | | |
| | Miscellaneous Permanent and Temporary Erosion Controls (NHDOT Item No. 645) | | LS | \$2,090.88 | \$0.00 | | |
| | Water Control Structures | | LS | \$1,626.24 | \$0.00 | | |
| | Install Cofferdams During Construction (NHDOT Item No. 503) | | | | | | \$0.00 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | | | | | |
| | Similar project (VTrans) | | LS | \$10,000.00 | \$0.00 | | |
| | Stormwater BMP - Small | | LS | \$25,000.00 | \$0.00 | | |
| | | | | | | | \$0.00 |
| Subtotal Construction | | | | | | | \$353,353.56 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | 1 | Contract | 25% | | | \$88,338.39 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 4 | Weeks | \$2,875.00 | | | \$11,500.00 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | 1 | Project | 5% | | | \$17,667.68 |
| TOTAL | | | | | | | \$470,859.62 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 6 | | | | | | | |
|---|---|----------|----------------|--------------------------|-------------|------------|-----------------|
| Site Name: Beaver Brook Tributary Pelham, NH | | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total | |
| Task 1. Construction & Permanent Easements | Construction Easement Permanent Easement | | Acres Acres | (per town) (per town) | | | \$0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | | | | | |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | 45 | CY | \$100.00 | \$4,500.00 | | \$4,500 |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel Rough Grading Fine Grade Channel & Wetland | | | | | | |
| | Channel Excavation (NHDOT Item No. 207.3) | | CY | \$12.00 | \$0.00 | | |
| | Common Excavation (NHDOT Item No. 203.1) | | CY | \$10.00 | \$0.00 | | |
| | Fine Grading (NHDOT Item No. 214) | | SY | \$1.00 | \$0.00 | | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil Rough Grading Fine Grade Wetland Replace Topsoil Additional Topsoil | | | | | | |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | | CY | \$8.00 | \$0.00 | | |
| | Common Excavation (NHDOT Item No. 203.1) | | CY | \$10.00 | \$0.00 | | |
| | Fine Grading (NHDOT Item No. 214) | | SY | \$1.00 | \$0.00 | | |
| | Wetland Humus (NHDOT Item No. 647.29) | | CY | \$20.00 | \$0.00 | | |
| | Humus (NHDOT Item No. 647.1) | | CY | \$11.95 | \$0.00 | | \$0 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants Replace with new wetland soil Additional Topsoil <i>Galerucella</i> beetle treatment | | | | | | |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | | CY | \$8.00 | \$0.00 | | |
| | Wetland Humus (NHDOT Item No. 647.29) | | CY | \$20.00 | \$0.00 | | |
| | Humus (NHDOT Item No. 647.1) | | CY | \$11.95 | \$0.00 | | |
| | D. Cygan (NH Dept. of Agriculture) | 1 | LS | \$10,000.00 | \$10,000.00 | | \$10,000 |
| Task 7. Plantings | Aquatic Bed Emergent - Deep Marsh Emergent - Wet Meadow Scrub/Shrub Forested/Floodplain Wetland or Forested Upland River Bank/Riparian Zone Seeding Upland Seeding | | | | | | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.95 | \$0.00 | | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.65 | \$0.00 | | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.65 | \$0.00 | | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.70 | \$0.00 | | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.80 | \$0.00 | | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$2.05 | \$0.00 | | |
| | Wetland Seed Mix (NHDOT Item 644) | | SF | \$0.70 | \$0.00 | | |
| | Conservation Seed Mix (NHDOT Item 644) | | SF | \$0.20 | \$0.00 | | \$0 |
| Task 8. Erosion and Sediment Control | Sediment Control Water Control Structures | | | | | | |
| | Miscellaneous Permanent and Temporary Erosion Controls (NHDOT Item No. 645) | | LS | \$450.00 | \$0.00 | | |
| | Install Cofferdams During Construction (NHDOT Item No. 503) | | LS | \$350.00 | \$0.00 | | \$0 |
| Task 9. Misc. Structures | Culvert Replacement - Small Stormwater BMP - Small | | | | | | |
| | Similar project (VTrans) | 1 | LS | \$10,000.00 | \$10,000.00 | | \$10,000 |
| | Similar project (Webster Lake) | | LS | \$25,000.00 | \$0.00 | | \$0 |
| Subtotal Construction | | | | | | | \$29,500 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | 1 | Contract | 25% | | | \$4,425 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 1 | Weeks | \$2,875.00 | | | \$2,875 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | | \$1,475 |
| TOTAL | | | | | | | \$38,275 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 52 | | | | | | | |
|---|--|----------|----------|------------|-------------|------------|-----------------|
| Site Name: Musquash Brook Headwater Hudson, NH | | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total | |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | | \$0.00 | | |
| | Permanent Easement | | Acres | | \$0.00 | | |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | | \$0 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | 45 | CY | \$100.00 | \$4,500.00 | | \$5,000 |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | | | | | | \$4,500 |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | | |
| | Channel Excavation (NHDOT Item No. 207.3) | | | | | | |
| | Common Excavation (NHDOT Item No. 203.1) | | | | | | |
| | Fine Grading (NHDOT Item No. 214) | | | | | | |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | \$0.00 | | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | | |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | | |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | | | | | | |
| | Common Excavation (NHDOT Item No. 203.1) | | | | | | |
| | Fine Grading (NHDOT Item No. 214) | | | | | | |
| | Wetland Humus (NHDOT Item No. 647.29) | | | | | | |
| | Humus (NHDOT Item No. 647.1) | | | | | | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | | |
| | Galerucella beetle treatment | 1 | LS | ##### | \$10,000.00 | | \$10,000 |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | | | | | | |
| | Wetland Humus (NHDOT Item No. 647.29) | | | | | | |
| | Humus (NHDOT Item No. 647.1) | | | | | | |
| | D. Cygan (NH Dept. of Agriculture) | | | | | | |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | | |
| | Emergent - Wet Meadow | | SF | \$1.65 | \$0.00 | | |
| | Scrub/Shrub | | SF | \$1.70 | \$0.00 | | |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | | |
| | Seeding | | SF | \$0.70 | \$0.00 | | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | | |
| | Planting - General (NHDOT Item No. 650) | | | | | | |
| | Planting - General (NHDOT Item No. 650) | | | | | | |
| | Planting - General (NHDOT Item No. 650) | | | | | | |
| | Planting - General (NHDOT Item No. 650) | | | | | | |
| | Planting - General (NHDOT Item No. 650) | | | | | | |
| | Planting - General (NHDOT Item No. 650) | | | | | | |
| | Wetland Seed Mix (NHDOT Item 644) | | | | | | |
| | Conservation Seed Mix (NHDOT Item 644) | | | | | | |
| Task 8. Erosion and Sediment Control | Sediment Control | | LS | \$450.00 | \$0.00 | | |
| | Water Control Structures | | LS | \$350.00 | \$0.00 | | |
| | Miscellaneous Permanent and Temporary Erosion Controls (NHDOT Item No. 645) | | | | | | |
| | Install Cofferdams During Construction (NHDOT Item No. 503) | | | | | | |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | ##### | \$0.00 | | |
| | Stormwater BMP - Small | | LS | ##### | \$0.00 | | |
| | Similar project (VTrans) | | | | | | |
| | Similar project (Webster Lake) | | | | | | |
| Subtotal Construction | | | | | | | \$0 |
| | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | | | | | \$19,500 |
| Task 10. Design & Permitting | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 0.5 | Contract | 25% | | | \$2,925 |
| Task 11. Construction Observation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Weeks | \$2,875.00 | | | \$1,438 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | | | Project | 5% | | | \$975 |
| TOTAL | | | | | | | \$24,838 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 67 | | | | | | |
|---|--|----------|----------|------------|-------------|-----------------|
| Site Name: Second Brook Swamp Hudson, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | |
| | Permanent Easement | | Acres | (per town) | | \$0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | ##### | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | 30 | CY | \$100.00 | \$3,000.00 | \$3,000 |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | |
| | | | | | | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | |
| | Replace Topsoil | | CY | \$20.00 | | |
| | Additional Topsoil | | CY | \$11.95 | | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | 1 | LS | ##### | \$10,000.00 | \$10,000 |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | |
| | Emergent - Wet Meadow | | SF | \$1.65 | | |
| | Scrub/Shrub | | SF | \$1.70 | \$0.00 | |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | |
| | | | | | | \$0 |
| Task 8. Erosion and Sediment Control | Sediment Control | | LS | \$450.00 | \$0.00 | |
| | Water Control Structures | | LS | \$350.00 | \$0.00 | |
| | | | | | | \$0 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | ##### | \$0.00 | |
| | Stormwater BMP - Small | | LS | ##### | \$0.00 | |
| | | | | | | \$0 |
| Subtotal Construction | | | | | | \$18,000 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | \$0 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | | Weeks | ##### | | \$0 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$0 |
| TOTAL | | | | | | \$18,000 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
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- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 71 | | | | | | |
|---|--|----------|----------|-------------|-------------|------------------|
| Site Name: Salmon Brook & Marsh Nashua, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | 1.5 | Acres | \$2,000.00 | \$3,000.00 | |
| | Permanent Easement | 1.5 | Acres | \$20,000.00 | \$30,000.00 | |
| | | | | | | \$33,000 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | | | | |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | | CY | \$100.00 | \$0.00 | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | |
| | | | | | | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | 1 | LS | \$10,000.00 | \$10,000.00 | \$10,000 |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | |
| | Emergent - Wet Meadow | | SF | \$1.65 | \$0.00 | |
| | Scrub/Shrub | | SF | \$1.70 | \$0.00 | |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | |
| | | | | | | \$0 |
| Task 8. Erosion and Sediment Control | Sediment Control | | LS | \$450.00 | \$5,400.00 | |
| | Water Control Structures | | LS | \$350.00 | \$0.00 | |
| | | | | | | \$5,400 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | 3 | LS | \$25,000.00 | \$75,000.00 | |
| | | | | | | \$75,000 |
| Subtotal Construction | | | | | | \$128,400 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | \$32,100 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 1 | Weeks | \$2,875.00 | | \$2,875 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$6,420 |
| TOTAL | | | | | | \$169,795 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 76 | | | | | | |
|---|--|----------|----------|-------------|-----------|-----------------|
| Site Name: Tributary to Harris Brook Salem, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | |
| | Permanent Easement | | Acres | (per town) | | |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | ##### | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | 37.5 | CY | \$100.00 | ##### | \$3,750 |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | |
| | | | | | | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | \$0.00 | |
| | Remove and Stockpile Existing Vegetation & Soils | | CY | \$10.00 | \$0.00 | |
| | Rough Grading | | SY | \$1.00 | \$0.00 | |
| | Fine Grade Wetland | | CY | \$20.00 | \$0.00 | |
| | Replace Topsoil | | CY | \$11.95 | \$0.00 | |
| | Additional Topsoil | | | | | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | | LS | \$10,000.00 | \$0.00 | \$0 |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | |
| | Emergent - Wet Meadow | | SF | \$1.65 | \$0.00 | |
| | Scrub/Shrub | | SF | \$1.70 | \$0.00 | |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | |
| | | | | | | \$0 |
| Task 8. Erosion and Sediment Control | Sediment Control | | LS | \$0.00 | \$0.00 | |
| | Water Control Structures | | LS | \$0.00 | \$0.00 | |
| | | | | | | \$0 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | | LS | \$25,000.00 | \$0.00 | |
| | | | | | | \$0 |
| Subtotal Construction | | | | | | \$8,750 |
| Task 9. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | \$1,313 |
| Task 10. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | | Weeks | \$2,875.00 | | \$0 |
| Task 11. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 | | Project | 5% | | \$438 |
| TOTAL | | | | | \$0 | \$10,500 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 81 | | | | | | |
|---|---|-------------------------|--|--|---|--------------------|
| Site Name: Porcupine Brook Tributary Salem, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement Permanent Easement | | Acres Acres | (per town) (per town) | | \$0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | 15 | CY | \$100.00 | \$1,500.00 | \$1,500 |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel Rough Grading Fine Grade Channel & Wetland | 1,125 1,125 1,125 | CY CY SY | \$12.00 \$10.00 \$1.00 | \$13,500.00 \$11,250.00 \$1,125.00 | \$25,875 |
| Task 5. Wetland Restoration | Strip Topsoil Rough Grading Fine Grade Wetland Replace Topsoil Additional Topsoil | | CY CY SY CY CY | \$8.00 \$10.00 \$1.00 \$20.00 \$11.95 | \$0.00 \$726,000.00 \$200,000.00 \$435,600.00 \$0.00 | \$1,361,600 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants Replace with new wetland soil Additional Topsoil Galerucella beetle treatment | | CY CY CY LS | \$8.00 \$20.00 \$11.95 \$10,000.00 | \$0.00 \$0.00 \$0.00 \$0.00 | \$0 |
| Task 7. Plantings | Aquatic Bed Emergent - Deep Marsh Emergent - Wet Meadow Scrub/Shrub Forested/Floodplain Wetland or Forested Upland River Bank/Riparian Zone Seeding Upland Seeding | | SF SF SF SF SF SF SF SF | \$1.95 \$1.65 \$1.65 \$1.70 \$1.80 \$2.05 \$0.70 \$0.20 | \$0.00 \$0.00 \$0.00 \$0.00 \$133,293.60 \$27,675.00 \$0.00 \$0.00 | \$160,969 |
| Task 8. Erosion and Sediment Control | Sediment Control Water Control Structures | | LS LS | \$62,436.38 \$48,561.63 | \$0.00 \$0.00 | \$0 |
| Task 9. Misc. Structures | Culvert Replacement - Small Stormwater BMP - Small | | LS LS | \$10,000.00 \$25,000.00 | \$0.00 \$0.00 | |
| Subtotal Construction | | | | | | \$1,554,944 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | \$233,242 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 5 | Weeks | \$2,875.00 | | \$14,375 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$77,747 |
| TOTAL | | | | | | \$1,880,307 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site:134 | | | | | | |
|---|--|----------|----------|------------|----------------|--------------------|
| Site Name: Farmed Wetlands Litchfield, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | \$1,200.00 | \$0.00 | |
| | Permanent Easement | 260 | Acres | ##### | \$2,600,000.00 | \$2,600,000 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | | | | |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | | CY | \$100.00 | \$0.00 | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | 15,100 | CY | \$12.00 | \$181,200.00 | |
| | Rough Grading | 15,100 | CY | \$10.00 | \$151,000.00 | |
| | Fine Grade Channel & Wetland | 68,000 | SY | \$1.00 | \$68,000.00 | \$400,200 |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | \$0.00 | |
| | Rough Grading | 15,111 | CY | \$10.00 | \$151,111.00 | |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | \$151,111 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | | LS | ##### | \$0.00 | \$0 |
| Task 7. Plantings | Aquatic Bed | 31,114 | SF | \$1.95 | \$60,672.89 | |
| | Emergent - Deep Marsh | 2,672 | SF | \$1.65 | \$4,409.46 | |
| | Emergent - Wet Meadow | | SF | \$1.65 | \$0.00 | |
| | Scrub/Shrub | 545 | SF | \$1.70 | \$925.65 | |
| | Forested/Floodplain Wetland or Forested Upland | 2,829 | SF | \$1.80 | \$5,091.48 | |
| | River Bank/Riparian Zone | 10,890 | SF | \$2.05 | \$22,324.50 | |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | \$93,424 |
| Task 8. Erosion and Sediment Control | Sediment Control | | | | | |
| | Miscellaneous Permanent and Temporary Erosion Controls (NHDOT Item No. 645) | 1 | LS | ##### | \$24,809.00 | |
| | Water Control Structures | 1 | LS | ##### | \$19,295.89 | \$44,105 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | ##### | \$10,000.00 | |
| | Stormwater BMP - Small | | LS | ##### | \$0.00 | |
| | | | | | | \$10,000 |
| Subtotal Construction | | | | | | \$3,303,840 |
| Task 9. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 15% | | \$495,576 |
| Task 10. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 10 | Weeks | \$2,875.00 | | \$28,750 |
| Task 11. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$163,192 |
| TOTAL | | | | | | \$3,993,358 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
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- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 218 | | | | | | |
|---|--|----------|----------|-------------|-------------|-----------------|
| Site Name: Nesenkeag Brook Headwater Londonderry, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | |
| | Permanent Easement | | Acres | (per town) | | \$0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | | LS | \$5,000.00 | \$0.00 | \$0 |
| | | | | | \$0.00 | \$0 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | CY | \$100.00 | | \$0 |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | | | | | \$0 |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | \$0.00 |
| | Rough Grading | | CY | \$10.00 | \$0.00 | \$0.00 |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | \$0.00 |
| | | | | | \$0.00 | \$0.00 |
| | | | | | \$0.00 | \$0.00 |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | | \$0.00 |
| | Remove and Stockpile Existing Vegetation & Soils | | | | | \$0.00 |
| | Rough Grading | | CY | \$10.00 | \$0.00 | \$0.00 |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | \$0.00 |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | \$0.00 |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | \$0.00 |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | | | | | \$0.00 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | \$0.00 |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | \$0.00 |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | \$0.00 |
| | <i>Galerucella</i> beetle treatment | 1 | LS | \$10,000.00 | \$10,000.00 | \$10,000.00 |
| | D. Cygan (NH Dept. of Agriculture) | | | | | \$0.00 |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | \$0.00 |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | \$0.00 |
| | Emergent - Wet Meadow | | SF | \$1.65 | \$0.00 | \$0.00 |
| | Scrub/Shrub | | SF | \$1.70 | \$0.00 | \$0.00 |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | \$0.00 |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | \$0.00 |
| | Seeding | | SF | \$0.70 | \$0.00 | \$0.00 |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | \$0.00 |
| | Conservation Seed Mix (NHDOT Item 644) | | | | | \$0.00 |
| Task 8. Erosion and Sediment Control | Sediment Control | | LS | \$450.00 | \$0.00 | \$0.00 |
| | Water Control Structures | | LS | \$350.00 | \$0.00 | \$0.00 |
| | Miscellaneous Permanent and Temporary Erosion Controls (NHDOT Item No. 645) | | | | | \$0.00 |
| | Install Cofferdams During Construction (NHDOT Item No. 503) | | | | | \$0.00 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | \$0.00 |
| | Stormwater BMP - Small | | LS | \$25,000.00 | \$0.00 | \$0.00 |
| | Similar project (VTrans) | | | | | \$0.00 |
| | Similar project (Webster Lake) | | | | | \$0.00 |
| Subtotal Construction | | | | | | \$10,000 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | \$1,500 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | | Weeks | \$2,875.00 | | \$0 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$500 |
| TOTAL | | | | | \$0 | \$12,000 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate

| Candidate Site: 231 | | | | | | |
|---|--|----------|----------|-------------|--------------|--------------------|
| Site Name: Hartshorn Brook Milford, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | 0.25 | Acres | \$1,200.00 | \$300.00 | |
| | Permanent Easement | 34.2 | Acres | \$10,000.00 | \$342,000.00 | \$342,300 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | 30 | CY | \$100.00 | \$3,000.00 | \$3,000 |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | \$0 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | 15,300 | CY | \$8.00 | \$122,400.00 | |
| | Replace with new wetland soil | 5,100 | CY | \$20.00 | \$102,000.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | | LS | \$10,000.00 | \$0.00 | \$224,400 |
| | | | | | | |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | |
| | Emergent - Deep Marsh | 17,400 | SF | \$1.65 | \$28,710.00 | |
| | Emergent - Wet Meadow | 108,900 | SF | \$1.65 | \$179,685.00 | |
| | Scrub/Shrub | 156,800 | SF | \$1.70 | \$266,560.00 | |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | 435,600 | SF | \$0.20 | \$87,120.00 | \$562,075 |
| | | | | | | |
| | | | | | | |
| Task 8. Erosion and Sediment Control | Sediment Control | 1 | LS | \$10,098.00 | \$10,098.00 | |
| | Water Control Structures | 1 | LS | \$7,854.00 | \$7,854.00 | \$17,952 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | | LS | \$25,000.00 | \$0.00 | \$0 |
| Subtotal Construction | | | | | | \$1,154,727 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 15% | | \$173,209 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 4 | Weeks | \$2,875.00 | | \$11,500 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$57,736 |
| TOTAL | | | | | | \$1,397,172 |

Notes:

- Construction estimate completed using 2008 dollars.
- NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
 Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 273 | | | | | | |
|---|--|----------|----------|-------------|--------------|--------------------|
| Site Name: Farmed Wetlands Litchfield, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | 0.25 | Acres | \$1,000.00 | \$250.00 | |
| | Permanent Easement | 34.2 | Acres | \$10,000.00 | \$342,000.00 | |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$342,250 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | | | | \$5,000 |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | 30 | CY | \$100.00 | \$3,000.00 | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | |
| | | | | | | \$3,000 |
| Task 5. Wetland Restoration | Strip Topsoil | 55,000 | CY | \$8.00 | \$440,000.00 | |
| | Rough Grading | 55,000 | CY | \$10.00 | \$550,000.00 | |
| | Fine Grade Wetland | 135,000 | SY | \$1.00 | \$135,000.00 | |
| | Replace Topsoil | 46,000 | CY | \$20.00 | \$920,000.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | | | | | | \$2,045,000 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | | LS | \$10,000.00 | \$0.00 | \$0 |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | |
| | Emergent - Wet Meadow | 25,000 | SF | \$1.65 | \$41,250.00 | |
| | Scrub/Shrub | 120,000 | SF | \$1.70 | \$204,000.00 | |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | |
| | | | | | | \$245,250 |
| Task 8. Erosion and Sediment Control | Sediment Control | | LS | \$92,160.00 | \$92,160.00 | |
| | Water Control Structures | 1 | LS | \$71,680.00 | \$71,680.00 | |
| | | | | | | \$163,840 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | | LS | \$25,000.00 | \$0.00 | |
| | | | | | | \$0 |
| Subtotal Construction | | | | | | \$2,804,340 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | \$420,651 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 7 | Weeks | \$2,875.00 | | \$20,125 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$140,217 |
| TOTAL | | | | | | \$3,385,333 |

Notes:
 1 - Construction estimate completed using 2008 dollars.
 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
 Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 295 | | | | | | |
|---|--|----------|----------|-------------|-------------|-----------------|
| Site Name: Hoodcroft Country Club Derry, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | |
| | Permanent Easement | 0.5 | Acres | \$15,000.00 | \$7,500.00 | \$0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | | | | |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | 30 | CY | \$100.00 | \$3,000.00 | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | |
| | | | | | | \$3,000 |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | 1 | LS | \$10,000.00 | \$10,000.00 | \$10,000 |
| | D. Cygan (NH Dept. of Agriculture) | | | | | |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | |
| | Emergent - Wet Meadow | | SF | \$1.65 | \$0.00 | |
| | Scrub/Shrub | | SF | \$1.70 | \$0.00 | |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | |
| | | | | | | \$0 |
| Task 8. Erosion and Sediment Control | Sediment Control | | | | | |
| | Miscellaneous Permanent and Temporary Erosion Controls (NHDOT Item No. 645) | 1 | LS | \$585.00 | \$585.00 | |
| | Water Control Structures | 1 | LS | \$455.00 | \$455.00 | |
| | Install Cofferdams During Construction (NHDOT Item No. 503) | | | | | \$1,040 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | 1 | LS | \$25,000.00 | \$25,000.00 | |
| | | | | | | \$25,000 |
| Subtotal Construction | | | | | | \$44,040 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | \$6,606 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | | Weeks | \$2,875.00 | | \$0 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$2,202 |
| TOTAL | | | | | | \$52,848 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 348 | | | | | | |
|---|--|----------|----------|-------------|--------------|------------------|
| Site Name: Hog Hill Swamp East Kingston, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | |
| | Permanent Easement | 20 | Acres | \$12,000.00 | \$240,000.00 | \$240,000 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | | | | |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | | CY | \$100.00 | \$0.00 | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | | | | |
| | Channel Excavation (NHDOT Item No. 207.3) | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | |
| | | | | | | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil | | | | | |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | | CY | \$8.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Common Excavation (NHDOT Item No. 203.1) | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | |
| | Fine Grading (NHDOT Item No. 214) | | SY | \$1.00 | \$0.00 | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | |
| | Wetland Humus (NHDOT Item No. 647.29) | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | Humus (NHDOT Item No. 647.1) | | CY | \$11.95 | \$0.00 | |
| | | | | | | \$0 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | 6,000 | CY | \$8.00 | \$48,000.00 | |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | 6,000 | CY | \$20.00 | \$120,000.00 | |
| | Replace with new wetland soil | 6,000 | CY | \$20.00 | \$120,000.00 | |
| | Wetland Humus (NHDOT Item No. 647.29) | | CY | \$11.95 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | Humus (NHDOT Item No. 647.1) | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | | LS | \$10,000.00 | \$0.00 | \$168,000 |
| | D. Cygan (NH Dept. of Agriculture) | | LS | \$10,000.00 | \$0.00 | |
| Task 7. Plantings | Aquatic Bed | | | | | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.95 | \$0.00 | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.65 | \$0.00 | |
| | Emergent - Wet Meadow | | SF | \$1.65 | \$0.00 | |
| | Planting - General (NHDOT Item No. 650) | 4,491 | SF | \$1.70 | \$7,634.19 | |
| | Scrub/Shrub | | SF | \$1.70 | \$7,634.19 | |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.80 | \$0.00 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$2.05 | \$0.00 | |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Wetland Seed Mix (NHDOT Item 644) | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | |
| | Conservation Seed Mix (NHDOT Item 644) | | SF | \$0.20 | \$0.00 | |
| | | | | | | \$7,634 |
| Task 8. Erosion and Sediment Control | Sediment Control | | | | | |
| | Miscellaneous Permanent and Temporary Erosion Controls (NHDOT Item No. 645) | 1 | LS | \$7,560.00 | \$7,560.00 | |
| | Water Control Structures | | | | | |
| | Install Cofferdams During Construction (NHDOT Item No. 503) | 1 | LS | \$5,880.00 | \$5,880.00 | |
| | | | | | | \$13,440 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | | | | |
| | Similar project (VTran) | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | | | | | |
| | Similar project (Webster Lake) | | LS | \$25,000.00 | \$0.00 | |
| | | | | | | \$0 |
| Subtotal Construction | | | | | | \$434,074 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | | | | |
| | | | Contract | 25% | | \$65,111 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 1 | Weeks | \$2,875.00 | | \$2,875 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$21,704 |
| TOTAL | | | | | \$0 | \$523,764 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 366 | | | | | | | |
|---|---|-----------------|--|--|----------------------|-------------------|----------|
| Site Name: Beaver Brook Tributary Salem, NH | | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total | |
| Task 1. Construction & Permanent Easements | Construction Easement Permanent Easement | | Acres Acres | (per town) (per town) | | | |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | 90 | CY | \$100.00 | \$9,000.00 | | \$9,000 |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel Rough Grading Fine Grade Channel & Wetland | | CY CY SY | \$12.00 \$10.00 \$1.00 | | | |
| Task 5. Wetland Restoration | Strip Topsoil Remove and Stockpile Existing Vegetation & Soils Rough Grading Fine Grade Wetland Replace Topsoil Additional Topsoil | | CY CY SY CY CY | \$8.00 \$10.00 \$1.00 \$20.00 \$11.95 | | | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants Replace with new wetland soil Additional Topsoil <i>Galerucella</i> beetle treatment | 1 | LS | \$10,000.00 | \$10,000.00 | | \$10,000 |
| Task 7. Plantings | Aquatic Bed Emergent - Deep Marsh Emergent - Wet Meadow Scrub/Shrub Forested/Floodplain Wetland or Forested Upland River Bank/Riparian Zone Seeding Upland Seeding | | SF SF SF SF SF SF SF SF | \$1.95 \$1.65 \$1.65 \$1.70 \$1.80 \$2.05 \$0.70 \$0.20 | | | |
| Task 8. Erosion and Sediment Control | Sediment Control Water Control Structures | 1 1 | LS LS | \$450.00 \$350.00 | \$450.00 \$350.00 | | \$800 |
| Task 9. Misc. Structures | Culvert Replacement - Small Stormwater BMP - Small | | LS LS | \$10,000.00 \$25,000.00 | | | |
| Subtotal Construction | | | | | \$24,800 | \$24,800 | |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | | \$3,720 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 1.5 | Weeks | \$2,875.00 | | | \$4,313 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | | \$1,240 |
| TOTAL | | | | | | \$34,073 | |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 371 | | | | | | |
|---|---|---------------------------|--|--|--|------------------|
| Site Name: McQuade Brook, Bedford, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement Permanent Easement | | Acres Acres | (per town) \$12,000.00 | \$0.00 | \$0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | 67.5 | CY | \$100.00 | \$6,750.00 | \$6,750 |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel Rough Grading Fine Grade Channel & Wetland | | CY CY SY | \$12.00 \$10.00 \$1.00 | \$0.00 \$0.00 \$0.00 | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil Rough Grading Fine Grade Wetland Replace Topsoil Additional Topsoil | 22,022 44,044 3,509 | CY CY CY CY | \$8.00 \$10.00 \$1.00 \$20.00 \$11.95 | \$176,176.00 \$0.00 \$44,044.00 \$70,180.00 \$0.00 | \$290,400 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants Replace with new wetland soil Additional Topsoil Galerucella beetle treatment | | CY CY CY LS | \$8.00 \$20.00 \$11.95 \$10,000.00 | \$0.00 \$0.00 \$0.00 \$0.00 | \$0 |
| Task 7. Plantings | Aquatic Bed Emergent - Deep Marsh Emergent - Wet Meadow Scrub/Shrub Forested/Floodplain Wetland or Forested Upland River Bank/Riparian Zone Seeding Upland Seeding | 15,791 30,008 | SF SF SF SF SF SF SF | \$1.95 \$1.65 \$1.65 \$1.70 \$1.80 \$2.05 \$0.70 \$0.20 | \$0.00 \$0.00 \$26,054.33 \$51,013.60 \$0.00 \$0.00 \$0.00 \$0.00 | \$77,068 |
| Task 8. Erosion and Sediment Control | Sediment Control Water Control Structures | 1 1 | LS LS | \$13,068.00 \$10,164.00 | \$13,068.00 \$10,164.00 | \$23,232 |
| Task 9. Misc. Structures | Culvert Replacement - Small Stormwater BMP - Small | | LS LS | \$10,000.00 \$25,000.00 | \$0.00 \$0.00 | \$0 |
| Subtotal Construction | | | | | | \$402,450 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 15% | | \$60,367 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 4 | Weeks | \$2,875.00 | | \$11,500 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$20,122 |
| TOTAL | | | | | | \$494,440 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
 Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 378 | | | | | | |
|---|--|----------|----------|-------------|--------------|------------------|
| Site Name: Riddle Brook Wetlands Bedford & Merrimack, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | |
| | Permanent Easement | 10 | Acres | \$12,000.00 | \$120,000.00 | \$120,000 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | 15 | CY | \$100.00 | \$1,500.00 | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | |
| | | | | | | \$1,500 |
| Task 5. Wetland Restoration | Strip Topsoil | 24,800 | CY | \$8.00 | \$198,400.00 | |
| | Rough Grading | 24,800 | CY | \$10.00 | \$248,000.00 | |
| | Fine Grade Wetland | 8,300 | SY | \$1.00 | \$8,300.00 | |
| | Replace Topsoil | 1,800 | CY | \$20.00 | \$36,000.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | | | | | | \$490,700 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | 1 | LS | \$10,000.00 | \$10,000.00 | \$10,000 |
| Task 7. Plantings | Aquatic Bed | 10,890 | SF | \$1.95 | \$21,235.50 | |
| | Emergent - Deep Marsh | 5,886 | SF | \$1.65 | \$9,712.56 | |
| | Emergent - Wet Meadow | | SF | \$1.65 | \$0.00 | |
| | Scrub/Shrub | | SF | \$1.70 | \$0.00 | |
| | Forested/Floodplain Wetland or Forested Upland | 14,520 | SF | \$1.80 | \$26,136.00 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | |
| | | | | | | \$57,084 |
| Task 8. Erosion and Sediment Control | Sediment Control | | LS | \$22,599.00 | \$22,599.00 | |
| | Water Control Structures | 1 | LS | \$17,577.00 | \$17,577.00 | \$40,176 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | | LS | \$25,000.00 | \$0.00 | |
| | | | | | | \$0 |
| Subtotal Construction | | | | | | \$724,460 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 15% | | \$108,669 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 3 | Weeks | \$2,875.00 | | \$8,625 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$36,223 |
| TOTAL | | | | | | \$877,977 |

- Notes:**
- 1 - Construction estimate completed using 2008 dollars.
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 - 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site:530 | | | | | | |
|---|---|----------|--|--|--|------------------|
| Site Name: Piscataquag River Floodplain Goffstown, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement Permanent Easement | 34 | Acres Acres | (per town) \$10,000.00 | \$340,000.00 | \$340,000 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | | LS | \$5,000.00 | \$0.00 | |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | CY | \$100.00 | \$0.00 | \$0 |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel Rough Grading Fine Grade Channel & Wetland | | CY CY SY | \$12.00 \$10.00 \$1.00 | \$0.00 \$0.00 \$0.00 | |
| Task 5. Wetland Restoration | Strip Topsoil Rough Grading Fine Grade Wetland Replace Topsoil Additional Topsoil | | CY CY SY CY CY | \$8.00 \$10.00 \$1.00 \$20.00 \$11.95 | \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 | \$0 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants Replace with new wetland soil Additional Topsoil Galerucella beetle treatment | | CY CY CY 1 LS | \$8.00 \$20.00 \$11.95 \$10,000.00 | \$0.00 \$0.00 \$0.00 \$10,000.00 | |
| Task 7. Plantings | Aquatic Bed Emergent - Deep Marsh Emergent - Wet Meadow Scrub/Shrub Forested/Floodplain Wetland or Forested Upland River Bank/Riparian Zone Seeding Upland Seeding | | SF SF SF SF SF SF SF SF | \$1.95 \$1.65 \$1.65 \$1.70 \$1.80 \$2.05 \$0.70 \$0.20 | \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 | \$0 |
| Task 8. Erosion and Sediment Control | Sediment Control Water Control Structures | | LS LS | \$450.00 \$350.00 | \$0.00 \$0.00 | |
| Task 9. Misc. Structures | Culvert Replacement - Small Stormwater BMP - Small | | LS LS | \$10,000.00 \$25,000.00 | \$0.00 \$0.00 | \$0.00 |
| Subtotal Construction | | | | | | |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 15% | | \$52,500 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | | Weeks | \$2,875.00 | | \$0 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$17,500 |
| TOTAL | | | | | | \$420,000 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site:578 | | | | | | | |
|---|---|----------|--|--|---|------------|-----------------|
| Site Name: Kimball Pond Road Bog Dunbarton, NH | | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total | |
| Task 1. Construction & Permanent Easements | Construction Easement Permanent Easement | | Acres Acres | (per town) (per town) | | | \$0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | CY | \$100.00 | \$0.00 | | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel Rough Grading Fine Grade Channel & Wetland | | CY CY SY | \$12.00 \$10.00 \$1.00 | \$0.00 \$0.00 \$0.00 | | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil Rough Grading Fine Grade Wetland Replace Topsoil Additional Topsoil | | CY CY SY CY CY | \$8.00 \$10.00 \$1.00 \$20.00 \$11.95 | \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 | | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants Replace with new wetland soil Additional Topsoil <i>Galerucella</i> beetle treatment | | CY CY CY LS | \$8.00 \$20.00 \$11.95 \$10,000.00 | \$0.00 \$0.00 \$0.00 \$0.00 | | \$0 |
| Task 7. Plantings | Aquatic Bed Emergent - Deep Marsh Emergent - Wet Meadow Scrub/Shrub Forested/Floodplain Wetland or Forested Upland River Bank/Riparian Zone Seeding Upland Seeding | | SF SF SF SF SF SF SF SF | \$1.95 \$1.65 \$1.65 \$1.70 \$1.80 \$2.05 \$0.70 \$0.20 | \$0.00 \$0.00 \$0.00 \$0.00 \$30,156.93 \$0.00 \$0.00 \$0.00 | | \$30,157 |
| Task 8. Erosion and Sediment Control | Sediment Control Water Control Structures | | LS LS | \$0.00 \$0.00 | \$0.00 \$0.00 | | \$0 |
| Task 9. Misc. Structures | Culvert Replacement - Small Stormwater BMP - Small | | LS LS | \$10,000.00 \$25,000.00 | \$0.00 \$0.00 | | \$0 |
| Subtotal Construction | | | | | | | \$35,157 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | | \$5,274 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 1 | Weeks | \$2,875.00 | | | \$2,875 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | | \$1,758 |
| TOTAL | | | | | | | \$45,063 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
 Restoration Site - Conceptual Cost Estimate**

| Candidate Site:666 | | | | | | |
|---|--|----------|----------|-------------|--------------|------------------|
| Site Name: Turkey River Floodplain Concord, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | |
| | Permanent Easement | | Acres | (per town) | | \$0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | CY | \$100.00 | \$0.00 | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | |
| | | | | | | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil | 94400 | CY | \$8.00 | \$755,200.00 | |
| | Rough Grading | 94,400 | CY | \$10.00 | \$944,000.00 | |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | | LS | \$10,000.00 | \$0.00 | \$0 |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | |
| | Emergent - Wet Meadow | 85,380 | SF | \$1.65 | \$140,877.00 | |
| | Scrub/Shrub | 236,500 | SF | \$1.70 | \$402,050.00 | 738 |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | |
| | Seeding | 100,000 | SF | \$0.70 | \$70,000.00 | |
| | Upland Seeding | 100,000 | SF | \$0.20 | \$20,000.00 | |
| | | | | | | \$632,927 |
| Task 8. Erosion and Sediment Control | Sediment Control | | LS | \$28,481.72 | \$28,481.72 | |
| | Water Control Structures | 1 | LS | \$22,152.45 | \$22,152.45 | |
| | | | | | | \$50,634 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | | LS | \$25,000.00 | \$0.00 | |
| | | | | | | \$0 |
| Subtotal Construction | | | | | | \$688,561 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | \$103,284 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 6 | Weeks | \$2,875.00 | | \$17,250 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$34,428 |
| TOTAL | | | | | | \$843,523 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site:671 | | | | | | |
|---|--|----------|----------|-------------|--------------|--------------------|
| Site Name: Turkey River Floodplain- White Farm Concord, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | |
| | Permanent Easement | | Acres | (per town) | | \$0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | 37.5 | CY | \$100.00 | \$3,750.00 | \$3,750 |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | 18000 |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | |
| | | | | | | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil | 43,000 | CY | \$8.00 | \$344,000.00 | 0 |
| | Rough Grading | 61,000 | CY | \$10.00 | \$610,000.00 | 0 |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | | | | | | \$954,000 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | | LS | \$10,000.00 | \$0.00 | \$0 |
| Task 7. Plantings | Aquatic Bed | 12,000 | SF | \$1.95 | \$23,400.00 | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | |
| | Emergent - Wet Meadow | 58,150 | SF | \$1.65 | \$95,947.50 | |
| | Scrub/Shrub | 58,150 | SF | \$1.70 | \$98,855.00 | 1631 |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | 12000 |
| | Seeding | 100,000 | SF | \$0.70 | \$70,000.00 | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | 50 |
| | | | | | | \$70,000 |
| Task 8. Erosion and Sediment Control | Sediment Control | | LS | \$42,930.00 | \$0.00 | |
| | Water Control Structures | | LS | \$33,390.00 | \$0.00 | |
| | | | | | | \$0 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | | LS | \$25,000.00 | \$0.00 | |
| | | | | | | \$0 |
| Subtotal Construction | | | | | | \$1,032,750 |
| Task 9. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | \$154,913 |
| Task 10. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 4 | Weeks | \$2,875.00 | | \$11,500 |
| Task 11. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$51,638 |
| TOTAL | | | | | | \$1,250,800 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 672 | | | | | | |
|---|--|----------|----------|-------------|-------------|------------------|
| Site Name: White Farm Concord, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | |
| | Permanent Easement | | Acres | (per town) | | \$0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | 37.5 | CY | \$100.00 | \$3,750.00 | \$3,750.00 |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | |
| | | | | | | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Wetland | 100,000 | SY | \$1.00 | \$44,528.00 | 44,528 |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | | | | | | \$44,528 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | | LS | \$10,000.00 | \$0.00 | \$0 |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | |
| | Emergent - Wet Meadow | 20,000 | SF | \$1.65 | \$7,812.39 | 4,735 |
| | Scrub/Shrub | | SF | \$1.70 | \$0.00 | |
| | Forested/Floodplain Wetland or Forested Upland | 20,000 | SF | \$1.80 | \$36,000.00 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | 50,000 | SF | \$0.20 | \$10,000.00 | 50 |
| | | | | | | \$36,000 |
| Task 8. Erosion and Sediment Control | Sediment Control | 1 | LS | \$3,623.76 | \$3,623.76 | |
| | Water Control Structures | 1 | LS | \$2,818.48 | \$2,818.48 | |
| | | | | | | \$6,442 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | 1 | LS | \$25,000.00 | \$25,000.00 | |
| | | | | | | \$25,000 |
| Subtotal Construction | | | | | | \$120,720 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | \$18,108 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 2.5 | Weeks | \$2,875.00 | | \$7,188 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$6,036 |
| TOTAL | | | | | | \$152,052 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 689 | | | | | | |
|---|--|----------|----------|-------------|--------------|------------------|
| Site Name: Burnham Brook Farmed Wetlands Epsom, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | |
| | Permanent Easement | 1 | Acres | \$8,000.00 | \$8,000.00 | 0 |
| | | | | | | 0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | |
| | | | | | | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | | | | |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | | CY | \$100.00 | \$0.00 | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | 1,500 | CY | \$12.00 | \$18,000.00 | |
| | Rough Grading | 1,500 | CY | \$10.00 | \$15,000.00 | |
| | Fine Grade Channel & Wetland | 27,000 | SY | \$1.00 | \$27,000.00 | |
| | | | | | | \$60,000 |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | | LS | \$10,000.00 | \$0.00 | \$0 |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | |
| | Emergent - Wet Meadow | | SF | \$1.65 | \$0.00 | |
| | Scrub/Shrub | | SF | \$1.70 | \$0.00 | |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | |
| | River Bank/Riparian Zone | 67,500 | SF | \$2.05 | \$138,375.00 | 3430 |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | |
| | | | | | | \$138,375 |
| Task 8. Erosion and Sediment Control | Miscellaneous Permanent and Temporary Erosion Controls (NHDOT Item No. 645) | | LS | \$2,700.00 | \$0.00 | |
| | Sediment Control | | LS | \$2,100.00 | \$0.00 | |
| | Water Control Structures | | | | | \$0 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | 2 | LS | \$25,000.00 | \$50,000.00 | |
| | | | | | | \$50,000 |
| Subtotal Construction | | | | | | \$261,375 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 15% | | \$39,206 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 6 | Weeks | \$2,875.00 | | \$17,250 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$13,069 |
| TOTAL | | | | | | \$330,900 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 704 | | | | | | |
|---|--|----------|----------------|--------------------------|--------------|------------------|
| Site Name: Bowen Brook Concord, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement Permanent Easement | | Acres Acres | (per town) (per town) | | \$0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | CY | \$100.00 | \$0.00 | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | 7,778 | CY | \$12.00 | \$93,333.33 | |
| | Rough Grading | 7,778 | CY | \$10.00 | \$77,777.78 | |
| | Fine Grade Channel & Wetland | 52,500 | SY | \$1.00 | \$52,500.00 | \$223,611 |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Wetland | 194,084 | SY | \$1.00 | \$194,084.00 | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | | LS | \$10,000.00 | \$0.00 | \$0 |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | |
| | Emergent - Deep Marsh | 12,524 | SF | \$1.65 | \$20,663.78 | |
| | Emergent - Wet Meadow | 174,676 | SF | \$1.65 | \$288,214.74 | |
| | Scrub/Shrub | 20,473 | SF | \$1.70 | \$34,804.44 | |
| | Forested/Floodplain Wetland or Forested Upland | 30,492 | SF | \$1.80 | \$54,885.60 | |
| | River Bank/Riparian Zone | 83,309 | SF | \$2.05 | \$170,782.43 | |
| | Seeding | 174,676 | SF | \$0.70 | \$122,272.92 | |
| | Upland Seeding | 10,000 | SF | \$0.20 | \$2,000.00 | \$347,941 |
| Task 8. Erosion and Sediment Control | Sediment Control | 1 | LS | \$25,719.84 | \$25,719.84 | |
| | Water Control Structures | 1 | LS | \$20,004.32 | \$20,004.32 | \$45,724 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | | LS | \$25,000.00 | \$0.00 | |
| | | | | | | \$0.00 |
| Subtotal Construction | | | | | | \$622,276 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 15% | | \$93,341 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 12 | Weeks | \$2,875.00 | | \$34,500 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$31,114 |
| TOTAL | | | | | | \$781,231 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 705 | | | | | | |
|---|---|----------|----------------|--------------------------|-------------|------------------|
| Site Name: State Prison Farm Concord, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement Permanent Easement | | Acres Acres | (per town) (per town) | | \$0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | | | | |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | | CY | \$100.00 | \$0.00 | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel Rough Grading Fine Grade Channel & Wetland | | | | | |
| | Channel Excavation (NHDOT Item No. 207.3) | | CY | \$12.00 | \$0.00 | |
| | Common Excavation (NHDOT Item No. 203.1) | | CY | \$10.00 | \$0.00 | |
| | Fine Grading (NHDOT Item No. 214) | | SY | \$1.00 | \$0.00 | |
| | | | | | | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil Rough Grading Fine Grade Wetland Replace Topsoil Additional Topsoil | | | | | |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | 8,873 | CY | \$8.00 | \$70,986.67 | |
| | Common Excavation (NHDOT Item No. 203.1) | | CY | \$10.00 | \$0.00 | |
| | Fine Grading (NHDOT Item No. 214) | 53,240 | SY | \$1.00 | \$53,240.00 | 440 |
| | Wetland Humus (NHDOT Item No. 647.29) | | CY | \$20.00 | \$0.00 | |
| | Humus (NHDOT Item No. 647.1) | | CY | \$11.95 | \$0.00 | |
| | | | | | | \$124,227 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants Replace with new wetland soil Additional Topsoil Galerucella beetle treatment | | | | | |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | | CY | \$8.00 | \$0.00 | |
| | Wetland Humus (NHDOT Item No. 647.29) | | CY | \$20.00 | \$0.00 | |
| | Humus (NHDOT Item No. 647.1) | | CY | \$11.95 | \$0.00 | |
| | D. Cygan (NH Dept. of Agriculture) | | LS | \$10,000.00 | \$0.00 | \$0 |
| Task 7. Plantings | Aquatic Bed Emergent - Deep Marsh Emergent - Wet Meadow Scrub/Shrub Forested/Floodplain Wetland or Forested Upland River Bank/Riparian Zone Seeding Upland Seeding | | | | | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.95 | \$0.00 | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.65 | \$0.00 | |
| | Planting - General (NHDOT Item No. 650) | 59,895 | SF | \$1.65 | \$98,826.75 | 3960 |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.70 | \$0.00 | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.80 | \$0.00 | |
| | Planting - General (NHDOT Item No. 650) | 32,500 | SF | \$2.05 | \$66,625.00 | 200 |
| | Wetland Seed Mix (NHDOT Item 644) | | SF | \$0.70 | \$0.00 | |
| | Conservation Seed Mix (NHDOT Item 644) | | SF | \$0.20 | \$0.00 | |
| | | | | | | \$165,452 |
| Task 8. Erosion and Sediment Control | Sediment Control Water Control Structures | | | | | |
| | Miscellaneous Permanent and Temporary Erosion Controls (NHDOT Item No. 645) | 1 | LS | \$5,590.20 | \$5,590.20 | |
| | Install Cofferdams During Construction (NHDOT Item No. 503) | 1 | LS | \$4,347.93 | \$4,347.93 | |
| | | | | | | \$9,938 |
| Task 9. Misc. Structures | Culvert Replacement - Small Stormwater BMP - Small | | | | | |
| | Similar project (VTrans) | | LS | \$10,000.00 | \$0.00 | |
| | Similar project (Webster Lake) | | LS | \$25,000.00 | \$0.00 | |
| | | | | | | \$0.00 |
| Subtotal Construction | | | | | | \$304,617 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | | | | \$45,692 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 3 | Contract | 15% | | \$8,625 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$15,231 |
| TOTAL | | | | | | \$374,165 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate

| Candidate Site:733 | | | | | | |
|---|--|----------|----------|-------------|-------------|------------------|
| Site Name: Gulf Brook Headwaters Pittsfield, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | |
| | Permanent Easement | 12 | Acres | \$8,000.00 | \$96,000.00 | |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | | LS | \$5,000.00 | \$0.00 | \$0 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | CY | \$100.00 | \$0.00 | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | | LS | \$10,000.00 | \$0.00 | \$0 |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | |
| | Emergent - Wet Meadow | | SF | \$1.65 | \$0.00 | |
| | Scrub/Shrub | | SF | \$1.70 | \$0.00 | |
| | Forested/Floodplain Wetland or Forested Upland | 29,621 | SF | \$1.80 | \$53,317.44 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | \$53,317 |
| Task 8. Erosion and Sediment Control | Sediment Control | | LS | \$0.00 | \$0.00 | |
| | Water Control Structures | | LS | \$0.00 | \$0.00 | \$0 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | | LS | \$25,000.00 | \$0.00 | \$0 |
| Subtotal Construction | | | | | | \$149,317 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 15% | | \$22,398 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 1 | Weeks | \$2,875.00 | | \$2,875 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$7,466 |
| TOTAL | | | | | | \$182,056 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site:769 | | | | | | |
|---|---|----------|--|--|--|-----------------------|
| Site Name: Hunting Swamp Headwaters, Loudon, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement Permanent Easement | | Acres Acres | (per town) (per town) | | \$0 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | | LS | \$5,000.00 | \$0.00 | \$0 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | CY | \$100.00 | \$0.00 | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel Rough Grading Fine Grade Channel & Wetland | | CY CY SY | \$12.00 \$10.00 \$1.00 | \$0.00 \$0.00 \$0.00 | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil Rough Grading Fine Grade Wetland Replace Topsoil Additional Topsoil | | CY CY 19,360 SY CY CY | \$8.00 \$10.00 \$1.00 \$20.00 \$11.95 | \$0.00 \$0.00 \$19,360.00 \$0.00 \$0.00 | \$19,360 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants Replace with new wetland soil Additional Topsoil <i>Galerucella</i> beetle treatment | | CY CY CY LS | \$8.00 \$20.00 \$11.95 \$10,000.00 | \$0.00 \$0.00 \$0.00 \$0.00 | \$0 |
| Task 7. Plantings | Aquatic Bed Emergent - Deep Marsh Emergent - Wet Meadow Scrub/Shrub Forested/Floodplain Wetland or Forested Upland River Bank/Riparian Zone Seeding Upland Seeding | | SF SF 15,246 SF 13,794 SF SF SF SF SF | \$1.95 \$1.65 \$1.65 \$1.70 \$1.80 \$2.05 \$0.70 \$0.20 | \$0.00 \$0.00 \$25,155.90 \$23,449.80 \$0.00 \$0.00 \$0.00 \$0.00 | \$48,606 |
| Task 8. Erosion and Sediment Control | Sediment Control Water Control Structures | | 1 1 | LS LS | \$871.20 \$677.60 | \$871.20 \$677.60 |
| Task 9. Misc. Structures | Culvert Replacement - Small Stormwater BMP - Small | | 2 | LS LS | \$10,000.00 \$25,000.00 | \$0.00 \$50,000.00 |
| Subtotal Construction | | | | | | \$50,000 |
| Subtotal Construction | | | | | | \$119,515 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 15% | | \$17,927 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 2 | Weeks | \$2,875.00 | | \$5,750 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$5,976 |
| TOTAL | | | | | | \$149,167 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 800/804 | | | | | | | |
|---|--|----------|----------|-------------|--------------|------------|------------------|
| Site Name: Sod Farms, West Road Canterbury, NH | | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total | |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | | |
| | Permanent Easement | 20 | Acres | \$12,000.00 | \$240,000.00 | | \$240,000 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | | | | | |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | | CY | \$100.00 | \$0.00 | | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | 1,852 | CY | \$12.00 | \$22,222.22 | | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | | |
| | Fine Grade Channel & Wetland | 2,778 | SY | \$1.00 | \$2,777.78 | | \$25,000 |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | \$0.00 | | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | | |
| | Fine Grade Wetland | 18,679 | SY | \$1.00 | \$18,679.11 | | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | | \$18,679 |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | | |
| | <i>Galerucella</i> beetle treatment | | LS | \$10,000.00 | \$0.00 | | \$0 |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | | |
| | Emergent - Wet Meadow | | SF | \$1.65 | \$0.00 | | |
| | Scrub/Shrub | 86,031 | SF | \$1.70 | \$146,252.70 | | |
| | Forested/Floodplain Wetland or Forested Upland | 150,000 | SF | \$1.80 | \$270,000.00 | | |
| | River Bank/Riparian Zone | 25,000 | SF | \$2.05 | \$51,250.00 | | |
| | Seeding | 50,000 | SF | \$0.70 | \$35,000.00 | | |
| | Upland Seeding | 10,000 | SF | \$0.20 | \$2,000.00 | | \$356,250 |
| Task 8. Erosion and Sediment Control | Sediment Control | | LS | \$1,965.56 | \$0.00 | | |
| | Water Control Structures | | LS | \$1,528.77 | \$0.00 | | \$0 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | | |
| | Stormwater BMP - Small | | LS | \$25,000.00 | \$0.00 | | \$0 |
| Subtotal Construction | | | | | | | \$644,929 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 15% | | | \$96,739 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 2 | Weeks | \$2,875.00 | | | \$5,750 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | | \$32,246 |
| TOTAL | | | | | | | \$779,665 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
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- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 806 | | | | | | | |
|---|--|----------|----------|-------------|--------------|------------|------------------|
| Site Name: Tannery Brook Boscawen, NH | | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total | |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | | |
| | Permanent Easement | 10 | Acres | \$12,000.00 | \$120,000.00 | | \$120,000 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | | | | | |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | | CY | \$100.00 | \$0.00 | | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | | | | | |
| | Channel Excavation (NHDOT Item No. 207.3) | | CY | \$12.00 | \$0.00 | | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | | |
| | | | | | | | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil | | | | | | |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | | CY | \$8.00 | \$0.00 | | |
| | Remove and Stockpile Existing Vegetation & Soils | | | | | | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | | |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | 10,164 | CY | \$8.00 | \$81,312.00 | | |
| | Replace with new wetland soil | 10,164 | CY | \$20.00 | \$203,280.00 | | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | | |
| | | | | | | | \$284,592 |
| Task 7. Plantings | Aquatic Bed | 8,276 | SF | \$1.95 | \$16,138.98 | | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | | |
| | Emergent - Wet Meadow | 30,492 | SF | \$1.65 | \$50,311.80 | | |
| | Scrub/Shrub | | SF | \$1.70 | \$0.00 | | |
| | Forested/Floodplain Wetland or Forested Upland | 4,356 | SF | \$1.80 | \$7,840.80 | | |
| | River Bank/Riparian Zone | 14,520 | SF | \$2.05 | \$29,766.00 | | |
| | Seeding | | SF | \$0.70 | \$0.00 | | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | | |
| | | | | | | | \$104,058 |
| Task 8. Erosion and Sediment Control | Sediment Control | | | | | | |
| | Miscellaneous Permanent and Temporary Erosion Controls (NHDOT Item No. 645) | | LS | \$12,806.64 | \$0.00 | | |
| | Water Control Structures | | LS | \$9,960.72 | \$0.00 | | |
| | | | | | | | \$0 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | | | | | |
| | Similar project (VTrans) | | LS | \$10,000.00 | \$0.00 | | |
| | Stormwater BMP - Small | | LS | \$25,000.00 | \$0.00 | | |
| | | | | | | | \$0.00 |
| Subtotal Construction | | | | | | | \$513,650 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | \$77,047 | |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | | Weeks | \$2,875.00 | | \$0 | |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$25,682 | |
| TOTAL | | | | | | \$0 | \$616,379 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate

| Candidate Site: 825/826 | | | | | | |
|---|--|----------|----------|-------------|-------------|------------------|
| Site Name: Kelly Brook Trib. Headwaters Loudon, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | |
| | Permanent Easement | 8.05 | Acres | \$8,000.00 | \$64,400.00 | \$64,400 |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | 1 | LS | \$5,000.00 | \$5,000.00 | \$5,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | | | | |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | | CY | \$100.00 | \$0.00 | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | | | | |
| | Channel Excavation (NHDOT Item No. 207.3) | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | |
| | | | | | | \$0 |
| Task 5. Wetland Restoration | Strip Topsoil | | | | | |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | | CY | \$8.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | | | | |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | | | | |
| | Wetland Humus (NHDOT Item No. 647.29) | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | Humus (NHDOT Item No. 647.1) | | LS | \$10,000.00 | \$0.00 | \$0 |
| | D. Cygan (NH Dept. of Agriculture) | | | | | |
| Task 7. Plantings | Aquatic Bed | | | | | |
| | Planting - General (NHDOT Item No. 650) | | SF | \$1.95 | \$0.00 | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | |
| | Emergent - Wet Meadow | | SF | \$1.65 | \$0.00 | |
| | Scrub/Shrub | | SF | \$1.70 | \$0.00 | |
| | Forested/Floodplain Wetland or Forested Upland | 49,368 | SF | \$1.80 | \$88,862.40 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | |
| | | | | | | \$88,862 |
| Task 8. Erosion and Sediment Control | Sediment Control | | | | | |
| | Miscellaneous Permanent and Temporary Erosion Controls (NHDOT Item No. 645) | | LS | \$0.00 | \$0.00 | |
| | Water Control Structures | | LS | \$0.00 | \$0.00 | |
| | Install Cofferdams During Construction (NHDOT Item No. 503) | | | | | \$0 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | 1 | LS | \$25,000.00 | \$25,000.00 | \$25,000.00 |
| Subtotal Construction | | | | | | \$183,262 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 15% | | \$27,489 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | 1 | Weeks | \$2,875.00 | | \$2,875 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$9,163 |
| TOTAL | | | | | | \$222,790 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.

**Merrimack River Watershed Wetland Restoration Strategy
Restoration Site - Conceptual Cost Estimate**

| Candidate Site: 1010 | | | | | | |
|---|--|----------|----------|-------------|--------------|------------------|
| Site Name: Lower Shields Pond Derry, NH | | | | | | |
| Scope Item | Description & Reference | Quantity | Unit | Unit Price | Extension | Task Total |
| Task 1. Construction & Permanent Easements | Construction Easement | | Acres | (per town) | | |
| | Permanent Easement | 115 | Acres | \$6,000.00 | \$690,000.00 | |
| Task 2. Mobilization and Demobilization | Contractor Startup (NHDOT Item No. 692) | | LS | \$5,000.00 | \$0.00 | \$690,000 |
| Task 3. Ditch Plugs | Install In-channel Ditch Plugs | | CY | \$10.00 | \$0.00 | \$0 |
| | Fill material, @ 7.5 yds per plug (NHDOT Item No. 203.52) | | | | | |
| Task 4. New Channel Shaping/Stream Restoration | Reshape Low Flow Channel | | CY | \$12.00 | \$0.00 | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Channel & Wetland | | SY | \$1.00 | \$0.00 | |
| | Channel Excavation (NHDOT Item No. 207.3) | | | | | |
| | Common Excavation (NHDOT Item No. 203.1) | | | | | |
| | Fine Grading (NHDOT Item No. 214) | | | | | |
| Task 5. Wetland Restoration | Strip Topsoil | | CY | \$8.00 | \$0.00 | |
| | Remove and Stockpile Existing Vegetation & Soils | | | | | |
| | Rough Grading | | CY | \$10.00 | \$0.00 | |
| | Fine Grade Wetland | | SY | \$1.00 | \$0.00 | |
| | Replace Topsoil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | Wetland Soil Excavation (NHDOT Item No. 203.49) | | | | | |
| Task 6. Invasive Species Removal/Soil Replacement | Remove Invasive plants | | CY | \$8.00 | \$0.00 | |
| | Replace with new wetland soil | | CY | \$20.00 | \$0.00 | |
| | Additional Topsoil | | CY | \$11.95 | \$0.00 | |
| | <i>Galerucella</i> beetle treatment | | LS | \$10,000.00 | \$0.00 | \$0 |
| | D. Cygan (NH Dept. of Agriculture) | | | | | |
| Task 7. Plantings | Aquatic Bed | | SF | \$1.95 | \$0.00 | |
| | Emergent - Deep Marsh | | SF | \$1.65 | \$0.00 | |
| | Emergent - Wet Meadow | | SF | \$1.65 | \$0.00 | |
| | Scrub/Shrub | | SF | \$1.70 | \$0.00 | |
| | Forested/Floodplain Wetland or Forested Upland | | SF | \$1.80 | \$0.00 | |
| | River Bank/Riparian Zone | | SF | \$2.05 | \$0.00 | |
| | Seeding | | SF | \$0.70 | \$0.00 | |
| | Upland Seeding | | SF | \$0.20 | \$0.00 | |
| | Planting - General (NHDOT Item No. 650) | | | | | |
| | Planting - General (NHDOT Item No. 650) | | | | | |
| | Planting - General (NHDOT Item No. 650) | | | | | |
| | Planting - General (NHDOT Item No. 650) | | | | | |
| | Planting - General (NHDOT Item No. 650) | | | | | |
| | Planting - General (NHDOT Item No. 650) | | | | | |
| | Planting - General (NHDOT Item No. 650) | | | | | |
| | Wetland Seed Mix (NHDOT Item 644) | | | | | |
| | Conservation Seed Mix (NHDOT Item 644) | | | | | |
| Task 8. Erosion and Sediment Control | Miscellaneous Permanent and Temporary Erosion Controls (NHDOT Item No. 645) | | LS | \$0.00 | \$0.00 | |
| | Water Control Structures | | LS | \$0.00 | \$0.00 | |
| | Install Cofferdams During Construction (NHDOT Item No. 503) | | | | | \$0 |
| Task 9. Misc. Structures | Culvert Replacement - Small | | LS | \$10,000.00 | \$0.00 | |
| | Stormwater BMP - Small | | LS | \$25,000.00 | \$0.00 | |
| | Similar project (VTrans) | | | | | |
| | Similar project (Webster Lake) | | | | | |
| | | | | | | \$0.00 |
| Subtotal Construction | | | | | | \$690,000 |
| Task 10. Design & Permitting | Consultant Fees for Final Survey, Geotechnical Investigations, Design, and Permitting, Complex | | Contract | 25% | | \$103,500 |
| Task 11. Construction Observation | Field Engineer PM, Average (RS Means No. 01 31 13.20 0180) | | Weeks | \$2,875.00 | | \$0 |
| Task 12. Long-term Monitoring/NHDES Report Preparation | Oversight and Management of the Project, Low Range (RS Means No. 01 11 31.20 0020) | | Project | 5% | | \$34,500 |
| TOTAL | | | | | | \$828,000 |

Notes:

- 1 - Construction estimate completed using 2008 dollars.
- 2 - NHDOT Item Numbers are from the publication, *NHDOT Standard Specifications - 2006 Edition*.
- 3 - NHDOT Item Costs are taken from NHDOT Weighted Average Unit Prices Years 2008 Qtrs 3,2,1 and 2007 Qtr 4, accessed via the internet.
- 4 - RS Means Item Numbers and Costs are taken from the publication, *Site Work & Landscape Cost Data, 27th Annual Edition, 2008*.