

## Wisconsin Department of Natural Resources SWIMS Project Summary

### General Project Information

|                    |   |
|--------------------|---|
| <b>Project ID:</b> | GLRI_00E00462   |
| <b>Name:</b>       | Ashland/Chequamegon Bay Shoreland Restoration Project   |
| <b>Type:</b>       | Great Lakes Restoration Initiative  |
| <b>Subtype:</b>    | Habitat   |
| <b>Status:</b>     | COMPLETE  |
| <b>Start Date:</b> | 10/01/2010  |
| <b>End Date:</b>   | 12/31/2013  |
| <b>Purpose:</b>    | In this project, we propose to restore 4,100 feet of public shoreland in the City of Ashland, WI, to native plant communities, eliminate invasive species, and measure the ecological benefits by quantifying wildlife population responses as well as changes in non-point nutrient loading to Lake Superior. Industrialization of Ashland's waterfront in the early 1900's significantly altered the natural environment of the shoreline. Lumber mills, wharves for handling coal, ore, limestone, logs, and pulpwood directly and negatively impacted the ecology of this once pristine environment. While much of the industrial activity has ended, significant amounts of debris still pollute Ashland's waterfront, including slab wood, large and small concrete sections with exposed rebar, and remnants of former dock facilities. What is now needed is restoration of these post-industrial lands to more natural shorelines to enhance scenic beauty, protect the region's ecology, and provide opportunities for recreation and tourism. This proposed work is an extension of ongoing Wisconsin Department of Natural Resources (WDNR) research on inland glacial lakes in Vilas County, WI (the Wisconsin Shoreland Restoration Project), and represents a partnership between WDNR Bureau of Science Services, Michigan Technological University, the City of Ashland, Ashland County Land and Water Conservation Department, the Northwoods Cooperative Weed Management Area, University of Wisconsin Extension, and Northland College's Sigurd Olson Environmental Institute, Ashland, WI. This partnership recognizes the ecological, economic and social values of a healthy shoreland habitat. The proposed project will merge with efforts coordinated through the Fish Creek Watershed Restoration and Management Plan funded through National Fish and Wildlife Foundation's Great Lakes Watershed Restoration Program (GLWRP) to perform water quality assessments across the City's waterfront, to minimize run-off entering the bay, and demonstrate the best management practices that protect or improve water quality. |
| <b>Objective:</b>  | This project will focus on native plant community plantings and invasive species abatement within a 75 foot riparian buffer along the 4,100 feet of public shore lands in the City of Ashland. Members of the Northwoods Cooperative Weed Management Area, experienced in invasive species abatement, will lead community volunteers to complete invasive species removal at all sites before native plant restorations occur. WDNR Science Services, with assistance from Ashland County Land and Water Conservation Department, will coordinate the native plant restorations. After factoring in the existing native vegetation for each site, planting plans and erosion control measures will be developed using the standards laid out in the Natural Resources Conservation Service 580 and 643A codes. Planting density guidelines for woodland shoreland habitat will be used as outlined in the Wisconsin Biology Technical Note 1: Shoreland Habitat (NRCS 2002). Plant numbers are calculated based on the area in square feet to be reestablished and the planting densities in the guidelines (see Table 1). The herbaceous cover layer will be comprised of a minimum of 30% native grasses (Poaceae) and/or sedges (Carex species). Sites that have significant amounts of established non-native turf grass will be smothered with tarps and black plastic for 4-8 weeks. Restoration plant species chosen will reflect the indigenous native plant community, but also will reflect hardiness, wildlife value, and propagation potential. Erosion control practices will include the installation of rain gardens and appropriate placement of erosion control materials such as EnviroLoc bags, sediment logs, and biologs. Two additional steps include temporary fencing and a careful watering regime for the plantings. The restoration team uses 8-foot plastic mesh fencing to protect the plantings following their installation and pumps, hoses and sprinklers will be installed to keep the restorations irrigated.  |
| <b>Comments:</b>   | <p>2013-2014 runoff collector study and a bio-retention basin study</p> <p>3. Points of Contact. Project Manager - Michael W. Meyer, Ph.D, Wisconsin Department of Natural Resources, Bureau of Science Services, 107 Sutliff Avenue, Rhinelander, WI 54501, 715-365-8858, FAX 715-365-8932, Michael.Meyer@Wisconsin.gov</p> <p>Project Co-Investigator Dan Haskell, Research Associate Scientist, School of Forest Resources &amp; Environmental Sciences, Michigan Technological University, 1400 Townsend Dr, Houghton, MI 49963 Ph: (715) 360-8942, E-mail: dehaskel@mtu.edu</p> <p>Project Co-Investigator Stacy Craig, Environmental Education Program Coordinator Sigurd Olson Environmental Institute, Northland College, Ashland, WI. 715-682-1220, scraig@northland.edu</p> <p>Finance Officer Ms. Sandy Duran, Wisconsin Department of Natural Resources, Bureau of Science Services, PO Box</p>   |

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7921, Madison, WI 53707, 608-266-5225, FAX 608-266-5226, Sandy.Duran@Wisconsin.gov  
DUNS 809-611-247

**Outcome:** This project will provide a state of the science Great Lakes shore land restoration project in Ashland, WI, a high profile recreation destination on the south shore of Lake Superior. Decades of post-industrial debris still lined the City Waterfront and this project will remove much of what remains. The National Park Service Northern Great Lakes Visitor Center is located 2 miles from the restoration and a display will be set up to direct visitors to the restorations. These restorations are designed to remove terrestrial invasive species that are common at these disturbed sites, and the plantings will return the vegetation community to that of undisturbed, natural shoreline in the Chequamegon Bay. This will improve the ecological functioning of the Ashland City Waterfront, improving wildlife and fish habitat, and improving water quality. The Final Report will provide a Template for Shoreline Restoration so the lessons learned and implemented at this site can be transferred to other Great Lake communities.

**Study Design:**

**QA Measures:**

### People

| Name              | Role         | Status | Start Date | End Date   | Organization  | Comments |
|-------------------|--------------|--------|------------|------------|---------------|----------|
| DINSMORE, DONALEA | COORDINATOR  | ACTIVE | 12/20/2010 |            | Wisconsin DNR |          |
| FEVOLD, BRICK M   | COORDINATOR  | ACTIVE | 10/01/2010 | 09/30/2011 | Wisconsin DNR |          |
| MEYER, MICHAEL W  | PROJECT_LEAD | ACTIVE | 10/01/2010 | 09/30/2011 | Wisconsin DNR |          |

### Project Statuses

| Date | Reported By | Status | Comments |
|------|-------------|--------|----------|
|------|-------------|--------|----------|

### Project Status Detail

**Answer Set: DEFAULT**

| Question | Answer |
|----------|--------|
|----------|--------|

1. Reporting Timeframe (Q1) (Q2) (Q3) (Q4):
2. Amount expended this reporting period:
3. Subcontracts or subgrants awarded this reporting period:
4. QAPP (Project Plan) status:
5. Local services and/or products purchased this reporting period:
6. Number of jobs created this reporting period:
7. Work accomplished this reporting period:
8. Work goals for coming reporting period:
  1. Reporting Timeframe Month/Year to Month/Year (Oct-Mar or Apr-Sept):
  2. Quality Documentation status (respond NA if not required):
  3. Describe work performed during this reporting period relating to the activities from the grant workplan (Previous 6 months):
  4. GLRI Action Plan metric(s) accomplished and numerical progress during this reporting period:

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| <b>Question</b>  | <b>Answer</b> |
|--|---------------|
| 5. GLRI Action Plan metric(s) accomplished and numerical progress since project start (total complete to date):  |               |
| 6. Percentage (estimate) of project work completed during this reporting period:   |               |
| 7. Percentage (estimate) of project work completed since the project start (total complete to date):   |               |
| 8. Is project work on schedule? If no, please explain.   |               |
| 9. If a problem was encountered, describe the problem and action(s) taken to correct it.   |               |
| 10. What work is projected during the next reporting period? (Next 6 months):  |               |
| 11. Will the project take longer than the approved project period? If so, have you requested an extension in writing to the grant coordinator?             |               |
| 12. Amount expended this reporting period (can be approximate) If no amount expended, explain why.   |               |
| 13. Is project invoicing/expenditures up to date? If invoicing is more than 3 months overdue, explain why.   |               |
| 14. Were any significant changes (>10% of the total project amount) made to the project budget? If so, have you notified the grant coordinator in writing? |               |

**Actions**

| <b>Action</b>                | <b>Detailed Description</b>   | <b>Start</b>        | <b>End Date</b> | <b>Status</b>   |
|------------------------------|---|---------------------|-----------------|-----------------|
| Habitat Restoration - Upland | Native vegetation cover<br>Baseline: <50%<br>Value at Grant Completion: >90%<br>Long-term Value: restores native plant community<br>Year Long-term Value will be Achieved: 2011                               | 10/01/2010          | 09/30/2011      | IN_PROGRESS     |
| <b>Details:</b>              | <b>Parameter</b>  | <b>Value/Amount</b> | <b>Units</b>    | <b>Comments</b> |
|                              | Native vegetation cover   | 90                  | %               |                 |
| Grant Awarded                | Restore 4,100 feet of public shoreland in the City of Ashland, WI   | 10/01/2010          | 09/30/2011      | IN_PROGRESS     |
| Restore Riparian Habitat     | Shoreline feet restored/enhanced<br>Baseline: 0 feet<br>Value at Grant Completion: 4100 feet<br>Long-term Value: restores natural plant and wildlife community<br>Year Long-term Value will be Achieved: 2011 | 10/01/2010          | 09/30/2011      | IN_PROGRESS     |
| <b>Details:</b>              | <b>Parameter</b>  | <b>Value/Amount</b> | <b>Units</b>    | <b>Comments</b> |
|                              | Monitoring  |                     | FT              |                 |

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| Action                             | Detailed Description   | Start      | End Date   | Status      |
|------------------------------------|--|------------|------------|-------------|
| Aquatic Plant Monitoring or Survey | Area infested by invasive species<br>Baseline: 4100 feet<br>Value at Grant Completion: 0 feet<br>Long-term Value: enhances recovery of native plant community<br>Year Long-term Value will be Achieved: 2011 | 10/01/2010 | 09/30/2011 | IN_PROGRESS |

| Details: | Parameter  | Value/Amount | Units | Comments |
|----------|------------|--------------|-------|----------|
|          | Monitoring |              | FT    |          |

### Monitoring Stations

| Station ID | Name                               | Comments |
|------------|------------------------------------|----------|
| 10041350   | Chequamegon Bay Runoff MP-BIO-1    |          |
| 10041351   | Chequamegon Bay Runoff MP-BIO-2    |          |
| 10041352   | Chequamegon Bay Runoff MP-BIO-3    |          |
| 10041353   | Chequamegon Bay Runoff MP-BIO-4    |          |
| 10041354   | Chequamegon Bay Runoff MP-BIO-5    |          |
| 10041355   | Chequamegon Bay Runoff MP-BIO-6    |          |
| 10041337   | Chequamegon Bay Runoff MP-RCB-1    |          |
| 10041346   | Chequamegon Bay Runoff MP-RCB-10   |          |
| 10041347   | Chequamegon Bay Runoff MP-RCB-11   |          |
| 10041348   | Chequamegon Bay Runoff MP-RCB-12   |          |
| 10041338   | Chequamegon Bay Runoff MP-RCB-2    |          |
| 10041339   | Chequamegon Bay Runoff MP-RCB-3    |          |
| 10041340   | Chequamegon Bay Runoff MP-RCB-4    |          |
| 10041341   | Chequamegon Bay Runoff MP-RCB-5    |          |
| 10041342   | Chequamegon Bay Runoff MP-RCB-6    |          |
| 10041343   | Chequamegon Bay Runoff MP-RCB-7    |          |
| 10041344   | Chequamegon Bay Runoff MP-RCB-8    |          |
| 10041345   | Chequamegon Bay Runoff MP-RCB-9    |          |
| 10041349   | Chequamegon Bay Runoff MP-RCB-LAKE |          |

### Assessment Units

| WBIC    | Segment | Local Name    | Official Name |
|---------|---------|---------------|---------------|
| 2751220 | 1       | Lake Superior | Lake Superior |

### Lab Account Codes

| Account Code | Description   | Start Date | End Date   |
|--------------|---------------|------------|------------|
| GL009        | ASHLAND CBSRP | 05/31/2011 | 06/30/2012 |
| SS084        | ASHLAND CBSRP | 06/26/2013 | 12/31/2014 |

### Forms

| Form Code | Form Name |
|-----------|-----------|
|-----------|-----------|

### Methods

| Method Code | Description |
|-------------|-------------|
|-------------|-------------|

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### Fieldwork Events

| Start Date       | Status   | Field ID | Station ID | Station Name                       |
|------------------|----------|----------|------------|------------------------------------|
| 06/06/2013       | COMPLETE | MP-LAKE  | 10041349   | Chequamegon Bay Runoff MP-RCB-LAKE |
| 06/06/2013       | COMPLETE | MP-LAKE  | 10041349   | Chequamegon Bay Runoff MP-RCB-LAKE |
| 08/27/2013 17:00 | COMPLETE | MP-OF-A  | 10041350   | Chequamegon Bay Runoff MP-BIO-1    |
| 08/27/2013 17:00 | COMPLETE | MP-BIO-A | 10041353   | Chequamegon Bay Runoff MP-BIO-4    |
| 08/27/2013 17:00 | COMPLETE | MP-BIO-B | 10041354   | Chequamegon Bay Runoff MP-BIO-5    |
| 08/27/2013 17:00 | COMPLETE | MP-OF-B  | 10041351   | Chequamegon Bay Runoff MP-BIO-2    |
| 08/27/2013 17:00 | COMPLETE | MP-OF-C  | 10041352   | Chequamegon Bay Runoff MP-BIO-3    |

### Documents

| Title  | Description   | Author        | Published  | Comments  |
|--|---|---------------|------------|---|
| Ashland GLRI Shoreline Restoration Proposal 2010   | Ashland GLRI Shoreline Restoration 2010   | Meyer, Mike   | 10/01/2010 |   |
| Ashland/Chequamegon Bay Shoreland Restoration QAPP | Zip file of QAPP and attachments signed by DNR and Ashland                                  | Michael Meyer | 10/31/2011 |   |
| Chequamegon Bay History Website                    | <a href="http://www.chequamegonbay-history.com/">http://www.chequamegonbay-history.com/</a> |               | 05/04/2011 |   |
| Chequamegon Bay Map, Lars Larson PhD Website       |   |               | 05/04/2011 |   |
| QAPP Addendum - Response to EPA Comments           | QAPP Addendum - to be incorporated into QAPP  | Brick Fevold  | 10/25/2012 | Summary of discussion from teleconference to resolve QAPP issues. |

### Budget

**Budget Description:** Budget for Ashland/Chequamegon Bay Shoreland Restoration Project      **Start Date:** 10/01/2010      **End Date:** 09/30/2011

| Code    | Description                | Quantity | Units | Unit Cost | Total Cost | Comments |
|---------|----------------------------|----------|-------|-----------|------------|----------|
| FTE     | FTE Hours                  |          | Hours | \$0.00    | \$0.00     |          |
| LTE SAL | LTE Salary                 |          | Hours | \$13.00   | \$0.00     |          |
| LTE FR  | LTE Fringe                 |          |       |           | \$0.00     |          |
| LTE IND | LTE Indirect               |          |       |           | \$0.00     |          |
| LTE TOT | LTE Total Cost             |          |       |           | \$0.00     |          |
| SUPPLY  | Supplies                   |          |       |           | \$0.00     |          |
| MILEAGE | Mileage                    |          | Miles | \$0.72    | \$0.00     |          |
| MEAL    | Meals                      |          | Meals | \$9.00    | \$0.00     |          |
| LODGE   | Lodging                    |          |       |           | \$0.00     |          |
| TRAVEL  | Travel Total               |          |       |           | \$0.00     |          |
| BUG     | Bug Contracts              |          |       |           | \$0.00     |          |
| OTHER   | Other Contracts            |          |       |           | \$0.00     |          |
| EQUIP   | Equipment                  |          |       |           | \$0.00     |          |
| USGS    | USGS Costs                 |          |       |           | \$0.00     |          |
| TOTAL   | Total Cost (excludes SLOH) |          |       |           | \$0.00     |          |

| Test Code | Description | Test Group | # Planned | Unit Cost | Total Cost |
|-----------|-------------|------------|-----------|-----------|------------|
|-----------|-------------|------------|-----------|-----------|------------|

**Total SLOH Lab Costs:**                      \$0.00  
**Total Budget:**                                 \$0.00

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**Combined Budgets:** \$0.00  
**Combined SLOH:** \$0.00  
**Combined Total:** \$0.00

### Funding

| Organization                        | Source  | Type                  | Amount       | Start Date | End Date |
|-------------------------------------|---------|-----------------------|--------------|------------|----------|
| Great Lakes National Program Office | Federal | Other type of funding | \$222,491.00 |            |          |