

**FINAL EVALUATION FINDINGS**  
**OLD WOMAN CREEK NATIONAL ESTUARINE RESEARCH RESERVE**

**August 2003 through August 2006**



Office of Ocean and Coastal Resource Management  
National Ocean Service  
National Oceanic and Atmospheric Administration  
U.S. Department of Commerce

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## I. EXECUTIVE SUMMARY

The Coastal Zone Management Act (CZMA) of 1972, as amended, established the National Estuarine Research Reserve System (NERRS). Sections 312 and 315 of the CZMA require the National Oceanic and Atmospheric Administration (NOAA) to conduct periodic performance reviews or evaluations of all federally approved National Estuarine Research Reserves (NERRs). The review described in this document examined the operation and management of the Old Woman Creek National Estuarine Research Reserve (OWCNERR or the Reserve) during the period from August 2003 through August 2006. The Reserve is administered by the Ohio Department of Natural Resources, Division of Wildlife (DOW).

This document describes the evaluation findings of the Director of NOAA's Office of Ocean and Coastal Resource Management (OCRM) with respect to the Old Woman Creek NERR during the review period. These evaluations include discussions of major accomplishments as well as recommendations for program improvement. The fundamental conclusion of the findings is that the State of Ohio is successfully implementing its federally approved NERR.

The evaluation team documented a number of Old Woman Creek Reserve accomplishments during this review period. The transition to the Division of Wildlife from the Division of Natural Areas and Preserves has gone smoothly and the Division's support of the Reserve appears strong. The new manager and staff have developed into a strong collaborative team and have maintained and increased successful and effective partnerships with a variety of agencies and organizations. Integration among the Reserve's research/monitoring and education/outreach programs has improved since the last evaluation, and the GIS program has provided support to all components and programs. The Reserve has begun to re-energize its volunteer program, and the Friends of Old Woman Creek organization has increased and broadened its activities in support of the Reserve. Research is strongly supported at the Reserve, including Graduate Research Fellows. Education programming is flexible to meet the needs of the community. A CTP coordinator was hired in 2004.

The evaluation team also identified areas where the Reserve and its programming could be strengthened. Two of the recommendations are required. The Reserve must complete revisions to its management plan, and a full-time education coordinator must be hired. The Reserve and Division should work to offset stakeholder perceptions that the Reserve may not be appropriately placed in the Division of Wildlife. The Division and Reserve should work to have the distance learning infrastructure and capabilities operational within the Visitor Center. The CTP should have a permanent coordinator position dedicated to the Coastal Training Program, and strategies and options should be explored to obtain a position to assist with land acquisition and other stewardship activities.

## II. PROGRAM REVIEW PROCEDURES

### A. OVERVIEW

The National Oceanic and Atmospheric Administration (NOAA) began its review of the Old Woman Creek Reserve in March 2006. The §312 evaluation process involves four distinct components:

- An initial document review and identification of specific issues of particular concern;
- A site visit to Ohio, including interviews and public meetings;
- Development of draft evaluation findings; and
- Preparation of the final evaluation findings, partly based on comments from the state regarding the content and timetables of recommendations specified in the draft document.

The recommendations made by this evaluation appear in boxes and bold type and follow the findings section where facts relevant to the recommendation are discussed. The recommendations may be of two types:

**Necessary Actions** address programmatic requirements of the CZMA's implementing regulations and of the Old Woman Creek Reserve approved by NOAA. These must be carried out by the date(s) specified;

**Program Suggestions** denote actions that NOAA's Office of Ocean and Coastal Resource Management (OCRM) believes would improve the program, but which are not mandatory at this time. If no dates are indicated, the state is expected to have considered these Program Suggestions by the time of the next CZMA §312 evaluations.

A complete summary of accomplishments and recommendations is outlined in Appendix A.

Failure to address Necessary Actions may result in a future finding of non-adherence and the invoking of interim sanctions, as specified in CZMA §312(c). Program Suggestions that are reiterated in consecutive evaluations to address continuing problems may be elevated to Necessary Actions. The findings in this evaluation document will be considered by NOAA in making future financial award decisions relative to the Old Woman Creek Reserve.

### B. DOCUMENT REVIEW AND ISSUES DEVELOPMENT

The evaluation team reviewed a wide variety of documents prior to the site visit, including: (1) Old Woman Creek Reserve §312 evaluation findings dated 2004; (2) federally approved Environmental Impact Statement and program documents; (3) financial assistance awards and work products; (4) semi-annual performance reports; (5) official correspondence; and (6) relevant publications on natural resource management issues in Ohio.

Based on this review and on discussions with OCRM, the evaluation team identified the following priority issues:

- major accomplishments during the review period;
- status of Reserve staffing and needs;
- facilities development and/or land acquisition efforts;
- status of general administration of the Reserve and management plan revisions;
- status of implementation of the Reserve's research, monitoring, and education programs;
- the manner in which the Reserve coordinates with other governmental and non-governmental organizations and programs in the state and region; and
- the manner in which the Reserve has addressed the recommendations contained in the §312 evaluation findings released in 2004. The Old Woman Creek Reserve's assessment of how it has responded to each of the recommendations in the evaluation findings dated 2004 is located in Appendix B.

### **C. SITE VISIT TO OLD WOMAN CREEK NATIONAL ESTUARINE RESEARCH RESERVE**

Notification of the scheduled evaluation was sent to the Ohio Department of Natural Resources, members of Ohio's congressional delegation, and regional newspapers. In addition, a notice of NOAA's "Intent to Evaluate" was published in the Federal Register on June 29, 2006.

The site visit to the Old Woman Creek Reserve was conducted from August 14 - 17, 2006. The evaluation team consisted of Ms. Chris McCay, Evaluation Team Leader, National Policy and Evaluation Division, OCRM; Mr. Matt Chasse, Program Specialist, Estuarine Reserves Division, OCRM; and Mr. Seth Blicht, Manager, Apalachicola (Florida) National Estuarine Research Reserve.

During the site visit, the evaluation team met with Old Woman Creek Reserve staff, senior staff from the DNR Division of Wildlife, other state agency staff, coastal researchers, educators, NOAA National Weather Service, local government staff and officials, Old Woman Creek Advisory Council members, and non-profit organizations. Appendix C lists people and institutions contacted during this review.

As required by the CZMA, NOAA held an advertised public meeting on Tuesday, August 15, 2006, at 7:00 p.m. at the Old Woman Creek Reserve Visitor Center, 2514 Cleveland Road East, Huron, Ohio. The public meeting gave members of the general public the opportunity to express their opinions about the overall operation and management of the Old Woman Creek Reserve. Appendix D lists individuals who registered at the meeting. NOAA's responses to written comments submitted during this evaluation are summarized in Appendix E.

The Old Woman Creek Reserve staff members were crucial in setting up meetings and arranging logistics for the evaluation site visit. Their support is most gratefully acknowledged.

### III. RESERVE PROGRAM DESCRIPTION

NOAA's Office of Ocean and Coastal Resource Management designated the Old Woman Creek National Estuarine Research Reserve (OWCNERR or the Reserve) in 1980. The lead agency is the Ohio Department of Natural Resources (DNR), Division of Wildlife (DOW). The Reserve is also a dedicated State Nature Preserve under the Ohio Natural Areas Act of 1970.

The Reserve is located on the south-central shore of Lake Erie at the mouth of Old Woman Creek. Old Woman Creek flows 15 miles through portions of Huron and Erie counties before draining into Lake Erie, three miles east of the city of Huron in Erie County. About a mile before entering Lake Erie, the channel of Old Woman Creek becomes submerged, and the slow-moving estuarine portion of the creek flows northward to Lake Erie. Only a portion of the Old Woman Creek watershed is encompassed within the boundaries of the Reserve. The major land use in the OWC watershed is agriculture, although the area is experiencing outward growth from the city of Huron and the village of Berlin Heights. Growth in planning and construction of residential subdivisions and light industry has been brought about, in part, by improvements to transportation infrastructure near the Reserve.

The smallest Reserve in the NERR system, the 573-acre OWCNERR is the only Great Lakes freshwater estuary in the NERR system and is one of Ohio's few remaining examples of a natural estuary. It encompasses significant estuarine, lacustrine, and terrestrial habitats, including open water, marsh, mudflat, oak-hickory upland hardwood forest, swamp forest, and sandy barrier beach. The coastal wetlands of the Reserve are located at the mouth of the creek, adjacent to Lake Erie. The estuarine portion of the wetlands is approximately 65 acres in size and extends about 1.3 miles south of the Lake Erie shoreline. The estuary is approximately 0.2 mile wide at its widest portion. Depths may reach 12 feet in the inlet stream channel, but most of the estuary is less than 20 inches deep. The estuary's outlet to Lake Erie at the stream mouth may be closed for extended periods of time by shifting sands of the barrier beach. When the mouth is open, occasional large seiches on Lake Erie (vertical oscillation, or sloshing back and forth of lake water after a wind setup) cause lake water to enter the estuary and spill into the wetlands

The reserve also comprises a diverse and important assemblage of native plants and animals representative of freshwater estuaries. Common aquatic vascular plants include the American water lotus, white water lily, duckweed, sedge, and arrowhead. The extensive lotus beds provide important habitat for fish and benthic macroinvertebrates. Common fishes found in the estuary include large-mouth bass, brown bullheads, sunfish, perch, shiners, and shad, many of which use the estuary as a critical spawning or nursery ground. Common birds at the Reserve include ducks, herons, songbirds, and migratory shorebirds. Several endangered or threatened species, such as the American bald eagle, use the estuary during the year. Other ecologically significant aquatic organisms found in the estuary include plankton, benthic algae, invertebrates, amphibians, and turtles.

## IV. REVIEW FINDINGS, ACCOMPLISHMENTS, AND RECOMMENDATIONS

### A. OPERATIONS AND MANAGEMENT

#### 1. Administration and Staffing

Since the last site visit in July 2003, the Reserve has been transferred administratively from the Ohio DNR Division of Natural Areas and Preserves to the DNR Division of Wildlife. Although the 2004 evaluation findings noted that the Reserve was “thriving” in the Division of Natural Areas, the state and DNR faced serious financial difficulties, and the much larger Division of Wildlife was able to provide greater and more stable financial support to the Reserve. Most importantly, the Division of Wildlife was very willing to house the Reserve administratively and work to coordinate the missions and goals of OWCNERR, the NERR system, and the Division. The transition appears to have gone smoothly, and the Division of Wildlife has supported the Reserve staff in travel to national meetings (a concern in the previous evaluation) and in the Reserve’s role in hosting the 2006 NERRS/NERRA annual meeting. The Reserve has a stable source of non-federal match dollars for its NOAA cooperative agreement awards.

**ACCOMPLISHMENT: The transition to the DNR Division of Wildlife for Reserve administration has gone smoothly. The Division is supportive of the Reserve and its goals while recognizing contributions that the Reserve can offer to support the mission of the DNR Division of Wildlife.**

During the site visit, there was some concern expressed by several people with whom the team met about the philosophical fit of the Reserve in the Division of Wildlife, particularly as it relates to research. The perception is that the larger ‘corporate’ Division of Wildlife, with its emphasis on single species, may not be as accommodating to research and to the values and objectives of the Reserve as was the much smaller Division of Natural Areas and Preserves, with its emphasis on ecosystems. Research partners in particular expressed a strong desire for coordination and communication among researchers and the Division. They would like an opportunity to sit down with managers and administrators in the Division at the Reserve for a meeting (beyond a short meet-and-greet session), where researchers could discuss their projects and research, express their concerns, have Division management ask questions, and discuss the Division’s view of the research and coordinated goals and strategies.

**PROGRAM SUGGESTION: The Reserve should facilitate periodic meetings to be held at the Reserve between upper level managers and administrators in the Division of Wildlife and Reserve researchers to discuss ongoing research and projects; the needs of researchers; the Division’s need for specific research, its mission and strategies, and how the Reserve fits in; and how the Reserve setting can provide a mutually beneficial opportunity for collaboration and cooperation on research.**

Throughout the site visit, everyone with whom the evaluation team met spoke highly of the Reserve staff. They are very professional, dedicated, respected, and take on a heavy workload with a small number of staff. The Reserve manager has brought an inclusive and collaborative management style to his position, earning the support and respect of the staff and the greater Reserve community.

**ACCOMPLISHMENT: The new Reserve manager and staff are highly dedicated and greatly respected and have developed a strong collaborative team that works well with numerous partners.**

However, the Reserve has had to turn away requests for very popular education and outreach programs and assistance because of staffing limitations, and several partners and individuals with whom the team met expressed concern about the current situation involving staff dedicated to the Coastal Training Program and the education programs. At present, the Reserve does not have a full-time education coordinator. The position has been vacant since the retirement of the coordinator early in this evaluation period. The coastal training program coordinator has assumed general oversight responsibility for all the Reserve's educational programs, and the Reserve provides education program staff support through combined staff time equal to more than one FTE (full-time-equivalent) position. The vast majority of the K-12, teacher development, and general public education programming is handled by a part-time, non-permanent staff position.

The CTP coordinator position, however, is a full-time project contract position, not a permanent FTE, and it has already been extended one year beyond the two-year life of the contract. The state has undergone four early-retirement incentive programs in the last several years as part of its budget process and restrictive state agency budgets. The DNR and DOW are constrained in staff recruitment due to state contract provisions with the Ohio civil service employees association. With significant vacancies resulting from the early retirement offers and certain rights related to personnel 'bumping' through the union contract, there is hesitation about advertising any position vacancies at this time.

The Division of Wildlife and OCRM have discussed these situations over the last year or more, and it is the Division's stated goal to combine multiple part-time or intermittent positions into a few full-time professional staff members. There will be significant changes in the executive branch in Ohio following elections in the fall of 2006, and the Division believes that some changes may be initiated after that. However, both OCRM and many Reserve partners and collaborators remain concerned that the quality and quantity of education programs and CTP performance not suffer and that the Reserve have sufficient staff to maintain its programs as required by NERRS regulations.

**NECESSARY ACTION: The Reserve and Division of Wildlife must continue to seek ways to maintain fully staffed education and CTP programs and must have a full-time education coordinator in place by the date of the next evaluation site visit.**



## 2. Management Plan

The Reserve's management plan was originally completed and approved in 1983. It has been updated twice since then, most recently in 1999. Because NERRS regulations require management plans to be updated every five years, it is time to be revised again. The Reserve has begun management plan revision, although the process has been slowed down recently because of the amount of staff time required to prepare for the 2006 annual NERRS/NERRA annual meeting in October, which OWCNERR is hosting.

**NECESSARY ACTION: The Reserve must complete updated revisions to its management plan. The completed final draft plan must be submitted to OCRM no later than May 31, 2007.**

## 3. Facilities and Infrastructure

As noted in the previous findings dated July 2004, the Reserve had just completed significant 'green' facility renovations to the Visitor Center and construction of a new long-term use dormitory prior to that evaluation site visit. During the time covered by the current evaluation, the Reserve completed construction of two outdoor kiosks at the Visitor Center and at a barrier beach site and repaved the Visitor Center parking lot, driveway, and a section of a walking trail leading to the observation deck. An additional 350 feet of new boardwalk were completed as part of an Eagle Scout project. Finally, the Reserve has begun the conceptual design phase to update and renovate the exhibits in the Visitor Center.

## 4. Coordination and Partnerships

The evaluation findings dated 2004 suggested that the Reserve's internal program coordination would benefit from increased linkages between research/monitoring and education/outreach. During the period covered by this evaluation, staff members have made a concerted effort to further this integration. The development of the Reserve's Coastal Training Program (CTP) and hiring of a CTP Coordinator have been a factor in linking Reserve and NERRS research with education and outreach efforts geared to managers and decision makers. Several long-term researchers at the Reserve are affiliated with universities and teach classes that feature their research done at OWCNERR. Several teach university classes (in whole or part) at the Reserve or have field days or lab classes for those classes at the Reserve. One researcher has taught a week-long water quality training program for K-12 teachers at the Reserve. The Reserve has created an interactive CD for the general public that presents SWMP and other water quality research and monitoring information in both a general way and specifically related to Old Woman Creek. The CD can be adapted by each Reserve in the NERR system to include its Reserve-specific water quality research and monitoring information.

**ACCOMPLISHMENT: The Reserve staff has made a concerted and successful effort to increase the linkages between, and integrate the results of, research/monitoring and the education/outreach programming at Old Woman Creek.**

The Reserve has maintained and increased successful and effective partnerships with a number of agencies and organizations, many of which are mentioned elsewhere in this document, but two of the most notable and enduring are with the Ohio Coastal Management Program and Ohio Sea Grant. The coastal program is represented on the Reserve Advisory Council and has designated a staff liaison to the CTP partnership. The Reserve's on-site GIS program was implemented with assistance from the Office of Coastal Management. Coastal program representatives indicated that research being done at the Reserve will support the program's coastal nonpoint pollution control program, and the OWC watershed plan to be developed by the newly funded position of watershed coordinator will also help the coastal program meet nonpoint program requirements. Reserve staff has participated in the DNR Integrated Management Team meetings related to the coastal management program and has participated in CELCP (Coastal and Estuarine Land Conservation Program) proposal reviews.

The Ohio Sea Grant program is also a major partner with the Reserve. It has a representative on the Reserve's Advisory Council. Sea Grant is one of the three parties involved in the creation and operation of the Reserve's Coastal Training Program, which is discussed later in these findings.

The Reserve staff members have maintained enduring partnerships with many researchers and research organizations and with teachers and education providers that are discussed in later sections of this document. The long-term nature of these mutual efforts speaks highly of the Reserve's ability to both contribute to and benefit from such collaborations. The Reserve collaborates on climate monitoring with the NOAA National Weather Service-Cleveland Forecast Office, which provides significant technical assistance in the maintenance of the OWCNERR weather station. The NOAA Office of Response and Restoration collaborated with the Reserve's Coastal Training Program to provide nearly 100 contact hours of training for state and local environmental managers relating to response and restoration of coastal habitats following oil spills. The Reserve and its many partners are to be commended for reaching an accommodation between seeking program integration and collaboration and the need to document individual agency success and performance.

**ACCOMPLISHMENT: The Reserve has maintained and increased successful and effective partnerships with a variety of agencies and organizations.**

##### 5. Volunteer Support and Non-profit "Friends" Group Support

The Reserve receives support from both permanent program volunteers and the Friends of Old Woman Creek non-profit organization. Permanent program volunteers sign an employment agreement with the Division of Wildlife, are basically considered unpaid state employees, and receive appropriate orientation and training. Volunteer activities include helping to staff the

Visitor Center; assisting with education programs, research, and stewardship activities; providing some clerical and maintenance support; and helping with special projects and events. The previous evaluation findings noted that the volunteer program was largely inactive during the construction period when the Visitor Center was closed to the public. Since the last evaluation site visit, Reserve staff has taken several steps to re-energize the volunteer program. This has included the creation of a volunteer brochure, volunteer handbook, and job descriptions for an array of specific volunteer activities. The Reserve also coordinates with a local volunteer agency that serves to match the needs of various agencies with people who wish to volunteer. During the period covered by this evaluation, five new permanent program volunteers have been recruited. The Reserve has also encouraged short-term stewardship volunteer opportunities. As a result, three Eagle Scout projects were completed during this review period: a second viewing window at the Visitor Center, a bluebird box trail, and an extension of the Reserve's boardwalk.

The Friends of Old Woman Creek was founded in 1998 and supports the mission and efforts of the Reserve through operation of a gift shop; financial support for special equipment, projects, or research and education efforts; fund raising; and assistance to Reserve staff. Since the last evaluation site visit, the Friends group has also increased its activities in support of the Reserve. It has begun publication of a Friends newsletter, has expanded the Visitor Center gift shop, and is involved in preparations along with Reserve staff for the NERRA/NERRS annual meeting in October 2006. Perhaps most significantly, the Friends of Old Woman Creek served as the sponsor organization and, in partnership with the Erie Soil and Water Conservation District, the Reserve, and several others, applied for and received four years of funding to support a watershed coordinator position to develop a watershed action plan for the Old Woman Creek watershed.

**ACCOMPLISHMENT: The Reserve has begun to re-energize its volunteer program. The Friends of Old Woman Creek organization has increased and broadened its activities in support of the Reserve and its mission.**

## 6. Advisory Council

The Old Woman Creek NERR Advisory Council was established in 1982 and meets quarterly. It is composed of about a dozen members, representing local government, local, regional, and statewide interest groups, agriculture, educational institutions, and a Great Lakes research institution. The evaluation team met with the Advisory Council during the site visit and was impressed with the strong support the members expressed for the Reserve, its activities, and the role it plays in the community. With the Reserve's transfer to the Division of Wildlife, the by-laws of the Council were revised so that additional members can be added, with a particular emphasis on representing the research community. With that change, both the manager and the evaluation team hope that the Advisory Council can increase its reach in terms of spreading a message about the Reserve's role and activities to traditional Division constituencies and help to counteract perceptions about any differences between the Division and Reserve missions and objectives.

## 7. Geographic Information System (GIS) Program

Since the last evaluation, the Reserve's GIS program has been implemented with assistance from the Office of Coastal Management. Since the Reserve's transfer to the Division of Wildlife, a joint appointment was developed for the Division's Wetland Habitat Coordinator to provide GIS technical assistance to the Reserve. During this evaluation period the GIS program has been able to support the research, education and outreach, and stewardship programs of the Reserve. Specific GIS activities have included:

- Initial coordination of a National Wetland Inventory Update for Ohio.
- Provided data to test a GIS-based biogeochemical model that simulates how changes in land use and agricultural management practices can change nutrient levels within a watershed.
- Provided maps for the successful Watershed Coordinator funding proposal.
- Inventory of cities and villages in the Lake Erie watershed for inclusion in a CTP survey.
- Preliminary development of a model to select locations of existing vernal pools and to select appropriate sites for vernal pool mitigation.

**ACCOMPLISHMENT: The Reserve has successfully implemented a GIS program and has been able to use it to support all components and programs of OWCNERR.**

## B. RESEARCH AND MONITORING

### 1. Research Activities

The evaluation team was impressed with the breadth and depth of research conducted at the Reserve as well as the strong relationships with researchers. Many researchers have been conducting research at the Reserve for years, and researchers told the evaluation team that the support of the Reserve and its staff is the reason they continue to return. Students, Reserve staff (including non-research staff members), and volunteers have conducted a variety of research projects at Old Woman Creek in addition to university and college professors and researchers. Lengthy lists of research projects, papers, and technical reports initiated and/or completed during the time period covered by this evaluation testify to the well-established research program at Old Woman Creek.

Examples of research conducted during the period covered by this evaluation include, but are not limited to:

- Management implications of invasive species control: Several studies have been conducted to examine the impact of herbicide spraying to control the invasive *Phragmites* on non-target communities, including invertebrates. In conjunction with these studies, a study examined benthic macroinvertebrate populations associated with *Phragmites* and *Typha* stands in wetlands

and the impact of herbicides used to control *Phragmites* on these populations.

- Habitat change due to lake level fluctuation: To adequately describe the changing aquatic vegetation patterns in the Old Woman Creek Estuary resulting from changing Lake Erie water levels, the vegetation has been mapped annually. A detailed vegetated map of the aquatic macrophyte communities in the estuary is produced. In 2005 proposed national protocols for monitoring aquatic vegetation were tested for applicability at Old Woman Creek.
- Pesticides in the estuary: Because row-crop agriculture accounts for about two-thirds of the land use in the OWC watershed, the estuary receives high levels of pesticides. Research has been ongoing since 1995 to study the role of the estuary in mitigating the pesticide load. During this evaluation period, work was conducted on the photolytic breakdown of pesticides in the water column and the chemical breakdown of the organic contaminants in sediments. Preliminary results indicate that the estuary breaks down the pollutants faster than was expected.
- Eukaryotic microbial communities: These communities form an important link in the movement of energy and the cycling of many nutrients in the estuary. Research at Old Woman Creek examined the microscopic organisms: both their taxonomy, using most current techniques, and their function in the estuarine habitat.
- The role of a natural swale in mitigating the runoff from urban development: This work is a long-term project being conducted by Reserve staff that will determine the effectiveness of a natural vegetated drainage swale in removing or transforming pollutants that result from a housing development.
- Old Woman Creek Atlas: To assist in future research and educational activities, an illustrated atlas of the organisms found in Old Woman Creek and the adjacent zone of Lake Erie is being developed.
- Small mammal survey: A survey of small mammals in two old fields in early succession was undertaken. The study laid the ground work for examining the impact of proposed stewardship activities on small mammal populations in the two fields. One of the two fields undergoing succession will be managed as a warm season grass prairie, and the second will be allowed to revert to a wetland.
- Great Lakes NOBOB (no ballast on board): This study was conducted by the NOAA Large Lakes Laboratory and evaluated the potential of NOBOB ships as potential vectors for the spread of exotic species.
- “The Ecology of Old Woman Creek, Ohio -- An Estuarine and Watershed Profile:” The Reserve’s extensive site profile was completed in 2004 and distributed in 2005.
- NERR Graduate Research Fellows (GRFs): Old Woman Creek Reserve has also provided significant support and opportunities to a number of GRFs. During the period covered by this evaluation, GRFs have initiated or completed research projects related to land use modeling, *phragmites* control, and remote sensing.

**ACCOMPLISHMENT: The Reserve provides excellent facilities and staff support for a varied range of researchers, including NERR GRFs, many of whom return to conduct long-term projects because of the facilities and staff at Old Woman Creek. The completion of the Reserve's site profile represents an extensive compilation of information and data about the reserve and of research conducted in the estuary, particularly focused on studies conducted through the Reserve.**

## 2. Monitoring

The Reserve's System-wide Monitoring Program (SWMP) is in full compliance with NERR SWMP requirements. The SWMP has four data loggers that are maintained at sites selected to provide information on both the impact of storms on the estuary and the role of the estuary in mitigating the storm runoff. Two sites near the mouth of Old Woman Creek provide information on the extent of lake water intrusion during wind setup and seiche events. Two of the sites are telemetered so that real-time data is transmitted to the Visitor Center for viewing. One data sonde will soon be telemetered directly to the integrated ocean observing system (IOOS), of which NOAA and the reserves are key partners. The Reserve also maintains a weather station. The National Weather Service (NWS)-Cleveland Forecast Office helps to maintain equipment to NWS standards.

During this evaluation period the Reserve completed a SWMP Phase II biomonitoring pilot project, has installed a doplar stream flow meter at the mouth of Old Woman Creek, and is in the process of installing another upstream. As noted in the "Coordination and Partnerships" section above, the Reserve completed an educational CD relating to abiotic SWMP and other water quality monitoring.

**ACCOMPLISHMENT: The Reserve's system-wide monitoring program continues to be implemented successfully, with all data submitted to the Centralized Data Management Office. The Reserve has created a CD to provide SWMP information and data to the public in a non-scientific, understandable way. The Reserve also has two data loggers telemetered so that real-time data is transmitted to the Visitor Center for viewing.**

## C. EDUCATION AND OUTREACH

### 1. Education and Outreach

The Reserve has developed strong partnerships with numerous educators, and they in turn are very loyal to the Reserve. Because the Reserve is located in a relatively rural area, the educational programs are carried out at schools, at the Reserve with reservations and planning in advance, and through a few distance learning opportunities. There are very few 'drop-in' programs (those not planned in advance for groups or school classes) because of the limited hours of operation at the Visitor Center and the dispersed nature of the community population.

Recently the Reserve staff has begun to offer a few scheduled classes at the Reserve during the summer for visitors (not school classes), including a nature sketch class, canoe class, and a nature walk.

The Reserve offers a variety of programs for both students and teachers. All the educators with whom the evaluation team met were effusive in their praise for the knowledge and dedication of Reserve staff and their flexibility in providing or adapting programs to meet particular needs. The educators said they particularly appreciated the on site, 'in nature' aspect of coming to the Reserve, the capacity for students to use real scientific equipment, and the opportunity to talk with research scientists. However, because of the rural nature of the watershed and region and costs involved in transporting students, they also greatly appreciated the creation of programs that they can present to students at the schools.

The Reserve effectively markets and uses NERR systemwide education initiatives, particularly "EstuaryLive." All of the general education programs and activities integrate a research focus on the functions and values of freshwater estuaries. Programs are designed to increase understanding of wetland ecosystems, particularly estuarine systems, and to promote stewardship of estuaries, coastal habitats, and watersheds. Lesson plans utilizing SWMP data have been adapted to Old Woman Creek. Topics that can be covered in programs (and adapted to varying grade and age levels) at the Reserve include: general wetlands information, Native American information as it relates to OWC, water chemistry, nature appreciation, life in a water drop, and animals, such as birds, mammals, reptiles, and amphibians.

As in many other aspects of the Reserve's operation, the education staff takes advantage of working with a variety of local and state partners. During this evaluation period, a partnership consisting of the Reserve, the Ohio Office of Coastal Management, Erie Metroparks, Erie Soil and Water Conservation District, and the Erie County Solid Waste Management Division produced an educational program called "Watershed Wonders." This is a cooperative effort to educate 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> grade students about the water resources in Erie County and includes activities about the water cycle, Lake Erie, watersheds, non-point and point source pollution, and how students can keep waterways clean. It is an activity kit that can be borrowed by teachers and schools.

Old Woman Creek Reserve also provides curriculum resources for educators, and teacher workshops, including a new curriculum entitled "Healthy Water/Healthy People." The curriculum focuses on making complex concepts of water quality relevant and meaningful for teachers and students. The workshops provide hands-on activities, including non-point source pollution, water chemistry, and aquatic biology.

Reserve staff has also developed a distance learning program with several individual units. The Reserve has acquired distance learning equipment, but it cannot yet be put to use because of obstacles encountered with installation and connection of equipment through the Ohio DNR. It appears that the primary hurdle involves firewall issues. Because of this, a Reserve staff member is required to travel to the Northern Ohio Education Computer Association offices in another city to provide these distance learning programs. Although the distance learning program does provide opportunities for students, the inability to use the equipment at the Reserve requires

additional staff time for presentation. At the time of the site visit the Reserve did not have internet access in its classrooms and exhibit hall.

**ACCOMPLISHMENT: The Reserve has integrated research at the Reserve into many of its general education programs and has been particularly flexible in creating and providing programs and activities to meet the needs of a generally rural, dispersed population. It provides distance learning programs, teacher workshops, and onsite programs.**

**PROGRAM SUGGESTION: The Division of Wildlife should work with the DNR and state information technology specialists to find a way to allow the installation and operation of the Reserve's distance learning infrastructure and to provide internet connectivity in the Reserve's classrooms and exhibit hall.**

At this point, it appears that the impact of the educational programs is maximized through professional teacher development, distance learning technologies, and partnerships. With the current staff limitation, the Reserve has had to turn down 21 requests for various general education programs in the first six months of 2006. As discussed in the earlier section entitled Administration and Staffing, the Reserve does not have a full-time, permanent education coordinator. Although the Reserve's education program partners, educators, and the region's education community are strong supporters of Reserve staff, they indicated to the evaluation team that a part-time education specialist, graduate students, interns, volunteers, and oversight of the education programs by the CTP coordinator are not sufficient to maintain the quality and quantity of existing programs and do not allow for the addition of more activities and programs. A Necessary Action is included in the Administration and Staffing section to address this need.

## 2. Coastal Training Program (CTP)

The Reserve's Coastal Training Program receives strong support from the Division of Wildlife, Ohio Coastal Management Program, and Ohio Sea Grant, as well as numerous participants in CTP workshops and training. During the period covered by this evaluation, the CTP strategy was completed, the CTP Advisory Council was appointed, and a CTP coordinator was hired. Workshops have been held covering topics including: oil spill response in freshwater marshes and streams, effects and control of *phragmites* in Lake Erie coastal wetlands, introduction and coastal applications of GIS for natural resource managers, land protection options using public and private tools to balance conservation and development, and balancing land use and water quality in the Lake Erie basin. Participation in the workshops and technical training has been strong.

**ACCOMPLISHMENT: The Reserve has completed the CTP program documents (i.e., market analysis, needs assessment, and program strategy) and hired a Coastal Training Program Coordinator.**



The CTP Coordinator has general oversight responsibility for all of the Reserve's education programs because there is no education coordinator, as has been previously discussed in other sections of this document. All the CTP partners and the Division of Wildlife expressed confidence in the CTP coordinator and her capabilities, and her original two-year project contract has been extended for a third year. However, her position is not a permanent position. Many of the education and CTP partners with whom the evaluation team met were forceful in their opinions that a full time education coordinator and a separate full time CTP coordinator are needed. Based on the current six-month report documentation provided to OCRM, the Coastal Training Program is not on target to meet its minimum performance requirements and is having difficulty updating the CTP needs assessment. It appears the Reserve needs a full-time CTP coordinator to maintain program needs.

**PROGRAM SUGGESTION: The Reserve and Division of Wildlife should seek ways to create a CTP Coordinator position that has sufficient time dedicated to maintaining and implementing a fully functional Coastal Training Program that meets all performance requirements.**

#### **D. STEWARDSHIP AND RESOURCE MANAGEMENT**

Within the NERR system, many reserves conduct or accomplish programs or activities related to land acquisition, enforcement, restoration, restoration science, technical advice and support, and community education under the general rubric of stewardship and resource management. Because the Reserve has so successfully integrated its research and education components, elements of stewardship and resource management are identifiable in almost all of its activities and programs, as can be seen in the discussions above.

The Reserve does not have a designated stewardship coordinator, and the Reserve manager serves in that capacity. The Division of Wildlife Wetland Habitat Coordinator provides additional stewardship support. During the period covered by this evaluation, the Reserve assisted the Ohio EPA by providing data that supported the development of total maximum daily loads (TMDLs) for Old Woman Creek. The Reserve is currently implementing an invasive species (*phragmites*) removal project in the estuary and is planning to create a prairie demonstration site adjacent to the Visitor Center. Volunteers help control other invasives such as garlic mustard and are also involved in 'adopt-a-highway' trash cleanup on the entrance highway to the Reserve. Reserve staff are monitoring salamander populations and examining vernal pool habitats within the Reserve. Finally, the Reserve is participating in a DNR initiative to stop the spread of the emerald ash borer. Additional opportunities for stewardship activities may be available with the hiring for four years of a full-time watershed coordinator.

One area of stewardship where the Reserve faces challenges is in its land acquisition efforts. The Old Woman Creek Reserve received NOAA land acquisition funding in 2004 to pursue additional land conservation in the watershed but is having great difficulty in identifying willing sellers using its current staffing and financial resources. A recent development may help in that regard. In late December 2005, eight land trusts operating in northeast Ohio voluntarily merged to create the Western Reserve Land Conservancy (WRLC). The evaluation team met with

representatives of the WRLC during the site visit. The group seems excited about the possibilities of a single regional entity and how it may be able to assist the Reserve in its land acquisition and conservation efforts. The WRLC bases its protection priorities on an “anchor” methodology, using existing preserved land (such as OWCNERR) as the fundamental building block for expansion. Given this potential partnership, the Reserve and Division should explore strategies to identify a portion of a position or person’s time to assist with land acquisition and other stewardship activities. Perhaps there are options for the WRLC to support this function through a contractual relationship or other agreement with the Reserve or Division. This would allow the a person to dedicate time to land acquisition in partnership with the WRLC and to other stewardship activities in which the Reserve is or could be involved, thus freeing up some of the Reserve manager’s time. The Reserve manager has been making routine inquiries to find willing sellers; however, it may take a more concerted effort at this point.

**PROGRAM SUGGESTION: The Division of Wildlife and the Reserve should explore strategies and options for identifying some portion of a position or person’s time to assist with land acquisition and other stewardship activities and to support these efforts currently being handled by the Reserve manager.**

## V. CONCLUSION

For the reasons stated herein, I find that the State of Ohio is adhering to the programmatic requirements of the Coastal Zone Management Act and the regulations of the National Estuarine Research Reserve System in the operation of its approved Old Woman Creek National Estuarine Research Reserve.

The Old Woman Creek Reserve has made notable progress in: Administration and Staffing; Coordination and Partnerships; Volunteer Support and Non-Profit “Friends” Group Support; Geographic Information System Program; Research Activities; Monitoring; Education and Outreach; and Coastal Training Program.

These evaluation findings also contain six (6) recommendations: two (2) Necessary Action that are mandatory and four (4) Program Suggestions. The state must address the Necessary Actions by the date indicated. The Program Suggestions should be addressed before the next regularly-scheduled program evaluation, but they are not mandatory at this time. Program Suggestions that must be repeated in subsequent evaluations may be elevated to Necessary Actions. Summary tables of program accomplishments and recommendations are provided in Section VI.

This is a programmatic evaluation of the Old Woman Creek National Estuarine Research Reserve that may have implications regarding the state’s financial assistance awards. However, it does not make any judgment about or replace any financial audits.

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David M. Kennedy  
Director, Office of Ocean and Coastal  
Resource Management

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Date

## VI. APPENDICES

### Appendix A. Summary of Accomplishments and Recommendations

The evaluation team documented a number of the Ohio DNR Division of Wildlife and Reserve's accomplishments during the review period. These include:

<b>Issue Area</b>	<b>Accomplishment</b>
Administration and Staffing	The transition to the DNR Division of Wildlife for Reserve administration has gone smoothly. The Division is supportive of the Reserve and its goals while recognizing contributions that the Reserve can offer to support the mission of the DNR Division of Wildlife.
Administration and Staffing	The new Reserve manager and staff are highly dedicated and greatly respected and have developed a strong collaborative team that works well with numerous partners.
Coordination and Partnerships	The Reserve staff has made a concerted and successful effort to increase the linkages between, and integrate the results of, research/monitoring and the education/outreach programming at Old Woman Creek.
Coordination and Partnerships	The Reserve has maintained and increased successful and effective partnerships with a variety of agencies and organizations.
Volunteer Support and Non-profit "Friends" Group Support	The Reserve has begun to re-energize its volunteer program. The Friends of Old Woman Creek organization has increased and broadened its activities in support of the Reserve and its mission.
Geographic Information System (GIS) Program	The Reserve has successfully implemented a GIS program and has been able to use it to support all components and programs of OWCNERR.
Research Activities	The Reserve provides excellent facilities and staff support for a varied range of researchers, including NERR GRFs, many of whom return to conduct long-term projects because of the facilities and staff at Old Woman Creek. The completion of the Reserve's site profile represents an extensive compilation of information and data about the reserve and of research conducted in the estuary, particularly focused on studies conducted through the Reserve.

Monitoring	The Reserve's system-wide monitoring program continues to be implemented successfully, with all data submitted to the Centralized Data Management Office. The Reserve has created a CD to provide SWMP information and data to the public in a non-scientific, understandable way. The Reserve also has two data loggers telemetered so that real-time data is transmitted to the Visitor Center for viewing.
Education and Outreach	The Reserve has integrated research at the Reserve into many of its general education programs and has been particularly flexible in creating and providing programs and activities to meet the needs of a generally rural, dispersed population. It provides distance learning programs, teacher workshops, and onsite programs.
Coastal Training Program (CTP)	The Reserve has completed the CTP program documents (i.e., market analysis, needs assessment, and program strategy) and hired a Coastal Training Program Coordinator.

In addition to the accomplishments listed above, the evaluation team identified several areas where the program could be strengthened. Recommendations are in the forms of Program Suggestions and Necessary Actions. Areas for improvement include:

<b>Issue Area</b>	<b>Recommendation</b>
Administration and Staffing	<b>PROGRAM SUGGESTION:</b> The Reserve should facilitate periodic meetings to be held at the Reserve between upper level managers and administrators in the Division of Wildlife and Reserve researchers to discuss ongoing research and projects; the needs of researchers; the Division's need for specific research, its mission and strategies, and how the Reserve fits in; and how the Reserve setting can provide a mutually beneficial opportunity for collaboration and cooperation on research.
Administration and Staffing	<b>NECESSARY ACTION:</b> The Reserve and Division of Wildlife must continue to seek ways to maintain fully staffed education and CTP programs and must have a full-time education coordinator in place by the date of the next evaluation site visit.
Management Plan	<b>NECESSARY ACTION:</b> The Reserve must complete updated revisions to its management plan. The completed final draft plan must be submitted to OCRM no later than May 31, 2007.

Education and Outreach	PROGRAM SUGGESTION: The Division of Wildlife should work with the DNR and state information technology specialists to find a way to allow the installation and operation of the Reserve's distance learning infrastructure and to provide internet connectivity in the Reserve's classrooms and exhibit hall.
Coastal Training Program (CTP)	PROGRAM SUGGESTION: The Reserve and Division of Wildlife should seek ways to create a CTP Coordinator position that has sufficient time dedicated to maintaining and implementing a fully functional Coastal Training Program that meets all performance requirements.
Stewardship and Resource Management	PROGRAM SUGGESTION: The Division of Wildlife and the Reserve should explore strategies and options for identifying some portion of a position or person's time to assist with land acquisition and other stewardship activities and to support these efforts currently being handled by the Reserve manager.

## **Appendix B. Response to Previous Evaluation Findings Dated 2004**

Program Suggestion: Given that NOAA considers reserve staff attendance at Reserve System national meetings to be of significant importance to include it as a condition of each operations grant and to provide federal funding for the travel, NOAA encourages ODNR to continue to authorize OWCNERR staff travel to these meetings.

Response: Although the state of Ohio has restricted employee travel periodically since 2003, no Reserve staff member has had difficulty making travel arrangements for NERR meetings subsidized by NOAA. Since the review (August 2003), core staff has participated in the NERRA/NERRS annual meeting, their own winter sector meetings, and the March Program Manager's meeting as requested by NOAA through special award conditions. In addition, the Division of Wildlife has granted permission for the Wildlife Research Administrator to accompany Reserve staff to each of the previous annual meetings (hosted by Wells/Great Bay NERRs and Rookery Bay NERR). The willingness to allow participation by the Reserve manager's supervisor has been a positive factor in easing the program's transition into its new Division.

Program Suggestion: NOAA strongly encourages OWCNERR to foster increased linkages between its Research and Monitoring Program and its Education and Outreach Program.

Response: Reserve staff has made this a point of emphasis during planning sessions for the OWC NERR Management Plan. The staff feels that focusing on basic messages like the functions and values of estuaries is critical to developing linkages between research and education. Increasing understanding through current research will also be prioritized. In light of these mutual priorities, the Reserve has sought to integrate its current research and monitoring into core offerings of the education program. Several of the researchers that you will meet during our review have direct education linkages with the Reserve. Professor Yo Chin of OSU has sponsored several hands-on classes that feature his research and methodology. Dr. Joe Holomuzki of OSU-Mansfield teaches a summer Ohio Sea Grant Stone Laboratory class on stream ecology at the Reserve that features his wetland restoration monitoring work. Many other Stone Lab classes that are hosted at the lab on Gibraltar Island have a field day at the Reserve and incorporate Reserve research. Dr. Bob Whyte hosts one of his Aquatic Biology classes at the Reserve. The Brown Bag Seminar series is another direct connection between priority audiences and researchers. At least one of these lunch time presentations has been held annually since 2003. The OWC NERR site profile, which was published initially in 2004 and reprinted last year, has proven to be a tremendous "one-stop" resource to help staff integrate Reserve science into all aspects of our education programs.

Program Suggestion: Given that reserve volunteers historically have provided significant support for reserve operations and programming, NOAA encourages OWCNERR to reinvigorate its Volunteer Program as soon as practicable.

Response: The Reserve has three categories of volunteers that are invaluable to our program's implementation: 1) permanent program volunteers, 2) Friends of Old Woman Creek members, and 3) The Old Woman Creek NERR Advisory Council.

- 1) Permanent program volunteers – Because the Reserve had just completed a major construction project immediately prior to the 2003 review, it had lost volunteers due to the visitor center not being in operation. The Reserve's volunteer coordinator has led several staff meetings about recruitment and retention of volunteers. The outcomes of these meetings included:
  - participation in three regional recruiting fairs
  - development of new volunteer brochure
  - creation of job descriptions for various volunteer tasks that could appeal to broader interests than visitor center assistance

This effort yielded an additional five new volunteers to man the visitor center, assist with species surveys, and Reserve outreach like canoe trips. Permanent program volunteers sign an employment agreement with the Ohio Division of Wildlife, and are as a matter of course, considered unpaid state employees.

Reserve staff has also focused on encouraging short-term stewardship volunteer opportunities such as storm drain stenciling, upland invasive plant removal, and tree plantings. Three Eagle Scout projects were completed during the review period, including a second viewing window, bluebird box trail, and extension of the Reserve's boardwalk.

- 2) Friends of Old Woman Creek – The Friends of Old Woman Creek organization were founded in 1998. Within this review period, the organization has taken a more prominent role in the Reserve's operations. The organization has gone through a strategic planning process led by Ohio State University Extension. During the scope of that process, the Friends took the lead in a partnership facilitated by the Ohio CTP to develop and submit a grant proposal for an Old Woman Creek watershed coordinator. The organization has also expanded its gift shop and now occupies additional space in the OWC NERR visitor center.
- 3) Old Woman Creek NERR Advisory Council - The Reserve Advisory Council was established in 1982 and meets quarterly, and will hold its summer session during the review. During the review period, the council reworked its bylaws in conjunction with the Reserve manager and ODW Wildlife Research Administrator. Three additional members, including national and local conservation representatives (new categories) and a local government representative (Berlin Independent School District Superintendent) have joined the Council.

Program Suggestion: NOAA recommends that OWCNERR consider expanding its Stewardship Program by: (1) examining potential ways to increase the amount of time that the Stewardship



Coordinator is able to devote to the reserve; and (2) engaging a part-time employee or volunteers to develop the Stewardship Program's human interaction element through stewardship outreach activities.

Response: Leading up to the submission of NERRS Operations Grant # NA04NOS4200088, the Reserve manager held discussions relating to stewardship with the Acting Chief of the Division of Natural Areas about stewardship program resources at the Reserve and the recommendations from the §312 review. It was decided that the acting stewardship coordinator would remain in a part-time role for the Reserve until July 2004 and transition into a full-time position as stewardship coordinator for the Reserve. Prior to that occurring, the Reserve program transferred within the Ohio Department of Natural Resources from the Division of Natural Areas to Wildlife. That plan was not pursued further following the transfer. Regardless, the Reserve has benefited from networking opportunities and additional stewardship resources available through the Division of Wildlife. The Division's Wildlife Management and Research Section, which is the organizational home of the Reserve program, successfully pursued USFWS Aquatic Nuisance Species funding and treated over 10 acres of the estuary that has been infested with *Phragmites australis* last August. This effort facilitated additional Reserve research relating to restoration of areas affected by aquatic invasive species, and an additional 20 acres is planned for treatment in August 2006. In addition, the Reserve has developed a partnership with its Friends group, Erie Soil and Water Conservation District (ESWCD), and several others to pursue funding for a watershed coordinator in the Old Woman Creek watershed. The coordinator would be an employee of the ESWCD. Match for the grant would come from the Friends of OWC and the coordinator would be an adjunct member of the Reserve staff. This is an exciting development that if funded, would lead to the development of a locally-driven watershed cleanup plan for Old Woman Creek. Reserve stewardship efforts have also been enhanced by the addition of a GIS technician, first through a partnership with the Ohio Office of Coastal Management and later through assistance provided by Wildlife's Wetland Habitat Specialist. Improved datasets have aided efforts like the development of the Reserve's acquisition and management plan, education exhibits, and research support. The OWC NERR manager is coordinating law enforcement activities within the Reserve with the Division of Wildlife District Law Supervisor and Erie County Wildlife Officer, who respond to law enforcement issues on the Reserve as needed. The Reserve manager and CTP Coordinator have held several meetings with local emergency management officials to discuss ways to update the Reserve's spill response plan, which dates back to 1991. Updating the plan and improving the Reserve's capacity to be a resource in the event of a spill emergency is a priority for the upcoming management planning cycle.

## **Appendix C. Persons and Institutions Contacted**

### U.S. Senators

Honorable Mike DeWine  
Honorable George Voinovich

### U.S. Representatives

Honorable Marcy Kaptur

### Ohio Department of Natural Resources

Steve Gray, Chief, Division of Wildlife  
Randy Miller, Assistant Chief, Business and Operations, Division of Wildlife  
Dave Risley, Executive Administrator, Wildlife Management and Research, Division of Wildlife  
Dave Scott, Wildlife Research Administrator, Division of Wildlife  
Phil King, Federal Aid Coordinator, Division of Wildlife  
Sue Demers, Revenue Administrator, Division of Wildlife  
Mickey Nygaard, Grants Coordinator, Division of Wildlife  
Steve Barry, Wetland Habitat Coordinator, Division of Wildlife

### Old Woman Creek National Estuarine Research Reserve

Frank Lopez, Reserve Manager  
Dr. David Klarer, Research Coordinator  
Heather Elmer, Education Programs Coordinator and Coastal Training Program Coordinator  
Phoebe Van Zoest, Education Specialist  
Marge Bernhardt, Volunteer Coordinator  
Gloria Pasterak, Office Assistant  
Dick Boyer, Facilities and Equipment Maintenance Specialist  
Bob Sennish, SWMP Technician  
Dick Sinwald, SWMP Technician  
Hong Nguyen, NERR Intern

### Old Woman Creek NERR Advisory Council

Heather Braun, Ducks Unlimited  
Herb Chapin, local real estate agent  
Steve Deehr, watershed farmer  
Dr. Bob Heath, Director, Water Resources Research Institute, Kent State University  
Floren James, retired extension agent  
Dr. Jeff Reutter, Director, Ohio Sea Grant College Program  
Tom Ritzenthaler, Erie County Conservation Club  
David Snook, Superintendent, Berlin-Milan Local Schools  
Tom Stockdale, retired Ohio State University School of Natural Resources

### Federal and State Agency Representatives

John Watkins, DNR, Ohio Coastal Management Program  
Yetty Alley, DNR, Ohio Coastal Management Program  
Matt Adkins, DNR, Ohio Coastal Management Program  
Katie McKibben, Ohio Environmental Protection Agency  
William Comeaux, NOAA National Weather Service

### Academic/Educational Representatives

Kathleen Failor, Firelands Montessori Academy  
Donna Fraelich, Western Reserve Middle School  
David Mowry, Tiffin City Schools  
Joy Shepard, Tiffin City Schools  
Amy Krajnak, Kelleys Island School  
Pete Kowal, Bowling Green State University, Firelands College  
Dr. Linda Cornell, Bowling Green State University, Firelands College  
Dr. Bob Whyte, California University of Pennsylvania  
Dr. Joe Holomuzki, Ohio State University at Mansfield  
Shawn Dalton, University of New Brunswick  
Joe Lucente, Ohio Sea Grant  
Nishanthi Wijekoon, OWC Reserve Graduate Research Fellow, Kent State University  
Doug Antibus, Hollings Scholar, Kent State University

### Other Organizations and Representatives

Gene Wright, former Manager, Old Woman Creek NERR  
Linda Feix, former Education Coordinator, Old Woman Creek NERR  
Tina Sevenbergen, Erie County Solid Waste  
Celine Hemminger, Erie Soil and Water Conservation District  
Eric Dodrill, Erie Soil and Water Conservation District  
Lois TerVeen, Erie MetroParks  
Kate Pilacky, Western Reserve Land Conservancy-Firelands  
Andy McDowell, Western Reserve Land Conservancy-Firelands  
Elaine Waterfield, President, Friends of Old Woman Creek  
Sue Cloak, The Volunteer Center  
Steve Fondriest, Fondriest Environmental  
Bill Salas, Applied GeoSolutions, LLC  
Steve Boles, Applied GeoSolutions, LLC

## **Appendix D. Persons Attending the Public Meeting**

The public meeting was held on Tuesday, August 15, 2006, at 7:00 p.m. at the Old Woman Creek National Estuarine Research Reserve Visitor Center, 2514 Cleveland Road East, Huron, Ohio. The following attended the meeting:

Larry Hogan  
Marilyn Hogan  
Connie Livchuk  
Gene Wright  
Marian Hancy  
Barbara Berg  
Jane Miller  
Elaine Waterfield  
Sparky Weinau

## **Appendix E. NOAA's Response to Written Comments**

NOAA received written comments regarding the Old Woman Creek National Estuarine Research Reserve. Each of the letters is part of the official record of the evaluation and is briefly summarized below, followed by NOAA's response.

**Wanda Dengel**  
**Second Grade Teacher, Notre Dame Elementary School**  
**Portsmouth, Ohio**

**Comment:** Ms. Dengel praised the staff involved in the educational programs. She does not work in the watershed (Portsmouth is in the south-central/Appalachian area of Ohio) but is grateful to receive information about numerous educational opportunities and science information at Old Woman Creek as well as outside the estuary from the Reserve. She has been able to use this information for herself and her students to learn more about a variety of subjects.

**NOAA's Response:** No response necessary. The evaluation team thanks Ms. Dengel for her comments.

**Jane Miller**  
**Old Woman Creek NERR Advisory Council Member**

**Comment:** Ms. Miller attended the site visit public meeting and spoke about the importance of research being done at Old Woman Creek. Her written comments express concern about the philosophical and physical changes in Old Woman Creek operations as she perceives them since the transition of administration of the Reserve from the DNR Division of Natural Areas and Preserves to the Division of Wildlife.

**NOAA's Response:** The evaluation team thanks Ms. Miller for her comments. This document addresses some of this perception in the section entitled Administration and Staffing and includes a recommendation.