Michigan Sea Grant
Green Marina Education and Outreach Project
Quality Management Plan

Revision: No. 3
Date: January 17, 2011
Page: 1 of 2

Title Page: Organization name, signatures
Project Team: Program Officer, Principal and Co-Investigators, Quality Manager and Collaborators

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<td>Signature: James Diana</td>
<td>Signature: Charles Pistis</td>
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<td>Date: January 20, 2011</td>
<td>Date: January 17, 2011</td>
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A. Management and Organization

1. Organization name, signatures
   See Title Page; page 1.

2. Quality Assurance Policy Statement
   Our project leaders realize the value of establishing a quality assurance system in achieving our project goals. This Quality Management Plan (QMP) describes minimum requirements to which all organizations, personnel and collaborators must adhere.

   We have appointed Chuck Pistis, a highly qualified person, with more than 30 years of experience working with the marina industry as our Quality Assurance (QA) Manager. Pistis will provide oversight of the work of investigators, collaborators and project groups to ensure that all EPA QA guidelines are addressed to the best of his ability. He will provide QA information and oversight of this QMP with reports to Environmental Protection Agency (EPA).

   Pistis will work with the project PI and Co-PIs to ensure that project groups effectively coordinate quality assurance (QA) and quality control (QC) efforts in Michigan, Ohio, Wisconsin, and other areas in the Great Lakes region.

3. Organization Chart
   Figure 1, below, illustrates project participants’ lines of authority and reporting responsibilities.

![Organization Chart - Green Marina Project](image)

**Figure 1: Green Marina Project Organization Chart**

4. QA Manager Authorities
   The QA Manager will be an objective reviewer of all materials and procedures and will maintain organizational independence from groups generating, compiling and evaluating data. The QA
Manager will have access to the project and personnel by participating in regularly scheduled meetings and presentations. The QA Manager will also have access to all relevant documents.

- **Lines of Authority:** The QA Manager will act as an independent consultant on the Project Team. The QA Manager will review all products, such as the regional best management practices (BMPs) document and revised training materials to ensure that they address the QA guidelines and evaluation metrics of the project.

- **Reporting Responsibilities:**
  - QA Manager Responsibilities: Review data, data analysis and data sources. Ensure adherence to established procedures. The QA Manager will work with the Regional Project Coordinator to ensure that reports, articles, news briefs and other public outreach messages will address progress toward project outcomes and metrics.
  - Project Team and QA Manager Responsibilities: Ensure that all project material produced will focus on fact-based environmental information that supports fact-based decision-making.

5. **Technical Activities and Programs**

**Brief Description of Project:** The Green Marina Education and Outreach project is a strategic collaboration to reduce or eliminate non-point source pollution and toxic substances from entering the Great Lakes through marina activities. This project will improve and expand existing Clean Marina programs by developing consistent best management practices for marinas in the Great Lakes region, creating uniform certification standards for marinas, boatyards and harbors, expanding online training and education, hosting webinars, and conducting a workshop to examine best practices for pressure washing and underwater hull cleaning. These project components will be subject to quality assurance controls. In collaborating across the Great Lakes Clean Marina programs, all participants will engage in quality control measures.

Marina participants are the primary target and focus of this project. The Project Team expects to achieve project results that include product improvement (e.g., online training and other supplemental materials), efficiencies in the management of Clean Marina programs and expansion of the number of best practices implemented by marinas to protect water quality in the Great Lakes region.

B. **Quality System Components and Principal Components**

1. **Quality System Components**

   a. **Description of quality system**

   Each stage of the project will include a QA review, focusing on key deliverables, quality objectives and performance criteria. To ensure systematic planning of projects, the project groups will follow a 3-Step Planning Process (see Section B.2.d: Systematic planning of projects).
The quality system for this project will focus on the development and completion of three key deliverables:

- Regional Best Practices Document
- Regional Training Tool (revision of the existing Clean Marina Classroom)
- Marina workshops and webinars

Quality Objectives:

- Develop consistent objectives and outcomes throughout the Great Lakes region.
- Recognize the importance of different mandatory (legal) requirements and guidelines of each state.
- Improve the effectiveness of the Clean Marina programs in the long-term, including increased participation, collaboration and application of BMPs in each Great Lake state.
- Ensure that we use the most appropriate BMPs.

Performance Criteria for Quality Objectives:

- The QA Manager and the Technical Review Team will review training resources, BMPs and certification criteria from Clean Marina programs in the Great Lakes states. We will also collect state legal requirements and guidelines. Links to state regulatory documents will be provided in training materials.
- The Technical Review Team and the QA Manager will carefully analyze the draft and final BMPs in order to develop consistent objectives for best practices throughout the Great Lakes region.
- Through project efforts we expect to increase the rate of Clean Marina certification in the Great Lakes.
- Through presentations at national meetings, such as the Association of Marina Industries, we will share tools and lessons developed through this project. We will also ensure transparency and information sharing by publishing articles in the “Journal of Extension” and other publications.

The project team has developed additional metrics to determine success of the project. For more detail, see Section G.5: Specifications of performance criteria for measuring quality.

2. **Principal Components**

   a. **Quality system documentation**

   The QA Manager will work with Project Investigators, the Project Team, and project groups (Technical Review Team, Outreach Team, and Online Training Team) to ensure that the material produced will focus on fact-based environmental information that supports fact-based decision-making.

   All project reports will be posted in Great Lakes Accountability System (GLAS). This web-based project tracking system will be available to the public to provide transparency and
accountability for how Great Lakes Restoration Initiative (GLRI) funds are being used. Although scheduled reports through the EPA-GLAS reporting system will provide ongoing information, such as number of participants, additional measures will be incorporated into the project to ensure quality and continual improvement.

Michigan Sea Grant will oversee all documentation, archives, published reports and final products in consultation with the QA Manager.

b. Annual systems review, management assessments
The QA Manager and the Project Team will review the QA guidelines for this project and make adjustments accordingly on an annual and ongoing basis. The Quality Management Plan (QMP) will be updated in the case of any major changes to the project. Project managers will engage in assessment as described in this QMP.

c. Training
The QA Manager, Regional Project Coordinator and at least one Co-PI from the Project Team will participate in EPA Quality Training. This training includes the following topics:
- Quality Fundamentals, Interpreting Non-detect Results and GLRI Accountability
- Quality Documentation Tracking, Inventory and Reporting
- Other EPA training, as appropriate, including information about the GLAS system

d. Systematic planning of projects
The Regional Project Coordinator and other members of the Project Team will follow the processes in this QA document. The Regional Project Coordinator will also follow the project timeline and make adjustments accordingly to ensure that project deliverables are completed. The QA Manager will work with the Regional Project Coordinator to submit regular QA reports.

3-Step Planning Process
- Determine if the information (e.g., best management practice) has been vetted with other Clean Marina programs, marina industry representatives and federal/state regulatory agency representatives. To this end, the Project Team will ensure that the Technical Review Team works with appropriate experts from each Great Lakes state.
- The Technical Review Team will submit evidence that information about best practices has complied with all federal/state regulations. The team will also ensure that the information is technically sound.
- The QA Manager will review all key project deliverables, both drafts and final information/products.

e. Project-specific quality documentation
Regional Best Practices Document
Project collaborators will find common ground on best management practices, standard operating procedures and certification criteria. The Project Team and project groups will apply their best professional judgment to determine which BMPs are the most appropriate
to include in the final document. The benefit-cost return from the boating industry will be assessed. Project Team members will review input from industries.

Through consensus, the final Regional Best Practices Document will be developed. The document development process will involve QA assessment at each stage of development, including:

1. The Regional Project Coordinator will work with others in the Project Team and the QA Manager to gather existing, relevant best management practice materials from Clean Marina programs in the Great Lakes region.
2. The Technical Review Team and the QA Manager will review and identify gaps in BMPs.
   a. Cost-benefits of BMPs are reviewed by Technical Review Team
   b. Technical Review Team makes recommendations for final BMPs
   c. Draft regional BMP document is created
3. The QA Manager and Project Team will review the draft BMP document
   a. The Regional Project Coordinator will gather comments/recommendations from the QA Manager and Project Team on each draft BMP document.
      I. The Technical Review Team may be consulted at this stage, if needed.
   b. The QA Manager and Project Team will agree on final recommendations for BMPs to use in training and educational materials.

All draft and final BMP documents will be archived by Michigan Sea Grant on a secure server that is backed-up daily and managed by the University of Michigan Information and Technology (IT) services.

Regional Training Tool – The Clean Marina Classroom:
The Clean Marina Classroom (www.cmp.course.com) will be transformed from the existing Michigan-focused best practices training product to a Great Lakes regional training product. This website will be revised, based on the final BMP document and recommendations from the QA Manager and the Project Team. Members of the Project Team will revise existing online training materials to reflect new regional best practices. The QA Manager, the project investigators and others, as appropriate, will review the final draft of the training modules before they are published. A pilot version of the training materials may be tested by a select number of marinas to ensure quality. Training materials and participant information are stored on a secure server that is backed-up daily and managed by the University of Michigan IT services.

The EPA Project Officer and QA Manager may also post project materials on the Great Lakes Restoration Initiative (GLRI) website (http://greatlakesrestoration.us).

Workshops and Webinars:
The Project Team and project groups will conduct workshops and webinars. The QA
Manager will review all information for workshops and webinars in advance of events. These events are designed to be educational. All educational content from workshops and webinars will be archived by Michigan Sea Grant on a secure server.

f. Project and data assessments
The QA Manager and Project Team will undergo annual and ongoing project assessment.

C. Personnel Qualifications and Training

1. Statement of the policy regarding training for management and staff
All personnel involved in this project will meet the following minimum qualification requirements:
   - A Bachelor’s degree
   - Related experience in outreach and communications
   - Project coordination experience

2. Identifying, ensuring and documenting qualifications
Personnel Qualifications
The Principal and Co-principal Investigators of this project have identified and ensured that all key personnel have the appropriate knowledge, skill and professional experience necessary to complete the commitments of this project.

Relevant experience of Project PI and Co-PIs:
Michigan Sea Grant program leaders have successfully managed and facilitated the dissemination of funding and resources, laying a foundation for Great Lakes education since 1969. Sea Grant has received numerous awards for outreach about key public health and coastal resource issues and for the development of online curriculum.

- Dr. James Diana, Principal Investigator and Director of Michigan Sea Grant is the President of the Michigan Clean Marina Foundation, established in 2009. He holds a Ph.D. in Zoology, a master’s in Biology, a bachelor’s in Marine Biology, and is a tenured professor with over 30 years of educational experience.
- Charles Pistis, Quality Assurance Manager and Extension Program Director of Michigan Sea Grant has extensive experience in working with the marina industry, state and federal government and non-government organizations. Pistis has advanced degrees in science, and over 30 years of experience in outreach with the marine industry.
- Elizabeth LaPorte, Co-PI and Director of Communications and Education Services for Michigan Sea Grant directed the development the first freshwater online training program for marinas in the nation, the Clean Marina Classroom. LaPorte has advanced degrees in communications, a master’s certification in educational media, and over 28 years of experience in communications and outreach.
• Vicky Harris, Co-PI and Water Quality and Habitat Restoration Specialist at the University of Wisconsin Sea Grant Institute, has advanced degrees in environmental science, and extensive experience in water quality issues.
• Jill Jentes Banicki, Co-PI and Assistant Director of the Ohio Sea Grant Program, has advanced degrees in natural resources, and extensive experience in communications and outreach.
• Amy Samples, Regional Project Coordinator and Community Outreach Coordinator at Michigan Sea Grant, has advanced degrees in natural resource management, including a master’s degree focused on aquatic sciences and environmental planning.

The Regional Project Coordinator is a new 0.5 FTE position, supported through this project (see position description, Appendix A). Michigan Sea Grant will oversee this half-time appointment. Training will be provided by Co-PI, Elizabeth LaPorte, in consultation with the project PI, Co-PIs and the QA Manager. Training will include a thorough review of the existing best practice materials from MI, WI and OH, as well as the existing training website, the Clean Marina Classroom. Additional training will include an intensive review of the EPA reporting guidelines, QA guidelines and other materials, as appropriate.

3. **Identifying the need for retraining**
Any retraining will be conducted on an as needed basis and will be determined at the annual quality system review. See: B.2.b: *Annual systems Review, management assessments.*

**D. Procurement and Solicitation Response Approval**

1. **Procurement of items and services, procurement document approval, solicitation response approval**
Not applicable. We do not expect to hire contractors or purchase items to complete this work. Should the occasion arise that we seek paid external resources, the Project Team will provide review and approval of all applicable procurement options to ensure that all items, services, documents and responses to solicitations satisfy all technical and quality requirements. In this case, the QA Manager will oversee the process for ensuring that guidelines are addressed. (See Section B.2.d: Systematic planning of projects – 3-Step Planning Process)

**E. Documents and Records**
Roles, responsibilities and authorities of the Project Team, as related to documents and records, are described in Section G.1.a: Investigators’ and collaborators’ roles and responsibilities.

1. **Quality-related documents and records requiring control**
Quality-related documents and records requiring control include:
   a) Regional Best Practices Document
b) Regional Training Tool (revision of the existing Clean Marina Classroom)
c) Marina workshops and webinars

2. **Records and documents accurately reflect completed work**
   The QA Manager will review each final version of the key deliverables described in Section E.1: Quality-related documents and records requiring control.
   a) The Regional Project Coordinator will collect and review materials and also submit reports to EPA. EPA reports will include a special section addressing quality assurance.
   b) The PI and QA Manager will review and comment on each EPA report.
   c) Co-PIs will cooperate with all required reports through the Regional Project Coordinator, ensuring that project information is distributed in a timely manner.
   d) All key personnel, including the QA Manager, will be responsible for addressing the Action Items outlined in the *Project Timeline*. (See Section G.2, Figure 2: Project Timeline and Work Plan)

3. **Maintenance of documents and records, retention times and traceability**
   a) All project information will be archived by Michigan Sea Grant on a secure server.
   b) Project information will be retained for a period of five years from the date of the project completion.
   c) Michigan Sea Grant administrative personnel have access to IT experts that can ensure access and archival capacity. The Regional Project Coordinator will ensure that documents are organized by document type and otherwise, in a logical manner.

4. **Compliance with all applicable statutory regulatory and EPA requirements for documents and records**
   Although scheduled reports through the EPA-GLAS reporting system will provide ongoing information, additional measures will be incorporated into the project to ensure quality and continual improvement, including:
   • The formation of a Great Lakes Clean Marina Network (a.k.a. Outreach Team) to assist with the broader application of consistent certification criteria throughout the region.
   • The formation of a Technical Review Team to ensure the quality of the material produced. This team will focus on guiding the development of scientifically accurate, reliable and unbiased content; the usefulness of the information for our targeted audience (marinas) and additional audiences (boaters, media, others); and the integrity of the information or final product.

**Reporting Impacts**
Impacts and results will be reported to National Oceanic and Atmospheric Administration, National Sea Grant College Program, the EPA-GLAS system and various publications. They may also be reported in print or web-based documents produced by Michigan, Ohio and/or Wisconsin Sea Grant, such as annual reports, project updates and newsletters.
5. Establish and implement confidentiality procedures for evidentiary records
The Regional Project Coordinator will establish and implement confidentiality procedures for evidentiary records.

F. Computer Hardware and Software

1. Hardware
We will not purchase any hardware with funds from this grant. All project information will be stored on a secure (password protected) server that is backed-up daily and managed by the University of Michigan Information and Technology (IT) services.

2. Software
The Clean Marina Classroom website is hosted by Remote-Learner. The course development software used to create this tool is called Moodle (Modular Object-Oriented Dynamic Learning Environment). Moodle is a free and open-source e-learning software platform, also known as a Course Management System. Moodle is provided freely as open source software (under the GNU General Public License). It has become very popular among educators around the world as a tool for creating online dynamic websites for their students. Michigan Sea Grant is supporting the use of this software. The software has been proven to meet user requirements, with current permissions providing adequate capacity as the program is expanded.

G. Planning

1. Identification and involvement of project partners, stakeholders, and others
   a. Investigators’ and collaborators’ roles and responsibilities
      
      Michigan Sea Grant (lead institution):
      
      • Dr. Jim Diana. **Project Role:** Principal Investigator. Diana will provide project oversight and consult with project leaders. He will participate with the Technical Review Team and review best practices.
      • Elizabeth LaPorte. **Role:** Co-principal Investigator. LaPorte will oversee curriculum revisions to existing Clean Marina Classroom, online training website. She will also oversee the activities of the Regional Project Coordinator.
      • Chuck Pistis. **Role:** Quality Assurance Manager. Pistis will assist with the review of all project materials and activities. He will ensure that all QA guidelines are addressed.
      • Amy Samples. **Role:** Regional Project Coordinator (new position). Coordinate Project Team meetings and project group meetings; collect data about activities, outcomes and results; summarize project information and submit project reports to EPA and NOAA-National Sea Grant, as directed. Attend all project meetings and regional workshops, document activities, and manage the timeline of activities.
**Wisconsin Sea Grant:**
- **Victoria Harris.** *Role:* Lead investigator for Wisconsin Sea Grant. Harris will work with Michigan Sea Grant and other project collaborators on this project. Harris will coordinate Wisconsin activities and provide oversight to ensure that goals and objectives are met in a timely manner.
- **Gene Clark.** *Role:* Clark will work with Michigan Sea Grant and other project collaborators. Both Harris and Clark will participate on the Technical Review Team and solicit representatives from the Wisconsin marina industry and state government to participate on the Team. Harris and Clark will help develop universal best management practices. In addition, Wisconsin Sea Grant specialists will provide video and photos of marina best practices; collaborate with project partners to organize a workshop on best practices for managing boat bottom wash water; conduct marina manager outreach and training seminars; and develop and conduct an evaluation survey of trained and certified marina managers to document project outcomes and environmental results.

**Ohio Sea Grant:**
- **Jill Jentes Banicki.** *Role:* Lead investigator for Ohio Sea Grant. Jentes Banicki will facilitate Ohio activities and ensure that project goals and objectives are met. Jentes Banicki will coordinate with Michigan Sea Grant and project partners and assist with project promotion through news releases, articles and other media. Jentes Banicki will also contribute video and photography to document best management practices, and help oversee the administration of a webinar series.
- **Frank Lichtkoppler.** *Role:* Collaborator for Ohio Sea Grant. Lichtkoppler is the Ohio Sea Grant Extension Program Leader and will provide oversight for the Ohio team. Lichtkoppler has experience in developing surveys and summarizing data about the marine industry.
- **Colleen Wellington.** *Role:* Collaborator for Ohio Sea Grant. Wellington and Lichtkoppler will participate on the Technical Review Team and coordinate efforts with the Ohio marina industry and state government participate on the Technical Review Team.

**b. Project Partners**
Michigan Sea Grant is the lead organization for this project. Project consultants named in the grant proposal, Wisconsin Sea Grant, and Ohio Sea Grant, are considered equal partners and will provide deliverables specified in the timeline and in accordance with quality guidelines.

**Project Consultants**
Many Clean Marina programs are supported by consultants, who are not regulators or inspectors, but who perform site visits that are based on guidelines identifying mandatory and recommended best practices. They also provide educational and training materials. *These personnel do not have any regulatory function and their work is not supported through project funds.* However, they do have experience in marina operations, marine industry education/training/consulting, and are trained in the application of BMPs to achieve Clean Marina certification. Clean Marina site visits are not specifically within the scope of this project. However, MI, OH, and WI Sea Grant programs and Green Marina project personnel will coordinate communication about certification efforts, as they are related to project activities, such as the development of best practices that are a critical component of the certification process.
c. Project Groups
The project is supported by a variety of individuals, including the principal and co-investigators, and other collaborators, as appropriate. These groups are defined below.

- **Project Team**: Principal and Co-principal Investigators (Co-PIs), EPA Project Manager, Quality Assurance (QA) Manager, Regional Project Coordinator and collaborators. The QA Manager will work with, but be independent from, the reporting structure of the Project Team, including the Principal and Co-principal Investigators. The QA Manager will remain objective and ensure that quality guidelines are addressed.
- Technical Review Team: Members to be determined through a nomination process by the Co-principal Investigators and collaborators, with representatives from MI, OH, WI and other states, as appropriate.
- Outreach Team: Members to be determined through a nomination process by the Co-principal Investigators and collaborators, including a cross-section of representatives from relevant industries/organizations. Subsequently, this team will be retained as the Great Lakes Clean Marina Network.
- Online Training Team: Membership will include Co-PIs and Regional Project Coordinator with oversight provided by the Project Team, and functional management and supervision provided by Elizabeth LaPorte, Co-principal Investigator.

2. Project goals, objectives and issues to be addressed
Through this project, EPA will support education and outreach to address marina industry compliance with environmental laws and regulations. The project will support a key business sector in the Great Lakes region and assist EPA and state agencies, potentially reducing the need for regulatory oversight. To receive certification Clean Marinas must voluntarily meet the minimum regulatory requirements and go above and beyond to adopt additional best practices.

Figure 2: Project Timeline and Work Plan

<table>
<thead>
<tr>
<th>Activity</th>
<th>Year 1 2010-2011</th>
<th>Year 2 2011-2012</th>
<th>Year 3 2012-2013</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Project Kick-off meeting and assemble all teams</td>
<td>Oct. 2010-Jan. 2011</td>
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<td>Regional Project Coordinator will schedule first project meeting, and then monthly meetings with partners. Representatives from EPA, MI, OH, WI and other GL states will be recruited for Technical Review Team and the Outreach Team (a.k.a. Great Lakes Clean Marina Network).</td>
</tr>
<tr>
<td>Asses existing Clean Marina materials</td>
<td>Oct. 2010-Mar. 2011</td>
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<td>Regional Project Coordinator will collect comments from the Technical Review Team and distill this information.</td>
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<tr>
<td>Contact existing LaMP groups and other potential collaborators and partners</td>
<td>Jan. - Mar. 2011</td>
<td></td>
<td></td>
<td>Work with EPA Program Officer to facilitate contact and discussion between LaMP managers, other stakeholders and project members.</td>
</tr>
<tr>
<td>Project Activity</td>
<td>Start Date</td>
<td>End Date</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>------------</td>
<td>----------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>Develop regional best practices and certification criteria</td>
<td>Jan. 2011 – July 2012</td>
<td></td>
<td>MI, OH and WI Sea Grant outreach specialists will work with the Great Lakes Clean Marina Network (a.k.a. Outreach Team), industry state and federal government partners to negotiate the adoption of universal best practices for the Great Lakes region.</td>
<td></td>
</tr>
<tr>
<td>QA Manager reviews all draft and final versions of best practices document</td>
<td>Jan. 2011 – July 2012</td>
<td></td>
<td>QA Manager is independent from but will work closely with the Technical Review Team and the Project Team to ensure that the QA guidelines are addressed. He will review the best practices documents.</td>
<td></td>
</tr>
<tr>
<td>Approve and draft training module changes</td>
<td>July-Dec. 2012</td>
<td></td>
<td>MI Sea Grant will modify existing online training modules.</td>
<td></td>
</tr>
<tr>
<td>Assess and pilot revised training materials</td>
<td>Dec. 2012</td>
<td></td>
<td>Participant reviews of existing training materials (MI only, year 1-2) and revised best practice training materials (all participants, year 3). MI will lead this effort with OH and WI.</td>
<td></td>
</tr>
<tr>
<td>QA Manager reviews training materials at pilot stage</td>
<td>Dec. 2012</td>
<td></td>
<td>QA Manager is independent from but works closely with the Technical Review Team and the Project Team to ensure that the QA guidelines are addressed.</td>
<td></td>
</tr>
<tr>
<td>Develop and Implement Outreach Plan</td>
<td>Dec. 2010-2013</td>
<td></td>
<td>Michigan Sea Grant will implement an outreach and communications plan in collaboration with project partners.</td>
<td></td>
</tr>
<tr>
<td>Regional Boat Bottom Washing Workshop*</td>
<td>2012</td>
<td></td>
<td>Wisconsin Sea Grant will organize a workshop in collaboration with project partners and in conjunction with annual National Marine Industry Conference.</td>
<td></td>
</tr>
<tr>
<td>Webinars for Marinas*</td>
<td>2012</td>
<td>2013</td>
<td>Ohio Sea Grant will coordinate webinars on key topics. First topic: Boat bottom washing. Others to be determined.</td>
<td></td>
</tr>
</tbody>
</table>

*The final schedule for workshops will be determined by a number of factors, including collaboration with regional and national partners.

**Reporting**

<table>
<thead>
<tr>
<th>Report Type</th>
<th>Start Date</th>
<th>End Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarterly Update Reports (as scheduled)</td>
<td></td>
<td></td>
<td>Michigan Sea Grant will provide quarterly updates on project activities and outcomes through the EPA-GLAS system. <strong>The QA Manager will work with the Regional Project Coordinator to submit QA reports.</strong></td>
</tr>
<tr>
<td>Annual Reports</td>
<td>Sept. 30, 2011</td>
<td>Sept. 30, 2012</td>
<td>Annual summary of activities/outcomes and impacts from all partners to EPA.</td>
</tr>
<tr>
<td>Final Project Report</td>
<td></td>
<td>Sept. 30, 2013</td>
<td>Summary of all activities, outcomes and impacts from all partners, including recommendations for additional efforts to EPA.</td>
</tr>
</tbody>
</table>

Project leaders will assemble a Green Marina Technical Review Team and other groups that will include extension experts, marina association and marine industry leaders, state regulatory agency representatives and others to draft regional best practices training materials.

Project groups will facilitate the development and application of: common best management practices (BMPs) and consistent certification criteria for marinas, boatyards and harbors in the Great Lakes region; the development of accessible online training for marina and harbor managers, making BMP training materials available to any freshwater marina, boatyard or harbor in the nation; and a regional or national workshop to examine best practices for pressure washing and underwater hull cleaning.
The implementation of best management practices helps to protect valuable coastal resources. Pistis will review regional BMP documents to ensure that they address key elements, including but not limited to the following:

- Siting, designing and constructing marinas to minimize disturbance to nearshore habitats.
- Making sound land management decisions that minimize the environmental impact of new or expanding marina structures and address erosion control measures.
- Practicing low impact development and implementing practices to effectively manage stormwater and reduce runoff pollution.
- Reducing the impact of boat winterization, sanding, painting, pressure washing and engine repair.
- Adopting effective fueling practices and emergency response plans, such as safety, signage and proper training to reduce the incidence of petroleum leaks and spills and ensure rapid cleanup.
- Installing pump-out systems and maintaining septic systems to properly dispose of marine sewage and reduce or eliminate the potential for waterborne diseases.
- Proper containment, storage, recycling and disposal of waste and hazardous materials.
- Education about waste disposal, safe fueling procedures and aquatic invasive species.

Pistis will also review revised training materials to ensure that information about BMPs are accessible to marina and harbor managers. He will also review all continuous improvements to training materials, such as invasive species and energy conservation modules, which are geared towards producing tangible results that advance EPA restoration initiatives. EPA is fully engaged in participating in this collaborative effort. Pistis will attend Project Team meetings, produce QA reports, and assist with progress toward completing this project in a timely and effective manner. Project activities, outcomes and results will be summarized in these reports.

3. Schedules, milestones
See Section G.2, Figure 2: Project Timeline and Work Plan. Project milestones are illustrated in Figure 3, below.

*Figure 3: Project Milestones*

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Year 1 2010-11</th>
<th>Year 2 2011-12</th>
<th>Year 3 2012-13</th>
<th>Lead State/partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop project groups with representatives from Great Lakes states</td>
<td>Jan., 2011</td>
<td></td>
<td></td>
<td>MI, OH, WI, in collaboration with other GL states</td>
</tr>
<tr>
<td>Produce first draft of Best Practices</td>
<td>Jan., 2011</td>
<td></td>
<td></td>
<td>MI, OH, WI, in collaboration with other GL states</td>
</tr>
<tr>
<td>Pilot revised training materials</td>
<td></td>
<td>Jan., 2012</td>
<td></td>
<td>MI, in collaboration with other GL states</td>
</tr>
<tr>
<td>Complete Regional Boat Bottom Washing Workshop*</td>
<td></td>
<td>Jan., 2012</td>
<td></td>
<td>WI, in collaboration with MI and OH</td>
</tr>
<tr>
<td>Task Description</td>
<td>Start Date</td>
<td>End Date</td>
<td>Collaborators</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
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</tr>
<tr>
<td>Complete First Webinar for Marinas*</td>
<td>Nov., 2012</td>
<td>OH, in collaboration with MI, WI and other GL states</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete Second Webinar for Marinas*</td>
<td>Mar., 2013</td>
<td>OH, in collaboration with MI, WI and other GL states</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete Webinar &amp; Workshop Summaries and send to EPA</td>
<td>Sept., 2013</td>
<td>OH and WI in collaboration with MI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recruit an additional 200 marina participants and certify an additional 65 marinas</td>
<td>All Quarters</td>
<td>MI, OH, WI, in collaboration with other GL states</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Exact Workshop/Webinar schedule may vary

4. **Type and quality of data needed**

The final best practices document will be used to develop best practices training materials that can be applied throughout the Great Lakes region. To develop this document, we will gather information from Clean Marina programs in the region. This information should be endorsed by the respective Clean Marina program, state agency or Sea Grant program.

5. **Specifications of performance criteria for measuring quality**

- An additional 200 marinas will participate in the Clean Marina programs in the Great Lakes region.
- An additional 65 marinas will be trained and certified as Clean Marinas in the Great Lakes region.
- Marina operators and others will become more aware of the sources and impacts of marine related pollutants, marine best management practices, and green (clean) marina programs as a result of this project.
- Qualitative feedback from marinas/participants in both the online training and in-person workshops.
- The application of consistent certification criteria in MI, OH and WI, and eventually, in other Great Lakes states.
- The formation of project groups: Technical Review Team, Outreach Team (a.k.a. Great Lakes Clean Marina Network), and Online Training Team.
- Project groups ensure that the material produced will focus on fact-based environmental information that supports fact-based decision-making.

6. **Developing, reviewing, approving, implementing and revising the QMP**

a) The PI and QA Manager will sign and approve the QMP.

b) The QMP will be submitted to Louis Blume, EPA Quality Assistance Manager for final approval.

c) The QA Manager will review the QA plan annually and recommend revisions. Other members of the Project Team may identify quality improvements during the course of this project and will submit these to the QA Manager.

7. **Evaluating and qualifying secondary data for a new use**

The QA Manager, Project Team and collaborators will determine if data may be used for multiple purposes.
H. Implementation of Work Processes

1. Ensuring work is performed according to approved planning and technical documents
Work will be performed according to approved planning and technical guidelines described in this plan. Participants will periodically review planning documents, such as the work plan and timeline, to ensure compliance with agreed upon standards, measures and deliverables.

2. Operations needing procedures, preparation, review, approval, revision and withdrawal of these procedures
Project groups’ creation of the:
   - Regional Best Practices Document
   - Regional Training Tool (revision of the existing Clean Marina Classroom)
   - Marina workshops and webinars

3. Controlling and documenting release, change and use of planned procedures
To ensure timely and complete reporting, a set of common report components will be established. Any revisions to these components will be reported in regularly scheduled reports.
   - Each Report to EPA will include:
     - Overall activities, outputs and outcomes
     - Project expenditures
     - Quality activities
   - The Project Team will ensure compliance with all applicable statutory, regulatory and EPA requirements for documents and records.
   - Progress reports will come from MI, OH and WI Co-PIs and be sent to MI Sea Grant (lead organization). The Regional Project Coordinator will compile all project report materials.
   - The Project Team recognizes that documenting outcomes/impacts in GLAS is important. Therefore, every effort will be made to convey the following:
     - Benefits of Clean Marinas
     - Cost savings to participants
     - Protection of coastal resources, such as nearshore habitat
     - How Clean Marinas are a key component of sustainable coastal development

Distribution List: Who is involved vs. who is receiving information?
Those involved in the project include:
   - EPA:
     - Program Officer, Judy Beck
     - Louis Blume, Quality Assistance Manager
     - LaMP managers (e.g., nearshore)
   - State natural resource agencies, and others, as appropriate (e.g., Office of the Great Lakes)
   - State and national marina industries
• National Oceanic and Atmospheric Administration, Clean Marina Program

Those who will be receiving project information from the Project Team include but are not limited to the following:
• EPA: Judy Beck, EPA Program Officer; LaMP managers; Great Lakes Forum
• National Sea Grant
• MI, WI and OH Sea Grant programs; University of Michigan, University of Wisconsin, Ohio State University
• National Oceanic and Atmospheric Administration, Coastal Zone Management
• National Network of Clean Marinas
  o Great Lakes Collaboration Team

Project Transparency: All of the dissemination methods described above will ensure that project partners, stakeholders and the public are aware of the activities supported by this project.

Quality Assurance Tools (Standard Operating Procedures)
Existing Clean Marina programs have developed operating procedures that focus on the commitment on behalf of marina/participants, as well as the certification procedures. MI, OH and WI Clean Marina programs currently follow a multi-step procedure for certification and are currently documenting their certification. An outline of existing forms and procedures is below.
• **Pledge Form:** Currently, marina operators sign a pledge to become an active participant in the Clean Marina program and to work toward certification.
  o Marinas pledge to eliminate and/or reduce pollutant impacts on fish and aquatic life, reduce nuisance and harmful algal blooms, protect critical habitats and swimming beaches, and assist in the delisting of impaired waters. This pledge to voluntarily participate is the first step in the certification process.
• **Checklists:** Checklists are focused on best practices, both mandatory (regulatory) as well as recommended. Each marina is required to address both mandatory and recommended practices in order to achieve certification.
  o Certification Checklists
    ▪ Self-assessment (Checklist completed by marinas in preparation for a site visit)
    ▪ Final assessment (Checklist completed by consultants with site review notes)
  o Re-certification Checklist (completed by marinas who have previously been certified)
• **Training Materials:** The MI, OH and WI Clean Marina programs maintain a record of who has completed the training (online or in person) to prepare for certification.
  o **Online Training:** The Clean Marina Classroom ([www.cmpcourse.com](http://www.cmpcourse.com))
    ▪ Course Modules (units, such as petroleum control and sewage handling)
    ▪ Best Practices Photos and Video
Linked BMP Glossary
Linked Key Terms Glossary
Unit Reviews (Quizzes)
Course Review/Feedback Form
Certificate of Course Completion Form
- Training Workbooks cover key topics, similar to online training
- Other materials include program websites, brochures, burgees, boater tip sheets and promotional materials.

Terminology Related to the Certification Process
1. The operations committee and/or technical committee in each state provide guidelines and final certification approval.
2. The Project Team will develop a matrix of the current status of clean marina efforts in the Great Lakes region to help inform project efforts.

I. Assessment and Response

1. Assessment of quality system
   The QA Manager will work with the Project Team to assess the adequacy of the quality system annually.

2. Assessment and reporting
   The Project Team, in consultation with the Great Lakes Clean Marina Network (a.k.a Outreach Team) and Technical Review Team will follow a standard review process of project documents. These groups will approve all products to ensure that deliverables (e.g. final best practices document, regional Clean Marina Classroom) are completed and meet established project objectives.

   The Technical Review Team, QA Manager and Project Investigators will review all final materials. Additionally, the Great Lakes Clean Marina Network (a.k.a. Outreach Team) will provide input to the development of products, and subsequently provide a form of external review.

   Assessment documents, including EPA-GLAS reports and annual QMP reviews, will be distributed to project personnel. These assessments will be managed by the Regional Project Coordinator and archived by Michigan Sea Grant.

   No major assessments will be conducted with project resources or as a part of project activities.

3. Appropriate personnel conducting assessments, access to required tools
   The QA Manager is primarily responsible for project assessment. The Project Team and project groups will also provide assessment. Since these groups are comprised of professionals from a wide geography, their best professional judgment is accepted as appropriate. The QA Manager
will work with project personnel to gain access to all documentation, records, and affiliated participants.

4. **Management review and response to assessment**
Management’s review and response to assessment will be included in project reports.

5. **Identification of corrective actions**
The QA Manager and the Project Team will identify any corrective actions. The Regional Project Coordinator will document these actions in project meeting notes which will be distributed to Project Team members and the QA manager. The Regional Project Coordinator will work with the QA Manager to ensure that these actions have been addressed and will document this in project reports.

6. **Disputes and arbitration**

**Arbitration philosophy**
The Project Team, in consultation with the QA Manager, will make the final call on the deliverables. The Team will consider input from the boating industry, natural resource managers, the Technical Review Team and others. The Team will work toward consensus but use majority rule when necessary.

J. **Quality Improvement**

1. **Continuous quality improvement**
The QA Manager will review all materials produced by project groups (e.g. BMP document). State-specific Clean Marina Operations Committees will help to ensure consistency in the certification process (e.g. site visits and technical reviews). Operations Committees generally include individuals with marina management experience, specialists that are knowledgeable of laws, regulations, natural resources and other areas that pertain to marinas. These committees work with Clean Marina consultants (specialists who perform site visits) to ensure that BMPs are addressed before Clean Marina certification is granted.

- **Plan:** The Technical Review Team will meet monthly to discuss issues, and make recommendations.
- **Do:** Incorporate additional factors, such as climate adaptation and aquatic invasive species training content into checklists and BMPs.
- **Check:** Evaluate efficacy of training materials through feedback from course participants.

**Long-term Impact:**
This project will inform a proposed Green Marina Phase II project to leverage marina BMPs and consider collaborative efforts with ports. A long-term objective of the Green Marina Project Team is that more than 50% of marinas, ports and harbors in the Great Lakes region will apply best practices.
Project efforts will support and sustain ongoing training and continuous improvement of existing certified marinas, boatyards and harbors throughout the Great Lakes region. The QA Manager, the Project Team (PI and Co-PIs), and others, will review all final products before they are published.

We anticipate that the development of a regional set of BMPs will be an iterative process that will involve engaging the existing Clean Marina program managers and marine industry leaders to develop high quality guidance, training and outreach materials.

The QA Manager will assist the Project Team with developing a plan to address updates/enhancements to best practice education and training materials and certification programs beyond this project.

The Project Team and the QA Manager will explore multi-partner commitments and cost-recovery options to sustain future administrative costs.

**Expected Outcomes:**
- Develop best practices document and training materials, applicable for marinas throughout the Great Lakes region.
- The application of consistent certification criteria in MI, OH and WI, and eventually, in other Great Lakes states.
- Qualitative information from marinas/participants in both the online training and in-person workshops.
- An additional 200 marinas will participate in the Clean Marina programs and an additional 65 marinas will be trained and certified as Clean Marinas in the Great Lakes region.
- Marina operators and others will become more aware of the sources and impacts of marine related pollutants, marine best management practices, and green (clean) marina programs as a result of this project.

**Expected Measurable Results:**
- Estimated number of best practices implemented by participants.
- Number of newly certified marinas, boatyards and harbors in Michigan, Ohio, Wisconsin and other Great Lakes states (as data is available).
- Number of participating marinas, boatyards and harbors, marine industries and regulatory agencies in all workshops, presentations, webinars, training courses and other project efforts.
- Number of Areas of Concern (AOCs) impacted by this project.

**2. Addressing conditions adverse to quality**

In joining the Project Team and/or project groups, participants are made aware of quality assurance protocols and expectations. It is expected that individuals will take responsibility for ensuring quality throughout project implementation. See Section I: Assessment and Response for more information on how we will provide oversight and quality control.
Appendix A: Community Outreach (Regional Project) Coordinator Description

Community Outreach (Regional Project) Coordinator Position Description:
Primary duties involve project coordination, communication and outreach about marinas, coastal land use and other Great Lakes topics. A focus of this position will be to assist in a federal grant-funded effort to develop educational and promotional materials, targeted toward marinas, to prevent water pollution. You will be part of a team dedicated to the protection and sustainable use of the Great Lakes and coastal resources. Activities/responsibilities involved with this position include the following:

Editing, writing, content development (25% effort)
- Revise existing online training materials, including editing best practices, developing surveys, as well as uploading digital photography, sound and video, fact sheets and other media.
- Assist with efforts to increase marina participation in project efforts, including online training and workshops; and with promotion and re-launch of revised online curriculum for marinas.

Project Coordination and Submission of EPA Reports (25% effort)
Ensure timely submission of quarterly reports, including collecting information from project partners. Assist with presentations and surveys. Coordinate work with collaborators in the Great Lakes region, including arranging meetings, assisting with publications, events and other project efforts, as defined. Keep accurate and timely documentation of activities. Follow EPA reporting guidelines, including writing and preparing reports, project plans; and assist with alignment of activities to specific project efforts.

Communications (50% effort)
Work on the production, promotion and distribution of a variety of web and print-based publications, including newsletters, brochures and booklets. Collaborate with a team of communications professionals and other specialists to determine the most effective delivery of messages.

Qualifications required:
Proven experience in project management and ability to work independently and collaboratively with a team of multidisciplinary specialists (e.g., webmaster, multimedia editor, communications director, education specialist). Candidate must be creative, web-savvy, accustomed to developing content for websites, and conducting web-based research. Excellent communications skills are required and include extensive experience in writing, editing, proofreading and crafting audience-specific messages.

Undergraduate degree in science (e.g., biology); excellent communication and writing skills, including web-based content development, social media, and news media outreach; experience assisting workshops; proven web-based research.

Desired: Graduate degree in science writing, communications or related fields.

Required with application: Cover letter, three writing samples and specific examples of project management and coordination.