



Grassy Island Forum II Discussion Record

Wyandotte Boat Club, Wyandotte, Michigan
March 9th; 7 – 9:00pm



Sponsored by:

Detroit River Remedial Action Plan
Detroit River International Wildlife Refuge
Friends of the Detroit River
International Wildlife Refuge Alliance
Wayne County
University of Michigan – Dearborn

The second Grassy Island Forum was held at the Wyandotte Boat Club in Wyandotte, Michigan on March 9, 2006. The event drew an audience of approximately 60 attendees and speakers. The purpose of the forum was to summarize the approach the Service and its partners are taking regarding remedial efforts at Grassy Island, and to report back to the public regarding the progress made in scoping and completing, the remedial investigations necessary to make decisions. To receive more information about Grassy Island, go to: <http://www.fws.gov/midwest/grassyisland>

This discussion record contains summaries of the key discussions and conclusions from the presentations and public comments regarding Grassy Island. The appendices also contain the slides presented and other meeting hand-outs.



PRESENTATIONS:

A copy of the slides used by presenters during their talks are assembled in Appendix A.

A Recap of the December Grassy Island Forum

John Hartig, U.S. Fish and Wildlife Service (Service)

During the first Grassy Island Forum in December, 2005 participants recommended six “next steps” to complete the investigative phase for Grassy Island and move forward in a coordinated fashion amongst the partners. In this second Forum, we are reporting back on the progress made on each of these steps. The six “next steps” identified in the first forum were:

1. Government agencies should agree on the problem and begin scoping out the remaining portion of the investigative phase for Grassy Island (i.e., identify the necessary studies and investigations needed to fill data and knowledge gaps, including assessing human health and wildlife risk, identifying significant release pathways, and evaluating dike wall integrity)
2. Citizens’ groups should undertake a citizens’ visioning exercise to define a “desired future state” for Grassy Island, including both a description of desired uses and features, and a compelling graphic.
3. As the Friends of the Detroit River (FDR) have taken on the responsibility for the Detroit River Remedial Action Plan (RAP), they should make Grassy Island a top priority and demonstrate this by seeking funding support from U.S. Environmental Protection Agency’s Great Lakes National Program Office during 2006 for helping complete the investigative phase for Grassy Island.
4. Biological surveys of Grassy Island should be planned for 2006 to help fill biological data gaps and help better define biological targets for restoration.
5. Grassy Island should be nominated as a priority project as part of the Great Lakes Regional Collaboration
6. Another Grassy Island Forum should be convened in early March 2006 to update concerned citizens, stakeholders, and parties on progress and the strategy for completing the investigative phase for Grassy Island.

The full discussion record of the December meeting can be viewed online at www.fws.gov/midwest/grassyisland

A Citizen’s Vision for Grassy Island

David Howell, FDR & Bruce Jones, International Wildlife Refuge Alliance (IWRA)

On January 31, 2006 a public visioning session for the future of Grassy Island was held at the Westfield Center in Trenton, MI. Approximately 55 people attended that meeting and provided their input on a vision and desired future state of Grassy Island. There were a wide variety of ideas expressed that were then prioritized in order to present a cohesive vision for Grassy Island. It was agreed by citizens that first and foremost we must make sure that contaminants are not being released from the island and that there are no impacts on human and ecological health. Further, because the island is part of the Refuge system, wildlife habitat improvement and management should be a priority. There was also support for providing appropriate recreational opportunities on Grassy Island and its surrounding shoals. The priorities presented were

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classified as being short or long-term in nature, in recognition that the site will not be remediated immediately.

Of the short-term priorities, citizens were interested in seeing habitat improvement within the shoal areas. There were other concerns noted that should be addressed as part of the remedial process, including: determining if contaminants are being released into the Detroit River and if so, contain/prevent further contamination, put signs around the island telling people that the area is off-limits for public use, and determine if additional navigational aides are necessary to prevent future groundings in the shoal area.

There was also a suite of long-term priorities that should be accomplished after contamination issues were addressed. The habitat based ideas included the elimination of invasive plant species, restoration and/or softening of shorelines, and creation of common tern nesting habitat. Priorities for human recreational use after remedial efforts are complete include: a canoe/kayak landing site and a small foot trail on the island.

Interagency Issue Statement Agreement

Stephanie Millsap, Service

Representatives from five State and Federal government agencies signed an issue agreement. In the agreement, our agencies committed to work together towards agreement on information needs and determining future actions. Each agency will do so within their respective authorities and funding. The complete text of this agreement is located within Appendix B. The Service has also written a Frequently Asked Questions (FAQ) sheet that provides answers to commonly asked questions about Grassy Island (Appendix C).

In this cooperative partnership, much has been accomplished during the past few months. Agency scientists and engineers participated in hydrogeological workshops to help prioritize potential release pathways and discuss ways in which releases could be measured. Agency scientists also assisted in providing input on what information needs to be included in an ecological risk assessment. This partnership amongst government agencies is essential to both the investigative and remedial phases of this project.

Completing the Investigative Phase for Grassy Island

This section was comprised of several presentations that were meant to provide a background into the remedial process being used by the Service and its partners, as well as provide updates regarding the technical progress that have been made at the site and provide information for activities that will be occurring in 2006.

Required Components – Lisa Williams, Service

The Service is following Federal and State laws, including the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), that define how remedial actions are supposed to be carried out. A Remedial Investigation and Feasibility Study (RI/FS) is part of that process and meant to provide the foundation for sound decision making. Its purpose is to answer questions such as:

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- What contaminants are present?
- What form are they in and in what concentrations?
- Are they being released from the site?
- Are humans or other organisms being exposed now? In the future? How?
- If so, do the exposures pose a risk?
- If so, what *could* be done to reduce risk and protect human health and the environment?
- What *should* be done?

The RI/FS process consists of scoping (identification of data needs, writing work plans, sampling plans, etc), site characterization (field sampling, laboratory analyses, risk assessments), developing alternatives, screening alternatives using a well-defined process, and finally choosing a preferred remedial alternative. Progress has been made on many of these steps with the support of other government agencies. However, we are not at a point where we have developed or screened potential remedial alternatives.

At many hazardous waste sites, consulting companies complete many RI/FS activities with agency oversight. Recently, the Service contracted Tetra-Tech, Inc. to develop an estimate of what it would cost to have a consulting firm complete many of the RI/FS activities at Grassy Island. Based on their experience, they estimated it would cost \$660,000 - \$1.1 million for a contract to complete all project planning activities, conduct additional investigative studies, perform a human health risk assessment, and write RI/FS reports that summarize all the studies into one cohesive document. The Service does not have the financial resources to have a contractor perform these tasks. However, we are confident that we can get all the necessary RI/FS activities completed for much less, with assistance from our partners. Scientists and engineers from several government agencies have been conducting scoping activities and assisting with the risk assessments. Specific activities will be discussed in greater detail by other speakers tonight.

Release Pathways: HELP Model Results – Pamela Horner, USACE (U.S. Army Corps of Engineers)

The U.S. Army Corps of Engineers, Engineer Research and Development Center (ERDC) in Vicksburg, Mississippi provided technical assistance by providing estimates of seepage and surface water runoff from Grassy Island. ERDC's mission is to conceive, plan, study and execute engineering investigations and research and development studies in support of the civil and military missions of the Corps of Engineers and other federal agencies.

The Hydrologic Evaluation of Landfill Performance (HELP) model is a water balance model that was developed by the USACE under a cooperative agreement with the U.S. Environmental Protection Agency (EPA) to support RCRA and Superfund programs. The HELP model balances the water budget at the ground surface, then routes the infiltrated water throughout the soil profile. The model simulated climatological data, over the course of 30 years, to develop the water balance at the surface and then computed runoff, evapotranspiration, and infiltration.

The HELP model used an average annual precipitation of 30.12 inches based on local meteorological data. Annual average seepage through dikes was predicted to be 0.0016 cubic feet per second (cfs), and annual average runoff flow was predicted to be 0.02 cfs. When expressed on a percentage basis, evapotranspiration accounted for 92.2 percent of the water budget, runoff accounted for 8.6 percent, and seepage through the dikes accounted for 0.6

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percent. Therefore, seepage through dike walls is predicted to be a very low volume release pathway. The report memo is contained within Appendix D.

This spring, the USACE – Detroit District will also be providing technical assistance to the Service in the form of inspecting the dike walls. The inspection will be conducted by an engineer who will follow the protocols laid out in the USACE operations and inspection manual for walled disposal units. The inspection will consist of visually inspecting the outer and inner dike walls, the weir structure, and the interior of the island. The USACE will also provide a report summarizing the inspection findings, complete with any site photographs. This inspection will occur in the spring of 2006, when weather conditions permit.

Quantifying Release Pathways: Stephanie Millsap, Service

A release pathway is the mechanism for transport of a substance from the source area to the air, surface water, groundwater, soil, sediment or biota. Potential release pathways at Grassy Island include soil erosion, surface water runoff, water seepage through the dike walls, direct contact of biota with the contaminated soil, and transport of contaminants through the food chain. This portion of the talk focuses primarily on water movement off of Grassy Island.

In February 2006, scientists and engineers from the Service, USACE, U.S. Geological Survey, EPA, and the Michigan Department of Environmental Quality (MDEQ) were part of a hydrogeological technical workgroup. The purpose of this workgroup was to help determine which water release pathways were likely the most significant and to “brainstorm” which techniques would be the best way to quantify those releases. The HELP model, conducted by the USACE, helped to focus data needs for surface and groundwater pathways by estimating the average dike wall seepage and surface water runoff.

Additional information regarding contaminant concentrations in water leaving the site will have to be collected. Although the HELP model provided estimates of water volume leaving the site, it does not predict the contaminant concentrations in the water leaving the site. Michigan environmental laws require that contaminant concentrations be below certain criteria. For instance, any contaminants found in surface water leaving the site must be below concentrations specified in Rule 57 in order to be in compliance with State law. Members of the technical workgroup made progress in determining how site-specific data regarding contaminant concentrations in water leaving the site would best be collected.

To determine contaminant concentrations in the surface water runoff, it was decided that collecting samples of water as it was leaving the weir structure would be best. The Service will be working with the USGS to conduct that study. By partnering with the USGS, an agency within the Department of Interior, the Service is able to save 12.5% of the total study cost. Although specific study details are not yet finished, it is anticipated that water samples will be taken from the weir structure during rain events. The water will then be sent to a laboratory and analyzed for a suite of contaminants known to occur on Grassy Island. Those results will then be compared to State of Michigan environmental criteria to determine if surface water leaving Grassy Island complies with State regulations. The data may also be used in the ecological risk assessment and the human health consultation. It is anticipated that field work for this study will

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begin in spring of 2006, with laboratory work following, and that a final report will be issued in the winter of 2006.

The workgroup had a more difficult time recommending studies that would be able to measure dike wall seepage or contaminant concentrations in the seepage. At issue is that dike wall seepage is extremely difficult to measure. The dike walls are believed to be made of low permeability materials (i.e. clay), the volume of seepage is estimated to be very low, and the volume of water flowing past Grassy Island is extremely great. A “weight of evidence” approach will be used to evaluate potential contaminant release via dike wall seepage. In this approach, a variety of factors will be taken into account instead of just one study. The Service will continue working with members from the technical workgroup to design specific studies that will effectively address concerns.

Human Health: Joseph Walczak, Michigan Department of Environmental Quality (MDEQ)

In 2006, the Michigan Department of Community Health (MDCH) will be performing a human health consultation for Grassy Island. The purpose of this talk is to explain the role of the Agency for Toxic Substances and Disease Registry (ATSDR) and MDCH, the health consultation process, and specific information that will be included in the Grassy Island health consultation.

The MDCH performs health consultations through a cooperative agreement with the ATSDR. The ATSDR’s mission is to prevent exposure and adverse human health effects and diminished quality of life from exposure to hazardous substances from hazardous waste sites and hazardous waste releases. The MDCH performs the health consultation, which is then reviewed and approved by the ATSDR.

The health consultation process is meant to accomplish the following goals for a site:

- Provide advice on specific public health issues related to real or possible human exposure to toxic material
- Evaluate information available about toxic material at the site, determine whether people might be exposed to it, and report what harm exposure might cause
- Provide recommendations to prevent further exposure or identify the need for additional information.

Sources of information for Grassy Island’s health consultation will include site visit information, preexisting contaminant data from the site, health outcome data, community knowledge of the site and their concerns. The information will be used to determine which exposure routes are complete, extent of exposure, and what health effects are associated with the level of estimated exposure. The health consultations will use all of this information to make conclusions about the public health hazard and provide recommendations that will ensure the protection of the public’s health in regards to the Grassy Island site.

Christina Bush, a toxicologist with the MCDH, will be conducting the health consultation for the Grassy Island site. She can be reached by phone (517-335-9717) or via email (bushcr@michigan.gov).

Ecological Risk: Stephanie Millsap, Service

The purpose of an ecological risk assessment (ERA) is to investigate actual and potential impacts of contaminants from the Grassy Island site on plants and animals. There are two types of ERAs based on the level of detail: a screening level ERA and a baseline ERA. The screening level ERA is the most basic and provides a general indication of risk while focusing the efforts of further investigations on contaminants that are likely to adversely impact biota. A baseline ERA is more refined than a screening level ERA. The baseline ERA can be used to more fully characterize risks to the environment, establish clean-up levels, and evaluate impacts of the alternative remedial options.

A screening level ERA will be conducted for Grassy Island prior to conducting a baseline ERA. Risks will be evaluated for plants, invertebrates, reptiles, mammals, and birds. The components the screening level ERA are as follows:

- Identification of fate and transport mechanisms
- Identification of likely ecological receptors
- Identification of assessment and measurement endpoints
- Selection of ecologically-based benchmarks/screening criteria
- Comparison of contaminant concentrations to benchmarks/screening criteria
- Baseline Problem Formulation

The Service is currently working on the screening level ERA, and a final report is expected to be finished in Winter 2006, after MDEQ reviews and approves the document. After the screening level ERA is completed, a baseline ERA will be conducted. It will use results obtained from biological surveys and other investigative studies. However, if existing data is insufficient, some limited sampling may occur in the spring of 2007.

Biological Surveys

Bruce Jones, IWR Alliance

There are a number of biological surveys that will be conducted on Grassy Island during 2006. They will be conducted by local botanists and biologists who are well known in our community. They include Suzan Campbell, Tony Reznicek, and Julie Craves among others. There are plans for four biological surveys in 2006: birds, plants, mussels, and reptiles/amphibians. Two of the surveys are part of larger Refuge-wide surveys while two are entirely volunteer efforts.

Involvement of the Detroit River Area of Concern Public Advisory Committee

Charlie Bristol, Friends of the Detroit River

The Detroit River Area of Concern, Public Advisory Committee (PAC) has recently been formed to assist the MDEQ and EPA with the Remedial Action Plan process for the Detroit River Area of Concern. Membership in the PAC consists of citizens representing a wide range of interests including local government, businesses, industries, and environmental groups. The PAC has been in the process of adopting bylaws, electing officers, and forming committees. However, it is also committed to helping the remedial efforts at Grassy Island. Ways in which the PAC envisions being of assistance is by identifying and pursuing grants. These grants could be for specific investigative studies that need to be conducted as part of the remedial investigation or

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looking further ahead to the future to help fund on the ground remediation and restoration activities after acceptance of a proposed plan.

Great Lakes Regional Collaboration

Lisa Williams, Service

The Great Lakes Regional Collaboration is a cooperative effort to design and implement a strategy for the restoration, protection and sustainable use of the Great Lakes. A wide variety of stakeholders have been involved including, the federal Great Lakes Interagency Task Force, the Council of Great Lakes Governors, the Great Lakes Cities Initiative, Great Lakes tribes and the Great Lakes Congressional Task Force. Recently, a strategy document for achieving the goals was released. Currently, the Interagency Task Force is drafting a Work Plan for fiscal years 2006 and 2007. The Service nominated Grassy Island for inclusion as part of this work plan.

Summary

Stephanie Millsap, Service

During the past three months, significant progress has been made on all action items from the last Grassy Island Forum. An aggressive schedule has been set to make progress on completing the investigative phase of remedial action at Grassy Island. Several investigative studies will be taking place in 2006, including surface water runoff investigations, inspection of dike walls, biological surveys, ecological risk assessment, and a human health consultation. Results from these various studies will be used to write the entire Remedial Investigation and Feasibility Study Report. The support from our partners has been, and will continue to be, critical to the success of the remedial process. Information regarding Grassy Island can be found either online (www.fws.gov/midwest/grassyisland) or at the Bacon Memorial Library in Wyandotte.

AUDIENCE QUESTIONS AND CONCERNS:

Staff from the Service, MDEQ, EPA, USGS, and USACE answered audience members' questions afterwards. Although not comprehensive, the following represents a list of questions and concerns regarding progress:

- Citizens have observed people picnicking and camping on Grassy Island. What efforts will be taken to prevent public access to the island?
- What impact would the material used to construct the dike walls have on the HELP model output?
- How has funding for Grassy Island been used, and could the Service provide additional information regarding budget information?
- If it were necessary, could the U.S. EPA's Research Vessel "Mudpuppy" be made available?
- Vessels have grounded in the shoals immediately north of Grassy Island, what navigational aides are currently present and are they sufficient to prevent future groundings?

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NEXT STEPS:

The following is a “road map” of the next steps that will be underway in 2006 in order to complete the investigative phase for Grassy Island:

- Thorough dike wall inspection of Grassy Island, Spring 2006
- Further scoping of dike wall seepage, Spring 2006
- Surface water pathway investigation, Spring – Winter 2006
- Human health consultation, Spring – Winter 2006
- Biological surveys (4), Spring – Winter 2006
- Screening level ecological risk assessment, Spring – Winter 2006
- Baseline risk assessment, Winter 2006 – 2007

Based on citizen’s questions and concerns, the following tasks will also be accomplished:

- “Do not enter” signs will be placed on Grassy Island, Spring 2006
- A memo will be written to explain how Grassy Island funds have been spent, Spring 2006 (Appendix E)
- The Service will meet with the U.S. Coast Guard to get additional information regarding vessel groundings in the vicinity of Grassy Island and adequacy of existing navigational aides, Spring 2006

APPENDICES:

- Appendix A: Copy of all Microsoft Powerpoint slides used by presenters during the Forum.
- Appendix B: Grassy Island Issue Statement
- Appendix C: Grassy Island Frequently Asked Questions
- Appendix D: Memorandum Report entitled “Leachate Seepage and Surface Runoff from the Grassy Island, Wayne County, MI”
- Appendix E: Grassy Island Budget Memorandum