

Minutes
Herring River Restoration Committee (HRRC)
Cape Cod National Seashore Headquarters
Wellfleet, MA
January 8, 2014
9:30 am-5:00 pm

Members Present: Gary Joseph, Tim Smith, Hunt Durey, Eric Derleth, Steve Spear, Steve Block, Charleen Greenhalgh, Hillary Greenberg

Others Present: Margo Fenn, Don Palladino, John Portnoy, Nils Wiberg, Kirk Bosma, Alan Platt, Jack Whalen, Stu Harris, Ted Castro-Santos, Martha Rheinhardt

Administration/Coordination:

Margo Fenn introduced Martha Rheinhardt, the new Project Management Associate for the Friends of Herring River (FHR).

Communications/Coordination with Friends of Herring River (FHR): Don Palladino reported on FHR activities. He asked the Committee about the process for reviewing and approving contractor invoices, going forward. The Committee agreed that Tim Smith should review all invoices. In addition, the HRRC member representing the funding source for specific project activities should be consulted. The group discussed how to allocate costs among shared funding sources, and agreed that it generally makes sense to split the costs of invoices between the applicable grants.

The Committee discussed working with FHR to submit a grant proposal to the Corporate Wetlands Restoration Partnership (CWRP) to fund additional hydrodynamic modeling runs. The new model runs would evaluate the effects of installing tide control at Pole Dike Road. Kirk Bosma agreed to provide a scope of work and cost estimate for the WHG to perform the needed model runs. Martha Rheinhardt offered to help draft a grant proposal to CWRP.

Don Palladino reported that he would give a project update to the Wellfleet Selectmen at their January 14, 2014 meeting.

Approval of Minutes: The Committee voted unanimously to approve the minutes of the December 5, 2013 meeting.

Schedule of Meetings: The Committee agreed to the following schedule for upcoming meetings:

January 22, 2014:	MOU III Working Group Meeting
February 13, 2014:	HRRC regular meeting
March 13, 2014:	HRRC regular meeting

Discussion:

Woods Hole Group (WHG) Modeling Report for Chequessett Neck Road bridge and tide gates: Kirk Bosma provided the Committee with a presentation on the WHG's latest hydrodynamic modeling efforts. The purpose of this analysis is to assess the response of the Herring River system to various tide gate and fixed panel configurations at the Chequessett Neck Road bridge. The goal is to optimize both the adaptive management ability and cost of the proposed design. The analysis included the following components/steps:

1. Simulations to determine the number of tide gates and number of full panels needed;
2. Evaluation of the width of individual tide gates and panels within the structure;
3. Evaluation of the types of tide gates needed;
4. Analysis of the location/position of tide gates and panels in the structure; and
5. Operations and adaptive management simulations to determine response to various opening combinations based on the final design recommendations developed in the previous steps.

Bosma presented some of the results of the modeling scenarios, noting that once mean high water reaches an elevation of 4.0 feet (NAVD), larger opening sizes in the bridge would have less significant changes in water surface elevation, and smaller influence throughout the system. Eight slide gates are needed to provide operational control until the 4.0-foot water elevation is reached. WHG evaluated both effects on high tides and low tides with different opening configurations. Bosma noted that it makes a big difference in drainage capability to have broad horizontal openings. In order to ensure that low-tide levels are at least maintained at current levels, at least two flap gates would be needed in the new structure. Bosma recommended using combination slide/flap gates for this purpose.

The WHG Report recommends:

- A maximum number of 8 slide gates are required to accurately control the water level prior to being able to remove full pre-cast concrete panels. More gates could be used; however, additional gates do not add any significant operational control.
- Two of the recommended 8 slide gates should be combination slide/flap gates to provide increased control of the low water, mean tide level, and tidal range within the Herring River system. The combination gates, specifically the gate component allowing for additional flow out of the system, provide the ability for non-linear exchange of water flux. Therefore, the flap components provide ability to shift the mean tide level and allow for increased drainage capacity if desired.
- An additional slide gate (9th gate) was added to the dike system for redundancy, in case of a gate failure or required maintenance on the primary gate(s).
- The sixteen (16) pre-cast concrete panels are intended to be operated in the later stages of the

restoration program (following attaining mean high water levels over approximately 4.0 feet NAVD88). At these later stages of the restoration design, concrete panels can be fully removed and have a less significant impact on the water levels within the system.

The Committee discussed these recommendations and asked that WHG provide more detail about the model output. The group discussed how to ensure that water surface elevations do not exceed stipulated levels after the concrete panels are fully removed. The group also briefly discussed how to configure the gates to optimize conditions for fish passage.

Fuss & O'Neill Update: Nils Wiberg provided the Committee with an update on Fuss & O'Neill's recent work. The geotechnical investigations at the Chequessett Neck dike went well, and the borings confirmed that there are good soil conditions for constructing a new bridge in this location. Fuss & O'Neill is working with the MA Department of Transportation (DOT) to set up a meeting to review the proposed bridge design. The goal is to have this consultation meeting in late January or early February.

The proposed schedule for upcoming work is to meet again with the HRRC in February to refine the bridge design and consider MA DOT's feedback. Then, WHG and Fuss & O'Neill will conduct a scour analysis and design (during February and March) and prepare the 25% design drawings and construction cost update (during April and May). The required MA DOT filings are part of the deliverables under this contract. Don Palladino reminded the group that the Massachusetts Environmental Trust (MET) grant that is funding this work has a completion deadline of June 30, 2014.

Nils Wiberg briefly reviewed the proposed bridge design. He noted that the parapet wall and walking path (both previously designed to extend in both directions along the embankment crest outside the bridge structure's footprint) have been removed from the design. Kirk Bosma noted that the bridge design should be adaptable to allow these parapet sections to be readily constructed at some future date, if needed. Hunt Durey noted that the design might need to address storm water management. The Committee discussed the visual effects of different tide gate designs. There are tradeoffs between visual impacts and maintenance costs: Higher tide gate stems enable easier inspection and maintenance. This is an issue that should be discussed with Wellfleet town officials.

Nils Wiberg also reported on his research about methods for accessing the Mill Creek dike site for geotechnical investigations. He has received several cost estimates for different methods of installing mats to support the needed drilling equipment. The Committee discussed the process for conducting the geotechnical work for Mill Creek. A Request for Determination of Applicability (RDA) must be filed with the Wellfleet Conservation Commission. If this is filed in January, it would be possible to have a hearing in February and then conduct the work in March. Permission is needed from the Chequessett Yacht and Country Club (CYCC) in order to access the site. Jack Whalen offered to go out to the site with Nils Wiberg. When a cost estimate is available for the needed work, the HRRC and FHR can modify the NOAA grant scope of work to provide funds for this purpose.

Hillary Greenberg offered to work with Nils Wiberg to prepare a RDA application and schedule a hearing before the Conservation Commission. Nils Wiberg will consult with CYCC officials

to obtain permission to access the Mill Creek dike site through CYCC property. He will provide FHR and HRRC with a cost estimate for the proposed work and work with Don Palladino to make any needed modifications in the contract with FHR.

FEMA Mapping: Steve Spear reported that the modeling subcommittee had had a conference call to discuss the relationship between the recently released FEMA flood maps and the hydrodynamic model for the Restoration Project. Kirk Bosma noted that some Massachusetts communities have challenged the new FEMA maps, and the Massachusetts Congressional delegation has sent a letter to FEMA questioning the methodology that was used to predict “wave set-up”. The Committee briefly discussed this issue and agreed that it would be helpful for the modeling subcommittee to review the storm data from the WHG hydrodynamic model. Kirk Bosma agreed to provide the storm data to the HRRC. The modeling subcommittee will schedule a meeting to discuss this further.

National Fish and Wildlife Foundation (NFWF) Grant: The Committee discussed a draft scope of work for an upcoming NFWF grant application. Ted Castro-Santos, a fisheries biologist and Adjunct Assistant Professor at the University of Massachusetts provided the group with a brief presentation on two monitoring projects in Wellfleet Harbor, one for terrapin and the other for river herring. He noted that he had received partial funding from a USGS grant to conduct the herring monitoring project, but additional funds are needed to acquire the necessary equipment to measure predator activity and herring movement in the harbor and in Herring River. With additional funding (approximately \$75,000) he would be able to monitor fish and predator activity both above and below the new Chequessett Neck Road bridge, as well as at upstream culverts. He expressed some concerns about fish passage through the new tide gates, noting that abrupt changes in light and velocity can be deterrents to passage. He stressed the importance of establishing good data on baseline conditions prior to beginning the adaptive management process.

The Committee discussed several other potential elements to be included in a Friends of Herring River (FHR) grant proposal to NFWF including:

- Design, permitting and replacement of culverts at Old Kings Highway (OKH)
- Design plans for the Mill Creek dike and tide gates
- Design plans for raising Pole Dike Creek Road and installing a new culvert/tide gates
- Monitoring of state-listed rare species
- Friends of Herring River program management

There are two grant categories under the NFWF grant program: One for project planning and the other for project implementation. Projects can be bundled to include both types of activities. Don Palladino reported that the Town of Wellfleet was planning to submit a grant application for Mayo Creek restoration and oyster propagation in Wellfleet Harbor, in connection with the Town’s wastewater management plan. The Committee discussed whether to try to merge the town and FHR grant applications and concluded that the projects were different and would make more sense as separate proposals. The Committee discussed the process for preparing the grant

application, including letters of support from key organizations and public officials.

Tim Smith agreed to draft the NFWF application. Don Palladino will seek a cost estimate for the OKH culvert replacement (design, permitting and construction). Don Palladino and Martha Rheinhardt will prepare a list of key organizations and individuals from whom to request letters of support, and draft a sample support letter for those organizations to use. Once the application is finalized, Martha Rheinhardt will submit it to NFWF online.

Low-lying Properties: The Committee reviewed recent contacts and discussions with low-lying property owners and discussed the process for selecting a contractor to provide engineering/design services for conceptual design of low-lying property impact prevention. Proposals from interested consultants to the Request for Responses (RFR) are due on January 9, 2014.

Don Palladino and Martha Rheinhardt agreed to review proposals to ensure that they comply with the minimum requirements of the RFR. A subcommittee of the HRRC (including Tim Smith, Eric Derleth, Steve Block and Steve Spear) will work with FHR officials to evaluate the proposals and select the consultant. Tim Smith offered to prepare an evaluation spreadsheet for the subcommittee to use.

Margo Fenn reminded the Committee that a follow up letter is still needed to those structurally affected property owners who did not respond to the October 2012 letter. In addition, she suggested that the Committee send a newsletter update on the Restoration Project to all affected property owners, referencing the new FHR website and Facebook page. This could be in conjunction with the distribution of the periodic FHR newsletter.

Margo Fenn and Tim Smith agreed to prepare letters to the structurally affected property owners who have not yet responded. Margo Fenn will work with Don Palladino to develop a newsletter update to be sent to all property owners.

FEIS/EIR Issues: Mark Husbands joined the meeting by phone. The Committee discussed the NEPA review process and how to craft the final Preferred Alternative. The group noted that installing tide control for Upper Pole Dike Creek would modify somewhat the Preferred Alternative D as it was set forth in the Draft EIS/EIR. However, this is within the scope of the impacts described in the DEIS/EIR. The long-range goal is still to seek full restoration in this basin, but tide controls at Pole Dike Road might be needed to limit water surface elevations in order to protect low-lying properties, if acceptable site-specific flood-prevention measures cannot be found.

Margo Fenn reported that she and Tim Smith and Mark Husbands had begun drafting the Concern/Response Report for the Final EIS/EIR. This is the vehicle for responding to public and agency comments on the DEIS/EIR. The NEPA process going forward involves multiple steps, including:

- Drafting the Final EIS/EIR

- HRRC Review

- CCNS Review
- Regional NPS Review
- Drafting of a Notice of Availability (NOA)
- Publishing the NOA in the Federal Register
- 30 day review period
- NOA for the Record of Decision (ROD)
- Issuance of the ROD

Margo Fenn noted that the MEPA/Cape Cod Commission process also has numerous required steps. She and NPS officials are consulting with MEPA to clarify and coordinate the process. Hunt Durey suggested that the HRRC also consult with the Cape Cod Commission about the Development of Regional Impact (DRI) process.

Margo Fenn, Tim Smith and Mark Husbands agreed to schedule a conference call with Holly Johnson of MEPA. Margo Fenn will provide the draft Concern/Response Report to HRRC members and request help from individual members to draft pertinent sections of the responses.

Update on MOU III Development/Legal Consultation: A report from the law firm of Anderson & Kreiger is expected in mid-January. The MOU Working Group will meet to review this report on January 22, 2014.

Other Business: Hunt Durey reported that the MA Division of Ecological Restoration (DER) would release a report on the economic effects of wetland restoration projects in mid-January.