

Minutes
Herring River Restoration Committee (HRRC)
Cape Cod National Seashore Headquarters
Wellfleet, MA
July 10, 2014
9:30 am-5:00 pm

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

Others Present: Margo Fenn, Martha Rheinhardt, Don Palladino, Nils Wiberg

Administration/Coordination:

Communications/Coordination with Friends of Herring River (FHR): Don Palladino provided an update on FHR activities, as follows:

The Friends of Herring River marched in the 4th of July parade. The FHR video is playing in the beach sticker office and will be shown on Wellfleet public access TV as well. There was a modern dance performance on the Chequessett Neck Road dike on July 9, 2014, which was videotaped.

The Annual Meeting is planned for August 19, 2014. The program will include presentations on river herring, the Chequessett Neck Road (CNR) bridge and tide gate design, and adaptive management.

Don Palladino also noted that he had requested time on the August 12, 2014 Wellfleet Board of Selectmen's agenda to give them an update on the design plans for the CNR bridge.

The group reviewed the status of the following grants:

National Oceanic and Atmospheric Administration (NOAA): Year 1 funds (\$300,000) are now fully committed; Year 2 funds (\$752,000) have been awarded. Margo Fenn noted that the Committee would discuss allocation of Year 2 funds in light of new funds now available from the FY15 Massachusetts capital budget. Funds may need to be reallocated among the tasks in the NOAA scope of work. Melanie Gange noted that this is acceptable, but FHR needs to let her know about any proposed modifications.

Massachusetts Environmental Trust (MET): This \$50,000 grant was awarded for the 25% design plans for the CNR bridge and tide gates. Final deliverables must be submitted to MET by the end of July. Fuss & O'Neill is completing the 25% design plans.

Corporate Wetlands Restoration Partnership (CWRP): A contract and notice to proceed has been approved for the Woods Hole Group (WHG) to do hydrodynamic

modeling of tide control at Pole Dike Creek Road. WHG has submitted a new schedule for completing the work, with a final report due on October 17, 2014.

Massachusetts Bays Program (MBP): Survey plans for the Old Kings Highway and Patience Brook road crossings have been completed. Stantec is performing this work and will provide a cost estimate for further design and construction. Don Palladino noted that FHR did not receive a grant award under the National Fish and Wildlife Foundation's Coastal Resiliency program, so other grant funds will need to be sought to construct new crossings at Old Kings Highway and Patience Brook.

MA Division of Ecological Restoration (DER): The FY14 grant for Project Coordination has been completed. The amended contract was for \$69,950 and includes low-lying property survey work and meeting consultations and wave analysis for the CNR bridge. A new Project Coordination grant has been approved for FY15.

Public Outreach: Don Palladino noted that FHR had received questions from a former Wellfleet Selectman, and a Wellfleet resident who owns property off Bound Brook Road. Hillary Greenberg and Don Palladino agreed to follow up.

Approval of Minutes: The Committee voted unanimously to approve the minutes of the June 18, 2014 meeting.

Meeting Schedule: The Committee agreed upon the following schedule for upcoming meetings:

July 17, 2014	MOU Working Group meeting
August 19, 2014	HRRC regular meeting and Friends of Herring River Annual Meeting
August 20, 2014	HRRC regular meeting
September 17, 2014	HRRC regular meeting (if needed)
September 18, 2014	HRRC regular meeting

Fuss & O'Neill: Mill Creek Dike: Nils Wiberg reviewed the Mill Creek Dike Structural Alternatives Analysis, noting that there had been some narrative revisions in the Technical Memorandum as well as an update in the site plan for the single wall alternative. Fuss & O'Neill added an at-grade stabilized access route to the wall design and revised the cost estimate. The single wall alternative is still less expensive than the earthen dike alternative and causes considerably less ground disturbance.

Since the Mill Creek dike would be located on National Park Service (NPS) land, the conceptual dike designs will need to be reviewed and approved by NPS engineers. Tim Smith noted that he would meet with the NPS Northeast Regional Director to discuss this. The Committee agreed that the Mill Creek Structural Alternatives Analysis is complete and that the Conservation Law Foundation (CLF) grant from Restore America's Estuaries (RAE), which funded this work, could now be closed out.

Fuss & O'Neill: Chequessett Neck Road (CNR) Bridge Design: Nils Wiberg

reviewed a number of changes in the design plans for the CNR bridge and tide gates, including:

- Raising the fishing platforms to be at the same elevation as the rest of the bridge structure;
- Reducing the size of the platforms slightly (since there is no longer a need for steps or ramps);
- Adding scour protection around the tide gates;
- Revising the stormwater management system;
- Realigning the cross-walks to line up with openings in the pedestrian barriers;
- Providing a designated location for a portable generator; and
- Adding a note about boating safety and the need for a portage area.

He noted that there are some items that will need to be decided with the Town of Wellfleet at a later date, such as whether to extend the guardrails to the end of the embankment and/or extend the below-ground utilities beyond the bridge. The Town and National Park Service will also need to decide where the construction staging area(s) will be located.

Nils Wiberg presented the findings of the wave analysis, prepared by the Woods Hole Group (WHG). The WHG report concluded that the maximum wave heights expected to propagate to the CNR dike are approximately 1 to 2 feet with wave periods of approximately 2-3 seconds. These waves are expected to be rare, locally generated wind waves that occur during high wind conditions from atypical storm directions. In addition, wave setup associated with these waves will be small, less than 3 inches. These parameters can be used to adjust the design of the dike as necessary; however, it is expected that waves will have little influence on the structure at this location. The storms for this area will be dominated by the total still water elevation (tide plus storm surge) that will be produced downstream of the dike.

Nils Wiberg noted that it would be 50 to 75 years before storm protection measures would be needed for the new bridge, but suggested that stone armoring at the top of embankment slope and crest areas immediately adjacent to the bridge structure (within current limits of work) would provide needed additional protection of the bridge in light of projected sea level rise, leaving a decision about the potential need to armor upper slope areas on remaining portions of the embankment for a future date when sea level rise projections are more accurate. HRRC members suggested that the plans be amended to show potential portage locations and concurred that the additional stone armoring of the embankment slopes would be a good idea.

The Committee discussed creating a 3D model to illustrate what the new structure would look like from various vantage points. Fuss & O'Neill will prepare a SketchUp model and enhance it with rendering software to show the bridge structure both with and without the tide gates and panels, and to place the bridge within Google Earth mapping to provide a dynamic view of the structure with aerial imagery and topographic landforms as a background. The model will be presented at the Friends of Herring River Annual Meeting in August. The group discussed what to cover in the CNR bridge presentation.

Budget and Work Plan for FY 2015: The Committee had a lengthy discussion of the upcoming work program for FY 2015. There is funding available from two key sources (\$752,000 from the NOAA Grant Year 2 and \$675,000 from FY15 MA State Capital Fund) to complete many elements of the needed engineering design for the Project. The Committee needs to refine a work plan to utilize these funds, with a goal of bringing all key Project infrastructure elements to permit-ready design. The group reviewed the status of each element and made some initial recommendations as follows:

CNR Bridge and Tide Gates: The 25% design plans will be completed by Fuss & O'Neill by the end of July and submitted to the MA Department of Transportation (DOT) for review. DOT review will likely take several months. It is estimated that preparing the 75% plans will take approximately 6 months. The group agreed that Tim Smith should be the technical liaison with Fuss & O'Neill for this work.

High Toss Road Removal: Earlier this year, the Town of Wellfleet did some research regarding High Toss Road and found the original road layout from 1847, which shows the causeway. While Cape Cod National Seashore owns the underlying land, the Town has a road easement across it.

The Wellfleet Board of Selectmen discussed the need for the road and concluded that it could be discontinued as a public way. There are two ways to do this: One approach would be to simply discontinue maintenance of the road; the other way is to formally abandon the right of access, which would require Town Meeting approval. The Selectmen would prefer to have Town Meeting authorize the discontinuance of the road. This could be proposed at the 2015 Annual Town Meeting.

Fuss & O'Neill provided a rough cost estimate of \$70,000 to \$80,000 to design the removal of High Toss Rd. The Committee discussed possible approaches to providing pedestrian access across the floodplain when the road is removed. The next step is to prepare conceptual design plans for road removal and options for pedestrian access. Since both the Town and NPS have legal interest in the road, both entities must be consulted about the process and acceptable options.

Other Road Work: Portions of Old County, Bound Brook and Pole Dike Roads will need to be elevated as part of the Restoration Project. There are several culverts that need replacement and a new tide gate will be installed at the Pole Dike Creek road crossing. CLE Engineering prepared conceptual plans for raising these road segments in 2011. The next step is to prepare 25% design plans. These are all town roads so the Wellfleet Department of Public Works (DPW) needs to be involved. HRRC and FHR need to develop a Request for Proposals (RFP) to select a contractor for this work.

Hillary Greenberg offered to check with DPW Director Mark Vincent to see if the town has a template to use for the needed survey and engineering work. Steve Block offered to be the HRRC technical liaison for the roadwork contract. Others may need to assist with the preparation of the RFP.

Chequessett Yacht and Country Club (CYCC) Golf Course: In 2010, the Louis

Berger Group (LBG) and golf course designer, Howard Maurer prepared a routing plan for the CYCC golf course. Under this plan, HRRC and CYCC agreed upon a conceptual plan to fill the lower fairways of the golf course to raise them above projected tide levels in Mill Creek. HRRC members had some cost-sharing discussions with the CYCC leadership at that time, but no formal agreements were reached.

The next step for this plan would be to develop a full grading plan for elevating the course and making other improvements needed to flood-proof the property. The Committee discussed the idea of engaging a third-party facilitator to develop a formal agreement with CYCC regarding the plans for the golf course. Hunt Durey suggested seeking help from the Consensus Building Institute (CBI) or a similar organization that provides negotiation and conflict-resolution services. Funding for these services could come from the FY15 State Capital Fund.

Mill Creek Dike: Fuss & O'Neill has recently completed a Mill Creek Dike Structural Alternatives Analysis, evaluating costs and feasibility of two different types of dike structures (an earthen dike or a steel single-wall structure) in Mill Creek. Since the Mill Creek dike and tide gates would be located on National Park Service (NPS) land, any dike designs must be reviewed and approved by NPS engineers.

Low-lying Property Impact Prevention: Under the NOAA Grant, FHR has begun a program of surveying and engineering for affected low-lying private properties. FHR hired the Louis Berger Group and its subcontractor Slade Associates to prepare survey plans and wetland delineations for ten properties in the lower basins of the estuary. Further work is needed to design flood-prevention strategies for these properties and to complete similar work for other affected properties elsewhere in the system. Part of this effort will be to develop legal agreements with affected property owners to permit needed mitigation work such as moving wells, constructing flood berms, raising driveways and similar activities on private property.

Permitting: The Final EIS/EIR for the Restoration Project is due to be completed by the end of 2014. Once this process is completed and a Record of Decision is approved, the Project can begin the state and federal permitting processes. The Cape Cod Commission regulations call for the Project to begin formal Development of Regional Impact (DRI) review following issuance of the final MEPA Certificate from the MA Secretary of Energy and Environmental Affairs. Engineering and legal help will be needed to prepare the DRI application.

Cultural Resources: The National Park Service (NPS) has developed a draft Programmatic Agreement (PA) with the Massachusetts Historical Commission to guide the identification, evaluation, and protection of potential archeological resources that may be within the area of potential effect of the proposed Restoration Project. In 2011, the Public Archaeology Lab (PAL) prepared a Phase 1A survey under Section 106 of the National Historic Preservation Act. The next step is to conduct Phase 1B field investigations in potential areas of construction disturbance. NPS is developing a scope of work for these investigations. The Committee discussed the needed work and agreed

that it would make sense to develop a consulting contract with several tasks covering several different locations for archaeological investigations.

Project Management: The Committee briefly discussed what kind of staffing would be needed to oversee Project activities over the coming year. Margo Fenn and Don Palladino agreed to outline an administrative/staffing proposal for FHR to manage upcoming work tasks and prepare a draft scope of work for use of FY15 State Capital Funds.

The Committee discussed a few other tasks that will possibly need funding in the coming year including vegetation management, sediment sampling, modeling work to link together hydrodynamic and ecosystem models and possibly a climate change risk assessment.

Adaptive Management: USGS experts Dave Smith and Jill Gannon joined the meeting by phone to discuss a draft decision structure report that they prepared to summarize the May workshop sessions on Adaptive Management. The Committee discussed the draft report and agreed that while the objectives are clear, further work is needed to articulate alternative strategies for tide gate openings and secondary actions. The group discussed several possible ways to structure the alternatives. For example, maximizing water quality improvement, tidal range or sediment deposition could each drive management choices, but there will likely be tradeoffs between these goals. The Committee discussed how to handle decision-making in light of uncertainties. Monitoring and learning about system responses in the early phases of the tide gate openings will help improve predictions over time.

Dave Smith noted that there is no fixed number of alternative strategies to evaluate, but it's important to evaluate the full range of possibilities. Strategies for tide gate openings could also be pared with secondary actions (like vegetation removal) for evaluation, and actions could differ for different sub-basins of the estuary.

HRRC members agreed to review the report and get any comments or suggestions to Tim Smith and Margo Fenn. Dave Smith and Jill Gannon will refine the report. Tim Smith and the USGS team will develop a revised Adaptive Management Appendix for inclusion in the Final EIS/EIR.

Low-Lying Properties: Martha Rheinhardt reported that LBG and Slade Associates had submitted survey plans for ten low-lying properties. HRRC members need to review these plans to make sure that they contain adequate and correct information.

Documents Referred to in the meeting:

- Minutes of the June 18, 2014 HRRC Meeting
- Draft Decision Structure for Adaptive Management, July 23, 2014