

Project Steering Committee Kickoff Meeting Notes
Wood-Pawcatuck Watershed Flood Resiliency Management Plan
March 26, 2015

Attendees:

- Denise Poyer, Wood-Pawcatuck Watershed Association
- Chris Fox, Wood-Pawcatuck Watershed Association
- Ernie Panciera, Rhode Island Department of Environmental Management
- Carla Feroni, Connecticut Department of Energy and Environmental Protection
- Liz Ahearn, United States Geological Survey
- Gardner Bent, United States Geological Survey
- Wendy Gendron, U.S. Army Corps of Engineers
- John O'Brien, The Nature Conservancy
- Joe Warner, The Town of Charlestown, RI
- Jim Lamphere, The Town of Hopkinton, RI
- Ron MacDonald, The Town of Hopkinton, RI
- Henry Oppenheimer, The Town of Richmond, RI
- George Crouse, The Town of Stonington, CT
- Scot Deledda, The Town of Stonington, CT
- Keith Brynes, The Town of Stonington, CT
- Judy Benson, The (New London) Day
- Erik Mas, Fuss & O'Neill, Inc.
- Maren Frisell, Fuss & O'Neill, Inc.
- Nils Wiberg (phone), Fuss & O'Neill, Inc.

Welcome and Opening Remarks (Denise Poyer)

- WPWA's mission: to preserve and protect the lands and waters of the Wood-Pawcatuck watershed for natural and human communities
- Introduced the importance of studying flood resiliency

Introductions (Erik Mas)

- Reviewed agenda and meeting purpose
- Introduced the project team and steering committee
 - Everyone in the room introduced themselves

Steering Committee Role and Expectations (Erik Mas)

- 2-Year Grant Agreement
- Several Steering Committee meetings to occur throughout the project timeframe
- Draft project deliverables to be distributed to the Steering Committee
- Looking for local knowledge and expertise from Steering Committee members
- Funding/ Grant
 - Grant application to U.S. DOI National Fish and Wildlife Foundation (NFWF)
 - Grant program to help communities affected by Hurricane Sandy
 - Enhance flood resiliency and benefit natural fish and wildlife systems, water quality, etc.
 - Goal: develop an eco-system-based flood resiliency plan for the watershed

- One of very few grants awarded; two related projects awarded in RI:
 - Grant awarded to the Narragansett Tribe to enhance resiliency on tribal lands in the watershed
 - 2 Grants awarded to URI to look at flood resiliency and community planning in Newport, West Warwick, and North Kingstown
 - Our project will incorporate information from these two related, parallel projects to the extent possible

Project Background and Objectives (Erik Mas)

- Goal: consider the entire watershed to increase resiliency using natural ecosystem-based approaches by completing two tasks:
 - Assessing vulnerability to flooding and storm-related damage
 - Developing a watershed-based management plan to enhance flood resiliency and strengthen natural ecosystems
- Importance of working together to develop a comprehensive watershed-wide plan and to prioritize limited financial resources
- Types of flooding to be considered
 - Riverine flooding (primary focus)
 - Urban drainage flooding (secondary focus; this project is not a drainage study)
 - Coastal flooding (Pawcatuck estuary)
- Approach to look at four general areas:
 - River corridors
 - Vulnerable settlements
 - Safer areas
 - The whole watershed

Wood-Pawcatuck Watershed Overview (Erik Mas)

- History of flooding in Wood-Pawcatuck Watershed
 - April 2010, landmark flood event in RI including the Wood-Pawcatuck watershed
 - Increased frequency of extreme storms in New England
- Watershed Overview
 - Geography
 - Geologic history
 - Subwatersheds/tributaries
 - Current and historic land use
 - Factors that control/cause flooding
 - Floodplain development
 - Channel encroachment
 - Impervious cover
 - Climate change (frequency of intense storms)
 - Natural Resources
 - High-quality and diverse habitat
 - Generally very good surface water quality
 - Some impaired waterbodies (primarily due to elevated levels of fecal indicator bacteria)
 - Sole source aquifer for drinking water within watershed

- Wild and Scenic Designation under study by the National Park Service

Work Plan Review – Project Scope and Schedule (Erik Mas)

- Work Plan (Handout)
 - Baseline watershed assessment
 - Watershed technical evaluations
 - Stream geomorphic assessment
 - Specific stream reaches (38 miles) for detailed field assessment have not yet been identified; priority ranking is currently being completed and will be distributed to the steering committee for review and comment
 - Bridge, culvert and dam assessment
 - A database of known culverts, bridges, and dams in the watershed is being compiled from existing information sources
 - Dams data is coming from several sources so it is variable in what it contains
 - Data collected will be available to all towns in spreadsheet or other database format
 - Green infrastructure assessment
 - Natural resource inventory
 - Land use regulatory review
 - Watershed plan development
- Project Schedule
 - Tentative steering committee meetings: March 2015, May 2015, November 2015, and April 2016
 - Baseline and technical assessments: March – December 2015
 - Plan development: January - October 2016
 - Community meetings: Winter 2015/2016
 - Municipal training: Fall 2016
 - No issues for proposed project timing raised by steering committee members
- Direct emails to be distributed for important items; all information to be posted to the WPWA project website

Previous and Ongoing Work in the Watershed – Available Study Reports and Data (Erik Mas)

- Existing Data (Handout)
 - Asked steering committee to review list and list/provide other data sources that may be pertinent for the study to F&O
- Watershed plan questionnaire is being developed and will be distributed to the towns

Discussion and Questions

Shown in the order of the conversation

Liz Ahern:

Q: Draft maps from USGS and FEMA Risk MAP project will be presented to the public in summer 2016; will they be incorporated into this project?

A: Due to the funding timeline, most of the technical evaluations and field work will be completed by the time the updated flood hazard maps are released, but F&O would like to incorporate any data and information from the Risk MAP project as soon as it is available. Liz indicated that they could prioritize the rivers within the watershed so that draft information is available as soon as possible.

Joe Warner:

The Town of Hopkinton is looking to finish its hazard mitigation plans for high hazard dams and would like to receive copies of technical data from the Wood-Pawcatuck Flood Resiliency Management Plan project for dams in the Town. The Town also has some data on existing dams that will be distributed to F&O. F&O and the Town of Hopkinton will be in communication regarding priority dams in the town.

Wendy Gendron and others on modeling:

Q: How will you measure cumulative impact of proposed projects in the watershed?

A: We plan to use existing HEC-RAS models developed by USGS (Risk MAP) and USACE to evaluate the effects of proposed projects and alternative management strategies.

Q: How will you factor in increases in precipitation due to observed and anticipated future climate change?

A: We plan to use the latest precipitation data (i.e., Cornell/Northeast Climate Data Center), which is reflected by the hydrology within the updated HEC-RAS models developed by USGS/FEMA, as well as the USGS StreamStats tool for RI. F&O will work with the steering committee members to select appropriate methods for accounting for future estimates of precipitation and flooding.

Q: HEC-RAS models do not allow for consideration of hydrograph routing and evaluation of downstream effects of proposed flood mitigation measures. How will you estimate the effectiveness of mitigation measures and downstream impacts? Also, the existing HEC-RAS models do not include all portions of the Wood River or the lower tidal portion of the Pawcatuck River; how are you going to evaluate these areas?

A: Evaluating the cumulative/downstream effects of various flood mitigation measures would require the use of a hydrologic model of the entire watershed, which is beyond the scope of this project. We will consider using the existing HSPF hydrologic model that was previously developed by USGS for the Wood-Pawcatuck watershed to evaluate the potential effects of various project recommendations, to the extent that this can be supported by the project scope and budget.

Q: How do you identify what flood recurrence frequency level you are going to plan for?

A: It will depend on the location and the potential benefit or feasibility of proposed improvement projects. Some project recommendations will be targeted at more frequent, smaller storms and flood events (i.e., green stormwater infrastructure), while other recommendations will target larger storms and flood events such as the 1 percent or 0.2 percent annual exceedance probability events.

Chris Fox:

Q: Will the plan consider location or feasibility of flood storage within the watershed?

A: Yes, it will be a consideration whether it is creating new flood storage or looking for opportunities to enhance or restore existing natural or man-made storage.

Q: Will the plan look at macro and micro levels of recommendations such as community-specific recommendations so that towns can budget and pursue individual projects?

A: Yes, the watershed management plan will identify site-specific recommendations and general recommendations that could be applied at a watershed-wide or town-wide level.

Q: Will the end product will be a document that the towns can use to pursue grant funding for individual projects?

A: Yes, we plan to identify individual projects located throughout the watershed, with conceptual level of design and planning, that the towns can use as the basis for pursuing future grant funding.

Ernie Panceira:

RIDEM is looking to create watershed plans for the major planning basins across the state to comply with EPA requirements (319 Nonpoint Source Program and addressing water quality impairments through implementation of watershed based plans), and is in support of this project. RIDEM's watershed plans will focus on aquatic habitat and water quality. RIDEM will work with F&O to develop water quality-related materials for this watershed plan so that it meets EPA requirements for watershed based plans. Once an approved watershed based plan is in place, the watershed communities will be well-positioned to seek 319 grant funding for implementation projects within the watershed.

Liz Ahearn:

The Risk MAP project will include an economic assessment of potential flood damages, which can be used by towns to apply for 319 and other funding.

Joe Warner:

There are several flood prone areas in Charlestown that are identified in the Community Rating System (CRS), which provides information/mapping on flood losses. Flood insurance claims may or may not be publically available, but Town representatives should have them. The Town of Charlestown has a GIS layer with "problem areas" but does not show individual properties due to the Right to Privacy Act. If a site has three insurance claims it qualifies for repetitive loss. In Charlestown these areas are generally coastal but some are due to drainage issues.

Carla Feroni:

Q: Are you going to look at the 0.2 percent exceedance probability flood (i.e., 500-year flood recurrence interval)?

A: Yes, we will consider larger flood events for individual sites and potential project recommendations based on the level of development downstream and other factors to best meet the project goals.

Jim Lamphere:

Q: Will you identify dams that are worth repurposing, fortifying, rebuilding for energy production, etc.?

A: The watershed is no longer being considered for any significant hydropower due to the low head levels on existing dams and the lack of any significant drops and flows in the Wood-Pawcatuck. None of the watershed dams were built for flood storage. Repurposing of existing dams is being considered. This would consist of modifying or re-building the dams to the extent that there would be no pool under normal conditions, but the dam would impound water under flood conditions. Flood control gates could be used in the event of a flood, which could mean rebuilding a dam. The watershed is also protected under the current Wild and Scenic designation. Construction of new dams is inconsistent with the important Wild and Scenic designation criteria of free-flowing rivers.

Chris Fox:

Q: Can F&O provide a few sentences to the towns to help them relay the purpose of the project throughout their communities when discussing the plan with elected officials, board members, and the public? What's in it for us (the communities)?

A: Yes, we will develop something. The basic goal of the project is to develop a watershed wide long-term protection plan that addresses chronic and routine flooding using natural techniques to protect both human interests and the natural environment.

To answer the question, "What's in it for us?" Chris Fox suggested the following language:

This is a multi-stakeholder collaborative effort of sharing of information in efforts to develop an overall guiding plan that will support and help elevate the priority of flood resiliency projects for funding. This can only be achieved by working as a whole watershed group.

Joe Warner:

Q: Will regulations from this project be adopted at the state level?

A: This project may inform flood resiliency planning and policy at the state level, and will serve as an example of watershed-based flood resiliency strategies that could be implemented in both states (RI and CT). The plan will be publically available.

Chris Fox:

Q: Will the plan have lots of appendices and data that the towns can use?

A: Yes. It will include thorough documentation of the technical assessments and supporting information in the document appendices. We also want to develop a user-friendly document that isn't intimidating to elected officials and the general public. The main body of the watershed plan will use plain language and a graphical format. The plan will contain detailed information for those who want to access it, but it will also be approachable for individuals just looking for the main purpose and recommendations. Although hard copies will be provided, it will be disseminated primarily in electronic format and via the web.

Henry Oppenheimer:

Q: Will you meet with town planners?

A: Town planners and other municipal staff will be invited to the community workshops that are planned for the project. We also want the steering committee members to reach out to other individuals in their towns or organization to receive their input and hopefully participate in the community workshop meetings. The goal is for the steering committee members to act as a liaison for their respective communities and organizations.