



John S. Truhan Consulting Engineers, Inc.

Metedeconk River Watershed Protection & Restoration Plan

Meeting Minutes

Stakeholder Advisory Committee Meeting 4: November 29, 2011

The fourth Metedeconk River Watershed Protection & Restoration Plan Stakeholder Advisory Committee was held at Howell Township's Main Administration Building on November 29, 2011 between 1:00 and 3:00 PM. A copy of the meeting agenda and sign-in sheet is attached.

Robert Karl, Project Manager for BTMUA, opened the meeting and thanked Howell Township for hosting and providing the venue. Following introductions by the attendees, Mr. Karl gave a brief project status update. He indicated that the purpose of the meeting was to present the management strategies for the Metedeconk River Watershed Protection and Restoration Plan that address the goals and objectives of the project, which were finalized following the third advisory committee meeting held in July 2011. These management strategies have been summarized in the Task 5 draft memorandum, "Management Strategies". In addition, Mr. Karl briefly addressed project Task 6 – Education & Outreach and Task 7 – Quality Assurance Project Plan (QAPP).

The Task 6 scope of work calls for the development of education and outreach initiatives. A couple of different approaches were offered at the latest Steering Committee meeting (held October 25, 2011), including making this task a Steering Committee function or creating a sub-committee with volunteers/organizations from the larger Stakeholder Advisory Committee. Ultimately, the Steering Committee recommended that the project team reach out to those organizations that currently undertake similar education and outreach activities and try to enlist their assistance. Task 7 involves the development and implementation of a QAPP, which is essentially a monitoring plan for the Metedeconk watershed that will ensure that all collected data are of sufficient quality to meet its intended purpose. Examples of the uses of the data include addressing data gaps, such as tributary water quality monitoring, and assessing the effectiveness of new BMPs through pre- and post-construction water quality tests.

Dan O'Rourke, Project Manager for CDM, proceeded into a discussion of Task 5, using a PowerPoint presentation and referencing the tables/figure handouts from the draft Task 5 memorandum. The management strategies, or BMPs, must be relevant to the previously defined goals and objectives. Eight BMP functions were identified which serve one or more of the goals and objectives. These functions are listed as follows:

- Reduce Stormwater Peak Flow and Total Volume: The ability to retain stormwater runoff, resulting in a reduction in the peak flow being discharged from the contributing drainage area as well as total volume.
- Improve Infiltration: The ability to infiltrate stormwater into the ground, providing a much needed increase in base flows within the watershed and a reduction of stormwater runoff.

- Promote Water Conservation and Reuse: The ability to conserve potable water through the retention and reuse of stormwater, and through simple reductions in household water consumption.
- Reduce Nutrient Loads: The ability to remove nitrogen and phosphorus from stormwater runoff.
- Reduce Sediment Loads: The ability to remove suspended solids from stormwater runoff.
- Reduce Pathogen Loads: The ability to remove pathogens from stormwater runoff.
- Improve Habitat: The creation of habitat to support wildlife abundance and biodiversity. This would also have a positive impact on water quality through reforestation of riparian buffers.
- Potential for Public Involvement: The ability of the BMP to be used as a demonstration project for the public to promote watershed education and awareness.

Based on these BMP functions, 28 unique BMPs were identified. Each was scored from a 0 (not applicable) to 3 (highest) based on their ability to meet the intent of the function. The individual scores were totaled and the BMPs were ranked highest to lowest. This assumed that each of the BMP functions had an equal weight as compared to the other functions. Scores were assigned and reviewed by the project technical team and Steering Committee. For each BMP, removal efficiencies (for total suspended solids (TSS), nitrogen and phosphorus) were listed. Costs were also included, although it was mentioned that costs will be variable and are very site specific. Many of the costs were taken from an on-going CSO program in Philadelphia and may be somewhat conservative for certain BMPs.

As per recommendations by the Steering Committee, a cost per pound of TSS, nitrogen and phosphorus was calculated based on hypothetical scenarios that included a residential development in Howell, located in the Ramtown portion of the township, using unit area loads as specified in the NJ BMP Manual. However, these costs are essentially conceptual cost estimates only and are highly variable depending on a number of site specific factors.

Although there are a number of BMPs identified, the purpose of the Task 5 memorandum is to finalize the most appropriate BMPs for the watershed. In order to include the Stakeholder Advisory Committee's subjective opinion, EVAMIX was introduced and utilized. EVAMIX is a sophisticated computerized, multi-criteria evaluation program developed at CDM to rank alternatives, using all available information and accounting for the relative priorities of the stakeholders. The three functions dealing with water quality (reduce nutrient load, reduce sediment load and reduce pathogen load), were condensed into a single function, simply "improve water quality", and a cost function was added based on the cost per pound of nutrient or sediment removed. Because costs are variable and site specific, rather than input direct costs into EVAMIX, a relative cost factor was included which utilized a relative score of 1 (high relative cost) to 3 (low relative cost). In summary, the functions evaluated using EVAMIX were as follows:

Reduce Stormwater Peak Flow
 Improve Baseflow

Promote Water Conservation & Reuse
 Improve Water Quality
 Improve Habitat
 Potential for Public Involvement
 Cost

A table was distributed so that each member of the Advisory Committee could enter relative percentages of priority for each function. An example was given on the sheet as follows:

Criteria	Criterion Definition	Example Weights	Your Weights
Reduce Stormwater Peak Flow	Will focus on projects which limit the amount of stormwater runoff that is generated and reduces the "flashiness" of the river during wet weather events. These projects will target streambank erosion, etc.	5%	
Improve Infiltration	Focus on improving the baseflow component of the Metedeconk River. Projects will emphasize infiltration and the removal of impervious cover.	5%	
Promote Water Conservation & Reuse	Projects which aim to promote water conservation to target providing a sustainable water supply and maintain natural flow regimes (Goal 1).	5%	
Improve Water Quality	Projects which aim to reduce nutrient (nitrogen, phosphorus), pathogen and sediment loading.	40%	
Improve Habitat	Projects that preserve open space, address invasive plant species, improve riparian buffers, etc.	5%	
Potential for Public Involvement	Projects that have a relatively high potential for the public to be involved through education, monitoring, maintenance, etc.	5%	
Cost	Overall project cost.	35%	
		100%	

In the example, water quality and cost would be the priorities and the other functions would be equally important to that particular individual, but much less so than water quality and cost.

Each member of the Advisory Committee filled in their weight assignments which were added to EVAMIX. The resulting average is as follows:

Criteria	Criterion Definition	Example Weights	Your Weights
Reduce Stormwater Peak Flow	Will focus on projects which limit the amount of stormwater runoff that is generated and reduces the "flashiness" of the river during wet weather events. These projects will target streambank erosion, etc.	5%	12%
Improve Infiltration	Focus on improving the baseflow component of the Metedeconk River. Projects will emphasize infiltration and the removal of impervious cover.	5%	19%
Promote Water Conservation & Reuse	Projects which aim to promote water conservation to target providing a sustainable water supply and maintain natural flow regimes (Goal 1).	5%	11%
Improve Water Quality	Projects which aim to reduce nutrient (nitrogen, phosphorus), pathogen and sediment loading.	40%	26%
Improve Habitat	Projects that preserve open space, address invasive plant species, improve riparian buffers, etc.	5%	9%
Potential for Public Involvement	Projects that have a relatively high potential for the public to be involved through education, monitoring, maintenance, etc.	5%	9%
Cost	Overall project cost.	35%	15%
		100%	100%

Based on the average weights, the five most prioritized BMPs are as follows:

Options	Rank #1
Resource Conservation/Protection	1
Infiltration Basin	2
Constructed Stormwater Gravel Wetland	3
Constructed Stormwater Wetland	3
Private Property BMPs	5

These results are very similar to the results listed in Table 2 of the Task 5 memorandum. However, due to the limited sample size (only 15 stakeholders provided input), it was decided that the sheet would be distributed (likely via online survey) to the entire Stakeholder Advisory Committee and the analysis would be expanded.

D. O'Rourke summarized the next steps of the project which were to finalize the Task 5 document, continue to work on the Watershed Plan (Task 8) and conduct site visits. Site visits will be based on a refinement of Table 3-1 in the Technical Analysis. Due to potential inclement weather in January, the project team will be in the field either the week of December 12th or the 19th to evaluate the top 10-15 sites. These sites will also be distributed to the Stakeholder Advisory Committee as a GIS shapefile and a Google Earth kmz file so that the Stakeholders can choose their top 5 sites/areas to be further evaluated in Task 9 and ultimately implemented in Phase II of the project.

Following the presentation, a brief discussion was held in which a number of issues were identified:

- While information completed to date is important, it must be conveyed to town planning and zoning boards so that decisions made by the town boards in the future take stormwater issues into account. It was suggested that perhaps this could be part of Task 6 (Education and Outreach);
- C. Raabe inquired if there was coordination with the Ocean County Natural Lands Trust for parcels of land identified for conservation? The project team responded that lands that have been identified by the Trust for Public Land will be incorporated into the Plan, but the team does not have electronic data or other mapping of the lands identified by the Ocean County Natural Lands Trust for acquisition. The team will request this information from the Ocean County Planning Department and, should those data be made available, they will most certainly be included in the Plan.
- K. Thoman indicated that resource conservation costs (costs for land acquisition) can be obtained from the Monmouth County Park System for northern upland areas and local realtors for waterfront property to allow for a range of costs, as well as provide some comparative information about the cost/benefit of preserving land in different parts of the watershed.
- The project team should use the Stakeholder Advisory Committee's recommendations/Evamix priorities to put together recommended land use/development ordinances that the municipalities can adopt and implement, which can be incorporated into the plan.

- The project team should request that the municipalities and counties formally adopt the Metedeconk Watershed Protection & Restoration Plan upon its completion.

R. Karl closed the meeting and asked that anyone interested in hosting the next Stakeholder Advisory Committee meeting please contact either him or D. O'Rourke.

A copy of the PowerPoint presentation has been posted to the eRoom.

cc: Stakeholder Advisory Committee Distribution

Metedeconk River Watershed Protection & Restoration Plan

**Stakeholder Advisory Committee Meeting
Howell Township Main Administration Building**

November 29, 2011

1:00 pm – 4:00 pm

Agenda

1. Introductions
2. Project overview and status
3. Summary of work completed for Task 5 – Identification of Watershed Management Strategies
4. Review of Ranking System
5. EVAMIX Application
 - a. Decision support tool
6. Priority Sites
7. Next Steps
 - a. Finalize priority sites
 - b. Field site visits
 - c. Develop Metedeconk River Watershed Protection and Restoration Plan
8. Recap and adjournment

Metedeconk River Watershed Protection & Restoration Plan
Stakeholder Advisory Committee Meeting
November 29, 2011

SIGN-IN SHEET

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