Watershed Management Area 4
Scope of Work
Stream Priority Segment
Non-tidal segment of the Passaic River from Two Bridges to Elmwood Park

Background

Watershed Management Area 4 (WMA 4) is located in the northeastern part of New Jersey. The Watershed Management Area 4 (WMA 4) includes the Lower Passaic River (from the Pompton River confluence downstream to the Newark Bay) and its tributaries, including the Saddle River. The drainage area of WMA 4 is approximately 180 mi^2, includes portions of five counties (Essex, Hudson, Morris, Bergen and Passaic Counties), and 66 municipalities. Several of the municipalities are older, industrial centers (Newark, Paterson, Clifton and East Orange) and a large portion of WMA 4 is already developed land and consists of impervious cover.

The large tributaries to the Passaic River in this Watershed Management Area are the Saddle River (drainage basin 51 mi^2), Preakness Brook, Second River, and Third River. The Lower Passaic River flows for 33 miles in this watershed with a drainage area of 129 mi^2. It is in WMA 4 that the Passaic River in Paterson provides the Great Falls along with a number of smaller falls. The Great Falls is the 2nd largest waterfall east of the Mississippi.

As part of the initial Watershed Management Planning process a Characterization and Assessment Report for WMA 4 was provided under a contract with North Jersey District Water Supply Commission. The direction of the Division of Watershed Management is to build on this broad characterization with an in-depth Characterization and Watershed Plan on a priority stream segment in each of the State's 20 Watershed Management Areas. Through the WMA process, the Public Advisory Committee (PAC) of WMA 4 has identified the mainstem Passaic River as the highest priority waterbody. The priority segment was identified through the public process as the non-tidal segment of the Passaic River from Two Bridges to Elmwood Park.

PROJECT DESCRIPTION

The objective of this project is to provide an in-depth characterization of the current conditions within the identified stream segment, and an evaluation and assessment of the findings of that characterization to evaluate and assess the short-term and long-term management measures that will be required to allow the stream to achieve full attainment of its designated uses. A Stream Characterization Report, including cost-benefit analyses, monitoring and modeling as applicable with available funds, identification of data gaps, and recommendations for further work and actions will be the principal deliverable. Achieving clean and plentiful water is a goal that requires balancing overall vision with site-specific individual characterizations. This project will provide a culmination of the vision of the WMA 4 PAC, NJDEP and other stakeholders in the Lower Passaic River/Saddle River watershed with the detailed analyses required to provide for actual measurable changes in water quality.

TASK

Task 1: Review of Available Data for defined segment

a. water quality and quantity records
b. land use summary analysis from existing GIS
c. TMDL issues including Fecal Coliform

Task 2: Design and execution of limited water quality monitoring program to fill in data gaps needed to complete a characterization

a. Chemical
b. Biological
c. Physical

Task 3: Initial modeling of water quality variables employing existing data.

a. Modeling using existing data for water quality variables
b. Evaluation and assessment of results of the modeling in terms of BMP scenarios.

Task 4: Development of Stream Segment Management Plan, including all available data, monitoring and modeling results. The overall components of the Stream Characterization Report will include:

a. Measurable Goals
b. Applicable BMPs
c. Applicable Model Ordinance
d. Mitigation Approaches used elsewhere, and their success.
e. Timeline
f. Identification Potential Funding sources

Deliverables

Task	Deliverable	Timeline
Task 1: Review of Available Data for defined segment	Historical Review of water quality/TMDL issues for defined segment, along with any water quality and quantity records for the main branch of the Passaic River and any data on tributaries to defined segment; review of existing land uses from GIS database	1st Quarter
Task 2: Design and execution of limited water quality monitoring program to fill in data gaps needed to complete a characterization	Design of water quality monitoring program; Monitoring report, including raw data available electronically; Fecal coliform sampling;	2nd & 3rd quarter
Task 3: Task 3: Initial modeling of water quality variables employing existing data.	Phase I modeling of water quality variables employing existing data and any monitoring data attained as a component of Task 2.	2nd & 3rd Quarter
Task 4: Development of Stream Segment Management Plan, including all available data, monitoring and modeling results.	The overall components of the Stream Characterization Report will include: • Measurable Goals • Evaluation and assessment of modeling results in terms of BMP scenarios • Applicable BMPs • Applicable Model Ordinance • Mitigation Approaches used elsewhere, and their success. • Timeline • Identification of Potential Funding sources	3rd & 4th Quarters