



State of New Jersey

Highlands Water Protection and Planning Council
100 North Road (Route 513)
Chester, New Jersey 07930-2322
(908) 879-6737
(908) 879-4205 (fax)
www.nj.gov/njhighlands



CHRIS CHRISTIE
Governor

JIM RILEE
Chairman

KIM GUADAGNO
Lt. Governor

MARGARET NORDSTROM
Executive Director

HIGHLANDS REGIONAL MASTER PLAN MONITORING PROGRAM WATER AND WASTEWATER UTILITIES TECHNICAL ADVISORY COMMITTEE MEETING

DATE: December 16, 2015
TIME: 3:30PM – 5:30PM
LOCATION: Highlands Council Office
100 North Road
Chester, NJ

ATTENDEES:

First Name	Last Name	Organization
Joe	Bella	Passaic Valley Water Commission
Andrew	Holt	Suburban Consulting Engineers
Rick	Howlett	NJ Water Association
Vince	Monaco	New Jersey American Water
Dan	O'Rourke	CDM Smith
Jeff	Olawski	NJ Department of Environmental Protection (NJDEP)
Fletcher	Platt	Gannett Fleming
Fred	Sickels	FASickels Environmental Management
Dan	Van Abs	Rutgers University
Diane	Zelaskus	NJ Department of Environmental Protection (NJDEP)
Richard	Vohden	NJ Highlands Council – Member
Margaret	Nordstrom	NJ Highlands Council – Executive Director
Chris	Danis	NJ Highlands Council – Staff
Casey	Ezyske	NJ Highlands Council – Staff
Jim	Hutzelmann	NJ Highlands Council – Staff
John	Maher	NJ Highlands Council – Staff
Corey	Piasecki	NJ Highlands Council – Staff
Alex	Belensz	Regional Plan Association
Courtenay	Mercer	Regional Plan Association

MEETING PURPOSE:

Technical Advisory Committees (TACs) serve to engage those with specific technical content knowledge across the ten topic areas included in the Highlands Regional Master Plan (RMP). TAC membership represents academic institutions, business and industry, regulatory agencies, and non-government organizations each providing a unique perspective on their area of expertise. Each TAC will meet two times over the course of the RMP Monitoring Program project.

The purpose of TAC Meeting 1 was to review of the draft proposed indicators under consideration for analysis, as well as sample indicator reports demonstrating the type of output that is anticipated to be included in the Monitoring Program Recommendation Report (MPRR). As time allowed, the TAC could discuss potential milestones.

MEETING SUMMARY:

The meeting opened with welcome remarks by the MPRR project consultant, Courtenay Mercer, New Jersey Director at Regional Plan Association (RPA). After attendees introduced themselves, Ms. Mercer provided an overview of the meeting purpose and an explanation of the meeting materials, which included the Agenda, RMP Goals information sheet, Briefing Memo, and Draft Indicator Spreadsheets.

Participants were presented with several general questions regarding implementation indicators in the MPRR, including:

- Do the indicators adequately analyze the Water and Wastewater Utilities goals and policies of the RMP? Are there any missing indicators, or are any indicators listed in an inappropriate tier?
- For the sample indicators, does the proposed MPRR format present the indicator clearly (in its narrative, tables, charts, and maps)?
- For each indicator, what may serve as the appropriate corresponding milestone?

The TAC first discussed the draft proposed Tier 1 indicators (those with the strongest nexus to the goal and policies of the RMP), which would be analyzed as part of the MPRR.

With regard to the Sewer Service Area indicator, it was clarified that the actual unit of analysis was wastewater utilities existing areas served (EAS), as the EAS bears a more direct nexus to the Regional Master Plan (RMP) goals regarding future land use and the expansion of infrastructure. The Highlands Council has better data regarding wastewater EAS for conforming municipalities than non-conforming municipalities. For conforming municipalities, the data comes from the Build out reports, Wastewater Management Plans, NJ Department of Environmental Protection (NJDEP), counties, municipalities, and wastewater facilities. For non-conforming municipalities, the Council uses the best available data source received during the Build-out process, or from the NJDEP, individual counties, or municipalities.

With regard to the Domestic Sewerage Facilities Capacity and Demand indicator, the TAC recommended that in addition to analyzing monthly wastewater flow; monthly precipitation be considered, as it plays a large role in variations in wastewater discharge. It was also recommended

that the analysis be performed as a trend over the course of 10 years, as opposed to analyzing change between discrete points in time.

With regard to the Non-Revenue Water indicator, participants noted that it was important to account for deficiencies limiting the overall efficiency of water infrastructure in the Region; but acknowledged that data was inconsistent, and that thresholds for water efficiency would vary based on the size and location of the individual system. In addition, many systems cross the Highlands Region boundary, further complicating the analysis. Because it is difficult to assign overall trends, participants recommended that the indicator be moved to Tier 2, analysis of which occurs when demand in water deficit areas are trending negative.

For the Public Community Water Systems Capacity and Demand indicator, TAC members indicated that since firm capacity can vary widely from year to year, permitted supply capacity was more relevant to the RMP. Similar to wastewater systems, climate affects supply and water use; so it is important that precipitation data be incorporated into the analysis, particularly for the summer months. Participants recommended that reservoir-based systems be excluded from the analysis, as they are generally do not serve the Highlands Region (e.g., Jersey City, Newark) that are dependent on Highlands' groundwater resources. It was also recommended that large and small systems be analyzed separately, using customer counts as the metric to differentiate between systems. Capacity should be analyzed for the summer months as a trend with multiple data points, as opposed to analyzing change between discrete points in time.

The TAC expressed concerns about the robustness of the data available for the Public Water Existing Areas Served indicator. Highlands Council staff acquired data through the Watershed Management Plan (WMP) process, the RMP build-out analysis, and water purveyors. NJDEP is updating their statewide GIS layer, which data will be available at some point in the near future. However, for small systems, NJDEP is sometime forced to make judgement calls regarding the EAS when data are not available. Participants suggested that the Highlands Council should establish a process to acquire sufficient data as an MPRR action recommendation.

Participants asked if the Highlands Council is able to track requests for sewer allocation based on proposed or planned new development. The Highlands Council does not see those specific requests; however, they are represented in Water Quality Management Plan amendments. Requests for service and capacity allocations received are not easily acquired from utilities. In the Future Land Use topic area, there is an indicator analyzing changes in land use and certificates of occupancy (COs) in sewer service areas. Participants agreed that it was important to include some analysis of the relationship between development and water and wastewater infrastructure. However, it should be noted that there are other major limits on development, such as septic yield or septic density, which would not be captured in this analysis.

TAC members asked if there would be any value in tracking per customer demand, or breaking down water use by customer class. It was noted that the New Jersey Geological Survey (NJGS) will be producing a report detailing potable water supplied to the state by the Highlands Region. Ms. Mercer further noted that there is an analysis of water allocations using the NJWaTr database already included as part of the Water Resources topic area. A Science & Research Agenda item could be added to examine water usage by customer class.

Participants asked if the importation of water from areas outside the Highlands Region could be tracked, to which Ms. Mercer responded that this is captured somewhat in the Water Resources topic area. The TAC recommended that net water availability in the Water Resources topic area be analyzed at the HUC11 subwatershed level as a Tier 1 indicator, with analysis at the HUC14 subwatershed level as needed depending on the HUC11 trends. The 2003 Net Water Availability Analysis could serve as a baseline.

Participants asked if greywater reuse could be tracked, as this could be an effective benchmark of water efficiency. This analysis would require extensive research, so it was recommended that it be added to the Science & Research Agenda.

Ms. Mercer then reviewed the final proposed changes to the Water and Wastewater Utilities indicators:

Domestic Sewerage Facilities Capacity & Demand:

- Incorporate precipitation data
- Perform as 10-year trend analysis, as opposed to analysis of two discrete points in time

Greywater Systems (new Tier 2):

- Add Tier 2 indicator analyzing implementation of greywater systems

Non-Revenue Water:

- Move to a Tier 2 indicator
- Perform analysis where demand in water deficits area are trending negative

Public Community Water Systems Capacity and Demand:

- Remove analysis of firm capacity
- Remove reservoir-based systems
- Analyze large and small systems separately (per water purveyor customer counts)
- Analyze summer vs. annual demand
- Incorporate precipitation data
- Perform as 10-year trend analysis, as opposed to analysis of two discrete points in time

Sewer Service Existing Area Served:

- No suggested changes

Water Supply Existing Areas Served:

- No suggested changes

UPDATED DRAFT WATER AND WASTEWATER UTILITY INDICATORS:

TIER 1 INDICATORS:

- **Domestic Sewerage Facilities Capacity and Demand:** Measures change in domestic sewerage facilities available capacity and demand.
- **Public Community Water Systems Capacity and Demand:** Measures change in public community water systems available capacity and demand.
- **Water Supply Existing Areas Served:** Measures change in extent of water supply existing areas served (EAS).
- **Wastewater Existing Areas Served:** Measures change in extent of wastewater existing areas served (EAS).

TIER 2 AND 3 INDICATORS

- **Greywater Systems:** Tracks implementation of greywater systems.
- **Non-Revenue Water:** Measures amount of water lost in transmission, metering and operations.
- **Water Use Efficiency:** Measures change in per capita and consumptive use of water.