



Comments from Wastewater Panel Meeting and CMAP Staff Responses

May 6, 2009

Attendees

In person	Darin, Jack	Sierra Club
	Rogner, John	USFWS (representing Chicago Wilderness)
	Kramer, Karla	US Fish and Wildlife Service
	Harmet, Pete	Illinois Department of Transportation
	Agasie, Kate	Metropolitan Mayors Caucus
	Werner, Patty	Lake County Stormwater Management Commission
	Schuessler, Joe	Metropolitan Water Reclamation District
	Van Buren, Wallace	Illinois Association of Wastewater Agencies
	Dooley, Martha	Village of Schaumburg
	Heltne, Paul	Center for Humans and Nature
	Danler, Ingrid	Fox Waterway Agency
	Weidel, Sean	Chicago Dept. of Environment
Via web	Cox, Lawrence	Illinois Association of Wastewater Agencies
	Sprague, Hal	Center for Neighborhood Technology
	McKinney, Cassandra	McHenry County Water Resources
	Trueblood, Bob	Fox River Water Reclamation District
	Attarian, Janet	Chicago Department of Transportation

Comments and Responses

- CMAP uses a figure of 100 gallons per capita per day wastewater generation. Per capita wastewater generation can vary substantially, though, from under 100 to 2,500 gpd.
 - The higher values come from older systems where inflow/infiltration is heavy. We would expect to I&I to be relatively low for newly laid systems, although, as a committee member pointed out, it would be helpful to request data from systems around the region to see how estimated flows matched with actual flows.
- Does the 100 gpcd figure include storm flows in a combined system?
 - No. It represents only wastewater.
- Should plant utilization be defined differently? CMAP is using annual average daily flow, whereas Illinois EPA uses flow in the three lowest-flow months. The reason is that, in

determining plant utilization, capacity to handle additional organic loading is a more important consideration than ability to handle additional wet weather flow. Wet weather flows are higher, but the strength of the wastewater is lower. If the low-flow months are used to compute plant utilization, there will be more capacity available in the region and less apparent need to expand treatment plants.

- This makes sense. We will review the flow data from the Permit Compliance System and see how the analysis changes if only the low-flow months are used.
- The map in Figure 2 is misleading because it does not capture all areas on septic systems.
 - We agree. There are many places within Facility Planning Areas with wastewater treatment plants that are not served by sewers and may not ever be. Flow assignment areas on the map that are denoted as “septic” should simply be read as having no centralized wastewater treatment plant.
- Does the CMAP analysis assume that the stormwater component of wastewater flow in the combined sewer areas will stay constant? If so, increased development by 2040 will lead to more flow reaching wastewater plants than CMAP is projecting. Isn't there the possibility that redevelopment will increase CSO events? Furthermore, climate change will likely increase storm flows as well.
 - The analysis assumes the stormwater component is constant. It is possible that new development in the combined sewer area will increase storm flows, but it seems more likely that the volume control requirements in the Chicago stormwater ordinance will reduce wet weather flows to treatment plants. If the MWRD stormwater ordinance includes similar provisions, we would expect the same effect. Regardless of the effect of these ordinances, it seems unlikely that storm flows could increase much beyond what they are today because the combined sewer area is essentially built out.
 - However, it is still possible that redevelopment could make it more difficult to control CSOs. We do not have a good means of estimating these potential impacts
 - An idea, we think a good one, from a committee member would be to include stormwater BMPs that provide volume control in the Innovate scenario.
- The report should look at existing investment needs, not just additional costs from growth.
 - We agree that rehabilitation needs are important, probably more so than the cost of providing new capacity. The report provides some information to this effect, but we are seeking guidance on how to address rehabilitation and replacement needs in the GO TO 2040 plan.
- Shouldn't long-term maintenance and replacement costs be included?
 - We assume the components for which we are estimating costs will not need replacing in the 30-year planning period. Except for the mechanical/electrical systems in treatment plants, they should have a lifespan of fifty or more years.

- Should nutrient removal be considered part of the Reference or the Innovate scenario? The Innovate scenario could include “nutrient farming” as a means of reducing the cost of nutrient removal.
 - The state requires plants over 1 mgd to meet a total phosphorus standard of 1 mg/L, but so far it has not required nitrate removal. It does not seem that nutrient removal policy is “settled” enough to be assumed in the Reference scenario.
 - Nutrient farming (the restoration of marginal floodplain farmland to wetland to promote nutrient removal) is a possibility, but much of the opportunity to do so is outside of the CMAP region within the Illinois River basin.

- The nutrient load from wastewater is smaller than that from lawns and from agriculture. It would be more appropriate to seek reductions from those sources. Also, nutrient removal is electricity intensive and therefore has carbon impacts.
 - The first point does not seem correct to us. Watershed yield estimates provided by the USGS (available at <http://water.usgs.gov/nawqa/sparrow/wrr97/results.html>) suggest that around half of the nutrient yield from the watersheds comprising the Chicago metro area comes from wastewater. Most of the remainder is from agriculture, while a small part is from urban runoff. It is true, however, that there would be carbon impacts from nutrient removal. This is one reason why nutrient farming may be an attractive approach.