

# OhioEPA

## Division of Surface Water

### Response to Comments

**Project:** Draft Approval of Columbus City Wet Weather Management Plan (WWMP) and Associated Modifications to the Columbus City Wastewater Treatment Plants NPDES Permits

**Ohio EPA ID #:** PTI 01-302-PW, NPDES 4PF00000\*MD, NPDES 4PF00001\*ND

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Ohio EPA held a public hearing on September 23, 2008 regarding approval of the Columbus Wet Weather Management Plan. This document summarizes the comments and questions received at the public hearing and during the associated comment period, which ended on September 30, 2008.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format.

#### Affordability Analysis and Schedule

**Comment 1:** Several commenters addressed the Affordability Analysis that OEPA is asking Columbus to submit by July 1, 2016. Specifically, can the Affordability Analysis be done on a more frequent basis (every three years)? Expediting the schedule will allow improvements to be completed as soon as possible while resources are available. One commenter is opposed to any delay in completion of the projects beyond 30 years.

**Response 1:** By year 2016, Columbus is scheduled to have the OARS tunnel for combined sewer overflow (CSO) control and the

ART Tunnel Phase 1 completed. Tunnel costs should be much easier to predict once the bids are received and construction for these two tunnels is underway. In addition, Columbus will also have completed work on upgrades to Jackson Pike and Southerly wastewater treatment plants. Finally, Columbus is projecting approximately \$50,000,000 per year expenditure on SSO control projects (CIP 690) beginning in year 2011.

The year 2016 was chosen to assure that there will be good costing data from the OARS tunnel and Phase 1 of the ART tunnel, as well as other capital projects. In addition, there will be enough years to validate whether Columbus really will need to spend the \$50M annually that they are currently projecting on SSO projects (CIP 690).

Given the above, and due to concerns about affordability, Ohio EPA feels it is appropriate to delay a final decision on an expedited completion date for the ORT and ART tunnels until the above data is available.

In regards to when an Affordability Analysis should be submitted, it does not appear that any of the above data would be compromised if the Affordability Analysis were submitted by the end of year 2014. A submittal date earlier than July 1, 2016, as several commenters noted, would allow more time for Columbus to plan for and implement an expedited schedule for the remaining phases of the ORT and ART tunnels, especially a schedule where the tunnels would be completed by 2030. In recognition of the possible benefits of accelerating the schedule for submittal of the Affordability Analysis, Ohio EPA has decided to change the date for submittal of the Affordability Analysis to January 9, 2015.

As to the question of periodic submittal of an Affordability Analysis after year 2015, Ohio EPA considered the major wet weather projects that will *not* have been bid by that date. These projects include the High Rate Treatment unit and the ORT and ART (Phase 2 and 3) tunnels. It is not expected therefore, that much new data would be gained by requiring submittal of the Affordability Analysis every three years after 2015.

**Comment 2:** Questions were raised regarding the 'costs and benefits (volume, frequency and duration)' study evaluating

**operational changes, additional storage or additional treatment that could be employed to further minimize the number and volume of bypasses around the Jackson Pike High Rate Treatment System.**

**Response 2:** Sierra Club requested that the "costs and benefits (volume, frequency and duration)" language in Item 5 of the Approval Letter be changed to cost-effective. The existing language of "costs and benefits (volume, frequency and duration)" adequately captures the intent of the requested study. Ohio EPA does not agree that a change to 'cost effective' is warranted.

Formation of an independent technical advisory committee is also recommended to review the Affordability Analysis and cost/benefit analysis to ensure money is spent the most cost-effective way.

While Ohio EPA has no objection to such a committee, we do not have authority to require such a committee.

**Comment 3:** **Several commenters had concerns about the language in the approval letter allowing a 'temporary lowering of water quality'.**

**Response 3:** The Ohio antidegradation rules require wet weather long term control plans to be approved in accordance with the antidegradation rules. The antidegradation rules require the 'temporary lowering' language as part of the public notice. The intent under the antidegradation rules is to address contributions from new sanitary connections which could temporarily increase discharges from the sewer system until such time that improvements are made to the sewer system under the control plan.

In the case of Columbus, many sewer infrastructure improvements have already been completed. Discharges from the sewer system are expected to further decrease significantly in year 2010, as improvements under the already approved Interim Plan are implemented.

Based on the above, Ohio EPA anticipates water quality will improve significantly from current and past levels.

See also the response to Comment 4.

**Comment 4:**        **The issue of wastewater contributions from new development and the need to reduce clean water inflow to the sanitary sewers from existing satellite communities was raised. A question was asked why there is no ‘flow tradeoff’ similar to the 5 gallons of clean water reduction for every gallon of new sewage flow as required by Pennsylvania.**

**Response 4:**        The modeling for the wet weather plan was conducted to predict the response of the sewer system to rain events taking into account growth from new and existing service areas. In evaluating the response of the sewer system to rain events, Columbus assumed the level of infiltration and inflow from satellite communities and new areas would be equivalent to current levels. This is a conservative assumption given that new development would have much lower rates of clean water inflow and infiltration. Ohio EPA is also currently working to reach agreement with existing satellite communities to have them reduce the level of infiltration and inflow from current levels.

In the case of Columbus, many sewer infrastructure improvements have already been completed. These improvements have reduced the clean water into the sewers in an amount well in excess of the Pennsylvania standard mentioned by the commenter. The wet weather plan includes many additional sewer projects that will need to be implemented in the coming years and that will further significantly reduce clean water inflow to the sewer system.

General comments

**Comment 5:**        **Several commenters raised concerns that the wet weather plan does not require Columbus to implement improvements through ‘green infrastructure, including but not limited to using quarries for storage of storm water and increasing storage by changing existing ditch design.**

**Response 5:**        In order to ensure that compliance dates outlined in the consent order are met, the Columbus wet weather management plan relies heavily on traditional infrastructure such as tunnels, storage and treatment. Ohio EPA agrees with this approach since it ensures compliance with the Consent Orders.

That said, Ohio EPA would like to encourage Columbus to continue and expand on their current green infrastructure program. We will initiate dialogue with Columbus and interested parties to explore how best to accomplish this outside the scope of the wet weather management plan.

**Comment 6:** **One commenter raised concerns that the wet weather plan does not require Columbus to actually eliminate outfalls as improvements are made. The same commenter raised concerns about the need for spill plans.**

**Response 6:** Elimination of any outfall will be addressed on a case by case basis. If safe and practicable, the City plans to eliminate the outfall. In many cases, the outfall or discharge point to the river will remain as a means to discharge stormwater from separately sewered areas, not sewage. In some cases, the CSO outfall will continue to handle combined sewage but it will only discharge combined sewage at the higher level of control prescribed in the WWMP.

As an example, the CSO regulators that are addressed by the OARS Tunnel, e.g. Broad St, Chestnut St., etc., will be controlled to a 10-year level of control. For these structures, Columbus intends to leave the CSO structure in place even though it will likely not overflow. These structures are safety valves to prevent basement backups and property damage during severe storm events. A number of the CSO outfalls also have storm water inputs in the overflow pipe downstream of the CSO weir.

In regards to 'spill plans'; Columbus is required by permit and the consent orders to properly operate and maintain their sewer system. Columbus spent considerable effort under the consent order developing and implementing an operation and maintenance program modeled after the US EPA's Capacity, Management, Operations, and Maintenance (CMOM) regulations. One component of CMOM is to prevent accidental spills or overflows that could damage the wastewater treatment plants or possibly discharge to the stream.

**Comment 7:** **One commenter raised concerns about possible riparian impacts from excavation and fill and construction of the**

**14-ft diameter tunnel along the west side of the Olentangy River.**

**The commenter also asked whether other technologies, such as detention basins, would have a reduced environmental impact compared to the tunnel.**

**Response 7:** The riparian issues and fill disposal will be dealt with during review of the permit-to-install and any associated 401 water quality certification. Compliance with all applicable environmental laws will be required.

Due to the depth of the tunnel below grade, fifty feet to 150 feet, and the need to both convey flow and to provide storage, Ohio EPA considers a tunnel to be the lowest environmental impact of any technology.

**Comment 8:** **One commenter asked what processes are in place to insure that all the individual overflow outfall monitoring systems are accurately and consistently functioning.**

**Response 8:** The Columbus NPDES permit has requirements for overflow monitoring. Ohio EPA conducts periodic compliance inspections of the Columbus sewer system and wastewater treatment plants. During those inspections, the Columbus maintenance program and data from the flow monitors is evaluated. Columbus is legally required to properly operate and maintain these devices.

**Comment 9:** **Why has 3 years passed between submittal of the plan and the public hearing?**

**Response 9:** It has taken three years for Ohio EPA to conduct a detailed technical, financial and legal analysis of the subject plan. In comparison, many communities have negotiated with federal authorities for much longer than 3 years and still have not yet submitted an approvable plan. Please note, that as a result of the consent orders and wet weather plan, significant reductions in overflows will occur early in the program.

For example, construction of projects is currently underway that are expected to reduce sewage discharges by approximately 540 million gallons in a typical year by 2010. The total cost for these interim projects is \$729 million. This is a very aggressive schedule, especially when compared to many other large communities.

**Comment 10:**        **Education and outreach should be provided to customers on ways to lower water bills by reducing usage, green infrastructure and ways to reduce unnecessary water use during storm events to reduce overflows.**

**Response 10:**      We will discuss these suggestions with Columbus in an effort to incorporate them into their existing outreach program.

**Comment 11:**        **What is the plan to handle increased rainfall if such occurs due to global warming?**

**Response 11:**      The Ohio EPA approval approves both the technology and control level. If the control level is not met, Columbus will be in violation of the approval and will need to provide a higher level of control.

Comments on NPDES Modifications

**Comment 12:**        **Permit should require continuous monitoring of pollutants which this facility has been out of compliance with in the past (TSS and fecal coliform).**

**Response 12:**      Based on a review of the recent effluent data, continuous monitoring is not needed at this time.

**Comment 13:**        **Public notice of CSO events should be required.**

**Response 13:**      Columbus is operating under an approved public notification plan. Under that plan, Columbus maintains an active web site, provides newspaper and billing notices and signs at each outfall. Ohio EPA does not feel public notice of each CSO event is warranted.

**Comment 14:**        **The wet weather management plan needs to be incorporated into the permit and be fully enforceable.**

**Response 14:**      We agree and believe the process we have followed does just that.

**End of Response to Comments**