



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 6 2001

OFFICE OF
WATER

MEMORANDUM

Subject: Proposed Project for Off-Stream Reservoir in Defiance, Ohio

From: Cynthia C. Dougherty, Director

Director, Office of Ground Water and Drinking Water (4601)

To: Jo Lynn Traub, Director
Water Division (Region V)

This memorandum responds to a request from Region V asking EPA Headquarters for a decision on the eligibility of an off-stream pretreatment reservoir in Defiance, Ohio for funding from the Ohio Drinking Water State Revolving Fund (DWSRF) program. The City has indicated that the proposed raw water reservoir is intended to serve as a backup storage supply for when the source (river) has high nitrate levels and/or is affected by pesticide spills upstream, and for turbidity attenuation during episodes of high turbidity. We have reviewed information submitted by the region, state and city outlining the need for the proposed project and have made a determination that the state may provide DWSRF assistance for a pretreatment reservoir with a 30-day capacity to address turbidity and elevated nitrate levels.

As you know, the DWSRF regulations disallow funding of a reservoir unless it is a finished water reservoir or a reservoir that is part of the treatment process and is located on the property where the treatment facility is located [40 CFR 35.3520(e)(3)]. We acknowledge that the proposed project, albeit with limitations discussed below, will serve to aid in the treatment process. However, because the proposed reservoir is not located on the property of the treatment facility, the state will need to obtain a deviation from EPA's regulations for the DWSRF Program. Upon receipt of a request for a deviation from the Ohio EPA, the region may submit a request for a deviation to the Grants Administration Division and the Office of Ground Water and Drinking Water.

We understand that the City's intent was to construct a reservoir with a 60-day capacity. After reviewing the documentation provided by the city and state, we cannot see a justification for a reservoir with a capacity of more than 30 days. The City has indicated that the reservoir is primarily needed to address high turbidity events and periods when nitrate concentrations in the river exceed the maximum contaminant level. With respect to addressing these two problems, we believe the reservoir is oversized for the following reasons:

- *Turbidity.* The Ten States Standards recommend 3 hours detention time for turbidity attenuation. These Standards were written for states with rivers that can reach turbidity levels of 6,000 NTU, so the standard should be sufficient for managing high turbidity levels affecting the Defiance plant. Even being conservative, no more than one day detention time is needed for the plant to achieve turbidity attenuation.
- *Nitrate.* The maximum nitrate contamination event experienced by the City was 13 days. If the City wanted to avoid drawing water from the river for the entire event, a minimum of 13 days would be needed. Because it is generally wise to have twice the amount of storage in case a second event occurred before the reservoir could be refilled, a storage capacity of 26 days would be recommended. The system did not provide sufficient data on the presence of other contaminants to recommend a design capacity for the reservoir based on their occurrence.

Note that in making this determination, we subjected the proposed project to Ohio EPA's own criteria for allowing funds to be used for treated and raw water reservoirs. While the proposed project met the majority of the state's criteria, it did not appear to meet the state's requirement that a reservoir be the minimum size needed to ensure achievement of the treatment goals. You should know that a correspondence forwarded to Congressman Gillmor from Darrell Handy, Chairman of the Water Committee for the Defiance City Council, indicated that the project was also needed to provide more water to the local General Motors Plant which was making changes to their production operations. In approving this project, it is important that we ensure that the funds are going to address treatment needs rather than quantity needs.

We recognize that the current DWSRF regulations may not adequately address the eligibility of other off-stream reservoirs that the state might want to fund in the future. The use of off-stream reservoirs has been proposed as a mechanism for achieving compliance with the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR), currently scheduled to be released in May, 2002. As part of that rule-making the Agency will work to develop a policy to address the eligibility of off-stream reservoirs. It is possible that we will use the criteria developed by the State of Ohio as a starting point in determining eligibility, but will need to work through a process with states and other interested stakeholders before releasing a final policy.

We appreciate the patience of the state and the region as we have worked to make a final decision on this project. We needed to conduct a careful review of the project since it failed to meet the straightforward criteria of the regulation and because it will set a precedent. Our goal is to ensure that funds from the DWSRF go to projects that have the greatest health benefit and avoid harm to the environment. If you have any additional questions about the decision we have provided, or wish to discuss the matter further, please contact me or have your staff contact William R. Diamond, Director of the Drinking Water Protection Division at (202) 260-7077.