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

OCT 10 2007

OFFICE OF
ADMINISTRATION
AND RESOURCES
MANAGEMENT

MEMORANDUM

SUBJECT: Request for a Deviation on Eligibility Determination for Texas Water Development Board Drinking Water State Revolving Fund Project for Anahuac, Texas from 40 CFR Section 35.3520(e)(3)

FROM: Stefan Silzer, Director
National Policy, Training and Compliance Division

TO: Stephen F. Heare, Director
Drinking Water Protection Division (4606M)

Hattie Brown
Grants Management Officer, Region 6

I am responding to your request for a deviation from the "Ineligible projects" requirements under 40 CFR Section 35.3520(e)(3) for the Texas Water Development Board (TWDB). The request was made thorough EPA Region 6 for a raw water reservoir proposed as part of a Drinking Water State Revolving Fund (DWSRF) funding by the TWDB for the City of Anahuac, Texas. The regulation states that "Ineligible projects" are "Reservoirs or rehabilitation of reservoirs, except for finished water reservoirs and those reservoirs that are part of the treatment process and are **on** the property where the treatment facility is located.

The Drinking Water State Revolving Fund (DWSRF) regulation disallows 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. The proposed reservoir will serve to aid in the treatment process, because the proposed reservoir is not located on the property of the treatment facility, the TWDB needs this deviation.

Background

The TWDB has initially approved funding for a DWSRF project for the City of Anahuac, which includes a proposed raw water reservoir. The State has suggested that this is more accurately characterized as a pre-treatment basin which is essential to address the City's existing chloride problem, to be located near the existing treatment facility. The purpose and location of the proposed pre-treatment basin are consistent with the intent of the Safe Drinking Water Act and the EPA's DWSRF regulations regarding the constructions of basins. This deviation is also consistent with purposes of Section 1452 of SDWA, which assists public water systems in

financing the cost of drinking water infrastructure projects which are necessary to achieve or maintain compliance with SDWA requirements and to further the public health objectives of the Act.

The relevant natural conditions indicating the necessity for the proposed raw water reservoir as a settling basin are described as follows. The sole water supply source for the City of Anahuac is Lake Anahuac, which is separated from Trinity Bay (an arm of the Galveston Bay estuary) by less than two miles of flat tidal wetlands and a low, 6' embankment. The City's existing raw water reservoir has only 3.5 days of total reserve capacity for use by the treatment plant. Storm surges may create brackish conditions in Lake Anahuac during the hurricane season due to waves in excess of 5-6', which conditions have in previous occurrences persisted for several weeks, and were not solely dependent on hurricane events. These brackish conditions have involved chloride exceedences of the EPA secondary standard of 250 mg/l, which cause problems of discoloration and taste, as well as elevated levels of total dissolved solids (TDS).

While violations of secondary drinking water standards do not themselves meet the statutory criteria for DWSRF funding as among the most serious risks to human health or compliance with SDWA requirements, secondary standards violations that involve significant taste and odor problems may severely impair the water's palatability for consumers. If contamination which does not directly threaten public health nonetheless effectively renders a water supply undrinkable, the resulting lack of a water supply acceptable to consumers can itself present a most serious risk to human health in the community affected.

As Anahuac's surface water treatment plant was placed in service in 1993, the only potentially feasible options were an upgrade of the existing treatment plant, or construction of a raw water reservoir to secure water of adequate, treatable quality during periods of high chlorides in Lake Anahuac, and as a settling basin for TDS. Adding reverse osmosis treatment, the plant upgrade which would be the indicated removal technology for chloride, was deemed financially infeasible in light of the sporadic occurrence of high chloride occurrences.

The raw water reservoir/settling basin with a 32-day retention time which has been proposed will ensure that intake water reliably meets the City treatment plant's design criteria for chlorides and total dissolved solids during extended periods of brackish water conditions in Lake Anahuac. Because the existing treatment plant is surrounded by development, it is infeasible to locate the raw water reservoir/settling basin on or directly adjacent to the property of the treatment facility. Of the three locations considered, the proposed site is the closest to the treatment plant and the least costly. It is 18' above mean sea level (MSL), and will be encircled with levees having a top elevation of 23.5' above MSL (over 8' above the 100 year flood level).

Recommendation

Region 6 and the Office of Ground Water and Drinking Water support the Request for Deviation from 40 CFR Part Section 35.3520(e)(3) This deviation will ensure that funds from the DWSRF go to projects that have the greatest health benefit and avoid harm to the environment.

Action

I am approving the requested deviation from 40 CFR Section 35.3520(e)(3)

cc:
Philip Metzger OGWDW
Kimberly Roy-Davis, OW
Charles Job. OGWDW