

December 29, 2010

Kittitas County Community Development Block Grant Application Summary

Applicant: Kittitas County

Sub-Recipient: Kittitas Water District #6 (Vantage)

Project: Phase 2—Wastewater Treatment Plant Upgrades

Amount: \$975,000

Introduction/Background

Kittitas County Water District #6 owns and operates a wastewater treatment facility for the unincorporated community of Vantage located in Kittitas County. Vantage is located on Interstate 90 on the west bank of the Columbia River.

The community of Vantage consists of approximately 40 residences (including a mobile home park) and the commercial businesses in the community. Typical wastewater flow contributions for Vantage average 10,000 gallons per day. Weekend concert events at the Gorge, as well as recreation opportunities on the Columbia River result in an influx transient population; and resulting peak flows exceeding 40,000 gallons per day.

Wastewater is collected to a central sewage lift station and pumped into the District's wastewater treatment facility. Wastewater is treated via extended aeration activated sludge process, chlorine disinfection and discharge of effluent to the Columbia River. The facility is regulated under a Department of Ecology NPDES permit. The facility was originally constructed in 1977.

Need Statement

No significant treatment plant upgrades, equipment replacements or renovations have been done since its original construction 33 years ago (1977). A wastewater facility plan was completed in 2001 (Varela & Associates) for the treatment facility and approved by the Department of Ecology. The facility plan conducted a comprehensive review of the existing facility; and recommended treatment modifications and upgrades to enable the facility to provide long term reliable operation into the future.

A summary of factors driving the need for plant upgrade include:

- Aged mechanical equipment at the end of its useful life (i.e. influent sewage lift station, comminutor, aeration equipment, structures, valves, etc.).
- Outdated and unsafe process components (i.e. conversion of chlorine gas disinfection system to ultraviolet disinfection system).
- Department of Ecology mandate for fine screening of influent wastewater to remove manufactured inert materials (Ecology deadline for compliance is 7/1/2012).
- Periodic plant overloads due to weekend influx of tourist traffic (i.e. need for flow equalization to spread out peak load to match plant capability).
- Inability to meet Ecology biosolids requirements due to insufficient sludge drying beds.
- Increased operation and maintenance costs and system reliability issues.

Funding Application

Treatment plant upgrades for Vantage are being completed in two phases:

- Phase 1: Main Lift Station Upgrade (underway and fully funded)
- Phase 2: Treatment Plant Upgrades (this CDBG application)

Phase 1: Main Lift Station Upgrade is fully funded and currently underway. Phase 1 includes upgrade/replacement of the main influent sewage lift station to the treatment plant. The project is being paid for through Department of Ecology funding and is projected at \$260,000 (i.e. grant approx. \$100,000, and loan approx. \$160,000). Construction bids for the lift station construction were received in December 2010 and construction will commence in early 2011. Sewer rates will be raised approximately \$10 per month to pay back the loan portion of the funding.

Phase 2: Treatment Plant Upgrades are estimated at \$975,000. Funding for Phase 2 is being applied for through this Community Development Block Grant (CDBG) funding application. Without grant funding assistance, sewer rate increases of \$50 to \$60 per month would be required to finance a loan to pay for the improvements.

Following is a summary of anticipated plant upgrades/improvements:

- Addition of influent screening of raw sewage into the treatment plant (may also include replacement of the existing influent comminutor)
- Conversion of the gas chlorination disinfection system to ultraviolet disinfection system
- Construction of flow equalization basin to equalize peak influent flow events
- Construction of second sludge drying bed
- Miscellaneous minor upgrades (as available funding allows): spot refurbishment of rusted tanks, replacement of aeration diffusers as needed, clarifier RAS/WAS/scum system modifications, site cleanup.

Preliminary work will include updating the Vantage Wastewater Facility Plan completed in 2001 (i.e. Amendment to the Facility Plan) and updating and obtaining the environmental clearances required under the funding program.

If this application is successful, and funding is awarded, the projected timeline for completion is estimated as follows:

Description	Projected Schedule
Funding award	May 2011
Contracts/processing	June 2011
Preliminary engineering/environmental	July—October 2011
Design/bid documents	October 2011—February 2012
Bid/award/notice to proceed	March—May 2012
Construction	May—August 2012
Closeout	Sept. 2012