

TOWN OF CAPE CHARLES
COUNCIL WORK SESSION
August 19, 2008

*WATER AND WASTEWATER
IMPROVEMENTS*

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- Water Treatment
- Wastewater Overflow
- Wastewater Treatment
- Regional System
- Recommendations

WATER TREATMENT

- Rehabilitated existing plant.
- New well on line to replace deteriorated well.
- Preliminary Engineering Report (PER) to connect two new wells (EW2 & TW2) installed by Bay Creek under review by VDH. Should be on line by next spring.
- Plant capacity will then be maximized at about 500K gallons per day (gpd). Additional capacity will be achieved by expansion on site or by regional facility.
- Demand peaked at about 271K gpd this Independence Day.

WASTEWATER OVERFLOW

- DEQ order to correct overflow problem at Mason Ave. pump station.
- Main cause is inflow and infiltration of fresh water into the sanitary sewer system.
- Accomplished so far: fixed broken cleanouts, disconnected illegal downspout and sump pumps, commercial grease traps, raised manhole covers and installed nylon inserts.
- Remaining work: repair and upgrade pump stations, re-route Fig St. pump station force main to WWTP, rehabilitate lateral connections along Mason Ave. See attached.

WASTEWATER TREATMENT

- Completed minor short term improvements to existing plant.
- New plant must be on line by January 2011 to meet new environmental regulations.
- New plant will be 500K gpd, vice 250K gpd for existing plant. Expandable to 1M gpd.
- PER under review by DEQ.
- Stearns & Wheler Task Order for final design and construction contract bid documentation now under review.

WASTEWATER TREATMENT

- Scope of project – headworks facility for screening and grit removal, flow equalization tanks, biological reactor, membrane filtration, UV disinfection, sludge storage and dewatering, Class A bio-solids composting, process control & laboratory building, provisions for future effluent reuse, extension of influent & effluent lines to new site, decommissioning of existing plant.
- To be located on Parcel 14, east of the tower.
- Project schedule attached.

REGIONAL SYSTEM

- Dual track approach to providing future capacity projected to be needed (1.4M gpd water, 1.0 gpd wastewater).
- Memorandum of Understanding among Cape Charles, Cheriton and Webster Investors, LLC to evaluate feasibility of a regional system.
- Existing WTP would remain in operation.
- New WWTP and WTP would be built on old Webster site east of Cheriton; railroad right of way would be used for piping.
- Effluent reuse instead of discharge into bay.

REGIONAL SYSTEM

- Same type of WWTP, but 1.0M gpd capacity, would be built. Planning and engineering to date is applicable.
- Modeling of capital and operational costs being refined by Webster. Still to be reviewed by Cape Charles and Cheriton to evaluate economic feasibility.
- If promising, a proposal must be submitted by Webster and evaluated by the public entity under the PPEA. See attached.
- A public entity must be formed by the participating governmental localities to contract with the private partner and manage the system.

REGIONAL SYSTEM

- Next Step – Meeting among Cape Charles, Cheriton and Webster to discuss formation of public entity and expectations for the proposal.
- Public Entity – Probably a partnership between the two towns instead of a public service authority. Code of Virginia provides sufficient authority.
- Schedule will be a challenge – January 2011.
- Determining factor will be cost to Cape Charles as compared to stand-alone approach.

RECOMMENDATIONS

- Connect two new wells to yield 500K gpd WTP capacity.
- Complete work to correct Mason Ave. pump station overflow problem.
- Continue with new WWTP final design and construction bid documentation.
- Continue evaluation of regional system under the MOU.
- Prepare for acceptance and evaluation of a PPEA proposal, including creation of the public entity.