Stevenson WW Facility Plan/General Sewer Plan
Description of Alternatives
May 18, 2017

	Alt 1B **Minimal Pretreatment** **(20% BOD Removal)** **Conventional Activated Sludge**	**Alt 2** **Pretreatment to Domestic Strength** **(85% BOD Removal)** **Oxidation Ditch**
Pretreatment (by Others)	**High load dischargers construct aerated equalization tanks**	**High load dischargers construct aerobic or anaerobic package treatment system at central location**
Headworks	Construct new headworks, including: • **Grit removal** • Fine screens • Flow measurement	Construct new headworks, including: • Fine screens • Flow measurement
Secondary Treatment	**Convert to conventional activated sludge treatment:** • **Construct 2 new conventional activated sludge aeration basins, with space for 3rd basin** • **Convert oxidation ditch to 3 anoxic selector basins** • **Construct new building for aeration blowers** Add 3rd clarifier	**Expand oxidation ditch treatment:** • **Construct 1 new oxidation ditch with anoxic selector, with space for 3rd ditch** • **Add anoxic selector to existing oxidation ditch** Add 3rd clarifier
Disinfection	Expand UV disinfection: • Construct 2nd parallel UV channel • Install new UV lamps in both channels	Expand UV disinfection: • Construct 2nd parallel UV channel • Install new UV lamps in both channels
Solids Handling	Upgrade existing solids handling facilities: • Refurbish solids holding tank with new partition walls and new aeration system • Construct new solids handling/blower building • Install new mechanical sludge thickener • Install new sludge pumps and truck loading station	Upgrade existing solids handling facilities: • Refurbish solids holding tank with new partition walls and new aeration system • Construct new solids handling/blower building • Install new mechanical sludge thickener • Install new sludge pumps and truck loading station
Support Facilities	Upgrade electrical and control systems, including: • New SCADA control system • Replace emergency generator with larger generator Construct new shop, operations, and lab building	Upgrade electrical and control systems, including: • New SCADA control system • Replace emergency generator with larger generator Construct new shop, operations, and lab building

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Capital Cost – City Wastewater Treatment Plant	$12,183,000	$10,205,000
Capital Cost – Pretreatment Facilities by Others	$711,000	$2,444,000
Capital Cost – City and Others	$12,894,000	$12,649,000
Plant Operation FTEs **(year 2040, CH2M and City effort combined)**	3.5	3.0
Major Considerations	Larger treatment capacity (greater total number of ERUs)	Smaller treatment capacity (reduced total number of ERUs)
	Accommodates industrial/commercial growth best	
		Simpler to operate
	Maximizes treatment capacity on existing site	
	Preserves waterfront aesthetics	
		Lower solids production and lower solids disposal costs
	Easier to achieve 20% pretreatment	Administratively complex to enforce 85% pretreatment
	Pretreatment program and BOD monitoring required	Pretreatment program and BOD monitoring required
	High strength surcharge for high-load dischargers	