



Boris Petkovic, P.E. | Project Engineer

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Mr. Petkovic has nearly a decade of experience in water resources and wastewater engineering with a focus on wastewater treatment facility design. Boris has established a reputation for his extensive expertise in designing headworks, clarification/sedimentation facilities, biological reactors, tertiary treatment processes, disinfection facilities and biosolids stabilization and handling facilities. Boris has a background in modeling wastewater systems, including mass balance and hydraulic profile modeling and calculations. He also has completed several storm water, culinary water, and wastewater master plans and studies.

Project Experience

City of Moab Water Reclamation Facility, City of Moab, UT. – 10.0 million

Construction of a new 2.0 MGD Water Reclamation Facility. Sequencing Batch Reactor treatment facility, intermediate pump station, headworks facilities (screenings and grit removal), bio-solids holding and dewatering facilities, and UV disinfection facility.

City of Rexburg Water Reclamation Facility Solids Handling Project, Rexburg, ID - \$6 million

Expansion of solids handling process by converting to anaerobic digestion and pasteurization to produce Class A biosolids and provide for solids storage.

City of Elko Solids Handling Building Upgrades City of Elko, NV. - \$1 million

Existing solids handling building upgrades. The work included the analysis of odor control equipment and design of a new bio-solids truck loadout building.

City of Elko Secondary Clarifier Upgrades, City of Elko, NV. - \$500,000

Upgrades of existing secondary clarifiers. The work included the analysis of clarifier performance and algae growth prevention measures, selection and procurement of new clarifier mechanisms, and installation of Stamford baffles.

Fort Shafter Flats Pump Station, Honolulu HI, Water Reclamation Facility Construction Project - \$25.0 Million

Construction of a new Membrane Bio Reactor (MBR) water reclamation facility at the Fort Shafter Army Base. The project includes modification of a seventy-year-old pump station to anoxic basins, construction of new aeration basins, construction of a new MBR basin, new headworks and solids handling equipment.

City of Provo Water Reclamation Facility UT, UV Disinfection, Digester Mixing, and Headworks Modification Project - \$5 Million

Existing WRF upgrade project. The project includes modification of the existing headworks building, construction of a new UV disinfection building, and installation of new digester mixing equipment.

Western Riverside County Regional Wastewater Authority (WRCRWA), Riverside CA, Plant Expansion Project – 45 Million

Specific duties included design of a new bioreactor basin, tertiary filtration system, sludge solar drying facility, and existing digester modifications (conversion from aerobic to anaerobic digesters).

Western Riverside County Regional Wastewater Authority, Riverside CA, Expansion Study

Developed a study for a 5 MGD plant expansion. The study involved evaluation of process modifications, different solids stabilization and handling processes as well as an evaluation of overall plant energy consumption.

City of Corona Wastewater Treatment Plant Sludge Holding Project, Corona, CA – \$2.0 Million

Plant modifications which included conversion of an existing chlorine contact basin to a sludge holding tank. Installation of primary and Waste Activated Sludge (WAS) screens, odor control, and associated pumping in a very complex site.

Education

B.S. Civil & Environmental Engineering,
University of Utah, 2005

M.S. Civil & Environmental Engineering,
University of Utah, 2008

Registration

Professional Engineer:
UT

Work Experience

10 Years

Affiliations

WEAU, WEF

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Project Experience (continued)

City of Elko Water Reclamation Facility Upgrade, City of Elko, NV. – \$6.0 Million

Analyzed potential biological treatment process alternatives, selection of the biological treatment process, and final design. The final design included the construction of a new IFAS process basin and modification of several existing hydraulic and process structures (secondary clarifiers, hydraulic control structures, etc.)

Western Riverside County Regional Wastewater Authority, Riverside CA, Aeration Upgrade - \$5 Million

Conversion of existing Ox. Ditches to staged aeration. The work included process design, selection of the fine bubble aeration equipment, aeration blowers, and the design of blower building and aeration piping.

Tooele City UT, Water Reclamation Facility Upgrade, Phase 1B - \$4 Million

Upgrade of the existing facility including new circular, concrete sludge holding tank with fine bubble diffuser mixing, modifications of the existing solids handling building, design of a new UV disinfection system and building (existing chlorine contact basin retrofit), and the design of a new solids dewatering building and sludge solar drying facility.

Elwood Town Corporation UT, Wastewater Treatment Plant Construction Project - \$3 Million

Construction of a new wastewater treatment plant. The project included construction of a new concrete tank for a sequencing batch reactor, construction of a new headworks/blower building, and the construction of a new disinfection building. Also, the project includes construction of several earthen basins, an effluent winter storage pond, and an irrigation pump station for the reclaimed effluent.

West Wendover NV, Water Reclamation Facility Phase II Upgrade – \$9.0 Million

Construction of a new influent lift station, addition of a new grit trap, construction of a new MBR facility with UV disinfection and modifications of the existing aeration basins. The project also included the expansion of the dewatering facility and the construction of a new building to house tertiary filters for the treatment of the stored effluent.

City of Page AZ, Water Reclamation Facility Upgrade - \$500,000

Evaluated existing facility process and hydraulic capacity and designed required modifications to allow de-nitrification in the existing oxidation ditches in order to produce Class A effluent.

California City CA, Feasibility Study and Engineering Report

Prepared a feasibility study and as subsequent engineering report for the potential expansion of the California City Water Reclamation Facility.

City of Payson UT, Dewatering Building - \$700,000

Construction of a new solids dewatering building with a screw press and cake conveyor system. Also, included modifications in the digester control building.

Brigham City UT, Waste Water Treatment Plant (WWTP) Upgrade - \$4.0 Million

Project included addition of a new secondary clarifier with a scum pump station, addition of a new UV disinfection system and UV building, and an addition of a new solids dewatering building with new dewatering screw presses. The project also included modifications to the existing WAS/RAS pump station and modification of existing headworks building.

Spanish Fork City Water Reclamation Facility UT, Anaerobic Digester Tank Addition

Addition of an anaerobic digestion tank and modifications of the existing digester control room. The project included the design of a new concrete tank, mixing system (Linear Motion Mixer), modification of the sludge recirculation pumping and piping, addition of a new heat exchanger and boiler, as well as modification of the existing anaerobic digestion tank (addition of Linear Motion mixer).

City of Provo Water Reclamation Facility UT, Solids Handling Building Expansion

The project included solids dewatering building expansion, addition of a new centrifuge, screw conveyor, sludge feed pump, mixing system for the sludge holding tank, and modifications of the existing solids hopper.
