

Fall/Winter 2010 Newsletter



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Since 1979 SHN has served customers throughout Northern California and Southern Oregon. Our wide-range areas of expertise provide our clients one convenient point of contact to move their projects forward to completion. For more information visit our website at www.shn-engr.com.

Civil



Construction Management



GeoSciences



Environmental



Materials Testing



Surveying



New Construction Stormwater Compliance Rules for Developers and Builders

Effective July 1 the California State Water Resources Control Board (State Water Board) implemented the new National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, [Construction General Permit Order 2009-0009-DWQ](#). The new General Permit represents a major shift in stormwater management practices from the previous general permit. The new permit significantly changes the way project implementation is permitted and managed and will have important implications for project design and approval strategies and will affect development activities in the State.

The new General Permit applies to all construction activities disturbing one or more acres of land or to smaller areas that are part of a common plan for construction activities related to linear overhead/underground projects (i.e. pipelines), which were previously covered under a separate general permit.

The new General Permit also implements a risk-based approach where a project's actual risk of affecting water quality during construction is projected based on the level of environmental risk as determined by such factors as type of soil, proximity to receiving waters, and revised universal soil loss equation (RUSLE) calculations. The permit provides for an overall risk determination framework that reflects the applicable levels of implementation and monitoring for three risk levels. Projects with high receiving water risk and high sediment risk will be subject to more stringent monitoring and reporting requirements.



The new permit also requires electronic filing of all Permit Registration Documents, Notices of Intent, annual reports, Notices of Termination, and other reporting documentation. All electronically filed documents will be immediately available to the public on the State Water Board's website.

SHN's Stormwater Compliance staff has been in front of this process since it was adopted in 2009, and has assisted many of our clients with closing out their old permits, and preparing projects for implementation under the new permit rules. Our staff is here to answer your questions and help provide stormwater compliance assistance.

We are committed to providing seamless solutions to the planning, design and reporting obligations created by state and federal regulations. We offer SWPPP development, site inspections, and stormwater compliance support services. Our goal is to help you navigate the multifaceted, ever-changing world of stormwater regulations so that you can focus on what you do best.

For answers to your Stormwater Questions, contact one of our Regional Offices at: www.shn-engr.com.

SHN Assists Communities with Prop. 84 Grants

Staff from SHN recently assisted several communities with the development and submission of Phase 1 Grant Applications for California Proposition 84 funding.

Proposition 84, otherwise known as the *Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Bond Act of 2006*, authorized funds for communities, tribes and non-profit organizations in the North Coast Region for programs to protect and enhance water quality in the region.

SHN's engineers, planners and economic development specialists assisted Siskiyou County and the McKinleyville Community Services District with Phase 1 applications for improvements to wastewater systems for the protection of water quality. Allocations for Phase 1 funding total \$4.11 million for the Region.

If selected, the projects will be allowed to submit full applications for consideration and funding in January 2011.

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Telegraph Creek Barrier Removal and Channel Restoration Design Humboldt County, CA



Existing dam on Telegraph Creek

SHN is currently providing comprehensive hydraulic, geomorphic and design engineering services for the Telegraph Creek Barrier Removal Project located in Shelter Cove, CA.

The main goal of the barrier removal project is the removal of a dam and triple-culvert on Telegraph Creek to re-establish aquatic organism passage (AOP) through the project reach and provide access to 4,900 feet of upstream habitat for adult and juvenile salmonids.

Design tasks on this project include producing a complete barrier removal plan that incorporates the dam and triple-culvert removal as well as channel restoration.

SHN has been tasked with completing the hydrologic and hydraulic analysis of the channel including AOP assessment, geomorphic analyses, and additional topographic/ bathymetric surveying as well as development of the complete plans and specifications for the project and an Engineer's Estimate of the construction costs for the project.



Telegraph Creek

"Town of Butte Falls WWTP - Certified Good To Go!" Butte Falls WWTP Improvements Project Completed February 2010

SHN recently certified the Town of Butte Falls new wastewater treatment facility, completing a four year system wide improvement project. The project, funded by Oregon Economic and Community Development Block Grant and the State Revolving Fund administered by Oregon DEQ came in at a budget of \$1.5 million with about \$900,000 allocated to the treatment system. With this funding, the Town completed a wastewater lift station upgrade, sewer system inflow reduction program, biosolids harvest, and constructed a new 0.42 MGD treatment facility.

Steve Donovan, SHN's Coos Bay Regional Manager and Project Manager had the following comments about the project: "After the first 270 days of operation, the new treatment facility has performed remarkably well; effluent quality is well below the facilities permit limits, BOD and TSS are consistently less than 5 mg/L, and BOD and NH₃ results frequently indicate no detection. When we started the project, I never imagined we could deliver a new wastewater treatment facility with this capability for just over \$2.00 per million gallons of treatment capacity. The entire system works extremely well, infiltration and inflow have been significantly reduced, treatment costs are lower while effluent water quality is greatly improved. The Mayor, Council, and Operator have taken a great deal of pride in accomplishing this facility upgrade."



New Butte Falls WWTP

The high efficiency extended aeration process, a Parkson BioLac™, has reduced the power demand for wastewater treatment by nearly 50%. The Town received substantial financial incentives from the Oregon Energy Trust for the significant energy savings. Disinfection of effluent is also achieved using 40 percent of the chemical required compared to the previous process and even with the added performance testing, operator time has been reduced. The Butte Falls wastewater system is set to address future permit limits including TMDLs for the Rogue River in Southern Oregon.

Focus On: Redding Office, Regional Manager: Mark Chaney



Siskiyou County Septage Feasibility Study

SHN is in the final stages of developing a feasibility study to determine the range of options for Siskiyou County to continue to provide septage services to its residents. Septage is residential wastewater and sludge from on-site septic tanks. The current practice is for private septage haulers to pump septic tanks and then transport the waste to either a municipal wastewater treatment plant where it is treated and disposed of, or to dispose of it at the Siskiyou County Septage pond.

Over the last several years, disposal of septage at City or Service District wastewater treatment plants has been curtailed due to changing regulations for disposal, or the fact that septage can cause significant problems with these municipal facilities. As a result, septage haulers have increased their use of the Siskiyou County facility, to the point where the facility has outlived its current life at that site. In addition, the County facility is over 30 years old, and was not designed to comply with current federal and state regulations for disposal of wastewater. As a result, this facility is planned to be closed in 2013.

SHN's feasibility study is evaluating several options that allow the County to continue to provide septage services to its predominantly rural residents, who rely on on-site septic systems for their wastewater disposal. Current options are being evaluated to determine the overall benefit to county residents, cost of the projects, long-term maintenance and operations, environmental and permitting requirements, and estimated costs to residential users.

Balls Ferry Boat Ramp Designed to Improve Handicap Access

In 2009 SHN was awarded the Balls Ferry Boat Ramp project from Shasta County Department of Public Works. This project entailed the complete renovation of an aging boat ramp on the Sacramento River to provide accessibility to handicap boaters. Funded by a grant from the California Department of Boating and Waterways (CDBW), the project entails renovation of car and boat trailer parking, new accessible restrooms, security lighting, a new boat ramp to provide better access to the river by a wide array of watercraft, and improved landscaping.

SHN completed the design of the improvements in Spring 2010 with oversight and review by CDBW staff. Extensive review and design of the boat launch "fairway" was required due to the tight sight constraints and the need to provide access for a wide variety of boats, including drift boats, jet bots, small fishing boats and kayaks. Of primary concern was access for Shasta County Sheriff's Department boats that provide search and rescue operations on the Sacramento River. The Balls Ferry ramp is critical for their use.

New restroom facilities will be enjoyed by boaters, with the inclusion of a "sweet smelling toilet" at the site. The antiquated restrooms currently at the site require significant maintenance and are prone to "significant odors during hot summer months", according to Dale Roper, PE, SHN's project design engineer. The new toilets are specially designed to provide positive ventilation to keep the interior of the building free of noxious odors.



Existing Balls Ferry Boat Ramp

SHN also provided the County with additional work including preliminary biological evaluations, geotechnical investigations, and surveying. Environmental concerns at the site include potential impacts from construction to federally listed species such as the Green Sturgeon, Central Valley Steelhead, Central Valley Spring-run Chinook Salmon, and Sacramento River Winter-run Chinook Salmon. Special water quality protection measures will be required during construction to ensure both habitat and individual fish protection, as well as preservation of water quality in the Sacramento River.

With the final design completed, the County is finalizing their federal and state permitting for the project and once completed, SHN hopes to provide assistance in the construction oversight, mitigation monitoring and reporting and contractor training and permit compliance. Construction is planned for 2011.