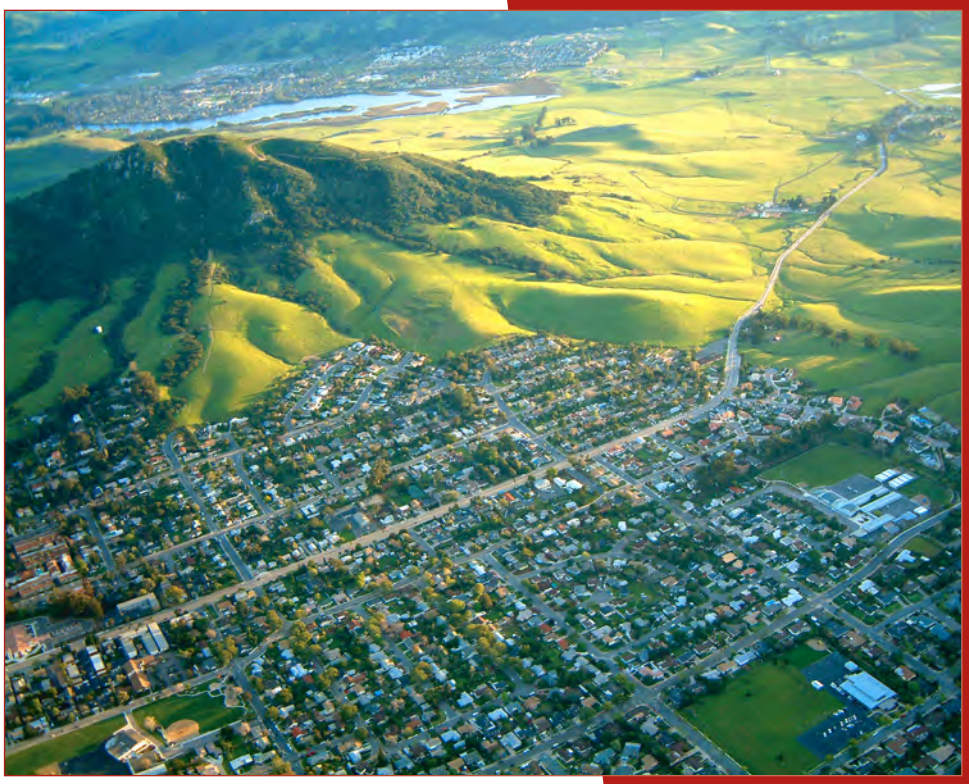
WALLACE GROUP



DEDICATION
TO SERVICE®

Firm Introduction

Statement of Qualifications

California Registered Engineers

Wallace Group, a California Corporation, was established in 1984 as an engineering firm focused on consulting services for public and private clients on the Central Coast. We are proud of providing over 35 years of superior service to our many clients located throughout California and beyond. We are registered to practice in the State of California with offices in Salinas, San Luis Obispo and Santa Barbara. Wallace Group specializes in Water Resource Engineering services. Our long history and presence in the Central California Coast has positioned us as leaders in the municipal water, stormwater, recycled, and wastewater industry.

Our Water Resources Department takes water, sewer, and stormwater projects from the planning and funding stages through design and construction. We will develop hydraulic models, prepare master plans and technical studies, prepare construction plans, specifications, and estimates, and provide bidding and construction support.

Beyond our Water Resources strengths, our ability to handle a wide range of civil engineering services allows us to be a one-stop shop for our Clients interested in improving their properties. As a multi-discipline firm, we can provide reviews by other disciplines with other perspectives, which increases the likelihood that the concepts will work on the ground. In addition to Water Resources, Wallace Group is home to staff specializing in civil and transportation engineering, surveying, construction management, landscape architecture, mechanical engineering, planning, and public works administration.

Sample Projects

Concannon Winery
Livermoore, CA

CLIENT

The Wine Group

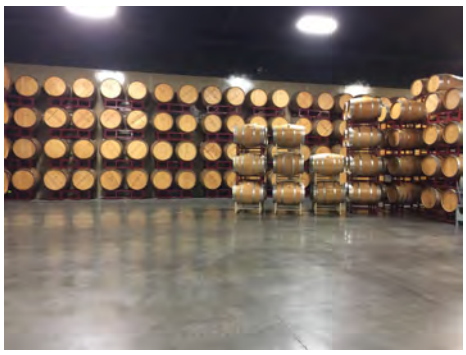
SERVICES PROVIDED

Process Engineering and Civil Design Services

Concannon Winery Process Wastewater Treatment System Improvements

The Wine Group operates a small winery and large bottling facility concurrently at the Concannon Winery site located in Livermoore, CA. Sometime around 2015, the Regional Water Quality Control Board began to scrutinize the winery's treated effluent land application methods which resulted in the winery hauling all process wastewater for offsite disposal and treatment, at a substantial cost.

Wallace Group was contracted in 2016 by Fluid Resource Management to provide process engineering and civil design services for a packaged membrane bioreactor treatment plant provided by Cloacina, LLC. Wallace Group interfaced with Kevin Baskins of Concannon, Regional Water Quality Control Board, Kennedy Jenks, Fluid Resource Management, and Cloacina, to provide a treatment system design that fit within the tight space available onsite and integrated with the existing lift stations and associated piping. Treated effluent was reused for vineyard irrigation with the satisfaction of the Regional Water Quality Control Board.



It was during this project that Wallace Group became aware of The Wine Group's interest in a possible treatment system for the Ripon facility. With the statewide Winery General Order being released sometime during the summer of 2020, the discharge limits enforced in some of the regions until now, will be enforced throughout the state of California, requiring some form of BOD reduction for large facilities before disposal via land application or possible reuse for irrigation.

Napa Bottling Center
Napa, CA

CLIENT

Constellation Brands

SERVICES PROVIDED

Mechanical Engineering
Civil Engineering
Water Resources

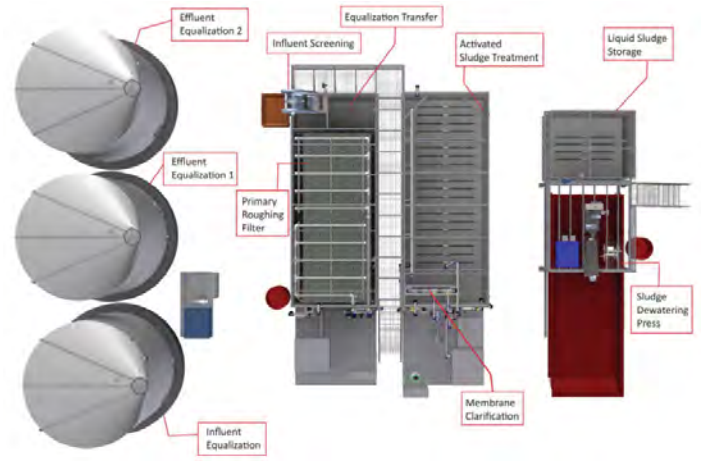
Napa Bottling Center Process Wastewater Treatment System Improvements

Constellation Brands occupies a large existing bottling center in Napa, CA. The prior occupant, Treasury Wine Estates, had purchased and installed a large process wastewater treatment system to reduce BOD/TSS in their winery operation process waste, before discharging to Napa Sanitation District. The system was designed and built by Lyve Systems using extended aeration and clarifier processes to treat the waste. Due to the variability of pH and strength of the bottling center's process waste stream, the treatment system had constant problems and was not able to consistently treat the waste. In 2016 the system was idled and process wastewater was trucked for disposal to East Bay Municipal at a rough cost of $1mil annually since that time.

Wallace Group partnered with American Winesecrets and Suez Water to retrofit the existing system into a membrane bioreactor. Using operations reports from past years, Wallace Group designed solutions for the prior issues including enhanced influent equalization, upgraded pH neutralization, the addition of UF membranes to retrofit the clarifiers into membrane tanks, and a new control narrative to operate the system as an MBR.

Wallace Group provided updated P&ID drawings and 3D mechanical drawings for the upgrades. American Winesecrets partnered with Suez Water to provide the components and installation labor necessary. Lyve Systems, the original builder, was contracted to provide upgraded controls to their existing PLC system, based on a control narrative provided by Wallace Group. The system was commissioned smoothly and has been providing consistent treatment since June 2019.

INDUSTRIAL PROCESS WASTEWATER TREATMENT FACILITY
West Richland, WA



CLIENT
City of West Richland

SERVICES PROVIDED
Civil Engineering
Water Resources
Mechanical Engineering

The State of Washington is seeing extensive growth, especially in the winery market. Methods for pre-treatment of winery process wastewater vary from winery to winery, with little direction on treatment standards or expectations. The City of West Richland, Washington saw an increasing desire for wineries to develop within City limits, however recognized that many would not want to pre-treat their wastewater onsite, and saw that their municipal wastewater plant could not accommodate additional organic loading without major equipment upgrades. Motivated by the growth of the winery market, and recognizing the need for a unique approach for process wastewater treatment and management, the City made an unconventional decision to install a City-owned and operated industrial water treatment facility, with a designated collection system separate from the existing municipal infrastructure. This facility, designated by the design team as the "iPlant" would serve as an attraction for wineries interested in developing within the City, without taxing the municipal wastewater plant, and alleviating the need for wineries to construct expensive onsite pretreatment facilities.

The City of West Richland secured $2.4 million in grant funding from the State of Washington to help design and construct the 50,000 gallon per day MBR-package style iPlant facility. The facility was designed and constructed within a building and includes an influent lift station, mechanical headworks screen, influent equalization tanks, fixed-film reactor, MBR treatment system, and effluent holding tanks.

The City consulted with Wallace Group, as we were familiar with the unique approach of treating industrial and winery wastewater and known for creative construction methods to help conserve capital expenditures. Wallace Group used subconsultants from Washington who were familiar with the area and had a history of working with the City. Together the team devised a plan for a progressive treatment facility and collection system that met the objectives of the project within the allowable budget. Collaboration with a local contractor, who was willing to work in alliance with the design team and equipment manufacturer, helped foster a teamwork attitude throughout the construction of the project, which has

subsequently become a huge success. An alternative bid process, as opposed to traditional bid-build construction, was pursued as another means of saving money, and the City took the unconventional risk of pre-purchasing the treatment equipment to reduce contractor markup. The unique approach to the iPlant project, from conception, to planning, design, and construction, promoted an unconventional collaboration between industry, regulatory, and municipal public works that can be considered inspirational for other cities or agencies looking to foster growth on a tight budget. Effluent from the facility is currently discharged to the City's municipal treatment plant, however the facility was designed to allow for reuse of the treated industrial water as a future project.

Sonoma Bottling Center
Napa, CA

CLIENT

Treasury Wine Estates

SERVICES PROVIDED

Mechanical Engineering

Sonoma Bottling Center Process Wastewater Treatment System Improvements

Treasury Wine Estates operates a large bottling center located in Sonoma, CA. The facility process wastewater system was constructed using septic tanks based on a domestic treatment system. Treasury was exceeding their discharge limits from Sonoma County Water Agency for pH and COD regularly. Wallace Group provided a process wastewater treatment evaluation for the client and offered several solutions based on different technologies, while recommending a simple packaged trickling filter as the preferred solution.

Wallace Group provided design engineering services, as well as permit assistance through Sonoma County Water Agency, and construction oversight.

The trickling filter has provided 70-90% BOD reduction, which has resulted in substantial sewer fee reductions, while also correcting the pH stability issues in the past. The return on investment for the system is estimated at less than 5 years.

SAN ANTONIO WINERY
Paso Robles, CA

CLIENT
San Antonio Winery

SERVICES PROVIDED
Civil Engineering
Water Resources
Construction Management
Mechanical Engineering

Wallace Group provided civil engineering services for San Antonio Winery during the initial phase of the project, including preliminary site grading, drainage, and utility plans, wastewater system conceptual design, and storm water control plan. Wallace Group assisted in the entitlements and land use permitting processes.

Upon successful conditional use permitting, the client requested Wallace Group's continued services to provide civil engineering, construction management, mechanical engineering, and water resources planning. Task included construction drawings, building permits, water and wastewater system design and construction drawings, storm water pollution prevention program creation and inspections, and several other services.

San Antonio Winery is a new production and hospitality facility in Paso Robles, capable of production of up to 100,000 cases annually. Due to the high strength nature of the winery wastewater, an onsite process wastewater treatment system was designed and integrated to produce tertiary treated recycled water for use with onsite ornamental irrigation.

The facility is currently under construction and within budget.

NINER WINE ESTATES
Paso Robles, CA

CLIENT
Pults & Associates

OWNER
Niner Wine Estates

SERVICES PROVIDED
Water Resources
LEED Documentation Support

SIZE
50,000 case-per-year facility

AWARD
USGBC California Central Coast Chapter Green Awards - 2010 Innovative Design Honorable Mention

Wallace Group is the designer for the winery wastewater reclamation system for a 50,000-case-per-year production facility at Niner Wine Estates in Paso Robles, California. The wastewater treatment system was designed to meet state-mandated discharge requirements for land disposal, as well as to address the issues of noise and odor to maintain a desirable setting for the tasting room and surrounding neighbors.

The design included cost-efficient aeration of a facultative pond using ADS technology. We worked with EP Aeration who provided ADS' fine-bubble aeration system which was well-suited to the environmental concerns of the project. In addition to the five-year guarantee to be odorless and meet discharge requirements, the ADS system is operating at 25% of the electrical requirements required by an industry-standard surface aerator.

Wallace Group also designed a constructed wetland which is utilized for final polishing of the water. We also designed a storm water recovery and blending pond, where multiple water resources are blended including recovered storm water from the winery roof, recycled process water, and well water. The on-site vineyards are then irrigated from the storm water recovery and blending pond. This water supplements approximately 15% of the estate vineyard's water demand.

The facilities Wallace Group designed received PG&E Savings By Design credits, contributed to the LEED Silver certification of the project, and received an Innovative Design Honorable Mention award at the 2010 USGBC C4 Green Awards.

In addition to wastewater reclamation system design, Wallace Group assisted in the LEED certification process by submitting the project's two Water Efficient Landscaping credits. Both credits were accepted by USGBC as is, without the need for clarification.

WALLACE GROUP®

ROBERT S. MILLER, PE
Principal Engineer, Vice President

Rob is one of five Principals responsible for corporate management. With over 25 years of experience, Rob has built an impressive background in the field of water and wastewater management. He also has extensive experience in the planning, design, and operation of municipal and industrial water and wastewater systems, pump stations, and distribution and collection facilities. With previous experience as a licensed engineering contractor and his current role as a utility manager, Rob brings a unique perspective to cost analysis and the development and selection of project alternatives.

In addition to his engineering abilities, Rob provides a broad range of technical services on various water management issues, including urbanized areas, agriculture, and rural mutual benefit water companies. Besides being exceptional in Client relations, Rob also excels at coaching and mentoring staff and leads and advocates for the company's professional development program.

REPRESENTATIVE PROJECTS

Water and Wastewater Master Plans, City of Pismo Beach, CA
Served as Principal-in-Charge for a range of planning documents relating to water management, including a Water Master Plan, Urban Water Management Plan, and Wastewater Master Plan. The scope of the studies included infrastructure and supply analysis for a 20-year planning horizon.

Woodlands Mutual Water Company, Nipomo Ca
The Woodlands Mutual Water Company approached Wallace Group in 2005 to design a 0.7 mgd tertiary facility for a new, 1,300 home village in Nipomo, Ca. As the project manager and engineer, Rob analyzed a number of conventional and natural alternatives, and ultimately prepared plans for a tertiary Type 2 AIPS pond system, including the implantation of advanced algae removal through microfiltration. The system has consistently produced tertiary water for golf course irrigation since 2006, and Rob currently serves as the general manager in charge of the mutual water company. Wallace Group is currently designing the second phase of the system, which will expand its customer base from 800 units to 1,300. Rob's creative approach to combining natural pond technology with advanced membrane equipment has the utility substantial operational dollars over the 10-year facility life. As General Manager, developed a range of water planning documents, including water and wastewater master plans and recycled water studies.

Los Osos Valley Groundwater Basin Water Management Services, Los Osos, CA
As District Engineer for the Los Osos Community Services District since 1999, Rob developed a range of water planning documents and basin studies in conjunction with Cleath and Associates, including a Basin Management Plan, Water Master Plan, basin-wide Urban Water Management Plan, grant-funded seawater intrusion assessment, and the analysis of recycled water alternatives for the proposed wastewater project.

EDUCATION
BS, Civil Engineering, California Polytechnic State University, San Luis Obispo, CA

REGISTRATION
California Registered Civil Engineer, Number 57474

Washington Registered Civil Engineer, Number 51266

AFFILIATION
Water Environment Federation

Engineers Without Borders

Nipomo Mesa (Water) Management Area, Nipomo, CA
Currently serves as President of the Nipomo Mesa Management Area (NMMA) technical group, which was formed as a result of litigation relating to the Santa Maria groundwater basin. Other services in the Nipomo area that relate to groundwater management include infrastructure assessment engineering for the Nipomo Community Services District and contract management for the Callender Grove Mutual Water Company.

Proposition 84 Grant Application for Nitrate Removal Facility, Los Osos Community Services District, Los Osos, CA
Principal in Charge for the preparation of the grant application for a Nitrate Removal Facility at the South Bay Well Facility. A $635,980 grant was awarded to the Los Osos Community Services District in 2012 and funded in July 2013. Helped assist in the coordination and preparation of the plans and specifications of a skid mounted, ion exchange unit to treat approximately 70 gpm of high nitrate water. Coordinated the environmental review and the Coastal Development Permit for the client. The project will go out to bid in the fall of 2013.

Water Master Plan and Pressure Zone Consolidation, City of Arroyo Grande, CA
As Project Manager, prepared a complete water master plan for the City, including a computer model of the district system. Recommended prioritized capital improvements to address deficiencies and achieve long-term cost savings. Prepared construction documents and performed construction management for the consolidation of two pressure flows.

Taft WWTP, Taft, CA
Rob has worked with the City of Taft since 2012 to upgrade an aging wastewater treatment facility, while preserving the operational simplicity and cost effectiveness of pond technology. Taft historically discharged to both surface water and disposal fields, with the accompanying permit challenges associated with tightening regulations. After facing the potential for upgrading to an expensive oxidation ditch system, Rob helped Taft obtain a recycled water permit for a hybrid alfalfa crop, improve the aging treatment plant with a new aeration system, headworks, and supporting infrastructure, and finance the work through a long term, low interest loan through USDA. The 1.5 mgd upgrade was designed within a tight construction budget of approximately $3 million dollars, and construction bids came out within the engineer's estimate in late 2015. Construction is expected to begin in summer, 2016.

Fiero Lane Water Company, San Luis Obispo, CA
Serves as General Manager and Company Engineer for the Fiero Lane Water Company, water and wastewater purveyor in the San Luis Obispo Airport area. Manages capital improvements, rate structure analysis and system operations through Fluid Resource Management (FRM). Currently serving as the project manager for the design/build team to implement tertiary effluent recycling for the system, including the irrigation of commercial open space and landscaping.

SHANNON JESSICA, PE
Senior Civil Engineer

Shannon has more than 17 years of experience in water and wastewater engineering with an emphasis on wastewater treatment and disposal design. Shannon's excellent communication and project management skills, in combination with her technical ability and experience, have made her a leader in the water and wastewater engineering industry. She manages projects that involve technical design of various water and wastewater treatment technologies that include collection system and lift station design, pipeline design, MBR and membrane filter systems, gravity sand filter systems, and various low-technology lagoon and aerated pond wastewater treatment systems. Shannon has extensive experience in industrial process wastewater treatment and disposal analyses, specifically in the food and beverage industries. She has engineered water and wastewater force mains, gravity sewers, prepared master plans and water balances, and completed emergency and operational plans for both water and wastewater systems. Shannon has extensive experience with permitting projects through the State and Regional Water Quality Control Boards and has been instrumental in securing numerous waste discharge permits for new and existing wastewater systems.

Recently Shannon has been managing several private projects for water and wastewater design and consulting, including the Oak Shores WWTP Improvements for a 280-unit new housing development in Paso Robles, and a new 1.0 MGD industrial wastewater reclamation plant in the City of Gonzales, CA for the two major vegetable producers who currently discharge to the municipal sewer.

Prior to working with Wallace Group, Shannon was the Project Engineer at HDR Engineering in Folsom, CA for the Vacaville Easterly Wastewater Treatment Plant Denitrification Project, a 15 MGD wastewater treatment plant process upgrade to include denitrification and tertiary filtration for the plant to successfully meet stringent NPDES permit requirements for discharge to a stream that flows to the Delta.

EDUCATION
BS, Civil Engineering, California Polytechnic State University, San Luis Obispo, CA

REGISTRATION
California Registered Civil Engineer, Number c75578

AFFILIATION
Water Reuse Association
Water Environment Federation
Engineers Without Borders
San Luis Obispo Leadership Class 28

RELEVANT PROJECTS

Oak Shores WWTP Improvements, Paso Robles, CA
Project Manager. Design of collection system, new lift stations, wastewater treatment, and disposal system improvements to accommodate a new 280-home development in a remote area of San Luis Obispo County. Treatment improvements include converting the existing County-owned and operated wastewater treatment plant aeration ponds to an MBR package plant for improved quality and treatment efficiency.

Industrial WWTP MBR, City of West Richland, WA
Project Manager for the design and construction of a 50,000 gallon per day membrane bioreactor (MBR) industrial process wastewater treatment system for the City of West Richland, Washington. The treatment system includes an influent lift station with pH adjustment capabilities, a package MBR wastewater treatment system by Cloacina, Inc. with influent screening, aeration, membrane filtration, and dewatering facilities. The entire system is enclosed in a pre-engineered metal building and operated by the City of West Richland.

WALLACE GROUP®

Vina Robles Winery WWTP, Paso Robles, CA
Project Engineer for the design and construction of a 12,000 gallon per day winery wastewater treatment system. The system includes a treatment pond with subsurface aeration followed by an effluent polishing pond. Water from the winery roof is captured and pumped to the polishing pond for blending and storage. Treated effluent and captured rainwater are used for irrigation of the nearby vineyards. Project includes three lift stations, blower building, headworks facility with influent screen and flow meter.

San Antonio Winery MBR, Paso Robles, CA
Project Manager for the design and construction of a 25,000 gallon per day membrane bioreactor (MBR) winery process wastewater treatment system for San Antonio Winery in Paso Robles. The treated water from the MBR is used for ornamental landscape irrigation around the site, with excess water discharged to the City of Paso Robles sewer system when irrigation is not necessary. The treatment train includes an influent pH adjusting lift station, influent screening, sludge storage and dewatering facilities, and RO treatment of incoming process water.

Secondary Effluent Disposal System, Ragged Point, CA
Project Engineer. Prepared analysis and waste discharge report for 15,000 gpd secondary wastewater treatment system at the Ragged Point Inn. The report considered several alternative disposal options to replace existing ocean discharge, including geoflow subsurface disposal. The report also considered possible disinfection alternatives so that secondary effluent meets Title 22 requirements for subsurface disposal. A permit was obtained from the Regional Water Quality Control Board to install and apply the proposed geoflow subsurface disposal system with corresponding ozone disinfection system.

Cate School Wastewater Treatment Plant, Carpenteria, CA
Project Manager for the design of a new tertiary wastewater treatment plant to replace the school's existing 40 year old 20,000 gpd extended aeration facility. This project involved a detailed feasibility study that evaluated several treatment methods including extended aeration, sequencing batch reactor, and MBR technologies. The selected treatment method was a package extended aeration plant followed by a continuous backwash sand filter for Title 22 compliance. The project required coordination with Regional Water Quality Control Board and California Public Health Department in the design of the new 30,000 gpd WWTP and corresponding 1 MG underground effluent storage tank.

Vacaville Easterly Wastewater Treatment Plant Denitrification Improvements, Vacaville, CA
Project Engineer. Design and bidding services for improvements to the City's 15 MGD WWTP to meet requirements of the Regional Water Quality Control Board for Title 22 reclamation. The design of the improvements involved two major Civil Engineering firms and four specialty engineering sub-consultants, totaling approximately 20 professional design engineers on the team. Shannon was responsible for managing the design and the team through the first two phases of the project. She worked with City staff to provide front-end document review, develop treatment plant discipline design criteria, permitting assistance services, and provided State Revolving Fund (SRF) application assistance.

WALLACE GROUP®

BRYAN CHILDRESS, PE
Senior Mechanical Engineer

Bryan's unique engineering background includes roles in technical sales, engineering design, project and personnel management, and technical support. Bryan's career started with a role as a sales engineer, designing and selling complex automation components and integrated systems to a variety of industries. He transitioned into the water treatment industry with Zenon Environmental Corporation, later acquired by GE Water & Process Technologies, where he opened and managed the Western US office that supported the commissioning and operation of over 150 municipal and industrial ultrafiltration water and wastewater treatment plants. Building on that experience, he took an engineering management role with a growing water treatment and groundwater remediation equipment integrator and expanded the company's product offerings into new markets and applications before joining Wallace Group. At Wallace Group, Bryan manages design projects in the water, wastewater, reclaimed water, and stormwater areas. Bryan's unique professional licensing as both a Registered Mechanical Engineer and Registered Civil Engineer in the state of California allows him to be the engineer in responsible charge of a variety of project types with a service-minded approach that benefits all project stakeholders.

EDUCATION
B.S., Mechanical Engineering, California Polytechnic State University, San Luis Obispo, CA

REGISTRATIONS
California Registered Mechanical Engineer, Number 037934

California Registered Civil Engineer, Number C88775

PATENT
Co-inventor, Patent US 8,540,457 B2

REPRESENTATIVE PROJECTS

Gold Creek Center WW Improvements, Sylmar, CA
As Project Manager and Engineer-of-Record, worked to find a cost-effective solution for replacement of a failed domestic WW treatment system in the remote mountains above Sylmar, serving a large retreat facility. Bryan worked alongside the operations company to design a 25,000 gpd packaged membrane bioreactor system that would suit the variable influent characteristics due to constant changes in occupancy. Design included repurpose of the existing aeration basin as an influent equalization tank, repurpose of the existing EQ basin as a sludge storage tank, and reconfiguring site layout to accommodate the package treatment system on a new concrete pad with associated retaining walls and drainage. Regional Board permitting was also within Wallace Group's scope for the project.

San Diego Zoo Safari Park WW Treatment Design-Build, Escondido, CA
As Engineer-of-Record, Bryan managed a team of engineers and subconsultants to provide design of a new domestic wastewater treatment system for the park. Many constraints made the design process complicated including space, access, budget, and influent characteristics. The facility performs in-house surgeries on animals within the park which result in large slugs of quarternary ammonium compounds and other antibiological agents reaching the wastewater treatment system, which required special consideration when designing the influent equalization, anoxic, and aeration zones within the membrane bioreactor design. Wallace Group was part of a design-build team led by the general contractor to provide a turn-key engineering/ permitting/

installation solution to the client.

Woodlands Mutual Water Company, Nipomo Ca
Bryan has supported the water company with many technical permitting and engineering projects over the past 5+ years. He has designed, sited, and coordinated four new monitoring wells to capture down gradient flows from the development's reclaimed water irrigation use areas. Bryan has designed a large irrigation lake and pumphouse including wet well, pumps, and SCADA system. Bryan has designed and installed two shallow aquifer irrigation wells, including all civil grading, utilities, and controls. He has coordinated the phased SCADA control of the 1,300-home development's overall water/sewer infrastructure. He has coordinated a large-scale capital prepayment program for the residents to allow for a re-amortization of capital funding for the water company on loan obligations to a neighboring agency for supplemental water supply projects. He has managed construction water use during final buildout phases of the development in a managed groundwater basin under current drought restrictions.

Edna Ranch East Mutual Water Company, San Luis Obispo, CA
As Project Manager, Owner's Representative and Design Engineer for several capital projects; responsible for design and construction of two new potable water supply wells and large potable storage tank expansion, to augment supply to the Edna Ranch East community; coordination with Surveyor, Contractors, Client, SLO County EHS, review of well hydrology documents for well pump design, specification of well pump and installation methods, creation of wellhead and building mechanical drawings, specification of control components including a cellular-based SCADA system to integrate three well sites and two tank sites, allowing owner to maintain system remotely, integrating backup power generator, providing cascading alarm hierarchy, surface and underground improvements, cost estimates, agency approvals including SLO County Environmental Health Services.

Harmony Town Title 22 Recycled Water System, Harmony, CA
Project Engineer responsible for the design and permitting of a Title 22 Disinfected Secondary-2.2 recycled water system under the Regional Water Quality Control Board and CA State Water Board Division of Drinking Water; complex site constraints required a creative approach to domestic WW treatment for the town expansion project; design includes customized sequencing batch reactor and chlorine contact chamber followed by subsurface irrigation of turf parking for effluent disposal; responsible for design strategy, permitting through SLO County and Regional Water Quality Control Board, sanitary sewer design including collection system, grease interceptor, lift station and treatment system, composite utility plan including gas, sewer, fire protection, potable water and electrical utilities, potable water system expansion including pump house, anchored storage tanks and appurtenances.

VALERIE G. HUFF, PE, QSD/P
Senior Civil Engineer

Valerie is a senior civil engineer at Wallace Group, with a broad range of general civil engineering experience, including public works and private development projects. She specializes in stormwater quality requirements as well as the analysis and design of water, sewer, storm drain, and flood control systems. Her project background includes street improvement plans, grading plans, and utility design. She has extensive experience with hydraulic and hydrologic analysis; technical specifications; construction management; and design reports and cost estimates.

REPRESENTATIVE PROJECTS

Urban Stormwater Diversion, Phase 4, City of Pacific Grove, CA
Valerie was the design engineer for an urban stormwater diversion project for the City of Pacific Grove. The project will divert runoff from the 85% storm to the sewer collection system for treatment and reuse at the Monterey One Water reclamation plant. Wallace Group along with the City also prepared a successful Proposition 1 grant application – grant funds have been allocated for design and construction.

Water Quality Certification (401c) for Los Osos Valley Road (LOVR) US 101 Interchange, San Luis Obispo, CA
The City of San Luis Obispo was required to obtain a Water Quality Certification (401c) for their LOVR interchange project, from the Central Coast Regional Water Quality Control Board (RWQCB). Valerie assisted the City in obtaining the 401c within their short funding deadline. Valerie provided design support and peer review of the proposed post-construction stormwater improvements, and coordinated with the City, RWQCB, and Caltrans to verify that the needs of all agencies were met with the final project design.

Street and Storm Drain Improvements for Water Storage Tank and Booster Station, Pismo Beach, CA
Design engineer for offsite storm drain and street improvements as part of a water system upgrade in the Pismo Heights residential neighborhood. Wallace Group provided project management and engineering design services for a new concrete water tank and replacement of a booster pump station.

Water Main Upgrades (Design-Build), Hal Hays Construction, Vandenberg Air Force Base, CA
Provided design support during construction for the replacement of water distribution piping with high-density polyethylene (HDPE) pipe and associated appurtenances in the Vandenberg Air Force Base cantonment area. Wallace Group also prepared record-drawings in accordance with Vandenberg AFB Standards for project close-out.

Water Distribution Systems Inter-tie, Golden State Water Company, Los Osos, CA
Design engineer for the replacement of a water systems inter-tie between the Golden State Water Company and Los Osos Community Services District water distribution systems. Wallace Group prepared construction drawings and technical specifications, and coordinated

EDUCATION
MS, Engineering, Specialization in Water Engineering, California Polytechnic State University, San Luis Obispo, CA

BS, BioResource and Agricultural Engineering, California Polytechnic State University, San Luis Obispo, CA

REGISTRATION
California Registered Civil Engineer, Number 72426

Qualified SWPPP Developer/Practitioner (QSD/P)

AFFILIATION
American Society of Civil Engineers (ASCE): Past-President 2012-2013, San Luis Obispo Branch

County-Wide San Luis Obispo Hydromodification Technical Advisory Committee (HTAC)

Central Coast Regional Water Quality Control Board Joint Effort Review Team (JERT)

Lecturer, BioResource and Agricultural Engineering Department, Cal Poly San Luis Obispo

the project between the two participating agencies. The project included a below ground vault, in-line flow meters, and connection to the existing water distribution systems.

Water Booster Station Upgrade, Arroyo Grande, CA
Design engineer for the replacement and upgrade of the existing Oro Water Booster Station in the City of Arroyo Grande. Prepared construction documents and technical specifications for the pump replacement and required waterline modifications. Wallace Group coordinated with sub-consultants for associated electrical and SCADA controls design. The project included a temporary pumping station to bypass the existing pump system and provide water service during project construction.

Drainage and Post Construction Stormwater Design, Octagon Barn Restoration, County of San Luis Obispo, CA
Valerie was the design engineer for grading and drainage improvements for the restoration of the historic Octagon Barn in San Luis Obispo County. Site design included a grading plan for the parking lots and ADA paths of travel, preparation of a drainage report, and a Storm Water Control Plan in accordance with the Central Coast RWQCB Post-Construction Requirements. Low impact development (LID) features include vegetated swales, pervious parking areas, and a restored wetlands area for stormwater retention.

Water System Model and Fire Flow Analysis, Los Osos Community Services District, Los Osos, CA
Prepared a system-wide water model update and calibration to account for recent pipeline upgrades and a new pressure zone in the Los Osos Community Services District water distribution system. Coordinated fire hydrant flow testing and data collection in support of the hydraulic model calibration. Conducted a fire flow availability analysis and prepared an ESRI geodatabase containing the modeled results for future use by the District and South Bay Fire Department.

Recycled Water Distribution System Conceptual Plan, Arroyo Grande, CA
Prepared a feasibility analysis to identify alternatives for recycled water distribution from either the South San Luis Obispo County treatment plant or the City of Pismo Beach treatment plant. Identified potential demands for existing secondary treated recycled water and potential tertiary treated recycled water, and conducted a hydraulic analysis to evaluate distribution system alternatives to provide projected demands at pressures required by site irrigation systems. Coordinated with Conoco Phillips to evaluate potential for reuse of an abandoned oil pipeline.

Drainage and Stormwater Quality Plan Checking Services, City of Seaside and City of Hollister, CA
Wallace Group, recognized for the in-depth expertise of its staff, has been engaged to provide plan checking services for a number of public agencies for infrastructure improvements as well as private developments. Valerie provides review of Drainage Reports, Stormwater Control Plans, and improvements plans for grading and drainage.

PRESENTATIONS

Pervious Concrete, Pavement, and Asphalt. Calming the Storm, Santa Cruz Resource Conservation District.

Stormwater Compliance Training Workshop. APWA Monterey Bay.

Post-Construction Stormwater Control Requirements. APWA Central Coast.

LID Construction Workshop. Central Coast Low Impact Development Initiative (LIDI).

TRAINING

BioRetention Design, Central Coast Low Impact Development Initiative (LIDI)

Low Impact Development (LID) Workshops, UC Davis Cooperative Extension & Central Coast Low Impact Development Initiative (LIDI)

Recycled Water Treatment and Distribution, CCWUC

HydroModification and Stormwater Management, ASCE

Trenchless Technology, APWA

Pumping Systems Design for Civil Engineers, ASCE

SOFTWARE

- AutoDesk Civil 3D
- Innovyze InfoSWMM
- FLO-2D
- Bentley WaterGEMS
- Bentley SewerGEMS
- HEC-RAS
- ESRI ArcView
- HydroCAD

KYLE ANDERSON, PE, QSD/P
Civil Engineer

Kyle joined Wallace Group in 2015 as a Civil Engineer in our Water Resources Department. He brings nine years of experience in water resources analysis and design and has experience working in both the public and private sectors. Kyle's experience includes hydrologic and hydraulic analysis and design, grading and drainage design, water and wastewater system master planning, analysis and design and municipal and construction stormwater regulatory compliance support. Kyle has an M.S. in Civil Engineering with an emphasis in water resources from the University of Colorado at Boulder and is a California registered civil engineer.

EDUCATION
MS, Civil Engineering Water Resources, University of Colorado at Boulder

BS, Materials Engineering, California Polytechnic State University, San Luis Obispo, CA

REGISTRATION
California Registered Civil Engineer, Number c79919

Qualified SWPPP Developer/Practitioner (QSD/P)

AFFILIATION
American Public Works Association, Central Coast Chapter – Communications Chair – 2019-Present

American Council of Engineering Companies, San Luis Obispo Chapter – Grass Roots Chair – 2019-Present

American Society of Civil Engineers – San Luis Obispo Branch Office – 2011-2017

Founder of the San Luis Obispo American Society of Civil Engineers Younger Member Forum

REPRESENTATIVE PROJECTS

Water Main Replacements, City of Grover Beach, CA
In 2016, the City of Grover Beach was awarded Community Development Block Grant (CDBG) monies to upgrade 12 under-sized pipeline segments throughout the City, totaling 8,000 linear feet. The Project included design considerations to minimize traffic impacts, strategize design to minimize complexity of cut-overs to the new water service, water service replacements, preparing detailed inventory of condition of all service water meter boxes for consideration by City staff for replacement, developing traffic control plans, preparing special provisions and technical specifications to address pipeline materials, Contractor coordination and notification requirements, and overall project requirements for the water main replacements. Wallace Group developed tie-in details for each of the 12 pipeline locations. The project is currently bidding, with bid opening scheduled for the week of April 18, 2016. Kyle was involved in all aspects of the design plans, including utility coordination and collection, preparing preliminary design report detailing tie-in conditions and alignment recommendations.

Chumash Reservation Recycled Water Tank and Distribution Line, Santa Ynez, CA
Project engineer for the design of a recycled water tank facility and a recycled water distribution main line. Design of the 213,000 recycled water tank included coordination with the tank contractor (bolted steel tank), tank site design, designing and specifying tank appurtenances and piping connections, 10" ductile iron tertiary effluent piping (from WWTP to tank) design, and relocation of existing utilities (including a 10" sewer main with a jack and bore creek crossing) to accommodate RW tank location. The recycled water distribution line included approximately 2,000 linear feet of 6" HDPE pipe with two bridge crossings. Kyle was involved in all aspects of the design plans, including utility coordination, hydraulic calculations to determine adequate delivery pressure to the reuse site (park), preliminary and final design, pipeline separation considerations, and recycled water pipeline color markings (purple) for the distribution system piping. Both the 10" RW effluent piping and the 6" HDPE RW piping required careful review of an existing vehicular bridge to identify suitable corridors and pipe hangers to suspend these pipelines across a very congested bridge with multiple existing utilities.

Urban Storm Water Diversion, Phase 4, City of Pacific Grove, CA
Assistant Project Manager and Project Engineer for the planning and design of an urban stormwater diversion project for the City of Pacific Grove. The

WALLACE GROUP®

KYLE ANDERSON, PE, QSD/P
Civil Engineer

project will collect and divert stormwater to an underground storage basin where the water will then be metered into the sewer collection system for treatment and disposal at Monterey One Water. WG prepared a Proposition 1 Stormwater Implementation grant application for funding the final design and construction of the project and the City was awarded the grant in December 2016. Wallace Group prepared construction bid documents and supported the City through the bidding process. Wallace Group will continue to support the City through the construction process anticipated to begin in the spring of 2020.

University of California – Santa Cruz West Sewer Emergency Replacement Project, Santa Cruz, CA
Project manager for the design of an emergency sewer replacement project. Wallace Group prepared a condition assessment report for the University based on CCTV review of its sewer collection system. The report identified sections of the sewer as needing to be replaced as soon as possible due to extreme corrosion of several sections of cast iron pipe. Kyle is project manager and project engineer and is leading the Wallace Group design team, coordinating work by sub-consultants, and coordinating with University Staff and local agencies. The project is anticpated to bid in October 2019 and begin construction in Winter 2019.

City of Greenfield Water and Wastewater Master Plans, City of Greenfield, CA
Project engineer for water and wastewater collection system master planning activities for the City of Greenfield. The water master planning effort included: projecting growth and water system demands, detailed hydraulic modeling and model calibration, analysis of well water supplies, water system and well reliability, water quality of groundwater supplies, water storage requirements, distribution system functionality, and other considerations to serve the City's needs for a 20-year planning horizon. The wastewater master planning effort included: conducting wastewater collection system monitoring (3 locations), development of a sewer collection system model, detailed evaluation of the hydraulic capacity of the collection system and an evaluation of the City's sewage lift stations for a 20-year planning horizon. Prioritized capital improvement programs were developed to assist the City with fiscal planning for needed water and wastewater system improvements to serve immediate and future needs.

Oklahoma and Kansas Avenue Water Main, County of San Luis Obispo, CA
Kyle is currently serving as Design Engineer for the addition of a 10" diameter potable water main in Kansas and Oklahoma Avenues, to address fire flow needs for the nearby Juvenile Hall and other adjacent existing structures. As part of the Juvenile Hall expansion, the County determined that an upsized water main is required to fulfill the fire flow needs for this area. Wallace Group is preparing the plans and specifications for this upgrade, expected to be constructed Summer 2016.

Recycled Water Modeling, City of San Luis Obispo, CA
Design engineer for developing and maintaining the City's recycled wáter model. This model is used by the City and Wallace Group to evaluate new developments, and what recycled wáter service pressures can be expected at the developments' irrigation Systems and points of connection.

AWARDS

2014 Outstanding Younger Civil Engineer - ASCE San Luis Obispo Branch

2014 Outstanding ASCE Younger Member Forum officer – ASCE Los Angeles Section

SOFTWARE

AutoDesk Civil 3D
HydroCAD
WaterCAD
InfoSWMM
HEC-RAS
HEC-HMS
ESRI ArcMap

WALLACE GROUP®

STEVEN G. TANAKA, PE
Principal Civil Engineer

Steve is a Principal Civil Engineer with extensive public and private sector experience in municipal water and sewer utility design, recycled water and wastewater systems master planning, studies, design, and project management. Having worked for the Regional Water Quality Control Board, Steve is particularly knowledgeable of applicable regulatory requirements and compliance issues.

REPRESENTATIVE PROJECTS

Water and Wastewater/Recycled Water Master Planning, Capital Improvement Programs for Multiple Central Coast Cities and Special Districts
Served has served as Project Manager and Engineer in the development of water, wastewater and recycled water master plans for many California and Central Coast communities and cities.

Water, Sewer and Storm Drain Utility Projects, Various Agencies
Steve has been Project Manager and Project Engineer on detailed design for over 35 miles of water transmission pipelines, sewer gravity lines and force mains, and storm drains in public rights-of-way, and has designed projects using PVC C900, HDPE, ductile iron and welded steel, and ranging in diameter from 6-inch to 42-inch. A summary of germane utility design projects by Steve include:

- City of Grover Beach, 8,000 LF of 8" potable water main upgrades, replacing undersized 2" and 4" water mains throughout the City.
- Band of Chumash Indians, design of 2,000 LF of new 12" diameter sanitary gravity sewer, to allow decommissioning of an aging sewage lift station.
- Whalerock Raw Water Pipeline, 0.5 miles of 30" diameter steel water main (designed alternative bids for steel and ductile iron). Wadsworth Storm Drain, Pismo Beach. Designed 0.5 miles of 42-inch and 48-inch HDPE pipe, including Dolliver/Caltrans crossing.
- 16th Street Sewer Replacement, San Miguel CSD. Designed short segment (200 LF) of new 16" HDPE sewer under existing railroad crossing, to replace an existing 12" ductile iron gravity sewer in poor condition.
- South Bay Recycling Program, San Jose, CA. Designed 5 miles of 12" to 42" diameter recycled water transmission mains in City streets. Project included two bore and jack crossings major thoroughfares.
- City of Burbank. Designed 2 miles of 24" diameter ductile iron water transmission main in Hollywood Way, in heavy traffic conditions and in front of Burbank Airport entrance.
- Goleta Water District. Designed over 10 miles of recycled water transmission main, ranging in diameter from 8" to 18". Alignment traversed under Goleta Slough, and through UCSB Campus.
- Pacific Ave. Water Main Upgrade, Paso Robles Beach Water Association/Cayucos, CA. Designed one mile of new 8" water main upgrade in Pacific Ave., immediately adjacent to the beach.
- Apple Farm Sewer Siphon Upgrade, City of San Luis Obispo. Replacement of 400 LF of 6" sewer siphon under San Luis Obispo Creek.
- Park Street Sewer Upgrade, City of San Luis Obispo. Replacement

EDUCATION
MS, Civil Engineering, California State University, Long Beach, CA

BS, Civil Engineering, California State University, Fresno, CA

REGISTRATION
California Registered Civil Engineer, Number 49779

Arizona Registered Civil Engineer, Number 31526

AFFILIATION
American Society of Civil Engineers (ASCE), 2016/17 President, San Luis Obispo Branch

WateReuse Association

Engineers Without Borders

Construction Specifications Institute (CSI)

2015 Outstanding ASCE Branch Officer, San Luis Obispo Branch

of 850 LF of 8" gravity sewer, including creek crossing.
- Park/Cypress Sewer, City of Pismo Beach. Replacement 850 LF of 18" gravity sewer.

Design-Build Casino Expansion and Cultural Museum for Santa Ynez Band of Chumash Indians, Santa Ynez, CA
Overall Project Manager for water, wastewater and civil facilities for the 2004 expansion of 190,000-sf casino complex with a 105-room hotel and parking structures, later expanding to 250,000-sf casino and 215-room hotel in 2016. Scope included master planning wastewater treatment and collection system, tertiary water recycling system, and water system improvements to serve the facility, agency coordination for new water services and pipelines, design and construction of a complete on-site water system, permitting and coordination for 0.2 mgd SBR tertiary wastewater treatment plant and negotiations with local sewer agency for wastewater capacity. Assisted the Tribe with planning for full use of tertiary recycled water for toilet flushing in the hotel and casino, and irrigating area landscaping. Steve is currently PM for the civil design aspects of the Tribe's cultural museum project being developed on 7 acres of Tribal trust lands.

Water Recycling Feasibility Studies and Design Projects, CA
Prepared recycled water feasibility and technical studies, design services, State Revolving Fund (SRF) funding support, regulatory oversight and public outreach, and other activities related to recycled water programs, for San Simeon CSD, South San Luis Obispo County Sanitation District, Chumash Casino Santa Ynez, City of Reno/Stead, Nevada, Goleta Water District, City of Camarillo, City of San Jose/South Bay Water Recycling Program, City of Taft/West Kern Water District, Lake Sherwood Golf Course (Southern California).

Water Storage Tanks, Various Agencies
Steve has been Project Manager and Project Engineer on detailed design, coating, re-coating, and repairs for various potable and recycled water storage tanks, including:
- San Miguel CSD. Design 0.65 MG welded steel water tank.
- Guadalupe, CA. Design 1.6 MG welded steel water tank.
- Templeton CSD. Emergency repair of two 0.4 MG welded steel water storage tanks damaged in 2003 earthquake.
- Los Osos CSD. Seismic retrofit and coating of two welded steel tanks, 0.4 MG and 0.34 MG.
- City of Arroyo Grande, CA. Re-coating and repairs of three water reservoirs 2, 3 and 5, ranging in size of 0.5 to 1.0 MG.
- Laguna County Sanitation District, Santa Barbara County. Design of two 1.0 MG welded steel reservoirs for storage of treated tertiary recycled water.
- Rice Ranch Ventures/Golden State Water Company. Design of 1.5 MG water storage tank to support new RRV development.

NATHAN WHITACRE, EIT
Associate Engineer III

Nate is an EIT who recently joined the Wallace Group's Water Resources Department with over 7 years of experience in operations and maintenance of water, wastewater and high-pressure fluid systems. He has quickly gained experience in the private sector with water and wastewater systems assisting in the completion of 10 water system preliminary technical reports and technical, managerial and financial reports. Nate's experience includes grading and drainage design, water and wastewater system design, wastewater regulatory compliance support, and wastewater operations and maintenance support.

REPRESENTATIVE PROJECTS

San Diego Zoo Safari Park, San Diego, CA
Design build of a Membrane Bio-Reactor and wastewater treatment upgrades.

City of Hollister Industrial Wastewater Treatment Plant, Hollister, CA
Provided preliminary design for combined wastewater and stormwater treatment facility. Acted as coordinator between City, Industrial Dischargers, Regulating Agencies and Plant Operators

Oak Shores Wastewater Treatment Plant, Oak Shores, CA
Design build of a Membrane Bio-Reactor and spray field treatment system

Water Systems: Provided Technical Reports, Permitting Assistance and Operations Support for:
Wineries: Booker, Briarwood, Justin, Sextant, Sixmilebridge, Sona and 11 Confessions
Small Public Water Systems: Precision mutual water company, Fiero Lane Mutual Water Company, Kind Farms, Rancho Mission Viejo, Pacific Ag Research and Greengate Ranch & Vineyards

PRIOR TO JOINING WALLACE GROUP

Technical Team Lead, E & J Gallo Spirits
Managed a team of sixteen maintenance technicians and electricians responsible for maintaining the infrastructure of 6 million case per year spirits facility. Project manager for capital projects, upgrades and rebuilds, to include a pH neutralization system upgrade and regenerative thermal oxidizer upgrade.

USS Wyoming Submarine Officer
Operational Safety Officer: Identified unsafe work practices and unnecessary risks during day-to-day operations.
Quality Assurance Officer: Supervised the completion of over fifty critical systems tests including primary relief valve testing, steam generator safety value testing and multiple hydrostatic tests.
Chemistry/Radcon Officer: Supervised a team of nuclear chemists responsible for sampling radioactive nuclides and maintaining the water chemistry of a S8G nuclear reactor.

EDUCATION

BS, Environmental Engineering, California Polytechnic San Luis Obispo, CA

Nuclear Physics, Chemistry, Thermodynamics and Electrical Engineering, Naval Nuclear Power School/Training Unit