



**Santa Clara Valley *Urban Runoff*  
Pollution Prevention Program**

**Request for Qualification Response for:  
Storm Water Treatment Measures and  
Hydromodification Control Facilities**

**Civil Engineering, 3<sup>rd</sup> Party Peer Review,  
& Site Survey Services**

**August 16, 2024**



**UNDERWOOD & ROSENBLUM, INC. CIVIL ENGINEERS and LAND SURVEYORS**

**1630 Oakland Road, Suite A114, San Jose, California**

**Phone: 408.453.1222  
Email: [Mark@UandR.com](mailto:Mark@UandR.com)  
Website: <https://www.UandR.com>**



Via Email: Vatre@eoainc.com and Dropbox  
Santa Clara Valley Urban Runoff Pollution Prevention Program  
Vishakha Atre

August 16, 2024

RE: Request for Qualifications for Professional Civil Engineers

Dear Vishakha Atre:

Thank you for the opportunity to submit qualifications to design, review and/or certify storm water treatment best management practices and hydro modification flow control facilities. Please add Underwood & Rosenblum, Inc. (U&R) to the list. **Senior Engineer, Mark Sorenson PE, QSD/QSP** will be the main contact for any RFQ's received. The complete contact information for U&R is:

Underwood & Rosenblum, Inc.  
Civil Engineers & Surveyors  
1630 Oakland Rd., Suite A114  
San Jose, CA 95131  
Tel: (408) 453-1222 x14  
Fax: (408) 453-1207

Established in 1978, U&R has become Northern California's leader in creative solutions for mid-sized projects. U&R's expertise ranges from private land development to public improvement efforts. For decades we have been providing civil engineering and surveying work for all types of mid-sized projects. Many land developers, architectural firms and school districts have chosen us as their primary consultant in our field for powerful reasons:

- Experience with thousands of mid-sized projects
- Senior-level management plans and oversees each project
- Capable of handling difficult projects, including infill and high-density cases
- Knowledge of current development and permit requirements
- State-of-the-art technology
- Ethical business practices

U&R personnel include California Registered Civil Engineers, licensed land surveyors, computer drafters, field survey crews and administrative staff.

U&R staff has been educated in the NPDES Permit requirements and has kept current with changes in C.3 procedures and reporting. In the last five years U&R has prepared numerous NOI's, Storm Water Pollution Prevention Plans and Storm Water Management plans. Currently U&R has two certified Qualified SWPPP Developers (QSD/P).

Storm water regulations have undergone extensive changes over the last few years. The U&R staff is current with the regulations and can bring our experience with drainage systems used on other projects to your projects. U&R was the first company to design a project in Alameda County using the new Hydromodification Management Plan. U&R staff is also experienced in the design of storm drainage system repairs to culverts, retaining walls, and embankments.

Included with this letter are resumes of licensed civil engineers registered in the State of California and the listing of the training on best management practice design for managing storm water quality and flows.

U&R has strong relationships with local community officials and these positive ties allow us to communicate effectively and minimize misunderstandings during the approval and permitting process. We communicate regularly with involved utility and government representatives to ensure a clear understanding of their needs in order to incorporate important information prior to submittals.

U&R has the resources to provide both conceptual and detailed design/review for your SCVURPPP requirements. Our staff includes three professional engineers, three licensed surveyors and a dedicated group of professional technicians, surveyors and support personnel. Based in the heart of Silicon Valley, Northern California, U&R has the pride and commitment to make every project a success; and with several thousand projects built and standing, this is plain to see.

If you have any questions regarding this matter do not hesitate to contact me.

Very Truly Yours,



Frank M. Rosenblum, RCE 42857, PLS 6395  
Principal Engineer / President  
408-453-1222  
Frank@uandr.com  
MS:ms



# **Santa Clara Valley *Urban Runoff* Pollution Prevention Program**

## **Table of Contents**

Statement of Qualifications .....	1
1. Background of individuals .....	1
2. Trainings.....	4
3. Proof of Training .....	8
Understanding of Storm Water Management .....	9
Hydrologic Models .....	12
Third Party Inspections.....	12
Project Experience.....	13
Summary of Interest.....	16

## Statement of Qualifications

- **The firm's name, business address, telephone number and year established.**

UNDERWOOD & ROSENBLUM, INC.  
CIVIL ENGINEERS and LAND SURVEYORS  
1630 Oakland Road, Suite A114, San Jose, CA 95131  
Phone: 408.453.1222  
Established in 1978

<https://www.UandR.com>  
Tax I.D. Number 94-2517191  
C-corporation

Civil Engineer, California No. 42857  
Land Surveyor, California No. 6395

- **Contact name, phone number, and email address.**

Mark Sorenson PE, QSD/P  
408.453.1222  
[Mark@uandr.com](mailto:Mark@uandr.com)

- **Names of the principles and key personnel who will be assigned to conduct the review or inspections. Describe their qualifications and experience by providing answers to the items below:**

**Mark Sorenson PE, QSD Senior Civil Engineer and Project Manager**, will be assigned to manage the overall project from Civil Engineering to Land Surveying field crews, and technical staff.

**Matt Kamkar, QSD/QSP, PE, JD – Principal Engineer and Project Manager**

Matt will work with Mark as well as our clients to perform the design of their projects, plan review for colleagues and conduct construction inspection of the stormwater features.

- 1. The background of these individuals, including whether they are licensed civil engineers registered in the State of California.**

Mark and Matt are licensed civil engineers registered in the State of California. Please see below for qualifications.

# Mark Sorenson, PE, QSD/QSP

## Project Manager

### Summary of Relevant Qualifications

Mark Sorenson joined U&R, Inc. in January 2007 and brought with him more than 31 years of civil engineering experience in transportation, traffic engineering and in developmental work. His experience includes horizontal and vertical alignment studies, site survey studies, highway geometrics, widening, reconstruction of existing highways, soundwall design, hydraulic studies, stormwater analysis per NPDES, grading and improvement design, SWPPP preparation, plans and specification preparation from private development projects to public school design.

Has also designed numerous storm water management projects from Salinas, Santa Clara County, Alameda County and Contra Costa County.

Mr. Sorenson is experienced in advanced BAHM training and application. Attended BAHM training Fremont, CA.

#### • 3<sup>rd</sup> Party C.3 Review and Inspection

Many municipalities are now asking the C.3 review consultant to include field inspection and material placement is per plan. U&R now includes field inspection as part of our scope of services. U&R has approved over 10 projects requiring 3<sup>rd</sup> party approval in Palo Alto, Sunnyvale, Cupertino and Mountain View.

#### • San Rafael High School, San Rafael, CA

Civil Engineer responsible for the new Administration and Multi Use (MACK) building in San Rafael. This DSA approved building meets the Regional Standards for Stormwater.

#### • Salinas HS #5, Salinas CA

Civil Engineering design for 39 acre new public school based on Salinas Stormwater Development Standards (November 2013). This stormwater management report required BAHM analysis to reach the 95<sup>th</sup> percentile rainfall event.

#### • Our Lady of LaVang Catholic Church, San Jose, CA

Since 2014 U&R has been involved with the design of the new Vietnamese Catholic Church at 389 East Santa Clara St., San Jose. Because of the length of time it takes the church to raise the funds the approval process and Stormwater standards at San Jose has changes twice. U&R is current with how San Jose has changed its evaluation forms and standard plans.

#### • San Pedro Elementary School, San Rafael, CA

Civil Engineer responsible for the new Administration and 2 classroom building in San Rafael. This DSA approved building meets the Regional Standards for Stormwater.

#### Firm:

Underwood & Rosenblum, Inc.

#### Experience: 33 Years

#### Education:

- BS, Civil Engineering, Cal Poly State University, Pomona, California

#### Registrations/Certifications:

- Civil Engineer, California No. C67498
- QSD Certified 23084
- QSP Certified 23084

#### Languages:

- English

#### Experience:

- Fremont Unified School District
- University of California, Berkeley
- University of California, Hayward
- SLUSD – 9th Grade Campus
- SFUSD – Burbank Middle School
- SFUSD – Aptos Middle School
- SFUSD – Downtown High School
- SFUSD – Cleveland Elementary School
- SFUSD – Spring Valley Elementary School
- SFUSD – Grattan Elementary School
- SFUSD – Mission CDC
- SFUSD – Burnett CDC
- Live Oak School District – Live Oak E.S.
- Tierra Pacific Charter School
- Evergreen School District
- Crib Wall Rehabilitation and Repair, Universal Studios Hollywood
- Pacific Coast Highway Rehabilitation

# Matt Kamkar, QSD/QSP, PE, JD

## Project Manager/ Principal Engineer

---

### Summary of Relevant Qualifications

Matt brings over 35 years of civil engineering experience to his projects. He has been a project engineer and/or a project manager for many public works projects like highways, roadways, light-rail, as well as residential, commercial, and retail projects. He has served over 20 years as a volunteer commissioner on City Commissions such as Planning, Small Business Development and Traffic Commissions.

His expertise is in drainage design; flood control as well as project planning, project management, and design studies.

### Bay Area Experience:

#### 3<sup>rd</sup> Party C.3 Review and Inspection

Many municipalities are now asking the C.3 review consultant to include field inspection and material placement is per plan. U&R now includes field inspection as part of our scope of services. U&R has approved over 10 projects requiring 3<sup>rd</sup> party approval in Palo Alto, Sunnyvale, Santa Clara, Cupertino and Mountain View.

#### Sample of Construction Inspection Experience include:

- Data Center Site at 2600 Walsh Ave.-Santa Clara
- Taylor Morrison Res. Dev. at 3035 El Camino Real – Santa Clara
- Pulte T-homes at 1830 Worthington Cir – Santa Clara
- Agrihood Senior Housing at Winchester Blvd. – Santa Clara
- Great America Commons Office Bldgs. at Great America Blvd.-Santa Clara
- Xtra-space Storage at 2566 Scott Blvd. – Santa Clara

#### Sample Public Works Projects in Drainage Design include:

- Highway 237/880 Interchange and Deck Drainage of Flyover- Milpitas
- Highway 580 WB widening, Greenville Rd. to Hwy. 680-Contra Costa Co.
- Highway 85 from 280 to S. Stelling Rd. OC - Cupertino
- Highway 880 from Gish Rd. to Montague Expwy. - San Jose
- Highway 880/Brokaw Interchange - San Jose
- Highway 17 from Lark Ave. to Highway 85 – Los Gatos
- Highway 85/17 interchange – San Jose
- Highway 237 from Maude Ave. to Middlefield Rd. – Sunnyvale
- El Camino Real re-route around Santa Clara Univ. – Santa Clara
- Olive Ave. Widening - Novato

#### Sample Private Projects

- Site design & on-site/off-site improvements; construction support and staking for a new industrial/commercial project for warehouse/light industrial use – South San Jose
- Site Modification and Construction Support for S. 1<sup>st</sup> St. Apartment – San Jose
- Hilton Homewood Suites, Civil Project Management – Sunnyvale
- Site Design – Putnam Subaru - Burlingame

#### Firm:

Underwood & Rosenblum, Inc.

#### Experience: 37 Years

#### Education:

- JD, Law; 2014  
Monterey College of Law  
Seaside, CA
- MS, Construction Engr. & Management; 1985  
Stanford Univ. Stanford, CA
- BS, Civil Engineering; 1984  
San Jose State Univ.  
San Jose, CA

#### Registrations/Certifications:

- Civil Engineer, California  
No. C42353
- QSD/P Certified, 26812

#### Professional Affiliation:

- CASQA
- AIA

2. Listing of the training completed by these individuals on sizing and design of control measures, including low impact development (LID) measures, for managing storm water quality and flow within the past three years.

- Mark Sorenson, PE, QSD/QS Training Completed.

STORMWATER MANAGEMENT SOLUTIONS

**COLLECTION & CONVEYANCE**



**ECOFLOR 100**  
High Performance Recycled Dual Wall Pipe

**TREATMENT**



**STORMWATER QUALITY**  
Water Treatment

**STORAGE**



**HYDROSTOR™**  
High Performance Rubber Curbside

**UNDERGROUND DETENTION**  
Stormwater High Performance Filter System

Certificate of Completion  
to  
**Mark Sorenson**  
for participation in  
**Prinsco's Stormwater Management Solutions Seminar**  
worth  
1 Professional Development Hour

Date: March 25, 2024



TO CARE. TO CONTRIBUTE. TO SOLVE.

MARK SORENSON, QSD, PE  
Underwood & Rosenblum, Inc.  
1630 OAKLAND ROAD, SUITE A114  
SAN JOSE, CA 95131

Certificate of Attendance

HalfMoon Education Inc. certifies that on May 31, 2019,  
MARK SORENSON, QSD, PE completed

*Stormwater Management*

This live lecture presentation was conducted at the  
Holiday Inn Hotel & Suites Oakland Airport, Oakland, California.

This seminar offers a 7.0-hour continuing education opportunity to California professional engineers, landscape architects, architects (non-credit), and floodplain managers. Continuing education is not required for engineer and landscape architect license maintenance or renewal in California. This course does not include accessibility content for California architects.

This program is approved by the American Institute of Architects for 7.0 HSW Learning Units (Sponsor No. 1885), the Landscape Architecture Continuing Education System for 7.0 HSW PDHs, and the Association of State Floodplain Managers for 7.0 CECs.

Professional engineers, landscape architects, and architects seeking continuing education credit in other states will be able to apply the hours earned at this activity, in most cases. Refer to specific state rules to determine eligibility.

Instructor: Rachael Keish

Seminar Sponsor: HalfMoon Education Inc.  
P.O. Box 278  
Altoona, WI 54720  
(715) 835-5900  
www.halfmoonseminars.org

Authorized Representative:  
  
Douglas E. Chapman  
Continuing Education Director

**CERTIFICATE OF TRAINING**  
CALIFORNIA CONSTRUCTION GENERAL PERMIT

QUALIFIED SWPPP DEVELOPER (QSD)  
AND  
QUALIFIED SWPPP PRACTITIONER (QSP)

Mark Sorenson

Apr 09, 2024 - Jun 09, 2026

Certificate # 23084



California Stormwater Quality Association and  
California Construction General Permit Training Team



Solutions for your Environment™

**CERTIFICATE**  
OF COMPLETION  
IS PRESENTED TO:  
*mark sorenson*  
**U & R Civil Engineers**

For a 1 hour educational seminar on:  
**The Five Fundamentals for Developing Sustainable Vegetation on Construction Sites**

Held on 08-16-2023  
Presented by Colin Ewart







**Mark has also attended the following:**

- Attended BAHM Training Workshops – Both the Basic as well as Advanced Sessions on Oct. 24, 2023
- Attended Annual C3 Workshop Low Impact Development & Green Infrastructure, June 9, 2022
- Attended Quarterly. Developer Conferences w/ SJDPW staff (i.e. Vivian Tom) discussing stormwater treatment issues among other topics. From 2019 to Present
- Attended Stormwater Management continuing education class May 31, 2019
- Attended Green Technology Training seminar September 15, 2017
- Attended NEPA Assist seminar April 26, 2015
- Attended Understanding Cal Green Building Code Seminar, February 2, 2015
- QSD/QSP Certified June 9, 2012 (renewed 2022)
- BAHM advanced workshop Fremont, CA. April 10, 2016

- Matt Kamkar, QSD/QSP, PE, JD training completed.

**WRECO** 1243 Alpine Road, Ste 108  
Walnut Creek, CA 94596  
Phone: 925.941.2017  
Fax: 925.941.2018  
www.wreco.com

**Course Completion Letter**  
California Construction General Permit Training

**Student Information**  
First name: Matt Last name: Kamkar  
Organization: Underwood and Rosenblum, Inc.  
Street address: 1630 Oakland Rd., Suite A114  
City, State, Zip: San Jose, CA 95131  
Phone number: (408) 594-0442 E-mail address: matt@uandr.com

**Type of Course [Check one]**  
 Qualified SWPPP Developer (QSD) and Qualified SWPPP Practitioner (QSP)  
 Qualified SWPPP Developer (QSD)  
 Qualified SWPPP Practitioner (QSP)

**Location of Training Course**  
Facility, City, State: WRECO, 1243 Alpine Road, Suite 215, Walnut Creek, CA

**Dates of Training Course**  
Month, Days, Year: May 15 - 17, 2018


**Total number of training hours [Record number of hours]**  
24 20 Hours [minimum] - Qualified SWPPP Developer (QSD) and Qualified SWPPP Practitioner (QSP)  
7.5 Hours [minimum] - Qualified SWPPP Developer (QSD)  
12.5 Hours [minimum] - Qualified SWPPP Practitioner (QSP)

**Trainer of Record information [May use stamp or label for some or all of information]**  
First name: Debra Last name: Carey  
Organization: WRECO  
Street address: 1243 Alpine Road, Suite 108  
City, State, Zip: Walnut Creek, CA 94596  
Phone number: (925) 941-0017 E-mail address: debra\_carey@wreco.com  
Certificate of Qualification expiration date: June 30, 2019

**Certification**  
The subject Training Course was conducted in accordance with all of the terms and conditions of the current, signed Qualified CGP QSD/QSP Trainer of Record Agreement between the California Stormwater Quality Association (CASQA) and myself as the Qualified Trainer of Record. Based on this, the student named above has hereby attended a California State Water Resources Control Board (SWRCB) approved training course as required by SWRCB Order No. 2009-0009-DWQ.

Trainer of Record Signature: Debra Carey  
California Construction General Permit Trainer of Record (CGP-ToR)

| Civil Engineering | Environmental Compliance | Geotechnical Engineering | Water Resources



**MATT KAMKAR**  
Underwood & Rosenblum, Inc.  
1630 OAKLAND ROAD, SUITE A114  
SAN JOSE, CA 95131

**Certificate of Attendance**

HalfMoon Education Inc. certifies that on May 31, 2019,  
MATT KAMKAR completed

**Stormwater Management**

This live lecture presentation was conducted at the  
Holiday Inn Hotel & Suites Oakland Airport, Oakland, California.

*This seminar offers a 7.0-hour continuing education opportunity to California professional engineers, landscape architects, architects (non-credit), and floodplain managers. Continuing education is not required for engineer and landscape architect license maintenance or renewal in California. This course does not include accessibility content for California architects.*  
*This program is approved by the American Institute of Architects for 7.0 HSW Learning Units (Sponsor No. J885), the Landscape Architecture Continuing Education System for 7.0 HSW PDHs, and the Association of State Floodplain Managers for 7.0 CECs.*  
*Professional engineers, landscape architects, and architects seeking continuing education credit in other states will be able to apply the hours earned at this activity, in most cases. Refer to specific state rules to determine eligibility.*  
Instructor: *Rachael Koish*

**Seminar Sponsor:** HalfMoon Education Inc.  
P.O. Box 278  
Altoona, WI 54720  
(715) 835-5900  
www.halfmoonseminars.org

**Authorized Representative:**  
Douglas E. Chapman  
Continuing Education Director

**CERTIFICATE OF TRAINING**  
CALIFORNIA CONSTRUCTION GENERAL PERMIT

QUALIFIED SWPPP DEVELOPER (QSD)  
AND  
QUALIFIED SWPPP PRACTITIONER (QSP)

**Matt Kamkar**

Jul 01, 2024 - Jul 15, 2026

Certificate # 26812

 California Stormwater Quality Association and  
California Construction General Permit Training Team

STORMWATER MANAGEMENT SOLUTIONS

 GOLFLOP 48/570 Super-Flow Pipe	 EDGEFLOW I CD High Performance Polypropylene Storm Water Pipe	 STORMWATER QUALITY Water Treatment	 HYDROSTOR™ High Performance Stormwater Storage	 UNDERGROUND DETENTION Customized High Performance Flow Systems
---	--	--	---	---

**Certificate of Completion**  
to  
**Matt Kamkar**  
for participation in  
**Prinsco's Stormwater Management Solutions Seminar**  
worth  
1 Professional Development Hour  
Date: March 25, 2024

 **PRINSCO**  
ENGINEERED WITH INTEGRITY

TO CARE. TO CONTRIBUTE. TO SOLVE.

**Matt has also attended the following:**

- Attended BAHM Training Workshops – Both the Basic as well as Advanced Sessions on Oct. 24, 2023
- Attended Qtrly. Developer Conf.s w/ SJDPW staff (i.e. Vivian Tom) discussing stormwatertreatment issues among other topics. From 2019 to Present. Among the topic were pending changes to the rules to include the offsite areas in the treatment as well lowering of the limits that trigger. These were also discussed in the June 9, 2022 zoom webinar SCVURPPP put on.
- Worked w/ EPA staff and Mark Johnson of Water Board R2 and Karen Petrina of GHD to cap/seal a PCB contaminated site in San Carlos. Learned the whole Bay's limit is only 12 lb. of PCB!
- Attended Stormwater Management course, May 31, 2019 and CA CGP training in May 2018
- Reviewed courses and passed quizzes to renew the QSD Certificate. QSD/QSP Certified July 15, 2018. This certificate is renewed and will expire on July 15, 2026.

**3. Proof of training completed by these individuals that was conducted by an organization with storm water treatment and hydromodification control measures design expertise. Such organizations include, but are not limited to:**

- o Universities
- o American Society of Civil Engineers
- o American Public Works Association
- o California Water Environment Association
- o California Storm Water Quality Association
- o Santa Clara Valley Urban Runoff Pollution Prevention Program



**THIS IS TO CERTIFY THAT**

**Mark Sorenson**

Has completed the "Municipal Storm Water Regulations - Future Changes / Municipalities and Public School Districts (K-14)" Webinar

*Presented by: Bill Hereth, State Water Resources Control Board*

*You may also submit this certificate to your own professional association or IIR Registration.*

*Carl Smith* 15 September, 2017 Webinar On  
 Education Program Director Date City/State  
 Green Technology



**CERTIFICATE OF TRAINING**  
 CALIFORNIA CONSTRUCTION GENERAL PERMIT

**QUALIFIED SWPPP DEVELOPER (QSD)  
 AND  
 QUALIFIED SWPPP PRACTITIONER (QSP)**

**Mark Sorenson**

Apr 09, 2024 - Jun 09, 2026

Certificate # 23084



California Stormwater Quality Association and  
 California Construction General Permit Training Team

MARK SORENSON, QSD, PE  
 Underwood & Rosenblum, Inc.  
 1630 OAKLAND ROAD, SUITE A114  
 SAN JOSE, CA 95131

**Certificate of Attendance**

HalfMoon Education Inc. certifies that on May 31, 2019,  
 MARK SORENSON, QSD, PE completed

**Stormwater Management**

This live lecture presentation was conducted at the  
 Holiday Inn Hotel & Suites Oakland Airport, Oakland, California.

*This seminar offers a 7.0-hour continuing education opportunity to California professional engineers, landscape architects, architects (non-credit), and floodplain managers. Continuing education is not required for engineer and landscape architect license maintenance or renewal in California. This course does not include accessibility content for California architects. This program is approved by the American Institute of Architects for 7.0 HSW Learning Units (Sponsor No. 1885), the Landscape Architecture Continuing Education System for 7.0 HSW PDHs, and the Association of State Floodplain Managers for 7.0 CECS. Professional engineers, landscape architects, and architects seeking continuing education credit in other states will be able to apply the hours earned at this activity, in most cases. Refer to specific state rules to determine eligibility.*

Instructor: Rachael Keish

Seminar Sponsor: HalfMoon Education Inc.  
 P.O. Box 278  
 Altoona, WI 54720  
 (715) 835-5900  
 www.halfmoonseminars.org

Authorized Representative:  
  
 Douglas E. Chapman  
 Continuing Education Director

**CERTIFICATE OF TRAINING**  
 CALIFORNIA CONSTRUCTION GENERAL PERMIT

**QUALIFIED SWPPP DEVELOPER (QSD)  
 AND  
 QUALIFIED SWPPP PRACTITIONER (QSP)**

**Matt Kamkar**

Jul 01, 2024 - Jul 15, 2026

Certificate # 26812



California Stormwater Quality Association and  
 California Construction General Permit Training Team

MATT KAMKAR  
 Underwood & Rosenblum, Inc.  
 1630 OAKLAND ROAD, SUITE A114  
 SAN JOSE, CA 95131

**Certificate of Attendance**

HalfMoon Education Inc. certifies that on May 31, 2019,  
 MATT KAMKAR completed

**Stormwater Management**

This live lecture presentation was conducted at the  
 Holiday Inn Hotel & Suites Oakland Airport, Oakland, California.

*This seminar offers a 7.0-hour continuing education opportunity to California professional engineers, landscape architects, architects (non-credit), and floodplain managers. Continuing education is not required for engineer and landscape architect license maintenance or renewal in California. This course does not include accessibility content for California architects. This program is approved by the American Institute of Architects for 7.0 HSW Learning Units (Sponsor No. 1885), the Landscape Architecture Continuing Education System for 7.0 HSW PDHs, and the Association of State Floodplain Managers for 7.0 CECS. Professional engineers, landscape architects, and architects seeking continuing education credit in other states will be able to apply the hours earned at this activity, in most cases. Refer to specific state rules to determine eligibility.*

Instructor: Rachael Keish

Seminar Sponsor: HalfMoon Education Inc.  
 P.O. Box 278  
 Altoona, WI 54720  
 (715) 835-5900  
 www.halfmoonseminars.org

Authorized Representative:  
  
 Douglas E. Chapman  
 Continuing Education Director

- **A brief statement of the firm’s understanding of urban storm water management practices, issues, and requirements, including LID requirements.**

### **Our Approach**

At U&R we are firm believers that a successful project begins with a thorough understanding of the proposed project’s requirements and goals, the budget and the schedule. Prior to beginning any design or review work, U&R senior management will first meet with the project staff to review the project goals, schedule and budget and all existing plans and information. Listed below are brief descriptions of current storm water requirements that may or may not be required for the project.

- **What does C.3 stand for?** C.3 is a subset of the MRP (Municipal Regional Stormwater Permit). It is a section in the Regional NPDES permit CAS61 2008 that details requirements for New Development and Redevelopment projects to be able to discharge their runoff to the creeks and/or the SFBay. The Construction General Permit was updated in 2022 but it’s application to new permits was delayed until July 1<sup>st</sup>, 2023. The trigger limits have been lowered in the new permit from 10,000 sf to 5,000 sf. This also includes the offsite work, which up to then, was not counted towards the limit. Once a project exceeds the limit, the provision of C.3 will apply, and stormwater treatment measures must be designed and applied to the project.
- **Where do I find the regional permit?**  
[http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/stormwater/mrp.shtml](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/mrp.shtml)
- **Who is covered under the permit?** All municipalities in the counties of Alameda, Contra Costa, San Mateo, Santa Clara and the cities of Fairfield, Suisun and Vallejo. Marin is also using the requirements but is not signatory.
- **Who enforces the regional permit?** The California Regional Water Quality Control Board has enforcement authority and is the final interpreter of questions and disagreements. What they say is the final word. They have the authority through Section 402(p) of the federal Clean Water Act (CWA), as amended by the Water Quality Act of 1987, which requires NPDES permits for stormwater discharges from municipal separate storm sewer systems (MS4s), stormwater discharges associated with industrial activity (including construction activities), and designated stormwater discharges, which are considered significant contributors of pollutants to waters of the United States. On November 16, 1990, USEPA published regulations (40 CFR Part 122), which prescribe permit application requirements for MS4s pursuant to CWA 402(p). On May 17, 1996, USEPA published an Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems, which provided guidance on permit application requirements for regulated MS4s.
- **Who checks our requirements?** The City or County is responsible for enforcing the requirements of the permit. The projects that qualify are all the same in the municipalities’ signatory to the permit. Many cities now require a third-party inspection from the third-party reviewer. U&R is familiar and active with both of these procedures.
- **What is the goal of C.3?** The goal of Provision C.3 is for the Permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.
- **What are the City’s required to do?** Have adequate legal authority to implement all requirements of Provision C.3;
  - a. Have adequate development review and permitting procedures to impose conditions of approval or other enforceable mechanisms to implement the requirements of Provision C.3. For projects discharging

directly to CWA section 303(d)-listed waterbodies, conditions of approval must require that post-development runoff not exceed pre-development levels for such pollutants that are listed;

- b. Evaluate potential water quality effects and identify appropriate mitigation measures when conducting environmental reviews, such as under CEQA;
- c. Provide training adequate to implement the requirements of Provision C.3 for staff, including interdepartmental training;
- d. Provide outreach adequate to implement the requirements of Provision C.3, including providing education materials to municipal staff, developers, contractors, construction site operators, and owner/builders, early in the planning process and as appropriate;
- e. For all new development and redevelopment projects that are subject to the Permittee's planning, building, development, or other comparable review, but not regulated by Provision C.3, encourage the inclusion of adequate site design measures that may include minimizing land disturbance and impervious surfaces (especially parking lots); clustering of structures and pavement; directing roof runoff to vegetated areas; use of micro-detention, including distributed landscape-based detention; preservation of open space; protection and/or restoration of riparian areas and wetlands as project amenities;
- f. For all new development and redevelopment projects that are subject to the Permittee's planning, building, development, or other comparable review, but not regulated by Provision C.3, encourage the inclusion of adequate source control measures to limit pollutant generation, discharge, and runoff. These source control measures should include:
  - 1) Storm drain stenciling.
  - 2) Landscaping that minimizes irrigation and runoff, promotes surface infiltration where possible, minimizes the use of pesticides and fertilizers, and incorporates appropriate sustainable landscaping practices and programs such as Bay-Friendly Landscaping.
  - 3) Appropriate covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas.
  - 4) Covered trash, food waste, and compactor enclosures.
  - 5) Plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency's authority and standards:
    - i. Discharges from indoor floor mat/equipment/hood filter wash racks or covered outdoor wash racks for restaurants.
    - ii. Dumpster drips from covered trash and food compactor enclosures.
    - iii. Discharges from outdoor covered wash areas for vehicles, equipment, and accessories.
    - iv. Swimming pool water, if discharge to onsite vegetated areas is not a feasible option.
    - v. Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option.
- g. Revise, as necessary, General Plans to integrate water quality and watershed protection with water supply, flood control, habitat protection, groundwater recharge, and other sustainable development principles and policies (e.g., referencing the Bay-Friendly Landscape Guidelines).

- **What is an impervious surface?** An impervious surface prevents infiltration of stormwater into the soil. On-site impervious surfaces include roof tops, pavement, paved walks, covered patios, parking lots, and streets.
- **What projects are covered?** Development projects as defined by Provision C.3.b.II of the Municipal Regional Stormwater Permit (MRP).

- **Provision C.3 Size Thresholds**

The thresholds for determining whether Provision C.3 applies to a project are based on the amount of impervious surface that is created and/or replaced by a project, as described below.

- ✓ Projects that create and/or replace 5,000 square feet or more of impervious surface must comply with Provision C.3. These include construction of new roads (and associated bike lines and sidewalks) and widening of existing roads with additional travel lanes.
- ✓ Projects involving Special Land Use Categories including uncovered parking areas, (stand alone or part of another use), restaurants, auto service facilities and retail gasoline outlets that create and/or replace 5,000 square feet or more of impervious surface must comply with Provision C.3.
- ✓ Projects that create and/or replace 1 acre or more of impervious surface may need to comply with the hydromodification management requirements of Provision C.3.g.

- **What is Low Impact Development?** The goal of LID is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used to adhere to these LID principles include measures such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes.

- **Does C.3 address bioretention Design?** Yes. A type of LID treatment measure designed to detain stormwater runoff, filter stormwater runoff through biotreatment soil media and plant roots, and release the treated stormwater runoff to the storm drain system. Biotreatment is allowed under Provision C.3.c of the Municipal Regional Stormwater Permit, if infiltration, evapotranspiration and rainwater harvesting and use are infeasible. As required by Provision C.3.c.i(2)(vi), biotreatment systems shall be designed to have a surface area no smaller than what is required to accommodate a 5 inches/hour stormwater runoff surface loading rate and shall use biotreatment soil as specified by the Municipality.

- **How do we design LID features?** The Permittees shall require that stormwater treatment systems constructed for Regulated Projects meet at least one of the following hydraulic sizing design criteria:
  - a. **Volume Hydraulic Design Basis** – Treatment systems whose primary mode of action depends on volume capacity shall be designed to treat stormwater runoff equal to:
    - 1) The maximized stormwater capture volume for the area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients set forth in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998), pages 175–178 (e.g., approximately the 85th percentile 24-hour storm runoff event); or
    - 2) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology set forth in Section 5 of the California Stormwater Quality Association's Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data.
  - b. **Flow Hydraulic Design Basis** – Treatment systems whose primary mode of action depends on flow capacity shall be sized to treat:
    - 1) 10 percent of the 50-year peak flowrate;
      - i. The flow of runoff produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths; or
      - ii. The flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity.

c. **Combination Flow and Volume Design Basis** – Treatment systems that use a combination of flow and volume capacity shall be sized to treat at least 80 percent of the total runoff over the life of the project, using local rainfall data.

- **What is Hydromodification?** Hydromodification Management (HM) Projects are Regulated Projects that create and/or replace one acre or more of impervious surface and are not specifically excluded within the requirements of Attachments B–F. A project that does not increase impervious surface area over the pre-project condition is not an HM Project. All HM Projects shall meet the Hydromodification Management Standard of Provision C.3.g.ii. Projects that outfall to concrete channels (all the way to the bay), are exempt from HM requirements.
- **A brief statement of the firm’s understanding of and experience with continuous simulation hydrologic models, including BAHM 2023, and analysis of output data for use in design of hydromodification control measures.**

U&R Civil Engineers and Surveyors uses the Bay Area Hydrology Model (BAHM) which was updated in 2023. This is a tool for analyzing the potential hydrograph modification effects of land development projects and sizing structural solutions to mitigate the increased stormwater runoff from these projects. This software was developed for use in three counties in the San Francisco Bay Area: Alameda, San Mateo and Santa Clara. U&R also uses a regionally designed version for Salinas regions.

Another software product used by U&R is Sewer GEMS. Sewer GEMS is a fully dynamic, multi-platform, sanitary and combined sewer modeling solution. Engineers can analyze sanitary or combined conveyance sewer systems using built-in hydraulic and hydrology tools and a variety of wet-weather calibration methods. From urban sewer planning to overflow remediation analysis to optimized Best Management Practices designs, Sewer GEMS provides an easy-to-use environment for engineers to analyze, design, and operate storm drain, sanitary and combined sewer systems.

- **A brief statement of the firm’s understanding of and experience with on-site third-party inspections of installed stormwater treatment measures.**

Thank you for the opportunity to submit this section relating to the third-party inspection of installed stormwater treatment measures. U&R’s staff has been educated in the NPDES Permit requirements and has kept current with changes in C.3 procedures and reporting. In the last five years U&R has prepared numerous NOI’s, Storm Water Pollution Prevention Plans, Third Party SWMP Reviews, field inspections and Storm Water Management plans. Currently U&R has two (2) certified Qualified SWPPP Developers (QSD).

During a normal design scope in our development projects U&R performs a punch walk to determine whether the contractor has installed the C.3 approved design per plan and Storm Water Management Plan (SWMP). One of the key components in our punch list is determining that the field components match the SWMP. U&R is qualified at determining the field inspected stormwater construction meets the SWMP measures.

Please add Underwood & Rosenblum, Inc. (U&R) to the list.

Mark Sorenson PE, QSD/QSP Principal Engineer will be the main contact.  
925-683-2910 (cell)  
[mark@UandR.com](mailto:mark@UandR.com)

Matt Kamkar PE, JD, QSD/QSP as an alternative contact  
408-594-0442 (cell)  
[matt@UandR.com](mailto:matt@UandR.com)

- **Information on three examples of experience in the design of stormwater treatment and flow control measures (including LID measures) within the past five years, including, but not limited to: type of project, size, location, a detailed description of the treatment or hydromodification control measures designed, and references/contact information for the firm and persons responsible for each project.**

**1. Project Name:** Drought Response Outreach Program for Schools (DROPS)  
Grant Monitoring and Reporting Plan  
Downtown College Prep Alma at 1402 Monterey Highway

**Location:** San Jose, CA

**Owner:** Downtown College Prep Alma

**Owner Contact:** Ms. Alice Huang 408-271-8120

**Engineer Contact:** Frank Rosenblum, 408-453-1222 x12

#### **Project Description**

U&R applied for and received state funding for stormwater treatment at a local college prep school. The project consists of remodeling the existing warehouse-type buildings and redeveloping the site for a college prep school. A separate “Steam Center” building is included in the planning design work and will be as part of a future phase of construction work. For the purposes of this proposal we will include limited design development and site development for this building area for obtaining Planning approvals. Final design and construction documents for this building is not included in this proposal.

#### **Purpose**

The State shall provide a grant to and for the benefit of the Grantee for the purpose of installing campus-wide stormwater low impact development (LID) best management practices (BMPs) to capture, treat, and/or infiltrate runoff and provide for the development and implementation of a student education program on stormwater and LID strategies at the Downtown College Preparatory School. The project was completed in 2019

#### **Scope of Work Consisted of:**

The Grantee shall prepare and submit a Monitoring and Reporting Plan (MRP). The MRP shall be organized by Project Assessment, Evaluation and Monitoring Plan.

The project specific requirements for this project included:

- Project Management
- Planning, Design and Engineering
- Construction and Implementation
- Monitoring and Performance
- Education and Outreach

**Total Construction Cost:** \$512,000 from grant

**2. Project Name:** Putnam Honda Auto Dealership  
Design of Stormwater Facilities –  
Duration: From March 2021 to September 2023

**Location:** 268 Industrial Rd., San Carlos, CA

**Owner:** 495 Bragato LLC - Putnam Auto Group

**Engineer of Record (EOR):** Matt Kamkar, QSD, PE, (408) 594-0442 cell  
U&R Engineers, (408) 453-1222 Office

**Project Description:**

New Auto Dealership providing Sale, Service, Parts as well as used car sales on this 2 acre site.

**Scope of Work Consisted of:**

- Providing civil engineering design plans (Grading, Drainage, Erosion Control, Stormwater Management Plans, & SWPPP, etc.).
- Capped the EPA designated portion of the site (due to PCB exposure).
- Converted the old industrial buildings into showroom and repair facility.
- Provided Flow-Through Planters to treat the stormwater runoff

**3. Project Name:** 3rd Party Peer Review of Plans  
Data Center Site  
Date: June 2024

**Location:** 651 Martin Ave., Santa Clara

**Owner:** Vantage Corp.

**Engineer of Record (EOR):** HMM Engineers

**Third Party Engineer Contact:** Matt Kamkar QSD, PE, (408) 594-0442

**Project Description:**

New Data Center Complex

**Scope of Work Consisted of:**

- Providing third party peer review services of the stormwater treatment design to HMM Engineers.
- U&R Civil Engineers reviewed the storm water management plan from EOR for compliance with regional stormwater regulations and policies for PCC Level.

**4. Project Name:** Salinas High School #5  
Completed August 2019

**Location:** Salinas, CA

**Owner:** Salinas Union High School District

**Owner Contact:** Ana Aguillon, Manager of Business Services/C.B.O. [ana.aguillon@salinasuhd.org](mailto:ana.aguillon@salinasuhd.org) (831) 796-7018

**Architect:** Kasavan Architects, Peter Kasavan Ph.: 831.424.2232

**Engineer Contact:** Mark Sorenson PE/ QSD Ph.: 408-453-1222 x14

**Project Consisted of:**

This new High School #5 (HS#5) project proposes to create a large amount of impervious surface area. The existing site is 38.97 acres of agricultural land. The complete build out of the proposed HS#5 will create 19.29 acres of impervious area. HS#5 will be permitted for construction by the Division of State Architect (DSA). This was U&R largest Stormwater project.

**Scope of Work Consisted of:**

Providing civil engineering and land surveying services to the architect and school district for the planning and engineering of a new school facility. Project included special off-site street improvement plans and utility company service connection plans submitted individually to each of those agencies.

**DSA Experience:**

Project was submitted and approved by DSA and City of Salinas for review of stormwater compliance.

**Discussion:**

This was the largest project U&R Civil Engineers has designed. This 40 acre site was agricultural with no surrounding city storm drain systems. U&R designed the storm drain system using BAHM to retain the 30 and 100 year flood. Drainage was directed to bio-filtration swales and ponds to hold the storm drainage system. U&R coordinated design activities and submittals to the local agencies for this work. New utilities on the site included storm drainage, sanitary sewerage, electric power, gas, communications, domestic water, irrigation water, and fire water. This project is currently under construction and projected to be completed in the August 2018.

**Total Construction Cost:** \$78,000,000

**Consultant Contracts:** Civil Engineering consultant to Kasavan Architects (on-site)  
Land Surveying consultant to Salinas UHSD  
Civil Engineering consultant to Salinas UHSD (off-site)

- **A brief statement summarizing the overall interest, availability, and commitment of the firm for inclusion on SCVURPPP's List.**

**Storm Water Regulations:**

Storm water regulations have undergone extensive changes over the last few years. Effective LID Landscape BMP's are now required. The U&R staff is current with the Salinas and San Francisco Bay Region Municipal Regional Stormwater regulations and can bring our experience with drainage systems used on other projects to review your projects. U&R was the first company to design a project in Alameda County using the new Hydromodification Management Plan. Another recent first is the development of a Stormwater Control Plan for the San Francisco Unified School District at the new Willie Brown public school.

U&R staff is also experienced in the design of storm drainage system repairs to culverts, retaining walls, and embankments. We have professional engineers and surveyors who have worked intensively with public works for all aspects of work. We also have individuals who can perform 3<sup>rd</sup> Party Review, prepare the hydrology reports and prepare Construction Stormwater Pollution Prevention Plans (SWPPP) and Stormwater Management Plans. U&R has two (2) Qualified SWPPP Developer/Practitioner (QSD/QSP).

U&R will review design civil improvements for projects with sustainability and environmental conservation principles. Our Senior Engineer, Mr. Mark Sorenson PE is a QSD/QSP. The following are some of the areas where the civil design has an impact of projects:

- **Construction Activity Pollution Prevention:** We will review erosion and sediment control plans to prevent loss of soil during construction, prevent sedimentation of storm sewers and prevent pollution of the air.
- **Stormwater Design:** Sometimes the existing site is almost all impervious surfaces. We will suggest a stormwater detention system that will result in a 25% decrease in the volume of stormwater runoff from the two year 24 hour storm or as required.
- **Stormwater Design Quality Control:** U&R will review a stormwater management plan that will promote infiltration and should treat stormwater runoff 90% of the average annual rainfall using acceptable best management practices.

**Availability:**

Once U&R is on the list of qualified consultants we will make all inquiries for our services, our top priority. U&R will produce a reasonable schedule and make sure all parties are contacted and updated on our progress.