August 2016

the Rain events

A monthly newsletter on the California Industrial General Permit by WGR Southwest

# Reiterations on the Iterative

In the previous Industrial General Storm Water Permit (IGP), Order # 97-03-DWQ, which became effective in 1997, on page XIII of the Fact Sheet, the IGP presented a principle called the ***"iterative self-evaluation process."*** The iterative process, as it was defined in the old IGP, was a step-by-step process on how to apply additional Best Management Practices (BMPs) until a facility could have their storm water analytical levels meet with water quality requirements (at that time called benchmarks).

Now, more than eighteen years later, the new IGP (Order# 2014-0057-DWQ) de-emphasizes the trial-and-error iterative process as it was understood in the old IGP, and replaces it with a more defined/guided iterative process in the Level 1 and Level 2 Exceedance Response Actions (ERAs). This is reflected in the new IGP requiring the use of a trained Qualified Storm Water Practitioner (QISP) as well as having all treatment BMPs designed by a civil professional engineer (PE). The purpose for this ERA process, as explained in the new IGP's Fact Sheet, is to assist dischargers with developing BMPs that will likely have a better chance of effectively lowering sampling analytical results below the numeric action levels (NALs) rather than wasting resources on inadequate and/or ineffective BMPs. But what does this process really look like? How does a QISP systematically go about determining the best course of action for a Level 1 ERA? To accomplish this reiteration of the iterative process, we have been implementing the following 6-step approach.

**Six steps in determining what BMPs will best address NAL exceedances:**

1. In most cases, the facility staff and/or the consultant has a qualitative understanding of the facility's hydrology; however, to achieve the quantitative data needed for a Level 1 ERA evaluation, a hydrology study performed by a PE is highly recommended in order to:
    - More accurately determine the drainage area sizing and flow pattern(s);
    - Obtain exact storm water volume; and
    - Determine the exact peak flow rate data.
2. Complete a pollutant source assessment for the pollutants of concern:
    - Note: This step is usually in some stage of completeness by this point. However, it is important to evaluate whether or not any sources have been missed or not accounted for in earlier evaluations.
3. Combine steps 1 and 2 to accurately determine the pollutant loading for each drainage area. This is vital in order to size the "treatment" system and BMPs.
4. Evaluate different types of "treatment options" such as:
    - Low Impact Development (LID) BMPs:
        - Infiltration / Percolation;
        - Evapotranspiration (evaporation in combination with transpiration);
        - Bioretention which utilizes infiltration, landscaping, evapotranspiration, rain gardens, vegetative swales, etc.
    - Classical/mechanical treatment types, such as:
        - Underground vault systems;
        - Activated carbon;
        - Sand filters;
        - Dissolved air / flocculants; and
        - Biological treatment.

*Continued from page 1 …*

5. Multi-Layer BMPs to use a combination of BMPs (non-structural and structural) for each drainage area, in order to reduce pollutant loads and prevent NAL exceedances. The selected BMPs will need to meet the facility's short and long term goals. Combining (or multi-layering) BMPs, in addition to treatment, will:
   - More likely bring discharge results within NAL levels while treatment alone may not be able to accomplish it;
   - Provide improved source controls to reduce pollutant loads;
   - Pre-treat storm water before it enters the treatment BMP; which reduces pollutant loading to the treatment BMP and helps to:
     - Keep the treatment system from being overtaxed;
     - Improve the effectiveness of the treatment system; and
     - Extend the effective life (lowering maintenance costs and requirements) of the treatment BMP, especially for filtering types of BMPs.
6. Install, implement, and monitor the new set of BMPs.
   - With the multi-layering of BMPs, there is now good reason to believe that the sampling results will be below the NALs, hopefully, bringing the facility back to Baseline status; but
   - Should there still be NAL exceedances, then the revised iterative process in the form of a Level 2 ERA will need to occur.

Please note that having NAL exceedances is not placing your facility out of compliance with certain provisions of the IGP; however, not responding to them does.

**Conclusion:**

If the current trend of analytical results from storm water sampling at your facility does not improve, and drop below the NALs, it will certainly be entering ERA Level 2 one year from now. An ERA Level 2 will require the facility to evaluate volume or flow-based treatment options. The six steps identified above will help take the guess-work out of the process and help prevent the costly and largely ineffective "trial and error" iterative approach. This kind of process and treatment can be costly, but not responding appropriately to a Level 1 ERA or just "guessing" can cost or waste even more time and money. The ultimate goal is that the investment made up front in performing these six steps will allow the facility to have storm water sampling results below all NALs and return to baseline, avoiding an ERA Level 2. If this happens, there would be future cost savings, not only due to avoiding Level 2, but also resulting from the reduced sampling requirements.

## "To Do List" for August

- Perform the August monthly non-storm water and BMP status inspection.
- If you exceeded NALs, find a QISP to handle the mandated training and Level 1 ERA evaluation. The evaluation must be completed by October 1, 2016.
- In light of the recently submitted annual report, review and revise the SWPPP. Remember to include any new BMPs from a Level 1 response.

Need a QISP?
Give us a call at (209) 334-5363, ext. 114

## What Requires a PE?

In this month's featured article, a Professional Engineer (PE) has an important role in the Level 1 ERA response. But, according to the Industrial General Permit, there are certain activities that can only be performed by a PE. They include:

- Inactive Mining Operation Certification;
- SWPPPs for inactive mining, and annual re-certification of Inactive Mining Operation Certification;
- NONA Technical Reports;
- Subchapter N calculations;
- Hydrologic calculations for treatment control BMPs; and
- Volume / mass estimates or calculations for facilities subject to certain ELGs.

### Is a PE a QISP?

No, not automatically, but they can become one quite easily. California licensed professional civil, industrial, chemical, and mechanical engineers and geologists have licenses that have professional overlap with topics in the Industrial General Permit. The California Department of Consumer Affairs, Board for Professional Engineers, Land Surveyors, and Geologists (CBPELSG) provides the licensure and regulation of professional civil, industrial, chemical, and mechanical engineers and professional geologists in California. The State Water Board developed a specialized self-guided State Water Board-sponsored registration and training program specifically for these CPBELSG licensed engineers and geologists in good standing with CBPELSG. To complete the training and self-certification, create an account on the Office of Water Programs website at www.owp.csus.edu. Click Stormwater Certificates then click IGP CBPELSG.

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*Please contact us if you have any questions …*

## The Rain Events

Newsletter Editor: John Teravskis
QSD/QSP, QISP, CPESC, ToR, IGPTT Participant
jteravskis@wgr-sw.com
(209) 334-5363 ext. 110 or (209) 649-0877

Technical Questions about Environmental Compliance?

Call …

**Aaron Ortiz**, QISP, ToR, aortiz@wgr-sw.com
(209) 334-5363 ext. 114

**Chelsea Dreyer**, QISP cdreyer@wgr-sw.com
(562) 799-8510 ext. 1003

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## Warning: Be Ready for First Rain Sample of the 2016-2017 Storm Water Year

# Stormwater Treatment: Strategies to Reduce Exceedances

### The Right BMPs for the Job

Depending on how far above the Numeric Action Level (NAL) your sample results may be, different types of BMPs may be dictated to improve sample results, allowing your facility to return to Baseline. Basic BMPs typically reduce NAL Exceedances by approximately 30%, while Intermediate BMPs often attain 60% reductions in NAL sample results. An Advanced BMP, such as Stormwater Treatment, is guaranteed to reduce NAL Exceedances by as much as 90%.

### Looking Ahead to Level 1 and 2

Level 2 Requirements include mandatory Advanced BMPs. This means facilities will be in a position where they may be forced to implement Treatment, Containment or Sheltering BMPs. While Containment and Sheltering are not always practical or possible depending on space and industrial limitations, Treatment is always a viable solution. StormPROOF Stormwater Treatment Systems guarantee to lower sample results, returning your facility to Baseline.

| | |
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## Enforcement

### Violations and Penalties

The State Water Board issued the new Industrial general Permit (IGP), which went into effect July 1st, 2015. The new permit calls for potential civil penalties as high as $37,500 per calendar day for any person who violates IGP conditions. Fines up to $10,000 and imprisonment are also possible for falsification of compliance records required by the IGP.

### Environmental Lawsuits

Third Party Environmental Groups now pose a more serious threat than ever before. Environmental Lawsuits are filed every day against industrial companies. The new IGP requires sample results to be uploaded online to the SMARTS database, creating complete transparency. This allows attorneys to easily access your sample results online. Lawsuits can be hundreds of thousands of dollars in liability, evidenced by a recent settlement of $900,000 in January 2016. Address the risk by implementing BMP solutions that work.

### Avoid Risks

Our advice is to avoid the substantial risks and heavy financial burden that penalties and lawsuits can carry. Take this opportunity to address your stormwater exceedances now, while you are still at Baseline or only at Level 1 Status.

# PRODUCT SPOTLIGHT

Our **D-Watering Bags** are effective devices for separating sediment from pumped water. Made from heavyweight, non-woven geotextile fabric, **D-Watering Bags** are a snap for filtering solids and sediments out of your water. The input sleeve is designed to accomodate several hose diameters. Securing the bag to a hose is quick and easy, using the heavy-duty webbing and d-rings that are sewn to the sleeve. To maintain uniform integrity, each **D-Watering Bag** is sewn with a 4-thread lockstitch hem, and an additional perimeter lockstitch sewn with high strength, marine-rated poly thread.

**D-Watering Bags** are available in three sizes: 3'x4', 4'x6', and 6'x9'.

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## Storm Water Contest...

Each month, we invite our readers to participate in a contest to test their knowledge of the Industrial General Permit and their storm water compliance program. We enter all submittals to our monthly newsletter question into a drawing, and one person is selected at random to receive a $25 gift card. Last month's question was:

**According to the QISP fact sheet, what are the responsibilities of a QISP?**

Hey, Edward Flores, you won! The responsibilities of a QISP include **implementing the SWPPP, performing the Annual Comprehensive Compliance Evaluation, assisting in the preparation of Annual Reports, performing ERAs, and training appropriate Pollution Prevention Team members.**

Edward wins $25 to Cold Stone Creamery!

## This Month's Contest Question:

**By what date must the Level 1 ERA evaluation be performed?**

By September 6, 2016, submit your response to the above question by sending an email to jteravskis@wgr-sw.com. All persons submitting the correct answer will be placed in a drawing. The winner will receive a $25 gift cart to Panera Bread.

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# QISP TRAINING CLASS

TUESDAY, OCTOBER 18, 2016 (8:00 AM - 4:30 PM)

### MEET THE TRAINERS

**JOHN TERAVSKIS**

*ToR, QISP, CPESC, QSD/QSP*

John is WGR's lead trainer for many different storm water-related classes, and is a part of the Industrial General Permit Training Team, a collaboration that assisted the State with developing the QISP training program.

**AARON ORTIZ**

*ToR, QISP*

Aaron is WGR's in-house expert on the Industrial General Permit, and one of the senior editors of The Rain Events. Aaron has extensive experience with storm water training, and also assisted with the Industrial General Permit Training Team.

In order to take this one-day training class, each QISP candidate will need to register for and complete the state-approved online QISP training course from CASQA. To take this course, visit the QISP page on CASQA's website:
**https://www.casqa.org/resources/qisp-qualification**

## RESERVE YOUR PLACE NOW!

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# QUALIFIED INDUSTRIAL STORMWATER PRACTITIONER FACT SHEET

The California Stormwater Industrial General Permit (IGP) glossary defines a Qualified Industrial Stormwater Practitioner (QISP) as:

*"Only required once a Discharger reaches Level 1 status, a QISP is the individual assigned to ensure compliance with this General Permit or to assist New Dischargers with determining coverage eligibility for discharges to an impaired water body. A QISP's responsibilities include implementing the SWPPP, performing the Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation), assisting in the preparation of Annual Reports, performing ERAs, and training appropriate Pollution Prevention Team members. The individual must take the appropriate State-approved or sponsored training to be qualified. Dischargers shall ensure that the designated QISP is geographically located in an area where they will be able to adequately perform the permit requirements at all of the facilities they represent."*

## Purposes Identified by the IGP for having QISPs

- To improve compliance and maintain consistent implementation of the IGP (Finding #49);
- To assist the Discharger and other on-site personnel with the implementation of IGP requirements (Finding #50);
- To have a high degree of technical knowledge and environmental experience in the assistance given to Dischargers (Fact Sheet p. 6);
- To improve the quality of the data submitted (Fact Sheet p. 20); and
- To avoid costly retrofits or closure of new facilities that cannot demonstrate that the facility will not cause or contribute to a 303(d) impairment (Fact Sheet p. 26).

## Ten QISP Roles According to the IGP

1. May represent one or more facilities but must be able to perform the functions required by the IGP at all times (Fact Sheet p. 28).
2. Assigned to a facility that reaches Level 1 and Level 2 status (Fact Sheet p. 48).
3. More accurately identify discharge locations representative of the facility's stormwater discharge (Fact Sheet p. 48).
4. Select and implement appropriate sampling procedures (Fact Sheet p. 48).
5. Evaluate and develop additional BMPs to reduce or prevent pollutants in industrial stormwater discharges (Fact Sheet p. 48).
6. Assist with the completion of the Level 1 Evaluation and preparation of the Level 1 ERA Report (Fact Sheet p. 61).
7. Assist with the completion of the Level 2 ERA requirements and the preparation of the Level 2 Action Plan & Level 2 Technical Reports (Fact Sheet p. 62).
8. Assist New Dischargers in preparing the Stormwater Pollution Prevention Plan (SWPPP) and monitoring program in addition to gaining coverage for New Dischargers that discharge directly to an impaired water body (Order p. 22).
9. Provide training to "appropriate team members" for Level 1 facilities (Order p. 23 & 33).
10. Be informed, responsible, and attentive to the required duties of a QISP while keeping the QISP registration in good standing with the State Water Board and the California Stormwater Quality Association (CASQA) (Fact Sheet p. 28).

## Becoming a QISP

Sign up for the QISP Training Program by going to the California State University, Sacramento Office of Water Programs (OWP) website at www.owp.csus.edu.

After creating an account, click Stormwater Certificates, then IGP QISP. The website guides you through the process of completing the QISP Training Program.

## QISP Training Program FAQs

### *Are there prerequisites or underlying certifications required to be a QISP?*

There are no formal prerequisites to be a QISP. There is, however, a practical prerequisite. The material presented in the QISP Training Program was developed for QISP candidates who have basic knowledge of stormwater principles, working knowledge of the IGP, and experience implementing industrial stormwater compliance. This program is not designed for a "Stormwater 101" audience.

### *How much time is a QISP candidate allowed to complete the QISP Training Program?*

The training program must be completed within one year of the initial registration date. If your registration expires before you complete all steps in the program, you would need to re-register and restart the QISP Training Program.

# More QISP Training Program FAQs

### *How do I become a QISP?*

To become a QISP, candidates must complete the online training; pass a midterm exam; attend a one-day, in-person class; and pass a final exam.

### *How long will the online training take?*

On average it takes 16 hours to complete the self-study online training material. This consists of videos, site scenarios, readings from the IGP, information from the CASQA Industrial and Commercial BMP Online Handbook, and quizzes.

### *How many attempts does a QISP candidate have to pass the midterm and final exams?*

The QISP candidate is allowed to take each exam twice. If the candidate does not pass the midterm exam in two attempts, the candidate must pay to re-register and retake the online training.

If the candidate does not pass the final exam in two attempts, the candidate must pay to re-register, retake the online training, complete the midterm with a passing grade, and attend another one-day, in-person class before re-attempting the final exam. A separate fee may be charged for each class attended.

### *How do I register for an in-person IGP Trainer of Record (ToR) class?*

After passing the midterm, the QISP candidate needs to attend a one-day in-person class with a IGP ToR. Register for a class by visiting the training calendar in the Stormwater Certificates portal at www.owp.csus.edu. A separate fee is charged for this class by the IGP ToR, who will provide payment instruction. When you complete the class, the IGP ToR records your pass/fail in the system. Candidates who pass the class are eligible to take the final exam.

Note that IGP ToRs are required to verify the identity of QISP candidates and their attendance for the completion of the one-day, in-person class. QISP candidates must be attentive during class.

### *Do California-registered Professional Engineers and Geologists need to take this training?*

California licensed professional civil, industrial, chemical, and mechanical engineers and geologists have licenses that have professional overlap with topics in the Industrial General Permit. The California Department of Consumer Affairs, Board for Professional Engineers, Land Surveyors, and Geologists (CBPELSG) provides the licensure and regulation of professional civil, industrial, chemical, and mechanical engineers and professional geologists in California. The State Water Board developed a specialized self-guided State Water Board-sponsored registration and training program specifically for these CPBELSG licensed engineers and geologists in good standing with CBPELSG. To complete the training and self-certification, create an account on the Office of Water Programs website at www.owp.csus.edu. Click Stormwater Certificates then click IGP CBPELSG.

### *What is required to renew the QISP training registration?*

The State Water Board, CASQA, and IGP Training Team have not yet determined what is required to renew the QISP training registration. More information will be provided as the date approaches.