

★ BACK TO ★

# BASELINE

A basketball inbound play occurs at the beginning of every period (except the first), after each made-basket, when the ball goes out of bounds, and for a non-shooting foul. Inbound plays typically take place on the **baseline**. Baseline plays present a great opportunity to get a quick score, and since most teams are poorly prepared to defend out-of-bounds situations, a good baseline strategy can be very successful. Like on the basketball court, the baseline is important in the Industrial General Permit arena. This month, **The Rain Events** is going to focus on getting back to baseline for those who have had their storm water program elevated to a Level 1 or Level 2 Exceedance Response Action (ERA). We will coach you on effective strategies to get your storm water game back to Baseline.

**Every Facility Started at Baseline** at the beginning of the Industrial General Permit (IGP) coverage for each pollutant in their monitoring program that has a Numeric Action Level (NAL). Only 21 of the possible dozens of monitoring parameters have NALs specified on Table 2 of the IGP. For some of these testing parameters dischargers have no choice to sample and analyze, such as pH, total suspended solids (TSS), and oil & grease. Everyone has to sample for these “Big 3” parameters, all of which have NALs on Table 2. In addition, facilities that have SIC codes which appear on Table 1 of the Permit are listed with other mandatory parameters for their business sector. All of these Table 1 parameters also have NALs listed on Table 2. Mandatory testing analytes may also be added to the monitoring program because of 303(d) receiving water impairments or TMDLs. Some of these may be listed on Table 2 having NALs; and many TMDLs will actually have TNALs and numeric effluent limits. But, there is one more criteria for selecting monitoring parameters of storm water runoff from industrial activities— the Pollutant Source Assessment (as described in Section X.G.2 of the IGP). Additional parameters may need to be included in your monitoring program that serve as indicators of the presence of all industrial pollutants identified in the Pollutant Source Assessment. In this case, a strategic baseline play is to select testing parameters that indicate

the presence or absence of the industrial pollutants but do not have NALs listed on Table 2. This could prevent your facility from moving up into Level 1 ERA, but still provide insight on the effectiveness of your pollution prevention program.



**A Discharger’s Baseline Status Changes** to Level 1 for any given parameter that has exceeded the instantaneous or annual NAL for that reporting year. The continuance of a NAL exceedance for that same parameter in a subsequent year will move the facility to a Level 2 ERA status. Similar to the opposing team scoring a basket, we want to get the

ball back to baseline as soon as possible so that we can control the ballgame (or, in this case, pollutants)

**A Return to Baseline Status Happens** when Level 1 dischargers submit the required Level 1 ERA Report, implement all of the identified additional BMPs, and obtain results from four consecutive Qualifying Storm Events (QSEs) that indicate no additional NAL exceedance for that parameter. The rules for returning to Baseline for a Level 2 discharger are little more complicated. First, the only Level 2 dischargers that are eligible to return to Baseline are those who chose the Industrial Activity BMP Demonstration as described in Section XII.D.2.a. paragraphs i. through iii of the IGP. In addition, in order to return to Baseline, these

Level 2 facilities must have implemented all of the BMPs specified in their Action Plan and Technical Report, and obtain results from four consecutive QSEs that indicate no additional NAL exceedance for that parameter. However, anytime in the future if the instantaneous or annual NAL is again exceeded for that same parameter, the facility will immediately return to a Level 2 status and will need to update and resubmit their Level 2 ERA Technical Report.

Unfortunately, facilities with an ERA status of Level 2 are **not eligible** to return to Baseline if they chose any of the following demonstrations in their Technical Report:

1. An **Industrial Activity BMP Demonstration** but specified that the addition of BMPs is not expected to eliminate NAL exceedances,
2. The **Non-industrial Pollutant Source Demonstration** (meaning that the NAL exceedances are caused by things like run-on, aerial deposition, or on-site non-industrial sources), or
3. The **Natural Background Pollutant Source Demonstration** (meaning that the NAL exceedance is attributable solely to the presence of the pollutant in natural background that has not been disturbed by industrial activities. For this demonstration, the IGP makes an allowance for the pollutant to be present due to industrial activities, but the Discharger must prove in their Technical Report that the pollutant contribution from industrial activity by itself would not result in a NAL exceedance.)

Once a facility claims one of these ineligible demonstrations for a return to Baseline for a particular NAL exceedance parameter **are they stuck there?** Well, the permit is not extremely clear on this point. However, in discussing this with Water Board staff, they acknowledged that a facility could decide to install a treatment process (perhaps for a different pollutant) and if it successfully addresses the pollutant that was claimed to be at one of these ineligible demonstrations, the discharger could then switch to the first industrial activity BMP demonstration for that original pollutant and return to Baseline. In other words, you can't return to Baseline from certain demonstrations, but you can change your demonstration. Just as in basketball, it is important to understand the "in-bound baseline" rules!

**Baseline is a Good Place to Be** and there are ways to get there. The advantages of Baseline include less exposure to Clean Water Act violations or third party lawsuits, monitoring reduction opportunities, and no QISP oversight requirements. Baseline strategies are important in basketball and they are equally important with storm water. First, you want to make sure that a thorough pollutant source assessment was made to identify and address all potential pollutant sources. Many times we find that because the pollutant sources are not completely understood by the facility personnel or the person performing the evaluation, that wrong BMPs were selected or they were implemented in the wrong locations. Second, pay attention to details. Recently



I performed a supplemental source identification inspection for zinc at an industrial site and found that although compost socks were installed for treating the runoff, and from a distance looked good; a closer inspection revealed that runoff was predominately flowing over and under them and not being treated. Compost socks (8" dia.) will treat about 7 gpm/linear foot. These socks were receiving well over 21 gpm, for the 2 - 3 foot length that was in the drainage swale, causing them to be overwhelmed and undermined. The flow should be spread out to come into contact with 6 feet of the sock and it would be better to stack them 2 or 3 high to accommodate treatment up to 126 gpm. ☁️

## "To Do List" for February

- ☁️ Perform the February monthly inspection
- ☁️ How are your NALs averaging? Do you need to take more samples to work your average down?
- ☁️ As soon as the rains come back, work on obtaining your last two samples for the storm water year.

## Semantics Matter!

### An email from the Monthly Dirt to the Water Board:

Sometimes I think something is obvious until someone else challenges me on it. I thought I was understanding correctly the following IGP requirement about returning to baseline.

*"A Discharger's Level 1 status for a parameter will return to Baseline status once a Level 1 ERA report has been completed, all identified additional BMPs have been implemented, and results from four (4) consecutive QSEs that were sampled subsequent to BMP implementation indicate no additional NAL exceedances for that parameter."*

From our IGPTT meetings, LMS training, and my own study of the permit, I understood this to mean that if a facility got two samples from July 1 - December 31, and two samples from January 1 - June 30, and all four results were below the NAL for the pollutant of interest (and the BMPs had been properly installed), the facility would return to baseline status for that parameter. This would still be true if the first sample was collected on October 21, there were QSEs on November 4, 12, and 21 that were not sampled, and another sample was collected on December 10 during the first half of the storm year; and something likewise for the second half of the year. As long as the four required samples were collected and below the NAL, the facility would return to baseline.

However, I encountered someone suggesting that the above Permit citation means that the QSEs have to be consecutive, not just the results. In other words, in the fictional example I gave, the facility would have had to sample October 21, November 4, 12, and 21, and all of the results would need to be below the NAL for the parameter of interest to return to baseline.

In reading the above permit citation, either interpretation could be deduced from it. Which interpretation is correct?

Thanks for your help!

### Response:

To return to baseline, in addition to submitting the Level 1 ERA report and implementing the identified additional BMPs, a discharger must have four consecutive QSE sampling events (within or outside of one storm water year) with results that collectively average below the annual NAL and/or do not have an exceedance of an instantaneous NAL (in other words, two values above the instantaneous NAL) for that Level 1 parameter. Other QSEs may have occurred in between the sampled QSEs, but as long as the discharger collects samples from two QSEs (if they occur) in each of the two halves of the storm water year per discharge location, the IGP does not require additional sampling of "all consecutive" QSEs and they may be eligible to return to baseline.

Please contact us if you have any questions ...

## The Rain Events

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## Technical Questions about Environmental Compliance?

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# NAL REFERENCE SHEET

(Taken from Table 2 on Page 43 of the Industrial General Permit – 2014-0057-DWQ)

PARAMETER	TEST METHOD	REPORTING UNITS	ANNUAL NAL	INSTANTANEOUS MAXIMUM NAL
pH*	See Section XI.C.2 of the IGP	pH units	N/A	Less than 6.0; greater than 9.0
Suspended Solids (TSS)*, Total	SM 2540-D	mg/L	100	400
Oil & Grease (O&G)*, Total	EPA 1664A	mg/L	15	25
Zinc, Total (H)	EPA 200.8	mg/L	0.26**	
Copper, Total (H)	EPA 200.8	mg/L	0.0332**	
Cyanide, Total	SM 4500-CN C, D, or E	mg/L	0.022	
Lead, Total (H)	EPA 200.8	mg/L	0.262**	
Chemical Oxygen Demand (COD)	SM 5220C	mg/L	120	
Aluminum, Total	EPA 200.8	mg/L	0.75	
Iron, Total	EPA 200.7	mg/L	1.0	
Nitrate + Nitrite Nitrogen	SM 4500-NO3-E	mg/L	0.68	
Total Phosphorus	SM 4500-P B+E	mg/L	2.0	
Ammonia (as N)	SM 4500-NH3 B+ C or E	mg/L	2.14	
Magnesium, Total	EPA 200.7	mg/L	0.064	
Arsenic, Total (c)	EPA 200.8	mg/L	0.15	
Cadmium, Total (H)	EPA 200.8	mg/L	0.0053**	
Nickel, Total (H)	EPA 200.8	mg/L	1.02**	
Mercury, Total	EPA 245.1	mg/L	0.0014	
Selenium, Total	EPA 200.8	mg/L	0.005	
Silver, Total (H)	EPA 200.8	mg/L	0.0183**	
Biochemical Oxygen Demand (BOD)	SM 5210B	mg/L	30	

SM – Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> edition

EPA – U.S. EPA test methods

(H) – Hardness dependent

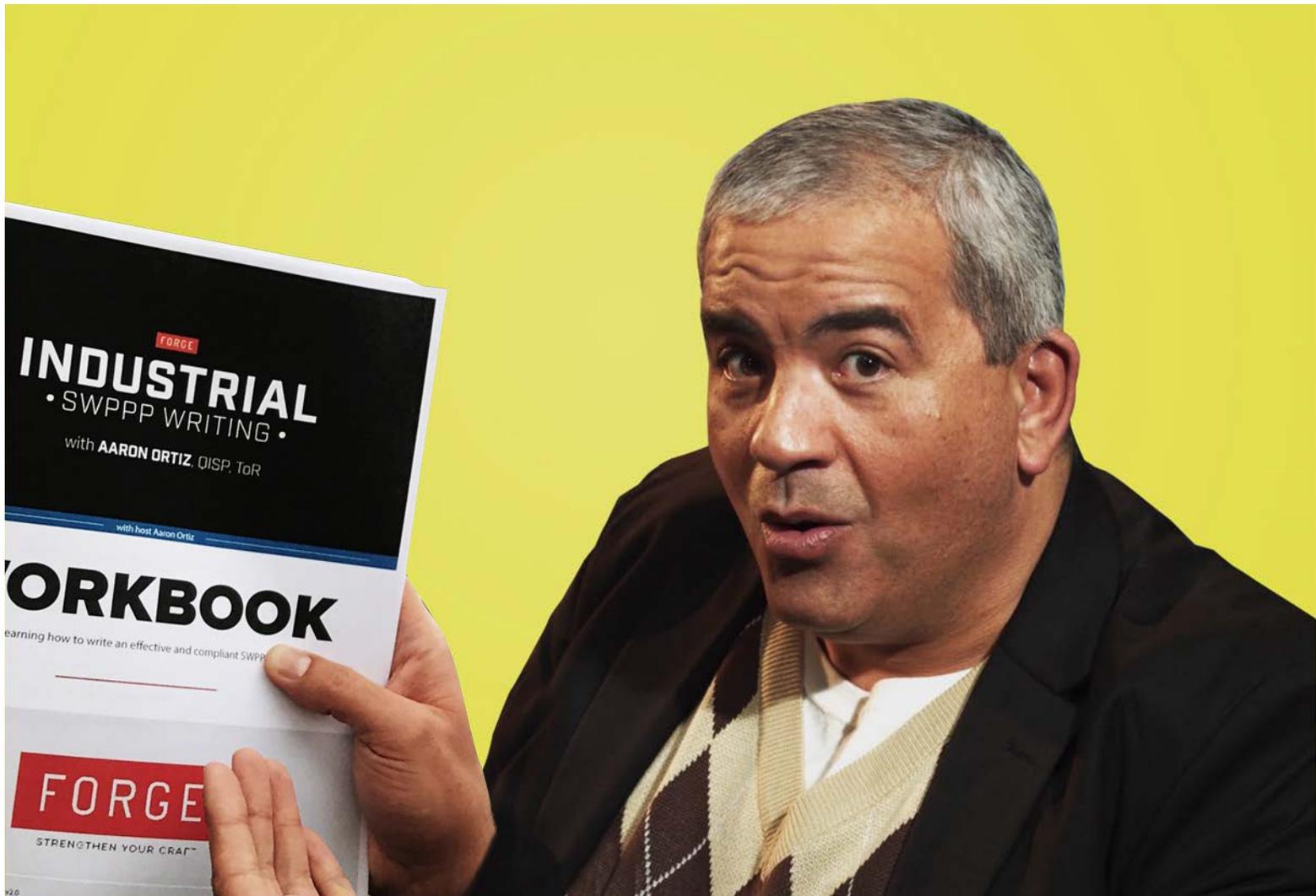
\* Minimum parameters required by the Industrial General Permit

\*\*The NAL is the highest valued used by the EPA based on their hardness table in the 2008 MSGP.

**TABLE 1: Additional Analytical Parameters**

<b>SIC code</b>	<b>SIC code Description</b>	<b>Parameters*</b>
102X	Copper Ores	COD; N+N
12XX	Coal Mines	Al; Fe
144X	Sand and Gravel	N+N
207X	Fats and Oils	BOD; COD; N+N
2421	Sawmills & Planing Mills	COD; Zn
2426	Hardwood Dimension	COD
2429	Special Product Sawmills	COD
243X	Millwork, Veneer, Plywood	COD
244X	Wood Containers	COD
245X	Wood Buildings & Mobile Homes	COD
2491	Wood Preserving	As; Cu
2493	Reconstituted Wood Products	COD
263X	Paperboard Mills	COD
281X	Industrial Inorganic Chemicals	Al; Fe; N+N
282X	Plastic Materials, Synthetics	Zn
284X	Soaps, Detergents, Cosmetics	N+N; Zn
287X	Fertilizers, Pesticides, etc.	Fe; N+N; Pb; Zn; P
301X	Tires, Inner Tubes	Zn
302X	Rubber and Plastic Footwear	Zn
305X	Rubber & Plastic Sealers & Hoses	Zn
306X	Misc. Fabricated Rubber Products	Zn
325X	Structural Clay Products	Al
326X	Pottery & Related Products	Al
3297	Non-Clay Refractories	Al
327X	Concrete, Gypsum, Plaster Products (Except 3274)	Fe
3295	Minerals & Earths	Fe
331X	Steel Works, Blast Furnaces, Rolling and Finishing Mills	Al; Zn
332X	Iron and Steel Foundries	Al; Cu; Fe; Zn
335X	Metal Rolling, Drawing, Extruding	Cu; Zn
336X	Nonferrous Foundries (Castings)	Cu; Zn
34XX	Fabricated Metal Products (Except 3479)	Zn; N+N; Fe; Al
3479	Coating and Engraving	Zn; N+N
4953	Hazardous Waste Facilities	NH3; Mg; COD; As; Cn; Pb; HG; Se; Ag
44XX	Water Transportation	Al; Fe; Pb; Zn
45XX	Air Transportation Facilities <sup>1b</sup>	BOD; COD; NH3
4911	Steam Electric Power Generating Facilities	Fe
4953	Landfills and Land Application Facilities	Fe
5015	Dismantling or Wrecking Yards	Fe; Pb; Al
5093	Scrap and Waste Materials (not including source-separated recycling)	Fe; Pb; Al; Zn; COD

<b>*Table 1 Parameter Reference</b>	
<b>Ag</b> – Silver	<b>Mg</b> – Magnesium
<b>Al</b> – Aluminum	<b>N+N</b> - Nitrate & Nitrite Nitrogen
<b>As</b> – Arsenic	<b>NH</b> – Ammonia
<b>BOD</b> – Biochemical Oxygen Demand	<b>Ni</b> – Nickel
<b>Cd</b> - Cadmium	<b>P</b> – Phosphorus
<b>Cn</b> – Cyanide	<b>Se</b> – Selenium
<b>COD</b> – Chemical Oxygen Demand	<b>TSS</b> – Total Suspended Solids
<b>Cu</b> – Copper	<b>Zn</b> – Zinc
<b>Fe</b> – Iron	<b>Pb</b> – Lead
<b>Hg</b> – Mercury	



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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 show 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:

**Where can you find the special plastics requirements in the current Industrial General Permit?**

**Congratulations, Patrick Samson, you're correct!** Patrick said the special requirements for plastics can be found in Section XVIII in the Industrial General Permit (Pages 64-66). This section includes a definition of what the Permit terms "Plastic Materials" and "Plastic Facilities," along with a specific set of requirements for Plastic Facilities. Patrick wins a \$25 gift card to Chick-fil-A!

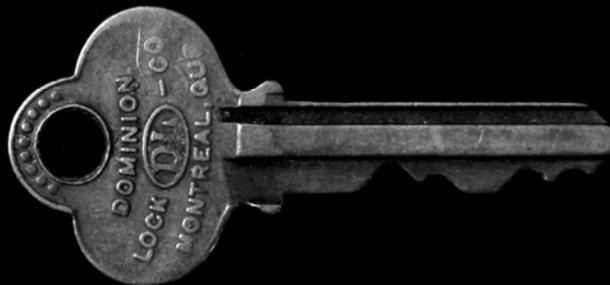
## This Month's Contest Question:

**IS A LEVEL 2 DISCHARGER ELIGIBLE TO RETURN TO BASELINE STATUS?**

We need industrial storm water sleuths to help us with this month's question. Submit your answers by Friday, February 28<sup>th</sup>. Email your answer to [jteravskis@wgr-sw.com](mailto:jteravskis@wgr-sw.com). One winner will be selected by a random drawing to receive a \$25 gift card to Jamba.



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