# Order No. R8-2012-0012

# NPDES Permit and Waste Discharge Requirements Sector-Specific General Permit for Storm Water Runoff Associated With Industrial Activities from Scrap Metal Recycling Facilities within the Santa Ana Region

# (Scrap Metal Permit)

# Training and Qualification Requirements

**Scrap Metal Qualified SWPPP Developer (SM-QSD)**

- Develop Storm Water Pollution Prevention Plan (SWPPP)
- A SM-QSD is automatically an SM-QSP

**Scrap Metal Qualified SWPPP Practioner (SM-QSP)**

- Implement Storm Water Pollution Prevention Plan (SWPPP)

**Certified Person**

- Collects and handles storm water samples

**Legally Responsible Person (LRP)**

- Certifies submittals
- Designates Approved Signatories to certify submittals

# Storm Water Pollution Prevention Plan (SWPPP)

**Select, design and install facility-specific control measures designed to:**

- **Meet either the BAT/BCT effluent limitations for Option 1 or**
- **Meet the water quality-based NELs in Table 1.b for Option 2**

**Site-specific SWPPP:**

- **Develop and upload to SMARTS database with permit application**

**SWPPP Elements:**

- **Facility information**
- **Preventative & mitigative measures**
- **Visual inspections and monitoring**
- **Reporting requirements**

**SWPPP Revision**

- **By Scrap Metal Qualified SWPPP Developer, as needed**

# Design Storm for Treatment Control Measures

**95th Percentile Storm Event**

- **The 95th percentile, 24-hour storm event represents the amount of precipitation of which 95% of all storm events for the period of record do not exceed**

**95th Percentile Design Storm Event**

- **Design & size all treatment systems for a 95th percentile storm event**

**95th Percentile Storm Event Exceedance**

- **If storm event is greater than 95th percentile storm event, do not use storm water sample analytical results when determining any exceedance of NALs or NELs**

# Design Storm for Treatment Control Measures

**Rainfall Data**

- Obtain the 24-hour daily precipitation data set from the closest rain gauge to the facility
- Use all of the rainfall data available for that gauge

**Sources for Rainfall Data**

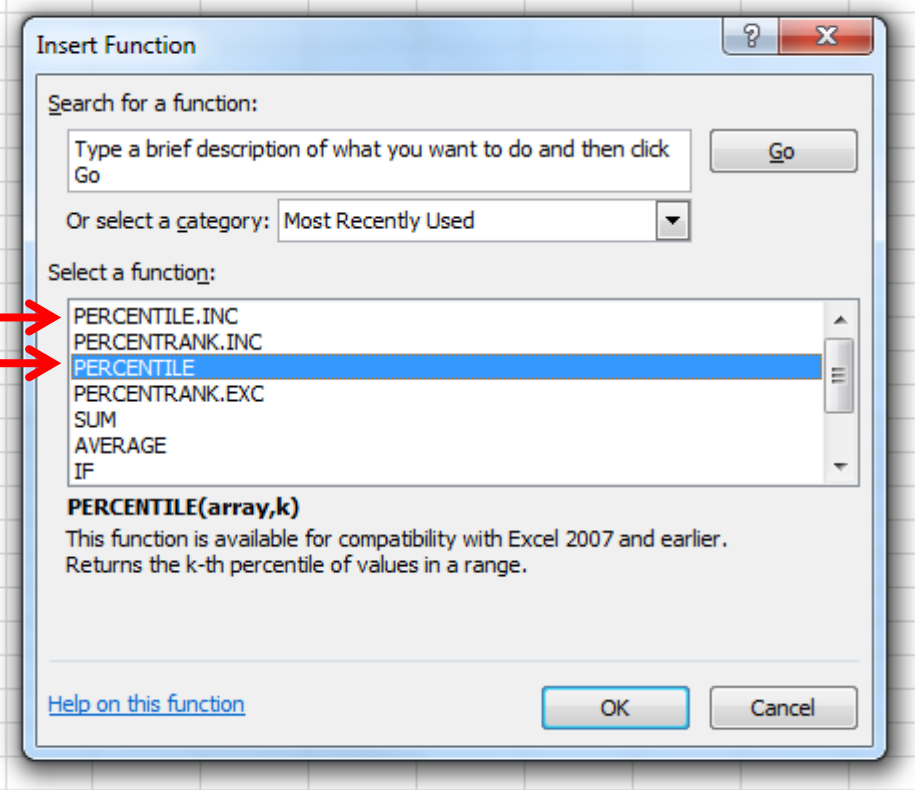
- http://www.ncdc.noaa.gov/oa/ncdc.html
- On-site rain gauge
- County Flood Control

**Calculate 95% Value**

- Use the PERCENT function in Excel to calculate the 0.95 value

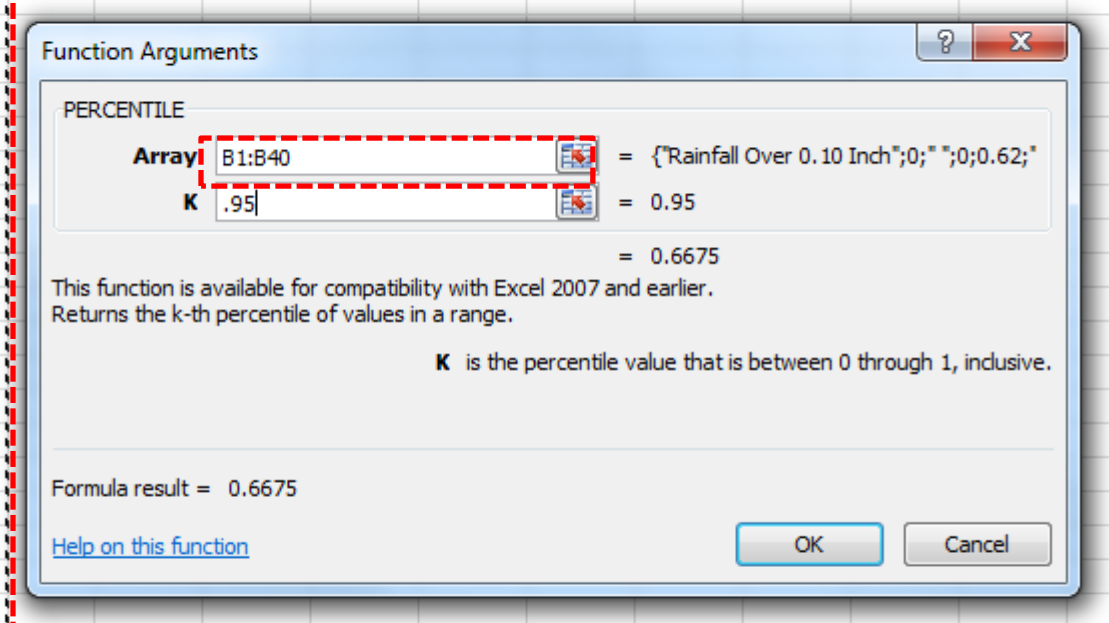
| Rainfall Data | Rainfall Over 0.10 Inch | Rainfall Over 0.10 Inch |
|---|---|---|
| ~~0.01~~ | | |
| ~~0.08~~ | | |
| ~~0.01~~ | | |
| 0.62 | 0.62 | 0.62 |
| ~~0.02~~ | | |
| ~~0.04~~ | | |
| 0.12 | 0.12 | 0.12 |
| ~~0.06~~ | | |
| 0.35 | 0.35 | 0.35 |
| 0.58 | 0.58 | 0.58 |
| 0.15 | 0.15 | 0.15 |
| ~~0.01~~ | | |
| 0.55 | 0.55 | 0.55 |
| 0.42 | 0.42 | 0.42 |
| ~~0.01~~ | | |
| ~~0.03~~ | | |
| ~~0.01~~ | | |
| ~~0.05~~ | | |
| ~~0.01~~ | | |
| 0.16 | 0.16 | 0.16 |
| 0.09 | | |
| 0.18 | 0.18 | 0.18 |
| ~~0.01~~ | | |
| ~~0.01~~ | | |
| 0.29 | 0.29 | 0.29 |
| 0.13 | 0.13 | 0.13 |
| 0.81 | 0.81 | 0.81 |
| ~~0.1~~ | | |
| ~~0.01~~ | | |
| 0.23 | 0.23 | 0.23 |
| ~~0.02~~ | | |
| 0.21 | 0.21 | 0.21 |
| ~~0.02~~ | | |
| 0.46 | 0.46 | 0.46 |
| ~~0.01~~ | | |
| 0.44 | 0.44 | 0.44 |
| ~~0.02~~ | | |
| ~~0.07~~ | | |
| ~~0.01~~ | | |

=



| Rainfall Over 0.10 Inch |
|---|
| |
| 0.62 |
| |
| 0.12 |
| 0.35 |
| 0.58 |
| 0.15 |
| 0.55 |
| 0.42 |
| |
| |
| |
| 0.16 |
| 0.18 |
| |
| 0.29 |
| 0.13 |
| 0.81 |
| |
| 0.23 |
| 0.21 |
| 0.46 |
| 0.44 |
| |
| |

=PERCENTILE(B1:B40,.95)




| |
|---|
| 0.23 |
| 0.21 |
| 0.46 |
| 0.44 |
| |
| |
| 0.6675 |

# Multiple Discharge Points

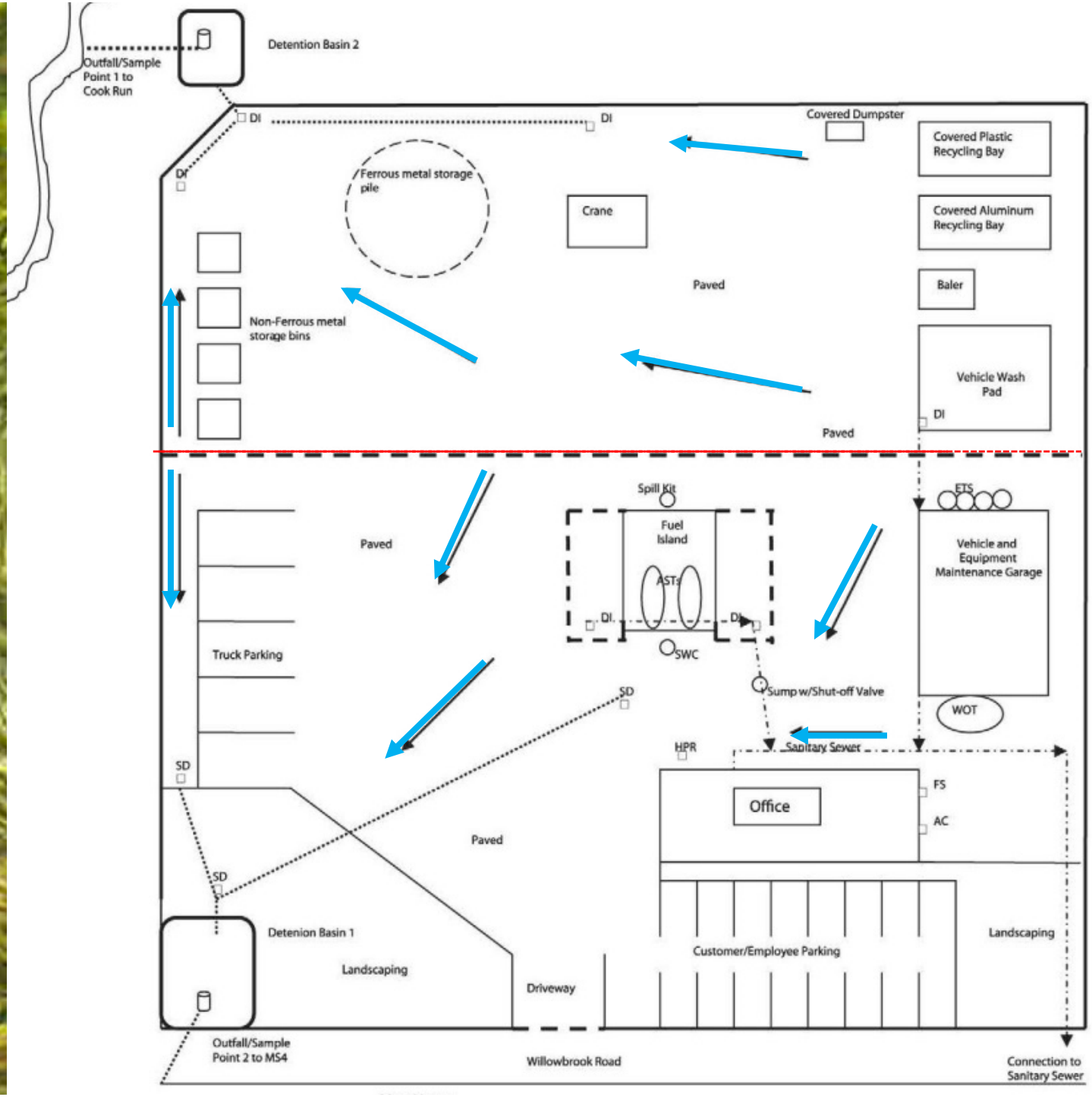
**Determine if there are separate areas for surface flow. The percent for each area is used when calculating the annual average for each constituent.**

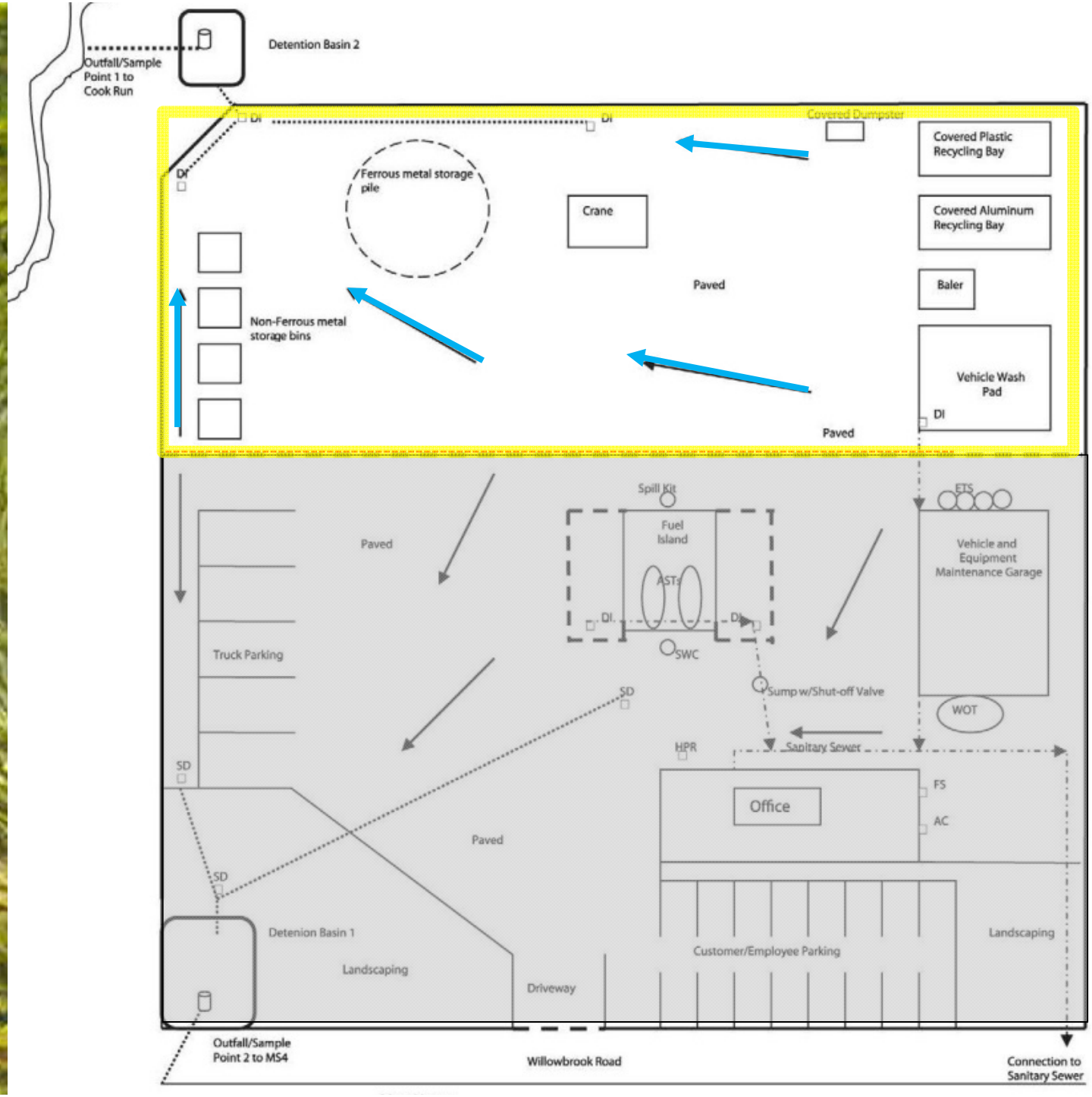
**<u>Steps:</u>**

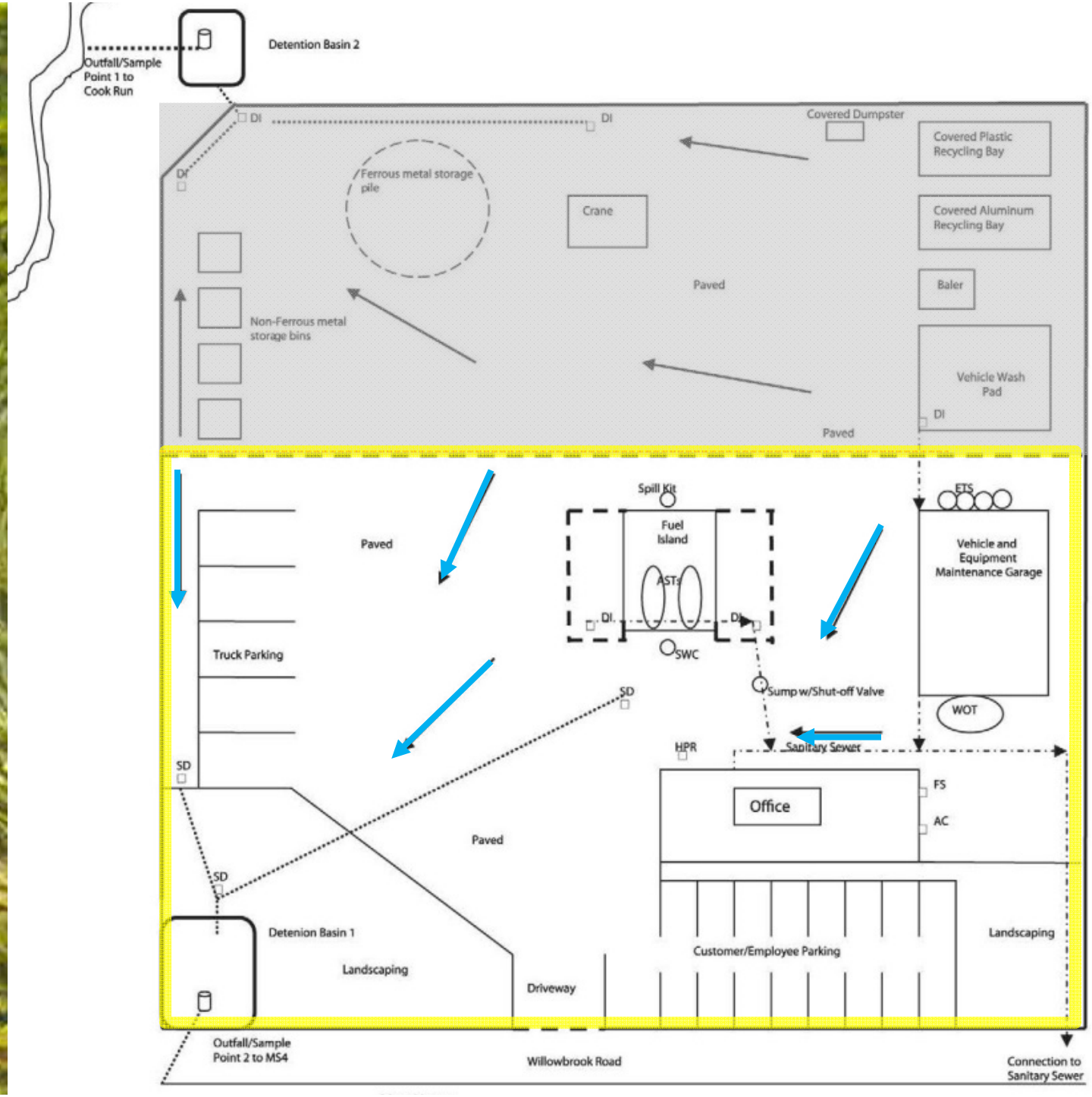
1. **Determine the number of points where surface flows leave the site (e.g., do not include sewer lines)**
2. **If there are multiple discharge points, determine the areas that drain to each point.**
3. **Determine the percent of the site each area covers.**

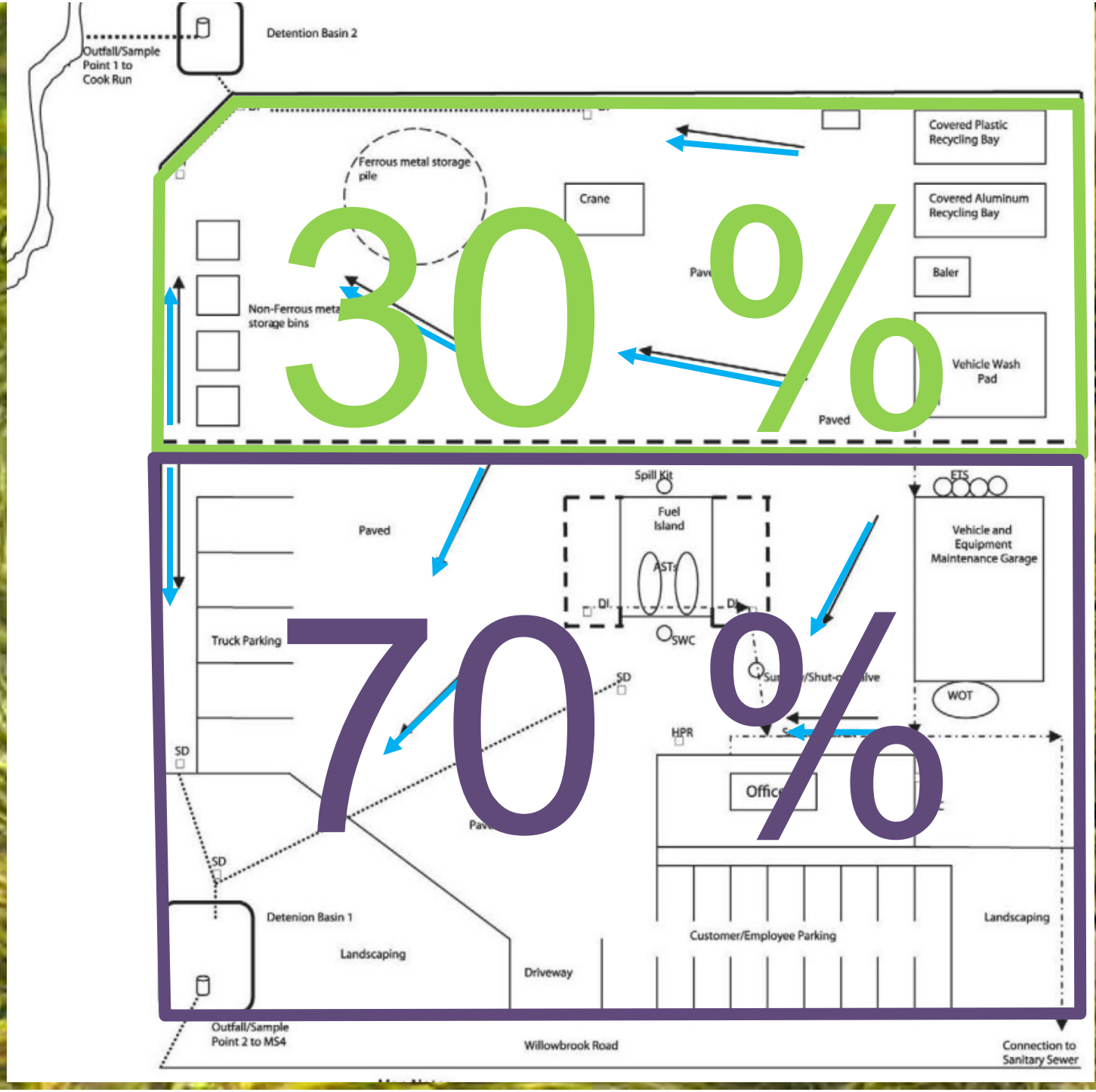
**<u>Compliance Evaluation</u>**

**If samples are collected from multiple discharge points, use the relative tributary area for each discharge point to determine the area-weighted average.**


Detention Basin 2
Outfall/Sample Point 1 to Cook Run
DI
DI
DI
Covered Dumpster
Covered Plastic Recycling Bay
Ferrous metal storage pile
Crane
Covered Aluminum Recycling Bay
Paved
Baler
Non-Ferrous metal storage bins
Vehicle Wash Pad
DI
Paved
Spill Kit
ETS
Fuel Island
Paved
Vehicle and Equipment Maintenance Garage
ASTs
DI
DI
SWC
Truck Parking
SD
Sump w/Shut-off Valve
WOT
HPR
Sanitary Sewer
SD
FS
Office
AC
Paved
SD
Detenion Basin 1
Landscaping
Customer/Employee Parking
Landscaping
Driveway
Outfall/Sample Point 2 to MS4
Willowbrook Road
Connection to Sanitary Sewer


Detention Basin 2
Outfall/Sample Point 1 to Cook Run
DI
Covered Dumpster
Covered Plastic Recycling Bay
Ferrous metal storage pile
Crane
Covered Aluminum Recycling Bay
Paved
Baler
Non-Ferrous metal storage bins
Vehicle Wash Pad
Paved
Spill Kit
ETS
Fuel Island
Paved
Vehicle and Equipment Maintenance Garage
ASTs
Truck Parking
SWC
SD
Sump w/Shut-off Valve
WOT
HPR
Sanitary Sewer
FS
Office
AC
Paved
Detenion Basin 1
Landscaping
Customer/Employee Parking
Landscaping
Driveway
Outfall/Sample Point 2 to MS4
Willowbrook Road
Connection to Sanitary Sewer


Detention Basin 2
Outfall/Sample Point 1 to Cook Run
DI
Covered Dumpster
Covered Plastic Recycling Bay
Ferrous metal storage pile
Crane
Covered Aluminum Recycling Bay
Paved
Baler
Non-Ferrous metal storage bins
Vehicle Wash Pad
Paved
Spill Kit
ETS
Fuel Island
Paved
Vehicle and Equipment Maintenance Garage
ASTs
Truck Parking
SWC
Sump w/Shut-off Valve
SD
WOT
HPR
Sanitary Sewer
FS
Office
AC
Paved
Detenion Basin 1
Landscaping
Customer/Employee Parking
Landscaping
Driveway
Outfall/Sample Point 2 to MS4
Willowbrook Road
Connection to Sanitary Sewer


Detention Basin 2
Outfall/Sample Point 1 to Cook Run
Ferrous metal storage pile
Crane
Covered Plastic Recycling Bay
Covered Aluminum Recycling Bay
Baler
Vehicle Wash Pad
Non-Ferrous meta storage bins
Paved
30 %
Spill Kit
Fuel Island
ASTs
DI
SWC
ETS
Vehicle and Equipment Maintenance Garage
WOT
Truck Parking
SD
HPR
Office
Detenion Basin 1
Landscaping
Driveway
Customer/Employee Parking
Outfall/Sample Point 2 to MS4
Willowbrook Road
Connection to Sanitary Sewer
70 %

# Authorized Non-Storm Water Discharges

**Type of Authorized Non-Storm Water Discharges**

- Uncontaminated condensate from refrigeration, air conditioning and compressor units; landscape irrigation
- Cannot collect pollutants prior to discharge

**SWPPP Requirements for Authorized Non-Storm Water Discharges**

- Identify each source and its discharge location
- Characterize the discharge including potential pollutants and the flow volume
- Identify appropriate pollutant control measures for each discharge including:
  - source control BMPs
  - other control measures to eliminate or reduce such discharges

# Compliance Options

**<u>Compliance Option 1 – Numeric Action Levels (NALs)</u>**

- **Comply with numeric action levels specified in Table 1a**
- **Phased approach: Numeric action levels are not effluent limits. An exceedance of a numeric action level is not considered a violation of the Permit; however, if an exceedance occurs, additional steps are required to meet the numeric action levels.**

**<u>Compliance Option 2 – Numeric Effluent Limits (NELs)</u>**

- **Comply with numeric effluent limitations in Table 1b**
- **Non-phased approach: an exceedance of a numeric effluent limit is considered a violation of the Permit**

# Compliance Option 1

## Table 1a: Water Quality-Based Numeric Action Levels

| Item No. | Constituent[14] | Units | Action Level (Annual average)[15] |
|---|---|---|---|
| 1 | pH | pH units | 6.5 to 8.5[16] |
| 2 | Turbidity | NTU | 250[17] |
| 3 | Specific Conductance | µmhos/cm or µsiemen/cm | 2000[18] |
| 4 | Oil and Grease | milligrams/liter | 15[19] |
| 5. | Chemical Oxygen Demand (COD) | milligrams/liter | 120[19] |
| 6. | Aluminum (total recoverable) | milligrams/liter | 0.75[19] |
| 7. | Copper (total recoverable) | milligrams/liter | 0.0189[20] |
| 8. | Iron (total recoverable) | milligrams/liter | 1.0[19] |
| 9. | Lead (total recoverable) | milligrams/liter | 0.122[19] |
| 10. | Zinc (total recoverable) | milligrams/liter | 0.16[19] |

# Compliance Option 1
## Storm Water Pollution Prevention Plan (SWPPP)

**Site Map**

- Location of the facility
- Sources of any non-storm water discharges
- Locations of fueling areas, chemicals and other materials storage areas, industrial process locations, loading and unloading areas, spill cleanup kits, run-on locations and treatment control locations
- Locations of storm water conveyance systems, discharge points, and monitoring locations

**SWPPP Information**

- Name and title of the person preparing and implementing the SWPPP
- Name and title of the facility contact if different from the QSD/QSP
- Description of the industrial activities at the site

# Compliance Option 1
## Storm Water Pollution Prevention Plan (SWPPP)

**Inventory**

***Requirement:*** **Maintain a current inventory of materials and chemicals used at the facility and identify proper storage locations and handling procedures**

***Frequency:*** **monthly**

***Documentation:*** **signature, date, and name of preparer**

**Hazardous Materials Storage**

***Requirement:*** **Build secondary containment and roofs over chemicals and hazardous materials storage areas**

# Compliance Option 1
## Storm Water Pollution Prevention Plan (SWPPP)

**Potential Pollutant Sources**

***Requirement***: **Identify potential pollutant sources throughout the facility and the control measures used for each source/area**

***Documentation***: **Procedures, specific equipment used, maintenance schedules and a record of all maintenance performed with dates and signatures**

# Compliance Option 1
## Storm Water Pollution Prevention Plan (SWPPP)

**Treatment Controls**

***Requirements*** **(1) Identify all treatment controls installed at the facility, (2) the person responsible for regular operation and/or maintenance of the system, (3) the schedule for any required maintenance, and (4) a record of the maintenance activities including the name of the person performing the maintenance, the date, and a signature.**

- **Identify pollutants that cannot be eliminated without treatment controls include the treatment control methods, persons responsible for their maintenance, and maintenance frequency**

# Compliance Option 1
## Storm Water Pollution Prevention Plan (SWPPP)

**Spills Prevention**

***Requirement:*** **Identify spill prevention and response procedures, including management of any non-storm water runoff**

**Spill Response Procedures**

***Requirement:*** **Develop and implement a spill and leak response procedures**

- **Identify all spill and leak response equipment, location and proper maintenance of the equipment**
- **Identify spill response personnel and any training needed for the spill response personnel**
- **Establish a procedure to notify proper personnel within the facility and regulatory agencies**

# Compliance Option 1
## Storm Water Pollution Prevention Plan (SWPPP)

**Sweeping**

***Requirement***: **Sweep industrial areas on a regular basis, preferably using a vacuum sweeper**

***Frequency***: **as needed**

***Documentation***: **sweeping activities, date, and name of preparer; keep with inspection records**

**Catch Basin Cleaning**

***Requirement***: **Clean catch basins and other storm water conveyance systems**

***Frequency***: **as needed, and at least as part of the inspection routine**

***Documentation***: **maintenance activities, date, and name of preparer; keep with inspection records**

# Compliance Option 1
## Storm Water Pollution Prevention Plan (SWPPP)

**Fluids Handling & Drip Pan Maintenance**

***Requirement***: **- Drain fluids from vehicles and equipment prior to storage, disposal, or shredding**
**- Use drip pans and absorbent materials under or around leaky industrial vehicles and equipment**
**- Conduct equipment cleaning and vehicle washing in designated areas and divert flows into sanitary sewer (with approval from the sanitation district) or recycle the wash water.**

***Frequency***: **Inspect all vehicles and equipment on a regular schedule (e.g., on a weekly basis) for leaks spills or other malfunctions.**

***Documentation***: **record drip pan use & maintenance; keep with inspection records**

# Compliance Option 1
## Storm Water Pollution Prevention Plan (SWPPP)

**Oily Wastes Control Methods**

- **Develop and implement control measures for oily wastes from the site, such as canopies, covers, roofs, oil-water separator, etc.**
- **Identify location of control systems on the site map, person responsible for its maintenance, and maintenance frequency**

**Advanced Media Filtration**

- **Evaluate the need for advanced media filtration (or equivalent systems) by evaluating the monitoring reports for the last three years. An advanced media filtration system may not be needed if the monitoring results were below the triggers specified above.**

# Compliance Option 1
## Storm Water Pollution Prevention Plan (SWPPP)

**Monthly Inspections**

*Requirement:* Performed by SM-QSP or a person under the direction of the SM-QSP. Inspect all industrial areas on a monthly basis and properly remove and dispose of all debris, wastes, trash and spilled or leaked materials

*Frequency:* monthly, at least 15 days apart

*Documentation:* signature, date, and name of preparer

**Employee Training**

*Requirement:* Develop and implement an employee training program for the implementation of the site SWPPP

*Frequency:* - New Employees: within 30 days of employment
- All Employees: annually

*Documentation:* documentation of training materials and attendance

# Compliance Option 1
## Storm Water Pollution Prevention Plan (SWPPP)

**Rain Event Action Plan (REAP)**

***Requirement:*** **Develop and implement a Rain Event Action Plan (REAP). Inspect all BMPs, housekeeping practices and treatment controls to ensure that they are properly maintained and in good working condition.**

**The REAP shall consider the following additional measures:**

- **temporarily covering exposed materials**
- **ensuring that all control measures are fully functional**
- **sweeping the site and make sure trash bins are covered**

***Frequency:*** **In the event of a predicted storm with a 40% or greater probability**
**- The probability of a storm shall be determined no more than three days in advance and need only be documented once a day.**
**- Use National Weather Service (www.weather.gov) website to determine the storm probability**

***Documentation:*** **A record of all activities related to the REAP shall be documented in the SWPPP and shall be dated and signed for each rain event.**

# Quality Assurance Program Plan (QAPP)

## Sampling

www.waterboards.ca.gov/rwqcb8/water_issues/programs/stormwater/scrap_metal_permit.shtml

Most Visited | Getting Started | Latest Headlines | Coast Community Col... | Welcome to CourseCo... | Facebook | Bookmarks

Skip to: Content | Footer | Accessibility

Search GO — This Site / California — Search best viewed using IE8

CA.GOV — CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

Home | About Us | Public Notices | Board Info | Board Decisions | Water Issues | Publications/Forms | Press Room

Programs | Available Documents | Hot Topics |

Office of Governor Edmund G. Brown Jr. — Visit his Website

- Cal/EPA
- State & Regional Water Boards
- Laws/Regulations
- Plans/Policies
- Programs
- Decisions Pending and Opportunities for Public Participation

Water Quality Performance Report

RESOURCES

- Email Subscriptions
- Data & Databases
- Business Help
- Public Records Center
- Grants & Loans
- Fees
- File an Environmental Complaint
- Employment
- Useful Links
- Website Index

Water Boards

Home » Rwqcb8 » Water Issues » Programs » Stormwater

### Sector-Specific Scrap Metal Recycler NPDES Storm Water Permit

**Sector-Specific Scrap Metal Recycler NPDES Storm Water Permit (Order No. R8-2012-0012)**

- Sector-Specific Scrap Metal Recycler NPDES Storm Water Permit, Order No. R8-2012-0012, NPDES Permit No. CAG618001
  - Revised Table 3 [New Methods and Minimum Limits]
  - Scrap Metal Permit Ad Hoc Help Guide
  - Permit Documents
    - Simplified QAPP Template
  - Scrap Metal Qualified SWPPP Developer List NEW!
  - Scrap Metal Qualified SWPPP Practitioner List NEW!
  - June 18, 2013 - SM-QSD/SM-QSP Certification Training (Workshop III)
    - Agenda
    - Flyer
    - Parking
    - Presentations
      - Scrap Metal - Qualified SWPPP Developer (SM-QSD) Training
      - Scrap Metal - Qualified SWPPP Practitioner (SM-QSP) Training
      - Stormwater Multiple Application & Report Tracking System (SMARTS) Update
  - September 11, 2012 - Certified Persons Training (Workshop II)
    - Agenda
    - Announcement
    - Presentations
      - Permit Overview
      - Certified Persons Training
      - Qualified Assurance Project Plan
      - SMARTS Database
  - March 28, 2012 Permit Workshop (Workshop I)
    - Workshop Notice

# Storm Water Sample Collection
## Certified Person & Sample Result Reporting

**Storm Water Sample Collection**

- **Identify each discharge location, sampling frequency, sample collection equipment and special requirements, sample preservation methods, chain-of-custody forms and procedures, all handling protocols and methods for delivery of samples to the certified laboratory.**
- **Identify the certified laboratory that will conduct the analysis.**
- **Analyze samples for parameters listed in Table 2 and any other potential pollutants present at the site.**

**Certified Person**

- **Sample, collection, preservation and handling shall be the responsibility of the Certified Persons.**
- **Identify a sufficient number of Certified Persons who are properly trained and certified in sample collection, preservation, and handling protocol.**
- **A Certified Person must have received at least one hour of classroom training provided by a certified laboratory in sample collection, sample preservation, sample handling, quality assurance and quality control protocols.**
- **Proof of such training, such as a certificate of completion from the certified laboratory, shall be included in the SWPPP.**

**Sample Result Reporting**

- **All sampling results, including any samples collected more frequently than the frequency specified in the Permit, shall be uploaded into SMARTS within 30 days of receipt of laboratory results.**

# Runoff Sampling and Analysis

**Sampling Requirements**

- **Collect at least four samples of runoff per year from each discharge point during qualifying storm events**
- **Samples shall be collected at the end of the storm water conveyance system before it comingles with any other flows**
- **If storm water associated with industrial activities is discharged into an onsite system (percolation basins, infiltration gallery, etc.) samples must also be collected from each of those discharge points**

**Sampling Frequency**

- **Monthly, until a minimum of four samples of runoff are collected**
- **The first sample for the season shall be collected during the first qualifying storm event after July 1st**
- ***Qualifying Storm Event*: storm occurs during operating hours resulting in 0.1-inch or more of rainfall producing runoff**

**Analysis Requirements**

- **Analyze for the constituents in Table 2, at a State certified laboratory (with the exception of on-site measurements of pH, turbidity and specific conductance)**

## Table 2: Parameters, Sample Type and Frequency

| Parameter | Units | Type of Sample | Frequency |
|---|---|---|---|
| Flow | mgd | Estimate | 4 times/year |
| pH | pH units | grab[33] | 4 times/year |
| Turbidity[34] | NTUs | grab | 4 times/year |
| Oil and Grease | mg/l | grab | 4 times/year |
| Specific Conductance | µmhos/cm | grab | 4 times/year |
| Total Petroleum Hydrocarbons | µg/l | grab | 4 times/year |
| Zinc ( total recoverable) | µg/l | grab | 4 times/year |
| Lead (total recoverable) | µg/l | grab | 4 times/year |
| Nickel (total recoverable) | µg/l | grab | 4 times/year |
| Silver (total recoverable) | µg/l | grab | 4 times/year |
| Aluminum (total recoverable) | µg/l | grab | 4 times/year |
| Copper (total recoverable) | µg/l | grab | 4 times/year |
| Iron (total recoverable) | µg/l | grab | 4 times/year |
| Cadmium (total recoverable) | µg/l | grab | 4 times/year |
| Arsenic (total recoverable) | µg/l | grab | 4 times/year |
| Chemical Oxygen Demand (COD) | mg/l | grab | 4 times/year |
| PCBs | µg/l | grab | 1st year after permit adoption (first storm sample) |
| Toxicity (Acute test) | | grab or composite | 4th year after permit adoption (first storm sample) |

# Analytical Methods & Minimum Quantitation Levels

## 1 µg = 0.001 mg

| Constituent | Units | Test Method | Minimum Level |
|---|---|---|---|
| pH | pH units | EPA 9040 or field test with a calibrated portable instrument | ±0.1 |
| Turbidity | NTUs | EPA 180.1 or Field test with a calibrated portable instrument | 0.5 |
| Oil and Grease | mg/L | EPA 413.2 or<br>EPA 1664 | 1.0 |
| Specific Conductance | µmhos/cm | EPA 120.1/ SM 2510-B or Field Test with portable Instrument | 1.0 |
| Total Petroleum Hydrocarbons | µg/l | EPA 418.1 | 0.1 |
| Zinc (total recoverable) | µg/l | EPA 200.8 | 0.5 |
| Nickel (total recoverable) | µg/l | EPA 200.8 | 0.5 |
| Silver (total recoverable) | µg/l | EPA 200.8 | 0.2 |
| Lead (total recoverable) | µg/l | EPA 200.8 | 0.5 |
| Aluminum (total recoverable) | µg/l | EPA 200.8 | 0.5 |
| Copper (total recoverable) | µg/l | EPA 200.8 | 0.5 |
| Iron (total recoverable) | µg/l | EPA 200.8 | 5.0 |
| Cadmium (total recoverable ) | µg/l | EPA 200.8 | 0.2 |
| Arsenic (total recoverable) | µg/l | EPA 200.8 | 0.5 |
| Chemical Oxygen Demand (COD) | mg/l | SM 5220C[35] | 1.0 |
| PCBs | µg/l | EPA Method 608 | 0.5 |

# Compliance Option 1
## Annual Compliance Assessment

**Single Discharge Point**

- For pH, collect the pH sample results for all storm water analyzed and calculate the arithmetic average.
- For all other sample results, collect all of the sample results for each parameter and take the geometric average for each.

**Multiple Discharge Points**

- Use the Relative Tributary Areas for your site to determine the area-weighted averages of arithmetic mean (pH only) or geometric means (all other constituents) for multiple discharge points where storm water has come in contact with industrial areas, processes, materials, products or wastes.

# Sample Result Analysis
## Arithmetic Annual Average

**<u>Arithmetic Average</u>: pH**

**Add sample results and divide by the number of values.**

$$\frac{6.4 + 6.9 + 6.8 + 6.6}{4} = 6.675$$

# Sample Result Analysis
## Geometric Annual Average

**<u>Geometric Average</u>: turbidity, specific conductance, oil & grease, chemical oxygen demand, aluminum, copper, iron, lead, zinc**

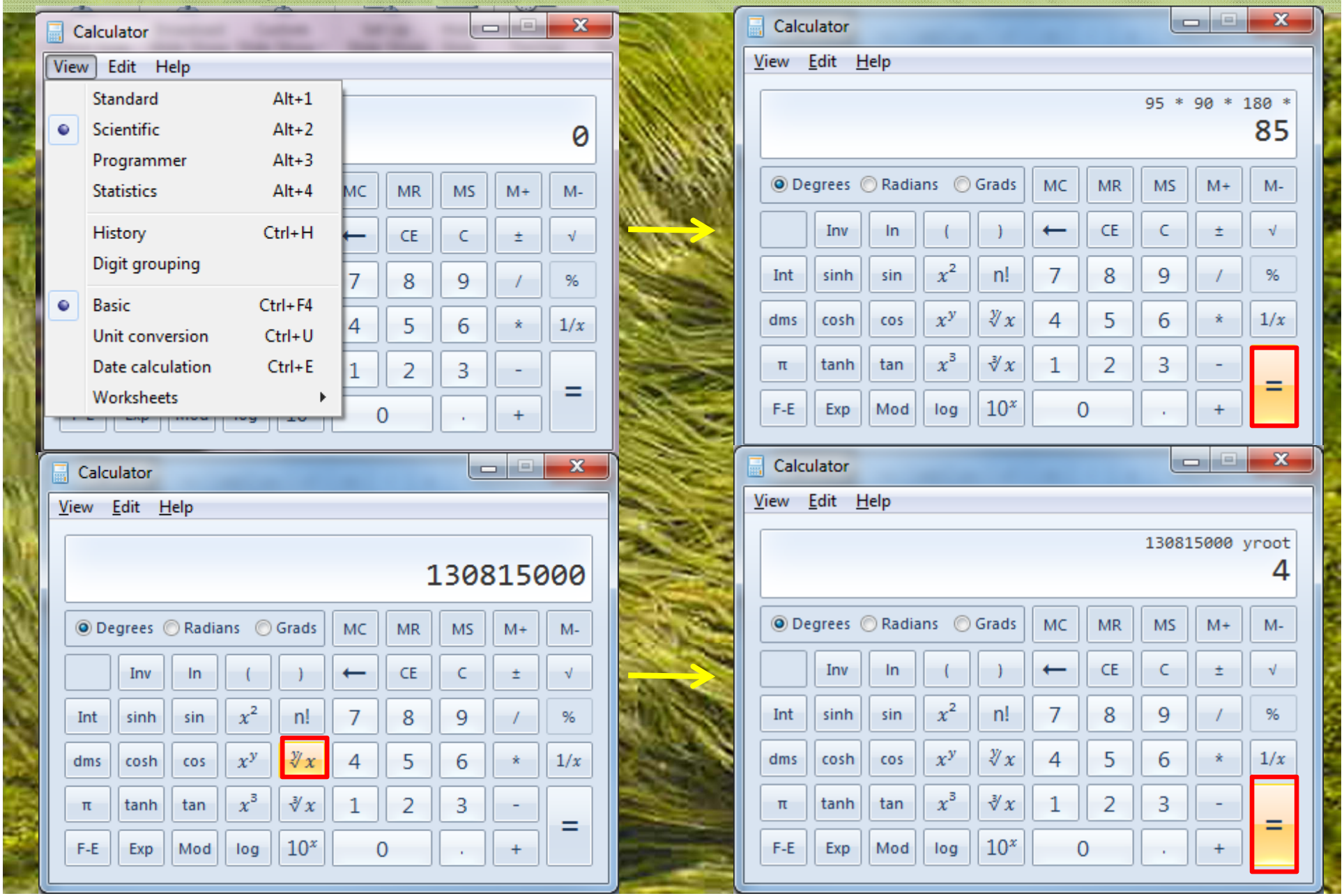
**Multiply sample results and apply root of number of samples**

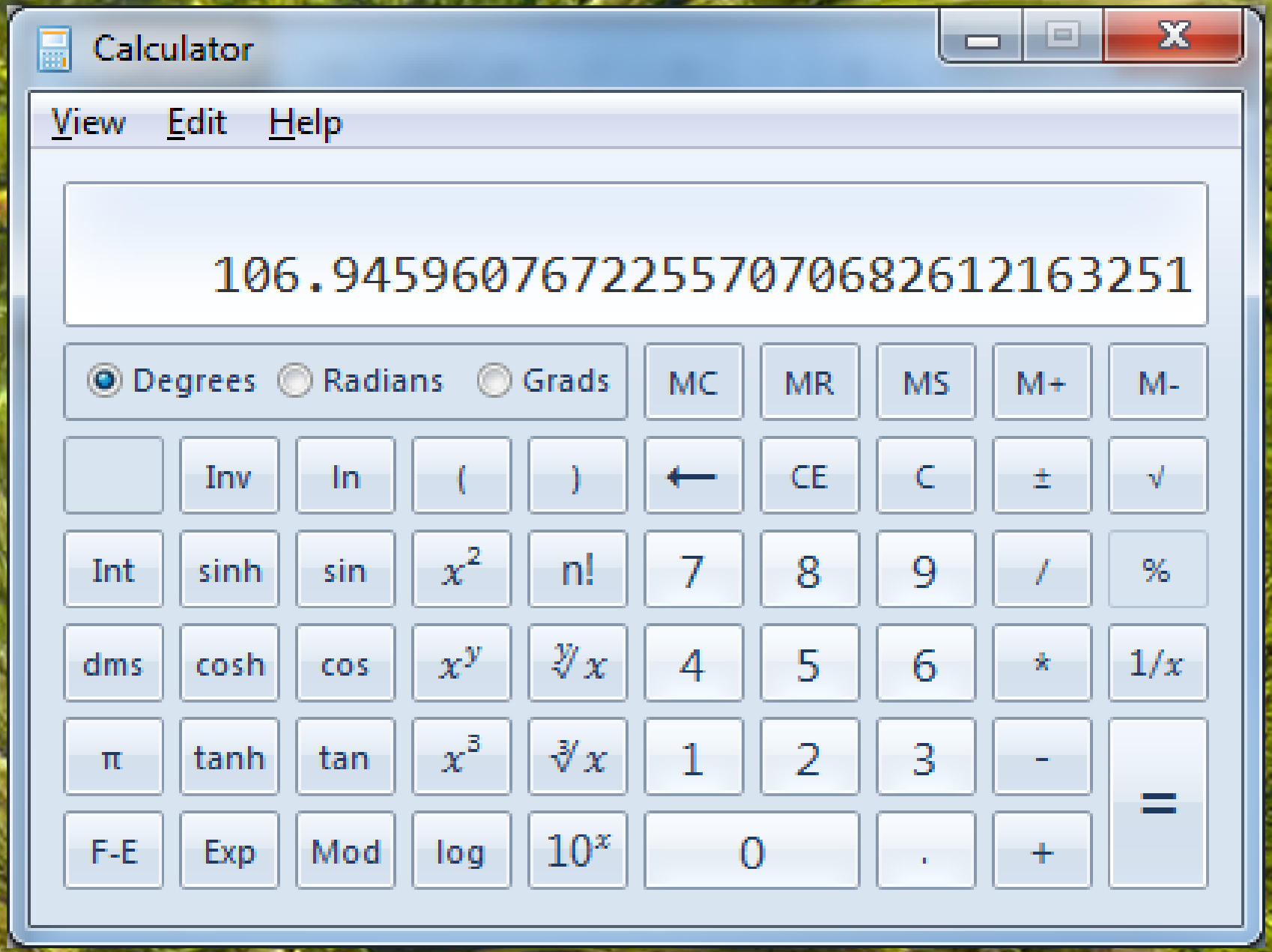
$$\sqrt[4]{95 \ x \ 90 \ x \ 180 \ x \ 85} = 106.9 \text{ mg/L}$$

$$(95 \ x \ 90 \ x \ 180 \ x \ 85)^{\frac{1}{4}} = 106.9 \text{ mg/L}$$

$$(\text{value 1} * \text{value 2} * \text{value 3} * \text{value 4})^{1\,/\,\text{number of values}}$$

$$(85 * 80 * 180 * 85)^{1/4} = 130{,}815{,}000^{1/4} = 106.95$$




Calculator
View Edit Help
106.9459607672255707068261216325 1
Degrees Radians Grads
MC MR MS M+ M-
Inv ln ( ) ← CE C ± √
Int sinh sin x² n! 7 8 9 / %
dms cosh cos xʸ ʸ√x 4 5 6 * 1/x
π tanh tan x³ ∛x 1 2 3 -
F-E Exp Mod log 10ˣ 0 . + =

# Multiple Discharge Points

## Relative Tributary Area / Area-Weighted Average

| | Discharge Point 1 | Discharge Point 2 |
|---|---|---|
| Relative Tributary Area | 30% | 70% |
| Analysis Results from 1st Sample | 95 mg/L | 103 mg/L |
| Analysis Results from 2nd Sample | 90 mg/L | 117 mg/L |
| Analysis Results from 3rd Sample | 180 mg/L | 98 mg/L |
| Analysis Results from 4th Sample | 85 mg/L | 106 mg/L |
| Annual Average | 106.9 mg/L | 105.8 mg/L |
| Annual Weighted Average | 106.9 x 0.30 = 32.07 | 105.8 x 0.70 = 74.06 |

**Combined Area-Weighted Annual Average: 32.07 + 74.06 = 106.13 mg/L**

# Compare Sample Results to Numeric Action Level (NAL) Triggers for Compliance Option 1 Phase Advancement

**Compliance Option 1 Annual Evaluation**

**<u>Single Sample Exceedance</u>**

**For each constituent compare each sample result to the Numeric Action Level.**

**For pH: < 5.5 pH units or > 9.5 pH units triggers phase advancement**

**For all other constituents: > twice NAL triggers phase advancement**

**<u>Annual Average Exceedance</u>**

**For each constituent, compare the annual average to the Numeric Action Level**

**For pH: < 6.5 pH units or > 8.5 pH units triggers phase advancement**

**For all other constituents: > NAL triggers phase advancement**

# Compliance Option 1
# Table 1a: Water Quality-Based Numeric Action Levels

| Constituent | Units | Single Sample Exceedance | Annual Average Numeric Action Level |
|---|---|---|---|
| pH | pH units | < 5.5 or > 9.5 | 6.5 to 8.5 |
| Turbidity | NTU | > 500 | 250 |
| Specific Conductance | µmhos/cm or µsiemen/cm | > 4000 | 2000 |
| Oil and Grease | milligrams/liter | > 30 | 15 |
| Chemical Oxygen Demand | milligrams/liter | > 240 | 120 |
| Aluminum (total recoverable) | milligrams/liter | > 1.5 | 0.75 |
| Copper (total recoverable) | milligrams/liter | > 0.0378 | 0.0189 |
| Iron (total recoverable) | milligrams/liter | > 2.0 | 1.0 |
| Lead (total recoverable) | milligrams/liter | > 0.244 | 0.122 |
| Zinc (total recoverable) | milligrams/liter | > 0.32 | 0.16 |

# Compare Sample Results to Numeric Action Level (NAL) Single Sample Result Analysis

**<u>pH Single Sampling Event Exceedence</u>: Any analysis result value less than 5.5 or more than 9.5 pH units is an exceedance that triggers Compliance Option 1 phase advancement and requires additional compliance steps.**

**Single Sample Exceedance for pH:**

**< 5.5 pH units or > 9.5 pH units**

**<u>Example pH Sample Results</u>**

**Analysis Result from 1st Sample: 6.7 pH units**

**Analysis Result from 2nd Sample: 6.3 pH units**

**Analysis Result from 3rd Sample: 5.2 pH units** **5.2 is less than < 5.5 pH units ***

**Analysis Result from 4th Sample: 7.9 pH units**

*** Triggers Compliance Option 1 phase advancement**

# Compare Sample Results to Numeric Action Level (NAL)
# Single Sample Result Analysis

**Single Sampling Event Exceedence: For constituents, other than pH, any analysis result value that exceeds twice the Numeric Action Level is an exceedance that triggers Compliance Option 1 phase advancement and requires additional compliance steps.**

**Single Sample Exceedance for Oil and Grease: NAL x 2**

**15 mg/L x 2 = 30 mg/L**

**Example Oil and Grease Sample Results**

**Analysis Results from 1st Sample 23.3 mg/L**

**Analysis Results from 2nd Sample 11.7 mg/L**

**Analysis Results from 3rd Sample 13.8 mg/L**

**Analysis Results from 4th Sample 31.5 mg/L 31.5 > 30***

*** Triggers Compliance Option 1 phase advancement**

# Compare Sample Results to Numeric Action Level (NAL) Annual Average Analysis

**<u>pH Annual Average</u>: Compare the arithmetic average of all pH sample analysis results for the reporting year and compare to the Numeric Action Level.**

**Numeric Action Level for pH: 6.5 pH units or 8.5 pH units**

**Arithmetic Average:** $$\frac{6.4 + 6.9 + 6.8 + 6.6}{4} = 6.675$$

**Numeric Action Level: 6.5 to 8.5 pH units**

**Annual Average: 6.675 pH units**

**Annual Average within Numeric Action Level range, so it does not trigger Compliance Option 1 phase advancement.**

# Compare Sample Results to Numeric Action Level (NAL) Annual Average Analysis

**<u>Annual Average</u>: For all constituents, except for pH, determine if annual average exceeds Numeric Action Level.**

**Numeric Action Level for Oil & Grease: 15 mg/L**

**Geometric Average:** $(23.3 \ x \ 11.7 \ x \ 13.8 \ x \ 31.5)^{\frac{1}{4}}$ **= 18.55 mg/L**

**Annual Average exceeds Numeric Action Level , so it triggers Compliance Option 1 phase advancement.**

# Multiple Discharge Points

## Relative Tributary Area / Area-Weighted Average

| | Discharge Point 1 | Discharge Point 2 |
|---|---|---|
| Relative Tributary Area | 30% | 70% |
| Analysis Results from 1st Sample | 95 mg/L | 103 mg/L |
| Analysis Results from 2nd Sample | 90 mg/L | 117 mg/L |
| Analysis Results from 3rd Sample | 180 mg/L | 98 mg/L |
| Analysis Results from 4th Sample | 85 mg/L | 106 mg/L |
| Annual Average | 106.9 mg/L | 105.8 mg/L |
| Annual Weighted Average | 106.9 x 0.30 = 32.07 | 105.8 x 0.70 = 74.06 |

Combined Area-Weighted Annual Average: 32.07 + 74.06 = 106.13 mg/L

Chemical Oxygen Demand – Numeric Action Level: 120 mg/L

Area-Weighted Annual Average: 106.5 mg/L

Area-Weighted Annual Average is less than Numeric Action Level

# Compliance Option 1
## Credits

**Credits (pH cannot be adjusted)**

- **If a facility has implemented volume reduction BMPs (e.g., percolation basins) or preventative measures (e.g., having industrial operations under a non-polluting roof), a percent credit may be applied to the annual average.**

- **Example: A non-polluting roof covers 25% of the operational area**

  **Numeric Action Level for Chemical Oxygen Demand: 120 mg/L**
  **Sample Annual Average for Chemical Oxygen Demand: 106.9 mg/L**

  **25% Credit: 106.9 x 0.25 = 26.6 mg/L**
  **106.9 - 26.6 = 80.2 mg/L**

  **Annual Average with Credit: 80.2 mg/L**
  **80.2 mg/L < 120 mg/L, so there is no trigger for phase advancement**

# Compliance Option 1
## Phase Advancement, Phase I to Phase II

**<u>Annually by June 30</u> (reporting year is July 1st to June 30th)**

- **Evaluate the monitoring results and by determining if any of the triggers have been exceeded**

**<u>If Any Trigger Exceeded</u> (single sample exceedance or annual average NAL exceedance)**

- **Immediately reassess the Phase I BMPs to identify the sources of exceedances**
- **Determine if additional BMPs or treatment controls are required to address the pollutant source**

**<u>By July 31</u>**

- **Develop and submit for Regional Board staff approval, a Phase II Corrective Action Plan. This Plan should identify the sources of pollutant(s) causing the exceedance, proposed control measures, and the expected discharge quality once the Plan is implemented. It is expected that the Phase II Corrective Action Plan will focus on Preventative Measures. If necessary, the facility shall select and design an advanced media filtration system or an equivalent treatment system to treat the design volume from exposed industrial areas.**

**<u>By August 15</u>**

- **All proposals for advanced media filtration systems or other equivalent treatment systems shall be submitted to the Regional Board staff for approval by August 15, 2013**

  **The treatment systems shall be designed to treat runoff from at least the 95th percentile storm event.**

**<u>Phase II Corrective Action Plan</u>**

- **Implement within 90 days of approval**

# Compliance Option 1
## Phase Advancement, Phase II to Phase III

**<u>Annually by June 30</u>**

- **Evaluate the monitoring results and by determining if any of the triggers have been exceeded**

**<u>If Any Trigger Exceeded</u>**

- **Immediately reassess the Phase II BMPs to identify the sources of exceedances**

**<u>By July 31</u>**

- **Develop and submit for Regional Board staff approval, a Phase II Corrective Action Plan.**

  **This Plan shall include an evaluation of the existing treatment controls and operation and maintenance procedures to improve system performance. The Plan shall also include additional reasonable source control measures that can be implemented to improve quality of storm water runoff from the site and a time schedule for implementing the proposed corrective actions.**

  **The approved Phase III Corrective Action Plan, when fully implemented, will meet the BAT/BCT effluent limitations and constitutes a water-quality based effluent limitation as per 40 CFR §122.44(k). The Permittee will be deemed to be in compliance with the BAT/BCT effluent limitations once the approved Phase III Corrective Action Plan is fully implemented.**

# Reporting Requirements

**<u>Non-Compliance Reporting</u>** – ***Immediate Threat to Human Health or the Environment***

**Verbally report (phone or email) discharges that are determined to pose an immediate threat to human health or the environment to Regional Board Staff and CalEMA / CalOES within 24 hours and submit written report within 10 days.**

**<u>Annual Report</u>**

- **Submit in SMARTS by August 1 for the previous July 1st to June 30th reporting year**
- **Summarize evaluation of all sampling and analysis results, including monthly visual observations**
- **Identify all additional BMPs or other corrective action methods implemented at the facility**
- **Summarize all compliance activities, including any new or proposed treatment controls**
- **Identify any major changes to any of the previously submitted SWPPP or MRP or other plans or programs**

# Submittals
## Authorized Signatory

**Legally Responsible Person (LRP): The Legally Responsible Person is the person identified on the permit application as the owner contact for the facility.**

**Authorized Signatory: Designated by the Legally Responsible Person to submit information in the online SMARTS database. The Authorized Signatory is a person with authority at facility, such as a facility manager, responsible corporate officer, or general partner.**
**Data Entry Person: Designated by the Legally Responsible Person to enter information in the online SMARTS database. The Legally Responsible Person or Authorized Signatory officially submits the information.**

***** Anyone acting as an Authorized Signatory must be officially designated through SMARTS.**
***** DO NOT use someone else's user name and password to submit information.**
***** If you misrepresent who is submitting the information, penalties may be assessed against the person making the false representation.**
***** The Authorized Signatory must be a person with authority at the facility.**
**Consultants representing a facility may NOT be designated as an Authorized Signatory.**

# Monitoring, Record Keeping

**Monitoring Information Records**

- Date, exact place, and time of sampling or measurements
- Time(s) analyses were performed
- Individual(s) who performed the analyses
- Analytical techniques or methods used
- Results of such analyses

**Record Keeping**

- Maintain a paper or electronic copy of all storm water monitoring information, copies of all reports (including Annual Reports), SWPPPs, and all other required records, including a copy of this Permit, for a period of at least five years from the date generated or date submitted, whichever is more recent. These records shall be available at the industrial facility.

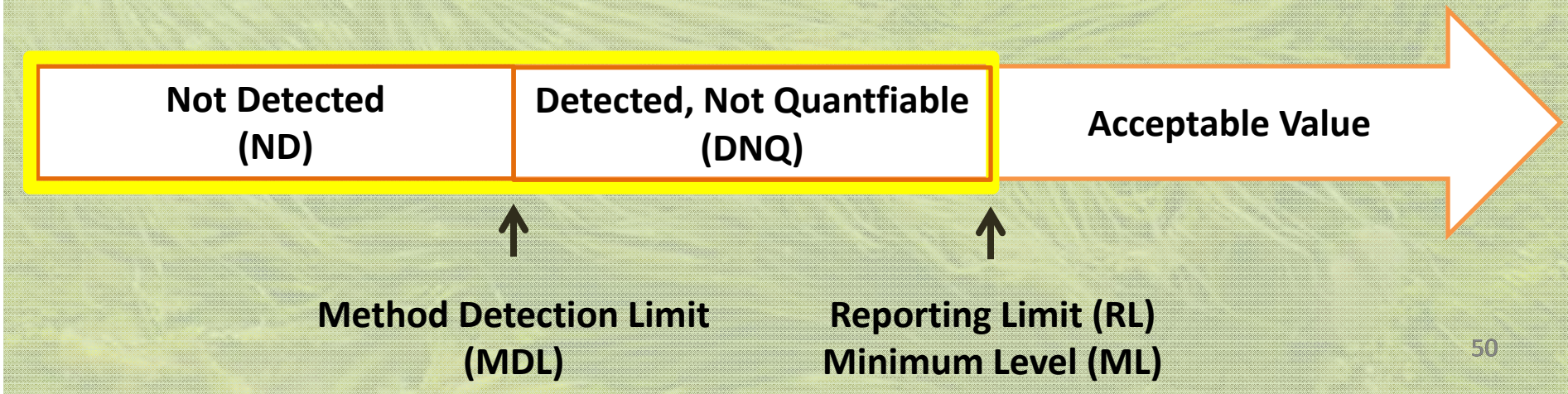
# Monitoring Reductions

**Visual Monitoring Frequency Reduction**

- If no significant violations for 4 consecutive monthly inspections
- SM-QSP certifies BMPs are fully implemented and site does not warrant monthly inspections
- Submit reduction request to Regional Board for approval
- Conduct at least one inspection of storm water runoff per reporting year

**Eliminate Storm Water Sample Constituent**

- Data from 4 samples per reporting year for 2 consecutive years
- All sample results less than reporting limit / minimum level
- Submit reduction request to Regional Board for approval



# Monitoring Reductions

**Storm Water Sample Frequency Reduction**

- Less than Numeric Action Level (Compliance Option 1 NAL) for 2 consecutive years
- Reliability of treatment systems certified
- Submit reduction request to Regional Board for approval

**No Exposure Certification (NEC)**

- If no industrial activity is exposed to storm water
- Analytical results of runoff from each discharge point for two storm events
- Renew NEC by June 30th of each year

**Notice of Termination when:**

- All industrial activities have ceased, and the facility no longer poses a threat to water quality
- No water flows from the facility to storm water systems or surface waters
- Change in ownership
- Change in location of facility
- Obtain individual permit coverage

# Regional Board Contacts

**Keith Elliott**
**Inland Stormwater Unit**
**(Riverside & San Bernardino Counties)**
**951-782-4925**
**kelliott@waterboards.ca.gov**

**Mary Bartholomew**
**Coastal Stormwater Unit**
**(Orange County)**
**951-321-4586**
**mbartholomew@waterboards.ca.gov**

**Michael Perez**
**Translation**
**Inland Basin Planning**
**951-782-4306**