

QSP DELEGATE FOUNDATIONAL TRAINING 2022 Construction General Permit (CGP)

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- Please visit www.cemstormwater.com for a list of monthly QSP and 6-Hr Refresher classes
- Private group classes are also available

A version of this training is here:
<https://youtu.be/2pWAAYjkhpA>

Qualified SWPPP
Practitioner (QSP)
Delegate Training
Guidelines

CGP Roles/Responsibilities

QSP Delegate

- Discharger may authorize a QSP to delegate QSP tasks (inspections, sampling, SWPPP implementation) to Delegates
- QSPs opting to delegate tasks shall provide the following training based on guidelines from the CGP Training Team (CGPTT):
 1. **Foundational training – You are here!**
 - Stormwater compliance roles/responsibilities
 - Forecast information
 - Documentation & reporting procedures
 2. **Site-specific training**
 - Visual inspections requirements
 - Sampling procedures
 - SWPPP & BMP installation/maintenance



1A. Roles and Responsibilities



Legal Background and Purpose

Related Environmental Regulations

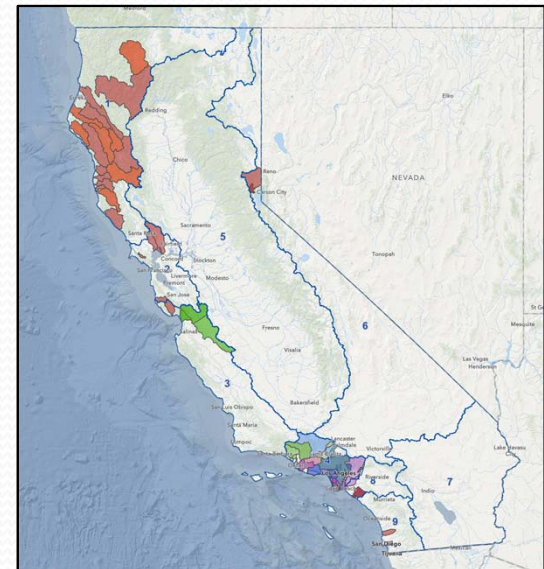
- EPA → Clean Water Act (CWA) 1972 – Intent of restoring and maintaining, the chemical, physical, and biological integrity of the waters of the U.S.
- Federal requirements
 - National Pollutant Discharge Elimination System (NPDES)
 - Regulates point source pollution
- State requirements (CA CGP) → SWRCB
 - CA is a Delegated State
 - Enforced by the RWQCB
- MS4 requirements → **Construction project oversight**
 - Enforce local ordinances and codes
- CWA Section 404: Dredge and Fill Permit → **Federal - Army Corps of Eng.**
 - **In-water work**
- CWA Section 401: Water Quality Certification → **State**
- 1600 – Lake and Streambed Alteration Agreement → **CDFW**
- CA Portor-Cologne Water Quality Control Act (legal framework to protect water quality)
 - Specific administrative, civil, and criminal penalties



Legal Background and Purpose

Related Environmental Regulations

- Section 303(d): Impaired Waters/TMDLs
 - The 303(d) list identifies water bodies that fail to meet water quality standards and guides the development of Total Maximum Daily Loads (TMDLs) to restore them
- Low Threat Discharge Permit
 - Short term, low volume discharges
- Air Quality → CA Air Resources Board
 - Air Quality Management Districts (AQMD) & Local Requirements
- Waste Regulations
 - Resource Conservation and Recovery Act (RCRA)
 - Governs disposal of hazardous wastes
- Federal Endangered Species Act
- CA Endangered Species Act
- And more...



Legal Background and Purpose

- **Purpose of the 2022 CGP**
 - Comply with CWA and CA water quality standards to prevent sediment and other pollutants from entering receiving waters
 - Protect water quality & beneficial uses by minimizing pollutant discharges
 - Sets minimum BMP, inspection, and sampling requirements
 - Permit coverage is required for **1 or more acres of soil disturbance** vs. Common Plan of Dev
- **Traditional Risk Levels 1, 2, and 3**
 - Increased threat to water quality → Increased risk level & requirements
 - Residential, commercial, road work, grading operations
 - Effluent sampling required for Risk Levels 2/3 → **Numeric Action Levels (NALs)**
- **Linear Underground/Overhead Projects (LUP) Types 1, 2, and 3**
 - Utility projects – Transmission of water, gas, electricity, cable, communications, and sewer
 - Effluent sampling required for LUP Type 2/3 → **NALs**
- **Consequences of Non-Compliance**
 - Environmental degradation and legal consequences
 - Failure to implement the SWPPP requirements and/or corrective actions is non-compliance and leads to enforcement actions
 - RWQCB → Notice of Violation (NOV) and Significant Fines \$\$\$
 - **State Administrative: \$10K per day/per violation and \$10 per gallon**
 - **Civil penalties \$37.5K per day/violation**

Refer to the Permit for a full list of Acronyms and the Glossary

- **Att. A – Acronyms/Terms**
- **Att. B – Glossary**

- SWPPP – Storm Water Pollution Prevention Plan
- SMARTS – Storm Water Multiple Application and Report Tracking System
- NOI – Notice of Intent
- WDID – Waste Discharge Identification Number
- NOT – Notice of Termination
- NALs – Numeric Action Level
- NELs – Numeric Effluent Limitations
- TMDL – Total Maximum Daily Load
- LCAN – Linear Construction Activity Notification
- LCTN – Linear Construction Termination Notification
- **QPE – Qualifying Precipitation Event (50%/0.5 in./24 hours)**
- BMP – Best Management Practices
- COI – Change of Information
- ATS – Active Treatment System
- PTS – Passive Treatment System

- **Highly recommend that all Delegates read the CGP Order, Att. D (Traditional), and Att. E (LUP)**



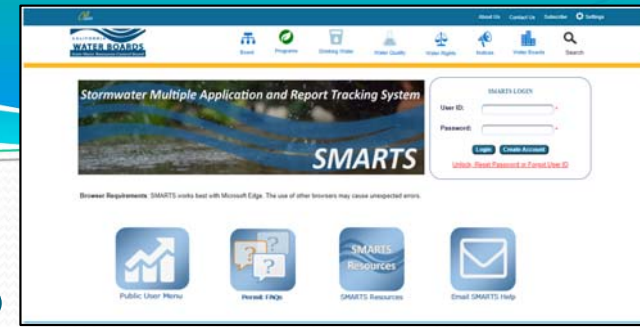
Communication Process for Stormwater-Related Concerns

CGP Roles/Responsibilities

- Discharger
 - LRP – Legally Responsible Person
 - DAR – Duly Authorized Rep
 - QSD – SWPPP Developer
 - QSP – SWPPP Implementation
 - QSP Delegate
-
- It is crucial to elevate and communicate non-compliance issues up the chain to ensure they are quickly addressed and meet the timelines within the CGP
 - QSP Delegate → QSP → QSD
 - Communicate with onsite staff for quick resolution of corrective actions
 - LRP/DAR should be in the loop!



CGP Roles/Responsibilities



Discharger/LRP

1. Oversee work by QSDs, QSPs and QSP Delegates. **Ultimately responsible for permit compliance.**
2. Ensure a SWPPP is developed by a QSD, and upload changes or amendments into SMARTS within **30 days**.
3. Verify all certified professionals responsible for implementing compliance are in good standing.
4. Ensure correct construction start and end dates are:
 - Used for risk determination
 - Listed in SMARTS
 - Included in the required WDID posting notice
5. Ensure project data and contact information is current in SMARTS.
6. Update LRP information if there is a change in personnel.
7. Review annual reports for accuracy and completeness.
8. **LRP:** Sign, certify and electronically submit any documents in SMARTS, including annual reports, ad hoc reports, exceedances and responses, changes of information (COI), amendments, certified personnel changes, and RWQCB required uploads.
9. **Option:** LRP may designate DAR(s) that meets the requirements set forth in the 2022 CGP.
10. **Retain a QSD from the beginning of the project through the NOT approval and perform all required inspections.**
11. Ensure that a QSP performs the required inspections and reviews/oversees any work performed by QSP delegates.

CGP Roles/Responsibilities - QSD

Qualified SWPPP developer (QSD) is a qualified stormwater professional authorized by the discharger to **develop and revise SWPPPs**.

- The QSD selects the BMPs that may be used at the project site.

- 1. Assess how construction activities will affect **erosion control**, and sediment transport, as well as the discharge of other pollutants in stormwater runoff in the SWPPP design
- 2. **Revise the SWPPP** (via amendment) to address potential (or actual) problems identified by visual inspections, sampling data, QSP observations, etc.
- 3. Include in the SWPPP the name, email, and phone number of QSP and QSP Delegate(s).
- 4. **Perform the following on-site visual inspections: (Refer to Chart)**
 - Within 30 days of construction activities starting on a site
 - Within 30 days of a discharger replacing the QSD
 - Twice annually, between **August and October** and again between **January and March**
 - Within 14 days after a NAL exceedance
 - Within the time period requested in writing by the Regional Water Board
- 5. The QSD may perform the work of a QSP

CGP Roles/Responsibilities - QSP

- **Qualified SWPPP practitioner (QSP)** is a qualified stormwater professional authorized by the discharger to conduct non-stormwater and stormwater visual observations, sampling, and implementation of all elements of the SWPPP.
- The discharger shall ensure that a **QSP reviews work performed by trained Delegates** including visual inspections, sampling, BMP implementation activities, and other required tasks listed in the SWPPP.
- **Required Inspections:**
 - Weekly (performed and/or delegated)
 - ❖ Monthly
 - ❖ Pre-Qualifying Precipitation Event (QPE) – 72-120 Hr.
 - During-QPE (performed and/or delegated) – 24 Hr.
 - Post-QPE (performed and/or delegated) – 96 Hr.
 - ❖ 14 Day Post-NAL Exceedance
 - ❖ Prior to Notice of Termination (NOT) for all or a portion of the site
 - ❖ Change of Information (COI) for acreage changes



CGP Roles/Responsibilities - QSP

QSP shall VERIFY the following:

- a) All BMPs are implemented, correctly installed, inspected, maintained
 - Begin the implementation of corrective actions within **72 hours** of identification and complete ASAP, prior to the next Forecasted Precipitation Event (FPE)
- b) Trackout at entrances/exits is controlled
- c) SMARTS generated WDID notification form is in location viewable by the public, current, with correct start/stop dates which match dates on SMARTS
- d) Sampling protocols for stormwater and non-stormwater discharges are correctly performed as described in the SWPPP by on-site trained personnel delegated by a QSP (including, but not limited to, taking **representative samples** of the runoff)
- e) Contact info for the Discharger, LRP, QSD, QSP are correct and updated on SMARTS within 90 days of change
- f) Photo documentation of deficiencies and resolved deficiencies
- g) **Photo documentation is required for:**
 - Problem areas of erosion
 - Sediment deposition
 - Unauthorized NSWDS
 - Failed BMPs☐ Provide to Regulatory Inspector upon request



CGP Roles/Responsibilities

QSP Delegate

The Discharger shall ensure that:

- The QSP has determined the delegates are **competent** to perform duties (inspection/sampling/BMP implementation) **prior to fully delegating** responsibilities to the delegate
- Delegates name, email, phone are maintained on a **training log**, uploaded as an attachment to SMARTS **prior** to the delegate performing the functions
- **Delegates have a system to record/report issues back to the QSP within 24-hours of when a corrective action is needed**
- Delegates **cannot perform** the QSD/QSP required inspections
- Delegates can be a data submitter (Ad-Hoc reports) on SMARTS



2022 CGP - Site Inspections

- Weekly and *Rain Event* Timing
- Pre-, During-, Post-QPE *also satisfies the weekly!*
- Inspections and sampling are conducted during site operating hours

		72-120 hrs.	24 hrs.	96 hrs.
Risk Level	Weekly	Pre-QPE	During-QPE	Post-QPE
1	X	X	X	X
2	X	X	X	X
3	X	X	X	X
LUP Type	Weekly	Pre-QPE	During-QPE	Post-QPE
1	X	X	X	N/A
2	X	X	X	X
3	X	X	X	X

2022 CGP - All Inspections

INSPECTION TYPE	QSD	QSP	DELEGATE
WEEKLY	X	X	X
PRE-QPE	X	X	
DURING-QPE	X	X	X
POST-QPE	X	X	X
QSP MONTHLY	X	X	
QSP NOT INSP. or COI ACREAGE CHANGES	X	X	
ANNUAL EXCEEDANCE - WITHIN 14 DAYS (QSD + QSP)	X	X	
QSD – WITHIN 30 DAYS FROM COMMENCEMENT OF CONSTRUCTION	X		
QSD – 2 ANNUAL INSPECTIONS (Aug-Oct) (Jan-Mar)	X		
QSD CHANGE (WITHIN 30 DAYS)	X		
INACTIVE PROJECTS			
QSD – WITHIN 14 DAYS AFTER COI APPROVAL	X		
INACTIVE PROJECTS MONTHLY INSPECTION	X	X	X
INACTIVE PROJECTS PRE-QPE	X	X	X

- Ensure all inspections are documented on an [inspection checklist](#) that meets the requirements listed in the CGP.

Inspection Protocols

Weekly Inspections

- Inspect the condition of BMPs and overall site conditions (sediment controls, erosion controls, trash/debris, trackout, additional BMPs needed, **unauthorized non-stormwater discharges**, etc.)
- Are BMPs properly installed? Are BMPs effective?

Pre-QPE Inspection and Weather Forecasts (discussed on future slides)

- **ONLY the QSP** (or a QSD) can perform the Pre-QPE inspection
 - Alternate QSP or QSD can perform inspection as backup!
- Recommend checking forecast for upcoming storm events everyday/same time
- **QPE – 50% chance/0.5 in./24-hour period**
- Identify BMPs needed to prepare the site for rain & communicate with corrective actions
- Inspect for leaks/spills or uncontrolled pollutant sources



During-QPE (every 24 hours with 0.25 inches forecasted)

- Checking on the condition of BMPs & discharge quality. Are BMPs effective?
- Is immediate action needed to prevent/minimize the discharge of pollutants? **Take action!**
- Collecting samples. Are you having a NAL exceedance? **Take action!**

Post-QPE

- Were BMPs implemented/effective?
- Are repairs needed? Are additional BMPs needed? Does the SWPPP need to be revised?

Inspection Protocols

Changes in Site Conditions – **Communicate with your SW Team!**

- A SWPPP amendment and Change of Information (COI) are needed for significant changes
 - SWPPP amended by QSD
 - Examples of when the Delegate should communicate up to the QSP/QSD.
 - Acreage increase/decrease
 - Additional BMPs not in the SWPPP toolbox
 - Changes to project duration
- Field Markups:
 - Adding more BMPs of the same type to prevent/minimize the discharge of pollutants (e.g., additional lines of fiber roll prior to discharge points).
 - This is a common revision
 - Document BMPs and other required map items as they move around the site due to changing site conditions → [Map management](#)
 - Material storage area
 - Equipment fueling/maintenance area
 - Stockpiles, toilets, trash receptacles, etc.
 - Sampling locations

Inspection Protocols

BMP Failures/Corrective Actions

- Begin the implementation of corrective actions within **72 hours** of identification and complete ASAP, **prior to the next Forecasted Precipitation Event (FPE)**
- If rain is pending it is crucial to prepare the site for rain and address all BMPs
- **Follow up on your findings during your next inspection and expect results!**

Regulatory Site Visits (common insp.)

- EPA, RWQCB, or Municipal Inspector
- Unannounced or scheduled
- Provide access to site and documentation
- They may inspect site/BMPs, collect samples, copy records
- Communicate with your team about any regulatory actions/visits
- Polite & honest, take notes
- **Move to resolution!**
- Provide confirmation to Regulator ASAP with email/photos that the issues have been resolved



Inspection Protocols

Construction Site Monitoring Program (CSMP)

- Site-specific component of the SWPPP
- Designed for the appropriate Risk Level or LUP Type
- The CSMP includes all monitoring procedures and instructions, location maps, forms, checklists, and reporting requirements
- Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures
- Applicable Numeric standards
 - E.G., NALs, Receiving Water Monitoring Triggers
- Sampling locations, and sample collection and handling procedures
- Non-storm water discharge monitoring requirements → → →
- Non-visible pollutant monitoring requirements
 - TMDL NALs/NELs
- Visual observation/sample collection (safety) exemptions
 - Dangerous weather conditions
 - Outside of scheduled hours
 - When the site is not accessible to the inspector
 - E.G., Snow



Inspection Protocols

Non-Stormwater Discharges (NSWD) must be identified, [eliminated](#) or controlled/treated
2022 CGP [Authorized](#) NSWDS → [Are subject to the NALs](#) → → →

Dechlorinated potable/non-potable:

- Fire-fighting activity
- Irrigation of vegetative erosion controls
- Dechlorinated potable water, including uncontaminated water line flushing
- Hydrostatic pipe flushing/testing & fire hydrant flushing
- Air condition condensate
- Uncontaminated groundwater or spring water from construction dewatering
 - Must comply with Attach. J (Dewatering requirements)
- Water to control dust



Unauthorized Discharges examples: Discharges of vehicle wash waters, sanitary wastes, concrete wash waters, paint wash waters, street washing, etc.

- **2022 CGP:** [Unauthorized NSWDS must be reported to the RWQCB within 24 hours](#)
- **[Discharge prohibitions:](#)** toxic/hazardous substances, trash/debris, treatment chemicals, cleaning products, fuel, oils, grease, washout waters, waste discharges to ASBS

Inspection Protocols

Expectations of Professionalism and Ethics

- Water Boards may suspend or rescind QSP/QSD certifications
 - If individual lacks adequate knowledge or training to perform duties
 - Willfully/Negligently caused/allowed a CGP violation
 - False/misleading information, fraud/deception, failed to use good judgement
 - Delegates must follow the same ethical standards
 - There can be serious consequences (\$) for falsifying reports or sampling results

Site-Specific SWPPP Governs BMP Implementation

- Project information/scope (location, size, dates, soil type, topography, rainfall, etc.)
- Site-specific Risk Level or LUP Type Determination
- Required site-specific BMPs are selected by the QSD → BMP toolbox
 - The full set BMPs selected by the QSD are listed in the text
 - Some, but not all, of those BMPs are shown on the WPCDs
 - Markup the WPCDs as conditions change, BMPs are installed, BMPs move, etc.
- Only the QSD can add additional BMPs to the SWPPP → Add to the toolbox
- If additional BMPs are needed, the QSP/QSD Delegate shall communicate this need to the QSD for consideration and amending the SWPPP

1B. Weather Forecasts

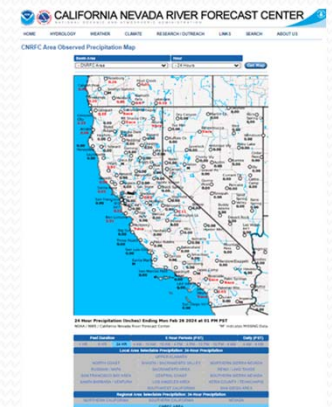
Date	Tue Oct 17				Wed Oct 18				Thu Oct 19				Fri Oct 20				Sat Oct 21				
High (°F)	86				90				92				88				78				
Low (°F)	61				64				65				65				62				
Weather																				Slight chance rain showers	?
Chance of Precip. (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	15	
Rainfall (in)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Snowfall (in)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	--	--	
Time	5am	11am	5pm	11pm	5am	11am	5pm	11pm	5am	11am	5pm	11pm	5am	11am	5pm	11pm	5am	11am	5pm	11pm	5am
Temperature (°F)	63	74	85	71	66	77	89	74	69	80	90	74	68	78	86	73	65	69	76	67	60
Dew Point (°F)	45	51	54	49	41	50	55	50	43	50	51	47	42	49	50	49	47	52	53	54	51
Relative Humidity (%)	53	44	34	45	40	38	32	44	40	35	26	39	39	35	29	44	53	55	46	62	72
Cloud Cover (%)	5	0	5	5	5	--	5	0	0	0	0	5	20	10	25	5	20	25	50	55	45
Wind Direction	NE	W	W	E	E	W	W	NE	NE	W	SW	NE	NE	SW	S	E	E	S	S	E	E
Wind Speed (mph)	5	6	9	5	5	5	6	5	5	3	6	6	5	6	9	6	6	9	10	6	6
Wind Gust (mph)	6	9	13	6	6	7	7	7	7	6	9	8	7	9	14	9	8	14	15	9	8
Snow Level (ft)	9200	9500	10600	11200	11100	11000	10900	10900	10700	10800	10700	10700	10600	10700	10500	10100	9700	9500	9300	9200	8800
Wind Chill (°F)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Weather/Rain Event Tracking

Qualifying Precipitation Event (QPE)

- QPE is any weather pattern that is forecast to have a 50% or greater Probability of Precipitation (PoP) and a Quantitative Precipitation Forecast (QPF) of 0.5 inches or more within a 24-hour period.
 - The event begins with the 24-hour period when 0.5 inches has been forecast and continues on subsequent 24-hour periods when 0.25 inches of precipitation or more is forecast.
 - The storm ends when there is a 24-hour period with less than 0.25 inches predicted
- Define work hours – Must be **listed on cover/title pages of SWPPP**
 - Inspections/sampling occur during normal site business hours

50%



Weather/Rain Event Tracking

Forecasted Precipitation Event (FPE)

- Forecasted Precipitation Event is any weather pattern that is forecasted to have a 50% or greater chance of producing 0.5 inches of precipitation in a 24-hour period in the project area. The discharger shall obtain precipitation forecast information from the [National Weather Service Forecast Office](https://forecast.weather.gov) (e.g., by entering the zip code of the project's location at <https://forecast.weather.gov>).
 - Discontinue application of erodible landscape materials before **FPE**
 - Repair BMPs (implement correction actions) prior to next **FPE**

Precipitation Event (PE)

- Precipitation event is any weather pattern that results in precipitation (rain, snow, sleet, or hail).
 - Cover washouts prior to and during **Precipitation Events**
 - Cover waste disposal containers at the end of every day and during **Precipitation Events**
 - Risk Level/LUP Type 2/3 – Sweep streets (as needed) prior to **Precipitation Events**
 - Submit sampling data after **Precipitation Events**



2022 CGP - Using Forecast Information

QPE Inspections

- **Pre-QPE insp.** - (Performed by QSP)
 - Complete within 72 hours of forecasted QPE or up to 120 hours in advance, if forecast available
 - Changing forecasts → [Save your forecasts to justify your inspection timing!](#)
 - Prepare your site for rain!
- **During-QPE insp.**
 - Complete every 24 hours with a forecast of 0.25 inches
- **Post-QPE insp.**
 - Within 96 hours after QPE if 0.5 inch or more precipitation has been recorded, using an on-site [Rain Gauge → new requirement! → →](#)
 - Rain Gauges are now used to determine if a post-QPE inspection is required.
 - **LUP Type 1** does not require Post-QPE insp.



Weather/Rain Event Tracking

Forecasting → NWS/NOAA

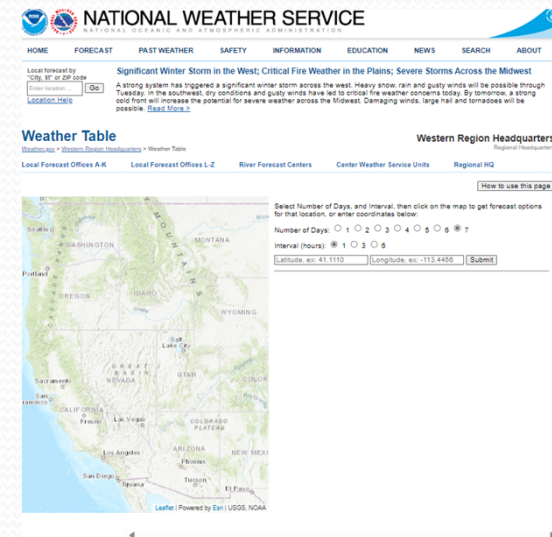
<https://forecast.weather.gov>

This general forecast does not provide the needed details

Forecast Weather Table: Must specifically use this link

<https://www.weather.gov/wrh/wxtable>

- Find project on interactive map or enter Latitude/Longitude
- Set to 6-hour interval
- Recommend checking forecast daily (at the same time)
- Insp. Checklist will require a variety of information obtained from the forecast: record storm beginning date, duration, and end date, amount of precipitation
- Maintain a Rain Log
 - Need rain totals for the Annual Report Compliance Summary



Weather/Rain Event Tracking

Date	Fri Jun 26				Sat Jun 27				Sun Jun 28				Mon Jun 29				Tue Jun 30				Wed Jul 01			
High (°F)	85				80				86				91				91				88			
Low (°F)	58				56				59				60				58				57			
Weather																								
Chance of Precip. (%)	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Precipitation (in)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Snowfall (in)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	--	--	--	--	--
Time	5am	11am	5pm	11pm	5am	11am	5pm	11pm	5am	11am	5pm	11pm	5am	11am	5pm	11pm	5am	11am	5pm	11pm	5am	11am	5pm	11pm
Temperature (°F)	61	72	83	65	59	68	79	64	56	75	86	69	59	79	91	71	61	78	90	69	59	77	87	61
Dew Point (°F)	50	54	59	59	55	54	51	51	50	48	38	46	47	50	43	49	50	51	46	51	51	52	49	51
Relative Humidity (%)	67	53	44	80	86	61	37	62	81	38	18	44	65	36	19	46	67	39	22	53	75	42	27	51
Cloud Cover (%)	65	5	15	50	90	30	15	5	0	--	0	0	5	0	0	0	5	--	--	0	5	0	0	5
Wind Direction	S	S	S	S	S	S	S	S	N	NW	NW	SE	SE	SW	W	S	SE	SW	SW	S	S	SW	SW	S
Wind Speed (mph)	12	9	12	13	12	8	9	7	1	12	7	3	2	3	6	5	3	5	9	7	5	6	9	7
Wind Gust (mph)	20	16	21	22	21	16	15	13	3	18	13	5	5	7	9	8	6	8	15	13	8	12	16	11
Snow Level (ft)	12500	11100	9700	8500	7700	7400	7800	7400	7400	6900	7700	8300	8300	8400	8900	9000	9000	9000	9300	9300	9000	9100	9300	9300
Wind Chill (°F)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

2022 CGP - Rain Event Inspections

Qualifying Precipitation Example #1

	December 31				January 1				January 2				January 3			
Time	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p
PoP	55	95	100	40	15	-	-	-	-	5	50	55	30	30	30	35
QPF	0.02	0.13	0.83	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.1	0.01	0.01	0.01	0.04
QPE	1 st QPE – Start & End				No QPE				No QPE				No QPE			

	January 4				January 5				January 6				January 7			
Time	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p
PoP	35	45	60	80	75	55	35	30	20	15	15	15	-	-	-	-
QPF	0.05	0.11	0.28	0.51	0.35	0.30	0.27	0.11	0.07	0.05	0.00	0.00	0.00	0.00	0.00	0.00
QPE	No QPE		2 nd QPE – Day 1 (Start)				2 nd QPE – Day 2 (End)				No QPE				No QPE	

PoP = Probability of Precipitation

QPF = Quantitative Precipitation Forecast

QPE = Qualifying Precipitation Event

2022 CGP - Rain Event Inspections

Qualifying Precipitation Example #2

	March 9				March 10				March 11				March 12			
Time	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p
PoP	-	10	100	70	80	30	70	60	65	70	75	75	75	65	60	70
QPF	0.00	0.36	0.46	0.48	0.28	0.07	0.06	0.10	0.12	0.15	0.14	0.14	0.12	0.19	0.07	0.13
QPE	No QPE		Day 1 (Start)				Day 2				Day 3				Day 4	

	March 13				March 14				March 15				March 16			
Time	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p
PoP	80	90	90	70	60	45	40	40	40	35	30	25	-	-	-	-
QPF	0.18	0.24	0.26	0.32	0.30	0.26	0.17	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QPE	Day 4		Day 5				Day 6 (End)				No QPE				No QPE	

PoP = Probability of Precipitation

QPF = Quantitative Precipitation Forecast

QPE = Qualifying Precipitation Event

2022 CGP - Rain Event Inspections

Figure 5: Back-to-Back Qualifying Precipitation Events

	December 31				January 1				January 2				January 3			
Time	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p
PoP	10	5	25	40	15	-	-	-	-	5	50	55	30	30	30	35
QPF	0.02	0.00	0.07	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.1	0.01	0.01	0.01	0.04
QPE	No QPE				No QPE				No QPE				No QPE			

	January 4				January 5				January 6				January 7			
Time	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p	4a	10a	4p	10p
PoP	55	70	90	85	-	-	-	-	65	50	55	70	85	75	90	65
QPF	0.05	0.21	0.51	0.35	0.00	0.00	0.00	0.00	0.20	0.05	0.05	0.25	0.40	0.35	0.60	0.30
QPE	1 st QPE – Start & End				No QPE				2 nd QPE – Day 1 (Start)				2 nd QPE – Day 2 (End)			

1C. Documentation and Reporting



Risk Level 2 Effluent Sampling Field Log Sheets			
Construction Site Name		Date	Time Start
Sampler			
Sampling Event Type: ☐ Stormwater ☐ Non-stormwater ☐ Non-visible pollutant			
Field Meter Calibration			
pH Meter #1 Ser.#/Date		Turbidity Meter #1 Ser.#/Date	
Calibration Date/Time		Calibration Date/Time	
Field pH and Turbidity Measurements			
Discharge Location Description	pH	Turbidity	Time
Grab Samples Collected			
Discharge Location Description	Sample Type	Time	
Additional Sampling Notes			
Time End			

- There are many reporting requirements and timelines in the CGP.
- Delegates must be properly trained for all assigned tasks prior to performing the task.

CGP Documentation and Reporting

The form is titled 'Risk Level 1, 2, 3 Visual Inspection Field Log Sheet'. It contains sections for:

- Date and Time of Inspection** and **Report Date**
- Inspection Type** with checkboxes for: Visually, Pre-Discharge, Precipitation, Event (CPE), During CPE, Post CPE, and Discharge/Decharge.
- Site Information** including Construction Site Name, Construction stage and completed activities, and Approximate area of exposed site.
- Weather and Observations** including Estimated rain predicted to occur, Predicted % chance of precipitation, Estimated time storm last, and Rain gauge.
- Observations** with checkboxes for: Colors, Flooding material, Suspended material, Sheen, Discolorations, and Turbidity.
- Site Inspections** including Outfalls or BMPs Evaluated, Deficiencies Noted, and Photo Reference IDs.
- Inspector Information** including Inspector Name, Inspector Title, and Date.

- **Inspection Reports & Photographs**
 - Visual observations
 - CGP requires specific questions on inspection checklist
 - Photographs are now required; extremely useful for communicating what is needed
 - Use date/time stamp feature
- **Corrective Action Logs** – Utilized to document and **communicate** BMP maintenance/installation requests
 - Follow up on findings and except results!
- **Weather Forecasts (NOAA)/Rain Logs**
- **Sample Data Field Logs** – For all types of sampling
- **Ad-Hoc Reports** – All sampling conducted is entered via an Ad-Hoc
 - Stormwater Discharges, TMDL Sampling, Non-Visible Pollutant Sampling, Receiving Water Sampling
- **Annual Reports** – Due Sept. 1 each year, for the July 1 to June 30 reporting year
 - Summary Excel file (download)
- **NAL Exceedance Reports**
 - Analytical results/methods, date/time/place
 - What BMPs were installed when exceedance occurred; what corrective actions were taken + photographs
- **NEL Violation Reports** → ATS users & TMDL-related NELs
- **Non-Stormwater Discharge Reporting**
 - Record information about all NSWDS observed on inspection forms
 - Sampling related to NSWDS would be recorded on a field sampling log
 - *Unauthorized Discharges* - Reported to the RWQCB within **24 hours!**

Inspection Checklist Requirements

For each required inspection, develop and complete an **Inspection Checklist**, that at a minimum includes: **(Hard copy or electronic format)**

- a) Inspection type: Weekly, pre-QPE, during-QPE, or post-QPE, monthly, etc.
 - Check all the appropriate boxes
- b) Inspection date and time
- c) **Weather information:** which includes the presence or absence of precipitation, an estimate of the beginning date, duration, end date, and precipitation amount of the QPE
- d) **Site information:** including stage of construction, activities completed since last inspection and approximate areas of disturbed soil
- e) A description of any **BMPs evaluated and any deficiencies noted**, including those that may have resulted in the release of non-visible pollutants (NVPs)
- f) A list of BMPs inspected, including erosion controls, sediment controls, chemical and waste controls and non-stormwater controls
 - Always looking out for non-storm water discharges!
- g) If present, describe any floating and suspended materials, odors, discolorations, visible sheens and/or any other sources of pollutants in discharged stormwater
- h) Any corrective actions required, including any necessary changes to the SWPPP with an implementation schedule
- i) Photographs corrective actions and photographs documenting correction
- j) Inspector's name, title, and certification, if any

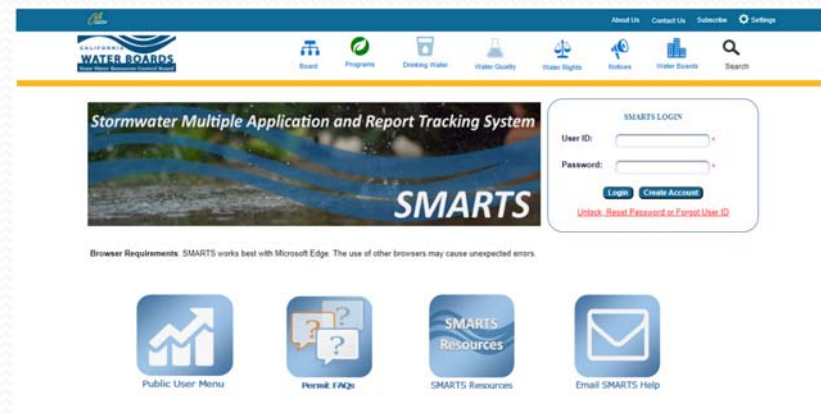
CGP Documentation

Additional Requirements:

- Notice of Intent (NOI) – Permit application
- WDID Receipt
- Change of Information – Permit/SWPPP revision
- Notice of Termination (NOT)

Site-Specific items:

- Active Treatment System (ATS) plan
- CGP Water Quality Based Corrective Action Plan
- CGP Passive Treatment Plan
- CGP Dewatering Plan



CGP Documentation and Reporting

- **Delegates must report corrective actions to QSP within 24-hours of identification**
 - Regularly check in to discuss project status, BMPs, concerns/observations.
 - Immediately notify the QSP/QSD if a sampling exceedance has occurred.
 - They must perform an inspection at the site within 14 days.
- QSP & QSP Delegate must **maintain/update the WPCDs** to reflect currently installed BMPs. Map management is an ongoing process.
 - Review/update map each inspection
 - **Initial/date BMP installation and removal**
 - Communicate if something is off or not working
- Delegates should communicate up, the need for SWPPP amendments to the QSP/QSD
 - Acreage changes, additional BMPs, duration changes, etc.
- **All documentation must be provided to State or Municipal Inspectors upon request during their inspection**
 - SWPPP, Inspections, Sampling Logs, Photographs etc.
- Delegates may assist with data entry on SMARTS; you must be linked
 - **Data Entry Person (DEP)**
 - Ad-hocs – simple data entry transfer of field sampling logs to SMARTS
 - Assist with Annual Report prep

Reporting Deadlines

- **Effluent Sampling**
 - Compliant sample due in **30 Days** from end of QPE – Submit via Ad-Hoc on SMARTS
 - NAL Exceedances due in **10 Days** from end of QPE – Submit via Ad-Hoc
 - NAL Exceedance Report: Provided to RWQCB within **30 days** of request
- Non-visible pollutant sampling data is due within **30 days** of obtaining results from lab
 - Or **10 days** if a TMDL-related NAL or NEL exceedance
 - TMDL NEL Exceedance – Water Quality Based Corrective Action Report – Due June 30th
- Existing or anticipated unauthorized non-stormwater discharges reported to the RWQCB within **24 hrs**
- ATS and PTS plans must be submitted **14 days** prior to use/operation
- Dewatering Operations (using Att. J)
 - Discharger must notify the RWQCB at least **24 hours** prior to the beginning of the anticipated discharge via email. Must submit full Discharge Notification.
 - Discharger must notify RWQCB and the MS4 within **24 hours** if a NAL exceedance occurs and an exception to the requirement to cease the discharge occurred in order to protect life or severe property damage
- ATS NEL Violations are reported to SWRCB in **24 hours**; All data submitted every 30 days
 - ATS NEL Violation Report – Due in 14 days
- Receiving water monitoring sampling: submit samples within **10 days** of the conclusion of the QPE.
- NOT due within **90 days** of completion (including final stabilization)
- Retain all documents for **3 years** from date generated/submitted (whichever is later).

SWPPP Binder Basics

SWPPP Binder Management

- Critical to keep complete and organized records
- A significant amount of enforcement actions are document related.

What to look for in the SWPPP:

- Review the binder and fill out the blanks!
- NOI, WDID receipt, SMARTS Generated Posting Notice
- QSD/QSP training certificates, QSP Delegate training log
- Field training logs for on-site staff (tailgate trainings)
- **Water Pollution Control Drawings → with markups**
- BMPs – what are the specific “**tools available**” for this project
- BMP Detail sheets
- Discharge points and sampling locations on the maps
 - These can and will change as site conditions change
 - Update the maps!
 - Record lat/long of sample collection points
- Run-on issues/locations
- Inspection/sampling forms - Organized
- The SWPPP is a “**living document**” that is amended/updated to reflect the current conditions and reduce pollution
- All amendments/revisions are to be kept in the SWPPP
 - Keep the binder organized
- Amendment log (QSD signs for each amendment)

Effluent Monitoring

Numeric Action Levels (NALs)

- Provides operational information regarding the performance of BMPs used at the site to minimize the discharge of pollutants
- pH/turbidity NALs apply **Risk Level 2/3 and LUP Type 2/3**
 - pH NAL = 6.5 – 8.5
 - Turbidity NAL = 250 NTUs
- NAL Exceedance is a trigger mechanism to implement corrective action
- Failure to implement corrective action is non-compliance



pH NAL
Exceedance



Turbidity NAL
Exceedance

Effluent Monitoring

Numeric Action Levels (NALs)

Compare each sample collected to the NALs

- Risk Level 2/3: Collect 1 sample at each discharge location
- LUP Type 2/3: Collect 1 sample at 1 or more representative discharge locations
- Implement corrective actions if a NAL Exceedance occurs
 - Implement an effective combination of Erosion/Sediment Controls to prevent Turbidity NAL Exceedances
 - Properly manage all items that alter pH



2022 CGP Sampling Chart		3's with Direct Discharge		Remember this is Option #2			
Project Type	Non-Visible Pollutant Sampling	Effluent Sampling (NALs)	Receiving Water Monitoring Triggers	Dewatering (NALs)	Non-Stormwater Discharges (NALs)	Passive Treatment (NALs)	ATS Users
Risk Level 1	X			X			Subject to the ATS NELs
Risk Level 2	X	X		X	X	X	
Risk Level 3	X	X	X	X	X	X	
LUP Type 1	X			X			
LUP Type 2	X	X		X	X	X	
LUP Type 3	X	X	X	X	X	X	
	Lab analysis, Spills/Leaks, TMDLs	pH 6.5 - 8.5 Turbidity 250 NTU	pH 6.0 - 9.0 Turbidity 500 NTU	pH 6.5 - 8.5 Turbidity 250 NTU	pH 6.5 - 8.5 Turbidity 250 NTU	pH 6.5 - 8.5 Turbidity 250 NTU	10 NTU average, 20 NTU single, <10% MATC, pH 6.0 - 9.0
Where	Discharge point(s)	Risk Level: collect sample from all discharge points	1 upstream & 1 downstream	Discharge point	Discharge point	Discharge point	Refer to Att F. for all specifics
		LUP Type: collect from 1 or more discharge points					
Timing	1 sample within 8 hours & 1 sample every 24 hours	Collect samples every 24 hours for extended QPEs	Collect samples every 24 hours for extended QPEs	Within 1st hour, then daily	When observed	Every 24 hour period of discharge	
Due on SMARTS	Compliant 30 days, NAL Exceedance 10 days	Compliant 30 days, NAL Exceedance 10 days	All results due within 10 days				All Data 30 days; NEL Exceedance 24 hours
Notes	TMDL-related NEL Exceedances --> Water Quality Based Corrective Actions			Notify RWQCB at least 24 hours prior to discharge via email			
				Cease if NAL Exceedance			
Due to Lab	48 hours						
Temp	39 degrees F						
SMARTS Plan Submittal				Amend SWPPP 24 hours prior		14 days prior	14 days prior
		NAL Exceedance Report 30 days					NEL Violation Report 14 days

Thank you for coming!

- Please spread the word that this free video is available for all QSPs and their Delegates to use!
- Feel free to contact me if you need anything in the future!
- **Delegates → Consider becoming a QSP yourself!**
 - Serve as an alternate QSP or take on your own projects!

Christopher J. Brown

CEM Storm Water

CASQA Qualified Trainer of Record

QSD/QSP, QISP, CPESC, CESSWI Instructor

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- Please visit www.cemstormwater.com for a list of monthly QSP and 6-Hr Refresher classes
- Private group classes are also available