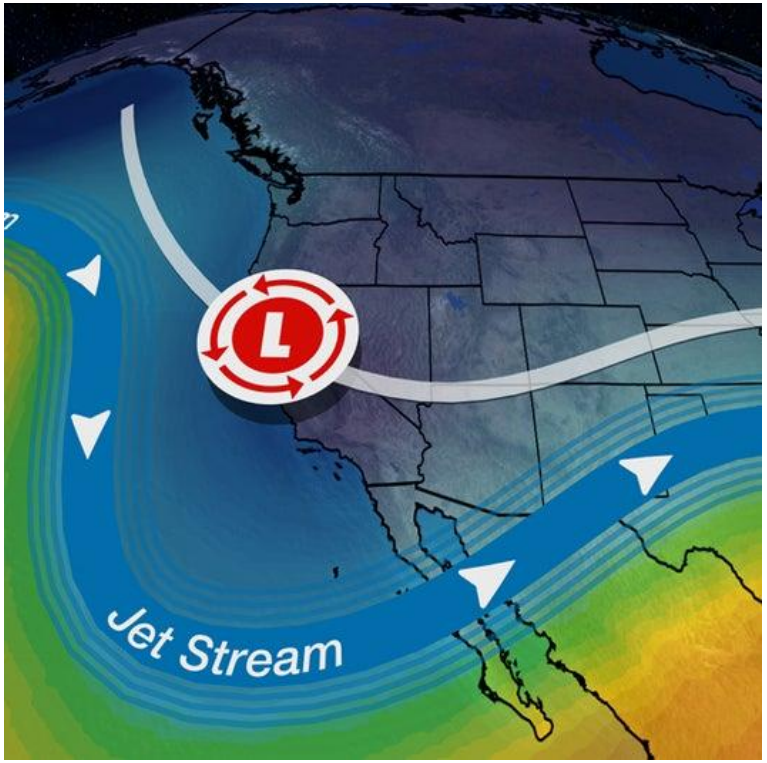


Municipal Storm Water 2023-24 Annual Training

SAN DIEGO COUNTY OFFICE OF EDUCATION

SEPTEMBER 28, 2023

Welcome

Training Sign-in sheet and Certificates:
https://form.jotform.com/232565617525157

Annika Dorman, CPSWQ, QISP ToR
Teresa Lyndon, CPSWQ, QISP, QSD/P

Bryn Evans, CPSWQ
Shannon Brown, PE, QISP, QSP

Ashlee Cadwell

Agenda

Intro to Storm Water

Phase II MS4 Permit Reissuance Update

- DRAFT School Districts Designation
- Schedule
- Draft Comments

SWMP Implementation

- Training and Outreach
- Good Housekeeping
- Grounds Maintenance
- Inspections and Maintenance
- Record Keeping
- Planning and Development

Engineering Services Spotlight

Construction General Permit Spotlight

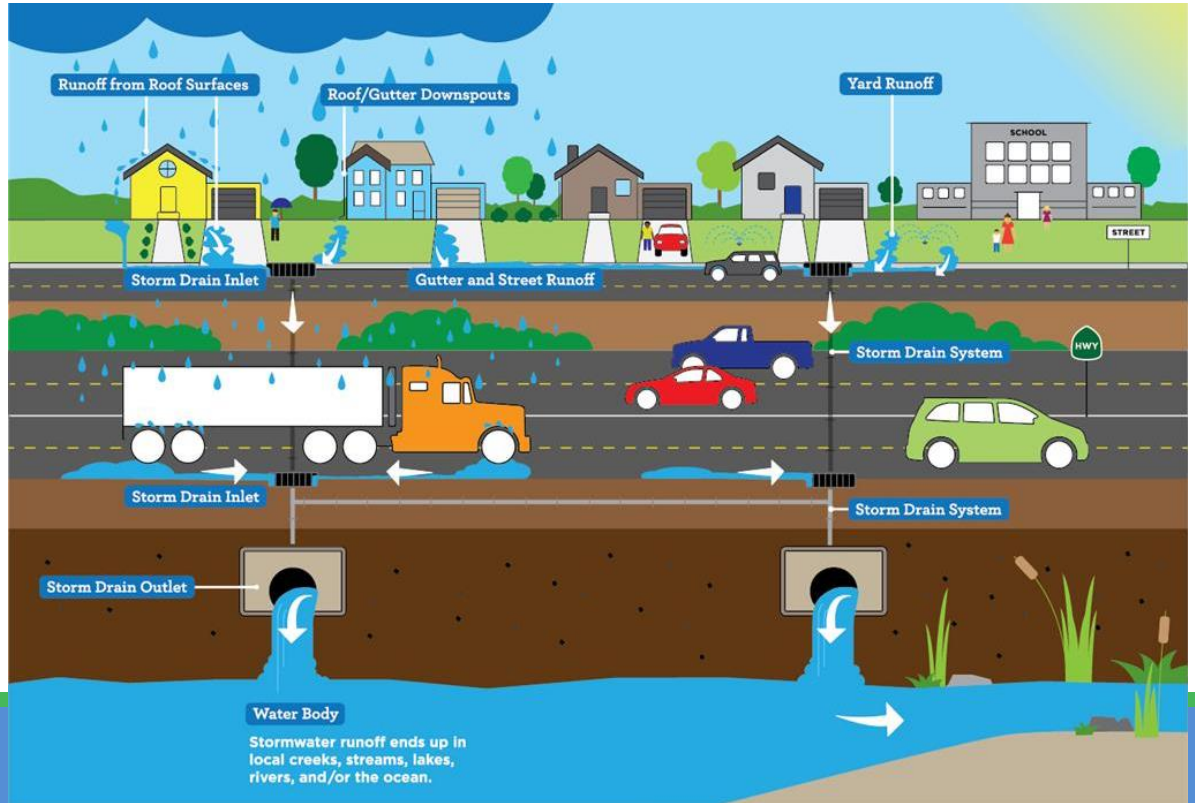
Current Events

Intro to Storm Water

Intro to Storm Water

Runoff to the storm drain system does not receive treatment prior to discharge

ONLY clean rain water is permitted to enter the storm drain system, with few exceptions



Intro to Storm Water

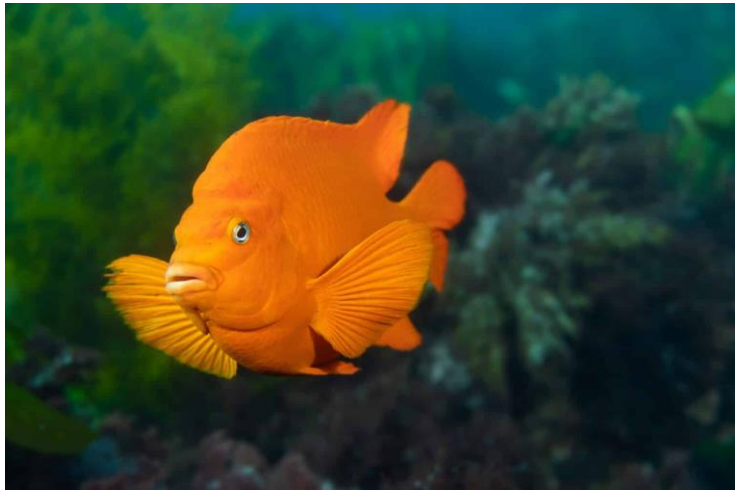
Regulations are intended to protect the **beneficial uses** of all waters of the United States

To continue using waters in the ways we want to, pollutants need to remain below a specified level

Intro to Storm Water

For example, to use a waterway for recreation or as a drinking water source, bacteria levels need to stay low enough not to make people sick

Or to use a waterway for aquatic species habitat, dirt and heavy metal levels need to stay low enough that species can survive and thrive



Intro to Storm Water

Beneficial uses include:

- Contact/Non-contact Recreation
- Municipal, Agricultural, Industrial Supply
- Habitat (Marine, estuarine, endangered species, wildlife, etc.)
- Migration
- Spawning
- Navigation
- Hydropower
- Commercial and Sport Fishing
- Aquaculture, Shellfish Harvesting

Intro to Storm Water

Pollutants that have negative effects on beneficial uses (and therefore must be minimized) include:

- Bacteria (food waste, decomposing organic waste, fecal material)
- Organic wastes (leaves, grass)
- Trash (solid waste)
- Dirt
- Heavy Metals
- Oils
- Soaps

Intro to Storm Water

Pollutants associated with general/municipal activities (residential, commercial, municipal operations, etc.) are regulated by Municipal General Permits (Region-specific)

Pollutants associated with construction activities are regulated by the Construction General Permit (Statewide)

Pollutants associated with industrial activities are regulated by the Industrial General Permit (Statewide)

- Transportation with maintenance, fueling, or washing

Intro to Storm Water

How are pollutants controlled/minimized?

- Best Management Practices
  - Good Housekeeping
  - Preventative Maintenance
  - Spill and Leak Prevention and Response
  - Material Handling and Waste Management
  - Erosion and Sediment Control
  - Employee Training Program
  - Quality Assurance and Record Keeping
- Inspections
- Monitoring

Phase II MS4 Permit Reissuance Update

DRAFT SCHOOL DISTRICT DESIGNATION

SCHEDULE

DRAFT COMMENTS

DRAFT School District Designation

Member Districts listed in the preliminary informal Draft as permittees, based on enrollment of 10,000+ students:

1. Cajon Valley Union
2. Capistrano Unified
3. Carlsbad Unified
4. Escondido Union
5. Grossmont Union High
6. La Mesa-Spring Valley
7. Oceanside Unified
8. Poway Unified
9. San Dieguito Union High
10. San Marcos Unified
11. Vista Unified
12. Grossmont-Cuyamaca CCD
13. Mira Costa CCD
14. Palomar CCD

Schedule

Public Release of the Informal Draft – October 2023

Public written comments due within 30 days – November 2023

Preliminary Draft – Date TBD, potential workshop dates

Public Comment Draft (written comments) – early 2024

Draft Comments

Approach

- Not much crafting to suit unique position of schools
- Terminology

Primary Concerns

- Funding
- Clarification of language/intent
- Legal Authority (regulation/enforcement)
- Conflicting requirements with State Architect
- Intrusion into classroom
- Overly-prescriptive requirements

Draft Comments

Differences from Current Approach

- Most components similar to SWMP, just formalized and detailed
- Some specifics may be difficult to implement
  - 24 hour spill response
  - Inventory details
  - Extensive planning stage requirements
- Regional Collaboration Opportunities
  - Not well outlined how these would work

Next steps: Informal Draft expected very soon; expect an update and a request for feedback

SWMP Implementation

- Training and Outreach
- Good Housekeeping
- Grounds Maintenance
- Inspections and Maintenance
- Planning and Development
- Record Keeping

Training & Outreach

Annual (at minimum) training for custodial, maintenance, facilities, and operations staff.

Feedback collected on student education

Feedback collected on student/staff participation (clubs, cleanups, etc.)

Good Housekeeping

Routine upkeep, annual audit and thorough maintenance of:

- Municipal operations yards / Storage areas
- Parking lots
- Dumpster areas
- Lunch areas, general campus
- Hotspots (agriculture programs, community gardens, pools, auto shops, arts, etc.)

Good Housekeeping

Use dry methods where possible

- Vacuum-assisted sweeping is best
- Manual sweeping
- Leaf blowers have limited benefit (dust redistribution, difficult to control debris, debris usually not collected, heavier sediments not removed)

Where wet cleaning is needed, contain and collect all waste water

- Mop and bucket/rags/spot cleaning rather than using hose
- Steam cleaning may redistribute oils and does not remove pollutants without recollection
- Hydrojetting, pressure washing: create collection point and recollect ALL water and waste

Good Housekeeping

Illicit Discharge Prevention

Facilitate correct activities

- Ensure mop sinks are accessible
- Provide drain covers for use during outdoor cleaning
- Restrict access to hoses (keyed hose bibs)
- Plumb AC lines to sewer or landscape

Ensure vendors are employing appropriate BMPs

- Contract language
- Activity audits
- Look for evidence of past discharges as well as active flows

Leak audits

- Water meter checks

Good Housekeeping

Spill & Leak Response

Minimize spills/leaks

- Conduct activities within indoor or contained areas

Stock spill kit materials

- Clay absorbent
- Mats
- Mops

Good Housekeeping

Spill & Leak Response

Train spill and leak response personnel

1. Identify and abate flow
2. Protect nearby discharge points as-needed
   - Cover with mat
   - Deploy sandbags or boom
3. Remove spilled substance
   - Absorb
   - Vacuum
4. Repeat/reapply as-needed until all residue removed
5. Properly dispose of spent spill kit materials
   - > trace amounts of hazardous materials require special disposal
6. Restock spill kit as-needed

Good Housekeeping

Material Handling and Waste Management

Regularly clean and maintain dumpster enclosures

- Permanent cover and berms recommended

Cover and/or contain all materials and wastes that may contribute pollutants

- Hazardous materials (toxic, reactive, corrosive, ignitable)
- Treated wood
- Galvanized or rusty metal
- Automotive components

Liquids ≥1gallon in secondary containment (110% of largest container or 50% of total volume, whichever is greater)

Good Housekeeping

Material Handling and Waste Management

Divert run-on away from wastes/materials/work areas

- Downspout extenders
- Sandbags

Observe and clean outdoor containers and equipment

- Drums, dumpsters, trash cans, etc. free of residues, rust, dirt, debris and in good condition
- Cleaning/collection equipment (shovels, brooms, drip pans, billy goats, vacuums)

Grounds Maintenance

Routine upkeep, annual audit and thorough maintenance of:

- Erosive slopes
- Stabilize unpaved areas
- Irrigation systems (free of overspray/leaks)
- Weed/Pest Control practices (Integrated Pest Management (IPM), minimize chemical use)

Inspections & Maintenance

Storm Drain system

Annually (at minimum) inspect/clean inlets, gutters, brow ditches

Identify/eliminate discharges (active or evidence of past)

Structural BMPs (vegetated swales, detention basins, inlet filters, etc.)

Refer to maintenance requirements listed in development documents

Inspections & Maintenance

Structural BMPs

Where installations exist:

- Detention basins
- Vegetated swales / bioswales
- Filter inserts
- Interceptors

Ensure they are adequately maintained:

Universal Inspection Checklist:	Vegetated Device Checklist:
❑ Accessible for inspection	❑ Well vegetated
❑ Free of damage	❑ Irrigation system working properly
❑ Free of significant trash, debris	❑ Free of erosion/scouring/channeling
❑ Free of unpleasant odors	❑ Free of excessive vegetation
❑ Free of standing water	❑ Rip-rap in place
❑ Inlets/outlets free of obstruction	
❑ Filter media in working condition	

Inspections & Maintenance

Construction/Maintenance Projects

Minor: Spot check BMPs for staff/contractors during activities

- Painting (washout area)
- Drywall (dust)
- Concrete work (washouts, hosing, cutting)
- Landscaping (sprinkler placement, maintenance considerations)
- Digging up utilities
- Plumbing
- Fire sprinkler testing

Major: Inspect for adherence to SWPPP/Construction Permit

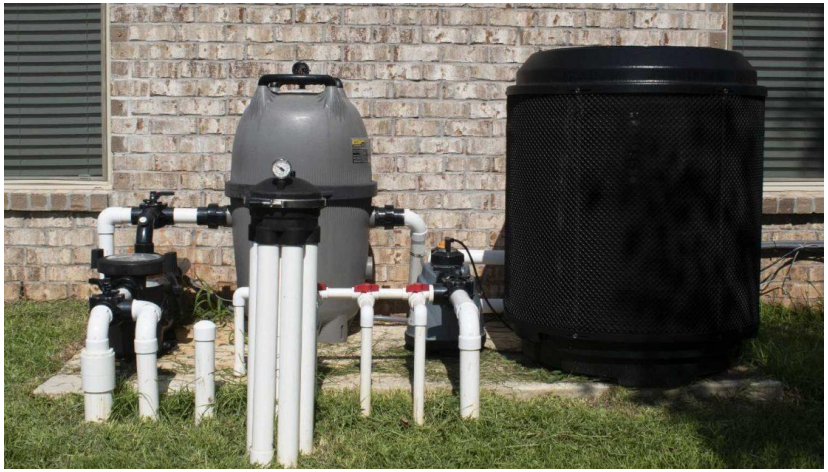
- See spotlight later in presentation

Inspections & Maintenance

Preventative Maintenance

Identify/observe all equipment and systems used outdoors that may spill or leak pollutants

- Vehicles
- Equipment
  - Pool filtration systems
  - Hydraulic lifts
  - Hydroponic systems



Establish maintenance schedules

Train school site staff

Establish repair procedures

Record Keeping

Training logs retained

Work Orders (for program activities) tagged as storm water-related or otherwise logged for future reporting as-needed

Inventories/maps for structural BMPs and other drainage features maintained

Complete Questionnaire for Annual Reporting in June:

- **SWMP Annual Reporting Form Link**

Planning & Development

Include Storm Water language in contracts

Consider Low Impact Development concepts and include where feasible (Direct runoff to landscaping, reduce paved area, etc.)

Include cover/containment for storage and activity areas where feasible

Hotspot areas considered for improvement as an add-on or by rearranging site plans where feasible (Repurposing covered areas, relocating activities to spaces that drain to landscaping, etc.)

Coordination with planning staff to ensure a seamless transition for post-construction maintenance (receive all drainage and structural BMP plans and record the frequency and type of maintenance needed)

Engineering Services Spotlight

DUDEK

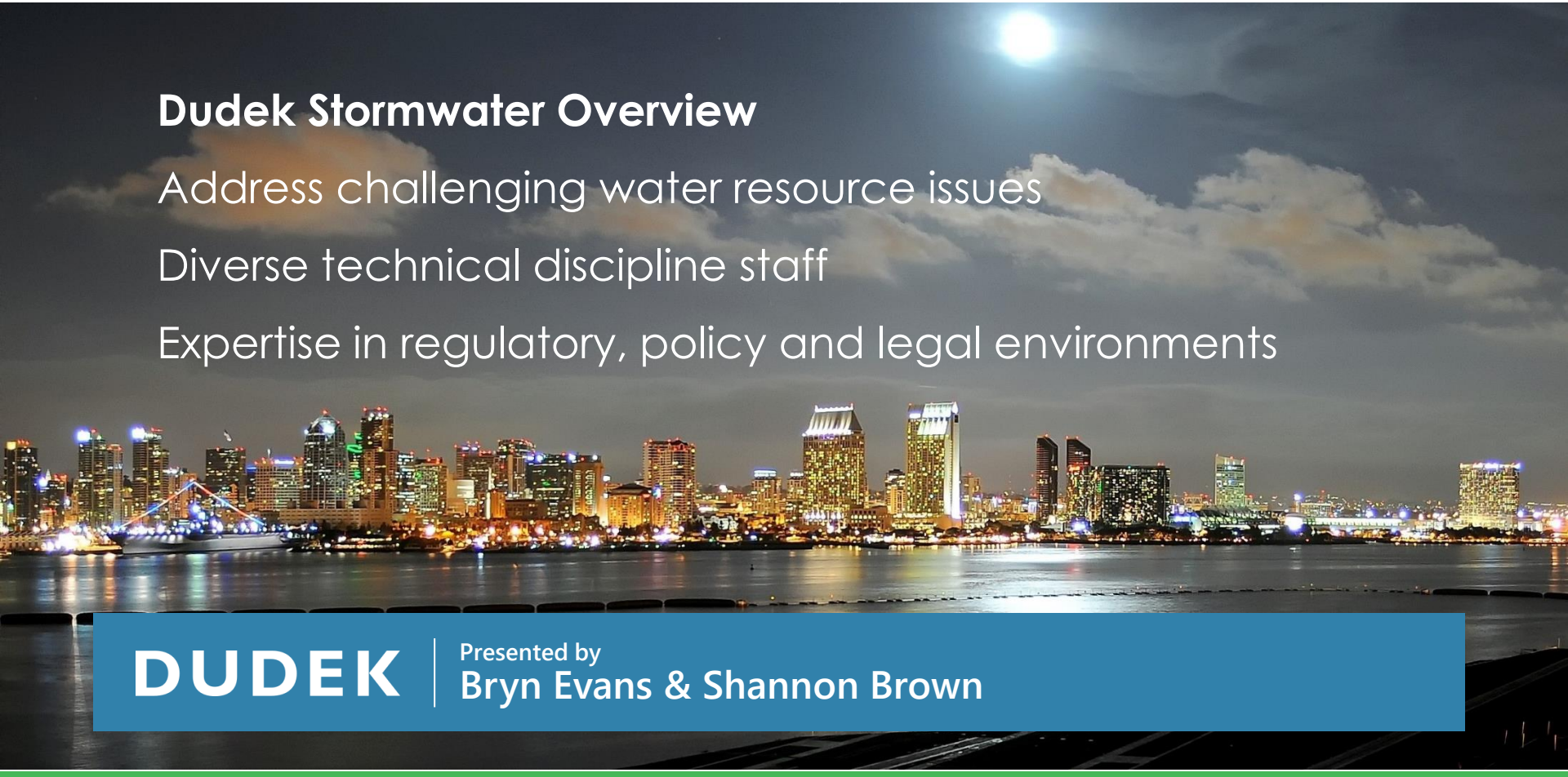
Engineering Services

New contract with D-MAX in 2023

Includes Dudek Associates (Dudek) as a subconsultant

- Local civil engineering firm that can provide any as-needed design engineering, environmental permitting, or related services.
- Accessible to Districts as-needed through the existing SDCOE contract

Engineering Services



Dudek Stormwater Overview

Address challenging water resource issues

Diverse technical discipline staff

Expertise in regulatory, policy and legal environments

DUDEK | Presented by
Bryn Evans & Shannon Brown

Engineering Services

Treatment: Planning & Design

- Nonstructural approaches
- Low impact development
- Treatment devices

Engineering Services

Questions?

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Intermission

Please enter any outstanding questions in the chat

Construction General Permit Spotlight

PERMIT REQUIREMENTS

NEW PERMIT CHANGES

KEY BMPS

Permit Requirements

Goal: Preserve Water Quality

Construction Pollutant Sources

- Exposed soils
- Construction waste

Effects

- Increase turbidity
- Clog fish gills
- Reduce fish spawning habitat
- Smother bottom-dwelling organisms
- Transport metals and other pollutants

Permit Requirements

Stormwater Element	Municipal Permit	Construction General Permit (CGP)
Applicability	All projects	Construction projects ≥ 1 acre
Requirement Triggers	• Total disturbed area • Impervious area added/replaced	Total disturbed area
Activities Regulated	• Construction BMPs • Post-construction BMPs	Construction BMPs

Permit Requirements

	Projects < 1 Acre	Projects > 1 Acre
Required plan	Construction BMP Plan	Construction SWPPP (QSD/QSP)
Inspection frequency	Wet season: weekly Dry season: monthly	All year: weekly Storms: pre, during, post
Required certification for inspectors	None	QSP

New Permit Changes

Effective Dates

- New applications on or after September 1, 2023
- Projects enrolled before September 1, 2023 grandfathered until September 1, 2025

Inspections by QSD rather than designee

- Within 30 days of construction starting, within 30 days of change to different QSD
- Twice (2x) per year
- Within 14 days of numeric action level (NAL) exceedance

Inspections by QSP rather than designee

- Once (1x) per month
- Before 0.5" or larger storm
- Before submit NOT or change of information (COI) to adjust site size

Key BMPs

Scheduling

- Minimize Soil Exposure in the Rainy Season
- Retain existing vegetation

Direct water away from disturbed areas

Erosion control BMPs should be the primary means of preventing storm water contamination, and sediment control techniques should be used to capture any soil that becomes eroded

Inspect temporary BMPs before and after storms

Erosion Control BMPs

Examples

- Soil binders
- Mulch
- Hydroseed
- Blankets, mats

- Inactive areas (2 weeks), even flat areas
- Requires maintenance; budget accordingly
- Sediment Control BMPs do not meet requirement

Sediment Control BMPs

"Temporary" BMPs designed to cause sedimentation prior to leaving the site

Basins:

- Sediment Basin
- Sediment Trap

Street Sweeping and Vacuuming

Active Treatment Systems (ATS)

Sediment Control BMPs

Linear Controls:

- Silt fence
- Fiber Rolls
- Check dams and Barriers
- Inlet Protection

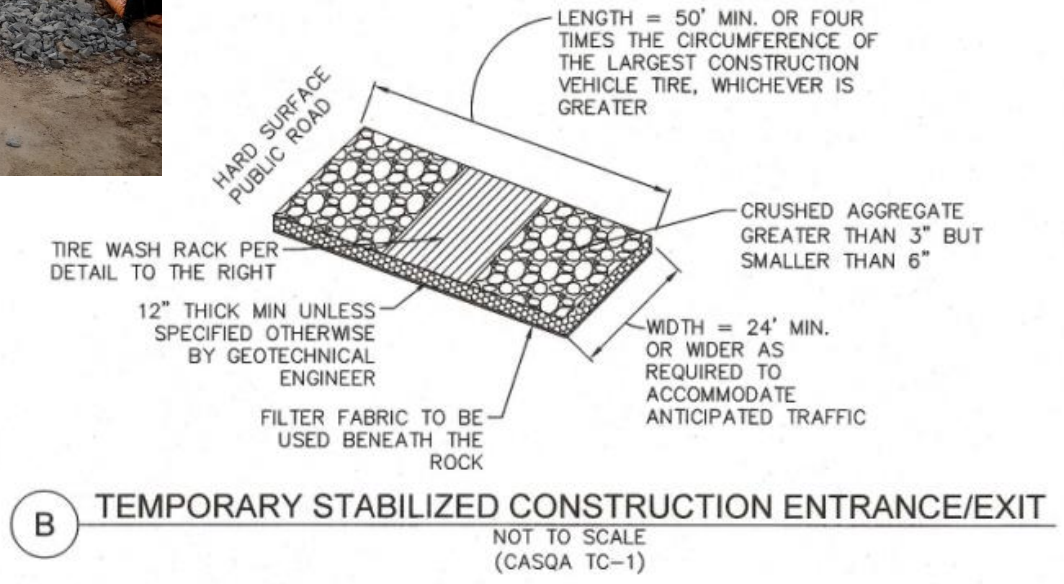
Inlet Protection

Check dams

Gravel bag berm and filter fabric

Inlet Screen

Stabilized Entrance/Exit



Vehicles

Prevent leaks by repairing and maintaining vehicles and equipment

Use drip pans

Material & Waste Management

Cover and containment for stockpile

Concrete washout

Common BMP Issues

Improper installation

BMPs removed and not re-installed

BMPs not maintained (degraded or no longer functioning)

Fiber Rolls As Erosion Control

Fiber rolls to be used in *combination* with erosion controls

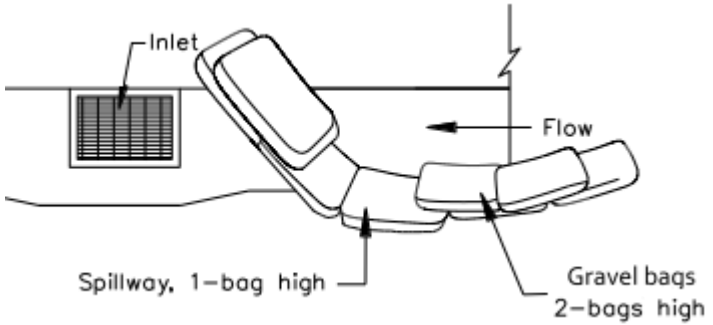
Improperly Installed Fiber Rolls

Wrong Type of BMP Installed

Improperly Installed Tracking Controls

Improperly Installed Check Dams

Damaged check dams, wrong orientation




Q
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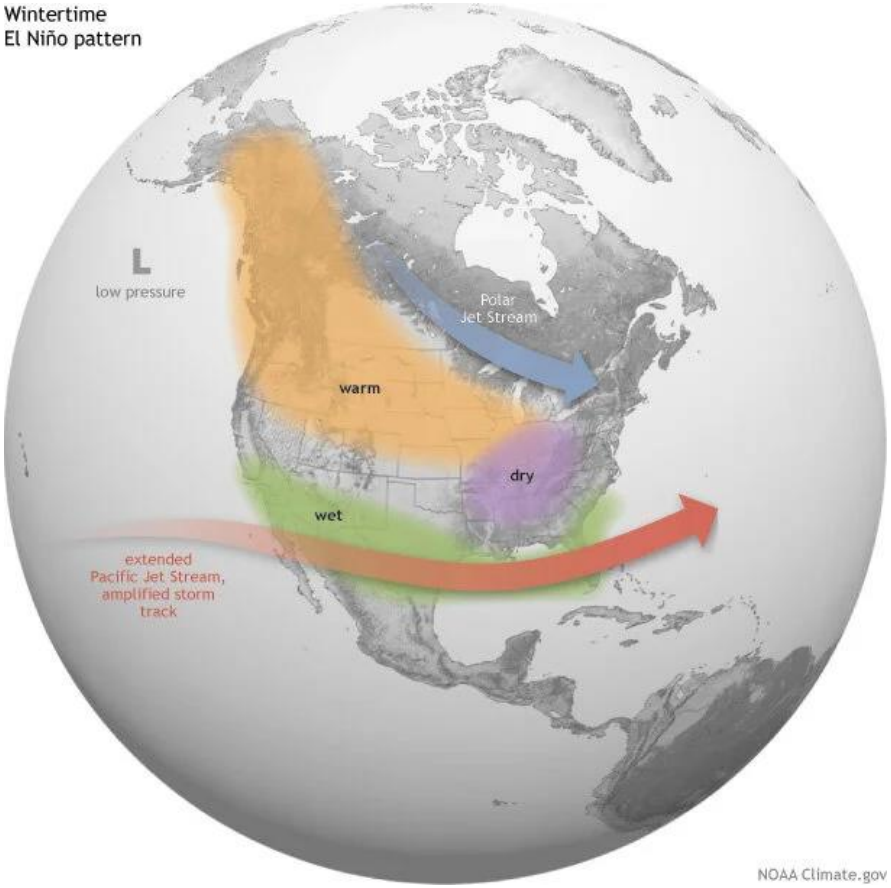
Current Events

WEATHER PATTERNS

Weather Patterns

El Niño conditions

- Per National Oceanic Atmospheric Administration (NOAA), there is a greater than 95% chance that El Niño continues across the Northern Hemisphere through the winter into 2024. The chance of a "strong" El Niño has also increased from 66% in August to now 71% in September.



Weather Patterns

More rain in the forecast

- Higher intensity rain can result in erosion, flooding, scouring
- Shore up existing BMPs, protections
  - Erosion control
  - Storage – secure tarps, clean behind storage units
  - Clean interior of secondary containment
  - Refresh inlet protections to eliminate displacement and clogging
- Keep sandbags handy
- Clean out storm drain structures to prevent flooding

Questions & Contacts

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