Dewatering Operations (SSP 07-346)

- Notify District Construction Storm Water Coordinator
- Use Caltrans Field Guide to Construction Site Dewatering
- Contractor to submit a Dewatering and Discharge Plan
- Use where groundwater or accumulated precipitation will be discharged from site
- Addresses sediment only
- Notify RE if pollutant other than sediment is present
- Must comply with applicable permits
You should be able to:

- Determine if a dewatering operation is required
- Determine if a permit is required
- Understand the Contractor’s and the Department’s roles and responsibilities
- Understand the process for dewatering under the Caltrans and RWQCB permits
- Determine if the Contractor is in compliance
- Determine the appropriateness of dewatering treatment technologies

What is a Dewatering Operation?

- Practices that manage the discharge when non-stormwater or accumulated precipitation must be removed from a work location
Is a Dewatering Operation Required?

- Do you have water on the project...
  
  ...that has been standing for 72 hours or more and needs to be removed for vector control?
  
  ...that needs to be removed by the Contractor for construction to proceed?

Is an NPDES Permit Required?

- Is it stormwater or non-stormwater?
- Where is the effluent being discharged?
- Where is the project located?
- What is the daily volume of water and duration?
- Is the effluent polluted with sediment or other pollutants?
Types of Dewatering Operations

- There are three types of dewatering operations:
  - Operations **NOT regulated** under an NPDES Permit
  - Operations **regulated under the Caltrans Statewide** NPDES Permit
  - Operations **regulated under a local RWQCB** NPDES Permit

Assess Water Quality

- Is there reason to suspect pollutant other than sediment?
- Sight and odor test

Estimate Discharge Parameters

- Is the water from groundwater, cofferdam, accumulated precipitation?
- What is the daily flow rate, duration, and total volume?
Manage Water with Pollutants Other than Sediment

- Additional testing and evaluation are typically required
- Contact your CSWC for assistance

Types of Dewatering Operations

- There are three types of dewatering operations:
  - Operations NOT regulated under an NPDES Permit
  - Operations regulated under the Caltrans Statewide NPDES Permit
  - Operations regulated under a local RWQCB NPDES Permit
Key Qualification: 
No NPDES Permit Required Options

Dewatering effluent cannot be discharged to a storm drain or water body at any time during the operation!

Dewatering Management Options: 
No NPDES Permit Required

- Retain Water on Site
- Discharge to Adjacent Land or Facility Owned by Others
- Discharge to a Public Sanitary Sewer System
- Transport Off Site Using a Transportation, Storage and Disposal (TSD) Contractor
Types of Dewatering Operations

- There are three types of dewatering operations:
  - Operations **NOT regulated** under an NPDES Permit
  - Operations **regulated under the Caltrans Statewide** NPDES Permit
  - Operations **regulated under a local RWQCB NPDES Permit**

Key Qualification: NPDES Permit

A dewatering operation is regulated by an NPDES Permit if any effluent will discharge to a surface water or a storm drain that discharges to a surface water
**Which NPDES Permit Regulates the Operation: Caltrans or RWQCB?**

- Depends on:
  - RWQCB with jurisdiction over project
  - Source of effluent: Stormwater or non-stormwater
  - Water quality: Unpolluted, polluted by sediment only, or contains pollutants other than sediment
  - Discharge Parameters: Flow rate, daily volume, duration

**District 1 RWQCB NPDES Permit Summary**

<table>
<thead>
<tr>
<th>Type of Dewatering Discharge</th>
<th>Caltrans District 1</th>
<th>RWQCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unpollotted or Sediment as Only Pollutant</td>
<td>1 North Coast</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Pollutant Other Than Sediment</td>
<td>5 Central Valley</td>
<td>Caltrans Statewide Permit</td>
</tr>
<tr>
<td>Unpollotted and Less Than 260,000 Gallons/Day (24-hour day) and Less Than 4 Months Duration (in Calendar Year)</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Polluted or More than 260,000 Gallons/Day (24-hour day) or Longer Than 4 Months Duration (in Calendar Year)</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
</tr>
</tbody>
</table>
### District 2
**RWQCB NPDES Permit Summary**

<table>
<thead>
<tr>
<th>Caltrans District 2</th>
<th>RWQCB</th>
<th>1 North Coast</th>
<th>5 Central Valley</th>
<th>6 Lahontan</th>
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<tbody>
<tr>
<td><strong>Type of Dewatering Discharge</strong></td>
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<tr>
<td>Storm Water</td>
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<tr>
<td>Unpolluted or Sediment as Only Pollutant</td>
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<tr>
<td>Pollutant Other Than Sediment</td>
<td>RWQCB Permit</td>
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<td>RWQCB Permit</td>
</tr>
<tr>
<td>Non-Storm Water and Storm Water</td>
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<tr>
<td>Water Mixed with Other Water</td>
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<td></td>
</tr>
<tr>
<td>Unpolluted</td>
<td>RWQCB Permit</td>
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</tr>
<tr>
<td>Polluted</td>
<td>No Volume or Duration Limits</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
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</tbody>
</table>

Note: Blacked out boxes are when Regional Board does not specify situation.

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### District 3
**RWQCB NPDES Permit Summary**

<table>
<thead>
<tr>
<th>Caltrans District 3</th>
<th>RWQCB</th>
<th>1 North Coast</th>
<th>5 Central Valley</th>
<th>6 Lahontan</th>
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<tbody>
<tr>
<td><strong>Type of Dewatering Discharge</strong></td>
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<tr>
<td>Storm Water</td>
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</tr>
<tr>
<td>Unpolluted or Sediment as Only Pollutant</td>
<td>RWQCB Permit</td>
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<tr>
<td>Water Mixed with Other Water</td>
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<td></td>
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<tr>
<td>Unpolluted</td>
<td>RWQCB Permit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polluted</td>
<td>No Volume or Duration Limits</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
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</tbody>
</table>

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District 4
RWQCB NPDES Permit Summary

<table>
<thead>
<tr>
<th>Caltrans District 4</th>
<th>Rwqcb</th>
<th>Rwqcb</th>
<th>Rwqcb</th>
<th>Rwqcb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Dewatering Discharge</td>
<td>1 North Coast</td>
<td>2 San Francisco</td>
<td>3 Central Coast</td>
<td>5 Central Valley</td>
</tr>
<tr>
<td>Storm Water</td>
<td>RWQCB Permit</td>
<td>Permission or RWQCB Permit</td>
<td>Caltrans Statewide Permit</td>
<td>Rwqcb Permit</td>
</tr>
<tr>
<td>Pollutant Other Than Sediment</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
<td>Rwqcb Permit</td>
</tr>
<tr>
<td>Non-Storm Water and Storm Water Mixed with Other Water</td>
<td>Unpolluted and Less Than 250,000 Gallons/Day (24-hr day) and Less Than 4 Months Duration (In Calendar Year)</td>
<td>RWQCB Permit</td>
<td>Permission or RWQCB Permit</td>
<td>Caltrans Statewide Permit</td>
</tr>
<tr>
<td>Polluted or More than 250,000 Gallons/Day (24-hr day) or Longer Than 4 Months Duration (In Calendar Year)</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
<td>Rwqcb Permit</td>
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</tbody>
</table>

* May give verbal permission for short-term, small quantity discharges without a permit

District 5
RWQCB NPDES Permit Summary

<table>
<thead>
<tr>
<th>Caltrans District 5</th>
<th>Rwqcb</th>
<th>Rwqcb</th>
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</thead>
<tbody>
<tr>
<td>Type of Dewatering Discharge</td>
<td>2 San Francisco</td>
<td>3 Central Coast</td>
<td>5 Central Valley</td>
</tr>
<tr>
<td>Storm Water</td>
<td>Unpolluted or Sediment as Only Pollutant</td>
<td>Permission or RWQCB Permit</td>
<td>Caltrans Statewide Permit</td>
</tr>
<tr>
<td>Pollutant Other Than Sediment</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
<td>Rwqcb Permit</td>
</tr>
<tr>
<td>Non-Storm Water or Storm Water Mixed with Other Water</td>
<td>Unpolluted and Less Than 250,000 Gallons/Day (24-hr day) and Less Than 4 Months Duration (In Calendar Year)</td>
<td>Permission or RWQCB Permit</td>
<td>Caltrans Statewide Permit</td>
</tr>
<tr>
<td>Polluted or More than 250,000 Gallons/Day (24-hr day) or Longer Than 4 Months Duration (In Calendar Year)</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
<td>Rwqcb Permit</td>
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### District 6
**RWQCB NPDES Permit Summary**

<table>
<thead>
<tr>
<th>Type of Dewatering Discharge</th>
<th>3 Central Valley</th>
<th>6 Lahontan</th>
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</thead>
<tbody>
<tr>
<td>Storm Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unpolluted or Sediment as Only Pollutant</td>
<td>Caltrans Statewide Permit</td>
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<tr>
<td>Non-Storm Water or Storm Water Mixed with Other Water</td>
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<td></td>
</tr>
<tr>
<td>Unpolluted No Volume or Duration Limits</td>
<td></td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Less Than 256,000 Gallons/Day (44-hr day) and Less Than 4 Months Duration (in Calendar Year)</td>
<td>Caltrans Statewide Permit</td>
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</tr>
<tr>
<td>More Than 256,000 Gallons/Day (44-hr day) or Longer Than 4 Months Duration (in Calendar Year)</td>
<td>RWQCB Permit</td>
<td></td>
</tr>
<tr>
<td>Polluted No Volume or Duration Limits</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
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</tbody>
</table>

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### District 7
**RWQCB NPDES Permit Summary**

<table>
<thead>
<tr>
<th>Caltrans District 7</th>
<th>3 Central Coast</th>
<th>4 Los Angeles</th>
<th>5 Central Valley</th>
<th>6 Lahontan</th>
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</thead>
<tbody>
<tr>
<td>Storm Water</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unpolluted or Sediment as Only Pollutant</td>
<td>Caltrans Statewide Permit</td>
<td>Caltrans Statewide Permit</td>
<td>Caltrans Statewide Permit</td>
<td></td>
</tr>
<tr>
<td>Pollutant Other Than Sediment</td>
<td>RWQCB Permit</td>
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<td>Non-Storm Water and Storm Water Mixed with Other Water</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Unpolluted No Volume or Duration Limits</td>
<td></td>
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<td>RWQCB Permit</td>
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<tr>
<td>Less Than 256,000 Gallons/Day (44-hr day) and Less Than 4 Months Duration (in Calendar Year)</td>
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<td>More Than 256,000 Gallons/Day (44-hr day) or Longer Than 4 Months Duration (in Calendar Year)</td>
<td>RWQCB Permit</td>
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<tr>
<td>Polluted No Volume or Duration Limits</td>
<td>RWQCB Permit</td>
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<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
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</tbody>
</table>

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### District 8

**RWQCB NPDES Permit Summary**

<table>
<thead>
<tr>
<th>Type of Dewatering Discharge</th>
<th>Caltrans District 8</th>
<th>RWQCB</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>6 Lahontan</td>
<td>7 Colorado River</td>
</tr>
<tr>
<td>Storm Water</td>
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<tr>
<td>Unpolluted or Sediment as Only Pollutant</td>
<td>Caltrans Statewide Permit</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Polluted Other Than Sediment</td>
<td>Caltrans Statewide Permit</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Groundwater</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharge to other than San Diego Bay or Storm Consequences on Tributaries: Tributaries: Unpolluted and Less Than 100,000 Gallons/Day (24 hr day)</td>
<td>RWQCB Permit</td>
<td></td>
</tr>
<tr>
<td>Non-Storm Water and Storm Water Mixed with Other Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unpolluted</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>More than 250,000 Gallons/Day (24 hr day) or greater than 1 Month Duration (in Calendar Year)</td>
<td>Caltrans Statewide Permit</td>
<td></td>
</tr>
<tr>
<td>Polluted</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
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<tr>
<td>Note: Blacked out boxes are when Regional Board does not specify situation.</td>
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</table>

### District 9

**RWQCB NPDES Permit Summary**

<table>
<thead>
<tr>
<th>Type of Dewatering Discharge</th>
<th>Caltrans District 9</th>
<th>RWQCB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6 Lahontan</td>
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<tr>
<td>Storm Water</td>
<td></td>
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</tr>
<tr>
<td>Unpolluted or Sediment as Only Pollutant</td>
<td>Caltrans Statewide Permit</td>
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<tr>
<td>Polluted Other Than Sediment</td>
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<td>RWQCB Permit</td>
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<tr>
<td>Non-Storm Water and Storm Water Mixed with Other Water</td>
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<tr>
<td>Unpolluted</td>
<td>RWQCB Permit</td>
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<tr>
<td>Polluted</td>
<td>RWQCB Permit</td>
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### District 10
**RWQCB NPDES Permit Summary**

<table>
<thead>
<tr>
<th>Caltrans District 10</th>
<th>RWQCB</th>
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<tbody>
<tr>
<td><strong>Type of Dewatering Discharge</strong></td>
<td><strong>2 San Francisco</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Storm Water</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td></td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Pollutant Other Than Sediment</td>
<td></td>
</tr>
<tr>
<td>Non-Storm Water and Storm Water Mixture with Other Water</td>
<td>No Volume or Duration Limits</td>
</tr>
<tr>
<td>Unpolluted</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Less Than 256,000 Gallons/Day (24-hr day) and Less Than 4 Months Duration (in Calendar Year)</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>More Than 256,000 Gallons/Day (24-hr day) or Longer Than 4 Months Duration (in Calendar Year)</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Polluted</td>
<td>No Volume or Duration Limits</td>
</tr>
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</table>

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### District 11
**RWQCB NPDES Permit Summary**

<table>
<thead>
<tr>
<th>Caltrans District 11</th>
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</thead>
<tbody>
<tr>
<td><strong>Type of Dewatering Discharge</strong></td>
<td><strong>7 Celerado River</strong></td>
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<tr>
<td>Storm Water</td>
<td>RWQCB Permit</td>
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<tr>
<td>Pollutant Other Than Sediment</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td></td>
<td>Contact RWQCB</td>
</tr>
<tr>
<td>Groundwater</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Discharge to other than San Diego Bay or Storm Conveyances or Tributaries Therein: Unpolluted</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>and Less Than 100,000 Gallons/Day (24-hr day)</td>
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</tr>
<tr>
<td></td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Discharge to other than San Diego Bay or Storm Conveyances or Tributaries Therein: Unpolluted and Greater Than 100,000 Gallons/Day (24-hr day) or Polluted and Less Than 100,000 Gallons/Day (24-hr day)</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td></td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Discharge to San Diego Bay or to Storm Conveyances or Tributaries Therein</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td></td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Non-Storm Water and Storm Water Mixture with Other Water</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Unpolluted and Less Than 256,000 Gallons/Day (24-hr day) and Less Than 4 Months Duration (in Calendar Year)</td>
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<td>RWQCB Permit</td>
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</tbody>
</table>

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# District 12 RWQCB NPDES Permit Summary

<table>
<thead>
<tr>
<th>Type of Dewatering Discharge</th>
<th># Santa Ana</th>
<th># San Diego</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storm Water</td>
<td></td>
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<tr>
<td>Unpolluted or Sediment as Only Pollutant</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td>Pollutant Other Than Sediment</td>
<td>Contact RWQCB</td>
<td>Contact RWQCB</td>
</tr>
<tr>
<td>Groundwater</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharge to either San Diego Bay or Storm Conveyances or Tribulation Thieves: Unpolluted and Less Than 100,000 Gallons/Day (24 hr day)</td>
<td>RWQCB Permit</td>
<td>RWQCB Permit</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non Storm Water and Storm Water Mixed with Other Water</td>
<td>RWQCB Permit</td>
<td>Contact RWQCB</td>
</tr>
<tr>
<td>Unpolluted and Less Than 250,000 Gallons/Day (24 hr day) and Less Than 4 Months Duration (in Calendar Year)</td>
<td>RWQCB Permit</td>
<td>Contact RWQCB</td>
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<td>RWQCB Permit</td>
<td>Contact RWQCB</td>
</tr>
</tbody>
</table>

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# Dewatering under Caltrans Permit General Information

- Stormwater in all RWQCB Regions except 1 and 2
- Qualifying non-stormwater in RWQCB Regions 3, 5, and 7 (volume and duration limits)
- Must be free of pollutants other than sediment
- May require treatment for sediment removal prior to discharge
Dewatering under Caltrans Permit
General Process

- Notify RWQCB (through your CSWC) if non-stormwater (Applicable for RWQCBs 7 & 9 only)
- Amend SWPPP/ WPCP if necessary (See 07-347)
- Treat to remove sediment if not ‘visibly clear’
- Monitor dewatering operations using the Dewatering Operations Monitoring Form (sample provided in revised NS-2 BMP available on Caltrans website)

Types of Dewatering Operations

- There are three types of dewatering operations:
  - Operations **NOT regulated** under an NPDES Permit
  - Operations **regulated under the Caltrans Statewide** NPDES Permit
  - Operations **regulated under a local RWQCB NPDES Permit**
Dewatering Under RWQCB NPDES Permit

- Required for dewatering discharge to storm drain or water body that is not allowed by the RWQCB under the Caltrans Permit
- Water Quality Limits
  - Must meet permit requirements
  - Pollutants other than sediment may be allowed, but treatment will be required

Dewatering Under RWQCB NPDES Permit

- May be discharged directly from the project site
- Appropriate for small or large volumes of water
- Minimal cost
- RWQCB permit may require several weeks to several months to obtain
- Treatment may be needed to meet water quality requirements
- Analytical testing, monitoring and reporting is required
The RWQCB may have issued a general permit that covers dewatering operations.

If the general permit does not cover your particular type of operation, a site-specific permit may be required.

- Permit Provisions
- Waste Discharge Requirements
  - Discharge Prohibitions
  - Effluent Limitations – numeric and narrative
  - Receiving Water Limitations – numeric and narrative
- Monitoring and Reporting Program
RWQCB Permits

- Where are the Permit Provisions?
- Where are the Waste Discharge Requirements?
  - Discharge Prohibitions?
  - Effluent Limitations – numeric and narrative?
  - Receiving Water Limitations – numeric and narrative?
- Where are the Monitoring and Reporting Program Requirements?

What are the Contractor’s Responsibilities?

- Conduct the dewatering operation
- Select the means and methods to perform the operation unless otherwise specified in the contract documents
- Comply with the contract documents
What are Department’s Responsibilities?

- Ensure that the contractor is in compliance with NPDES permit requirements
- On Caltrans Construction contract sites, the Department is responsible for obtaining the NPDES permits needed
- Encroachment Permit Projects, the Department is responsible for assuring compliance with Caltrans requirements within Caltrans right of way

Course Highlights

- Pollutant sources, potential impacts and Regulation Refresher
- Best Management Practices Refresher
- Contract Administration for Water Pollution, SWPPP Review, Inspection and Maintenance, and Sampling and Analysis Refresher
Provide Contractor With SWPPP Information

From Information Handout:
- Vicinity Map
- Pre-Construction (Existing) Stormwater Control Practices (BMPs)
- Permanent (Post-Construction) Stormwater Control Measures (BMPs)
- Layout Sheets Showing BMP Locations
- Explanation of (Temporary) BMPs
- Copy of Notice of Construction (NOC)/Notice of Intent (NOI)

Provide Contractor With SWPPP Information

- Site-specific Inspection Sheet
- Other Plans/Permits
- Construction Site Estimates
- Drainage Information
- Soils/Geotechnical or Project Materials Report or other reports, including the nature of fill material
- Conceptual SWPPP
NOC

• Review the Notice of Construction (NOC) and make necessary changes through the NPDES Coordinator

New CCR Requirement

NOI

• For EP Projects, review the Notice of Intent (NOI) and make sure necessary changes are made by the permittee or their contractor
Other Plans and Permits

- Army Corps 404
- RWQCB 401 Certification
- Department of Fish and Game 1602
- Dewatering permits
- Make sure they will not expire during project
- Make sure that construction activities have not changed since application was sent in – the permit application may need to be resubmitted

Review the SWPPP/WPCP

Use the SWPPP/WPCP Preparation Manual

- Caltrans Storm Water Quality Handbooks
- March 2007 Edition
Section 300.3 Construction Site Estimates

- Check for required information, including construction site area, runoff coefficient before and after construction, percentage impervious area before and after construction and anticipated stormwater flow on to site
- Check calculations in Attachments D & E

Section 300.4 Project Schedule/ Water Pollution Control Schedule

- Check that Graphic schedule includes all required information listed in instructions
Sec. 400 References, Other Plans, Permits, and Agreements

• Check that all Documents Referenced in the SWPPP are listed

• Copies of the Caltrans (CAS000003) and General Construction (CAS000002) permits must be attached to the SWPPP

• All referenced materials not attached to SWPPP must be kept on-site and be readily available for review

Sec. 500 Body of SWPPP

• 500.2 Vicinity Map
  – Check that Attachment A has Title sheet of project plans and vicinity map with all items listed in Instructions
500.3.4-500.3.8 BMPs

- Check that the BMP Tables are completed correctly
  - Contract line items must be included

- Check WPCDs for locations of all selected BMPs (Attachment B)

- Check for adequate narrative description of all selected BMPs and how they will be incorporated into the project

500.4 Water Pollution Control Drawings

- Check that WPCDs (Attachment B) have all required information listed in Instructions
500.7 Training

- Check that the training for the WPCM, SWPPP Preparer, Sampling personnel and any other responsible person is described and that Attachment I has adequate certification

600.5 Sampling and Analysis Plan for Non-Visible Pollutants

- Verify that contractor has listed all non-visible sampling locations:
  - Material and Waste Storage and Use areas
  - Prior known contamination of the site
  - Soil amendments to be utilized
  - Run-on to the site
- Verify that locations are shown on the WPCDs in Attachment B
600.5.4 Analytical Constituents

- Verify that contractor has completed Table 600-3 and identified specific sources and types of potential non-visible pollutants on site

<table>
<thead>
<tr>
<th>Pollutant Source</th>
<th>Pollutant</th>
<th>Water Quality Indicator Constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Batteries</td>
<td>Lead, Sulfate, Acid</td>
<td>Lead, sulfate or pH</td>
</tr>
</tbody>
</table>

Pre Construction Meeting

- Who should attend?
  - RE
  - Contractor’s Superintendent
  - Contractor’s Water Pollution Control Manager (WPCM)
  - Contractor’s SWPPP Preparer
  - Appointed CT SWPPP Inspector
  - CSWC
  - RWQCB Representative (Invitation required to meeting with contractor)

- Water pollution control meeting can be integrated into the pre-construction meeting with the contractor, but not recommended
Pre Construction Meeting

- Discuss project-specific water pollution control issues
  - Other plans and permits
  - Environmentally sensitive areas
  - Coordination of Special Provision requirements
  - The conceptual SWPPP (if applicable)
  - RE Pending File information

RE Responsibilities During Construction

- Coordination With Structures Representative

  - Bridge Construction Memo 2-1.0
    Miscellaneous Information and Instructions
    (May 1, 1995 - Sheet 6 of 7)

  - Bridge Construction Memo 2-1.1
    Miscellaneous Information and Instructions
    (Sept. 17, 2004 - Sheet 1 of 1)
11. Dealing With Agencies Such as Corps of Engineers, Reclamation Board, Flood Control Districts, or Coast Guard: This is the basic responsibility of the Resident Engineer. However, since these agencies control waterways and it will generally be structure work which is the subject of discussion, the Office of Structure Construction will provide any assistance which the Resident Engineer requests.

RE Responsibilities During Construction

Bridge Construction Memo 2-1.1

Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Administration is the responsibility of the Resident Engineer. Office of Structure Construction personnel will assist the Resident Engineer in the administration of SWPPP/WPCP for structure related work.
Contract Special Provisions

- Section 10-1. Water Pollution Control
- Issued to satisfy the NPDES Permit requirements
- Requires use of the Storm Water Quality Handbooks
- Details water pollution control requirements
- Defines DSA limit
- Maintenance and Inspection

Contract Special Provisions

- Identifies plan required (SWPPP or WPCP)
- Identifies appropriate RWQCB
- The SWPPP/WPCP contents and approval process
- Additional required BMPs
- Year round requirements
Contract Special Provisions

- Winter Shutdown (if applicable)
- Sampling and Analytical Requirements
- Move-In/Out for Temporary/Permanent Erosion Control
- 50/50 BMP Maintenance Sharing
- Progress Payments/Detention/Retention

No Work to Start Without Approved SWPPP/WPCP

- Contractor should not:
  - Move-in equipment or pollutant causing materials
  - Disturb soil areas
  - Track sediment onto adjacent roads
**Inspections**

- **Contractor**
  - Must complete inspection and submit completed Checklist to RE

- **Caltrans**
  - Ensures Contractor has completed inspections
  - Inspect the contractor’s operations for water pollution control compliance

**Inspection Frequency**

- Prior to anticipated storm events
- During extended storm events (once each day)
- After actual storm events
- Weekly
- Daily within the Lake Tahoe Region
- Other permit required frequency
Before the Inspection

- **Review Special Provision 10-1.02 Water Pollution Control**
  - What are the required BMPs for erosion, sediment and construction site management?
- **Review the SWPPP or WPCP**
  - Are there any relevant amendments?
  - Are there any Unique Site Features?
  - Does the Schedule call out adequate BMPs for erosion, sediment and construction site management?

Stormwater Inspection Tips

- Take a copy of approved SWPPP on field inspection
- Use an inspection form
- Contractor should participate in inspection
- Inspect the entire site including the perimeter
- Start inspection from the lowest point or from the area where discharge possibility is the highest
Stormwater Inspection Tips

- Walk interior and perimeter of Contractors yard
- Invite Structures Construction personnel
- Identify existing conditions
- Take photographs
- Identify changes in construction that may require amendments to the SWPPP or WPCP

Stormwater Inspection Tips

- What if contractor’s yard is not within the ROW? Check with RE before entering
- The Caltrans Permit requires SWPPP to apply to all areas related to construction whether or not they are on the right-of-way
- The RE is responsible for:
  - Coordinating the inspection of offsite construction activities with the contractor
  - Communicating with the contractor and ensuring proper implementation and maintenance of BMPs
  - Ensuring proper compliance with the Permit and SWPPP
Inspections

- Are the BMPs implemented in accordance with the Special Provisions and SWPPP?
- Are the required combinations of Soil Stabilization, Sediment Barriers and Desilting Basins installed?
- If a Desilting Basin is required but not feasible, is there an adequate replacement?
- Are the sediment control BMPs available for implementation prior to a predicted rain event?
Inspections

- Look at photos and identify a noncompliance
- Find a questions on checklist that matches observations
- Check yes or no to indicate a noncompliance.
- Write a corrective action (even if it is fixed during inspection)
- Don’t forget to document follow-up once corrective action is completed
Inspection Exercise

• Find a question that matches the site condition
• Check yes or no to indicate a noncompliance
• Write a corrective action
• Not done with checklist until implementation is indicated
Find a question that matches the site condition
Check yes or no to indicate a noncompliance
Write a corrective action
Not done with checklist until implementation is indicated
Find a question that matches the site condition
Check yes or no to indicate a noncompliance
Write a corrective action
Not done with checklist until implementation is indicated
Inspections

- Find a question that matches the site condition
- Check yes or no to indicate a noncompliance
- Write a corrective action
- Not done with checklist until implementation is indicated
Sampling and Analysis

RE and inspector are responsible for making sure contractor performs sampling as required.

When is sampling required on a Project?

Per the General Construction Permit
Per a Local Regional Board Permit:
- Dewatering Permit
- Permit for a Clear Water Diversion
- 401 Water Quality Certification
Non-Visible Pollutants

- Sampling and Analysis is required if...
  - Construction material or wastes are not stored under watertight conditions
  - A spill or breach of containment of pollutants occurs and is not cleaned up prior to rain
  - Site is contaminated by prior use
  - Soil amendments or soil stabilizers have been applied during or within 24 hours preceding a rain event

. . . and there is the potential for discharge of pollutants to surface waters or drainage system

Sediment/Silt/Turbidity

- Sampling and Analysis is required if...
  - The construction site discharges directly to listed water body
Dewatering Pollutants

- **Sediment**
  - In some RWQCB jurisdictions, stormwater with sediment only can be discharged under the Caltrans Permit if it is ‘visibly clear’. Sampling may not be required.
  - Other RWQCBs require a General or a Site Specific Dewatering Permit which will require sampling as specified by that permit

- **Other Pollutants**
  - Sampling as required by RWQCB Permit

Field Sampling for Turbidity

- Visibly clear is if you can see through it, Equivalent to < 50 NTUs
**Field Sampling for Turbidity**

- Collect a sample in a small jar from effluent, or receiving water as required
- View to see if it is visibly clear
- Or test with a Turbidity Meter Measured in Nephelometric Turbidity Units (NTUs)

**Sampling Procedures**

- **Field Analysis**
  - pH
  - Turbidity
- **All field equipment should be calibrated per manufacturer’s specifications**
Evaluation of Results

• Data Evaluation
  - The contractor will submit an evaluation of the water quality sample analytical results for every sampling event
  - Should downgradient samples exceed upgradient or background levels, the WPCM will evaluate:
    • BMPs
    • Site Conditions
    • Surrounding influences/other site factors

Evaluation of Results

• Data Evaluation (cont.)
  - Contractor will determine probable cause for the increase in levels downgradient
  - Appropriate BMPs will be repaired or modified to mitigate increases/discharges
  - Any revisions to the BMPs will be recorded as an amendment to the SWPPP
**RE Enforcement**

- Verbal warning
- Written notification
- Enforcement using the 25% progress payment retention
- Stop work

**RE Enforcement**

- Manage SWPPP items like other contract items
- 50/50 BMP Maintenance sharing – specific BMPs are identified in Specials
- Move-In/Out (Permanent Erosion Control)
RE Enforcement

- Suspending any work that would exacerbate the noncompliance or interfere with or prevent the contractor’s efforts to correct the deficiency (Standard Specifications 8-1.05)
- Withholding funds from contract progress payments as specified in the contract (Special Provisions 10-1)

RE Enforcement

- Hold contractor responsible for all costs and liabilities resulting from a failure to comply with Water Pollution Control special provisions (Special Provisions 10-1)
- Discharge any subcontractor or person employed by contractor who Caltrans deems to be incompetent or who acts in a disorderly or improper manner (Standard Specifications 5-1.12)
RE Enforcement

- Assess liquidated damages including passing along fines for permit violations (Standard Specifications 8-1.07)
- Bring in a separate contractor or Caltrans Maintenance to complete the work (Standard Specifications 8-1.08)
- Initiate termination of the contract (Standard Specifications 8-1.11)

Local Agency Project Sanctions

- Encroachment Permits (Oversight Projects Generally <$1,000,000):
  - Caltrans has right to revoke permit for violation of the encroachment permit conditions
  - Without an encroachment permit, local agency and contractor are required to suspend all work on site
  - Additional bonding, deposit of additional funds, and additional fees may be required to reissue permit
Local Agency Project Sanctions

- **Cooperative Agreement**
  (Oversight Projects Generally >$1,000,000):
  - If the Local Agency does not comply with the encroachment permit, they can be required to return the site to original condition or to a condition of acceptable permanent operation
  - Caltrans can take over a project and complete it or place Project in satisfactory permanent operation condition, then be reimbursed with gas tax funds that were due the local agency
  - State retains authority to discontinue services of any personnel considered to be unqualified

Local Agency Project Sanctions

- **Other Possible Sanctions by Caltrans Include:**
  - Freeze the programming of federal or state funds
  - Freeze progress payments for a federal-aid project
  - Withdrawal of all or part of Federal or State funds

*Failure to correct the deficiencies in a timely manner shall be grounds for imposing additional sanctions*
Field Activity Compliance Evaluation (SWMP Section 14.3)

- Performed and reported by Department’s Chief Environmental Engineer (CEE) to:
  - Monitor the level of compliance
  - Evaluate trends
  - Recommend improvements

- Construction Compliance Evaluation Plan (CCEP) Quality Process includes:
  - QC: Inspection (by contractor)
  - QA I: Inspection (by RE staff)
  - QA II: Review (by DCSWC)
  - IA: Independent Assurance Review (under direction of DEA reviewer)

- Results are provided in Annual Report

Other Important Forms

Contractor is to initiate the following forms but the RE must ensure they are completed:

- Notice of Discharge
- Annual Compliance Certification
- Trained Contractor Personnel Log
- SWPPP Amendment
- Amendment Log
Notice of Discharge

- **Applicable Discharges:**
  - Stormwater from a DSA discharged to a waterway without treatment by a BMP
  - Stormwater discharged to waterway or storm drain system where control measures have been overwhelmed or not properly maintained or installed
  - Prohibited non-stormwater or hazardous substance discharges/spills
  - Where water quality samples indicate elevated sediment or non-visible pollutants
  - Others as directed by RE

Notice of Discharge

- If any pollutants are discharged into the waters of the state, notify the CSWC immediately
- Review Caltrans Permit to determine the appropriate reporting timeframe, and provide a draft report of noncompliance to the CSWC
- The CSWC will then forward the report to the RWQCB
Notice of Discharge

Find the best and worst description of Initial Assessment of any impact caused by discharge

- “An estimated 6,000 gallons of stormwater runoff entered the frog pond. No damage was observed.”
- “50 gallons of drill water entered the Bay. No visual impact to the Bay was observed.”
- “Silt entered the creek area at Sta 75+00. No danger to public safety.”
- “None”
Find the best and worst description of Existing BMPs in place prior to discharge

- “Air testing of tubes was conducted prior to grouting operation. Crew was in the area to watch for any leaks.”
- “Silt fence, straw, waddles, temporary cover, drainage inlet protection (rock bags), and street sweeping”
- “Drilling plan, which includes BMP NS-13 “Material and Equipment use Over Water” was being followed when the incident occurred. The drill water is contained in the piles and weir barge using a sealed system.”
- “N/A”

Find the best and worst description of Date of Deployment and Type of BMPs after Discharge

- “No additional BMPs were deployed.”
- “1-7-08 @ 2:30PM: Water Pollution Control Manager and site Superintendent scheduled dispatch of two crews to clean and repair area of silt fence damage.”
- Feb 4 -8, 2008, Added extra silt fence, extra straw waddles and maintained drainage inlet protection. Furthermore, operated street sweeper twice a day to remove accumulated sediment in the street that resulted from pile driving operations at that location.”
- “N/A”
Find the best and worst description of Steps taken or planned to reduce recurrence of discharge

- “A larger pump will be introduced into the North Gate Sump to intercept the larger flows in order for the sump to not be overwhelmed. During forecasted large rain events a 6” diesel pump will be in place at the north gate to help with increased flows until a larger pump is installed in the sump.”

- “Attendant will watch filling of water tanks.”

- “Once discharge area is re-stabilized, crews will clean out rock slope protection ED 23-d @ 74+60 and 900 mm CSP culvert 23-b at 74+70 and place additional check dams along subgrade choker between 72+00 and 74+00. This will prevent sediment transport to the area of discharge so that the new BMPs will not be overwhelmed by future rain events. This area will be monitored with additional emphasis prior to, during, and after future storms.”

Find the best and worst description of Implementation and maintenance schedule for any affected BMPs

- “SWPPP maintenance will be continued for any additional sediment buildup around BMPs and any onsite storm water collection points.”

- “Enhancement and maintenance of all BMPs in the vicinity will continue through the course of bridge construction over the next 4 months.”

- “N/A”

- “1-8-08 to 1-9-08 Clean silt from BMPs and repair silt fence in area of discharge.

1-10-08 to 1-11-08 Clean culver and install more frequently spaced check dams along subgrade choker from Station 72+00 to 74+00.”
Trained Contractor Personnel Log

Contractor is to use this form to document training:

- SWPPP Preparer
- Water Pollution Control Manager
- Stormwater sampler
- Ongoing training during construction

- Need to make sure contractor submits training at least quarterly and updates training when personnel change
### Trained Contractor Personnel Log

#### Section: Stormwater Training Record

<table>
<thead>
<tr>
<th>Name</th>
<th>Hours</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Instructions**

- Complete all fields in the Training Record.
- Submit completed Training Records to the Contractor's Quality Control Manager.
- Ensure all personnel are trained and recorded in the database.

**Course Information**

- Stormwater Training Course:
  - Title: Stormwater Training Program
  - Date: [Date]
  - Location: [Location]
  - Instructor: [Instructor]

**Contractor's Quality Control Manager**

- Name: [Name]
- Phone: [Phone]

**Contractor's Quality Control Manager's Signature**

- Date: [Date]
Annual Certification of Compliance

- Make sure that the contractor completes and certifies the annual compliance certification form (CEM-2070) of the SWPPP and submits it to the RE by July 15
- The RE then signs and certifies the same form and gives a copy back to the Contractor for the SWPPP
- File a copy in Category 20

SWPPP Amendment

- Handout – Blank SWPPP Amendment Form and Log
- Exercise - We will complete a simple amendment
- RE determined that gravel bag berms need to be added at the top of some slopes
- For the exercise, include all required information in the space on the log
- Mark up Revisions on WPCD
SWPPP Amendment

The amendment requires:

- Who requested the change
- Location of the proposed change
- Reason for change
- Original BMPs before change, if any
- New BMPs after amendment

Contract Documentation

- Category 20 files
  - SWPPP/WPCP
  - Amendments
  - Annual certification
  - Contractor inspection reports
  - Caltrans inspection reports
  - Correspondence with the contractor
  - DCSWC CCEP (QAII) inspection reports
  - Correspondence with regulatory agencies
Communication

- Regulatory inspections
  - When to expect them
  - How to act
  - What to say
  - What not to say

- DON’T SAY: I don’t know

- ALWAYS: Let them know there is a SWPPP or WPCP on site and direct them to it

Project Closeout

- Maintenance Superintendent Review at 90% – Should any BMPs remain? Discuss permanent BMP maintenance

- Relieve the Contractor of maintenance but ensure SWPPP items are complete

- Contract Acceptance – construction complete and NCC filled out
Terminate Permit

- NPDES permit requirements
  - Construction must be completed and permanent erosion control must be in place and functional
  - Erosion control is considered functional when a uniform vegetative cover equivalent to 70 percent of the native background vegetation coverage has been established or equivalent stabilization measures have been employed
  - Submit NCC

Notice of Completion

- The Notice of Completion of Construction (NCC)
- Take photographs documenting compliance with permit conditions and include with NCC
- Insert into SWPPP
Until NCC or NOT is Submitted

- The SWPPP must remain on site during working hours
- Site inspections continue prior to, during, and after storm events
- The July 15 Annual Certification of Compliance
- Notice of Discharge reporting

Retain Records for 3 Years

- Approved SWPPP documents and amendments
- Records of all inspections
- Compliance certifications
- Notification of Construction
- Notice of Discharge reporting
- NCC/NOI
Level II – Post-Test

- Take test when you return to office
- Same test given at the start of the course to evaluate what you learned
- Results will be used to evaluate the effectiveness of this training