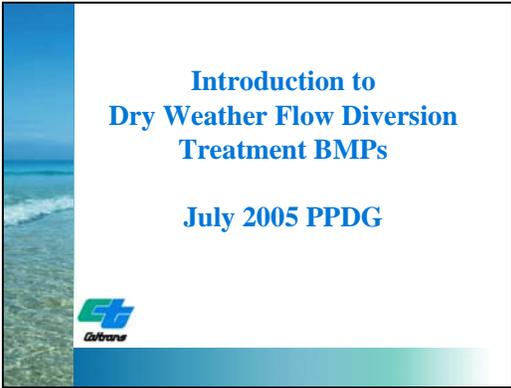
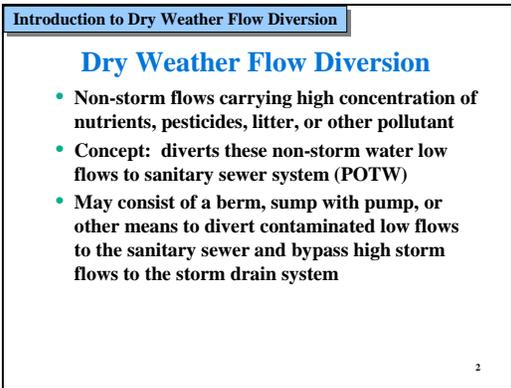


Treatment BMP Training – Text to the “Dry Weather Flow Diversion” PowerPoint Presentation  
 Caltrans Headquarters Office of Storm Water Management



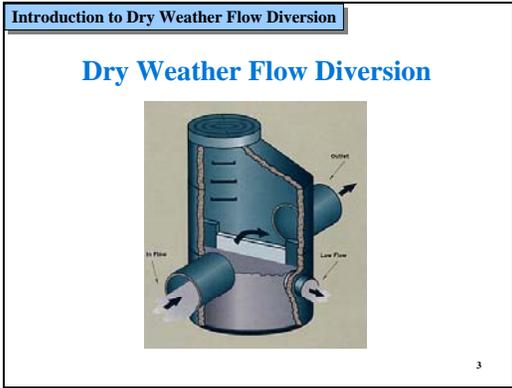
**Slide 1:** In this module we will review the Dry Weather Flow Diversion Treatment BMP (DWFD).



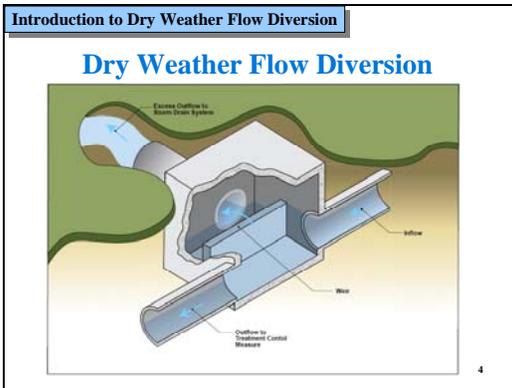
**Slide 2:**

- Non-storm flows carrying high concentration of nutrients, pesticides, litter, or other pollutant that are generated within the Caltrans right of way and by Caltrans operations are eligible for consideration of DWFD.
- Concept: The DWFD diverts these non-storm water low flows to sanitary sewer system (POTW).
- May consist of a berm, sump with pump, or other means to divert contaminated low flows to the sanitary sewer and bypass high storm flows to the storm drain system

POTW – publicly owned treatment works.

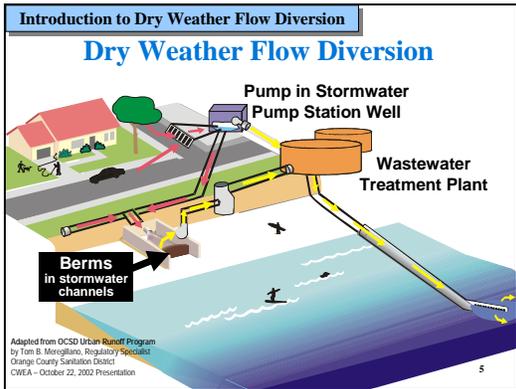


**Slide 3:** Not all Dry Weather Flow Diversions are in manholes like this one, but this would be typical. Often a different diverter is used, one that closes upon high flows (or, depending upon place installed in the system, opens) when flow rates are higher, meaning when a storm event is occurring.



**Slide 4:** This is another possible style of dry weather flow diversion, although since it does not show how storm water will be prevented from continuing downstream to the Treatment facility, this slide would better be described as an upstream flow splitter.

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**Slide 5:** The main components of a DWFD are shown on this slide: a vault, and a weir or a ‘switched’ drop inlet to separate non-storm water flows from the storm water flows; only the non-storm water flows will be directed to the sewage line for treatment at the POTW.

**Introduction to Dry Weather Flow Diversion**

### Treatment Mechanisms

**Treatment by:**

- Whatever processes are used at the treatment facility

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**Slide 6:** Treatment mechanisms in POTWs usually start with a separation of large floatables and grit, and later screening technologies are used, frequently an oil separation system, and lastly a pathogen-inhibiting treatment (either by chlorine, ultra-violet light, or ozone) prior to release to the downstream surface water body.

**Introduction to Dry Weather Flow Diversion**

### Pollutants Captured

	Biofilm Sys	Dry Weather Flow Diversions <sup>1</sup>	Gross Solids Removal Devices	Traction Sand Traps
Total Suspended Solids		✓		✓
Nutrients		✓		
Pesticides		✓		
Particulate Metals		✓		
Dissolved Metals		✓		
Pathogens		✓		
Litter		✓	✓	
Biochemical Oxygen Demand		✓		
Total Dissolved Solids		✓		

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**Slide 7:** This table shows the pollutants that DWFD are effective in removing. They include totals suspended solids, particulate metals, and litter. Note that all the pollutants listed on this table are considered to be treated.

**Introduction to Dry Weather Flow Diversion**

### Application and Siting Criteria

- Requires coordination with wastewater treatment plant (POTW)
- Consult your District NPDES Storm Water Coordinator

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**Slide 8:** Caltrans must coordinate with the POTW to obtain permission to divert storm water runoff to the sanitary sewer system for treatment, and usually the District NPDES Coordinator will also be involved in the discussions.

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**Introduction to Dry Weather Flow Diversion**

**Application and Siting Criteria**

- Dry weather flow is persistent (consistent flow rate and significant length of time)
- Connection would not involve extraordinary plumbing to implement
- POTW willing to accept dry weather flow

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PPDG Table B-6, Page B-40 and Checklist T-1, Part 3

**Slide 9:** These are the criteria that must be met when considering this Caltrans-approved Treatment BMP.

- Dry weather flow is persistent (consistent flow rate and significant length of time)
- Connection would not involve extraordinary plumbing to implement
- POTW willing to accept dry weather flow

To date, only a few have been placed on the state system, the latest of which is a DWD under discussion in the Huntington Beach/Newport Beach area.

**Introduction to Dry Weather Flow Diversion**

**Preliminary Design Factors**

- Berm or wall across channel to divert dry weather flow to the sanitary sewer
- Gate, weir, or valve to stop diversion during wet season
- Conveyance to sanitary sewer sized only for dry weather flow
- Consider a screen to limit debris conveyed to the POTW
- Maintenance vehicle access

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PPDG Table B-6, Page B-40 and Checklist T-1, Part 3

**Slide 11:** These are the preliminary design factors:

- Berm or wall across channel to divert dry weather flow to the sanitary sewer
- Gate, weir, or valve to stop diversion during wet season
- Conveyance to sanitary sewer sized only for dry weather flow
- Consider a screen to limit debris conveyed to the POTW
- Maintenance vehicle access

In fact, it is quite possible that District Hydraulics or the POTW will design the diversion structure.

**Introduction to Dry Weather Flow Diversion**

**Disqualifying Siting Criteria**

- Connection would involve extraordinary plumbing to implement (apply criteria used for access chambers or vaults)
- POTW not willing to accept dry weather flow

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PPDG Table B-6, Page B-40 and Checklist T-1, Part 3

**Slide 10:** These are some disqualifying criteria for placement of a DWFD:

- Connection would involve extraordinary plumbing to implement (apply criteria used for access chambers or vaults)
- POTW not willing to accept dry weather flow

**Introduction to Dry Weather Flow Diversion Treatment BMPs**  
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**Questions**



**Slide 12:** End of the presentation.