

Caltrans Cost Impact Assessments: Statewide Stormwater & Construction General Permits



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Tab 61

Draft Caltrans Permit - Reissuance Timeline

Last adopted in 2012

Timeline



Major Changes

- 💧 Lower thresholds for Post-construction stormwater treatment
- 💧 TMDL Compliance Plan/Municipal Coordination Opportunities
- 💧 Trash Control Compliance Plan

Draft Caltrans NPDES Permit
Annual Compliance Cost Projections

	1	2	3	4
Stormwater Regulatory Requirement	2012 Permit: Baseline Annual Funding Needs	Post 2012 Permit: Regulatory Actions - Baseline Annual Funding Needs	2021 Permit: New Annual Funding Needs	2021 Draft Permit Total Compounded Annual Funding Needs:
A Stormwater Treatment Device (Legacy Impacts to impaired areas)	\$ 190	-	\$ 55 - \$ 78	\$ 245 – \$ 268
B 2017 Trash Provisions (Statewide) (SHOPP -> trash capture device retrofits)	-	\$ 128 - \$ 224	-	\$ 128 – \$ 224
C 2019 District 4 Cease & Desist Order (SHOPP -> trash capture device retrofits)	-	\$ 58	-	\$ 58
D Trash – Maintenance Operations (Increased frequency & inventory)	-	\$ 43	\$43 - \$151	\$ 87 – \$ 194
E Stormwater Treatment Device (New Development & Redevelopment Impacts)	\$ 292	-	\$ 8 - \$ 10	\$ 300 – \$ 302
F General Maintenance Operations	\$ 13	-	\$ 3	\$ 16
G Program Administration (guidance doc), Mapping, Monitoring & Reporting	\$ 16	-	\$ 4	\$20
H Total Stormwater Compliance Annual Funding Needs (Capital & Maintenance)	\$ 520	\$ 230 – \$ 330	\$ 120 – \$ 250	\$ 860 – \$ 1.09 billion
I Total Annual SHOPP Needs	\$ 400	\$ 190 – \$ 290	\$ 70 – \$ 90	\$ 660 – \$ 780
			SHOPP ALLOCATION	\$ 300 - \$ 330
			SHOPP FUNDING GAP	\$ 360 - \$ 450

Total Maximum Daily Load Requirements (Legacy Pollutant Obligations)

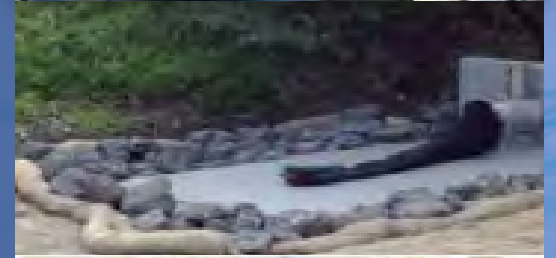
- 64 Time Schedule Order TMDLs by Year 2034
- 2012 Permit: Annual Compliance Needs = \$190 Million/year
- Annual allocation = \$90 to \$120 Million/year
- 2021 Permit Annual Increased Needs = **\$55-78 Million/year**
- 2021 – 2034: Total Annual Funding Need = **\$245-268 Million/year**
- Total Funding Shortfall = **\$148+ Million/year (30-40% over Baseline)**
- Collaborating with State Board to sustain municipal coordination opportunities
- Potential savings by increasing off-system partnerships to 40% = **\$35- \$50 Million per year**

	2012 Permit	2021 Permit
Compliance Demonstration	Compliance units	Waste Load Allocations
1. On-system	60%	80%
2. Partnerships	40%	20%



Trash Control – Cost Impact Projections

- 2012 - District 4 Region Specific - Baseline Permit Requirement
- 2017 – Statewide Trash Provisions – Regulatory Action
 - (16,000 acres of STGAs (Hot Spots) statewide)
 - **SHOPP = \$128 - \$224 million/year**
 - **Maintenance = \$44 - \$ 151 million/year**
- 2019 District 4 Enforcement Action – Cease & Desist Order
 - (9,000 acres of Hot Spots statewide)
 - **Additional SHOPP & Maintenance Needs = \$101 Million/year**
- **2021 – 2030: Annual Total Trash Funding Needs = \$273 - \$476**
- Risk – Future Trash Assessment increase Trash Hot Spots
- **Opportunity – Clean California reduces Hot Spots**
- Compliance strategy:
 - On-system retrofits = 25%
 - Off-system local partnerships = 25%
 - Enhanced Maintenance (litter removal) = 50%
 - **Leverage Clean CA – Litter Collection Efforts**



Feasibility of Meeting Final Compliance: TMDL & Trash

o Physical Freeway Constraints for On-system Treatment Devices:

• Safety (Caltrans #1 Priority)

- Clear recovery zone
- Hydroplaning
- Maintenance worker exposure and safe access

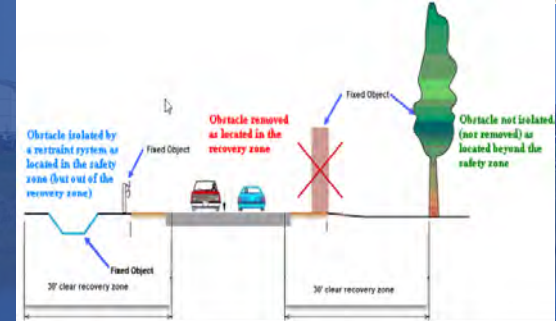
• Environmentally Sensitive Areas

• Inefficiencies:

- Small treatment sheds (<0.5 acre at each outlet)
- Limited operating right of way for large scale devices
- Much higher cost per acre treated

o Technical Constraints to meet Numeric WLA targets:

- o Even if all Caltrans contributing area treated, final monitoring could reveal compliance not achieved.
 - o RWQCB can restart the TMDL process



Draft CGP Reissuance Timeline

Last adopted in 2009;

Expired in 2014; Administratively extended until effective date of reissued permit

Timeline



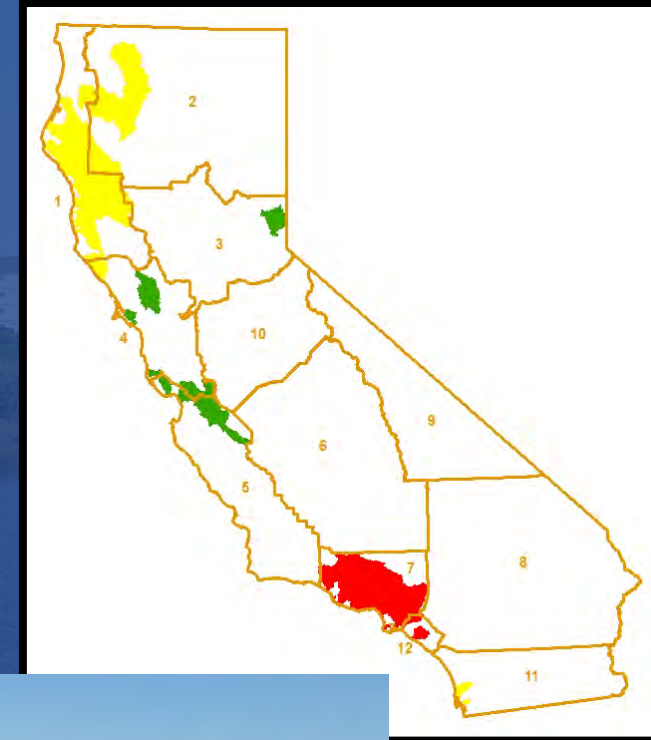
Major Changes

- 💧 No Grandfathering
- 💧 Numeric Discharge Limitations
- 💧 Emergency projects subject to numeric discharge limitations

Draft CGP –Cost Impact Projections

- 2009 CGP Annual Baseline Cost: \$136 million
- 2021 Draft CGP Annual Baseline Cost: \$216 million

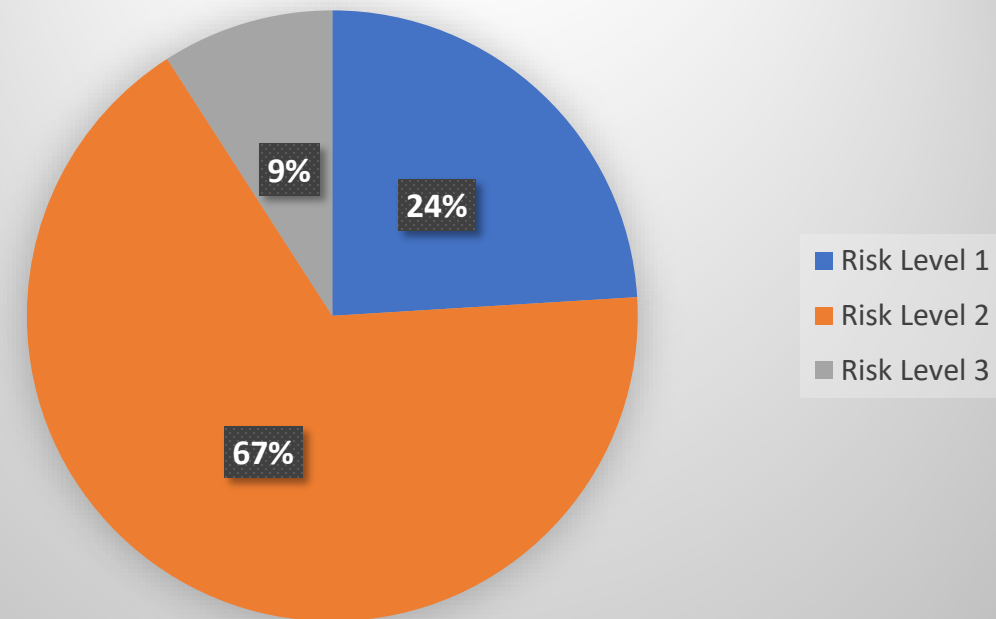
Item	Estimated Increase (\$/yr)
Minimum BMP Implementation	\$5-6 million
RUSLE2 BMP Implementation	\$14-22 million
Active Treatment System	\$18-32 million
Monitoring/Reporting	\$14-20 million
Total	\$51-80 million



Draft CGP – Basis of Increased Cost Impacts

- Model project based on following averages
 - Project Size: 12 acres
 - Statewide average BMP Implementation costs
 - Historical rainfall data and statewide average
- Scaling to Statewide Program
 - 257 Active Projects
 - Obtained % of:
 - Risk Level 1, 2, and 3 Projects
 - Projects within each Total Maximum Daily Load (TMDL) watershed (70%)
 - 308 Projects/Year expected

Risk Level Distribution



Draft CGP - Cost Impact Projections

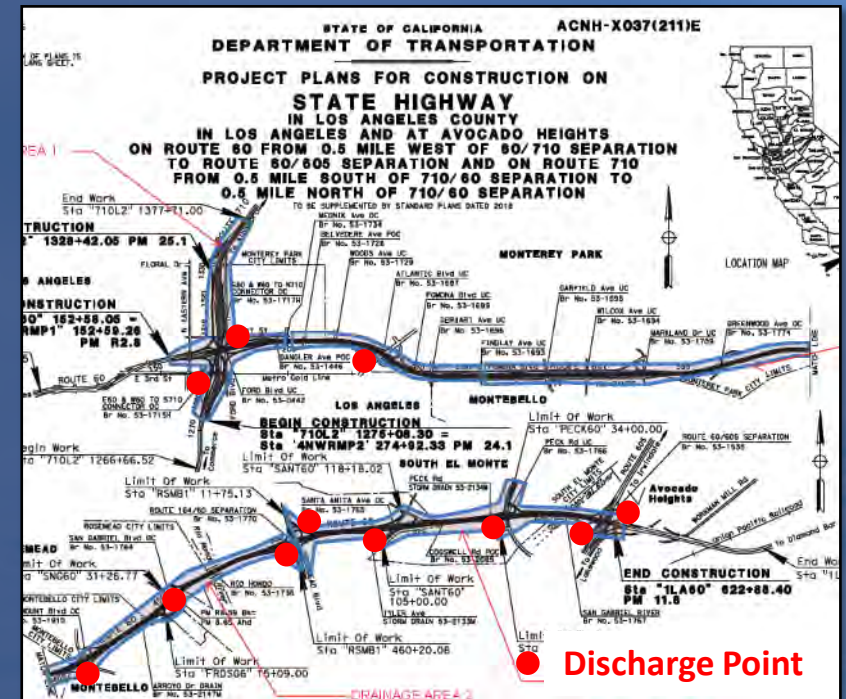
- 2009 CGP Annual Baseline Cost: \$136 million
- 2021 Draft CGP - Increase Cost of New Permit Requirements : \$80 million
- Total Annual 2021 Draft CGP Compliance Cost: \$136 - \$216 million
- Risk – Immediate disruption to active construction projects
 - Tort liabilities associated with Contractor claims
 - Enforcement actions for failure to meet unachievable discharge limits
 - Project Change Requests needed to accommodate allocated budgets
- ✓ Opportunity – Grandfathering will avoid contract disputes for active construction projects to defer cost impacts.

Draft CGP - Feasibility of Compliance

- Non-sediment related TMDL numeric targets Unattainable
 - Insufficient data on ATS effectiveness for non-sediment related pollutants
 - Numeric targets may be too low for available technology
 - Space constraints
 - Large systems, complex piping systems, multiple discharge points, etc.
 - Not conducive to projects linear in nature
- Pre-construction sediment loss Unattainable
 - Erosion prediction modeling (RUSLE2)
 - Lack of industry/regulator knowledge;
 - Highly subjective model
 - Significant increase in erosion & sediment control BMPs
 - Inadequate material and/or labor supplies

Project Information

- Contract No.: 07-301104
- Location: Rte 60 (from Rte 710 to Rte 605); District 7
- Disturbed Soil Area: 71 acres
- Duration: 39 months
- Risk Level: 2
- TMDL Receiving Waters:
 - San Gabriel River Metals
 - Los Angeles River Metals & Nutrients
- Activities:
 - Roadway Improvements
 - Drainage Improvements
 - Landscaping



Permit Cost Comparison

- Estimated CGP Implementation Costs
 - 2009 CGP: \$2,218,274
 - Draft 2021 CGP: \$4,315,209
 - % Increase: 95%
 - 20 – 30% increase in support cost
- Cost Increase Driver: TMDL Implementation
 - **Additional Best Management Practices (BMPs) Required**
 - **Including large footprint Active Treatment Systems to meet runoff limits**
 - Additional Monitoring and Reporting to comply with TMDL pollutants

Additional BMP Requirements

- Treatment BMPs
 - Physical Constraints
 - RUSLE2 Modeling



Profile: CT D7 Sample Project - Slope 2 - Post*

Manage Soil Topo

Add break Erase break

STEP 1: Choose location to set climate:
Location: USA\California\Los Angeles County\CA_Los Angeles_R15

STEP 2: Choose soil type:
Segment: 1 Sag length (horiz), ft: 97 Soil: ...nga-Urban land complex, 0 to 2 percent slopes\Tujunga Sand 65%

STEP 3: Set slope topography:

Segment	Slope length to bottom of seg (along slope), ft	Sag length (horiz), ft	Steepness, %	Total vert. drops, ft	Sediment delivery, t/ac/yr
1	98.23	97.00	16	16	0.060

STEP 4: Select and modify management:

Segment	Slope length to bottom of seg (horiz), ft	Management	Sed. delivery, t/ac/yr
1	16	Mediterranean climate areas\Local Management files\Hydraulic Mulch, BFM 6000 lbs/ac on 11/1	0.037
2	17	MAN_PTR:INTERNAL[1]	0.039
3	36	Mediterranean climate areas\Local Management files\Hydraulic Mulch, BFM 6000 lbs/ac on 11/1	0.045
4	37	MAN_PTR:INTERNAL[3]	0.047
5	56	Mediterranean climate areas\Local Management files\Hydraulic Mulch, BFM 6000 lbs/ac on 11/1	0.050

STEP 5: Set supporting practices: Contouring: a. not contoured; Diversions, Terraces, Sediment Basins: (none)

STEP 6: Set Sediment barrier system: Sediment barrier set: open; description: This record was developed using RUSLE2 Version 2.6.3.4; Build date: June 9, 2017; Science date: June 7, 2017; Custom database for construction site applications, custom

Soil loss, t/ac/yr: 0.037
Soil loss erod. portion, t/ac/yr: 0.060
Sediment delivery, t/ac: 0.060



Unattainable Compliance Expectations



- Inability to meet discharge limits
- Not designed for construction sites

- Safety
- Accessibility
- Inadequate treatment capacity

- Mandatory Minimum Penalties (\$3,000 per violation)
- Escalated enforcement

- No POTWs
- Project schedule
- Unable to construct

QUESTIONS?

