California Urban Streams Alliance – The Stream Team
1282 Filbert Ave
Chico, CA 95926
timmariehamill@gmail.com, 530 342-6620

November 4, 2025

Subject: Comments on Caltrans Highway Project in Gualala, CA – Addressing 6PPD-Q Risks in Stormwater – Agenda Item 4g

Dear Members of the Mendocino County Board of Supervisors and Caltrans District 1 Representatives,

On behalf of the California Urban Streams Alliance – The Stream Team, I am writing to provide comments regarding the ongoing Caltrans highway project in the town of Gualala. Our comments focus on the emerging contaminant 6PPD-Q, which poses a significant risk to salmonid populations and water quality in the Gualala River watershed.

1. Risks of 6PPD-Q in Stormwater

Tire and road-wear particles (TRWP) generate 6PPD-Q, a toxic transformation product of the tire preservative 6PPD. Studies show 6PPD-Q is highly toxic to salmonids, with lethal concentrations reported at 95 nanograms per liter (ng/L) for coho salmon and 1,000 ng/L for rainbow trout (Tian et al., 2021; USEPA, 2023). Stormwater from roads is the primary transport pathway for this pollutant. Without effective treatment, runoff from local highways could pose a risk to coho salmon and steelhead trout in the Gualala River estuary—species already under stress from habitat degradation.

2. Traffic Volume and Local Monitoring

Recent research (Tian et al., 2022; Zhang et al., 2023) has shown a direct correlation between 6PPD-Q concentrations and traffic volume (measured as Average Annual Daily Traffic, or AADT). The 2024 Caltrans White Paper analyzed more than 200 samples statewide and demonstrated that higher AADT corresponds with elevated 6PPD-Q levels.
Given this, we ask:

- Has Caltrans collected current AADT or traffic data for the town of Gualala?
- How is that data being used to assess the local risk of 6PPD-Q in project stormwater discharges?

This information is vital to determine whether Gualala should be identified as a priority area for 6PPD-Q mitigation and monitoring under Caltrans' NPDES and TMDL programs.

3. Mitigation and Design Considerations

The current project design includes one bioswale to treat stormwater. To ensure protection of receiving waters, we request clarification on the following points:

- What volume of stormwater runoff will the bioswale treat?
- How will Caltrans verify that 6PPD-Q concentrations are reduced below toxic thresholds before discharge to the estuary? Has Caltrans monitored 6PPD-Q to set baseline for tracking mitigation effectiveness??
- What coordination has occurred with CDFW, SWRCB, or the Coastal Commission regarding emerging toxic pollutants such as 6PPD-Q?

We also encourage Caltrans to explore additional treatment opportunities that could be incorporated into the project, such as:

- Installing curb cuts to allow for future stormwater sampling.
- Including a stubbed-out line for a potential future bioretention cell.
- Expanding use of small-scale bioretention areas, which Caltrans research (Rodgers et al., 2024) found can remove up to 96% of 6PPD-Q in stormwater.

Integrating such scalable options now would strengthen compliance with Caltrans' Statewide NPDES Permit and Water Quality Objectives while advancing state and federal commitments to salmonid recovery.

We appreciate Caltrans' ongoing efforts to address emerging contaminants and improve stormwater management practices. We respectfully request that these questions and recommendations be considered as part of the project review and future design refinements.

Thank you for your attention to this important issue.

Sincerely,
Timmarie Hamill
Executive Director
California Urban Streams Alliance – The Stream Team

FYI: In 2022, The Stream Team launched the Gualala River Stream Team to assess water quality in the Gualala River and estuary. This program builds on more than two decades of watershed monitoring across Northern California and is supported by strong local partnerships, including with Friends of the Gualala River (FoGR). Together, The Stream Team and FoGR have initiated storm-event monitoring at outfalls above and below the Caltrans project site to measure concentrations of 6PPD-Q in stormwater discharged from parking lots and roadways directly into the Gualala River Estuary without treatment. Sampling from five storm events between November 2024 and October 2025 found 6PPD-Q concentrations exceeding twice the LC50 for Coho Salmon (ranging between 45-170 ng/L). Monitoring will continue through this winter, and we welcome the opportunity to discuss these findings with you.