

## DRAFT Water Quality and Covered Fish Species-Related Avoidance and Minimization Measures

*[Note to Reviewers: This handout presents avoidance and minimization measures for water quality and covered fish species. These measures are in addition to those presented for other resources and will be included in the Butte Regional HCP/NCCP document as part of Chapter 5, Conservation Strategy.]*

### Transportation-Related Covered Activities

**AMM31: Implement CALTRANS Construction Site Best Management Practices (BMPs) To Maintain Water Quality.** Entities implementing covered transportation-related activities will implement CALTRANS best management practices (BMPs: see <http://www.dot.ca.gov/hq/construc/stormwater/factsheets.htm>) in effect at the time of implementation for avoiding and minimizing adverse effects on water quality. BMPs include, but are not limited to:

- **Preservation of existing vegetation:** Preservation of existing vegetation is the identification and protection of desirable vegetation that provides erosion and sediment control benefits.
- **Streambank stabilization:** Drainage systems including the stream channel, streambank, and associated riparian areas, are dynamic and sensitive ecosystems that respond to changes in land use activity. Streambank and channel disturbance resulting from construction activities can increase the stream's sediment load, which can cause channel erosion or sedimentation and have adverse affects on the biotic system. Best Management Practices can reduce the discharge of sediment and other pollutants and minimize the impact of construction activities on watercourses. Streams included on the 303(d) list by the State Water Resources Control Board (SWRCB) may require careful monitoring to prevent construction-related increases in sedimentation, siltation and/or turbidity to the stream
- **Wind erosion control:** Wind erosion control consists of applying water and/or other dust palliatives as necessary to prevent or alleviate erosion by the forces of wind. Dust control shall be applied in accordance with Caltrans standard practices. Covering of small stockpiles or areas is an alternative to applying water or other dust palliatives. Stabilized construction entrance/exit: A stabilized construction access is defined by a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.

- **Water conservation practices:** Water conservation practices are activities that use water during the construction of a project in a manner that avoids causing erosion and/or the transport of pollutants off site.
- **Dewatering operations:** Dewatering operations are practices that manage the discharge of pollutants when non-storm water and accumulated precipitation (storm water) must be removed from a work location so that construction work may be accomplished.
- **Sanitary/septic waste management:** Procedures and practices will be used to minimize or eliminate the discharge of construction site sanitary/septic waste materials to the storm drain system or to watercourses.

**AMM32: Avoid and minimize the bridge construction-related noise and other disturbances.** Entities implementing bridge construction and replacement activities across flowing stream courses will implement CALTRANS noise reduction measures and BMPs (see [http://www.dot.ca.gov/hq/env/bio/fisheries\\_bioacoustics.htm](http://www.dot.ca.gov/hq/env/bio/fisheries_bioacoustics.htm)).

These measures include, but are not limited to:

- **Project timing:** In-water work windows should be scheduled to avoid potential impacts on fish species of concern (i.e., avoid in-water work during salmonid migrations).
- **Pile placement:** Eliminate or minimize the number of piles that require in-water work.
- **Pile type:** Minimize the use of steel piles for in-water work.
- **Pile driving equipment:** Use pile driving techniques that minimize impacts when practicable.
- **Pile size:** Minimize the size of piles as engineering constraints allow.
- **Noise minimization tools:** If in-water work that will create noise levels harmful to fish and wildlife species is deemed unavoidable, use one or a combination of structures and techniques to reduce noise to levels that will not harm fish and wildlife. These structures and techniques include air bubble curtains, cofferdams, isolation casings, and cushion blocks.

### Urban Development-Related Activities

**AMM33: Implement Storm Water Pollution Prevention Plans.** Each entity implementing an urban development covered activity will prepare and implement an approved Stormwater Pollution Prevention Plan (SPPP) that identifies BMPs per the requirements of the jurisdiction within which each activity is implemented. Typical BMPs include:

- Placement of trash receptacles situated at convenient locations on construction sites and maintained such that trash and litter do not accumulate on the site or migrate off-site;
- Placement of structural controls such as sediment barriers, filters, and berms;
- Remove any construction-related debris that falls into streams, or other bodies of water;
- Prohibiting the washing of construction or other vehicles adjacent to a construction site shall be prohibited; and
- Controlling erosion from slopes and channels through the effective combination of BMPs.

**AMM34: Implement Standard Urban Stormwater Management Plans.** Each entity implementing an urban development covered activity will prepare and implement an approved Standard Urban Stormwater Management Plan (SUSMP) per the requirements of the National Pollutant Discharge Elimination System (NPDES) permit for the jurisdiction within which the activity is implemented. The SUSMP must incorporate, at a minimum, either a volumetric or flow-based treatment control design standard, or both, as specified in the National Pollutant Discharge Elimination System (NPDES) permit, to mitigate (infiltrate, filter, or treat) stormwater runoff. Treatment control BMPs set forth in the proposed project plans, shall meet the design standards set forth in the SUSMP.

**AMM35: Implement Landscaping Management Plans.** Each entity implementing an urban development covered activity will prepare and implement an approved irrigation plan and chemical management plan for landscaped areas. Plans shall include use of state-of-art irrigation systems and design features to reduce the potential for herbicides and fertilizers in storm and irrigation runoff and reduce associated potential effects on open drainages.

**AMM36: Implement Wet Weather Erosion Control Plan.** Each entity implementing an urban development covered activity that will leave soil disturbed during the rainy season (i.e., October 1 through April 15) will prepare and implement an approved Wet Weather Erosion Control Plan (WWECP). The WWECP must be available 30 days before construction commences. Information to be provided in WWECPs will include, but not be limited to the following information:

- the name, location, period of construction, and a brief description of the project;
- contact information for the owner and contractor;
- a site map (construction plans may be used) showing the location of erosion land sediment control BMPs that will be implemented for the rainy season; and
- a certification statement that all required and selected BMPs will be effectively implemented.

**AMM37: Implement Additional Avoidance and Minimization Measures and Best Management Practices.** Each entity implementing an urban development covered activity will implement applicable avoidance and minimization measures and BMPs identified in current Central Valley Regional Water Quality Control Board guidelines and the Butte County General Plan that are in addition to those required under AMMs 32-36.

**AMM38: Monitor Construction Sites and Eliminate or Minimize Sources of Contaminants.** Each entity implementing an urban development covered activity will monitor construction sites to identify and eliminate or minimize all sources of contaminants (e.g., leaking fuel tanks or chemical tanks) that could enter ground and surface waters.

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