WDR Attachment B

California Regional Water Quality Control Board
Lahontan Region

Basin Plan Excerpts

South Shore Project Waste Discharge Requirements

1. **Beneficial Uses**. Pursuant to the Basin Plan and State Board Plans and Policies, including State Water Board Resolution No. 88-63, the existing and potential beneficial uses of surface waters potentially affected by the proposed activity include:

   a. Municipal and Domestic Supply (MUN)
   b. Agricultural Supply (AGR)
   c. Groundwater Recharge (GWR)
   d. Freshwater Replenishment (FRSH)
   e. Navigation (NAV)
   f. Water Contact Recreation (REC-1)
   g. Non-contact Water Recreation (REC-2)
   h. Commercial and Sportfishing (COMM)
   i. Cold Freshwater Habitat (COLD)
   j. Wildlife Habitat (WILD)
   k. Preservation of Biological Habitats of Special Significance (BIOL)
   l. Rare, Threatened, or Endangered Species (RARE)
   m. Freshwater Replenishment (FRSH)
   n. Migration of Aquatic Organisms (MIGR)
   o. Spawning, Reproduction, and Development (SPWN)
   p. Water Quality Enhancement (WQE)
   q. Flood Peak Attenuation/Flood Water Storage (FLD)

   The beneficial uses of the groundwaters of the Lake Tahoe HU Department of Water Resources Groundwater Basin No. 6-5.02, as set forth and defined in the Basin Plan include municipal and domestic supply and agricultural supply.

   Of these, Project activities have the potential to affect groundwater recharge, non-contact water recreation, cold freshwater habitat, wildlife habitat, preservation of biological habitats of special significance, rare, threatened, or endangered species, spawning, reproduction, and development, water quality enhancement, and flood peak attenuation/flood water storage. The FEIS, FEIR, and this Order contain elements and requirements to avoid or reduce disturbance in sensitive areas, monitor Project activities, mitigate potential disturbances, and restore natural functionality of meadows and SEZs. Where measures detailed in the FEIS, FEIR, and these WDRs appear to be conflicting, the more protective or

restrictive measures shall be adhered to in the field. It is expected that these nine beneficial uses will be positively affected by the Project in the long term.

2. **Water Quality Objectives**. The Porter-Cologne Water Quality Control Act defines "water quality objectives" as the allowable "limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area." The Basin Plan provides both narrative and numerical water quality objectives for individual water bodies which define the upper concentration or other limits that the Water Board considers protective of beneficial uses. Additionally, the Basin Plan includes a Nondegradation Objective which applies to all waters of the Lahontan Region, including surface waters, wetlands, and ground waters. Whenever the existing quality of water is better than the quality of water established in this Basin Plan as objectives (both narrative and numerical), such existing quality shall be maintained unless appropriate findings are made under the policy.

   The Basin Plan Chapter 5 lists the following narrative and numerical water quality objectives for the following, which apply to all surface waters within the Lahontan Region:
   (a) Ammonia;
   (b) Bacteria, Coliform;
   (c) Biostimulatory Substances;
   (d) Chemical Constituents;
   (e) Chlorine, Total Residual;
   (f) Color;
   (g) Dissolved Oxygen;
   (h) Floating Materials;
   (i) Oil and Grease;
   (j) Non-degradation of Aquatic Communities and Populations;
   (k) Pesticides;
   (l) pH;
   (m) Radioactivity;
   (n) Sediment;
   (o) Settleable Materials;
   (p) Suspended Materials;
   (q) Taste and Odor;
   (r) Temperature;
   (s) Toxicity; and
   (t) Turbidity.

   The Basin Plan also includes narrative and numeric water quality objectives which are directed toward protection of surface waters in specific areas, which, in case of overlap, supersede the water quality objectives described for all surface waters. These specific areas which are affected by the Project include the Lake Tahoe HU and Fallen Leaf Lake. While the Project may have the potential to affect any of the Basin Plan-listed water quality objectives, suspended sediment, (stream)

temperature, and turbidity are at most risk during timber harvesting operations. These water quality objectives are as follows:

- Suspended sediment concentrations in tributaries to Lake Tahoe shall not exceed a 90th percentile value of 60 mg/L.
- The natural receiving water temperature of all waters shall not be altered unless it can be demonstrated to the satisfaction of the Water Board that such an alteration in temperature does not adversely affect the water for beneficial uses. For waters designated COLD, the temperature shall not be altered.
- Waters shall be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. Increases in turbidity shall not exceed natural levels by more than 10 percent. For Lake Tahoe, the vertical extinction coefficient shall be less than 0.08 per meter when measured below the first meter. When water is too shallow to determine a reliable extinction coefficient, the turbidity shall not exceed 3 Nephelometric Turbidity Units (NTU).

Table 5.1-3 in the Basin Plan includes the following water quality objectives for certain water bodies in the Lake Tahoe HU (only surface waters potentially affected by the Project are included below):

Surface Waters	**Objective (mg/L)** [1,2]						
	TDS	**Cl**	**SO_4**	**B**	**N**	**P**	**Fe**
Lake Tahoe	60 65	3.0 4.0	1.0 2.0	0.01 -	0.15 -	0.008 -	--
Fallen Leaf Lake	50 -	0.30 0.50	1.3 1.4	0.01 0.02	See Basin Plan Table 5.1-4 (reproduced below), for additional objectives		
Tallac Creek	60 -	0.40 -	--	--	0.19 -	0.015 -	0.03 -
Taylor Creek	35 -	0.40 0.50	--	--	0.17 -	0.010 -	0.02 -
Upper Truckee River	55 75	4.0 5.5	1.0 2.0	--	0.19 -	0.015 -	0.03 -
Trout Creek	50 60	0.15 0.20	--	--	0.19 -	0.015 -	0.03 -

[1] Annual average value/90th percentile value.
[2] Objectives are as mg/L and are defined as follows:
B - Boron
Cl - Chloride
SO_4 - Sulfate
Fe - Iron, Total
N - Nitrogen, Total
P - Phosphorus, Total
TDS - Total Dissolved Solids (Total Filterable Residues)

Table 5.1-4 in the Basin Plan includes the following additional water quality objectives for Fallen Leaf Lake:

Constituent	Objective (mg/L except for pH and Temperature)
pH [a]	6.5 - 7.9
Temperature [b]	Hypolimnion - □15 ^{o} C Bottom (105m) - □7.5 ^{o} C at no time shall water be increased by more than 2.8 ^{o} C (5 ^{o} F).
Dissolved oxygen [c]	% saturation above 80% and DO >7 mg/L except if saturation exceeds 80% DO at bottom (105m) > 6mg/L
Total nitrogen [d]	0.087 [e] / 0.114 [f] / 0.210 [g]
Dissolved inorganic – N [h]	0.007 / 0.010 / 0.023
Total phosphorus	0.008 / 0.010 / 0.018
Soluble reactive - P	0.001 / 0.002 / 0.009
Soluble reactive iron	0.004 / 0.005 / 0.012
Total reactive iron	0.005 / 0.007 / 0.030
Chlorophyll-a [ij]	0.6 / 0.9 / 1.5
Clarity - Secchi depth [k] - Vertical extinction coefficient	18.5 / 16.0 [l] / 13.6 [m] 0.146 / 0.154 / 0.177 [n]
Phytoplankton cell counts [o]	219 / 280 / 450

[a] 0.5 units above and 0.5 units below 1991 maximum and minimum values. Also reflects stability of this constituent throughout the year.
[b] Based on 1991 data. Indicates that if temperature in the hypolimnion during the summer exceeds 15^{o} C or if the water at 105m exceeds 7.5^{o} C this would constitute a significant change from existing conditions. Unless there is a anthropogenic source of thermal effluent, which does not currently exist, changes in water temperature in Fallen Leaf Lake are natural. Objectives apply at any time during the defining period.
[c] Based on coldwater habitat protection and 1991 data base. The need for an objective for the bottom (105m) results from the desire to control primary productivity and deposition of organic matter on the bottom. A decline in bottom DO to below 6 mg/L would indicate a fundamental shift in the trophic state of Fallen Leaf Lake.
[d] Because of the similarity between the mid-lake and nearshore sites, Fallen Leaf Lake objectives for N, P and Fe are based on the combined mid-lake 8 m and 45 m, and nearshore 8 m concentrations. Units are mg N/L, mg P/L and mg Fe/L.
[e] Mean annual concentration (May - October) unless otherwise noted.
[f] 90th percentile value unless otherwise noted.
[g] Maximum allowable value; 1.5 times the maximum 1991 value. No single measurement should exceed this value unless otherwise noted.
[h] DIN = NO3+NO2+NH4
[l] Corrected for phaeophytin degradation pigments.

[j] Units are µg chl-a/L.
[k] Units are meters.
[l] 10th percentile since clarity increases with increasing Secchi depth.
[m] Represents 15% loss of clarity from 10th or 90th percentile value.
[n] Calculated in the photic zone between 1 m below surface to 35 m. Units are per meter.
[o] Units are cells per milliliter.

3. Lake Tahoe TMDL. Basin Plan Subchapter 5.18 describes the Lake Tahoe TMDL which include project-specific requirements (shaded for emphasis, below) for forest management agencies:

> *Forest Uplands:* Forest uplands comprise approximately 80 percent of the land area within the Lake Tahoe basin. Fine sediment particles from this source category most often originate from discrete disturbed areas such as unpaved roads, ski runs, and recreation areas in forested uplands.
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> The United States Forest Service Lake Tahoe Basin Management Unit (LTBMU), California Department of Parks and Recreation, California Tahoe Conservancy (CTC), and other public land managers implement watershed management programs on their lands. As part of these watershed management programs, land managers maintain existing facilities (including unpaved roads and trails), restore disturbed lands, implement and maintain stormwater treatment facilities for all paved/impervious surfaces, prevent pollutant loading from fuels management work, and take other actions to reduce fine sediment particle, total nitrogen, and total phosphorus loads. These agencies are responsible for implementing forest fuels reduction projects to reduce the threat of wildfire in the Lake Tahoe basin. These projects must include best management practices and appropriate monitoring to ensure fuels reduction efforts do not cause this source to exceed its load allocation for fine sediment particle and nutrient loads and must comply with any applicable state or federal permits regulating stormwater discharges from roads created for silvicultural activities.
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> The California Department of Forestry and Fire Protection is responsible for regulating forest practices on private forest lands and works directly with Regional Board staff to minimize the water quality impacts associated with vegetation management. The Emergency California-Nevada Tahoe Basin Fire Commission Report (May 2008) provides guidance to the Regional Board and the Tahoe Regional Planning Agency to facilitate projects that address Lake Tahoe's wildfire vulnerability.
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> The Ninth Circuit federal Court of Appeals has found that "stormwater runoff from logging roads associated with silviculture that is collected in a system of ditches, culverts, and channels and is then discharged into streams and rivers" is not exempt from the National Pollutant Discharge

Elimination System permitting process because it is considered a point source discharge of stormwater "associated with industrial activity" (Northwest Environmental Defense Center v. Brown, 2010 WL 3222105 (2010)). If, in conformance with this decision, the Water Board reclassifies a portion of the forest load allocation as a waste load allocation, such a regulatory shift would not change the implementation approach.

The forest upland load reductions are expected to be accomplished through continued implementation of existing watershed management programs described above. The Regional Board will require forest management agencies to track and report load increases and load reduction activities to assess whether required basin-wide forest load reductions are occurring. Some activities, including fuels reduction and associated administrative road construction, have the potential to increase pollutant loading at a project scale. Forest management agencies responsible for these actions must demonstrate that other project activities, including restoration efforts and temporary and/or permanent best management practices, will be implemented to compensate for any anticipated project-scale loading increase. These agencies must ensure that no increased loading occurs on a sub-watershed or catchment scale and that the basin-wide fine sediment particle, total nitrogen, and total phosphorus load from the forest uplands is reduced as required by Tables 5.18-2, 5.18-3, and 5.18-4.

4. **Discharge Prohibition, Required Findings, and Exemption**. To protect the natural treatment capacity of 100-year floodplains and SEZs, and to prevent channelized flows from causing erosion, the Basin Plan prohibits permanent disturbance within 100-year floodplains and SEZs, unless the Water Board grants exemptions to these prohibitions.

   The following is a listing of waste discharge prohibitions applicable within the Lake Tahoe HU. These include both region-wide prohibitions and prohibitions specifically applicable to the Lake Tahoe HU. "Waste" is defined to include any waste or deleterious material, including, but not limited to, waste earthen materials (such as soil, silt, sand, clay, rock, or other organic or mineral material) and any other waste as defined in the California Water Code Section 13050(d).

   (a) Regionwide Prohibitions

   1. The discharge of waste which causes violation of any narrative water quality objective contained in this Plan, including the Nondegradation Objective, is prohibited.
   2. The discharge of waste which causes violation of any numeric water quality objective contained in this Plan is prohibited.

3. Where any numeric or narrative water quality objective contained in this Plan is already being violated, the discharge of waste which causes further degradation or pollution is prohibited.
4. Direct discharges of wastes, including sewage, garbage, and litter, into surface waters of the Region are prohibited.

The Water Board encourages restoration projects that are intended to reduce or mitigate existing sources of soil erosion, water pollution, or impairment of beneficial uses, and may grant exemptions to these prohibitions for waste earthen materials discharged as a result of restoration projects. However, there are no exemptions to the above prohibitions for any other type of project. All of the above prohibitions therefore apply to the Project.

(b) Project-Applicable Lake Tahoe HU Discharge Prohibitions

1. The discharge of waste earthen material or of any other waste as defined in Section 13050(d) of the California Water Code which would violate the WQOs of this plan, or otherwise adversely affect the beneficial uses of water designated by this plan, is prohibited.
2. The discharge of treated or untreated domestic sewage, industrial waste, garbage or other solid wastes, or any other deleterious material to the surface waters of the Lake Tahoe Basin is prohibited.
3. The Porter-Cologne Act also prohibits the discharge of garbage or other solid waste to lands within the Lake Tahoe Basin.
4. The discharge, attributable to human activities, of solid or liquid waste materials, including soil, silt, clay, sand and other organic and earthen materials, to the surface waters of the Lake Tahoe Basin, is prohibited.
5. The discharge, attributable to human activities, of solid or liquid waste materials, including soil, silt, clay, sand and other organic and earthen materials to lands below the highwater rim of Lake Tahoe or within the 100-year floodplain of any tributary to Lake Tahoe is prohibited.
6. The threatened discharge, attributable to human activities, of solid or liquid waste materials including soil, silt, clay, sand, and other organic and earthen materials, due to the placement of said materials below the highwater rim of Lake Tahoe or within the 100-year floodplain of any tributary to Lake Tahoe, is prohibited.

There are no exemptions to the above prohibitions for any type of project, except for Items 4, 5, and 6, as noted in Finding # 18(d). The remaining items in the above are therefore applicable to this Project.

(c) Lake Tahoe HU Discharge Prohibitions to Protect 100-Year Floodplains

The Basin Plan includes a Water Board discharge prohibition to protect 100-year floodplains in the Lake Tahoe Basin, as follows. This is separate from the prohibitions for protection of SEZs. The criteria for definition of SEZs include

100-year floodplains as secondary indicators, but unless other indicators are also present, a 100-year floodplain is not automatically considered to be a SEZ. When a 100-year floodplain is considered a SEZ, the SEZ exemption criteria noted below under Finding # 18(d) apply.

The discharge, or threatened discharge, attributable to human activities, of solid or liquid waste materials, including soil, silt, clay, sand and other organic and earthen materials to lands below the highwater rim of Lake Tahoe or within the 100-year floodplain of any tributary to Lake Tahoe is prohibited.

For public service facilities, the Lahontan Water Board may grant exceptions to the 100-year floodplain discharge prohibition for Lake Tahoe and its tributaries, in cases where the floodplain is not also an SEZ, only under the following circumstances: (a) the project is necessary for public health, safety, or environmental protection, (b) there is no reasonable alternative, including spans, which avoids or reduces the extent of encroachment in a floodplain, and (c) the impacts on the floodplain are minimized. These conditions for this Project are covered in Finding # 18(d).

(d) Lake Tahoe HU Discharge Prohibitions to Protect SEZs

In the Lake Tahoe HU, the Water Board adopted waste discharge prohibitions to limit soil erosion and sediment delivery in and around surface waters and their associated floodplains and Lake Tahoe SEZs. The Water Board has identified extremely fine sediment (less than 16 micrometers in size) to be the primary cause of clarity loss in Lake Tahoe and anticipates adopting a Total Maximum Daily Load (TMDL) for sediment and nutrient discharges to Lake Tahoe in 2010. Therefore, this Order adds additional conditions and requirements within the Lake Tahoe HU to ensure compliance with the Basin Plan.

The Basin Plan specifies the following discharge prohibition for activities within SEZs: “the discharge or threatened discharge, attributable to new development in SEZs, of solid or liquid waste, including soil, silt, sand, clay, rock, metal, plastic, or other organic, mineral or earthen materials, to SEZs in the Lake Tahoe basin is prohibited.”

"New development" means ". . . construction activity resulting in permanent soil disturbance … New development does not include maintenance or repair of an existing structure or the replacement of any existing structure with another structure on the same parcel of no greater land coverage." This means that if an activity occurs in an SEZ that does not result in permanent disturbance, the prohibition is not violated.

The Basin Plan provides that exemptions may be granted for public service facilities that are applicable to timber harvest and vegetation management activities in SEZs:

1. The project is necessary for public health, safety or the environment.
2. There is no reasonable alternative, including spans, which avoids or reduces the extent of encroachment.
3. The impacts are fully mitigated.
4. SEZ lands are restored in an amount 1.5 times the area of land developed or disturbed by the project.

The following Project-related activities proposed to be conducted within 100-year floodplains or in SEZs require an exemption:

- Enlargement of existing permanent watercourse crossings and/or roads.
- Construction of temporary roads.
- Construction of temporary watercourse crossings and associated approaches in place longer than one season.
- Construction of skid trails.
- Pile burning.

The Project contains elements of the following types of timber harvest and vegetation management projects which make them eligible for exemptions to the above-described prohibitions:

- Timber harvest and vegetation management projects to reduce fuel loading that are identified in a community wildfire protection plan.
- Improvement of a stream crossing on an existing road to benefit water quality.
- Timber harvest and vegetation management projects for aspen regeneration or improvement of riparian conditions.
- Construction of an approach within a 100-year floodplain or a crossing necessary to achieve Project goals.
- Timber harvest and vegetation management activities to protect forest values, such as wildlife habitat.