WDR Attachment F

California Regional Water Quality Control Board
Lahontan Region

Best Management Practices and Mitigation Measures

South Shore Project Waste Discharge Requirements

Many terms used in this document have specific meanings as defined in Attachment A. All other terms shall have the same definitions as prescribed by the California Forest Practice Rules (California Code of Regulations, title 14, section 895.1 et seq.), Public Resources Code section 4528, subdivision (f), and the Porter-Cologne Water Quality Control Act (Water Code section 13000 et seq.), unless specified otherwise.

The following Best Management Practices (BMPs) may be subdivided into operations which may take place during or outside of dry conditions, or during or outside of normal operating periods. "Dry conditions" and "normal operating periods" shall be as defined in BMPs No. 5 and 6; "wet conditions" and "outside of normal operating periods" shall be defined as all other times.

General Best Management Practices

1) All equipment used shall be monitored daily for leaks, and immediately repaired and/or removed from service if necessary to protect water quality. All hazardous material spills, whether from equipment, fueling activities, or other materials handling and storage, shall be immediately contained and spilled materials and/or contaminated soils must be disposed of in a legal and responsible manner. An emergency spill kit adequate to contain spills that could result from hazardous materials or equipment on-site shall be at the project site at all times.

2) Uncured concrete materials shall be stored in a weatherproof area, away from Stream Environment Zones (SEZs) and waterbodies. Concrete mixing shall only occur within a self-contained and removable, impenetrable container that provides protection from accidental runoff. Concrete mixers or sweepings shall not be washed out within 50 feet of storm drains, open ditches, streets, SEZs, or waterbodies; concrete washings and wastes shall be stored in an impenetrable container for later disposal and shall be cleaned up and disposed of properly.

3) Where any part of BMPs No. 10, 17, 20, 21, 24, 39, 50, and 52b is either not practicable or feasible due to the specified field conditions or is left to the Discharger's discretion, the Discharger's staff, as noted in the relevant BMP,

shall implement BMPs and mitigation measures that provide equal or better protection to these original BMPs. Where such deviations are made, additional explanation, tracking, and reporting are required pursuant to the MRP.

4) Where any of the following BMPs require submittal of additional details, plans, BMPs, mitigation measures, or any other design to Water Board staff, those designs shall be provided to Water Board staff for review and acceptance at least 30 days prior to site activities. In rare cases where timing is critical, the Discharger may request a shorter time period for staff review and acceptance by the Water Board Executive Officer.

Vegetation treatments in uplands (during normal operating period and dry conditions)

5) "Normal operating periods," as used throughout these documents, refers to that period between May 1st and October 15th, when conditions within the Lake Tahoe Basin are generally dry. However, ground-based equipment operations are allowed during this period only when dry soil moisture conditions, as determined pursuant to BMP No. 6, exist. Temporary erosion control measures as noted throughout this Attachment shall be in place throughout the Project prior to commencing any soil-disturbing activities, and the Discharger shall implement additional BMPs as required in BMP No. 23 prior to any forecast storm event which may mobilize loosened sediments towards waterbodies.

6) To determine operable dry soil conditions, the Discharger's Soil Scientist shall evaluate soil moisture conditions at the 2 to 10-inch depth, where ruts to a depth of two inches or more for a distance of 25 feet or more will not be exceeded. Operable moisture conditions shall be only as noted in the Soil Moisture Operability Protocol, Table 1The acceptable 'operable area' is as defined by those characteristics recommended for operable soils in the Table by both the USFS Regional Soil Scientist and Bob Powers (USFS PSW Soil Scientist). Where it is necessary to cross an SEZ with inoperable soil moisture conditions, the Discharger shall submit detailed justification and plans, including monitoring and mitigation measures, to Water Board staff for review and acceptance prior to implementation, pursuant to BMP No. 4, above.

Soil Moisture Operability Protocol, Table F1

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Soil Moisture % Increases Downward	Coarse Soils	Light Soils	Med. Soils (<35% clay)	Heavy Soils (>35% clay)
	Loamy sands, fine sand loam, very fine sands, coarse sands	Fine sandy loams, sandy loams, very fine sandy loam	Sandy clay loam, loam, silt loam, sandy clay loam, clay loam	Clay loam, sandy loam, silty clay loam, clay
Dry Soils	Dry, loose, single grained flows thru fingers	Dry, loose, flows thru fingers	Powdery, dry, sometimes slightly crusted but breaks down into powdery conditions	Hard, baked, cracked sometimes has loose crumbs on surface
Moist Soil	Still appears dry, will not form a ball with pressure	Still appears to be dry; will not form a ball		
Moist Soil	Still appears dry, will not form a ball with pressure			

7) Ground-based treatments may be used to reduce upland hazardous fuels on slopes less than 30% and soils not considered sensitive. Skid trails shall be designated and flagged to be at least 40 feet apart, except where they converge at landings.

8) On slopes greater than 30%, ground-based equipment shall not be used, however, hand treatments, end-lining, or equipment reach may be used to reduce hazardous fuels in these areas. See also BMP No. 9. Berms from ruts created by end-lining or equipment reach shall be raked in, and disturbed soils shall be covered, as described in BMP No. 21b-c.

9) Where isolated, small areas of slopes greater than 30% are present in a treatment unit, trees shall be hand-felled and the logs end-lined (or removed by reaching in with an articulated boom) to a part of the treatment unit where they can be picked up by heavy equipment. Berms from ruts created by end-lining or equipment reach shall be raked in, and disturbed soils shall be covered, as described in BMP No. 21b-c.

10) Where end-lining or equipment reach occurs on slopes above 10%, materials shall be removed along slope contours (i.e., cross-slope) to avoid creating

ruts in the soil that are oriented downhill. Berms from ruts created by end-lining or equipment reach shall be raked in, and disturbed soils shall be covered, as described in BMP No. 21b-c. Where this operation is not practicable, the Discharger shall follow BMP No. 3.

11) Water bars on skid trails shall be installed to provide proper drainage and prevent erosion before large precipitation events (one inch forecasted by the National Weather Service [NWS, http://www.nws.noaa.gov/]) and within 15 days after operations are complete. Spacing of water bars shall be in accordance with California Department of Forestry and Fire Protection's (CalFire's) California Forest Practice Rules 2009 (FPRs), California Code of Regulations, title 14, section 914.6:

Maximum Distance between Waterbreaks (Table F2)

Estimated Erosion Hazard Rating	**US Equivalent Measure Road or Trail Gradient (in percent)**			
	10 or less	11-25	26-50	>50
	feet	Feet	Feet	Feet
Extreme	100	75	50	50
High	150	100	75	50
Moderate	200	150	100	75
Low	300	200	150	100

These specific requirements of the FPR's design and spacing of waterbreaks (equivalent to water bars) shall be included on the Final Contract Plans and Maps provided to Water Board staff and the Contractor prior to operations. All water bars shall be evaluated to determine if additional energy dissipaters, per BMP No. 37d, are necessary.

Vegetation treatments in RCAs and SEZs (during and outside of normal operating periods).

12) SEZs shall be determined by application of the criteria set forth in the Tahoe Regional Planning Agency's (TRPA's) Water Quality Management Plan for the Lake Tahoe Region, Volume III, SEZ Protection and Restoration Program (1988). Prior to commencing operations within any treatment unit which contains SEZs, wetlands, or waterbodies, maps of sufficient scale shall be developed which clearly identify these sensitive areas. SEZs shall also be flagged on the ground prior to operations. Flagging shall be maintained throughout the life of the Project activities (including prescribed fire activities) within any active treatment unit. Work in SEZs shall be limited to the time of year when soils are dry, or when operable conditions are present outside of normal operating season, as specified in BMPs No. 6, 22a, and 22b.

13) Ground-based equipment operations shall be limited in SEZ stands to Cut-to-Length (CTL) operations or operations using equipment that has been demonstrated to the Water Board Executive Officer to not result in permanent disturbance in SEZs.
   a) SEZ stands that exhibit equal or less sensitivity than the Heavenly Valley Creek SEZ Demonstration Project (HSEZ) site based on the Sensitivity Rating System may be treated with the above CTL or approved equivalent ground-based equipment under operable soil moisture conditions, as specified in BMP No. 6.
   b) Ground-based equipment shall not be used to treat SEZ stands that rate more sensitive than the HSEZ project site. These areas may be treated by hand crews, endlining or equipment reach (per BMPs No. 8, 9, 10, and 21), or mechanical over-snow operations (per BMP No. 22a).
   c) When SEZ stands are rated more sensitive than the HSEZ site, but only a portion of the stand is responsible for the high sensitivity rating, the less sensitive part may be treated with the above CTL or approved equivalent ground-based equipment, provided access to the less sensitive part across operable soils is available. The more sensitive portions of these stands must still be treated by hand crews, endlining or equipment reach, per BMPs No. 8, 9, 10, 14, 20, and 21, or mechanical over-snow operations, per BMP No. 22a. Waterbody buffer zones, per BMPs No. 14 and 15, from more sensitive SEZ soils, watercourse channels, wet soils, special aquatic features, or other sensitive features within these particular stands shall be flagged prior to commencement of CTL or approved equivalent mechanical operations.
   d) If operating within SEZs, CTL equipment must travel only over areas that have been scattered with limbs and tree tops to prevent rutting or compaction of underlying soils and minimize damage to native SEZ vegetation. The CTL Forwarder shall remove this slash bed when backing out of a completed unit; sufficient slash shall be left to provide adequate ground cover, as defined in BMP No. 21b. Where sufficient slash is unavailable to adequately control erosion, waterbreaks, per BMP No. 11, shall be hand-created on CTL trails.

14) In the area between any waterbody and 25 feet beyond bankfull stage (or top of bank, whichever is greater) of any waterbody, CTL tree removal methods shall be limited to reaching in and removing logs <u>with full suspension</u> to avoid ground disturbance.

    CTL equipment shall maintain the 25-foot exclusion buffer on perennial and intermittent watercourses for over-the-snow and hard frozen soil operations in SEZs.

15) For Whole Tree (WT) equipment operations, waterbody buffer zones for all waterbodies shall be, at a minimum, as detailed in Table F-3 below:

Waterbody Buffer Zones (Table F3)

Slope of land adjacent to watercourse or lake (%)	Class I	Class II (includes special aquatic features)	Class III	Class IV
<30	75 feet	50 feet	25 feet	25 feet
30-50	100 feet	75 feet	50 feet	50 feet
>50	150 feet	100 feet	50 feet	50 feet

Ground-based equipment in WT treatment stands shall not operate in SEZs or within these waterbody buffer zones. Hand or CTL (per BMPs No. 13 and 14) treatments may be used in these areas. SEZ areas within WT stands shall be treated with hand crews, leaving the resulting logs in place, except as described in BMP No. 21. No standard buffer zone width has been established for unclassified waterbodies. However, timber harvest and vegetation management activities shall be excluded from within the channel zone, except for use and maintenance of existing roads and crossings.

16) All waterbody buffer zones shall be flagged per BMP No. 15 prior to operations. Flagging shall be maintained throughout Project operations in all active Treatment Units.

17) Existing downed trees and Large Woody Debris (LWD, or Coarse Woody Debris, as denoted in the Final Environmental Impact Statement [FEIS]) that are in Class I, II, or III watercourses shall be left in place unless the Discharger's Hydrologist or Fisheries Biologist authorizes removal to protect or improve channel stability and the Discharger follows BMP No. 3. If embedded LWD must be removed, a sediment curtain shall be erected around the LWD to be removed and dewatered unless those portions of the LWD which are not embedded can be sawed off and removed to avoid disturbing stream bed and bank. Once the LWD has been removed, the disturbed bed and/or bank shall be stabilized prior to reintroducing stream flow.

18) Trees (live or dead) may be marked for removal within five feet of the bank edge of any waterbody only where fuel loads or stand densities exceed prescription and where LWD is at or above desired levels. No live trees greater than 14-inch dbh (diameter at breast height) which contribute to the stability of stream banks, as determined by the Discharger's Hydrologist or Fisheries Biologist, shall be removed.

Stream bank, or near-stream vegetation removal shall also be managed to ensure there is no measurable increase in daily mean water temperatures where fuel reduction occurs. Shaded bank conditions shall be maintained on fish-bearing watercourses by retaining at least 50% of the stream bank site

potential for herbaceous and shrub cover and at least 25% of the site potential for tree cover. Where natural tree cover is less than 20%, 80% of the potential shall be retained. Thirty-five to 70% of the stream shall be shaded from 11:00 AM to 4:00 PM.

19) Riparian vegetation, other than target species, that is found along waterbodies, or within or bordering meadows and wet areas, must be retained and protected during timber harvest and vegetation management activities. No more than 15% incidental damage to riparian vegetation shall occur.

20) Directional falling shall be used to keep felled trees out of Class I, II, or III watercourses unless the channel reach is identified as deficient in LWD. Taylor Creek is the only watercourse identified in the FEIS as being below desired LWD levels; therefore, within LWD-deficient section(s) of Taylor Creek, the Discharger's Fisheries Biologist shall select trees greater than 12-inch DBH, while adhering to BMPs No. 3 and 18, to be felled directionally into the channel. The Discharger's Fisheries Biologist shall submit additional details and adequate justification to Water Board staff for review and acceptance per BMPs No. 3 and 4, prior to felling trees into any other watercourse within the units listed under Resource Protection Measure AR-3 in the FEIS.

21) To achieve desired fuel loading in SEZs within WT units, the Discharger's Watershed Specialist may determine to use equipment reach or end-line trees out of the SEZ, per BMP No. 3. Ruts caused by end-lining or equipment reach shall be mitigated, per Paragraph c below. Slash in excess of 15 tons per acre shall be removed by hand from waterbody buffers, per BMP No. 15, and may be piled and burned.
    a) Any other WT tree removal methods that disturb the ground surface within waterbody buffer zones, per BMP No. 15, shall be prohibited. Ground-based equipment may only reach in to remove material located within the distance noted in BMP No. 14 by using full suspension, and may only operate within the waterbody buffer zone when constructing, removing, or utilizing temporary or permanent watercourse crossings.
    b) 90% ground cover shall be provided to a depth not exceed an average of two inches with a maximum of four inches, to prevent erosion in disturbed areas. "Ground cover" means slash, wood chip, or masticated material (collectively termed "chip" throughout these BMPs), and includes sufficient existing surface rock, needle cast, and brush or other vegetative matter in contact with the soils. Existing ground cover shall be considered sufficiently effective where monitoring supports that the rock or vegetation retain soils, reduce raindrop splash, prevent erosion, and promote infiltration.
    c) Berms from ruts created by end-lining, which have the potential to discharge runoff to a waterbody or create nick points, shall be raked in and ground cover per Paragraph b, above, shall be provided to stabilize soils. Individual logs may be placed within SEZs to interrupt runoff flow

and act as sediment barriers. These log berms must be placed on contour such that runoff is neither redirected around the ends nor under the logs.

Vegetation Treatments in uplands (outside of normal operating period)

22) When working outside of the normal operating period, conditions shall be adequate to prevent erosion, sediment delivery to water bodies, and soil compaction that could impact soil productivity or soil hydrologic function.
   a) Operations shall be permitted in hard-frozen soil conditions where operated vehicles, tractors, and equipment can travel without creating ruts in soil, road, or landing surfaces. Temperatures shall also remain low enough to preclude thawing of the soil surface sufficient to create rutting.
   b) For over-the-snow operations, a minimum of 12 inches of compact snow/ice shall be maintained on undisturbed ground, and six inches of compacted snow/ice shall be maintained on existing disturbed surfaces. Before over-snow operations begin, snow shall be packed on landings and main trails to facilitate freezing. Wood chips may also be spread in packed snow base, to provide traction.
   c) When snow conditions are at acceptable depth and temperatures, as defined in Paragraph b, to be suitable for over-the-snow operations, ground-based equipment operations shall be allowed per BMPs No. 22a and b and 23.

23) When conditions are approaching inoperable (i.e., outside the operable conditions defined in BMP No. 6), all BMPs designed to contain or infiltrate runoff before it reaches a waterbody shall be installed as equipment and materials are being moved to staging areas or paved locations. Discharger staff shall time activities to complete all tasks and safely stage equipment and materials prior to the arrival of the anticipated storm event or warming trend.

24) When adequate snow or frozen soil conditions are not present, but soils are dry per BMP No. 6, WT equipment operations and temporary crossings on Class II, III, or IV (intermittent or ephemeral) watercourses may be approved on a case by case basis through agreement between the Discharger's Sale Administrator and Watershed Specialist. These agreements shall be documented and performed according to the conditions of BMPs No. 3 and 53 through 55. Over-snow watercourse crossings may be constructed as long as they are designed to pass all flows during rain on snow events, snow melt, or other unexpected flow event equal to or greater than a 20-year, one-hour storm event, without the risk of diversion or obstruction of the natural flow of water within the channel, and removed at the conclusion of operations. Removal of such watercourse crossings shall be done without obstructing flows, impairing water quality, or disturbing watercourse bed or banks, per BMPs No. 54d through f, and 55.

Hand-Piling and Pile Burning in SEZs, and other Prescribed Fires

25) The Discharger shall develop and submit a Fire Prescription Plan, as specified in the WDR Section B.9, to Water Board staff for review and acceptance prior to any Project-related burning activity, per BMP No.4. The Fire Prescription Plan shall include underburning prescriptions (such as creep, avoidance areas, specific measures to protect arborglyphs, etc.), burn pile details (such as percentage piled, buffers, sizing, re-piling, hot piling, etc.), and smoke controls (such as prescribing weather conditions, e.g., mixing heights and transport winds, for the affected communities and Desolation Wilderness). The Fire Prescription Plan shall therefore incorporate BMPs No. 26 through 31 and adaptive management strategies, plus additional BMPs and Resource Protection Measures included in the Discharger's Project-specific Thinning Contract, Burn Plan, and Smoke Management Plan. Underburn prescriptions shall be designed to ensure that fire intensity and duration do not result in severely burned soils and protect water and soil resources. The BMPs and Resource Protection Measures specified in the accepted Fire Prescription Plan shall be adhered to throughout Project operations.

26) A 50-foot buffer (no hand piling or pile burning) shall be flagged and maintained along Class I or II (perennial or intermittent watercourses or springs) watercourses, lakes, and special aquatic features. Piling and burning shall be permitted up to 10 feet from the edge of Class III or IV (ephemeral) watercourses where slopes are less than 15%.

27) Where effectiveness monitoring on burned piles in SEZs, as required in the MRP (WDR Attachment C), indicates hydrophobic soils were created beneath the burn piles, the burn area shall be raked to a depth of six inches to break up the hydrophobic soils, native organic matter shall be amended into the soils, and the area shall be covered as described in BMP No. 21b.

    If the effectiveness monitoring of the burn piles indicates that impacts had occurred on greater than 20% but less than 50% of these piles, the Discharger shall notify Water Board staff and provide an updated, location-specific monitoring and mitigation plan. If 50% or more of the piles subject to the original effectiveness monitoring effort indicate impacts, <u>all</u> remaining (unmonitored) burn piles in SEZs shall be monitored, and mitigated wherever additional impacts are observed. Mitigation measures shall include an adaptive management strategy for all future burn pile creation in SEZs.

28) Fire shall be allowed to creep between piles and into these buffers, except where sensitive plants, fens, and the noxious weeds whitetop and cheatgrass are present. Flame lengths shall be controlled to less than two feet in height.

29) Each pile shall be allowed to be re-piled once after the initial ignition of the pile, as long as it is still burning. Adding extra fuel may create a hotter fire, potentially resulting in more damage to the soils. Where re-piling occurs, the locations of all sites where re-piling has occurred must be documented on the

Implementation Checklist. Where effectiveness monitoring, as required in the MRP (WDR Attachment C), indicates hydrophobic soils were created beneath the burn piles, the burn area shall be raked to a depth of six inches to break up the hydrophobic soils, native organic matter shall be amended into the soils, and the area shall be covered as described in BMP No. 21b.

If the effectiveness monitoring of the burn piles that were re-piled during burning indicates that impacts had occurred on greater than 20% but less than 50% of these piles, the Discharger shall notify the Water Board and provide a monitoring and mitigation plan. If 50% or more of the piles subject to the original effectiveness monitoring effort indicate impacts, all remaining (unmonitored) burn piles in SEZs shall be monitored, and mitigated wherever additional impacts are observed. Mitigation measures shall include an adaptive management strategy for all future burn pile creation in SEZs.

30) Hot piling of burn piles shall be prohibited within SEZs. Hot piling shall also be prohibited where burn piles have been created adjacent to aspen trees which are outside of SEZs. Exceptions may occur where specific conditions (e.g., on coarse alluvium soils) and mitigation measures have been previously identified and detailed in the accepted Fire Prescription Plan.

31) Additional Fire Prescription Plan BMPs to reduce the potential impact to SEZ soils and water quality shall include:
   a) SEZs shall be identified and flagged during prescribed burns as described in BMP No. 12.
   b) Piles shall be placed in a non-linear pattern in each treatment unit.
   c) Maintain a minimum of 10 foot spacing between piles in each treatment unit.
   d) Maximum pile size shall not exceed 10-foot diameter by five-foot height.
   e) No more than 30% of any SEZ acre shall be occupied by piles.
   f) No more than 15% of any SEZ acre shall be piled or burned each year.
   g) For broadcast burning activities, ignition shall not be allowed in SEZs but fire would be allowed to back into these areas.
   h) Water used to manage controlled burns shall not be drafted from undeveloped surface water sources, wetlands or other special aquatic features. Emergency drafting of water from other waterbodies for out-of-control prescribed burns located far from these hydrants shall not cause impacts to watercourse floodplain, bed, or banks. Access routes to emergency drafting sites shall not result in sloughing of soils into waterbodies, compacting of soils leading to access points, or destruction of riparian vegetation. Any impacts caused to these resources during emergency drafting shall be mitigated to original conditions, including soil stabilization and revegetation where necessary. The Discharger shall provide a report to the Water Board within 30 days of any emergency drafting from waterbodies, including justification and details regarding monitoring and mitigation measures. Monitoring, in addition to inspection for sediment discharge or compaction and damage to riparian vegetation,

shall include photographs of the access areas and waterbody bed and bank, taken within three days following control of the emergency. Mitigation measures specified in the report shall include an adaptive management strategy for all future water drafting sites.

Roads (during normal operating period and dry conditions)

32) No new permanent roads shall be constructed.

33) All roads used for this Project shall be maintained and/or restored to Forest Service standards that support equipment and trucks needed for activities and are tailored to protect beneficial uses and soil and water quality resources from the impacts of specific classifications of equipment use. The prescribed maintenance period for erosion controls on permanent and seasonal roads, associated landings, and drainage structures which have not been decommissioned (such that they are hydrologically invisible on the landscape) shall be for three years following completion of the Project.

34) Dust control, including the use of chips and slash, shall be used throughout the Project to prevent transport of fine sediment to waterbodies or to human receptors, such as open recreational areas, residences, etc. Roads and landings shall be watered for dust abatement at least as often as needed to keep dust down. Water used for dust abatement shall come from South Tahoe Public Utility Department hydrants. Water shall not be applied in excess so as to cause erosion into any waterbody. Commercial dust palliatives may be used, provided published materials indicate they do not have impacts on water quality. Oil-based palliatives shall therefore not be used, but certain Organic Nonpetroleum - Lignin Derivatives, Synthetic Polymer Derivatives, and enzyme-based palliatives, among others, may be used. Material Safety Data Sheets (MSDSs) and publications such as the U.S. Forest Service's "Dust Palliative Selection and Application Guide" (Publication Number 9977-1207-SDTDC, 1999) shall be used to make the selection. The MSDSs for dust palliatives used during Project activities shall be included in the approved Project ECP. All environmental impacts and the product-specific BMPs for handling, storage, and use of the selected dust palliative(s) shall be reiterated under its own heading in the ECP. Since some dust palliatives which do not impact water quality may still have adverse effects on aquatic life, at a minimum, dust palliatives shall not be used within 50 feet of a waterbody, or 75 feet where the road gradient towards the waterbody exceeds 30%.

35) Road drainage shall be established and maintained on all roads used for Project activities so that roads do not channel runoff. All drainage features shall be evaluated to determine if additional energy dissipaters, per BMP No. 37d, are necessary. Reconstructed and new temporary roads shall be outsloped to ensure proper drainage.

36) Where a native surface road meets a paved road, the road intersection shall be covered with no less than a four-inch lift of three-inch plus competent rock, for a distance of at least 25 feet, to prevent tracking of mud onto the paved road. This coverage shall be maintained in operable condition throughout use. The paved roads shall be swept clean whenever dirt tracking does occur. Where vehicles continue to track soils onto the paved road, additional measures, such as rumble strips or tire wash-offs shall be installed. Encroachment permits shall be obtained to access City of South Lake Tahoe streets and/or El Dorado County roads from Forest Service lands. On site meetings with City or County engineering department staff shall determine the extent and type of stabilization to utilize at each intersection. Soil type, grade, and alignment shall determine the extent of the stabilization above minimum requirements.

37) When a temporary road would use the alignment of a previously decommissioned road, the following reconstruction activities shall take place:
   a) Vegetation removal.
   b) Grading: Obstacles such as ruts, water bars, leadoff ditches, and pronounced dips shall be graded out to make the road suitable for logging traffic during operations.
   c) Crossings: Facilities such as culverts or fords shall be installed to accommodate the free flow of channels and ditches. All such crossing work shall occur within the road prism. The outflow of these structures shall be rocked to ensure dispersal of waters such that erosion of the streambed does not occur.
   d) Drainage of runoff: Dips and leadoff ditches shall be installed to facilitate occasional thunderstorm runoff. All such dips and leadoff ditches shall be evaluated to determine if additional energy dissipaters, such as rock, slash, or vegetation, to prevent erosion and/or facilitate immediate infiltration of occasional thunderstorm runoff, is necessary. Where existing materials are insufficient to infiltrate runoff within 20 feet of any drainage (other than channels), additional energy dissipaters shall be installed and maintained.

38)

38) Within the Project treatment units, existing and new temporary roads shall be decommissioned within 30 days after use. Drainage shall be restored during decommissioning by removing all temporary culverts and/or fords. Water bars shall be installed as specified in BMP No. 11 to prevent accumulating water on the road surface. All water bars shall be evaluated to determine if additional energy dissipaters, per BMP No. 37d, are necessary. Intersections with City and County roads would be temporary and blocked or obliterated when the Project is complete.

39) Temporary road decommissioning shall include ripping where the rock content of the soil allows (<35% cobble by volume, as determined by the Discharger's Soil Scientist, per BMP No. 3). All compacted temporary roads

shall be ripped and mulched upon completion of harvest and post-harvest operations. Chips shall be ripped into the decommissioned roads as a mitigation measure. Use of rock rippers shall not be permitted to accomplish subsoiling requirements. Ripping shall be accomplished using a winged subsoiler or other equipment that will lift and fracture the subsoil by vertical and lateral shattering, leaving the soil loosened through the full width and depth of the compacted layer with the topsoil remaining substantially in place rather than being inverted. Subsoiling shall extend to a depth of 18 inches. The Discharger's Soil Scientist, pursuant to BMP No. 3, may agree to lesser depths when excessive rock or other limiting site conditions are encountered. This work shall be done when the soil is dry. Ground cover requirements, per BMP No. 21b, shall be met after ripping.

40) Barriers shall be strategically established along open areas adjacent to decommissioned road or trail access (boulders, split rail fence, and barriers/signs) to discourage post-treatment establishment of user-created routes that are not designated routes. In addition, natural barriers such as large logs and rocks shall be placed at un-gated road or trail entrance points to prevent continued use of decommissioned road alignment.

41) All existing temporary roads shall be returned to their original use and width under the Discharger's Access and Travel Management Plans (ATMs) (e.g., trail to road conversions would be returned to trail width). However, all existing temporary roads' previous uses and widths shall be evaluated. Where it is determined that the original features were inadequate, the temporary road shall be reworked during decommissioning to prevent erosion and sediment transport to waters (including SEZs).

Roads (during wet conditions or outside of normal operating period)

42) Where a native surface road meets a paved road, the road intersection shall be covered with no less than a four-inch lift of three-inch plus competent rock, for a distance of at least 25 feet, to prevent tracking of mud onto the paved road. This coverage shall be maintained in operable condition throughout use. The paved roads shall be swept clean whenever dirt tracking onto a snowless road does occur. Where vehicles continue to track soils onto the paved road additional measures, such as rumble strips or tire wash-offs shall be installed. If this native surface road is only to be used outside of normal operating periods or during wet conditions and the preceding coverage has not been provided, adequate snow cover or frozen soil conditions, as defined in BMPs No. 22a and 22b, must be maintained throughout use. Rough organic material (e.g., chip) may be used where roads are packed with at least six inches of snow and additional traction is required. Encroachment permits shall be obtained to access City of South Lake Tahoe streets and/or El Dorado County roads from Forest Service lands. On site meetings with City or County engineering department staff shall determine the extent and type

of stabilization to utilize at each intersection. Soil type, grade, and alignment shall determine the extent of the stabilization past above minimum requirements.

43) If a native surface road becomes rutted, the road shall be closed. If monitoring of the area indicates the rutting is an isolated instance and adequate conditions, as defined in BMP No. 22, exist throughout the rest of the treatment unit, the rutted area may be temporarily repaired with spot rocking with an even-graded sub-base material (FS Specification A, B, or equivalent). Use may continue after the impacted area is re-covered in six inches of packed snow as long as conditions throughout the rest of the treatment unit remain adequate. Where this temporary fix is used, the "repaired" area shall be added to the high risk effectiveness monitoring sites.

44) During operations outside of the normal operating season, paved surfaced roads, including paved turnouts, may be plowed, if the action will not cause damage to the road surface and associated drainage structures. Native surfaced roads may also be plowed, as long as the minimum amount of snow, as described in BMP No. 22b remains. Soil in quantities deleterious to water quality shall not be intermixed with the side-cast snow during plowing.

45) Road alignments within the contract area that require snow removal shall be visibly marked on both sides along the entire alignment to facilitate plowing. Plowed snow shall not be placed into waterbodies, SEZs, or riparian areas.

46) Before over-the-snow operations begin, existing culvert locations, and nearby waterbodies, SEZs, and riparian areas shall be clearly marked such that markings shall be visible in deep snowpack. During and after operations, all culverts and ditches shall be open and functional.

47) When roads are plowed, snow berms shall be breached to allow drainage during snowmelt. Outlets shall be spaced every 100 feet, at a minimum, so as not to concentrate road surface flows. Erosion control structures, per BMP No. 11, shall be installed as necessary at outlets as snow melts, to collect road generated sediment.

Landings

48) All reasonable efforts shall be made to use existing landings. Where no existing landings are available new landings shall be constructed (see exceptions in BMPs No. 49 and 50). New landings shall be no larger than required in order to safely facilitate the handling and removal of biomass material in compliance with OSHA requirements. Individual landings shall average less than one acre in size and the maximum size shall be two acres.

49) Landings, fuel storage, and refueling shall be prohibited in SEZs.

50) Landings, fuel storage, and refueling areas shall be located outside RCAs unless a specific site plan detailing reasoning for the proposed in-lieu practice and adequate additional mitigation measures is submitted to Water Board staff for review and acceptance prior to implementation (per BMPs No. 3 and 4).

51) Landings with slopes >2% shall be outsloped to provide proper drainage. On existing landings that cannot be outsloped, ditching may be used. Drainage ditches, where used, shall not hydrologically connect with a waterbody. The outlets of these drainage ditches shall be evaluated to determine if additional energy dissipaters, per BMP No. 37d, are necessary.

52) Landings shall be decommissioned after operations are complete in each area using the following methods:
   a) Chips shall be applied to each landing as described in BMP No. 21b.
   b) After chipping, all landings within 50 feet of an SEZ shall be ripped as described in BMP No. 39, and seeded with a native seed mix of grasses, forbs, and shrubs, unless the landing slopes away from the SEZ. Chips shall be ripped into the landings as a mitigation measure. Ripping shall not occur in a known area infested with noxious weeds, or in very rocky soils (>35% cobble by volume). The Discharger must comply with alternative procedures and documentation as specified in BMP No. 3 for all areas where ripping is not feasible due to these specific field conditions.

Crossings and Culvert Replacements

53) Equipment operations are prohibited in Class III or IV (ephemeral) watercourses, except at crossings. Class III or IV watercourse crossings shall not exceed one crossing every 800 feet of channel length.

54) Temporary crossings on Class II and III (intermittent and ephemeral) watercourses shall be constructed as follows:
   a) Construction shall only occur when the channels are dry (i.e., seasonally non-flowing).
   b) Temporary crossings shall be “modified Spittlers,” and installed such that water flow is not obstructed. The incorporated culvert shall be sized to pass a 20-year, one-hour storm event, so that these crossings do not need to be removed prior to a storm event. Upon consultation with Water Board staff, “Humboldt” crossings may be used on Class III watercourses, but must be removed, and the associated soils stabilized, prior to any one-inch storm event forecast by the NWS.
   c) Detailed Diversion Plans (for Class II watercourse crossings only) and Dewatering Plans (for all crossings) as required in WDR Section E. 3, Reports Required, shall be implemented where flow or standing water is encountered during installation and removal. The Diversion Plans shall include provisions for damming any potential stream flow above the

construction site, transporting all anticipated flows around the construction site, and discharging the flow below the construction site in a manner which shall not create disturbance of the stream bed or banks. The Dewatering Plans shall specify that any accumulated groundwaters, rainwater, or other unexpected water collected in the construction area shall be pumped to an upland (i.e., non-waterbody, floodplain, riparian, or SEZ) location where discharge will infiltrate without returning to any waterbody or SEZ.

d) Temporary over-snow crossings shall be constructed and removed according to BMP No. 24.
e) Photo-point monitoring, using MRP Attachment G, shall occur at those crossings which have flow during installation or removal.
f) All temporary crossings, with the exception of over-snow crossings, shall be properly removed, with the channel bed and banks stabilized, prior to October 15th, per BMP No. 55.
g) The FEIS identifies one temporary road crossing, located on the Saxon Creek intermittent channel, which will overwinter. This crossing may be required during winter operations and constructing and removing it numerous times during the fall, winter, and spring would create unnecessary sedimentation. The Discharger shall submit additional details and adequate justification to Water Board staff for review and acceptance per BMP No. 4, prior to leaving any other crossing in place overwinter. Crossings on temporary roads, which remain in place outside of the normal operating period, shall be constructed such that they can pass the 100-year flood flow and associated debris.

55) All crossings on all waterbodies shall be protected from side-sloughing of native-surfaced roads by placing coir logs, straw bales, or the equivalent along the edges of the crossing above the creek. Any accumulated or sloughed-in soils in the channel following removal of a temporary crossing shall be removed and stabilized in an upland location, and the stream bed and banks shall be restored to their original configuration. Disturbed soils shall be stabilized per BMP No. 21b.

56) The proposed new culvert crossing on Powerline Road (Rd 12N08) shall consist of a 48-inch corrugated metal culvert. Diversion and Dewatering Plans shall be implemented per BMP No. 54c. Installation of this crossing shall require additional fill to bring the road grade at the crossing to an acceptable height for haul trucks to pass the entry and exit slopes. This fill shall be excavated primarily from the road alignment on either side of the crossing, with some excavation coming from the land adjacent to the road to lessen the slopes on either side of the road prism. Waste materials (i.e., organic soil) from the removal of the existing culvert shall be stabilized in an upland location, and the existing culvert shall be properly disposed of off-site. To reduce the amount of fill needed for this culvert replacement and road upgrade, concrete headwalls shall be used to maintain the road width through the crossing. Concrete shall be stored, mixed, and disposed of per BMP No.

2. Additional drainage features shall be added per the spacing described in BMP No. 11 along the incised road segment which will increase in length after excavating the required fill. Any areas disturbed by the excavation or filling for road crossing replacement shall be covered with chips per BMP No. 21b, except on the approaches and crossing itself. These areas shall be covered with clean, three-inch plus competent angular rock, with no less than eight-inch lift at any spot at any time, to provide stability. In addition, drainage features shall be constructed such that discharge shall infiltrate immediately into soils without reaching a waterbody (per BMP No. 37d). In the event that road drainage from the incised road approaches to the crossing cannot be discharged away from the water course, the entire length of incised road shall be rocked with a minimum eight inch lift of three inch plus competent rock with the minimum binder necessary to provide a stable road surface. Final plans for this culvert replacement shall be submitted to the Water Board staff per BMP No. 4 for review and acceptance at least 30 days prior to implementation. Photo-point monitoring, using MRP Attachment G, shall occur at this location during excavation, culvert installation, and materials removal.

57) The permanent watercourse crossing on Forest Service system road 12N01A over an intermittent tributary to Saxon Creek shall be replaced and improved in the fall, when the channel is dry and the meadow is drier than at other times of the year. Diversion and Dewatering Plans shall be implemented per BMP No. 54c. Possible designs to be evaluated for reducing installation disturbance to the floodplain include: 1) a series of pre-fabricated bridge segments with gabion basket supports filled with small boulders permeable to water flow, and 2) a series of multiple arched culverts surrounded by the gabion baskets, with the center culvert large enough to pass the bankfull water volume. The FEIS identifies the latter of these options as the proposed design, but leaves the options open. The final design shall be provided to Water Board staff per BMP No. 4 at least 30 days prior to site activities for acceptance and any other design used shall be at least as protective of beneficial uses and soil and water resources as these two potential designs. Excavation in the floodplain (within the existing road prism) would be required to remove the existing fill and connect the foundation of the road with the crossing to support equipment and hauling trucks. Excavated fill shall be removed to an upland location and stabilized, and all other waste materials from the existing crossing shall be properly disposed of off-site. The removed fill would be replaced with clean granular rock to support the weight of the crossing and the intended use. Rocking and drainage shall be as described in BMP No. 56. Photo-point monitoring, using MRP Attachment G, shall occur at this location during installation and removal.

58) A crushed culvert on Forest Service system road 12N20 in the Osgood Swamp watershed shall be removed, and the crossing over the spring-fed Class I watercourse shall be improved. An objective for this crossing is the maintenance of a natural stream bed, with possible designs including a

bottomless arched culvert, a prefabricated steel span, or a prefabricated concrete "box" culvert with the underside buried under the natural stream bed. The final design shall be provided to Water Board staff at least 30 days prior to site activities for approval, any other design used shall be at least as protective of beneficial uses and soil and water resources as these three potential designs. Because this channel is spring fed, it flows perennially. The flow therefore shall be diverted around the site during culvert replacement. Diversion and Dewatering Plans shall be implemented per BMP No. 54c. The Discharger shall contact Water Board staff at least 48 hours prior to initiating the Diversion and Dewatering plan to allow Water Board staff an opportunity to be present when the diversion is started. The Discharger is not required or expected to delay project implementation to accommodate Water Board staff availability to inspect project initiation activities. Once the construction area is free of standing water, the unsuitable materials (i.e., organic soil) shall be removed to an upland location and stabilized, and the existing pipes shall be properly disposed of off-site. The new crossing shall be installed with its footings extending below the existing channel to allow for a natural material bed. Finally, fill consisting of clean cobble, gravel, or sand shall be placed around and over the new culvert to connect the existing road surface elevation with the culvert crossing. Road drainage shall be provided as described in BMP No. 56. Prior to allowing the channel flow back into the downstream reach after crossing installation, re-introduced water would be retained behind the lower coffer dam and pumped to upland areas until turbidity levels are less than 3 NTU at the downstream end. If a turbidity level of less than 3 NTU cannot be reached after three days of pumping, pumping and infiltration will continue until decreases in turbidity greater than 25% of the previous measured turbidity are no longer being achieved and turbidity is less than or equal to 20 NTUs prior to releasing flows into the existing channel. The Discharger will contact Water Board staff to inform them of: 1) the turbidity level in the new channel; and 2) how long it is anticipated treatment shall occur, should this final step be necessary. Monitoring shall include photo-points, using MRP Attachment G, at this crossing during installation and removal, as well as the data collected to achieve the 3 NTU standard.

Aesthetics

59) Retain up to 15% of existing 4 to10-inch dbh trees and shrubs within foreground views (generally 100 feet) from the following travel routes: Pioneer Trail, Hwy 50, Hwy 89. Create irregular spacing and clumping distribution between trees and groups of trees within foreground views where practical. To determine practicality of the tree spacing and clumping, the Discharger's Forest Landscape Architect will conduct a site inspection and look for physical features that must be considered (such as rock outcrops and other geomorphic variation) in designing the appropriate spacing and clumping to ensure the effects from planned tree thinning and burning will be less than significant.

60) Design prescribed fires to retain up to 15% of selected understory vegetation, as well as to reduce evidence of tree scorching within foreground views (generally 100 feet) from Pioneer Trail, Hwy 50, and Hwy 89.

61) Minimize cut stump heights. Stump heights shall not exceed approximately six inches measured from the uphill side.

62) Locate mechanical treatment landings beyond foreground views (generally 100 feet) from travel routes Pioneer Trail, Hwy 50, and Hwy 89 where feasible. To determine feasibility of the locations, the Discharger's Forest Landscape Architect will inspect the sites and consider physical obstacles to avoid, such as rock outcrops, SEZ, sensitive vegetation in siting the landings to ensure there are no significant impacts from the landings..

Air Quality

63) Scheduling of prescribed burn activities shall comply with air quality standards and restrictions, and the Discharger shall acquire the relevant permits from California Air Resources Board (CARB)/EDAQMD for prescribed burning and smoke mitigations (e.g., Smoke Management Plan). The Smoke Management Plan shall follow the guidance and direction in the following documents to protect air quality:
   a) Interim Air Quality Policy on Wildland and Prescribed Fires, issued by the Environmental Protection Agency in 1998;
   b) Memorandum of Understanding between the (CARB) and the USDA Forest Service, signed on July 13, 1999; and
   c) Smoke Management Guidelines in Title 17 of the Code of Federal Regulations.

Biological Resources

64) For California Spotted Owl protected activity centers (PACs), maintain a limited operating period (LOP) prohibiting vegetation treatments, prescribed fire, or road or trail building within approximately ¼ mile of the activity center, if known, or within ¼ mile of the PAC, if unknown, during the breeding season (March 1 to August 15).

65) For northern goshawk PACs, maintain a LOP prohibiting vegetation treatments, prescribed fire, or road or trail building within approximately ¼ mile of the activity center, if known, or within ¼ mile of the PAC, if unknown, during the breeding season (February 15 to September 15).

66) For northern goshawk disturbance zones, maintain a LOP restricting management activities, including habitat manipulation for purposes other than habitat improvement, within approximately ½ mile of existing nest trees located outside urban zones from February 15 to September 15.

67) For the bald eagle winter habitat near Taylor and Tallac Creeks, maintain a LOP restricting management activities, including habitat manipulation for purposes other than habitat improvement, from October 15 to March 15.

68) For suitable habitat surrounding an active willow flycatcher nest, maintain a LOP prohibiting vegetation treatments, prescribed fire, or road or trail building during the breeding season (June 1 to August 31).

69) For osprey disturbance zones, maintain a LOP restricting management activities, including habitat manipulation for purposes other than habitat improvement, within approximately ¼ mile of the nest during the breeding season from March 1 to August 15.

70) For peregrine falcon disturbance zones, maintain a LOP restricting management activities, including habitat manipulation for purposes other than habitat improvement, within approximately ¼ mile of the nest from April 1 to September 30.

71) Except in Wildlife Areas where specific snag retention is prescribed: Where available an average of four of the largest diameter snags and four downed logs per acre would be retained. Snags would be at least 15-inch dbh in clumped and irregular spacing, depending on the average size class in the stand. (This does not supersede the removal of hazard trees).

Cultural Resources

72) Flag identified cultural sites and prohibit mechanical equipment from entering these sites.

73) Use hand thinning treatments to reduce wildfire effects within heritage sites.

74) The Discharger's Archeologist will evaluate linear features pursuant to protocols specified by the California State Historical Preservation Officer to establish possible crossing areas, and develop the methodology for crossing these features without creating a significant impact to cultural resources.

75) Protect arborglyphs during prescribed fire, per BMP No. 25.

Pest Management

76) Live true fir and pine tree cut stumps 14 inches diameter and greater shall be treated with an EPA-registered borate compound (Sporax), which is registered in California for the prevention of annosus root disease.
   a) Sporax shall be applied to conifer stumps within 24 hours of creation.
   b) Sporax shall not be applied within 25 feet of any waterbody.

c) Sporax shall not be applied in flag and avoid areas to protect threatened, endangered, or sensitive plants.
d) Sporax shall not be applied during precipitation events.

77) Invasive and/or noxious weed infestations identified within the Project area (including travel routes and staging or landing areas) shall be immediately treated by methods accepted for use by the Discharger's Noxious Weed Coordinator, or flagged for avoidance before Project implementation within any given unit. Invasive and noxious weed species known to occur within the Project area are listed in FEIS Table 3-98. The FEIS did not identify specific eradication methods; if chemical means of eradication are chosen, the Discharger's Noxious Weed Coordinator shall develop and submit a Noxious Weed Plan, which shall include and follow the MSDSs specific to the applicable pesticide, to Water Board staff for review and acceptance prior to using any pesticides to control or eradicate invasive or noxious weeds, per BMP No.4 and WDR Section B.10.

78) All off-road equipment used on this project shall be washed before moving into the Project area to ensure that the equipment is free of soil, seeds, vegetative material, or other debris that could contain or hold seeds of invasive and/or noxious weeds. "Off-road equipment" includes all logging and construction equipment and such brushing equipment as brush hogs, masticators, and chippers; it does not include log trucks, chip vans, service vehicles, water trucks, pickup trucks, and similar vehicles not intended for off-road use. When working in known weed infested areas equipment shall be cleaned before moving to other National Forest System lands which do not contain noxious weeds. The Discharger's Contract Administrator shall document required equipment washing.

79) All gravel, fill, or other imported materials shall be weed-free. The Discharger's Contract Administrator shall inspect all imported materials and off-road equipment brought onto the Project sites and document certifications for weed-free materials. On-site sand, gravel, rock, or organic matter shall be used where available, when these materials can be removed without creating a potential discharge to surface waters.

80) Certified weed-free mulches and native seed sources shall be used for all revegetation activities, including on decommissioned roads and landings. TheDischarger's Forest Botanist will approve the proposed seed mixes to ensure there will be no significant impacts from using the seed mixes.

81) Pile burning or underburning shall be prohibited within areas of invasive or noxious weed infestations of species known to spread with fire (see also BMP No. 28).

82) Ground and vegetation disturbance shall be minimized in construction areas by adhering to the applicable BMPs noted above. In addition to the requirements of BMP No. 52b, native vegetation shall be re-established where necessary and feasible on disturbed bare ground, such as decommissioned staging, landing, and road areas to minimize weed establishment and infestation and stabilize soils. To determine the feasibility and necessity of re-establishing native vegetation on bare ground, the Discharger's Forest Soil Scientist will consider natural physical constraints to replanting, such as lack of soil, rock talus slope, coarse decomposed granite, tree canopy shading a thick duff layer, to ensure affects will be less than significant.

Recreation

83) The extent and duration of temporary forest closures associated with mechanical treatments shall be minimized by restricting the size of active treatment units, and completing operations within each unit in a safe and timely manner. The Discharger shall provide signage during area closures informing the public of the reasons for the closure and alternative options for recreation access during the closure. To determine the safety and timing of the temporary closure and activity from the project, the Discharger's safety officer will consult with the Discharger's Recreation Officer to plan the closure for low visitor times ensure the safest conditions for the Discharger's workers and the general public.

84) The Discharger shall schedule mechanical treatments where practical to avoid peak visitor use recreation times (July 1 – Labor Day) in and adjacent to the following developed recreation areas: Camp Richardson Resort, Camp Richardson Corral, Fallen Leaf Campground, Baldwin Beach, Tallac Historic Estates, and recreation residence tracts. To determine the practicality of avoiding the peak visitor use times for the planned activity from the project, the Discharger's safety officer will consult with the Discharger's Recreation Officer to plan the optimal mechanical treatment during low visitor times, which are typically in late Fall

85) The Discharger shall provide information to the public through their visitor services regarding current and planned temporary forest closures associated with treatment units.

Sensitive and Special Interest Plants and Fungi

86). All identified sensitive plant populations, sensitive plant communities, and special interest Sphagnum areas, as noted in FEIS Resource Protection Measure (RPM) SP-1, shall be flagged prior to Project activities within the specified treatment units. The protection buffer shall extend 100 feet from the edge of the population. The Discharger's Botanist shall conduct field

investigations to identify and record sensitive and special interest plant locations prior to Project activity in Units 266 & 269.

87) No Project activities shall be allowed to occur within flagged sensitive or special interest plant protection buffers, unless approved by the Discharger's Botanist, per BMP No. 3. These prohibited Project activities include, but are not limited to, hand or mechanical treatment, endlining, directional felling into the buffer zones, piling or burning of piles, and prescribed fire.

88) If any additional sensitive plants or sensitive plant communities are found prior to or during implementation of Project activities, they shall also be recorded, flagged, buffered, and avoided per BMP No. 87.

89) The Discharger's Botanist shall be notified immediately prior to any Project activities in Treatment Unit #83 to flag the designated Regional Sensitive Fungi monitoring plot. No Project activities, per BMP No. 87, shall occur within the flagged area.

Supplemental Best Management Practice

90) On December 5, 2011, the US Forest Service Regional Forester for the Pacific Southwest Region approved an updated Water Quality Management Handbook (R5 FSH 2509.22, Chapter 10) (WQMH), which provides equal or better protection than the 2000 handbook, which the FEIS' RPMs were based on. The Discharger's's Project Record of Decision (ROD) specified that the updated handbook will be incorporated into the implementation of the South Shore Fuel Reduction and Healthy Forest Restoration Project. Of particular importance to this Project WDR is BMP 2.13 of the WQMH, the requirement for a project-specific erosion control plan (ECP).

The stated Objective of the WQMH is to "(e)ffectively limit and mitigate erosion and sedimentation from any ground-disturbing activities, through planning prior to commencement of project activity, and through project management and administration during project implementation." One requirement of this Objective is to "provide seamless transition between planning-level (NEPA) mitigation descriptions and on-the-ground implementation of erosion-control measures tailored to site conditions."

The FEIS' mitigation measures (RPMs), developed before the approval of the WQMH, allow for undisclosed field decisions without sufficient criteria for the protection of the environment to make those decisions, or do not provide adequate protection to the tributaries to Lake Tahoe. The WDR BMPs incorporate all of the FEIS RPMs and BMPs, while adding specific requirements to ensure environmental resources are protected. The WDR therefore requires the exclusive use of the specific BMPs in this Attachment, which incorporate and supersede the RPMs and BMPs noted in the FEIS.

Because the WQMH was approved by the Regional Forester and incorporated by reference in the ROD immediately prior to the public release of the Project WDR, many of the requirements of the WQMH were not captured in the WDR BMPs. For example, the WQMH includes a requirement for the development of a Project-specific Erosion Control Plan, which in turn requires the development of storm preparedness plan. The requirements of the WQMH are hereby also incorporated into this WDR, where those requirements are equal to, or more stringent than the requirements and mitigation measures specified in the WDR and its attachments, including the BMPs in this attachment.

The Discharger shall develop a Project-specific Erosion Control Plan (ECP) as described in BMP 2.13 of the WQMH, with the following additions:

- The mitigation measures specified in the ECP shall be equal to or more stringent than those specified in this WDR Attachment F.
- The Discharger shall develop a storm preparedness plan no later than the calendar day 24 hours prior to any anticipated precipitation event. An anticipated precipitation event is any weather pattern that is forecast, per BMP No. 11 above, to have a 30 percent or greater chance of producing precipitation as rainfall in the project area. During periods when thunderstorm activity is anticipated, the Discharger's shall monitor weather conditions during the course of the day, and implement the storm preparedness plan when visual observations indicate imminent precipitation.
- The storm preparedness plan shall be developed for all phases of the Project operations until the WDR is terminated by the Water Board (see WDR Attachment D).
- The storm preparedness plan shall include a list of the additional control practices and actions to perform prior to the rain event, per BMP No. 23 above.