

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION**

**MEETING OF MAY 13 and 14, 2009  
South Lake Tahoe**

**ITEM:** 11

**SUBJECT: UPDATED WASTE DISCHARGE REQUIREMENTS FOR  
THE RESORT AT SQUAW CREEK, PLACER COUNTY**

**CHRONOLOGY:** September 10, 1987 – Water Board adopted Waste Discharge Requirements (WDRs) for the construction of the Resort at Squaw Creek and associated golf course under Water Board Order No. 6-87-102.

August 9, 1990 – The Water Board later adopted WDRs for construction and operation of ski facilities under Water Board Order No. 6-90-50.

April 8, 1993 – Water Board Order No. 6-93-26 was adopted, suspending the previous two Orders, and regulating the operations of the resort, golf course, and ski facilities. Water Board Order No. 6-93-26 has been amended five times (Water Board Order Nos. 6-93-26A1, 6-93-26A2, 6-93-26A3, 6-93-26A4 and 6-93-26A5), relating to changes in allowed chemical use and chemical application on the golf course.

**ISSUES:** Should the Water Board adopt the proposed order updating waste discharge requirements for the Resort at Squaw Creek?

**DISCUSSION:** The Water Board is updating waste discharge requirements on its own initiative to streamline requirements and improve the monitoring and reporting program for enhanced protection of water quality. Significant updates in the WDR and associated Monitoring and Report Program (MRP) include the following items.

- Updated ground water sampling plan in the MRP to be consistent with the MRPs for golf courses in the Lake Tahoe basin. The proposed MRP will reduce the number of ground water wells sampled from 17 to 5. However,

**11-0001**

the frequency of sampling will increase from twice per year to monthly during active turf management when fertilizers and chemicals are more likely to be applied and hence more likely to be leached into ground water.

- The list of "Prohibited and Authorized Chemicals" derived from the Resort at Squaw Creek Technical Review Committee (TRC) Chemical Application Management Plan (CHAMP) has been removed from the WDR and placed in the MRP to allow for more flexibility in golf course management and to allow more efficient use of Water Board and TRC time, since minor changes in golf course management need not come before the Water Board as an amendment, but may be accepted by the Water Board Executive Officer. The TRC and public will receive at least 10 days notice prior to the Executive Officer making any changes to the MRP.
- The California Inland Surface Waters Plan (1991) is no longer applicable and has been deleted from the WDR.
- This Order implements relevant portions of the Squaw Creek TMDL and Truckee River TMDL. This Order includes bioassessment monitoring requirements and requirements to implement management practices to reduce sediment loading as appropriate.

Water Board staff has solicited comments from the Discharger and interested parties. At a special Technical Review Committee (TRC) meeting held on April 20, 2009, Water Board staff received verbal comments, and made revisions in response to concerns raised. Revisions also addressed concerns raised by the Squaw Valley Mutual Water Company and the Department of Health Services written comments. Water Board staff anticipates these changes will satisfy Mr. Heneveld's concerns as well, and the item will be able to remain on consent.

**RECOMMENDATION:**

Adoption of the Order as proposed.

- Enclosures:
1. Proposed Order
  2. Water Board Order No. 6-93-26
  3. Comments received March 22, 2009 from David Brew of Squaw Valley Mutual Water Company.

4. Comments received April 13, 2009 from Kim Hanagan of California Department of Health Services.
5. Comments received April 23, 2009 from Ed Heneveld of Friends of Squaw Creek.

# ENCLOSURE 1

11-0004

CALIFORNIA REGIONAL WATER QUALITY CONTROL WATER BOARD  
LAHONTAN REGION

BOARD ORDER NO. R6T-2009-(**PROPOSED**)  
WDID NO. 6A318511300

UPDATED WASTE DISCHARGE REQUIREMENTS

FOR

THE RESORT AT SQUAW CREEK

Placer County

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The California Regional Water Quality Control Water Board, Lahontan Region (Water Board), finds that:

1. Discharger

The Resort at Squaw Creek is owned by Squaw Creek Associates (SCA), a California General Partnership. Pacific Squaw Creek Inc. (PSC), a California Corporation and subsidiary of HCV Pacific Partners, is the Managing General Partner, and is responsible for the day-to-day affairs of the SCA Partnership. The Resort at Squaw Creek submitted information on March 20, 1986, which constitutes a complete report of waste discharge for Resort at Squaw Creek Golf Course. For the purposes of this Order, the Resort at Squaw Creek is referred to as the "Discharger" and the golf course and its routine operation and maintenance are referred to as the "facility".

2. Permit and Monitoring History

The Water Board adopted Waste Discharge Requirements (WDRs) for the construction of the Resort at Squaw Creek and associated golf course under Water Board Order No. 6-87-102 on September 10, 1987. The Water Board later adopted WDRs for construction and operation of ski facilities under Water Board Order No. 6-90-50 on August 9, 1990. Water Board Order No. 6-93-26 was adopted on April 8, 1993, suspended the previous two Orders, and regulates the operations of the resort, golf course, and ski facilities. Water Board Order No. 6-93-26 has been amended five times (Water Board Order Nos. 6-93-26A1, 6-93-26A2, 6-93-26A3, 6-93-26A4 and 6-93-26A5). This Order updates Water Board Order No. 6-93-26, as amended.

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3. Reason for Action

The Water Board is updating waste discharge requirements on its own initiative to streamline requirements and improve the monitoring and reporting program for enhanced protection of water quality. Significant updates in the WDR and associated Monitoring and Report Program (MRP) include the following items.

- a. Updated ground water sampling plan in the MRP to be consistent with the MRPs for golf courses in the Lake Tahoe basin. The proposed MRP will reduce the number of ground water wells sampled from 17 to 5. However, the frequency of sampling will increase from twice per year to monthly during active turf management when fertilizers and chemicals are more likely to be applied and hence more likely to be leached into ground water.
- b. The list of "Prohibited and Authorized Chemicals" derived from the Resort at Squaw Creek Technical Review Committee (TRC) has been removed from the WDR and is now addressed in the MRP to allow the Water Board staff to respond more efficiently and in a more timely manner to changes in golf course management. The previous WDRs required the Water Board to accept any changes to this list as part of a formal WDR amendment. Now any changes to the list of "Prohibited and Authorized Chemicals" contained within the facility's Chemical Application Management Plan (CHAMP) will be submitted to the Water Board Executive Officer. The Water Board Executive Officer will make any modifications to the MRP if necessary. The TRC and public will receive at least 10 days notice prior to the Executive Officer making any changes to the MRP.
- c. The California Inland Surface Waters Plan (1991) is no longer applicable, and has been deleted from the WDR.
- d. This Order implements relevant portions of the Squaw Creek TMDL and Truckee River TMDL. This Order includes bioassessment monitoring requirements and requirements to implement management practices to reduce sediment loading as appropriate.

4. Facility Location

The facility is located in the Truckee River Hydrologic Unit in portions of Sections 30, 31 and 32 of T15N, R16E, and Sections 5 and 6, T15N, R16E, MDB&M, as shown on Attachment "A", which is made a part of this Order.

5. Facility Description

The existing facility consists of a hotel complex consisting of 405 guest rooms, the Plaza Building (restaurants, convention space, retail stores and other "public" space), landscaping and grounds, 48 homesites and an 18-hole golf course

located on the hillside and within the 100-year floodplain and wetlands of Squaw Creek. Additionally, the facility includes ski facilities including a lift and runs operated in conjunction with the Squaw Valley Ski Corporation.

Operation and maintenance of the facility includes:

- a. Application of fertilizers and pesticides ("pesticides" include fungicides, herbicides, etc.).
- b. Watering, mowing, maintaining tee boxes, fairways, and greens.
- c. Fueling and maintenance of equipment.
- d. Maintaining roads, golf cart paths, ski runs, bridges, ski lifts, parking lots and drainage facilities.
- e. Site landscaping and minor improvements.

6. Potential Waste Discharges

Potential waste discharges from golf course operations primarily consist of nutrients from fertilizers, and toxic compounds from the use of pesticides, and diesel fuel from the two 1000-gallon above-ground fuel tanks and a 500-gallon waste oil storage tank. Other discharges of waste from facility operations may include: sodium chloride (salt) as a snow conditioner, waste earthen materials from ski slopes, other previously disturbed areas lacking vegetation and unpaved access roads; chemicals used in ski slope preparation; stormwater runoff from impervious surfaces and road sanding materials; oil and grease and litter disposed in parking areas. For purposes of this Order, waste earthen materials are defined as any drainage, flow, or seepage containing eroded earth from any human-disturbed areas or as a result of human activities.

7. Chemical Application Management Plan (CHAMP)

The CHAMP was developed for the operation and maintenance of the golf course. It provides the basis for the use of fertilizers and chemicals on the golf course. The legal requirements for the preparation and content of the CHAMP were set forth in the project approval conditions established by Placer County and the Water Board, as well as in two written agreements which resolved separate lawsuits related to the Resort at Squaw Creek Project. This document, reviewed and recommended by the Technical Review Committee (TRC), was approved and accepted by Placer County on July 16, 1991 and by the Water Board, on September 12, 1991. It is periodically updated to incorporate new operation and maintenance measures, including the use of different fertilizers and pesticides. The TRC reviews and considers all changes in chemical use. The previous WDRs required all changes to be considered and accepted by the

Water Board through a formal amendment of the WDRs. This Order allows the Water Board Executive Officer to accept changes through a revision to the Monitoring and Reporting Program after approval by the TRC.

8. Spill Contingency Plan

As part of the CHAMP, the Discharger prepares a Spill Contingency Plan for the golf course operation which will be followed in the event of any spill of petroleum products or any hazardous material to contain, ensure the rapid cleanup, and minimize the effects of any spill.

9. Land Treatment System

Runoff from the Resort complex drains to two ponds and an artificial wetlands constructed as part of the project which provides partial treatment of the runoff. Runoff from the ponds is discharged to a meandering channel within the existing wetlands before finally discharging to Squaw Creek below the project. Additional wetlands were created within the 100-year floodplain of Squaw Creek to mitigate and to treat runoff from the golf course. The Discharger has an ongoing program to minimize disturbance of natural vegetation and to use best management practices such as revegetation and maintenance of disturbed areas, mechanical stabilization, water bars, drop inlets and other sediment control measures to prevent waste earthen materials from the ski area from entering surface waters. The Discharger has installed and maintains stormwater runoff treatment facilities for its parking area and other impervious surfaces. Treatment facilities consist of drop inlet structures and maintenance consists of cleaning out drop inlet structures and sweeping of the parking area.

10. Snow Disposal/Storage

Snow from parking areas is disposed and stored in mounds around the perimeter of the parking lot. Snowmelt runoff discharges to the two ponds and the artificial wetland.

11. Site Hydrology/Geology

Runoff from the project site will enter ground and surface waters (Squaw Creek) of the Truckee River Hydrologic Unit. Ground water in the vicinity of the facility in the shallow aquifer is about 10 feet below the surface and flows in a generally northerly direction toward Squaw Creek. Ground water in a lower aquifer is about 40 feet below the surface (with a piezometric surface about 10 feet below the ground surface) and flows generally in an easterly direction toward the lower end of the meadow.

12. Water Supply

The facility's current irrigation and domestic water source are Resort at Squaw Creek private production wells and Squaw Valley Public Services District, respectively.

13. Basin Plan

The Water Board adopted a Water Quality Control Plan (Plan) for the Lahontan Region, including the Tahoe Basin March 31, 1995. This Order implements the Plan as amended. The Plan contains water quality objectives for the Truckee River and its tributaries.

14. Beneficial Uses - Surface Water

The beneficial uses of surface waters of Squaw Creek and its tributaries as set forth and defined in the Plan are:

- a. Municipal and domestic supply (MUN)
- b. Agricultural supply (AGR)
- c. Ground water recharge (GWR)
- d. Water contact recreation (REC-1)
- e. Non-contact water recreation (REC-2)
- f. Commercial and sportfishing (COMM)
- g. Cold freshwater habitat (COLD)
- h. Wildlife habitat (WILD)
- i. Rare threatened or endangered species (RARE)
- j. Migration of aquatic organisms (MIGR)
- k. Spawning reproduction and development (SPWN)

15. Beneficial Uses – Wetlands

The beneficial uses of Squaw Valley Meadow Wetlands, as set forth and defined in the Plan are:

- a. Municipal and domestic supply (MUN)
- b. Agricultural supply (AGR)
- c. Ground water recharge (GWR)
- d. Water contact recreation (REC-1)
- e. Non-contact water recreation (REC-2)
- f. Cold freshwater habitat (COLD)
- g. Wildlife habitat (WILD)
- h. Spawning reproduction and development (SPWN)
- i. Water quality enhancement (WQE)
- j. Flood peak attenuation/flood water storage (FLD)

16. Beneficial Uses- Ground Water

The beneficial uses of ground waters of the Olympic Valley (Squaw Valley) in the Truckee River Hydrologic Unit, and Department of Water Resources Groundwater Basin No. 6-108, as set forth and defined in the Plan are:

- a. Municipal and domestic supply (MUN)
- b. Agricultural supply (AGR)
- c. Freshwater replenishment to surface waters (FRSH)

17. Policy for Maintaining High Quality Waters

State Water Resources Control Water Board Resolution No. 68-16 requires the Water Board, in regulating the discharge of waste, to (a) maintain existing high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses, and will not result in water quality less than that described in State or Regional Water Board policies; and (b) require that any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters must meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

The facility has two primary pathways for discharging potential wastes: surface runoff and irrigation. Surface runoff enters Squaw Creek from treatment ponds and a wetlands system that flows through the golf course. Waste discharges may enter shallow groundwater through percolation of irrigation or storm water.

Water quality sampling from previous years indicates no degradation of surface or ground water quality. The continued waste discharges appear to be adequately treated by existing control measures. The existing and ongoing activities and control measures (stormwater and erosion control management practices and treatment measures) will meet the waste discharge requirements and result in best practicable treatment or control of the discharge necessary to assure that (a) pollution or nuisance will not occur and (b) the highest quality water will be maintained.

18. Other Considerations and Requirements for Discharge

Pursuant to California Water Code section 13241 the requirements of this Order take into consideration:

(a) Past, present, and probable future beneficial uses of water.

This Order identifies past, present and probable future beneficial uses of water as described in Finding nos. 14 and 15. The ongoing discharges from the facility will not adversely affect present or probable future beneficial uses of water.

(b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.

Finding no. 11 describes the environmental characteristics of the hydrographic unit. The quality of groundwater is generally excellent on the western side of the valley, and is used for drinking water supply. Surface water quality is generally good with the exception of elevated sediment levels which were identified in the Water Board's Clean Water Act Section 303 (d) list of impaired waterbodies.

(c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area.

Two TMDLs have recently been adopted to reduce sediment loading to Squaw Creek. This Order requires continued use of stormwater and erosion control measures. Continued sediment reductions in the Squaw Creek watershed are anticipated through the implementation of the TMDLs including specific requirements contained in individual facility waste discharge requirements and in Placer County's municipal storm water permit. Additionally, monitoring requirements in this Order and other orders for discharges in the watershed will effectively document improvements in watershed function anticipated to occur as a result of decreased sediment loading. Water quality is expected to improve in response to TMDL implementation.

(d) Economic considerations.

This Order regulates an existing facility with existing control measures. This Order continues to require operation and maintenance of control measures. Monitoring requirements have been modified. Costs associated with assessment of golf course operation impacts to surface and ground waters will not be substantially different. Costs for bioassessment and streambed sediment monitoring required under the TMDL are new, but will be minimized if costs are shared by the other three regulated facilities sharing sediment load reductions allocations in the Squaw Creek drainage.

(e) The need for developing housing within the region.

This is an existing facility and will not require current or future housing.

(f) The need to develop and use recycled water.

The Discharger does recycle some ground and surface waters through pumping of irrigation water from pond A, which collects some local tail water and receives some groundwater recharge. Irrigation application is conducted at or below evapotranspiration (ET) rates to minimize the potential for contaminants entering the pond or local surface or ground waters.

19. CEQA Compliance

The continued operation of this existing facility with minor modifications under these revised waste discharge requirements are exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Title 14, California Code of Regulations, Section 15301.

20. Notification of Interested Parties

The Water Board has notified the Discharger and interested parties of its intent to update waste discharge requirements for the discharge.

21. Consideration of Public Comments

The Water Board in a public meeting heard and considered all comments pertaining to the discharge.

**IT IS HEREBY ORDERED THAT THE DISCHARGER SHALL COMPLY WITH THE FOLLOWING:**

I. DISCHARGE SPECIFICATIONS

A. Effluent Limitations

All surface flows generated within the facility which are discharged to surface waters shall not contain the following:

1. Substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, or animal life;
2. Coliform organisms attributable to human wastes; and
3. Grease and oil shall not exceed 2.0 mg/L.

B. Receiving Water Limitations

1. The discharge of surface flows generated within the facility, to surface waters within the Squaw Creek drainage of the Truckee River Hydrologic Unit, shall not cause the following receiving water quality objectives to be exceeded:

<b>Constituent</b>	<b>Units</b>	<b>Annual Mean Concentration</b>
Total Dissolved Solids	mg/l	85
Chloride	mg/l	3.0
Sulfate	mg/l	25.0
Total Nitrogen	mg/l as N	0.18
Total Kjeldahl Nitrogen	mg/l as N	0.13
Nitrate plus Nitrite	mg/l as N	0.05
Total Phosphorus	mg/l as P	0.02
Total Iron	mg/l as Fe	0.13

If constituent concentrations of waters entering the facility exceed the numerical limitations specified above there shall be no increase in the constituent concentrations in the waters that are discharged from the facility.

2. The discharge of water from the facility to surface and ground waters, including percolating waters from irrigation, shall not cause violation of the following objectives:

- a. Ammonia - The concentrations of un-ionized ammonia ( $\text{NH}_3$ ) or total ammonium ( $\text{NH}_3 + \text{NH}_4$ ) at ambient water temperature and pH in receiving waters, shall not exceed the corresponding water quality objectives given in Tables 3.1 through 3.4 of the Basin Plan.
- b. Bacteria - Waters shall not contain concentrations of coliform organisms attributable to anthropogenic sources, including human and livestock wastes. The fecal coliform concentration during any 30-day period shall not exceed a log mean of 20/100 ml, nor shall more than 10 percent of all samples collected during any 30-day period exceed 40/100 ml. *The log mean shall ideally be based on a minimum of not less than five samples collected as evenly spaced as practicable during any 30-day period. However, a log mean concentration exceeding 20/100 ml for any 30-day period shall indicate violation of this objective even if fewer than five samples were collected.*
- c. Biostimulatory Substances - Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect the water for beneficial uses.
- d. Chemical Constituents - Waters designated as MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) based upon drinking water standards specified in the following provisions of Title 22 of the California Code of Regulations which are incorporated by reference into this plan: Table 64431-A of Section 64431 (Inorganic Chemicals), Table 64433-2A of Section 64433.2 (Fluoride), Table 64444-A of Section 64444 (Organic Chemicals), Table 64449-A of Section 64449 (Secondary Maximum Contaminant Levels- Consumer Acceptance Limits), and Table 64449-B of Section 64449 (Secondary Maximum Contaminant Levels- Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect. Waters designated as AGR shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses (i.e., agricultural purposes). Waters shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses.

- e. Chlorine, Total Residual - For the protection of aquatic life, total chlorine residual shall not exceed either a median value of 0.002 mg/L or a maximum value of 0.003 mg/L. Median values shall be based on daily measurements taken within any six-month period.
- f. Color - Waters shall be free of coloration that causes nuisance or adversely affects the water for beneficial uses.
- g. Dissolved Oxygen - The dissolved oxygen concentration, as percent saturation, shall not be depressed by more than 10 percent, nor shall the minimum dissolved oxygen concentration be less than 80 percent of saturation. For waters with the beneficial uses of COLD, COLD with SPWN, WARM, and WARM with SPWN, the minimum dissolved oxygen concentration shall not be less than that specified in Table 3-6 of the Basin Plan.
- h. Floating Material - Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect the water for beneficial uses. For natural high quality waters, the concentrations of floating material shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.
- i. Oil and Grease - Waters shall not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect the water for beneficial uses. For natural high quality waters, the concentration of oils, greases, or other film or coat generating substances shall not be altered.
- j. Nondegradation of Aquatic Communities and Populations - All wetlands shall be free from substances attributable to wastewater or other discharges that produce adverse physiological responses in humans, animals, or plants; or which lead to the presence of undesirable or nuisance aquatic life. All wetlands shall be free from activities that would substantially impair the biological community as it naturally occurs due to physical, chemical and hydrologic processes.
- k. Pesticides -As defined in CA Agriculture Code 12753, pesticides include insecticides, herbicides, rodenticides, fungicides, piscicides and all other economic poisons, which is any substance intended to prevent, repel, destroy, or mitigate

the damage from insects, rodents, predatory animals, bacteria, fungi or weeds capable of infesting or harming vegetation, humans, or animals. Pesticide concentrations, individually or collectively, shall not exceed the lowest detectable levels, using the most recent detection procedures available. There shall not be an increase in pesticide concentrations found in bottom sediments. There shall be no detectable increase in bioaccumulation of pesticides in aquatic life. Waters designated as MUN shall not contain concentrations of pesticides or herbicides in excess of the limiting concentrations specified in Table 64444-A of Section 64444 (Organic Chemicals) of Title 22 of the California Code of Regulations which is incorporated by reference into this plan. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

- i. pH – In fresh waters with designated beneficial uses of COLD, changes in normal ambient pH levels shall not exceed 0.5 pH units. For all other waters, the pH shall not be depressed below 6.5 nor raised above 8.5.
- m. Radioactivity – Radionuclides shall not be present in concentrations which are deleterious to human, plant, animal, or aquatic life or which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life. Waters designated as MUN shall not contain concentrations of radionuclides in excess of the limits specified in Table 4 of Section 64443 (Radioactivity) of Title 22 of the California Code of Regulations which is incorporated by reference into this plan. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.
- n. Sediment - The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect the water for beneficial uses.
- o. Settleable Materials - Waters shall not contain substances in concentrations that result in the deposition of materials that cause nuisance or adversely affect the water for beneficial uses. For natural high quality waters, the concentration of settleable materials shall not be raised by more than 0.1 milliliters per liter.

- p. Suspended Materials - Waters shall not contain suspended materials in concentrations that cause nuisance or that adversely affects the water for beneficial uses. For natural high quality waters, the concentration of total suspended materials shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.
- q. Tastes and Odors - Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish or other edible products of aquatic origin, that cause nuisance, or that adversely affect the water for beneficial uses. For naturally high quality waters, the taste and odor shall not be altered.
- r. Temperature - 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 WARM, water temperature shall not be altered by more than five degrees Fahrenheit (5\_F) above or below the natural temperature. For waters designated COLD, the temperature shall not be altered. Temperature objectives for COLD interstate waters and WARM interstate waters are as specified in the "Water Quality Control Plan for Control of Temperature in The Coastal and Interstate Waters and Enclosed Bays and Estuaries of California" including any revisions. This plan is summarized in Chapter 6 (Plans and Policies), and included in Appendix B of the Basin Plan.
- s. Toxicity - All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. *Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration and/or other appropriate methods as specified by the Water Board.* The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary, for other control water that is consistent with the requirements for "experimental water" as defined in *Standard Methods for the Examination of Water and Wastewater* (American Public Health Association, et al. 1998).

- t. Turbidity - 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.
4. The discharge of water from the facility to surface and ground waters, including percolating waters from irrigation, shall not cause violation of the following objectives:
    - a. In ground waters designated as MUN, the median concentration of coliform organisms over any seven-day period shall be less than 1.1/100 milliliters.
    - b. Chemical Constituents - Ground waters designated as MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) based upon drinking water standards specified in the following provisions of Title 22 of the California Code of Regulations which are incorporated by reference into this plan: Table 64431-A of Section 64431 (Inorganic Chemicals), Table 64433-2A of Section 64433.2 (Fluoride), Table 64444-A of Section 64444 (Organic Chemicals), Table 64449-A of Section 64449 (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits), and Table 64449-B of Section 64449 (Secondary Maximum Contaminant Levels-Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect. Waters designated as AGR shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses (i.e., agricultural purposes). Ground waters shall not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.
    - c. Radioactivity - Ground waters designated as MUN shall not contain concentrations of radionuclides in excess of the limits specified in Table 4 of Section 64443 (Radioactivity) of Title 22 of the California Code of Regulations which is incorporated by reference into this plan. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.
    - d. Tastes and Odors - Ground waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or that adversely affect beneficial uses. For ground waters designated as MUN, at a minimum, concentrations shall

not exceed adopted secondary maximum contaminant levels specified in Table 64449-A of Section 64449 (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits), and Table 64449-B of Section 64449 (Secondary Maximum Contaminant Levels- Ranges) of Title 22 of the California Code of Regulations which is incorporated by reference into this plan. This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

C. Best Management Practices

1. The Discharger must comply with the Chemical Application Management Plan (CHAMP) for operation of the golf course as approved and amended by the Technical Review Committee. Nothing in this Order shall abrogate the authority of the Technical Review Committee (TRC) or the Placer County Division of Environmental Health (DEH) as defined in the CHAMP, in Placer County approvals, or in the two written agreements which resolved separate lawsuits related to the Resort at Squaw Creek project.
2. Unless a variance has been granted pursuant to the Provisions, there shall be no removal of vegetation nor disturbance of existing ground surface conditions between October 15 of any year and May 1 of the following year.
3. Prior to any disturbance of existing soil conditions, the Discharger shall install temporary erosion control facilities to prevent transport of eroded earthen materials and other wastes off the property.
4. Vehicle use shall be restricted to existing roads and previously disturbed areas.
5. There shall be no significant modification of existing drainage ways or existing stream channel geometry except for the purpose of stabilization or enhancement of water quality improvement effects. All modifications of the bed, channel, or bank of a stream require a prior written agreement with the California Department of Fish and Game.
6. All eroding slopes steeper than two horizontal to one vertical shall be stabilized.
7. All soil disturbance activities shall cease and temporary erosion control measures immediately installed if adverse weather

conditions threaten the transport of disturbed soils from the project site.

8. Prior to October 15 of each year, the Discharger shall provide permanent or temporary stabilization of all disturbed or eroding areas through commencement of revegetation and/or completion of mechanical stabilization measures. Commencement of revegetation shall consist of seeding, planting, mulching, initial fertilization as needed, and initial watering as needed.
9. Surface flows from the project site shall be controlled so as to not cause downstream erosion at any point.
10. Stormwater runoff handling and disposal facilities shall be cleaned and renovated annually.
11. All disturbed areas shall be adequately restabilized or revegetated. Revegetated areas shall be continually maintained in order to assure adequate growth and root development until vegetation becomes established. When applicable, the following mitigation measures may be implemented:
  - a. Depending on the level of disturbance, wood fiber mulch or pine needles may be applied on or tilled into disturbed surfaces in lieu of vegetation;
  - b. Tackifier or rice straw shall not be applied within 100 feet of the high water line;
  - c. Whenever practical seeds collected from the project site area should be added to the seed mix being applied during revegetation; and
  - d. Whenever practical, native revegetation will be the preferred and most utilized method of stabilization.
12. There shall be no significant modification of existing drainage ways or existing stream channel geometry except to stabilize erosion or enhance water quality. All modifications of the bed, channel or bank of stream require prior written approval from the California Department of Fish and Game and all others appropriate state and federal agencies.

13. All slopes subject to erosion shall be stabilized.
14. All loose piles of soil, silt, clay, sand, debris, or other earthen materials shall be protected in a reasonable manner to prevent the discharge of these materials to waters of the State.
15. Dewatering shall be done in a manner so as to eliminate discharge to surface waters. A separate NPDES Permit may be required for dewatering discharges to surface waters.
16. To the extent feasible, stormwater runoff collection, treatment, and/or infiltration disposal facilities shall be designed, installed, and maintained to dispose or treat the effluent to meet effluent and receiving water limitations above for a discharge of stormwater runoff from at least a 20-year, 1-hour design storm (approximately 1" of rainfall) from all impervious surfaces.
17. Surface flows from the facility shall be controlled to not cause downstream erosion at any point. All storm water runoff which leaves the site shall be discharged to a storm drain or stabilized drainage.
18. Dust shall be controlled to prevent the transport of such material off the project site, into any surface water, or into any drainage course.
19. Erosion control facilities shall be installed in conjunction with a routine maintenance and inspection program to provide continued integrity and proper performance of erosion control facilities. Stormwater runoff handling and disposal facilities shall be inspected annually and cleaned and renovated as needed.
20. Snow storage and disposal shall be separated from surface waters and contained to avoid surface runoff.
21. At or before completion of a construction project, all surplus or waste earthen materials shall be removed from the project site and deposited only at a legal, authorized point of disposal or restabilized onsite in accordance with erosion control plans previously approved by the Executive Officer.
22. At no time shall waste earthen materials be placed in surface water drainage courses, or in such a manner as to allow the discharge of such materials to adjacent undisturbed land or to any surface water drainage course.

23. Fresh concrete or grout shall not be allowed to contact or be discharged to surface waters.
24. The Discharger shall immediately clean up and transport to a legal disposal site any spilled petroleum products or petroleum-contaminated soils to the maximum extent practicable.
25. Construction activities that involve crossing or alteration of a stream channel shall be timed to occur during the period of the year in which stream flow is expected to be lowest.
26. Drainage swales disturbed by construction activities shall be stabilized by appropriate soil stabilization measures to prevent erosion.

D. General Requirements and Prohibitions

1. The discharge of treated or untreated domestic wastewater, industrial waste, garbage or other solid wastes, or any deleterious material to surface or ground waters of the Truckee River Hydrologic Unit is prohibited.
2. 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 surface waters of the Truckee River Hydrologic Unit or within the 100-year floodplain of any tributary to the Truckee River is prohibited. Waste discharge prohibitions do not apply to discharges of stormwater when wastes in the discharge are controlled through the application of management practices or other means and the discharge does not cause a violation of water quality objectives.
3. The discharge of oil, gasoline, diesel fuel, petroleum derivative, or any other toxic chemical or hazardous waste is prohibited.
4. The discharge of waste shall not cause a pollution or nuisance as defined in Section 13050 of the California Water Code or a threatened pollution.
5. The Discharger shall at all times fully comply with the engineering plans, specifications, and technical reports submitted with the completed report of waste discharge.

II. PROVISIONS

A. Rescission of Previous Order

Water Board Order No. 6-93-26 and all amendments 6-93-26A1 through A5 are hereby rescinded.

B. Monitoring and Reporting

Pursuant to the California Water Code 13267(b), the Discharger(s) shall comply with Monitoring and Reporting Program No. (PROPOSED). The Executive Officer has the authority to change provisions of the MRP in accordance with California Water Code Section 13267.

C. Notification of Discharge

The Discharger shall immediately notify the Water Board by telephone whenever an adverse condition occurs as a result of any discharge from this facility; written confirmation shall follow within two weeks of the date of violation. An adverse condition includes, but is not limited to, serious violation or serious threatened violation of waste discharge requirements, significant spills of petroleum products or toxic chemicals, or serious damage to control facilities that could affect compliance.

D. Reporting Changes in Project

Any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Water Board at least 60 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances, all proposed expansion projects, increase in impervious surface coverage, or any change in drainage characteristics at the Facility.

E. Water Board Prerogative in Changing the Order

The Water Board reserves the privilege of changing all or any portion of this Order upon legal notice to and after opportunity to be heard is given to all concerned parties.

F. Scope of Applicable Waterways

"Surface waters" and "receiving waters", as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses, wetlands, and natural lakes.

G. Change of Ownership

The owners of property subject to waste discharge requirements shall be considered to have a continuing responsibility for ensuring compliance with applicable waste discharge requirements in the operations or use of the owned property. Any change in the ownership and/or operation of property subject to waste discharge requirements shall be reported to the Water Board. Notification of applicable waste discharge requirements shall be furnished to the new owners and/or operators and a copy of such notification shall be sent to the Water Board.

H. Reports and Time Schedule

1. **No later than July 1, 2009**, the Discharger must provide a copy of the current CHAMP as amended and approved by the Technical Review Committee.
2. The use of fertilizers and pesticides is restricted to the specific types described in the CHAMP. Any proposed changes in the types of fertilizers or pesticides must be reported to the Executive Officer 60 days prior to its proposed use.

I. Standard Provisions

See Standard Provisions, Attachment B.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Water Board, Lahontan Region, on May 13, 2009.

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HAROLD J. SINGER  
EXECUTIVE OFFICER

Attachments:      A:      Location Map  
                          B:      Standard Provisions

# **ATTACHMENT A**

11-0026

ATTACHED IMAGES: Images: SQUAW1.jp8  
 ATTACHED XREFS: RENO.IXD

CAD FILE: L:\2009\Drilling\4430\ LAYOUT: PLATE 1 (2008)

PLOTTED: 13 Feb 2009 9:14am: RvwJck



LEGEND	
●	PRODUCTION WELL
○	TEST WELL
○	SHALLOW MONITORING WELL
○	DEEP MONITORING WELL
▲	SURFACE WATER SAMPLE LOCATION
□	CARBON FILTER
(WELL LOCATIONS ARE APPROXIMATE)	
○	GROUNDWATER ELEVATION CONTOURS
□	LOST WELLS
○	EVEN YEAR (SHALLOW) WELLS
○	ODD YEAR (SHALLOW) WELLS
○	SECOND YEAR (DEEP) WELLS (2007, 2008, ...)
○	FOURTH YEAR (DEEP) WELLS (2004, 2008, ...)

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PROJECT NO.	94130.01
DRAWN:	JANUARY 12, 2009
DRAWN BY:	K. WUJCIK
CHECKED BY:	J. FORTMANN
FILE NAME:	WELL LOCATIONS-SQUAW-04-18A-CONTOURS.dwg

<b>GOLF COURSE WELL LOCATION MAP AND GROUNDWATER ELEVATION CONTOURS</b>
RESORT AT SQUAW CREEK SQUAW VALLEY, CALIFORNIA

PLATE	1
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# **ATTACHMENT B**

ATTACHMENT B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

**STANDARD PROVISIONS**  
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger shall permit Regional Board staff:

- a. to enter upon premises in which an effluent source is located or in which any required records are kept;
- b. to copy any records relating to the discharge or relating to compliance with the Waste Discharge Requirements (WDRs);
- c. to inspect monitoring equipment or records; and
- d. to sample any discharge.

2. Reporting Requirements

- a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.
- b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board. Any such proposal shall be reported to the Regional Board at least 120 days in advance of implementation. This shall include, but not be limited to, all significant soil disturbances.
- c. The Owners/Discharger of property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with applicable WDRs in the operations or use of the owned property. Any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Regional Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.
- d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing, and correct that information.

- e. Reports required by the WDRs, and other information requested by the Regional Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation.
- f. If the Discharger becomes aware that their WDRs (or permit) are no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their WDRs (or permit) be rescinded.

3. Right to Revise WDRs

The Regional Board reserves the privilege of changing all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the WDRs may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and re-issuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the WDRs which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the WDRs. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the WDRs.

7. Waste Discharge Requirement Actions

The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDRs conditions.

8. Property Rights

The WDRs do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the WDRs including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the WDRs shall be kept and maintained by the Discharger and be available at all times to operating personnel.

11. Severability

Provisions of the WDRs are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board's Executive Officer.

14. Definitions

- a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.
- b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

MONITORING AND REPORTING PROGRAM NO. R6T-2009-(**PROPOSED**)

UPDATED WASTE DISCHARGE REQUIREMENTS

FOR

THE RESORT AT SQUAW CREEK

Placer County

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This Monitoring and Reporting Program (MRP) is established to assure optimal management of potential wastes from the golf course chemical application and irrigation practices. It is designed to track seasonal and long-term trends in transport of chemicals and associated transformation products to waters of the State. This includes potential waste discharges to surface waters and ground waters, whether originating from fertilizer, pesticides, herbicides, fungicides, petroleum products, or other factors related to golf course use and management, including sediment from accelerated erosion from anthropogenic sources.

Chemical use and irrigation shall conform to the Chemical Application Management Plan (CHAMP), as amended and approved by the Resort at Squaw Creek Technical Review Committee. Before implementing any change in golf course chemical and irrigation management, the Discharger shall notify the Executive Officer at least 60 days prior to any proposed changes to allow for the modification of the Monitoring and Reporting Program, if necessary.

At any time, upon the Executive Officer's own motion, or at the request of the Discharger, the Executive Officer may amend or modify this MRP in accordance with California Water Code Section 13267. Water Board staff will provide ten day notice (on the Water Board website) of any proposed changes unless changes are needed to confirm or investigate any imminent threats to drinking water supplies or aquatic habitat.

I. MONITORING

A. Erosion and Runoff Controls

The Dischargers shall inspect the facility site monthly during months in which ground cover by snow is not complete. The purpose of this investigation is to discover potential erosion and surface runoff problems on the project site so that corrective measures may be immediately

11-0031

undertaken. Records of problems identified and corrective measures taken shall be kept at the facility.

This inspection shall include:

1. Infiltration Trenches (if applicable)
    - a. Clogging of inlet pipes by debris
    - b. Accumulation of sediment
    - c. Disrepair of trenches
    - d. Runoff movement into infiltration trenches
    - e. Damage by vehicles
  2. Drop Inlets
    - a. Clogging by debris, ice, or sediment
    - b. Runoff movement into the infiltration gallery
    - c. Damage by vehicles or snow plow equipment
  3. Drainage Collection System
    - a. Clogging by debris, ice, or sediment
    - b. Free movement of water through pipes, channels, and appurtenances
    - c. Damage
    - d. Eroding channels
  4. Erosion Control
    - a. Health and productive vegetation
    - b. Gully or rill erosion on slopes
    - c. Sediment buildup at toe slopes
    - d. Vegetation damage by vehicles or heavy foot traffic
    - e. Bare areas in need of revegetation
    - f. Traffic and parking restrictions in place
  5. Sedimentation Ponds/Storm Water Treatment Wetlands
    - a. Eroding banks
    - b. Accumulation of sediment or solid waste material
    - c. Vegetative condition
- B. General Maintenance and Operations
1. Maintenance and Hazardous Material Storage Areas

- a. Evidence of spilled oil, gasoline, diesel fuel or any other hazardous materials
  - b. Damage to any hazardous material storage or containment structures
  - c. Spill absorbent material available
2. Chemical Use (Fertilizer and Pesticide, including herbicides and fungicides) and Irrigation

Records shall be kept on an ongoing basis of the following items:

- a. Product Purchased
  - (1) Each type of product purchased
  - (2) Amount of each type of chemical purchased
  - (3) Place of purchase
  - (4) Date of arrival of chemicals purchased
  - (5) Onsite storage location of chemicals purchased
  - (6) Manufacturer's label and Material Safety Data Sheet (MSDS)
- b. Chemical Application
  - (1) Types of chemical applied
  - (2) Locations of application
  - (3) Dates of application
  - (4) Amounts of application
  - (5) Method of application
  - (6) Name of person(s) responsible for application

C. Squaw Creek TMDL Monitoring

The Discharger is required to conduct monitoring as described in Sampling and Analysis Requirements Numeric Target Monitoring, Squaw Creek Total Maximum Daily Load for Sediment, Placer County, 3-19-08, Lahontan Regional Water Quality Control Board (Attachment 2). The numeric target monitoring must be conducted at three locations in Squaw Creek's meadow reach every two years. The scope of monitoring includes benthic macroinvertebrate biomonitoring and assessment of streambed characteristics such as median (D-50) particle size and percent sand and percent fines.

The four facilities required to perform this monitoring hold waste discharge requirements (WDRs) with sediment and erosion control provisions in the Squaw Creek watershed-Intrawest/Squaw Village Neighborhood Company, Placer County, the Resort at Squaw Creek, and the Squaw Valley Ski Corporation. A coordinated monitoring effort is encouraged, as was discussed in the April 17,

2008 meeting between Water Board staff and the four dischargers. If a coordinated monitoring program is pursued, submission of one set of data will suffice to satisfy the reporting requirements of all four WDRs. There is no requirement for coordination, but the monitoring costs would be reduced overall if a coordinated monitoring program is implemented.

Monitoring is to commence in 2009, and is to be conducted every other year. Sampling is to occur in late June or early July (approximately 6/20 - 7/10), in accordance with flow conditions specified in Attachment 2. Reports are due January 15 of every even year (approximately 6 months following the monitoring).

D. Sample Collection Procedures

Samples shall be collected by a person with at least two years of water quality monitoring experience. Water samples shall be taken in appropriate bottles which have been cleansed with a non-phosphorus detergent and triple rinsed with stream water prior to collecting the grab sample. Samples will be preserved in accordance with standard methods or approved EPA Methods until delivery to the laboratory for analysis.

A measurement or estimate of the flow rate shall be made each time a surface water sample is taken. A measurement of the depth to groundwater shall be made each time a well sample is taken.

Turf (soil) samples shall be a soil plug cut from the representative green, tee or fairway. Turf (soil) samples shall be taken by a person with at least two years of soil sample extraction experience.

E. Groundwater Monitoring

1. Requirements of the Groundwater Sampling Program: (1) establish baseline conditions in early spring; (2) monitor the effects of chemicals applied during the active (summer) season; (3) determine residual effects once the active season has ceased; (4) build a database adequate to provide effective feedback for golf course chemical and irrigation management with respect to environmental protection; and (5) five shallow wells shall be monitored for dissolved chemical constituents. One upgradient well (Well 5-s), three mid-course wells (Wells 305, 306, and 322), and one downgradient well (Well 301). Additionally, monitoring of shallow wells will act as sentinel wells for the deeper aquifer, which is used for local drinking water. Any significant increase in chemical constituents (non-pesticides) detected in shallow monitoring wells shall trigger additional parallel monitoring in adjacent deep aquifer wells.

2. Groundwater Sampling Schedule: Monthly monitoring from May through October (six months) is required to cover the active golf season.
3. Groundwater Chemical Analyses: The dissolved chemical constituents shall be determined on samples passed through a 0.45 micron or smaller pore size filter (not made of cellulose nitrate). Instead, dissolved Total Kjeldahl Nitrogen (TKN, composed of organic N plus ammonium) will be assessed to capture organic forms of fertilizer now commonly used, and often more mobile in percolating groundwater, such as urea-based and formaldehyde-based chemical fertilizers, as well as ammonium-based fertilizer. Additionally, dissolved total phosphorus (TP) will be assessed (composed of dissolved orthophosphate, polyphosphates, and organic phosphate forms).
4. Groundwater Sampling Methodology: Sampling of the groundwater monitoring wells shall be conducted pursuant to the schedule and frequencies shown in the table below, contained in the General Provisions for Monitoring and Reporting (Attachment 1), and according to provisions of the CHAMP.

All groundwater samples for dissolved chemical constituents shall be grab samples and shall be drawn and analyzed according to the following:

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Dissolved Total Kjeldahl Nitrogen	mg/L as N	Monthly (May –Oct)
Dissolved Nitrate/Nitrite-Nitrogen	mg/L as N	Monthly (May -Oct)
Dissolved Total Phosphorus	mg/L as P	Monthly (May –Oct)
Dissolved Ortho Phosphorus	mg/L as P	Monthly (May-Oct)
Constituents of Pesticides	ug/L	see CHAMP (generally
May, September, and November only following use)		

Additionally, thirty-two on-site wells (monitoring wells 301 through 332) will be monitored (if functional) for Static Water level, reported in feet above mean sea level, and monthly (May-October) maps of groundwater flow direction shall be prepared.

F. Surface Water Monitoring

1. Requirements of the Surface Water Sampling Program: The purpose of the surface water monitoring program is to assess impacts of applied chemicals on transport of these compounds into surface water.
2. Surface Water Sampling Schedule and Locations: Since an adequate database for surface monitoring of potential pollutants

such as nutrients and pesticides does not exist for this site for the active golf season, monthly monitoring is required, May through October (up to six samples) during periods when discharge occurs from Pond A.

Three locations shall be sampled: Station R-9 Squaw Creek at western boundary of Resort at Squaw Creek; Station R-5 Squaw Creek at Squaw Valley Road; and Station R-10 Outflow from Pond A.

3. Surface Water Chemical Analyses: Chemical constituents to be measured are listed below (same as for groundwater).

All surface water samples shall be grab samples and shall be drawn and analyzed according to the following:

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Dissolved Total Kjeldahl Nitrogen	mg/L as N	Monthly (May – Oct)
Dissolved Nitrate/Nitrite Nitrogen	mg/L as N	Monthly (May – Oct)
Dissolved Total Phosphorus	mg/L as P	Monthly (May – Oct)
Dissolved OrthoPhosphorus	mg/L as P	Monthly (May – Oct)
Total Suspended Solids (TSS)	mg/L	Monthly (May – Oct)
Oil and Grease	mg/L	Monthly (May – Oct)
Constituents of Pesticides	ug/L	Monthly (May – Oct) (if used)

Sampling and analysis shall be done in accordance with the General Provisions for Monitoring and Reporting (Attachment 1).

G. Turf (Soil) and Carbon Filter Samples

Samples are to be taken from the following sources at the following locations:

Three greens carbon filter samples-(if water is present) -green No. 1, green No.7, and green No. 14;

Samples are to be analyzed according to the following schedule:

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Dissolved Total Kjeldahl Nitrogen	mg/L as N	Annual (June)
Dissolved Nitrate/Nitrite Nitrogen	mg/L as N	Annual (June)
Dissolved Total Phosphorus	mg/L as P	Annual (June)
Dissolved OrthoPhosphorus	mg/L as P	Annual (June)
Total Organic Carbon (TOC)	mg/L	Annual (June)
Herbicides and Fungicides	ug/L	April, May, June (if used)

Nine turf (soil) samples--green No.1, green No.7, green No. 14, tee No.1, tee No.7, tee No. 14, fairway No.1, fairway No.7, and fairway No. 14.

Turf soil samples are to be analyzed according to the following schedule:

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Herbicides and Fungicides (if use)	ug/kg	April, May, June

#### H. Analytical Capabilities

Because of the unique and often pristine nature of waters in the Lahontan Region in general, exceptional analytical capabilities for nutrients and contaminants are required to assure compliance with Lahontan Basin Plan Water Quality and Non-Degradation Objectives. Required analytical reporting limits are:

Constituent	Reporting Limit (RL) <sup>1</sup> mg/L
Total Dissolved Solids (TDS)	85
Chloride	3.0
Sulfate	25.0
Total Nitrogen (TN as N)	0.18
Total Kjeldahl Nitrogen (TKN)	0.13
Nitrate plus nitrite (as N)	0.05
Total Phosphorus (TP as P)	0.02
Total Iron	0.13
Grease and Oil, EPA 1644, no silica gel cleanup, or equivalent	2.0

Other Constituents:

Reporting Limits shall be at a minimum as sensitive as the more restrictive of those required for analysis of pollutants (40CFR136), or analysis of drinking water specified by the California Code of Regulations, Title 22, Division 4, Chapter 15; or 40 Code of Federal Regulations, Part 141.

II. REPORTING

The above data including sampling results and inspections shall be submitted to the Board in accordance with the schedule described below. The Discharger shall arrange and compile data in a concise form for quick review by Water Board staff.

Report	Frequency	Report Submittal Dates
Erosion and Runoff Controls <sup>1</sup>	Annual	December 15
Maintenance and Operation <sup>1</sup>	Annual	December 15
Water Quality Monitoring	Annual	December 15
Golf Course monitoring	Annual	December 15
Bioassessment Monitoring	Every Two Years	January 15 (even yrs)

1. Written summary of monthly inspections, problems identified, and corrective measures taken.

Beginning on **December 15, 2009**, and each December 15 thereafter, monitoring reports shall be submitted to the Board for the period of sample collection covering the previous May through October. Beginning January 15, 2010, and every two years thereafter, bioassessment reports shall be submitted. Additionally, any detection of pesticide or significant increase in chemical constituents found during monthly monitoring must be reported immediately on receipt of the laboratory report to Water Board staff electronically or by FAX.

Ordered by: \_\_\_\_\_ Dated: \_\_\_\_\_  
HAROLD J. SINGER  
EXECUTIVE OFFICER

- ATTACHMENT:
- A. General Provisions for Monitoring and Reporting.  
September 1, 1994
  - B. Sampling and Analysis Requirements Numeric Target  
Monitoring, Squaw Creek Total Maximum Daily Load for  
Sediment, Placer County, March 2008

# ATTACHMENT A

11-0040

ATTACHMENT A  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

**GENERAL PROVISIONS**  
FOR MONITORING AND REPORTING

1. SAMPLING AND ANALYSIS

- a. All analyses shall be performed in accordance with the current edition(s) of the following documents:
  - i. Standard Methods for the Examination of Water and Wastewater
  - ii. Methods for Chemical Analysis of Water and Wastes, EPA
- b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.
- c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board Executive Officer prior to use.
- d. The discharger shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.
- e. The discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.
- f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.
- g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

## 2. OPERATIONAL REQUIREMENTS

### a. Sample Results

Pursuant to California Water Code Section 13267(b), the discharger shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

### b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

## 3. REPORTING

- a. For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.
- b. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
- c. The discharger shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.
- d. Monitoring reports shall be signed by:
  - i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;
  - ii. In the case of a partnership, by a general partner;
  - iii. In the case of a sole proprietorship, by the proprietor; or

- iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
- e. Monitoring reports are to include the following:
  - i. Name and telephone number of individual who can answer questions about the report.
  - ii. The Monitoring and Reporting Program Number.
  - iii. WDID Number.
- f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

#### 4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation.

# ATTACHMENT B

11-0044

**SAMPLING AND ANALYSIS REQUIREMENTS**  
**NUMERIC TARGET MONITORING**

SQUAW CREEK TOTAL MAXIMUM DAILY LOAD FOR SEDIMENT,  
PLACER COUNTY



Lahontan Regional Water Quality Control Board  
2501 Lake Tahoe Boulevard  
South Lake Tahoe, California 96150  
530.542.5400

**Contact Person:**

Anne Holden  
Engineering Geologist  
[aholden@waterboards.ca.gov](mailto:aholden@waterboards.ca.gov)  
530.542.5450

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## 1. DATA COLLECTION SUMMARY

The following shall be collected synoptically (i.e., at the same time) at each site, and on a biennial schedule (i.e., once every two years):

- General sampling site information (date, time, weather, conditions)
- Global Positioning System (GPS) coordinates of site locations
- Site photographs
- Water chemistry data
  - Temperature, dissolved oxygen, pH, conductivity
- Physical habitat data
  - Substrate particle size, water depth, stream width, current velocity
- Benthic macroinvertebrate samples

## 2. SAMPLING LOGISTICS

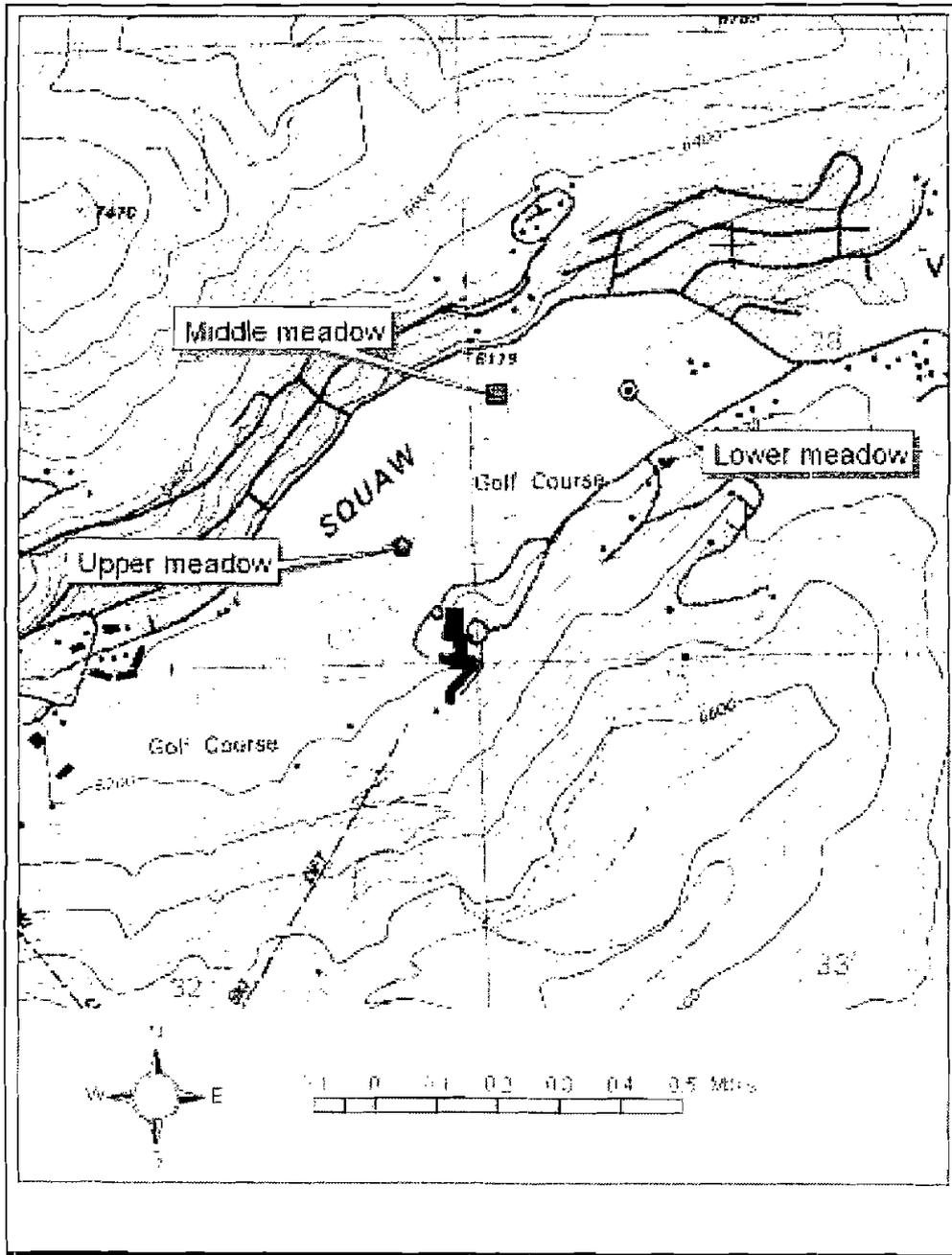
### Sample Locations

Bioassessment sampling locations shall duplicate the three sites in the low gradient meadow reach of Squaw Creek sampled in 2000 and 2001 for the Squaw Creek TMDL bioassessment study (Herbst 2002). The UTM coordinates (datum: NAD 1927) for each site established by Herbst are provided in Table 1. The coordinates were recorded at the downstream end of each 150-meter sampling reach. Figure 1 shows the general sampling site locations.

**Table 1. Sampling site coordinates. Datum is NAD 1927.**

<b>Location</b>	<b>Northing</b>	<b>Easting</b>
Squaw Creek <b>Upper meadow</b>	4342814	740091
Squaw Creek <b>Middle meadow</b>	4343185	740287
Squaw Creek <b>Lower meadow</b>	4343245	740475

Figure 1: Squaw Creek meadow reach numeric target monitoring locations



### Sampling Frequency

Sampling shall be conducted once every two years, beginning in 2009.

### **Sampling Period (also called “Index Period”)**

Sampling shall occur between the months of June and August, after peak snowmelt flows have subsided, when flows in the meadow reach are continuous and riffle habitat at the sampling sites is present. Target flow conditions are when the high-discharge snowmelt period is over, but before baseflows become so low that no riffle habitat is present. Avoid sampling when flow may be strongly influenced by precipitation, because sudden flow increases may affect local community composition (SWAMP 2007).

### **Sampling Equipment**

(Adapted from Herbst 2001 and 2002, and SWAMP 2007)

- Multi-parameter probe or individual probes (for field measurements of dissolved oxygen, temperature, conductivity, pH)
- Current meter (for stream discharge)
- D-frame kick net (250-micron mesh size)
- BioQuip forceps
- White sorting pan (enamel or plastic)
- 100% ethanol and rose bengal stain
- Sample jars (250 ml or 500 ml)
- Buckets (2) and aquarium nets (fine mesh)
- Meter stick or other graduated rod (for measuring depth and pebble counts)
- Meter tape (50 meters on a reel)
- Data collection sheets/fieldbook
- Flags/flagging Tape
- Camera
- GPS unit
- Small metric ruler or gravelometer for substrate measurements

### **3. FIELD PROCEDURES**

(Adapted from Herbst 2001 and 2002, and SWAMP 2007)

#### **Prepare Sampling Location**

##### *1. Define sampling reach*

Each sampling site is a 150-meter reach along an approximation of the thalweg (i.e., deepest part) of the channel. To the extent possible, this measurement should be made by following along the bank contours of the channel, laying out the meter tape. This may require crossing the channel or even walking in the stream if bank vegetation cover is too dense – but this should be avoided or kept to an absolute minimum to avoid

disturbance of benthic habitat. Lay out the 150-meter reach starting at zero at downstream end of reach.

## *2. Record reach information*

Once the 150-meter reach is delineated, record GPS UTM coordinates and datum at the bottom end of the reach. Record date, time, sampling staff, site name (i.e., Squaw Creek upper, middle or lower meadow) and general weather conditions, as well as any other conditions that may influence bioassessment sampling (i.e., recent high flows, scouring events, other stream disturbances, etc.).

## *3. Take photographs*

Photos shall be taken at 0 meters (m) looking upstream, 50 m looking upstream, 100 m looking upstream and 150 m looking downstream. For all photos, record site, date, and transect location of photo (e.g., 0 m looking upstream).

## *4. Define riffle-pool areas*

Over the 150-meter reach, record along the meter tape (to the nearest meter) where erosional and depositional habitat types begin and end – riffles and pools, respectively. This provides an indication of the distribution and length of these major geomorphic features within each reach. The position of these habitat features shall also be used to determine where the benthic invertebrate samples are to be collected by using a random number table (0-150). Specifically, after recording the riffle ranges, select random numbers until five of the random numbers correspond with the riffle ranges, and then sample at those locations. Any habitat not assigned to the riffle-pool categories may be recorded as transitional “glide” or “run” habitat type.

## *5. Establish transects*

Establish fifteen transects, spaced at 10-meter intervals, over the length of the 150-meter sampling reach. Mark transects with surveyor's flags or similar, along a single bank.

## **Measure and Record Water Chemistry Data**

At the top end of the reach, where no instream habitat has been disturbed by the sampling crew, measure and record ambient water chemistry data (i.e., pH, dissolved oxygen, temperature, conductivity).

## **Collect Benthic Macroinvertebrate Samples**

Macroinvertebrate samples shall be collected before recording physical habitat data. Samples shall be collected as composites of 3 kick samples across 5 randomly selected

riffle habitats; therefore, each sampling site will have 5 replicate samples collected for laboratory analyses.

### *Benthic Macroinvertebrate Sampling Procedure*

(Adapted from Herbst 2001, Appendix 2-2)

Select 5 riffles from a random number table (as described above in the subsection titled "Define riffle-pool areas") along the 150-meter reach. Use the D-framed net (250-micron mesh size) to collect kick samples at  $\frac{1}{4}$ ,  $\frac{1}{2}$  and  $\frac{3}{4}$  of the stream width. (Always start at the location furthest downstream and work up.) When selected riffles are wide enough, collect the 3 samples for each composite along a transect that is perpendicular to the stream (i.e., across the stream in a side-by-side manner). For selected riffles that are too narrow to collect all 3 samples along a perpendicular transect, collect the 3 samples one above the other (starting from downstream) as described further, below. Kick an area approximately 30 x 30 cm directly upstream of the net (a square area with sides equal to net width). Continue this kick for about 10-15 seconds, then rub the rocks by hand for an additional 10-15 seconds (total 20-30 seconds at each of 3 positions = 1 to 1.5 minutes). If shallow enough, just use hands for the full time, rather than kicking. After each sample position, remove large rocks or wood debris after washing them in the current into the net.

For streams less than 1-2 meters wide, take 2 kick samples from both sides of the stream with one sample just above and mid-stream, or collect all 3 samples singly (one above another) starting at the random number location (instead of taking all 3 across the stream when widths are greater than 1- 2 meters). Keep in mind that the goal is to sample across different microhabitat types in the stream including varied depth, current, and substrate types; the three composited samples should represent the variety of riffle habitat present. One or two samples may be used to comprise a composite if samples are dense with debris. The label should then indicate the number of kicks used (i.e., 1 or 2); assume 3 if not noted on label. If riffle habitat is not available across the entire line of each transect, select representative locations to collect the needed composite sample.

Quickly dip the net into the stream to consolidate the material to the bottom of the D-framed net. Pick out any remaining large debris being sure to retain any attached insects. Invert the net into a bucket that is  $\frac{1}{4}$  to  $\frac{1}{3}$  full of water. Shake out the net to collect all the debris and insects (do not dip in bucket water since insects will adhere). Dip net into the stream again to consolidate remaining contents and flick inverted net into the bucket.

Elutriate (pour off lighter material) with a swirling motion into the other bucket five times. Use only a small volume of water in each elutriation so the receiving bucket does not overflow. Only rocks and sand should be left in the original bucket. Empty these rocks into a shallow white pan (or closely examine the bottom of the bucket). Search for cased caddisflies/snails and add to sample if found (they are heavier and may not pour off).

Strain collected material through a fine mesh aquarium net supported on one bucket (this may also serve as elutriation since some sand usually remains). Empty contents of aquarium net into a sample container. Use BioQuip forceps to scrape any remaining debris into vial. Fill container with ethanol to preserve the captured organisms. Fill to a level that just covers the amount of debris. Add 5 ml of rose bengal stain. Label sample jar as shown below, and move on to next sample.

### *Label Sample Jars*

Record stream name, site name, date, and replicate number. The label shall also indicate the number of kicks used (i.e., 1 or 2) if fewer than 3; assume 3 if not noted on label.

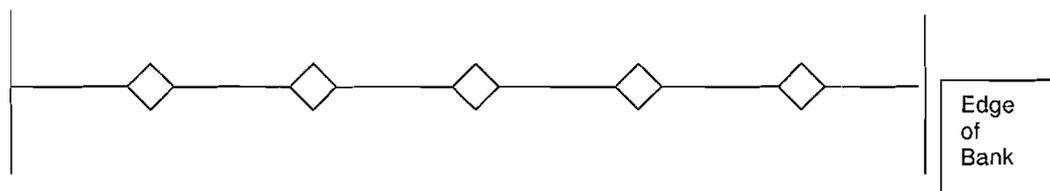
### **Collect Physical Habitat Data: Percent Fines and Sand, D-50 Particle Size**

(From Herbst 2001 and 2002, and SWAMP 2007)

Physical habitat data shall be collected at 5 equidistant points along each of the 15 established transects. Current velocity shall be measured at one selected representative transect at each reach.

1. Measure and record stream width (wetted perimeter) at transect location. Each transect is then visually divided into 5 equally spaced points (visualize the mid-point as 3, and equally divide the left and right sides into points 1 and 2 and points 4 and 5). (Figure 2).

**Figure 2. Spacing of transect points.**



2. At each of the 5 points along the transect, lower a graduated rod (e.g., meter stick or similar) through the water column perpendicular to both the flow and the transect to objectively select the particle located at the tip of the rod.
3. Measure the depth from the water surface to the top of the particle and record to the nearest centimeter.
4. Remove the particle from the streambed, then measure and record the length of its intermediate axis to the nearest millimeter, and assign to one of the size classes listed below. Alternatively, size may be estimated using descriptions listed below (SWAMP 2007). Record size class using codes listed in the far right column of Table 2.

**Table 2. Substrate size descriptions and size class codes.**

<b>Substrate</b>	<b>Size (Herbst 2002)</b>	<b>Description (from SWAMP 2007)</b>	<b>Size Class Code</b>
Fines	< 1 mm	Not gritty	F
Sand	1-3 mm	Gritty to ladybug	S
Gravel	3-65 mm (6.5 cm)	Ladybug to marble to tennis ball	G
Cobble	6.5 cm to 25 cm	Tennis ball to basketball	C
Boulder (or bedrock)	>25 cm (10 inches)	Bigger than basketball	B

5. Select one representative transect at each reach to record current velocity. At 60 percent depth, measure the current velocity at each point along the selected transect. Record current meter type used and units. Discharge is calculated as the sum of one-fifth the stream width times the depth and current velocity measured at each of the five transect points.

Stream velocity, depth, and substrate size shall be recorded and reported using the template provided in Attachment 1 (from Herbst 2001, Appendix 1-7, pp. 2-3), or an equivalent method, and stream discharge (width x depth x velocity) shall be reported for each reach. Substrate data shall be entered into the Excel spreadsheet template provided in Attachment 2, and provided to Water Board staff in that electronic format, including values for the D-50 (median) particle size and “percent fines plus sand” calculated for each reach according to the methods and formulas in Attachment 2.

#### **4. LABORATORY ANALYSIS**

##### **Standard Operating Procedures for Laboratory Processing and Identification of Benthic Macroinvertebrate Samples**

(Adapted from Herbst 2001 and 2002)

##### Subsample Counts:

Each subsample shall have a minimum organism count of 250. Complete counts shall be performed for any and all subsamples taken. (Average counts will be in the 300-500 range.)

##### Sample Splitting:

Samples may be split to acquire subsamples using either the grid-tray method or a rotating drum (i.e., Folsom) plankton splitter. Additional background information about the performance characteristics of these and other procedures is available in Herbst and Silldorff (2004).

##### Sample Identification:

Sorted specimens shall be identified, assigned, and reported using the taxonomic levels shown in Attachment 3 (Calculator for Squaw Cr Biological Targets). Each identification

shall have a taxonomic certainty rating of "1," "2," or "3" assigned to it, to assist in evaluating any problems with taxonomy that may arise (see taxa record sheets in Herbst 2001, Appendix 1-3, for an example template). Life stage(s) and observations of identifying traits or specimen condition shall also be recorded and reported along with the other results.

## **5. CALCULATION OF COMPONENT METRICS AND THE "BIOLOGICAL CONDITION SCORE" (BCS)**

The BCS's seven component metrics (i.e., Biotic Index, Taxa Richness, EPT Diversity Index, %EPT of Total, Number of Sensitive Taxa, % Tolerant Taxa, R-50 Index) shall be calculated using the methods in Attachment 3 ("Calculator for Squaw Cr Biological Targets"). Following calculation of the seven component metrics, the BCS shall be calculated by summing the component metric scores derived using the values in Attachment 3, (from: Herbst 2002, p. 9, table titled "Biological Condition Scores Assigned to Metric Value Ranges").

## **6. QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC)**

The discharger shall prepare and/or make available to its relevant staff and/or consultants a Quality Assurance Project Plan (QAPP) that addresses the required bioassessment monitoring. The QAPP should follow USEPA guidance and requirements as found in *USEPA Requirements for Quality Assurance Project Plans* (EPA QA/R-5, EPA/240/B-01-003, March 2001), and *USEPA Guidance for Quality Assurance Project Plans* (EPA QA/G-5, EPA/240/R-02/009, December 2002). Upon request from the discharger, the Water Board's Executive Officer or Quality Assurance Officer may override any USEPA quality assurance requirements and/or guidance that are deemed inapplicable and/or unnecessary for this project. Any such deviations must be approved in writing and in advance by Water Board staff. An umbrella document, such as a Quality Assurance Management Plan or other project or program quality assurance document, may be used to meet this requirement if the umbrella document covers all relevant aspects of the required bioassessment sampling.

The QAPP (or umbrella document) shall include, or be supplemented to include, a specific requirement for external quality assurance checks (i.e., verification of taxonomic identifications and correction of data where errors are identified). External QA checks shall be performed on: (1) all uncertain taxa; and (2) one macroinvertebrate sample per calendar year in which sampling occurs for this project, or ten percent of the samples per year (whichever is greater). QA samples shall be randomly selected. The external QA checks shall be paid for by the discharger, and performed by the California Department of Fish and Game's Aquatic Bioassessment Laboratory. An alternate laboratory with equivalent or better expertise and performance may be used for the external QA checks if approved in advance by the Water Board's QA Officer or Executive Officer.

## 7. DATA REPORTING

The discharger shall provide, within one year of each sample date, electronic copies (in Microsoft Excel<sup>®</sup> format) of:

- Spreadsheet with substrate size calculation formulas, providing values for the D-50 particle size and “percent fines plus sand”, calculated according to the methods and formulas contained in Attachment 2. (This reporting requirement can be satisfied by completing and submitting the spreadsheet provided in Attachment 2.)
- All raw bioassessment data (i.e., all data for all 5 replicates for each site) in spreadsheet format, reported using the taxonomic levels in Attachment 3. (Note: Deviation from the taxonomic levels in Attachment 3 is not acceptable, since any such deviation could affect the component metrics and final BCS score.) This shall include a separate column of data for each of the five replicates, and a “total” column that sums (composites) the data for all five replicates. (This reporting requirement can be satisfied by completing and submitting the spreadsheet provided in Attachment 3.)
- Metric calculation spreadsheet showing values for the seven BCS component metrics and the final BCS score calculated according to the formulas in Attachment 3. (This reporting requirement can be satisfied by completing and submitting the spreadsheet provided in Attachment 3.)

The discharger shall also provide, concurrently with the data described above, in both hardcopy and electronic (i.e., Adobe PDF) formats, a brief interpretive report including:

- A narrative summary of the results (including calculated Biological Condition Score, D-50 particle size, and “percent fines plus sand”) for each site and date, with a tabular comparison of the most recent scores to the TMDL targets and any and all previous monitoring scores (i.e., to clearly display and briefly summarize the trends in target values over time compared to the numeric targets).
- Photocopies of field data sheets and field notes
- Site photographs
- Results of the external QA checks and any action(s) taken to resolve any discrepancies encountered during the QA process.

## 8. SAMPLE PRESERVATION AND ARCHIVING

Definitions: The “original sample material” is that material (i.e., macroinvertebrates, organic material, gravel, etc.) remaining after the subsample has been removed for identification. The “remaining subsampled material” is that material (i.e., organic material, gravel, etc.) that remains after the organisms to be identified have been removed from the subsample for identification. (Generally, no macroinvertebrates are present in the remaining subsampled material, but this needs to be verified via QA

completeness checks, according to the lab's QAPP.) The "identified organisms" are those organisms within the subsample that are specifically identified and counted.

The original sample material shall be stored in 70 percent ethanol and retained by the discharger until: 1) all QA analyses specified herein and in the relevant QA plan are completed; and 2) any data corrections and/or re-analyses recommended by the external QA laboratory have been implemented. The remaining subsampled material shall be stored in 70 percent ethanol and retained until completeness checks have been performed according to the relevant QA plan. The identified organisms shall be stored in 70 percent ethanol, in separate glass vials for each of the five replicates for each site for each sample date. The discharger shall preserve and retain these identified organisms until the Regional Board's Executive Officer accepts in writing the fifth biennial monitoring report (i.e., If monitoring commences in 2009, and is conducted every other year, in 2011, 2013, 2015, and 2017, the identified organisms shall be preserved and retained by the discharger as described above until the ten-year report on the 2017 results is accepted in writing by the Executive Officer).

The external QA samples shall be stored in 70 percent ethanol in separate glass vials for each final ID taxon. (For example, a sample with 45 identified taxa would be archived in a minimum of 45 vials, each containing all individuals of the identified taxon.) Each of the vials containing identified organisms shall be labeled with taxonomic information (i.e., taxon name, organism count) and collection information (i.e., site name/site code, waterbody name, date collected, method of collection). These samples shall be transmitted to the external QA laboratory, and once returned by the external QA laboratory shall be archived (i.e., retained) by the discharger for the same duration as the other identified organisms.

All archived samples shall be checked at least once per year and "topped off" with ethanol to prevent desiccation, and shall be relinquished to the Water Board upon request by any Water Board staff.

## 9. ATTACHMENTS

1. *Appendix 1-7.pdf* from Herbst (2001), "Stream Form" (3 pages)
2. *D-50 calculation template.xls* (Excel spreadsheet template for calculating and reporting D-50 particle size and "percent fines plus sand")
3. *Squaw\_permit\_attachment\_3\_Calculator\_for\_Squaw\_Cr\_Biological\_Targets.xls* (Example Excel spreadsheet template for calculating individual component metrics of the Biological Condition Score)

## 10. REFERENCES

- Herbst, D.B. 2001. *Quality Assurance Project Plan – Aquatic invertebrate bioassessment monitoring in the Eastern Sierra Nevada*, Sierra Nevada Aquatic Research Laboratory and Lahontan Regional Water Quality Control Board. Download at: [http://www.waterboards.ca.gov/lahontan/water\\_issues/projects/quality\\_assurance\\_project\\_plan/index.shtml](http://www.waterboards.ca.gov/lahontan/water_issues/projects/quality_assurance_project_plan/index.shtml)
- Herbst, D.B. 2002. *Development of Biological Water Quality Targets for Assessment of Total Maximum Daily Load (TMDL) of Sediment in the Squaw Creek Watershed (Placer County, California)*. Final Report to Lahontan Regional Water Quality Control Board for Contract #9-118-160-0. April 16, 2002. 39 pp. Download at: [http://www.waterboards.ca.gov/lahontan/water\\_issues/programs/swamp/docs/herbst\\_scb\\_2002.pdf](http://www.waterboards.ca.gov/lahontan/water_issues/programs/swamp/docs/herbst_scb_2002.pdf).
- Herbst, D.B., and E.L. Silldorff. 2004. *Performance of Different Bioassessment Methods from California: Side-by-Side Comparisons of Field, Laboratory and Analysis Procedures for Streams of the Eastern Sierra Nevada*. Final Report to the Lahontan Regional Water Quality Control Board for Contract #9-191-160-0. November 26, 2004. 51 pp. Download at: [http://www.waterboards.ca.gov/lahontan/water\\_issues/programs/swamp/docs/herbst\\_silldorff\\_methods\\_comparison\\_2004.pdf](http://www.waterboards.ca.gov/lahontan/water_issues/programs/swamp/docs/herbst_silldorff_methods_comparison_2004.pdf)
- Surface Water Ambient Monitoring Program (SWAMP). 2007. *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California*. California State Water Resources Control Board, Sacramento, CA. February 2007. 48pp. Download at: [http://www.waterboards.ca.gov/swamp/docs/phab\\_sopr6.pdf](http://www.waterboards.ca.gov/swamp/docs/phab_sopr6.pdf)

# ENCLOSURE 2

11-0058

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

BOARD ORDER NO. 6-93-26  
WDID NO. 6A318511300

UPDATED WASTE DISCHARGE REQUIREMENTS

FOR

THE RESORT AT SQUAW CREEK

Placer County

FINDINGS of the California Regional Water Quality Control Board, Lahontan Region, (hereinafter referred to as the "Board"):

1. Dischargers

The Resort at Squaw Creek is owned by Squaw Creek Associates (SCA), a California General Partnership. Pacific Squaw Creek Inc. (PSC), a California Corporation and subsidiary of HCV Pacific Partners, is the Managing General Partner, and is responsible for the day-to-day affairs of the SCA Partnership. Mr. Robert L. Pierce, General Manager of Perini Resorts, then the managing general partner, submitted information on which these revised waste discharge requirements are based. For purposes of this Order, Squaw Creek Associates and Pacific Squaw Creek, Inc. are hereinafter referred to as the "Dischargers" and the Resort at Squaw Creek is hereinafter referred to as the "facility".

2. Permit and Enforcement History

The Board previously prescribed waste discharge requirements for the Resort at Squaw Creek under Board Order No. 6-87-102, for construction of the resort and golf course, and Board Order No. 6-90-50 for construction and operation of the ski facilities. Board Order No. 6-87-102 regulated waste earthen materials, stormwater runoff from impervious surfaces, nutrients from the use of fertilizers and toxic chemicals from the use of pesticides on the golf course. Board Order No. 6-90-50 regulated waste earthen materials and petroleum spills from lifts and construction equipment.

3. Reason for Action

The Board is updating the waste discharge requirements on its own initiative as part of a statewide program to periodically review and revise all outdated Board Orders. Additionally, the waste discharge requirements are being revised to reflect the change from the construction phase of the project to an ongoing operation phase. Provisions of these waste discharge requirements will incorporate provisions of the approved Chemical Application Management Plan (CHAMP).

11-0059

4. Facility Location

The facility is located in the Truckee River Hydrologic Unit in portions of Sections 30, 31 and 32 of T15N, R15E, and Sections 5 and 6, T15N, R16E, MDB&M, as shown on Attachment "A", which is made a part of this order.

5. Facility Description

The existing facility consists of a resort complex including a hotel complex consisting of 405 guest rooms, the Plaza Building (restaurants, convention space, retail stores and other "public" space), landscaping and grounds, 48 homesites and an 18-hole golf course located on the hillside and within the 100-year floodplain and wetlands of Squaw Creek. Additionally, the facility includes ski facilities including a lift and runs operated in conjunction with the Squaw Valley Ski Corporation.

6. Potential Pollutants

The Dischargers, on a limited basis, may use sodium chloride (salt) as a snow conditioner on selected runs during ski races. From other areas where salt has been used to condition snow, there have been few indications of the salt in either the soil or the water. Potential pollutant discharge from the project consists of waste earthen materials from ski slopes, other previously disturbed areas lacking vegetation and unpaved access roads; excess fertilizer and chemicals applied to golf course fairways and greens; chemicals used in ski slope preparation; stormwater runoff from impervious surfaces and road sanding materials; oil and grease and litter disposed in parking areas. For purposes of this Order, waste earthen materials are defined as any drainage, flow, or seepage containing eroded earth from any man-disturbed areas.

7. Chemical Application Management Plan (CHAMP)

The CHAMP was developed for the operation and maintenance of the golf course. The legal requirements for the preparation and content of the CHAMP were set forth in the project approval conditions established by Placer County and the Regional Board, as well as in two written agreements which resolved separate lawsuits related to the Resort at Squaw Creek Project. This document, which has been reviewed and recommended by the Technical Review Committee (TRC), was approved and accepted by Placer County on July 16, 1991 and by the Regional Board on September 12, 1991. It provides the basis for the use of fertilizers and chemicals on the golf course.

8. Spill Contingency Plan

As part of the CHAMP, the Discharger prepared a Spill Contingency Plan for the golf course operation which will be followed in the event of any spill of petroleum products or any hazardous material to contain, ensure the rapid cleanup, and minimize the effects of any spill.

9. Treatment Systems

Runoff from the Resort complex drains to two ponds and an artificial wetlands constructed as part of the project which provides partial treatment of the runoff. Runoff from the ponds is discharged to a meandering channel within the existing wetlands before finally discharging to Squaw Creek below the project. Additional wetlands were created within the 100-year floodplain of Squaw Creek to mitigate and to treat runoff from the golf course. The Discharger has an ongoing program to minimize disturbance of natural vegetation and to use best management practices such as revegetation and maintenance of disturbed areas, mechanical stabilization, water bars, drop inlets and other sediment control measures to prevent waste earthen materials from the ski area from entering surface waters. The Discharger has installed and maintains stormwater runoff treatment facilities for its parking area and other impervious surfaces. These facilities consist of drop inlet structures and bi-weekly sweeping of the parking area.

10. Snow Disposal and Storage

Snow from parking areas is disposed and stored in mounds around the perimeter of the parking lot. Snowmelt runoff discharges to the two ponds and the artificial wetland.

11. Site Hydrology/Geology

Runoff from the project site will enter ground and surface waters (Squaw Creek) of the Truckee River Hydrologic Unit. Water quality the undisturbed headwaters of Squaw Creek is excellent and suitable for a wide variety of beneficial uses. Ground water in the vicinity of the facility in the shallow aquifer is about 10 feet below the surface and flows in a generally northerly direction toward Squaw Creek. Ground water in a lower aquifer is about 40 feet below the surface (with a piezometric surface about 10 feet below the ground surface) and flows generally in an easterly direction toward the lower end of the meadow.

12. North Lahontan Basin Plan

The Regional Board adopted a Water Quality Control Plan for the North Lahontan Basin on June 26, 1975. On June 26, 1980, the Regional Board adopted amendments to that Plan for the Truckee River and Little Truckee River Hydrologic Units. This Order implements the Plan as amended. The Plan, as amended, contains water quality objectives for the Truckee River and its tributaries.

13. Beneficial Uses

The beneficial uses of Squaw Creek as set forth and defined in the Water Quality Control Plan for the North Lahontan Basin are:

- a. municipal and domestic supply
- b. agricultural supply
- c. water-contact recreation
- d. non-water-contact recreation
- e. cold freshwater habitat
- f. wildlife habitat
- g. groundwater recharge
- h. rare and endangered species (potential beneficial use)

The beneficial uses of ground water in the Truckee River Hydrologic Unit as set forth and defined in the Water Quality Control Plan for the North Lahontan Basin are:

- a. municipal and domestic supply
- b. agricultural supply
- c. freshwater replenishment

14. Inland Surface Waters Plan

The California State Water Resources Control Board adopted the California Inland Surface Waters (CISW) Plan on April 11, 1991. This permit incorporates specific water quality standards required by the CISW Plan, as shown on Attachment "B" which is made a part of this Order. The CISW Plan states that within 5 years of the adoption of the plan the Regional Board shall determine what actions are appropriate to ensure that stormwater discharges are in compliance with the numerical objectives. The Dischargers shall be given a maximum of ten years from the date of adoption of the Plan to come into compliance with the numerical objectives. The CISW Plan states that before costly end-of-pipe treatment is required of Dischargers unable to comply with numerical effluent limitations, the Regional Boards shall require Dischargers to (1) fully evaluate source reduction of toxic pollutants for industrial and all other inputs, and (2) develop management plans and implement source control and best management practices to reduce the discharge of these pollutants to the maximum extent practicable. The receiving water constituent limits in the CISW Plan, as contained in this Order, will be based on zero dilution capacity of the receiving waters since the upstream flow-rate and quality of the receiving waters are unknown. The receiving water limitations for the CISW Plan constituents may be revised if it is determined that alternative limitations are more appropriate.

15. CEQA Compliance

These discharge requirements govern the waste discharged due to the operations and minor maintenance activities at an existing facility. Maintenance activities of existing facilities are exempt from the provisions of the California Environmental Quality Act (Act) (Public Resources Code, Section 21000 et. seq.) in accordance with Section 15104, Chapter 3, Title 14, California Code of Regulations. Any proposed future modifications to the project not determined to be categorically exempt from the provisions of the Act will be considered as separate projects under the provisions.

16. Notification of Interested Parties

The Board has notified the Dischargers and interested parties of its intent to revise waste discharge requirements for the discharge.

17. Consideration of Public Comments

The Board in a public meeting heard and considered all comments pertaining to the project and the proposed discharge.

IT IS HEREBY ORDERED THAT THE DISCHARGERS SHALL COMPLY WITH THE FOLLOWING:

I. DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. All surface flows generated within the golf course, the ski area, the resort complex or the parking lots, which are discharged to surface waters shall not contain constituents in excess of the following concentrations:

<u>Constituent</u>	<u>Maximum Concentration</u>
Total Filterable Residue	85 mg/l
Chloride	3.0 mg/l
Sulfate	25 mg/l
Nitrate Nitrogen	0.05 mg/l as N
Total Kjeldahl Nitrogen	0.13 mg/l as N
Total Nitrogen	0.18 mg/l as N
Total Phosphorus	0.02 mg/l as P
Total Iron	0.13 mg/l
Grease and Oil	2.0 mg/l

2. If constituent concentrations of waters entering the subject property at any time exceed the numerical standards specified above, there shall be no increase in the constituent concentrations in the waters that are discharged to Squaw Creek from the subject property.
3. All surface flows generated within maintenance facilities or within parking lot areas which are discharged to Squaw Creek or other surface waters shall not contain constituents in excess of the concentrations specified in Attachment "B" of this Order.
4. All surface flows generated within the facility which are discharged to surface waters or to stormwater runoff conveyance systems shall not contain the following:
  - a. substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, or animal life.
  - b. coliform organisms attributable to human wastes.
  - c. substances with a pH below 7.0 units or greater than 8.4 units.
  - d. substances containing any perceptible floating materials including but not limited to solids, liquids, foams, and scums.
  - e. substances which contain settleable solids in detectable concentrations.

B. Receiving Water Limitations

1. The discharge of surface flows generated within the project to surface waters or to stormwater runoff conveyance systems shall not cause the following water quality objectives for Squaw Creek to be exceeded:

<u>Constituent</u>	<u>Units</u>	<u>Average<sup>1</sup> Concentration</u>
Total Filterable Residue (Total dissolved solids)	mg/l	85
Chloride	mg/l	3.0
Sulfate	mg/l	25.0
Nitrate Nitrogen	mg/l as N	0.05
Total Kjeldahl Nitrogen	mg/l as N	0.13
Total Nitrogen	mg/l as N	0.18
Total Phosphorus	mg/l as P	0.02
Total Iron	mg/l	0.13

<sup>1</sup>Average Concentration = mean of monthly means for months in which discharge to Squaw Creek occurs.

2. If the constituent concentrations of the receiving waters just above the discharge point exceed the levels in I.B.1., the discharge shall not cause a statistically significant increase (at a 90 percent confidence level) in the concentrations below the discharge point over those upstream of the discharge.
3. All surface flows generated within maintenance facilities or within parking lot areas which are discharged to Squaw Creek or other surface waters shall not cause the CISW Plan receiving water objectives listed in Attachment "B" to be exceeded for Squaw Creek.
4. The discharge of surface flows generated within the project, or as a result of the development of the project, shall not cause the following conditions or alterations in surface waters of the Truckee River Hydrologic Unit:
  - a. The concentration of total nonfilterable residue (TNFR, or total suspended sediment or solids) shall not be altered to the extent that such alterations are discernable at the 90 percent significance level.)
  - b. The concentration of settleable material (total settleable solids) shall not be raised by more than 0.1 milliliter per liter.
  - c. The turbidity of waters shall not be raised over 3 NTU (Nephelometric Turbidity Units, mean of monthly means) or 10 percent over natural levels, whichever is greater.

- d. The dissolved oxygen concentration, in terms of percent saturation, shall not be depressed by more than 10 percent, or to less than 80 percent of saturation or to less than 7.0 mg/l, whichever is least.
- e. Waters shall not contain concentrations of coliform organisms attributable to human wastes. The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 20/100 ml, nor shall more than 10 percent of total samples during any 30-day period exceed 40/100 ml.
- f. The concentration of biostimulatory substances of waters shall not be altered in an amount that could promote aquatic biomass to the extent that such increases are discernible at the 90 percent significance level.
- g. The mean monthly algal growth potential of waters shall not be altered to the extent that such alterations are discernible at the 90 percent significance level.
- h. The species composition of aquatic organisms of waters shall not be altered to the extent that such alterations are discernible at the 90 percent level.
- i. surface waters shall not contain oil, greases, waxes or other materials that result in a visible film or coating on the surface of the water or on objects in the water.
- j. the concentration of total identified chlorinated hydrocarbons, organophosphates, carbamates, and other pesticide and herbicide groups shall not exceed the lowest detectable levels, using the most recent detection procedures available. There shall be no increase in pesticide concentrations found in sediments or aquatic life.
- k. surface waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Chapter 15, Article 4, Section 64435, Tables 2 and 4.
- l. the concentrations of toxic pollutants in the water column, sediments, or biota shall not exceed levels which adversely affect the water for beneficial uses. The discharge shall not cause acute or chronic toxicity in ambient waters.

5. All surface flows generated within the facility which are discharged to groundwater or to land treatment systems shall not cause a violation of the following water quality objectives for ground waters of the Truckee River Hydrologic Unit:
- a. ground waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses;
  - b. the median concentration of coliform organisms, in ground waters, over any seven-day period shall be less than 2.2/100 ml;
  - c. ground waters shall not contain a concentration of total nitrogen in any single sample in excess of 5.0 mg/l as N, nor shall they increase the annual mean concentration of nitrate nitrogen at any single groundwater sampling location by more than 0.5 mg/l as N above pre-project background levels (pre-project background level of nitrate nitrogen has been established as 0.05 mg/l).
  - d. the summation of concentrations of total identified chlorinated hydrocarbons, organophosphates, carbamates, and other pesticide and herbicide groups, in all waters of the basin, shall not exceed the lowest detectable levels, using the most recent detection procedures available. There shall be no increase in pesticide concentrations found in sediments or aquatic life.
  - e. the concentrations of toxic pollutants in the ground water shall not exceed levels which adversely affect the water for beneficial uses.
  - f. ground waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 17, Chapter 5, Subchapter 1, Group 1, Article 4, Section 7019, Tables 2, 3 and 4;
  - g. ground waters shall not contain concentrations of chemical constituents in amounts that adversely affect beneficial uses.

C. Best Management Practices

1. The Dischargers must comply with the Best Management Practices for operation of the golf course as listed in Attachment "C". These practices, modified as noted to conform to the Regional Board's statutory authority, are extracted from the Chemical Application Management Plan (CHAMP). Nothing in this Order shall abrogate the authority of the Technical Review Committee (TRC) or the

Placer County Department of Environmental Health (DEH) as defined in the CHAMP, in Placer County approvals, or in the two written agreements which resolved separate lawsuits related to the Resort at Squaw Creek project.

2. Unless a variance has been granted pursuant to the Provisions, there shall be no removal of vegetation nor disturbance of existing ground surface conditions between October 15 of any year and May 1 of the following year.
3. Prior to any disturbance of existing soil conditions, the Discharger shall install temporary erosion control facilities to prevent transport of eroded earthen materials and other wastes off the property.
4. Vehicle use shall be restricted to existing roads and previously disturbed areas.
5. There shall be no significant modification of existing drainage ways or existing stream channel geometry except for the purpose of stabilization or enhancement of water quality improvement effects. All modifications of the bed, channel, or bank of a stream require a prior written agreement with the California Department of Fish and Game.
6. All eroding slopes steeper than two horizontal to one vertical shall be stabilized.
7. All soil disturbance activities shall cease and temporary erosion control measures immediately installed if adverse weather conditions threaten the transport of disturbed soils from the project site.
8. All disturbed areas shall be adequately restabilized or revegetated. Revegetated areas shall be continually maintained until vegetation becomes established.
9. Prior to October 15 of each year, the Discharger shall provide permanent or temporary stabilization of all disturbed or eroding areas through commencement of revegetation and/or completion of mechanical stabilization measures. Commencement of revegetation shall consist of seeding, planting, mulching, initial fertilization as needed, and initial watering as needed.
10. Surface flows from the project site shall be controlled so as to not cause downstream erosion at any point.
11. Stormwater runoff handling and disposal facilities shall be cleaned and renovated annually.

12. All disturbed soil and surplus waste earthen materials shall be removed from the project site and deposited only at a legal point of disposal, or restabilized on-site in accordance with erosion control plans previously reviewed by the Executive Officer.
13. At no time shall waste earthen materials be placed in surface water drainage courses, or in such a manner as to allow the discharge of such materials to adjacent undisturbed land or to any surface water drainage course.
14. Fresh concrete or grout shall not be allowed to contact or enter surface waters.
15. The Dischargers shall immediately clean up and transport to a legal site any spilled petroleum products to the maximum extent practicable.

D. General Requirements and Prohibitions

1. 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 the surface waters of the Truckee River Basin is prohibited.
2. 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 surface waters or to lands within the 100-year floodplain of the Truckee River or any of its tributaries is prohibited.
3. The discharge of treated or untreated domestic wastewater, industrial waste, garbage or other solid wastes, or any deleterious material to surface waters and/or ground waters of the Truckee River Hydrologic Unit is prohibited.
4. The discharge of oil, gasoline, diesel fuel, or any other petroleum derivative or any toxic chemical or hazardous waste to surface waters and/or ground waters of the Truckee River Hydrologic Unit is prohibited.
5. The discharge of waste shall not cause a pollution or nuisance as defined in Section 13050 of the California Water Code, or a threatened pollution.

II. PROVISIONS

A. Rescission of Board Orders

Board Orders No. 6-87-102 and 6-90-50 are hereby rescinded.

B. Monitoring and Reporting

Pursuant to California Water Code Section 13267(b), the Dischargers shall comply with Monitoring and Reporting Program No. 93-26.

C. Standard Provisions

The Dischargers must comply with Standard Provisions in Attachment "D".

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region on April 8, 1993.

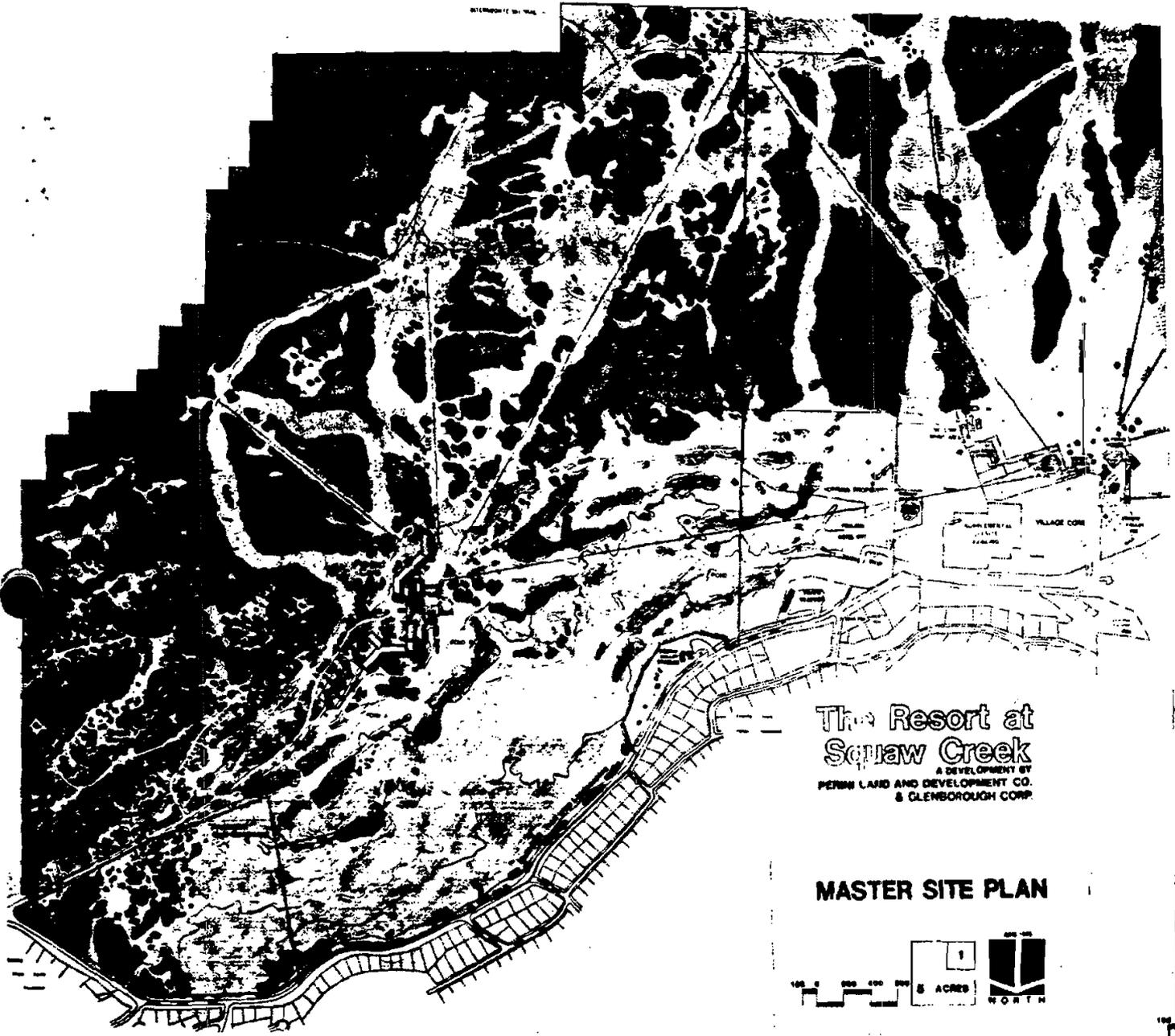
  
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HAROLD J. SINGER  
EXECUTIVE OFFICER

Attachments:

- A. Location Map
- B. CISW Effluent Limitations & Receiving Water Objectives
- C. Best Management Practices Golf Course Operation (from CHAMP)
- D. Standard Provisions

Attachment "A"

LOCATION MAP



Portions of Sections 30, 31 and 32  
T15N, R15E, MDB&M

11-0071

**CALIFORNIA INLAND SURFACE WATERS PLAN  
EFFLUENT LIMITATIONS AND RECEIVING WATER OBJECTIVES\*\*\*  
FOR THE PROTECTION OF HUMAN HEALTH**

ATTACHMENT "B"

<u>Constituent</u>	<u>Existing or Potential Sources of Drinking Water</u>		<u>Other Waters</u>	
	<u>Units</u>	<u>30-day Average</u>	<u>Units</u>	<u>30-day Average</u>
<u>Noncarcinogens*</u>				
cadmium	ug/l	10	ug/l	--
4-chloro-3-methylphenol	ug/l	3000**	--	--
chromium (VI)a	mg/l	0.05	--	--
copper	ug/l	1000.0**	--	--
1,2-dichlorobenzene	ug/l	2700	mg/l	18
1,3-dichlorobenzene	ug/l	400	ug/l	2600
2,4-dichlorophenol	ug/l	0.30**	--	--
endosulfan	ug/l	0.9	ug/l	2.0
endrin	ug/l	0.8	ug/l	0.8
fluoranthene	ug/l	42	ug/l	42
lead	ug/l	50.0	--	--
mercury	ng/l	12	ng/l	12
nickel	mg/l	0.6	mg/l	4.6
phenol	ug/l	300**	--	--
selenium	ug/l	10	ug/l	--
silver	mg/l	0.05	mg/l	--
toluene	ug/l	10000	mg/l	300
zinc	mg/l	5.0**	--	--
<u>Carcinogens*</u>				
aldrin	pg/l	130	pg/l	140
arsenic	ug/l	5.0	--	--
benzene	ug/l	0.34	ug/l	21
chlordane	ng/l	0.08	pg/l	81
chloroform	ug/l	5.7	ug/l	480
DDT	ng/l	0.59	pg/l	600
1,4-dichlorobenzene	ug/l	9.9	ug/l	64
dichloromethane	ug/l	4.6	ug/l	1600
dieldrin	pg/l	140	pg/l	140
nalomethanes	ug/l	5.7	ug/l	480
heptachlor	ng/l	0.16	ng/l	0.17
heptachlor epoxide	ng/l	0.07	ng/l	0.07
hexachlorobenzene	ng/l	0.66	pg/l	690
hexachlorocyclohexane				
alpha	ng/l	3.9	ng/l	13
beta	ng/l	14	ng/l	46
gama	ng/l	19	ng/l	62
PAHs	ng/l	2.8	ng/l	31
PCBs	pg/l	70	pg/l	70
pentachlorophenol	ug/l	0.28	ug/l	8.2
TCDD equivalents	pg/l	0.013	pg/l	0.014
toxaphene	ng/l	0.67	pg/l	690
2,4,6-trichlorophenol	ug/l	0.34	ug/l	1.0

\* Note: Certain dischargers may be subject to more stringent requirements pursuant to Chapter 6.6 of Division 20 of the California Health and Safety Code.

\*\* Taste and/or odor-based objectives.

\*\*\* The concentrations listed are both Effluent Limitations (based on zero dilution capacity of receiving waters) and Receiving Water Objectives.

**CALIFORNIA INLAND SURFACE WATERS PLAN  
EFFLUENT LIMITATIONS AND RECEIVING WATER OBJECTIVES\*\*\*  
FOR THE PROTECTION OF AQUATIC LIFE**

<u>Constituent</u>	<u>Unit</u>	<u>4-day Average</u>	<u>Daily Average</u>	<u>1-hour Average</u>	<u>Instantaneous Maximum</u>
arsenic	ug/l	190	--	360	--
cadmium	ug/l	b	--	b	--
chromium (VI)a	ug/l	11	--	16	--
copper	ug/l	c	--	c	--
mercury	ug/l	--	--	2.4	--
lead	ug/l	d	--	d	--
nickel	ug/l	e	--	e	--
selenium	ug/l	5.0	--	20	--
silver	ug/l	--	--	--	f
zinc	ug/l	g	--	g	--
endosulfan	ng/l	--	56	--	220
endrin	ng/l	--	2.3	--	180
pentachlorophenol	ug/l	h	--	h	--
toxaphene	ng/l	0.2	--	730	--
tributyltin	ng/l	201	40	--	60

mg/l = milligram(s) per liter; ug/l = microgram(s) per liter  
ng/l = nanogram(s) per liter; pg/l = picogram(s) per liter

"--" = Not applicable

a = Dischargers may, at their option, meet this limitation as total chromium.

b-g = Objectives for these metals are expressed by the following formulas, where H = ln (hardness) in mg/l as CaCO<sub>3</sub>.

b = 4-DAY AVERAGE cadmium =  $e^{0.7852H - 3.490}$

1-HOUR AVERAGE cadmium =  $e^{1.128H - 3.828}$

For example where hardness is 50 mg/l, the 4-DAY AVERAGE cadmium = 0.66 ug/l and the 1-HOUR AVERAGE cadmium = 1.8 ug/l.

c = 4-DAY AVERAGE copper =  $e^{0.8545H - 1.465}$

1-HOUR AVERAGE copper =  $e^{0.9422H - 1.464}$

d = 4-DAY AVERAGE lead =  $e^{1.273H - 4.705}$

1-HOUR AVERAGE lead =  $e^{1.273H - 1.460}$

e = 4-DAY AVERAGE nickel =  $e^{0.846H + 1.1645}$

1-HOUR AVERAGE lead =  $e^{0.846H + 3.3612}$

f = INSTANTANEOUS MAXIMUM silver =  $e^{1.72H - 6.52}$

g = 4-DAY AVERAGE zinc =  $e^{0.8473H + 0.7614}$

1-HOUR AVERAGE zinc =  $e^{0.8473H + 0.8604}$

h = The 4-DAY AVERAGE objective for pentachlorophenol is  $e^{1.005(pH) - 5.290}$

This is 13 ug/l at pH = 7.8. The 1-hour AVERAGE objective for pentachlorophenol is  $e^{1.005(pH) - 4.830}$ . This is 20 ug/l at pH = 7.8.

i = Six-Month Median.

BEST MANAGEMENT PRACTICES  
GOLF COURSE OPERATION

(Extracted from Chemical Application Management Plan (CHAMP))  
[Items in brackets contain changes from CHAMP required to  
conform to regulatory authority of the Regional Board]

General Management Requirements

1. A Technical Review Committee (TRC) shall be established to provide oversight and technical [recommendations regarding] the application of pesticides, herbicides, fungicides, rodenticides and fertilizers to the tees, greens and fairways of the golf course.
- 4.2.1. The use of approved maintenance fertilizers and chemicals on the project shall comply with the guidelines presented in the CHAMP. The [Dischargers] shall assume full responsibility for compliance with the CHAMP.
- 4.2.2. All maintenance operations shall be conducted under the supervision of person(s) possessing a current California Department of Food and Agriculture (DFA) Qualified Applicator or Advisor License and/or Certification.  
(5.2.10)
- 4.2.3. All golf course maintenance personnel will read and follow Chapter 5.0 of Volume I of the CHAMP. Employees shall sign a statement acknowledging their receipt of the CHAMP.
- 4.2.4. The golf course superintendent shall be responsible for proper staffing with qualified personnel.
- 4.2.7. The Dischargers shall be responsible for maintaining records on all maintenance of the course.
- 4.2.16. Management shall have the sole responsibility for providing expertise, approved materials, supplies and action in the matters of pest control on the course.
- 4.2.18. No application or method described in the CHAMP shall supercede the specifications of these waste discharge requirements.
- 4.2.19. Pest control in rough areas will use mechanical methods only.  
(5.6.14)
- 4.2.20. Pest control in sand trap areas will use mechanical methods only.  
(5.6.15)
- 4.2.21. Fertilizer, fungicide or herbicide application to pond, stream or wetland environment is prohibited.
- 5.2.1. All personnel involved in the management and application of chemicals shall receive initial site health and safety training regarding the storage, handling, application, decontamination and spill control procedures. All employees shall sign a statement acknowledging receipt of the prescribed training as regulated by the California Food and Agriculture Worker Health and Safety Program.

- 5.2.2. The CHAMP shall be followed explicitly with respect to the type of herbicides, fungicides, fertilizers, and application rates approved for use in the CHAMP. Any change from the document must be approved by the [Regional Board, following a recommendation by the TRC.]
- 5.2.11 Maintenance chemicals may not be used under any circumstances without the full knowledge and approval of the [Discharger] or his appointed representative.
- 5.6.11  
(4.3.5) Basket devices for catching grass clippings shall be used on mowers except for the first mowing after a green has been top dressed or fertilized. All clippings will be disposed of offsite at an approved disposal facility. To the extent possible, clippings should not be allowed to enter any surface water body.
- 5.6.12 Where maintenance tasks are specified to be performed on a scheduled basis (i.e. daily, every other day, etc.) management will not be expected to perform the task on the specified schedule if the performance of the task is precluded by weather or other unforeseeable or adverse conditions. The tasks shall be performed on the next available day on which weather or other conditions will not interfere with the reasonable performance of the task.

Drainage Collection Systems

- 4.3.1 All drainage collection and installed treatment systems shall be inspected weekly during the irrigation season and every other week during the off season.
- 4.3.2 All greens drainage collection and installed treatment systems shall be inspected and in proper operating conditions prior to application of any fungicide, herbicide or fertilizer.
- 4.3.3  
(5.6.6) No chemical additives will be used to clean or maintain any portion of the drainage collection or installed treatment systems. All maintenance of the drainage system must be conducted with mechanical methods.
- 4.3.12  
(5.2.17) When possible, all waste chemical solutions and cleanup rinse water shall be reapplied to the golf course in the approved manner.

Prohibited and Authorized Chemicals

4.4.1 The following chemicals are prohibited for use on the project:

## Fungicides:

- Anilazine, Benomyl-Carbamic acid, Captan, Copper metallic, Chlorothalonil (Daconil), Cycloheximide (Acidione), Dinocap (Karathane), Fenarimol, Iprodione, Lime sulfur, Mancozeb (Dithane), Maneb, Metaxyl, PCNB (terraclor), PMA (Agrosan), Sulfur, Thiophanate (Topsin E), Thiophanate methyl-dimethyl, Thiram, Triadimefon, Zineb

## Herbicides:

- Ammonium Sulfamate, Benefin (Balan), Bensulide, Calcium acid methane arsonate (CMA), DCPA (Dacthal), Dicamba (Banvel), Dichlobenil, Dichlorprop, Diphanamid, Diquat dibromide (Reglone), Diuron, Dodeclammoniummethanearsonate, DMAA (Cacodylic acid), DSMA (Sodium Cacodylate), Endothall, EPTC (Eptam), Ethofumesate (Northron), MCPA (Metaxon), Metribuzin (Sencor), Monouron, MSMA (Buenol), Nuboron (Granurex), Oxadiazon, Oxyfluorfen, Pendimethalin, Potassium Cyanate, Prometon (Pramitol), Siduron (Tupersan), Sodium Chlorate, Sodium Thiocyanate, Triclopyr, Trifluralin

## Insecticides and Miscellaneous Pesticides:

- Bacillus Thuringiensis, Carbaryl (Sevin), Chlordane technical, Chlorophyrifos (Dursban), Citronella oil, Diazinon, Dichlorvos (DDVP), Dicofol (Kelthane), Disulfoton (di-syston), Ethoprop (Mocap), Lethan 384, Malathion (Sumitox), Metaldehyde, Methiocarb (Mesuroi), Methoxychlor technical, Methyl Demton (Meta-systox), Milky Spore Power, Naphthalene, Nosema locustae spores, Piperonyl butoxide, Trichlorfon (Dylox)

4.4.2 Only the following approved herbicides, fungicides and fertilizers may be used at the site:

## Herbicides:

- 2,4-D and MCCP for the control of broadleaf plants (as found in Weed-B-Gon by Ortho). The use of 2,4-D on the project will be dependent on an evaluation of 2,4-D by the State Scientific Advisory Board relating to the carcinogenic aspects and/or Prop 65's aspect of 2,4-D. If the state decides it is a Proposition 65 compound, 2,4-D can not be used on the project at any time, in any amount.
- Glyphosate for spot eradication of weeds (as found in Roundup by Monsanto)

## Fungicides:

- Chloroneb for control of gray snow mold during winter months (as found in Fungicide II by Scotts)

## Fertilizers and fertilizer type products:

- Scotts Starter 19-26-5
- Scotts High Density 22-0-16
- Scotts Super Greens Fertilizer 19-0-17
- Scotts H.D. Nitrogen Plus 31-0-0
- Scotts Turf Fertilizer w/SREF 34-3-7
- Scotts High K Fertilizer 16-0-30
- Ferrous Sulfate ( $\text{FeSO}_4$ )
- Potassium Sulfate ( $\text{K}_2\text{SO}_4$ )
- Gypsum, Calcium Sulfate ( $\text{CaSO}_4$ )
- Dolomite Limestone

- 5.2.9 No fungicide, herbicide, rodenticide or insecticide, approved or otherwise, may be applied to green No. 8 (previous No. 17) at any time, regardless of the circumstances.
- 5.2.13 The use or discharge of chemicals containing nitrogen or phosphorus (such as are used on ski slopes) for snow conditioning is prohibited.
- 5.2.14 Seeds to be used in the revegetation plan and for the establishment of the golf course turf may not be pretreated with any pesticide.

Herbicides and Fungicides

- 4.2.11 The [Dischargers] shall notify the Regional Board staff and the TRC prior to the use or application of any herbicide/fungicide. Advance notification shall be provided to allow Regional Board staff and the TRC to be present onsite at the time the fungicide or herbicide use or application is proposed.
- 4.2.10 Stockpiling or temporary storage of approved fungicide(s) and  
(5.2.15) herbicide(s) may not exceed 30 days. To facilitate the temporary storage, a chemical holding area shall be designated at the site for the purpose of storing fungicides and herbicides. All unused chemicals shall be returned to the storage facility at the end of each work day.
- 4.2.12 The golf course operator shall carefully control and inspect the irrigation system prior to use of any herbicide/fungicide to preclude saturation of areas subject to irrigation from occurring due to improper irrigation system maintenance.
- 4.2.13 Weed control will be accomplished by mechanical methods only. In  
(5.2.8 and the event all practical mechanical methods fail to produce  
5.3.6) sufficient weed control the golf course superintendent may apply approved herbicides in the form of 2,4-D (Weed-B-Gon) and glyphosate (Roundup) to maintained, fertilized fairway and tee areas only. At no time may any herbicide be applied to any green or rough areas, any unfertilized play areas, any natural vegetation or wetland and surface water area. In the event of herbicide application, the drainage from the treated area will be isolated from the surrounding environment. This isolation process must remain in effect for a minimum of three days after herbicide application. If surface waters accumulate in the isolated areas, the isolation process should continue until there is no remaining compounded water.

- 4.2.14 The [Dischargers] shall immediately notify Regional Board staff, the Placer County DEH, and the TRC whenever adverse weather conditions occur within 15 days following the application of any herbicide, especially Weed-B-Gon. A written report shall follow detailing the reasons for the adverse conditions and procedures to alleviate the adverse condition.
- 4.2.20 When sand traps are constructed with underdrains, then herbicide shall not be applied within 10 feet of those sand traps.
- 4.2.22. The operator will inform each TRC member if any approved herbicide or fungicide (or their toxic metabolites, breakdown products or derivatives) is detected by the monitoring program. The operator must report the location and concentration of the detection.
- 4.2.23. In the event that an approved herbicide or fungicide is detected in surface or ground water sampling, its further use is prohibited until and unless the operator can demonstrate the contamination resulted from an activity other than the approved application, or a revised request for use is approved.
- 4.2.24. The [Executive Officer, after recommendation by the TRC] may authorize interim use of a detected herbicide, and may impose restrictions to prevent further contamination.
- 4.2.25 After the first instance of detection, the [Discharger may submit to the TRC] a revised request for use. The request may propose an alternate herbicide or fungicide (less mobile and persistent than the original compound), or place additional geographic or concentration restrictions on the same compound. The TRC will recommend [to the Executive Officer] whether this revised request should be approved.
- 4.2.26 The TRC must determine whether implementation of the revised request will cause further contamination.
- 4.2.27 If a revised request proposing use of the same herbicide or fungicide at a lower concentration is accepted, and that substance is subsequently detected a second time, its use will be immediately suspended and prohibited.
- 4.2.28 If a revised request proposing use of a less mobile, less persistent herbicide or fungicide is accepted, and that compound is detected at the same sampling station as the initial detection, no further use of any herbicide or fungicide will be allowed in that area or in areas of similar soil and hydrogeologic conditions, as determined by the [TRC and the Executive Officer].
- 4.2.29 If a revised request proposing use of a less mobile, less persistent herbicide or fungicide is accepted, and that compound is detected at a different sampling station than the initial detection, no further use of any previously detected herbicide or fungicide will be allowed in the project area.

- 4.2.30 The operator may submit a second revised request to the TRC, following a second detection, proposing use of another herbicide or fungicide of substantially lower mobility and persistence than either previously detected substances. The TRC will recommend [to the Executive Officer] whether this revised request should be approved.
- 4.2.31 If the second revised request is approved [by the Executive Officer] and the herbicide or fungicide is detected in the monitoring system, no further use of any herbicide or fungicide (whichever is applicable) shall be allowed in the project area.
- 4.2.32 In addition to the provisions set forth in 4.2.22-4.2.31, no further use of any fungicide or herbicide shall be allowed if any of the following occur:
- o three instances of herbicide, one instance of fungicide contamination
  - o three instances of fungicide, one instance of herbicide contamination
  - o two instances of herbicide, two instances of fungicide contamination
- 4.2.33 If a modification, reduction, or cessation of herbicide, fungicide, or fertilizer use is required [by the TRC and the Executive Officer], neither Placer County DEH nor the Placer County Board of Supervisors have the power to waive the required modification, reduction, or cessation.
- 4.2.34 If any herbicide or fungicide in use on the golf course is detected in drinking water wells, further use of all herbicides and fungicides shall be prohibited unless it can be shown that the contamination did not occur as a result of approved application of herbicides or fungicides to the golf course.
- 4.2.35 [The Executive Officer may request Placer County to conduct] an investigation into any alleged tampering of monitoring program samples and may order an independent firm conduct the program or that additional safeguards be instituted.
- 4.3.7 Should fungicide or herbicide testing of greens show elevated levels of Chloroneb, 2,4-D, or glyphosate, application levels will be reduced in an amount sufficient to offset the residual amounts of these compounds.
- 4.3.8. The snow pack overlying greens, fairways and tees shall be managed to minimize the need for fungicides and herbicides during the growing season and reduce snow melt infiltration.
- 4.3.11 The project site shall be checked daily for fungus growth, insect infestations, weed invasion or any other pest problem. The appropriate mechanical controls for these conditions shall be applied as soon as necessary after their detection.
- 4.4.2 If fungicides are to be used, a surface water and leachate treatment system shall be installed.

- 4.4.3.1.1 Fungicide in the form of chloroneb may be applied once per year to the green areas only. The manufacturer's prescribed application rate of 32.75 lbs./5,500 ft<sup>2</sup> (approximately 6 lbs/1000 ft<sup>2</sup>) for areas of persistent snow cover shall be strictly observed. Any areas with excess application shall be raked to distribute the product evenly or vacuumed to remove excess applications.
- 4.4.3.1.2 (5.2.12) At no time may maintenance personnel transport and/or distribution vehicles contain active fungicide ingredients in excess of 25 pounds (11.3 kilograms) of chloroneb (as found in Fungicide II).
- 4.4.3.1.3 (4.3.4) The granular form of Fungicide II (chloroneb) shall be applied using a spreader type of applicator to facilitate an even distribution.
- 4.4.3.1.4 (4.3.4) If possible, an "ice blanket" should be laid over the treated area immediately after application. The blanket may be useful in mitigating the effects of snow melt and rain runoff.
- 4.4.3.2.2 The manufacturer's prescribed application rates shall be strictly observed.
- 4.4.3.2.3 (5.3.14) All herbicides shall be applied in liquid form only. The "weed and feed" type granular products should not be applied. The treatment shall be conducted using hand-trigger applicators only. The use of hose end sprayers is prohibited.
- 4.4.3.2.4 (5.3.13) At no time may maintenance personnel transport herbicide application mixtures (as described in 4.4.3.2.2) in excess of :
- o 2,4-D and MCCP (as found in Weed-B-Gon) prescribed application mixtures in the amount of 10 gallons (37.5 liters)
  - o Glyphosate (as found in Roundup) prescribed application mixtures in the amount of 10 gallons (37.5 liters).
- 4.4.3.2.5 No irrigation shall be allowed on the treated area(s) within 48 hours following application.
- 4.4.3.2.6 Herbicides may be applied only if the operator has submitted to the [TRC and to the Executive Officer; and the Executive Officer has] approved the request, following a positive recommendation from the TRC. The TRC may recommend approval if it finds that:
- (i) The operator has used all reasonable mechanical means to control the spread of unwanted broadleaf plants, including daily inspection of fairways and removal of weeds. If daily mechanical removal is insufficient to control weed infestation, the operator, prior to requesting permission to apply herbicides, shall attempt to control the infestation by a significantly intensified application of mechanical means. Mechanical means of weed removal shall not be deemed unreasonable simply because they are more expensive than chemical application;

- (ii) The infestation of unwanted broadleaf plants continues to spread; and
- (iii) If herbicide application is not approved, the continued spread of broadleaf plants will adversely affect the quality of play on the golf course.

Herbicides may not be applied in concentrations, amounts, or frequencies greater than those specified in the CHAMP. The TRC shall specify further restrictions on the use of herbicides in reviewing a request for use, such as the location in which use is approved, the number of applications allowed, and the duration of the approval.

The TRC may specify additional mechanical means of weed control, over and above those already employed by the operator, be employed prior to approving herbicide use.

The TRC shall act on the operator's request for permission to use herbicides within five days of receipt. The TRC shall meet, if feasible, to consider the operator's request. If a meeting of all members is not feasible, those who cannot attend shall attend by teleconference if they are available. If it is impossible to obtain the physical or telephonic presence of a majority of the TRC members within five days of submission of the operator's request for use, the operator may poll the TRC members individually by telephone. TRC members shall make every reasonable effort to view the golf course prior to making a decision of the operator's request. The operator shall confirm the results of a meeting or telephone poll by written memorandum to all TRC members immediately following the meeting or poll. Following approved applications, the operator shall provide TRC members with a written report specifying actions taken and results achieved.

- 4.4.3.2.7. The TRC may recommend to the [Executive Officer] additional restrictions or limitations on allowable concentrations of fungicide if necessary.
- 5.3.1 All fungicide applications will be limited to greens. Fungicides will only be applied at the direction of the golf course superintendent. No fungicides may ever be applied to green No. 8 (previous No. 17). The only fungicide approved for use on the greens is Fungicide II by Scotts containing 6 percent chloroneb. No fungicide will be used on the fairways.
- 5.3.2 If fungicides are applied, all surface and subsurface drainage from each treated green will require treatment before discharging to the surrounding land surface. The treatment will consist of passing the drainage through an activated carbon contact chamber sized to adequately treat a volume of liquid resulting from a 20 year, one hour storm event. The purpose of the activated carbon will be to chemically adsorb organic compounds that may be found in the discharge.

- 5.3.3 Fungicide in the form of chloroneb may be applied only once per year to the green areas only. The manufacturer's prescribed application rate of 32.75 lbs/5,500 ft<sup>2</sup> (approximately 6 lbs./1,000 ft<sup>2</sup> for areas of persistent snow cover shall be strictly observed. Any areas with excess application shall be raked to distribute the product evenly or vacuumed to remove excess material.
- 5.3.5 The only herbicides approved for use are:
- Weed-B-Gon by Ortho containing 10.8 percent 2-4, D and 11.6 percent MCPP
  - Roundup by Monsanto containing 18 percent Glyphosate
- The prescribed herbicide application rates as provided by the manufacturer shall be less than:
- Weed-B-Gon = 3.3 oz (20 teaspoons) per gallon per 1,000 ft<sup>2</sup> spot application only (limited to an area no greater than 5000 ft<sup>2</sup>).
  - Roundup = 6 oz. (12 tablespoons) per 1 gallon.
- 5.3.6 The golf course operator shall check National Weather Service projected weather forecasts (916-442-1468) prior to use of herbicides or fungicides. If adverse weather conditions are anticipated within five days of application, use of the herbicide/fungicide shall be postponed. Adverse weather conditions would include a forecast predicting precipitation in excess of a trace amount with a probability of occurrence exceeding 10 percent. The golf course superintendent must be notified if a weed infestation is observed. Herbicides can only be applied with the full knowledge of the golf course superintendent.
- 5.3.7 Weed-B-Gon or Roundup application areas shall be limited as possible to complete the task. Individual or "spot" application area should not exceed 5000 ft<sup>2</sup>.
- 5.3.8 Weed-B-Gon or Roundup shall be applied using a hand-held applicator equipped with hand-trigger device. No fogger, aerial or hose end application is allowed.
- 5.3.9 Areas treated with Weed-B-Gon or Roundup shall be identified with markers at four points. No irrigation will be allowed on the treated area for at least 48 hours.
- 5.3.15 If application of approved herbicides is necessary, the drainage from the treated area will be isolated from the surrounding environment. This isolation process should be in effect for a minimum of three days after herbicide application or until no potential drainage water remains. There is a potential for summer thunderstorms to mobilize Weed-B-Gon shortly after application. To minimize the potential for Weed-B-Gon to impact the surrounding surface water, all drainages into and away from the treated area

should be blocked. This may be accomplished using sand bags to block the drainage and adequately sized sump pumps to divert upslope runoff and recirculate runoff from the treated area. If surface waters accumulate in the isolated areas, the isolation process should continue until there is no remaining impounded water.

- 5.6.9 Should fungicide or herbicide of testing greens show elevated levels of Chloroneb, 2,4-D or glyphosate, application levels will be reduced in an amount sufficient to offset the residual amounts of these compounds.
- 5.6.10 The snow pack overlying greens, fairways and tees shall be managed to minimize the need for fungicides or herbicides during the growing season and reduce snow melt infiltration.
- 5.6.13 The project site shall be checked daily for fungus growth, insect infestations, weed invasion or any pest problem. The appropriate mechanical controls for these conditions shall be applied as soon as necessary after their detection.

#### Rodenticides and Insecticides

- 5.3.5 No insecticides or rodenticides are authorized for use.
- 5.6.5 (4.2.16) An ongoing program of rodent control using mechanical methods will be implemented by the golf course operator. The program shall keep the course relatively free of vertebrate pests such as gophers, ground squirrels, moles, etc., and shall maintain control programs for insects, fungi, and weed pests. The golf course superintendent shall be notified of any infestations.

#### Fertilizers

- 4.4.3.3.1 Fertilizers are considered as any substance, either chemically processed or natural organic matter, that is applied to enhance and enrich the growth of the golf course turf.
- 4.4.3.3.2 The application of fertilizers to areas of natural vegetation between the golf course tees, fairways, and green islands is prohibited throughout the golf course. In addition, the application of fertilizers to any portion of the golf course located within the post-project 100-year flood plain is also prohibited.
- 4.4.3.3.3 The types and amounts of fertilizer to be applied on the golf course may not differ in types or exceed amounts specified in the information contained in the submitted report entitled "Golf Course Maintenance Proposal" prepared by John Stanowski. The Executive Officer may approve changes in the types or amounts of fertilizers as a result of information from the demonstration project provided that changes in the amount of fertilizer used may be approved only if the discharger provides clear and convincing evidence that the changed application (i) is necessary to prevent

significant adverse effects on the quality of play on the golf course and (ii) will not violate effluent limitations or receiving water limitations specified in the waste discharge requirements. In the event the Monitoring Program detects concentration of nitrate nitrogen in excess of the receiving water standards, unless it is demonstrated to the Executive Officer by the discharger that such concentrations were not due to the application of fertilizers to the golf course, the discharger shall, at least, immediately reduce the fertilizer application rates (in terms of amount of fertilizer per acre) 50 percent without increasing the frequency of fertilizer application. Prevention of ground water inflows to Squaw Creek by pumping or other means may be required to prevent violation of receiving water limitations for surface waters. If concentrations of nitrate nitrogen do not decline to the specified receiving water limitations within 90 days of the date they were first found to exceed that requirement, fertilization application shall, at least, be further reduced in accordance with the recommendation of the TRC. If concentrations persist in excess of specified receiving water limitations, fertilizer applications shall be discontinued until the specified receiving water limitations are met, and they then can be resumed at a rate specified by the TRC if approved by the Executive Officer. "Bi-weekly" shall be defined as occurring once every two weeks."

- 4.4.3.3.4 The information on fertilization as contained in "Golf Course Maintenance Proposal" prepared by John Stanowski, shall be implemented.
- 4.4.3.3.5 The greens are to be fertilized in increments of not more than 0.25 pounds of nitrogen per 1,000 square feet per bi-weekly application. This reflects the test green research which indicated approximately 66 to 70 percent of manufacture's bag strength application will sustain a hardy, playable growth.
- 4.4.3.3.6 The greens are to be fertilized frequently enough to support constant growth which is correspondent to the particular season of the year. No more than 3.5 pounds total of nitrogen per 1,000 square feet per year are to be applied.
- 4.4.3.3.7 (5.4.15) Applications of fertilizer may not begin until soil temperatures exceed 45 degrees (F) for three consecutive days. Fertilizer applications must end when soil temperatures remain below 45 degrees for more than three consecutive days (Placer County condition of approval No. 104). Temperatures shall be read with a stainless steel stem thermometer at a depth of 4 to 6 inches.
- 4.4.3.3.8 (5.4.12) Fertilizer may not be applied within 25 feet of Squaw Creek or other perennial streams.
- 4.4.3.3.9 The fairways, tees and aprons are to be fertilized frequently enough to support constant growth which is correspondent to the particular season of the year. The fairways are to be fertilized not more than three times per year with not more than a total of two pounds of nitrogen per 1,000 square feet per year to be applied.

- 4.4.3.3.10 (5.4.16) Any fairway, tee or green areas that require repair or revegetation due to winter freeze, disease or other complete damage, and will require an additional fertilizer application to recover growth must first be approved by the Executive Officer. In any case, not more than six pounds of nitrogen per 1,000 square feet should be allowed and only until the damaged area is recovered.
- 4.4.3.3.11 (5.4.17) Any proposed change in the amount or type of fertilizer to be used shall be reported to the TRC and to the Regional Board staff at least 90 days in advance of implementation of any such proposal.
- 4.4.3.3.12 (5.4.18) When feasible, new sod should be used to replace damaged areas as described in B.M.P. 4.4.3.3.10.
- 5.4.1 Fertilizers are considered as any substance, either chemically processed or natural organic matter, that is applied to enhance and enrich the growth of the golf course turf.
- 5.4.2 Only the following approved fertilizers may be used on the golf course:
- Scotts Starter 19-26-5
  - Scotts High Density 22-0-16
  - Scotts Super Greens Fertilizer 19-0-17
  - Scotts H.D. Nitrogen Plus 31-0-0
  - Scotts Turf Fertilizer w/SREF 34-3-7
  - Scotts High K Fertilizer 16-0-30
- Other fertilizer type products approved for use are:
- Ferrous Sulfate ( $\text{FeSO}_4$ )
  - Potassium Sulfate ( $\text{K}_2\text{SO}_4$ )
  - Gypsum, Calcium Sulfate ( $\text{CaSO}_4$ )
  - Dolomite Limestone
- 5.4.4 The application of fertilizers to areas of natural vegetation between the golf course tees, fairways, and green islands is prohibited throughout the golf course.
- 5.4.5 Fertilizers may only be applied to maintained, groom turf areas, tees and green islands.
- 5.4.6 All fertilizing will be done with full approval and knowledge of the golf course superintendent.
- 5.4.7 The greens should be fertilized in increments of not more than 0.25 pounds of nitrogen per 1,000 square feet per application. Total yearly nitrogen application may not exceed 3.5 pounds of nitrogen per 1,000 square feet per year.
- 5.4.8 The fairways may be fertilized no more than three times per season with no more than 0.7 pounds of nitrogen per 1,000 square feet per application.\*

\*The actual amount of fertilizer applied can be calculated from its nitrogen content. For example, a fertilizer with 19-0-17 (N-P-K) contains 19 percent available nitrogen weight. Applying 0.7 pounds of N per 1,000 square feet would require 3.68 pounds of fertilizer.

0.7 pounds N = 3.68 pounds of fertilizer per 1,000 square ft  
(19 pounds N/100 pounds fertilizer)

- 5.4.9 The tees may be fertilized no more than once per month at a rate of 0.5 pounds of nitrogen per 1,000 square feet per application.\*
- 5.4.10 All fertilizer shall be of a granular, slow release form and distributed using mechanical spreader equipment for even application.
- 5.4.11 All fertilizer applications shall be documented on forms available from the superintendent.
- 5.4.13 At no time may fertilizers be applied to areas with standing water.
- 5.4.14 The Fertilizer and Cultural Strategy contained in "Golf Course Maintenance Proposal" shall be implemented. Portions of that information are reprinted below.

The following report is a recommendation to the Perini Land and Development Co. for use as a guide in the maintenance of a golf course in a Sierra meadowland environment.

The strategy being proposed, is decidedly a "lean and mean" approach. This is a philosophy based on scientific information, that turf is actually healthier when it is not fed as much nitrogen or watered as much as previously thought necessary. In combination with natural buffer zones and collection ponds to recycle irrigation water, the goal is to affect no degradation to the environment. Excessive nitrogen leads to disease susceptibility, depleted root structures and poor wear tolerance as well as to other stress factors such as heat, drought and cold. With the higher use of potassium instead we intend to strive for deeper and denser root structures and thicker more resilient cell walls of the vegetative portion of the turf. The turf may be less colorful although the use of iron will help provide the color that is lost.

#### Irrigation

- 4.4.3.4.3 The irrigation systems shall maximize the even distribution of water to all irrigated areas. No area should exceed the maximum application rate by more than 15 percent.
- 4.4.3.4.4 All irrigation practices shall be conducted in accordance with the "Golf Course Maintenance Proposal".
- 5.5.1 Direct irrigation of endemic flora (natural vegetation) is prohibited. This will minimize the impact on natural vegetation and wildlife.
- 5.5.2 (4.4.3.4.2) The maximum irrigation rate will be 1.5 inches per week, and may be reduced during the growth season as geographic locations, climatic trends, and turf requirements dictate. Any change from this irrigation rate will require the approval of the Executive Officer.

5.5.3 The irrigation system shall maximize the even distribution of water to all irrigated areas. No area should exceed the maximum application rate by more than 15 percent.

5.5.4 All irrigation practices shall be conducted in accordance with the "Golf Course Maintenance Proposal" report. Specifically:

"Irrigation can help in the stabilization of newly graded soils. Light, frequent cycles help prevent wind erosion and serve to settle the soil. During seeding establishment, light, frequent cycles are necessary throughout the day to insure germination. Plant root structures are immature and deep watering is of no use. After the turf is established and then when the course opens, mid-day watering give way to nightly cycles. Once again using repeat cycles will reduce run-off. Deeper penetration will be achieved in this manner to aid in root elongation.

Any irrigation system for this project will certainly have multiple repeat capacity. Many have the capacity for a daily percentage addition or reduction of total watering time based on daily fluctuations in the evapotranspiration rate. The superintendent can adjust according to his assessment or by the use of soil tensiometers and evaporation pans.

An average nightly watering in this area during peak periods would be about 16 minutes. Some runoff will likely occur unless this is done for example, in four cycles of four minutes each. Soil and thatch are very often hydrophobic at first and initial wetting makes subsequent watering more effective."

Any variation from the routine irrigation methods shall be brought to the attention of the golf course superintendent.

#### Chemical Spill Contingency Plan

5.7.1 The golf course superintendent shall immediately notify the [Regional Board staff, the TRC and Placer County DEH] of any spill, regardless of the size of the spill, date, time, day of week or location. The notification phone numbers for these agencies are:

Placer County Division of Environmental Health  
(916) 581-6240\*

Lahontan Regional Water Quality Control Board  
(916) 544-3481\*

\* After hours messages can be recorded at each location on an automatic answering machines.

These phone numbers shall be posted near the spill response equipment (see Section 5.7.2).

## 5.7.2

Spill response equipment shall be assembled and maintained near the chemical storage facility for cleaning up any chemical spills. The equipment shall be readily accessible. The equipment may not be used for any purpose except for chemical spill cleanup. The equipment shall include at least the following:

1. Approximate 100 sandbags for directing sheet flow.
2. A portable pump and generator for removal and/or recycling of contaminated fluids.
3. Storage containers sufficient to contain approximately 500 gallons of either solid or liquid.
4. Several brooms and shovels.
5. Industrial-type vacuum of sufficient power to retrieve spilled solids and liquids.
6. Approximately 10,000 square feet of visqueen to cover areas where herbicides have been applied.
7. Approximately 50 pounds of chemical absorbent to contain liquids.

## 5.7.3

The golf course superintendent shall immediately be notified of any adverse condition. An adverse condition shall include, but not limited to, any herbicide or fungicide spills; losses or thefts of herbicides/fungicides; excessive application of herbicides/ fungicides; or any unauthorized uses of herbicides/fungicides. The Regional Board staff shall also be notified whenever adverse weather conditions occur within fifteen days following the application of any herbicide, especially Weed-B-Gon. A written report shall follow detailing the reasons for the adverse condition and procedures to alleviate the adverse condition.

## 5.7.4

If the spill consists of a solid on land, the material should be immediately collected by sweeping, shoveling or using suction type cleanup equipment. The collected material may be reused or disposed of offsite.

## 5.7.5

Should the spill of a solid material enter surface water of any kind, every effort should be made to immediately remove the material from the water and place into a suitable container. Small surface water flows should be immediately blocked downstream and diverted upstream around the spill site. The recovered spill materials should be transported to and stored in the chemical holding area pending further instructions from Placer County DEH and/or [Regional Board staff] and/or TRC. If a chemical spill (liquid or solid) enters a large surface water body, the appropriate agencies identified in Section 5.7.1 should be immediately notified. The water body shall then be sampled immediately downstream of the spill area within one hour from the time of the spill. The sample shall be submitted to the superintendent or next person in charge and should be analyzed for parameters identified by the contacted agencies. If the discharge (spill) to the surface water continues, daily samples shall be collected until the discharge ceases.

- 5.7.6 If the spill is a liquid on land, immediately isolate the spill by berming the affected areas with sand bags or soil. Immediately apply chemical absorbent. Every effort should be made to keep the affected area dry. Do not apply water to the spill area. If necessary, cover the affected area with visqueen or other suitable water repellent material. When possible, the spilled liquid or solid should be collected using a portable, high suction industrial vacuum. When a spill occurs on soil and/or turf area, that area should be identified immediately. The soils may be aerated or removed if the size of the area is manageable. Further action will be directed by Placer County DEH, [Regional Board staff], and the TRC.
- 5.7.7 A remedial ground water investigation should be commenced within 72 hours of a large liquid spill as determined by Lahontan RWQCB. Remedial activities should commence within ten days of the spill. Remedial action could conceivably consist of extraction well points downgradient of the spill. The water obtained in this method could be stored in portable tanks. Final treatment could be accomplished onsite or offsite whichever is most cost effective.
- 5.7.8 All circumstances leading up to the spill, action immediately following the detection of the spill, notification procedures, all cleanup activities and waste disposal activities shall be carefully documented and presented to [the TRC and to the Executive Officer].

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

MONITORING AND REPORTING PROGRAM NO. 93-26

FOR

Resort at Squaw Creek

Placer County

I. MONITORING

A. Water Quality Monitoring

1. Locations of Sampling Stations

Water quality sampling stations shall be established at the following locations, as shown on Attachment "A" to this Monitoring and Reporting Program:

Station R-9: Squaw Creek at western boundary of Resort at Squaw Creek

Station R-5: Squaw Creek at Squaw Valley Road

Station R-10: Outflow from pond "A"

Well 301: shallow aquifer (even years<sup>1</sup>)  
Well 302: deep aquifer (fourth years<sup>2</sup>)  
Well 303: shallow aquifer (odd years<sup>3</sup>)  
Well 304: deep aquifer (second years<sup>4</sup>)  
Well 305: shallow aquifer (odd years)  
Well 306: shallow aquifer (odd years)  
Well 307: shallow aquifer (even years)  
Well 308: deep aquifer (fourth years)  
Well 309: shallow aquifer (even years)  
Well 310: deep aquifer (fourth years)  
Well 311: deep aquifer (fourth years)  
Well 312: shallow aquifer (even years)  
Well 313: shallow aquifer (even years)  
Well 314: deep aquifer (fourth years)  
Well 315: deep aquifer (fourth years)  
Well 316: shallow aquifer (even years)  
Well 317: deep aquifer (fourth years)  
Well 318: shallow aquifer (even years)  
Well 319: deep aquifer (second years)  
Well 320: shallow aquifer (odd years)  
Well 321: deep aquifer (second years)  
Well 322: shallow aquifer (odd years)  
Well 323: shallow aquifer (odd years)

<sup>1</sup> 1994, 1996, 1998 and even years thereafter  
<sup>2</sup> 1996, 2000 and every fourth year thereafter  
<sup>3</sup> 1993, 1995, 1997 and odd years thereafter  
<sup>4</sup> 1994, 1998 and every fourth year thereafter

Well 324: deep aquifer (fourth years)  
Well 325: shallow aquifer (even years)  
Well 326: deep aquifer (second years)  
Well 327: shallow aquifer (second years)  
Well 328: shallow aquifer (odd years)  
Well 329: deep aquifer (second years)  
Well 330: deep aquifer (second years)  
Well 331: shallow aquifer (odd years)  
Well 332: deep aquifer (second years)

Carbon filter discharge, green No. 1 (previous No. 10)  
Carbon filter discharge, green No. 7 (previous No. 16)  
Carbon filter discharge, green No. 14 (previous No. 5)

Turf (soil), green No. 1  
Turf (soil), green No. 7  
Turf (soil), green No. 14  
Turf (soil), tee No. 1  
Turf (soil), tee No. 7  
Turf (soil), tee No. 14  
Turf (soil), fairway No. 1  
Turf (soil), fairway No. 7  
Turf (soil), fairway No. 14

2. Sample Collection Procedures

Samples shall be collected by a person with at least two years of water quality experience. Water samples shall be taken in appropriate bottles which have been cleansed with a non-phosphorus detergent, and tripled rinsed with stream water prior to collecting the grab sample. Samples will be preserved in accordance with standard methods or approved EPA Methods until delivery to the laboratory for analysis.

A measurement or estimate of the flowrate shall be made each time a surface water sample is taken. A measurement of the depth to groundwater shall be made each time a well sample is taken.

Turf (soil) samples shall be a soil plug cut from the representative green, tee or fairway. Turf (soil) samples shall be taken by a person with at least two years of soil sample extraction experience.

3. Frequency of Water Quality Sampling

Samples will be collected on the following frequency:

<u>Sample Type</u>	<u>Frequency</u>
Surface water samples at Squaw Creek	May, October (every year)
Shallow Ground Water well samples	May, October (one half wells sampled in odd numbered years, other half sampled in even numbered years)
Deep Ground Water well samples	October (one half wells sampled every second year, other half sampled every fourth year)
Greens carbon filter samples	Three times during period April-June
Turf (soil) samples, nutrients	June
Turf (soil) samples, Chloroneb	Three times during period April-June

No sample will be collected if discharge is frozen, or if there is no ephemeral runoff late in season, but those conditions should be noted in the monitoring report.

4. Constituents to be Monitored

Constituents will be analyzed for each sample according to the following schedule:

		Surface Samples	Ground Water Samples	Carbon Filter Samples	Turf(soil) Samples
Volumetric flowrate	CFS	x			
Total Dissolved Solids (TFR)	mg/l		x		
Total Suspended Solids (TNFR)	mg/l	x			
Turbidity	NTU	x			
Chloride	mg/l	x	x		
Sulfate	mg/l	x	x		
Nitrate Nitrogen	mg/l as N	x	x	x	x
Total Kjeldahl Nitrogen	mg/l as N	x	x	x	x
Total Nitrogen	mg/l as N	x	x	x	x
Total Phosphorus	mg/l as P	x	x	x	x
Total Iron	mg/l	x	x	x	x
Grease and Oil	mg/l	x			
Dissolved Oxygen	mg/l	x			
pH		x	x		
Temperature	° Celsius	x	x		
Electroconductivity	c.u	x	x		
Total Organic Carbon*	mg/l			x	x
Fungicides*	ug/l	x	x	x	x
Herbicides*	ug/l	x	x	x	x

\*Each herbicide or fungicide applied to greens or any other part of the golf course shall be analyzed. Analysis may be for Total Organic Carbon (TOC) rather than Chloroneb once a correlation is established.

B. Inspections and Record Keeping of Golf Course  
(Extracted from the indicated sections of the Chemical Application Management Plan (CHAMP))

1. (4.2.8) An inspection of the project shall be made by the operator on a monthly basis during those months in which ground cover by snow is not complete. The purpose of this investigation is to discover potential erosion and surface runoff problems on the project site so that corrective measures may be immediately undertaken. Only employees designated by the golf course superintendent shall perform the inspections. The completed inspection forms shall be maintained in a file by the golf course superintendent. The inspection shall include at least the following:
  - a. Infiltration Trenches
    - (1) Clogging of pipes by debris
    - (2) Accumulation of sediment
    - (3) Disrepair of trenches
    - (4) Runoff movement into infiltration trenches
    - (5) Damage by vehicles
  - b. Drop Inlets
    - (1) Clogging by debris, ice, or sediment
    - (2) Runoff movement into the infiltration gallery
    - (3) Damage by vehicles or snow plow equipment
  - c. Drainage Collection System
    - (1) Clogging by debris, ice, or sediment
    - (2) Free movement of water through pipes, channels, and appurtenances
    - (3) Damage
  - d. Erosion Control
    - (1) Healthy and productive vegetation
    - (2) Gully or rill erosion on slopes
    - (3) Sediment buildup at toe of slopes
    - (4) Vegetation damage by vehicles or heavy foot traffic
    - (5) Bare areas in need or revegetation
  - e. General
    - (1) Accumulated debris (pine needles, refuse, etc.) on parking areas and roof tops
    - (2) Illicitly dumped wastes from recreational vehicles
    - (3) Illicitly dumped oil and gasoline from vehicles; spilled chemicals

- (4) Illicitly dumped or discharged grease, cooking oil, non-specification product or product component
  - (5) Parking and traffic area restrictions in place.
2. (4.2.9) Records shall be kept on an ongoing basis of the use of herbicides and fungicides. The records will include entries with the following:
- a. Herbicides/Fungicides
    - (1) Herbicides/Fungicides purchased
      - (a) Each type of herbicide/fungicide purchased
      - (b) Amount of each type purchased
      - (c) Date of each purchase
      - (d) Place of purchase
      - (e) Date of onsite arrival
      - (f) Onsite storage location
    - (2) Herbicide/Fungicide application
      - (a) Types of herbicide/fungicide applied
      - (b) Locations of application
      - (c) Dates of application
      - (d) Amounts of application
      - (e) Method of application
      - (f) Name of person(s) responsible for application
3. (5.3.11) The following information shall be reported for all herbicides/fungicides removed from the project site:
- a. Type of herbicide/fungicide removed from the project site
  - b. Amount of herbicide/fungicide removed from the project site
  - c. Location of herbicide/fungicide disposal
4. (5.4.3 and 4.2.15)
- a. All fertilizer applications shall be documented on forms available from the superintendent. The records shall reflect the following:
    - (1) Locations of fertilizer applications
    - (2) Type of fertilizer applied
    - (3) Amounts of applications
      - (a) Total pounds
      - (b) Pounds per acre
    - (4) Dates of application
    - (5) Composition of fertilizer

b. Records shall be kept of all fertilizers, pesticides, herbicides, fungicides and rodenticides stored and/or used on the golf course. The following shall be reported on a quarterly basis:

- (1) Amounts stored at the facility
- (2) Amounts used during past quarter
- (3) Dates used
- (4) Application rates

5. (5.6.3) All drainage collection and installed treatment systems shall be inspected weekly during the irrigation season and every other week during the off season. The systems will be inspected for leaks, sediment buildup, clogging, and algae growth. The golf course superintendent shall be notified immediately of any deficiencies. The attached inspection form shall be used during the inspection. Only employees designated by the golf course superintendent shall perform the inspections. The completed inspection forms shall be maintained in a file by the golf course superintendent.

6. (5.6.13) The project site shall be checked daily for fungus growth, insect infestations, weed invasion or any other pest problem.

C. Erosion Control Monitoring of Ski Area

1. Inspections shall be made by the Discharger on a monthly basis during those months in which ground cover by snow is not complete. The purpose of the inspection is to identify potential erosion and surface runoff on the project site so that corrective measures may be immediately undertaken.

The inspection shall include and note damage to:

- a. revegetated areas
- b. culverts at drainage crossings
- c. designated roadways
- d. adequate closure and control of use of closed roadways
- e. energy dissipators on culverts
- f. sedimentation basins/irrigation ponds
- g. rock-lined channels
- h. mechanical stabilization measures (e.g. riprap and gabions)
- i. drop inlets
- j. water bars
- k. unprotected soil piles
- l. grease traps
- m. infiltration trenches
- n. gully/rill erosion on slopes
- o. other erosion control and stormwater runoff facilities

The Dischargers shall develop and annually update a run by run checklist of erosion control facilities as listed above to be used during the inspection and for reporting the results of the inspection. The checklist should include date of inspection, inspector(s) problems noted, corrective measures taken etc.

D. Parking Lots Monitoring

1. The Discharger shall inspect the parking lots and lodge on a monthly basis during those months in which ground cover by snow is not complete. The purpose of this inspection is to identify potential erosion and surface runoff on the project so that corrective measures may be immediately undertaken. The inspection shall include:

a. Drop Inlets

- 1) Clogging by debris, ice, or sediment
- 2) Runoff movement into the infiltration gallery
- 3) Damage by vehicles or snow plow equipment

b. Drainage Collection System

- 1) Clogging by debris, ice or sediment
- 2) Free movement of water through pipes, channels, and appurtenances
- 3) Damage to drainage collection system
- 4) Adequate energy dissipation

c. Erosion Control

- 1) Healthy and productive vegetation.
- 2) Gully or rill erosion on slopes
- 3) Sediment buildup at toe of slopes
- 4) Vegetation damage by vehicles or heavy foot traffic

d. Culvert Outlet

- 1) adequate energy dissipation
- 2) removal of trash and debris from drainageway

e. Spilled chemicals, paints, fuels, sealants, oils, greases, anti-freeze etc.

f. Sediment/sand build-up on parking lot

g. Grease traps

Resort at Squaw Creek shall develop and annually update a checklist of erosion control facilities as listed above to be used during the inspection and for reporting the results of the inspection. The checklist should include date of inspection, inspector(s), problems noted, corrective measures taken etc.

E. Snow Conditioning Monitoring

If snow conditioning chemicals are used on ski slopes, a log of the following information shall be kept:

1. Locations of application
2. Dates of applications
3. Amounts of applications
  - a) total pounds
  - b) pounds per acre
4. Compositions of the conditioning chemicals

F. Snowmaking Enhancement Chemicals Monitoring

If snowmaking enhancement chemicals are used on ski slopes, a log of the following information shall be kept:

1. Locations of application
2. Dates of application
3. Amounts of applications
  - a) total pounds
  - b) pounds per acre
4. Composition of the conditioning chemicals

II. REPORTING

The above data including sampling results and inspections shall be submitted to the Board in accordance with the schedule described below (i.e. July 15, November 15). The Discharger shall arrange and compile data in a concise form for quick review by Regional Board staff.

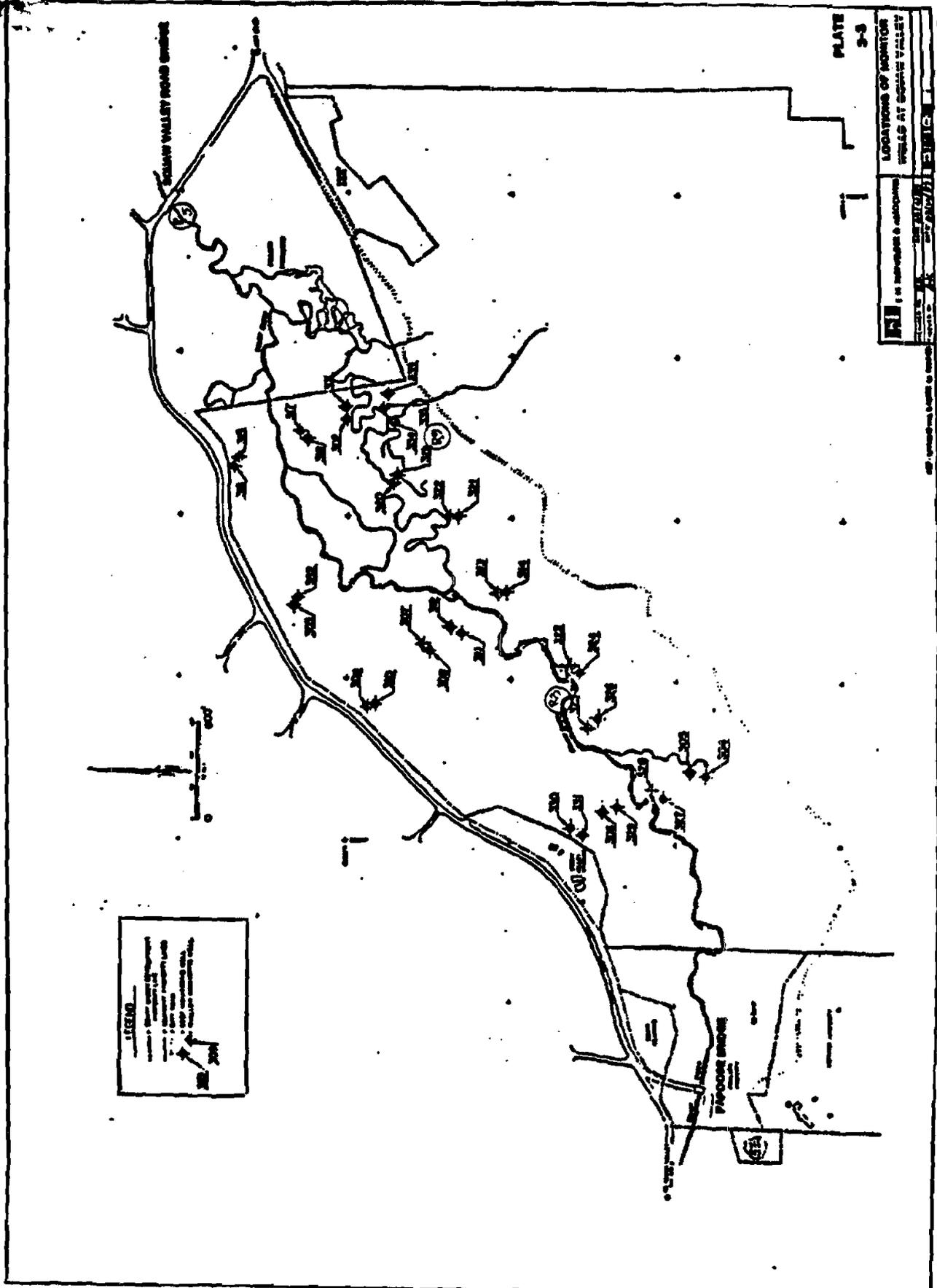
<u>Report</u>	<u>Frequency</u>	<u>Report Submittal Dates</u>
Water Quality Monitoring	Semiannual	July 15, November 15
Parking Lot Monitoring	Semiannual	July 15, November 15
Erosion Control Monitoring of Ski Area	Semiannual	July 15, November 15
Golf Course Monitoring	Semiannual	July 15, November 15
Snow Conditioning Monitoring	Annual	July 15
Snowmaking Enhancement Chemicals Monitoring	Annual	July 15

Any erosion, surface runoff problems, wastewater disposal problems, or other adverse conditions which are found on the subject property shall be clearly described and the corrective measures proposed by the Discharger shall be included in the monitoring report. In the event that no such problems are found on the property, a statement certifying this condition must be included for each monthly inspection.

In reporting the monitoring data, the Discharger shall arrange the data in a tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner as to clearly illustrate compliance with the discharge requirements. All analysis shall be performed in accordance with the current edition of "Standard Methods for the Examination of Water and Waste Water", in a laboratory certified to perform such analysis by the California State Department of Health or the Executive Officer.

Ordered By: Harold J. Singer Dated: April 8, 1993  
HAROLD J. SINGER  
EXECUTIVE OFFICER

Attachment A. Sampling Location Map



Attachment "A" (Monitoring and Reporting Program, Resort at Squaw Creek)

# ENCLOSURE 3

11-0103

**From:** Sally Brew <sdbrew1@mindspring.com>  
**To:** Bruce Warden <bwarden@waterboards.ca.gov>, <VSandova@placer.ca.gov>  
**CC:** Margot W Garcia/FS/VCU <mgarcia@vcu.edu>, "doced@att.net" <doced@att.net...>  
**Date:** 3/22/2009 6:50 PM  
**Subject:** Review of Resort @ Squaw Creek Tentative WDR Update (and CHAMP)

Bruce:

I have reviewed the documents you sent on March 18 and my comments follow.

First, however, a question: When I went to print out the material, my printer dialogue box said 170 pages, and--sure enough--there were 170 pages. But within those pages are two copies of the revised version of Volume I of the "Golf Course Chemical Application Management Plan". The second copy appears to be complete, but the first lacks the final pages, namely pages 52 to 60. It's possible that my printer messed it up, or perhaps some other material was to be in place of one or another of the copies. If I missed something, please let me know.

I did not look at the previous versions of the WDR's and the Management Plan, so I did not make a comparison.

The material appears to me to be well organized and straightforward and, other than the specific comments below, I have no reservations about this version going forward.

RE UPDATED WDR's:

Page 5, item 12 (Water Supply) of the "Board Order No. R6T-2009-(TENT), W DID NO. 6A318511300" states that The Squaw Valley Mutual Water Company is the supplier of domestic water to the facility. If true, I was unaware of this, as the Mutual Water Company does not to my knowledge supply any commercial users. Is the supplier instead the Squaw Valley Public Service District?

Page 6, item 13 (Beneficial Uses-Surface Water) of that same order has a list of uses; two of them (c. and e.) are the same.

Page 16, items 8 and 11 (concerning erosion control and revegetation) of that same order appear to me to be unduly restrictive because new and better erosion control and revegetation measures are already in use and under development. Thus these sections might refer to outdated BMP's.

Page 3, item C (Squaw Creek TMDL Monitoring) of "Monitoring and Reporting Program NO. R6T-2009-(TENT) UPDATED WASTE DISCHARGE

11-0104

REQUIREMENTS" specifies TMDL monitoring at three locations along Squaw Creek's meadow reach every two years. In my opinion, this monitoring should be done every year. A two-year interval is not sufficient to relate changes in the TMDL to specific events that may have occurred in the natural parts of the watershed or as a result of anthropogenic activities.

Page 4, item D.1. (Groundwater Monitoring; Goals...) of that same Program description contains what appears to be a misstatement about halfway down the paragraph: "Well location may vary seasonally..." probably should read "Well selection may vary seasonally..."

Page 5, item D.4. (Groundwater Monitoring; Groundwater Sampling Methodology) of that same Program description does not specify the actual procedure for taking a sample; i.e., procedures for cleansing the sample bottles, purging the upper portion of the well, etc. Perhaps these are all so well established that they don't have to be specified?

Page 6, item E. (Surface Water Monitoring) of that same Program description also does not specify the actual procedure for taking a sample; i.e., the detailed procedures involved. Again, perhaps these are all so well established that they don't have to be specified?

RE CHAMP (Realizing that these may be dealt with at a later date)

As an aside: It would be good to have a clear and up-to-date map showing the golf course and Squaw Creek as part of the CHAMP.

Almost all of the following comments concern the presence of, and spread of, the detrimental invasive weed known as Tall White Top (TWT) in Squaw Valley. It appears that the infestation was generated at Squaw Valley Stables and it has been spreading into the meadow (and, inexorably) toward the Resort At Squaw Creek golf course. To date, the repeated mechanical (meaning hand-pulling) efforts by the Friends of Squaw Creek has not measurably reduced the potential for continued spread. It has been rumored that the weed has already been identified elsewhere locally, in the eastern end of Squaw Valley.

Tall White Top (*Lepidium latifolium*; aka Perennial Pepperweed) is (according to the California Exotic Pest Plant Council and the Weed Research and Information Center Leaflet #02-1, January 2002) an invasive, non-native plant species that displaces native plant communities and "...transform[s] native habitats to more saline areas dominated by salt-tolerant non-native species."

That same leaflet identifies both glyphosate and 2,4-D as herbicides effective against TWT. Both of these herbicides are approved by CHAMP

11-0105

for spot application (meaning less than 5,000 square feet per Capter 5, Section 5.3.7) on fairways and tees. Roundup is the glyphosate mentioned and Weed-be-Gon is the 2, 4-D approved for spot application. Both are specifically prohibited in the rough areas (CHAMP, Volume 1, Chapter 3, Section 3.2.1; Chapter 4, Sections 4.1 and 4.4.3.2.1; Chapter 5, Section 5.3.6); nor can any herbicide be used within 25 feet of Squaw Creek (CHAMP, Volume 1, Chapter 3, Section 3.2.5). As far as I can tell, CHAMP does not discuss the "beyond-rough" areas of the golf course in a clear way.

In my judgment, both the TRC and the Resort at Squaw Creek golf course personnel should be aware of, and ready to cope with, this advancing infestation. Not only does it pose a serious threat to the course itself, but it could have a very serious long-term effect on the whole valley (most of which is owned by the Resort at Squaw Creek).

Moving on: A curious reference appears in Volume 1, Chapter 4, Section 4.3.7. It concerns the possible presence of glyphosate and/or 2,4-D on the greens. Elsewhere it seems to be clear that neither should be on the greens.

Another item in CHAMP that caught my eye was Volume I, Chapter 4, Section 4.4.8. (4): Erosion Control. I think that this needs to have slope angle in the adjacent watershed included as a factor to be inspected; elsewhere in CHAMP there is a reference to a 1 in 2 slope and I wonder if this has been adhered to outside of the golf course itself; namely in the part of the watershed that contributes runoff and sediment to the golf course area.

- A final question: I found only two references to the chemical(s) that are added to water in the snow-making that occurs on the mountainside above the golf course. Perhaps these additives have been discussed specifically in previous meetings, studied appropriately, and dismissed as possible sources of contamination or of elevated values. Would it be appropriate to include more information about them and their likely path through the golf course area as the snow melts? What is actually being used?

Regarding a possible meeting before April 13: I can be available March 27 through April 5, and I would prefer the Resort at Squaw Creek location. I do think that a meeting would be useful.

Dave Brew

09.03.22.1845

11-0106

# ENCLOSURE 4



Mark B Horton, MD, MSPH  
Director

State of California—Health and Human Services Agency  
Department of Public Health



ARNOLD SCHWARZENEGGER  
Governor

4/14/09  
Emails  
to BTW

To:	Bruce Warden	From:	Kim Hanagan
Fax:	530-544-2271	Pages:	3 + cover
Phone:	530-542-5416	Date:	4/13/09
Re:	WDR comments -	cc:	

Comments: RSDA @ Squaw Creek 530-224-2413

Thank you!

facsimile

...NOTICE...

Submittal of Written Material for Regional Board Consideration

In order to ensure that the Regional Board has the opportunity to fully study and consider written material, it is necessary to submit it at least ten (10) days before the meeting. This will allow distribution of material to the Board Members in advance of the meeting. Pursuant to Title 23 California Code of Regulations Section 648.4, the Regional Board may refuse to admit written testimony into evidence unless the proponent can demonstrate why he or she was unable to submit the material on time or that compliance with the deadline would otherwise create a hardship. If any other party demonstrates prejudice resulting from admission of the written testimony, the Regional Board may refuse to admit it.

A copy of the procedures governing Regional Water Board meetings may be found at Title 23, California Code of Regulations, Section 647 et seq., and is available upon request. Hearings before the Regional Board are not conducted pursuant to Government Code Section 11500 et seq.

Complete Form and Return

TO: California Regional Water Quality Control Board, Lahontan Region

SUBJECT: Comments on Tentative Updated Waste Discharge Requirements for the Resort at Squaw Creek in the Truckee River Hydrologic Unit

- We concur with tentative order
- We concur; comments attached
- We do not concur; comments attached

Michael J. Namara (Sign)

Michael J. McNamara, P.E. (Type or print name)

California Dept. of Public Health (Organization)

Lassen District, 415 Knollcrest Dr (Address) Suite 110

Redding CA 96001 (City and State)

530-224-4800 / 224-4844 (Telephone/Fax)

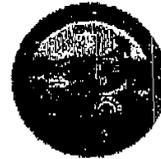
California Environmental Protection Agency





MARK B HORTON, MD, MSPH  
Director

State of California—Health and Human Services Agency  
California Department of Public Health



ARNOLD SCHWARZENEGGER  
Governor

April 13, 2009

California Regional Water Quality Control Board, Lahontan Region  
2501 Lake Tahoe Boulevard  
South Lake Tahoe, CA 96150

Attention: Lauri Kemper, Supervising Engineer, North Lahontan Watersheds Division

**Subject: Comments – Tentative Updated Waste Discharge Requirements for the Resort at Squaw Creek in the Truckee River Hydrologic Unit**

On March 18, 2009, this office received the link to the tentative updated Waste Discharge Requirement for the Resort at Squaw Creek from Bruce Harden for our review and comment. The proposed monitoring program appears to be adequate. We concur with the tentative order however we do have the following comments.

- 1) Missing description of existing wells. A map showing locations of all existing water supply wells, along with a table of well construction data, should be provided. The proposed number of monitoring wells is five; it is not possible to determine if this is the appropriate number without a detailed map showing the golf course, ponds, and groundwater extraction wells. Prevailing groundwater directions based on current understanding of the shallow and deeper groundwater aquifers should also be indicated on a map.
- 2) Missing provision for documenting the vertical gradient between shallow and deeper groundwater aquifers. The proposed monitoring program does not include piezometers or any combination of monitoring wells and piezometers to evaluate the vertical gradient between the shallow and deeper aquifer. It is our understanding that the irrigation well that is currently used to fill the pond could potentially be used by Squaw Valley Public Service District in the future. Therefore, future pumping from this part of the valley could increase.
- 3) Item D.1 of the monitoring and reporting program: CDPH would like to review the proposed monitoring well locations.
- 4) Item D.4 of the monitoring and reporting program: Direction of groundwater flow should be provided on a map, not as a 'description or map' as indicated. The static water levels should be plotted along with an interpretation of the prevailing shallow groundwater flow direction.
- 5) General comment regarding future monitoring reports: The varying groundwater extraction rates at the water supply and irrigation well at the Resort could potentially affect the shallow groundwater flow directions. The Resort should tabulate monthly pumping totals from the extraction wells in the valley and incorporate this data into the analysis, at least qualitatively.

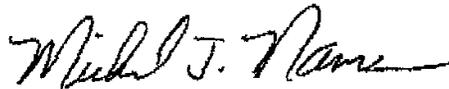
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Division of Drinking Water and Environmental Management  
415 Knollcrest Drive, Suite 110, Redding, CA 96002  
(530) 224-4800 (530) 224-4844 Fax  
Internet Address: [www.cdph.ca.gov](http://www.cdph.ca.gov)

11-0110

CRWQCB – Tentative Updated WDR The Resort at Squaw Creek  
April 13, 2009  
Page 2

If you have any questions, please contact Kim Hanagan of my staff at (530) 224-2413.



Michael J. McNamara, P.E.  
District Engineer, Lassen District  
DRINKING WATER FIELD  
OPERATIONS BRANCH

cc: Placer County Environmental Health Department

# **ENCLOSURE 5**

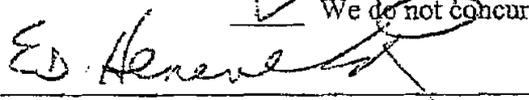
11-0112

SUBJECT: Comments on Tentative Updated Waste Discharge Requirements for the Resort at Squaw Creek in the Truckee River Hydrologic Unit

- We concur with tentative order
- We concur; comments attached
- We do not concur; comments attached

BW  
 MLK  
 HSS

notes due date for  
 written comments was  
 4-13-09 - BW

 (Sign)

ED HENEVELD (Type or print name)

assoc. with Friends of Squaw Creek (Organization) / SV Resident

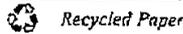
Box 2488 (Address)

Olympic Valley CA 96146 (City and State)

(530) 5831817 / 5831557 (Telephone/Fax)  
 phone

email: doced@att.net

California Environmental Protection Agency



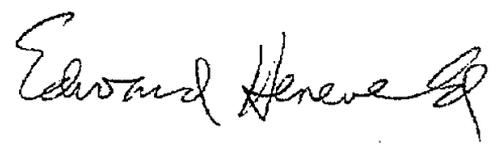
4/23/09

Fax (530) 5442771

To the Executive Officer:

Please remove item 11 "Resort at Squaw Creek,  
 Placer County" WDRs from the Board's  
 "Uncontested Calendar" for consideration May 13, 2009

I have serious reservations of the document  
 as presented on the website. The "CHAMP"  
 is not accurate or approved.




 Edward H. Heneveld  
 PO Box 2488  
 Olympic Valley, CA 96146

11-0113