CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2008-0126

WASTE DISCHARGE REQUIREMENTS
FOR
SILVERTHORN RESORT ASSOCIATES LIMITED PARTNERSHIP
AND
U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE
FOR OPERATION OF SILVERTHORN MARINA/RESORT
SHASTA COUNTY

The California Regional Water Quality Control Board, Central Valley Region (hereafter Regional Water Board), finds that:

1. Waste Discharge Requirements (WDRs) Order No. 5-01-231, adopted by the Regional Water Board on 7 September 2001, prescribes requirements for the discharge of domestic sewage from Silverthorn Marina/Resort to a septic tank leachfield system.

2. Silverthorn Resort Associates Limited Partnership owns and operates Silverthorn Marina/Resort in accordance with a special use permit from the U.S. Department of Agriculture Forest Service, who administers the property (Assessors Parcel Nos. 026-130-007 and 026-130-008) for the public. Silverthorn Resort Associates Limited Partnership and U.S. Department of Agriculture Forest Service (Forest Service) are hereafter referred to as Discharger.

3. Silverthorn Resort Associates Limited Partnership submitted an Application/Report of Waste Discharge (ROWD), dated 28 September 2007, requesting revised WDRs for an additional non-conventional on-site sewage disposal system at Silverthorn Marina/Resort.

4. The marina/resort is located in Sections 31 and 32, T34N, R3W, MDB&M (Minnesota Mountain USGS Quadrangle), as shown on Attachment A, which is incorporated herein and made part of this Order. The site topography is relatively steep and sloping toward Shasta Lake; the surrounding area is undeveloped.

5. The marina/resort consists of a private moorage dock, boat ramp, restaurant/office, residence/shop, mobile home, storage buildings, and six cabins as shown on Attachment B, which is incorporated herein and made part of this Order. Annually, approximately 500,000 gallons of wastewater is discharged to a septic tank leachfield system. Approximately 60 percent of the annual flow is discharged from May through September. Houseboat sewage holding tanks are pumped into a 1,000-gallon holding tank installed beneath the marina's public restroom. When capacity is reached, the marina's wastewater is pumped to a 7,500-gallons septic tank. Effluent from this septic

tank is pumped to another 3,000-gallon septic tank that also receives an unknown quantity of wastewater from the restaurant/office, residence/shop, mobile home, and six cabins. The effluent is then is pumped to 800-feet of leach-line for disposal. Approximately 1 percent of the septic tank wastewater is removed annually and transported off-site for disposal.

6. In 2000, a survey of Shasta Lake marinas found that a variety of deodorizing chemicals are used in commercial houseboat sewage holding tanks with chemical constituents that may include but are not limited to; ammonium nitrate, calcium nitrate, n-alkyl dimethyl benzyl ammonium chloride, n-alkyl dimethyl benzyl ethyl ammonium chloride, formaldehyde, alkoxylated linear primary alcohol, gluteraldehyde, methanol, and ethoxylated nonylphenol. The amount of deodorizing chemicals used in sewage holding tanks of private houseboats, cabin cruisers, and small portable toilets are unknown.

7. On 6 September 2001, the Regional Water Board adopted Resolution No. 05-01-211 authorizing the Executive Officer to enter into a memorandum of understanding (MOU) with the Forest Service, to eliminate gray water discharges from houseboats to Shasta Lake after 6 September 2006. In January 2004, the Executive Officer and Forest Supervisor signed MOU No. 04-MU-11051458-004.

8. Gray water is defined in MOU No. 04-MU-1151458-004 as water generated from showers, kitchen sinks, bathroom sinks, wet bars, dishwashers, and washing machines.

9. The existing septic tank leachfield system was expanded in 1994 to accommodate additional fleet capacity, and has been adequate to date. Silverthorn Marina/Resort has generated approximately 350,000 gallons of wastewater during the peak-operating season. However, Silverthorn Marina/Resort anticipates additional waste due to the capture of gray water and increased number of large boats, cabins, and restroom facilities; therefore, additional disposal area is proposed.

10. On 10 October 2007, Regional Water Board staff approved the Discharger's proposal to expand the current wastewater disposal system. The system expansion consists of one 5,000-gallon septic tank, and 2,460 linear-feet of leach-line. The septic tank will be installed in series with the existing septic system located under the main parking lot. The expanded system is designed to treat up to 10,000 gallons per day. However, the current wastewater generation rate from houseboats and the marina area, including gray water is approximately 8,000 gallons per day. Wastewater generated above the maximum design flow will be hauled to the Redding Regional Septage Disposal Facility in Anderson.

11. The Discharger operates 35 commercial houseboats. Several of the commercial houseboats are equipped with hot tubs. Hot tub wastewater, toilet (black) water, and gray water from commercial and private boats are removed through the marina's sewage pump-out system.

12. Wastes may also be discharged to Shasta Lake as a result of marina operations such as the refueling of vessels, storage of fuel, storage of chemicals, and maintenance of the facilities (including cleaning, washing, and refurbishing of rental houseboats). During the cleaning process, the Discharger uses water and a dilute solution of cleaning agent. Wastewater from houseboat cleaning is directly discharged to Shasta Lake.

13. Gasoline is stored in underground storage tanks and transferred to one land based dispenser and seven dispensers on the marina dock. Small quantities of other petroleum products are stored at various locations throughout the facility in aboveground tanks having secondary containment. The Discharger monitors the underground storage tanks in accordance with the requirements of the Shasta County Department of Resource Management Environmental Health Division (SCEHD).

14. Storm water from the facility discharges to Shasta Lake and is regulated under the General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (WDID# 5R45I010979).

SITE DESCRIPTION

15. Silverthorn Marina/Resort lies within the Shasta Dam Hydrologic Unit (506), Shasta Lake Hydrologic Area (506.10) Calwater 2.1. The underlying soil in the disposal area consists of reddish-brown very gravelly clay loam underlain by moderately weathered, highly fractured metamorphic sandstone, siltstone, or mudstone. Percolation test results were between 4 to 16 minutes per inch. The Discharger used a flux rate of 1.54 gallons/square feet/day to design the new disposal system.

16. The average annual rainfall, reported at the U.S. Bureau of Reclamation Shasta Dam Station, is approximately 60 inches and the average annual evaporation rate is approximately 70 inches.

SURFACE AND GROUNDWATER CONDITIONS

17. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*, (Basin Plan) designates beneficial uses, establishes water quality objectives and contains implementation plans and policies adopted by the State Water Resources Control Board. Pursuant to California Water Code Section 13263(a), waste discharge requirements must implement the Basin Plan.

18. Surface water drainage is to Shasta Lake, a tributary of the Sacramento River.

19. The Basin Plan designates the beneficial uses of Shasta Lake as municipal and domestic supply; agricultural supply; industrial supply; hydropower generation; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; spawning reproduction and/or early development; wildlife habitat; and navigation.

20. Drinking water for the marina/resort is pumped from Shasta Lake, treated, and stored in aboveground tanks prior to use. The intake is approximately 400 feet from the marina. When Shasta Lake is full, the intake is 20 feet deep. The SCEHD regulates drinking water from Silverthorn Marina/Resort. Currently, SCEHD has not confirmed constituents in the drinking water supply that exceed drinking water standards.

21. The drinking water intake for Shasta County Service Area #6 is approximately ½ mile from Silverthorn Marina/Resort. The 600-feet long intake pipe enters Shasta Lake on a two to one slope. When Shasta Lake is full, the intake is 262 feet deep. The California Department of Health Services, Office of Drinking Water (DHS) regulates drinking water from Shasta County Service Area #6. Currently, DHS has not confirmed constituents in the water supply exceeding drinking water standards.

22. The Discharger monitors one piezometer, installed in the leachfield area, to determine depth to water and maintain the capacity of the wastewater disposal field. Currently, design and construction information for the leachfield and piezometer are not available; therefore the reported depth to water, 56 to 80 inches, may not be indicative of shallow groundwater conditions at the site. Generally, shallow groundwater wells installed at other marinas adjacent to Shasta Lake are dry during drought conditions, in late fall, or early winter when the surface elevation of the lake decreases. This Order requires the Discharger install a groundwater monitoring network consisting of at least one upgradient and two downgradient locations.

23. The Basin Plan designates the beneficial uses of underlying groundwater as municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.

24. The Basin Plan establishes numerical and narrative water quality objectives for surface water and groundwater within the basin. Water quality objectives are the limits or levels of water quality constituents established for reasonable protection of beneficial uses of water or the prevention of nuisances.

25. The local economy is sustained substantially by recreational activities on Shasta Lake; therefore, continued operation of the marina is important to the economic vitality of the region. Prior to implementation of MOU No. 04-MU-1151458-004, gray water was directly discharged to surface waters (Shasta Lake). Removing the direct discharge of waste to surface waters and discharging the waste to a disposal field will result in additional treatment, which otherwise would not have occurred, thus providing greater protection to waters of the state and benefiting the people of California.

26. State Water Resources Control Board Resolution No. 68-16 Statement of Policy with Respect to Maintaining High Quality of Waters of the State (Antidegradation Policy), requires the Regional Water Board in regulating the discharge of waste to maintain 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

beneficial uses, and will not result in water quality less than that described in the Regional Water Board policies. This Order requires effluent and groundwater monitoring to assure continued protection of beneficial uses of waters of the state.

CEQA AND OTHER CONSIDERATIONS

27. Regional Water Board staff received a letter dated, 26 May 2006, stating that the Forest Service had completed the Environmental Assessment (EA) for the Gray Water Leach Systems Project and, the Forest Service Supervisor signed a Decision Notice/Finding of No Significant Impact for the project. The EA and Finding of No Significant Impact comply with Title 14, California Code of Regulations (CCR), Chapter 3, Section 15221.

28. The action to revise waste discharge requirements for ongoing operations of the existing Facility is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.).

29. California Water Code Section 13267 states, in part, that:

> "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the qualities of the waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

30. The Monitoring and Reporting Program required by this Order is necessary to assure compliance with these waste discharge requirements.

PROCEDURAL REQUIREMENTS

31. The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe revised waste discharge requirements for the discharges of waste to land, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

32. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the revision of Waste Discharge Requirements.

33. Any person adversely affected by this action of the Regional Water Board may petition the State Water Resources Control Board to review the action in accordance with

Sections 2050 through 2068, Title 23, CCR. The petition must be received by the State Board Office of Chief Council, P.O. Box 100, Sacramento, CA 95812-0100, within 30 days of the date of adoption of this Order. Copies of the law and regulations applicable to the filing of a petition are available on the Internet at http://www.waterboards.ca.gov/water_laws/ and will be provided upon request.

IT IS HEREBY ORDERED, pursuant to Sections 13263 and 13267 of the California Water Code, that Order No. 5-01-231 is rescinded, and that Silverthorn Resort Associates Limited Partnership and the U.S. Department of Agriculture Forest Service, their agents, successors, and assigns, in order to meet the provisions of Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. The Discharge of waste classified as 'hazardous', as defined in Section 2521(a) of Title 23, CCR, Section 2510, et seq., (hereafter Chapter 15), or 'designated' as defined in Section 13173 of the California Water Code, is prohibited.

2. The discharge of waste from hot tub treatment or use to surface waters or surface water drainage courses is prohibited.

3. The by-pass or overflow of untreated or partially treated wastewater from the sewage disposal system is prohibited.

4. The discharge of gray water from houseboats to surface waters is prohibited.

5. The discharge of solid or liquid waste or pollutants, including solvents, oil, grease, or other petroleum products, to surface water, or surface water drainage courses is prohibited.

B. Discharge Specifications

1. Neither the treatment nor the discharge of waste shall cause a nuisance or conditions of pollution as defined by the California Water Code, Section 13050.

2. The domestic wastewater discharged from the marina to the leachfield shall not exceed 10,000 gallons per day.

3. The discharge shall not cause degradation of any water supply.

4. The discharge shall remain within the designated disposal area at all times.

5. The treatment facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

6. Objectionable odors originating at the facility shall be investigated, and controlled. Failing treatment system components shall be repaired.

7. Solid waste shall be properly contained to prevent waste or leachate from entering surface waters.

8. Deodorizing chemicals and chemicals used for houseboat and facility maintenance shall be stored in containers designed to prevent discharges to groundwater, surface water, or surface water drainage courses.

C. Groundwater Limitations

1. The discharge shall not cause contamination of underlying groundwater nor cause underlying groundwater to contain waste constituents that are significantly greater, statistically, than background water quality.

D. Provisions

1. The Discharger shall comply with Monitoring and Reporting Program No. R5-2008-0126, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.

2. The Discharger shall comply with all the items of the “Standard Provisions and Reporting Requirements for Waste Discharge Requirements (Standard Provisions),” dated 1 March 1991, which are part of this Order.

3. The Discharger shall dispose of sludge and other solids removed from waste disposal systems in a manner that is consistent with Title 27, California Code of Regulations and approved by the Executive Officer.

4. The Discharger shall comply with the standards contained in Title 23, California Code of Regulations, Division 3, Chapter 20, Sections 2815 through 2829, *Standards for the Removal of Sewage from Vessels*.

5. The Discharger shall report to the Regional Water Board any material change or proposed change in character, location, or volume of the discharge or chemical or cleaning agents used.

6. In the event of any change in control or ownership of land or waste discharge facilities described herein, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Regional Water Board.

7. The Discharger shall notify the Regional Water Board by telephone immediately upon having knowledge of a discharge of hazardous or designated waste to surface waters, or surfacing effluent from the septic tank or leachfield areas.

8. The Forest Service as administrator of the property at which the discharge occurs, is ultimately responsible for ensuring compliance with these requirements. Silverthorn Resort Associates Limited Partnership retains primary responsibility for compliance with these requirements, including day-to-day operations and monitoring. Enforcement actions will be taken against the Forest Service only in the event that enforcement actions against Silverthorn Resort Associates Limited Partnership are ineffective or would be futile.

9. A copy of this Order and its attachments shall be maintained at Silverthorn Resort Associates Limited Partnership, Silverthorn Marina/Resort, and the Shasta-Trinity National Recreation Area, Shasta Lake Ranger Station for reference by key operating personnel.

10. The Regional Water Board will review this Order periodically and revise requirements when necessary.

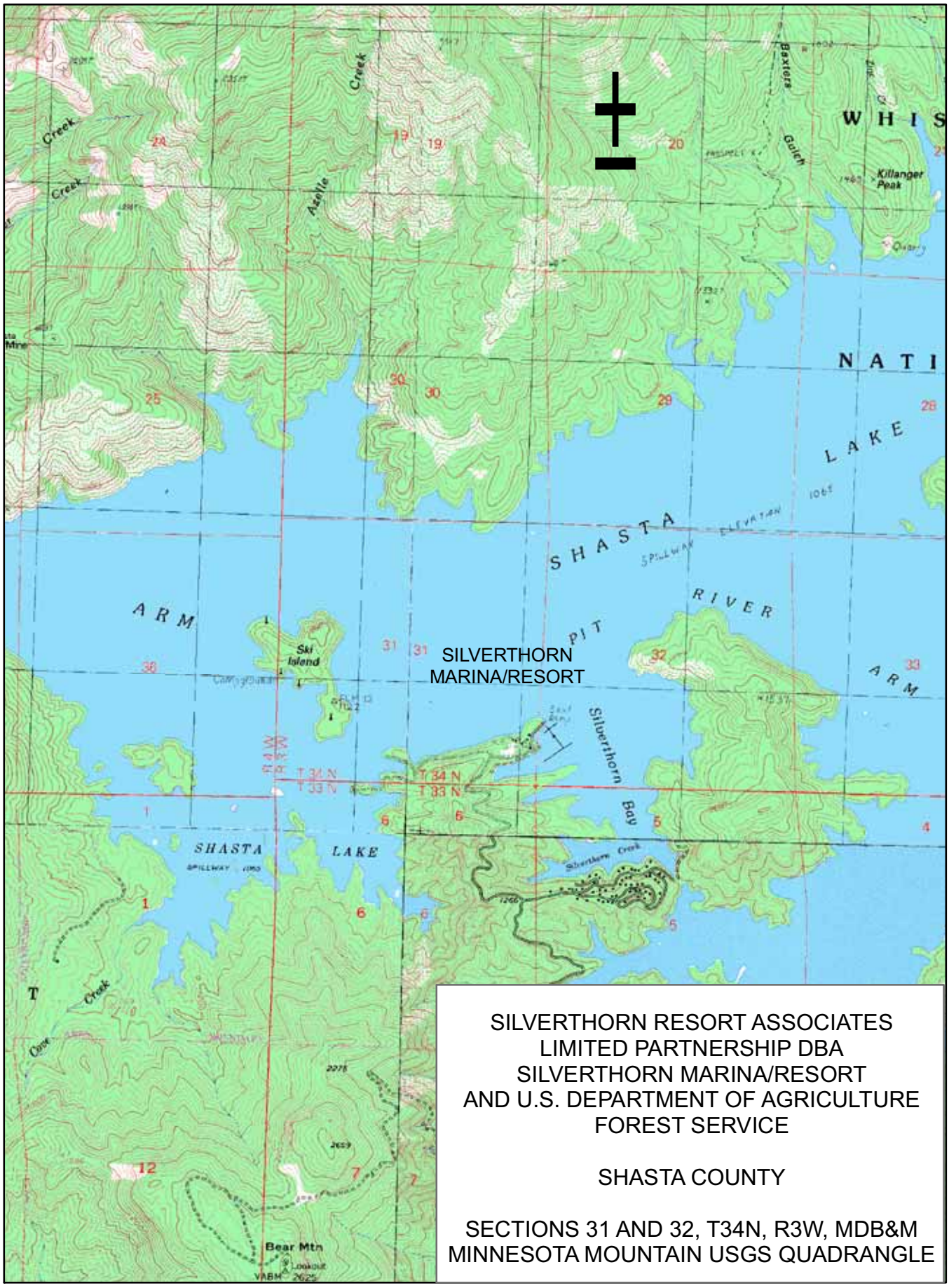
11. The Discharger shall install a groundwater detection monitoring system for the wastewater treatment and disposal system in accordance with the following time schedule:

Task	**Compliance Date**
a. Submit a work plan for installation of a groundwater monitoring system adjacent to the wastewater treatment and disposal system.	**1 January 2009**
b. Submit groundwater monitoring system installation report.	**1 July 2009**

I PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region on 31 July 2008.

_____
PAMELA C. CREEDON, Executive Officer

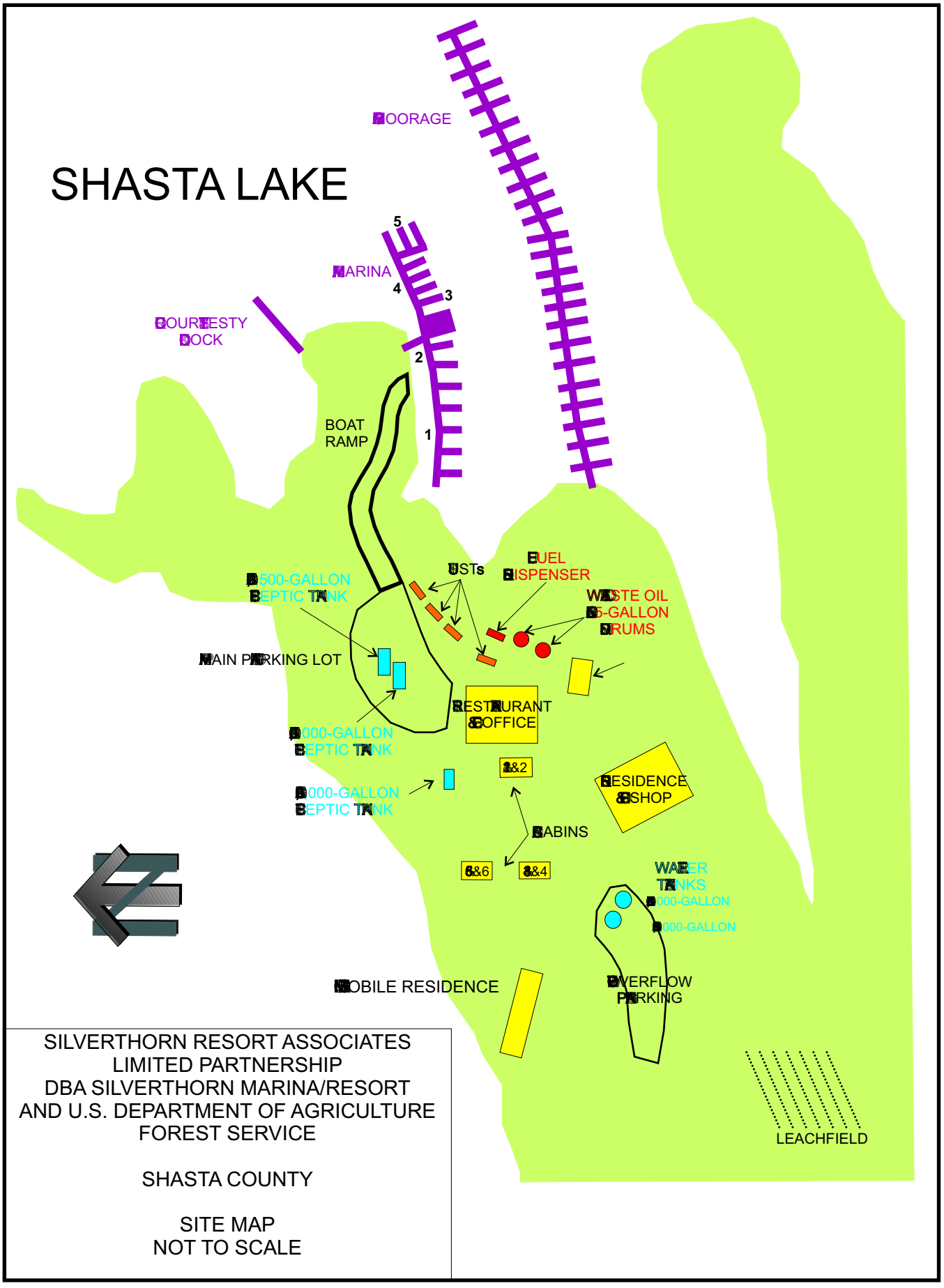
KB/KLC: sae



SILVERTHORN RESORT ASSOCIATES
LIMITED PARTNERSHIP DBA
SILVERTHORN MARINA/RESORT
AND U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

SHASTA COUNTY

SECTIONS 31 AND 32, T34N, R3W, MDB&M
MINNESOTA MOUNTAIN USGS QUADRANGLE



SILVERTHORN RESORT ASSOCIATES
LIMITED PARTNERSHIP
DBA SILVERTHORN MARINA/RESORT
AND U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

SHASTA COUNTY

SITE MAP
NOT TO SCALE

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2008-0126

FOR
SILVERTHORN RESORT ASSOCIATES LIMITED PARTNERSHIP
AND
U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE
FOR OPERATION OF SILVERTHORN MARINA/RESORT
SHASTA COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for sewage collection system, septic tank and holding tank, septic tank effluent, leachfield, groundwater and surface water monitoring, and standard observations. The Discharger shall submit **monitoring reports** to the Regional Water Board office **by the end of the month following the reporting period in which samples were collected and/or observations made (for example, the October report is due by 30 November)**.

REPORTING

The Discharger shall arrange monitoring data in tabular form so that the date, sample type, and analytical result for each sample area are readily discernible. The data shall be summarized in such a manner to illustrate clearly compliance with waste discharge requirements. The results of any monitoring done more frequently than required at the locations specified in the MRP shall be reported to the Regional Water Board.

Table 1. Monitoring reporting schedule

Monitoring Type	Performance Schedule	Reporting Schedule
Sewage Collection System	Quarterly	Month performed
Septic Tank and Holding Tank	Annually	Month performed
Septic Tank Effluent	Semi-annually	Month performed
Leachfield (visual)	Monthly	Monthly
Groundwater	Quarterly	Month performed
Surface Water	Monthly (May - September)	Monthly (June - October)
Standard Observations	Monthly	Month performed

SEWAGE COLLECTION SYSTEM MONITORING

The Discharger shall inject an approved tracer dye, on a quarterly basis, into the sewage collection system on the marina to test for leaks and report whether dye was observed. If dye is observed, the release shall be reported to the Regional Water Board within 24 hours, and corrective action measures shall be implemented immediately.

SEPTIC TANK AND HOLDING TANK MONITORING

Septic tank maintenance inspections shall be performed at least annually. Information concerning inspections and maintenance activities (including, but not limited to, pumping, replacement, and repairs) shall be reported in the corresponding monthly monitoring report.

The contents from the holding tank, marina septic tank, and residential septic tank shall be periodically removed. The last date of service of each septic tank and holding tank and the quantity of sewage removed shall also be reported.

In addition, the Discharger shall record the quantity of sewage pumped from the marina to the holding tank and from the holding tank to the leachfield on a daily basis and report the results monthly.

SEPTIC TANK EFFLUENT

A grab sample of the septic tank effluent shall be collected prior to discharging to the marina leachfield and analyzed for at least the following:

Table 2. Summary of septic tank effluent monitoring

PARAMETER	UNITS	FREQUENCY
Kjeldahl-Nitrogen (TKN)	mg/L	Semiannual
Nitrate-Nitrogen	mg/L	Semiannual
Fecal Coliform	MPN/100 mL	Semiannual
Formaldehyde	µg/L	Semiannual
Biological Oxygen Demand	mg/L	Semiannual
Total Suspended Solids	mg/L	Semiannual

*Semiannual samples shall be collected in March and August each year

LEACHFIELD MONITORING

The Discharger shall inspect the leachfields and report the presence or absence of saturated soils or standing liquid each month.

GROUNDWATER MONITORING

The Discharger has installed a piezometer in the leachfield area and is required to install a groundwater monitoring network, which consists of at least two downgradient, and one background monitoring location. The groundwater wells and piezometer shall be sampled in accordance with the following:

Table 3. Summary of groundwater monitoring

PARAMETER	UNITS	FREQUENCY
Field Parameters		
Groundwater Elevation	FT., & hundredths, MSL	Quarterly
Temperature	°C & °F	Quarterly
Turbidity	NTUs	Quarterly
Specific Conductance	µmhos/cm	Quarterly
pH	pH units	Quarterly
Dissolved Oxygen	mg/L	Quarterly
Monitoring Parameters		
Nitrate-Nitrogen	mg/L	Quarterly
Kjeldahl Nitrogen	mg/L	Quarterly
Total Coliform	MPN/100 mL	Quarterly
Fecal Coliform	MPN/100 mL	Quarterly
Formaldehyde	µg/L	Quarterly
Total Organic Carbon	mg/L	Quarterly
Total Dissolved Solids	mg/L	Quarterly

SURFACE WATER MONITORING

Surface water samples shall be collected around the marina each month from May through September, in the general areas depicted in Attachment B, and analyzed for total and fecal coliform (Standard Method 9221 or 9222). Samples shall be collected, even if the dock

configuration changes. If any fecal coliform analysis exceeds 400/100 mL or if the geometric mean of fecal coliform analyses taken within any 30 day period exceed 200/100 mL, the Discharger shall immediately report the results, dye test the sewage collection system, and re-analyze all receiving water stations. Sampling shall continue daily until compliance is achieved.

STANDARD OBSERVATIONS

The moorage area shall be visually inspected, at least monthly, to determine if boats are discharging gray water while moored at the facility. If gray water discharges are occurring, the vessel identification number and moorage area shall be noted and reported to the Regional Water Board. Visual observation and inspection notes shall be included in the monthly monitoring report. A log shall be kept of the water conditions with attention given to the presence or absence of:

- Floating or suspended matter
- Oil sheen or slick
- Discoloration
- Scum or foam
- Aquatic life

The Discharger shall comply with the MRP until revised by the Regional Water Board Executive Officer. The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

31 July 2008
(Date)

KB/KLC: sae

INFORMATION SHEET

ORDER NO. R5-2008-0126
SILVERTHORN RESORT ASSOCIATES LIMITED PARTNERSHIP
AND U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE
FOR OPERATION OF SILVERTHORN MARINA/RESORT
SHASTA COUNTY

On 7 September 2001, the Regional Water Board adopted Waste Discharge Requirements (WDR) Order No. 5-01-231 prescribing requirements for the discharge of domestic wastewater from Silverthorn Marina/Resort to septic tank leachfield systems. The marina/resort formerly operated under WDR Order No. 96-029.

In 19 March 2001, the U.S. Department of Agriculture Forest Service (Forest Service) issued Silverthorn Resort Associates Limited Partnership a 14-year special use permit for operating and maintaining Silverthorn Marina/Resort on approximately 25 acres along the Pit River arm of Shasta Lake. No private land ownership is associated with the marina operations.

Silverthorn Marina/Resort consists of a marina, private moorage dock, boat ramp, restaurant/office, residence/shop, mobile home, storage buildings, and six cabins. The on-water marina consists of a houseboat and small boat rental area, minor maintenance shop, store, office, various storage areas, public restroom, three sewage pump-out stations, and seven gasoline dispensers for fueling vessels.

The Forest Service issues up to 450 commercial houseboat special use permits for Shasta Lake, of which 35 permits are issued to Silverthorn Marina/Resort. The Forest Service has also issued 648 special use permits to private houseboats. Private houseboats may be moored at any marina on Shasta Lake. Currently, moorage is available to 113 boats at Silverthorn Marina/Resort.

Houseboats are categorized by the Forest Service as Recreational Overnight Vessels (ROV). An ROV is defined as any watercraft that has dimensions of 31 feet by 12 feet and is designed for overnight occupancy on the water. The Whiskeytown-Shasta-Trinity National Recreation Area Management Guide states that any vessel meeting the definition of an ROV, used or stored on Shasta Lake, more than 30 days per calendar year, must be authorized under the special use permit.

On 6 September 2001, the Regional Water Board adopted a Resolution No. 05-01-211 authorizing the Executive Officer to enter into a memorandum of understanding with the Forest Service to eliminate gray water discharges from houseboats to Shasta Lake after 6 September 2006.

Silverthorn Marina/Resort discharges varying quantities of domestic sewage, generated from houseboat pump outs and public restroom facilities. The greatest wastewater flow rates occur during the summer months and may peak at 4,000 gallons per day; however, flows typically average no more than 1,000 gallons per day during the off-season. Currently, wastewater is pumped from the docks to a 1,000-gallon single-walled holding tank installed beneath the restroom facilities. The holding tank contains a system of floats to detect the level of wastewater. When a high level is reached, a submersible pump transfers the waste into a

7,500-gallon septic tank installed in the parking lot, then to a 3,000-gallon septic tank which also receives wastewater from the restaurant/office, six cabins, and residence/shop. A meter has been installed to determine discharge flow and check valves are located along the pipe to prevent backflow. Manual shut-off valves are installed between the pipe and hose connections. The holding tank and septic tank also have electronic alarms.

The original leachfield, located in the upper parking lot consisted of five, 100-foot leachlines, and was designed for a maximum flow rate of 3,000-gallons per day. In 1994, an additional 300-feet of leachline, a switching box, and piezometer were installed.

In order to manage the disposal of additional wastewater generated from the capture of gray water and future increases to the rental houseboat fleet, an additional 2,460 liner feet of leach line and one additional 5,000-gallons septic tank will be installed. The additional septic tank will be installed in-series with the two primary tanks located in the lower parking lot. The current leachfield in the upper parking lot will be augmented to work with the expansion, and will include a series of valves, which will allow wastewater to be distributed to three hydrosplitters. Each of the hydrosplitters will equally depressurize the wastewater and evenly distribute waste to a portion of the expanded leachfield.

Two 10,000-gallon underground petroleum storage tanks are located adjacent to the RV park manager's residence. Petroleum products from the tanks are delivered to the marina dock dispensers through a system of underground and above ground piping. Currently, a single 1-½ inch pipeline carries gasoline from the two 10,000-gallons tanks, which have been manifolded together, to the docks. When the marina relocates during low surface water conditions, petroleum products are dispensed from two 1,000-gallon portable aboveground storage tanks. Absorbent materials are available at various locations to prevent and/or clean-up petroleum releases.

Effective 1 January 2008, Aboveground Petroleum Storage Act (APSA) oversight (California Health and Safety Code, Chapter 6.67, Sections 25270-25270.13), is administered through Certified Unified Program Agencies (CUPA's). Previously the State Water Resources Control Board and Regional Water Boards administered the APSA. Under the new law, the CUPA's have responsibility for APSA whereas the Regional Water Boards retain responsibility to oversee the cleanup-related efforts with regard to a release at an aboveground tank facility.

Storm water is regulated under the General NPDES Storm Water Permit for Discharges Associated with Industrial Activities (WDID #5R45I010979).

KB/KLC: sae