Storm Water Pollution Prevention Plan for North Tahoe Marina

November 15, 2000

STORM WATER POLLUTION PREVENTION PLAN

FOR

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT

FOR

DISCHARGES OF STORM WATER RUNOFF ASSOCIATED WITH INDUSTRIAL ACTIVITY AND MAINTENANCE DREDGING AT MARINAS

FOR

NORTH TAHOE MARINA
7360 NORTH LAKE BLVD., TAHOE VISTA, CA 96148
APN: 117-130-053

INTRODUCTION

The California Regional Water Quality Control Board (RWQCB) – Lahontan Region has recently developed a National Pollutant Discharge Elimination System (NPDES) General Permit for discharges of storm water run-off associated with industrial activity and maintenance dredging at marinas at Lake Tahoe. The General Permit combines requirements from the NPDES General Industrial Activities Storm Water Permit and the individual Waste Discharge Requirements in order to decrease costs and complexities associated with complying with two similar permits and their monitoring and reporting requirements. Regulations pursuant to this General Permit will manage potential pollutant discharges at the marina including storm water run-off, waste from maintenance activities, vessel sewage, bilge water wastes and pollutants associated with maintenance dredging.

The Storm Water Pollution Prevention Program (SWPPP) is a site-specific document developed for each marina in the Lake Tahoe Basin and is designed to comply with Federal requirements to implement BMPs. In accordance with this document, the North Tahoe Marina is required to install Best Management Practices (BMPs) to ensure that effluent limits and water quality objectives outlined by the Basin Plan are met with respect to fuel, oil, and sewage and that impacts associated with maintenance dredging are prevented or minimized.

The SWPPP shall be certified in accordance with the signatory requirements of Section 9 of the Standard Provisions as Attachment A in this document. It shall be revised whenever appropriate and readily available for review by facility employees or Regional Board inspectors.

OBJECTIVES

The SWPPP shall be developed and amended, when necessary, to meet the following objectives:

1. Identify and evaluate sources of pollutants associated with industrial activities being conducted at the facility that may affect the quality of storm water discharges and prevent non-storm water discharges from the facility

2. Identify and implement site-specific BMPs to reduce or prevent pollutants associated with industrial activities in storm water discharges and non-storm water discharges.

Appropriate BMPs include both structural and non-structural pollution prevention measures. Structural BMPs include treatment measures, run-off controls and overhead coverage. Non-structural BMPs include activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures.

POLLUTION PREVENTION TEAM

The pollution prevention team for North Tahoe Marina shall consist of:

1. Jan Brisco and Andrea Buxton will be responsible for researching all information required by the General Permit, writing the SWPPP, and assisting the marina operator in implementation of any necessary BMP's and monitoring and reporting activities.

2. James Walsh and Cathy Eastes are the marina operators and will be responsible for implementation of any necessary BMP's and conducting monitoring and reporting activities.

North Tahoe Marina has an Emergency Response Procedure plan on site that contains storm water pollutant control measures, included as Attachment B in this document. A Hazardous Materials Inventory is on file with the Placer County Department of Environmental Health.

SITE MAP

A site map for the North Tahoe Marina property is included as Attachment C in this document.

LIST OF SIGNIFICANT MATERIALS

A list of significant materials handled and stored at the site is included as Attachment D in this document and includes storage locations, quantities, and frequencies of use.

DESCRIPTION OF POTENTIAL POLLUTANT SOURCES

The following is a description of the industrial activities of North Tahoe Marina that are associated with potential pollutants. It includes potential pollutant sources that could be discharged in storm water discharges or non-storm water discharges and the BMPs implemented onsite to prevent pollutants from entering surface waters or stormwater. A summary of all areas of industrial activities and potential pollutant sources is included as Attachment E in this document.

The season of operation at North Tahoe Marina extends from May 1 through November 1 of each year. All industrial activities described below are only associated with the above dates of operation.

INDUSTRIAL PROCESSES

1. Fueling
    a. Locations of activity
        - On fuel dock at three fuel pumps, each with two dispensing hoses
    b. Pollutant type
        - Unleaded gasoline (benzene, toluene, ethylbenzene, xylenes and other petroleum hydrocarbons)
    c. Pollutant characteristics
        - Colorless, flammable liquid
        - Slightly soluble (0.18g/100 mL)
        - Odor detected at 12 ppm
        - Benzene is a know carcinogen
    d. Potential pollutant sources
        - Leaks or spills near pumping stations
        - Overflow from boat gas tanks while fueling
        - Rainfall running off fueling area and rainfall running into and off fueling area
    e. Quantity
        - Less than one gallon per incident
        - Incidents expected to occur very infrequently

f. BMPs
    - Sorbent booms and pads located in storage bin on fuel dock for quick absorption of spilled fuel
    - Microorganisms used after spill containment for bioremediation of remaining petroleum hydrocarbon residues
    - Employees trained in proper fueling, clean-up and spill response techniques
    - Fueling area inspected regularly to detect problems before they occur
    - Automatic shut-off valves at pumps
    - Leak detection monitors
    - Above ground storage of gasoline in Convaults with secondary containment
    - Double walled piping with secondary containment from Convaults to fuel pumps

2. Boat Washing
    a. Location of activity
        - Maintenance yard
        - Upper parking lot
    b. Pollutant type
        - Oily residues
        - Algae
    c. Pollutant characteristics
        - Petroleum hydrocarbons
        - Organic compounds (nutrients)
    d. Pollutant source
        - Films on outsides of boats
    e. Quantity
        - Low concentrations of both pollutants
    f. BMPs
        - Slotted drain discharging to underground infiltration pit #3 collects water generated in maintenance yard
        - Drop inlet discharging to underground infiltration pit #2 also collects water generated in maintenance yard
        - Drop inlet discharging to underground infiltration pit #1 collects water generated in the upper parking lot
        - Pressure washer uses minimal amount of water (approx. 1gallon/min.)
        - No soap used
        - Bioremediation by microorganisms
        - Most cleaning done outside of the Tahoe basin, in Nevada

3. Bilge Draining
    a. Location of activity
        - Maintenance yard
    b. Pollutant type
        - Oily residues
    c. Pollutant characteristics
        - Petroleum hydrocarbons
    d. Pollutant source
        - Contaminated bilge water
    e. Quantity
        - Approximately 1-5 gallons of contaminated water with low concentrations of petroleum hydrocarbons drained per boat
        - Bilges drained approximately 1 time per year for 310 boats
    f. BMPs
        - All contaminated bilge water drained into buckets and poured into 55 gallon waste water drum in shop and disposed of by Reno Drain Oil, 11970 I80 East, Sparks, NV, 89431, 775-342-0351
        - Slotted drain to underground infiltration pit #3 collects any bilge water spillage
        - Bioremediation by microorganisms

4. Painting/Gel-coating
    a. Location of activity
        - Fiberglass room
    b. Pollutant type
        - Paint
        - Gel-coat
        - Paint Thinner
        - Acetone
    c. Pollutant characteristics
        - Paints may contain heavy metals
        - Paint thinners may contain tetrachloroethylene (PERC), tetrachloroethane, trichloroethylene (TCE), methylene chloride
    d. Potential pollutant source
        - Spills while performing activity
        - Dirty paintbrushes
    e. Quantity
        - 100 gallons paint stored
        - 1-2 ounces paint used 1-2 times per week
        - 10 gallons gel-coat stored
        - 1-2 ounces gel-coat used 1-2 times per week

- 2 gallons paint thinner stored
- 1-2 ounces paint thinner used 1-2 times per week
- 4 gallons acetone stored
- 1-2 ounces acetone used 2-3 times per week

f. BMPs
- All painting and gel-coating done inside fiberglass room
- All paints/gel-coat/paint thinners/acetone stored in fireproof cabinets in fiberglass room
- Waste paint removed and disposed of by Safety-Kleen, 1200 Marietta Way, Sparks, NV, 89431, 775-331-4477
- Some disposable brushes and putty knives used
- Some brushes wiped clean with rags containing paint thinner or acetone, rags picked up and cleaned by Aramark, 1335 Greg St., Ste. 106, Sparks, NV 89431, 775-331-1221

5. Oil Changes / Drive Lubrication
   a. Location of activity
      - Maintenance yard
      - Service shop
   b. Pollutant type
      - Waste oil
      - Waste filters
      - New oil
      - Gear lubricant
   c. Pollutant characteristics
      - Petroleum hydrocarbons
   d. Pollutant source
      - Withdrawal and replacement of oil from boat engines
      - Withdrawal and replacement of lubricant from boat engines
   e. Quantity
      - 5-14 quarts waste oil
      - 1-2 used oil filters
      - 5-14 quarts new oil
      - Approximately 8-12 ounces of lubricant used per event
      - Both activities occur approximately 1 time per year for 310 boats
   f. BMPs
      - All oil pumped directly from engine into tightly sealed 30 gallon vacuum tank
      - Vacuum tank pumped into 300 gallon waste oil tank surrounded by secondary containment berm, disposed of by Reno Drain Oil

- Oil filters crushed and drained of oil on grate into same 300 gallon waste oil tank in oil room
- New oil pumped from 55 gallon drum in oil room, dispensed by dripless nozzle on rubber hose
- Waste gear lubricant poured into waste oil tank and removed by Reno Drain Oil
- Bioremediation or oily residues by microorganisms

6. Engine Maintenance
    a. Location of activity
        - Service shop
        - Maintenance yard
    b. Pollutant type
        - Oily residues
        - Cleaning solvents
    c. Pollutant characteristics
        - Petroleum hydrocarbons
        - Safety-Kleen solvent (petroleum based)
    d. Pollutant source
        - Engine parts
        - Safety-Kleen unit
    e. Quantity
        - Continuous stream of Safety-Kleen solvent cycled through unit
    f. BMPs
        - All engine parts washed in self-contained Saftey-Kleen unit
        - Contaminated solvent removed by Saftey-Kleen

7. Upholstry Cleaning
    a. Location of activity
        - Service shop
        - Upper parking lot
    b. Pollutant type
        - Carpet cleaner
    c. Pollutant characteristics
        - Unknown
    d. Pollutant source
        - Spills while performing activity
    e. Quantity
        - 10-15 gallons carpet cleaner stored
        - 1-5 ounces used 1 time per year for 310 boats
    f. BMPs
        - Solution used in self contained steam cleaner

8. Welding (Structural and equipment maintenance)
    a. Location of activity
        - Service shop
        - Anywhere structural repairs are needed
    b. Pollutant type
        - Acetylene
    c. Pollutant characteristics
        - Flammable gas
    d. Pollutant source
        - Blow torch fuel
    e. Quantity
        - Approximately 30 gallons stored
        - Welding approximately 1 time per month
    f. BMPs
        - Acetylene stored in appropriate pressurized metal tanks
        - Work area kept clean

9. Fiberglassing (Hand laying of fiberglass)
    a. Location of activity
        - Fiberglass room
    b. Pollutant type
        - Resins
    c. Pollutant characteristics
        - May contain heavy metals, sulfates, polyesters
    d. Pollutant source
        - Spills during use
    e. Quantity
        - 2 gallons stored
        - 1-2 ounces used 1 time per week
    f. BMPs
        - All fiber glassing done in fiberglass room
        - Resins stored in fireproof cabinet
        - No waste generated

10. Sewage pumping
    a. Location of activity
        - Fuel dock
    b. Pollutant type
        - Raw sewage / human waste
    c. Pollutant characteristics
        - Nitrogen containing organic compounds
        - Other organics
        - Bacteria
    d. Pollutant source
        - Spills and leaks during pumping of sewage tanks

e. Quantity
    - Approximately 200 boats at marina have onboard toilets
    - Pump-out stations used approximately 3-4 times per week
f. BMPs
    - 3 Pump-out facilities available to public – 2 on fuel dock, 1 on land
    - Pump inspected regularly for proper function
    - Sewage pumped to 75 gallon tank then discharged to sewer system and treated by Tahoe Truckee Sanitation Agency

11. Winterizing and Engine Service
    a. Location of activity
        - Service shop
        - Maintenance yard
    b. Pollutant type
        - Engine anti-freeze (for engine service)
        - Potable anti-freeze (for winterizing of onboard sinks, toilets, and other freshwater systems)
    c. Pollutant characteristics
        - Ethylene glycol
        - Propylene glycol
    d. Pollutant source
        - Spills while performing activity
    e. Quantity
        - Approximately 1 gallon used 10 times per year
        - Approximately 1 gallon used 200 times per year
    f. BMPs
        - All waste anti-freeze removed by Reno Drain Oil

MATERIAL HANDLING AND STORAGE AREAS

See Attachment C for quantities stored.

1. Service Shop
    a. Location
        - Inside boathouse
    b. Types of pollutants handled
        - Petroleum hydrocarbons (waste fuel, waste water, kerosene)
        - Safety-Kleen solvent (petroleum based)
        - Acetylene
        - Carpet Cleaner
        - Anti-freeze (ethylene glycol, propylene glycol)

- Batteries (acids/alkalis)

c. Quantity handled
   - A few gallons of petroleum hydrocarbons per event
   - A few ounces of paints, solvents, acetylene, or kerosene per event

d. Spill prevention / response procedures
   - Sorbent pads used to contain and absorb any spills
   - Safety-Kleen solvents limited to self-contained Safety-Kleen unit

2. Fiberglass Room
   a. Location
      - Inside boathouse
   b. Types of pollutants handled
      - Paints, Gel-Coat (may contain various heavy metals)
      - Solvents (acetone, paint thinner that may contain tetrachloroethane, TCE, PERC or methylene chloride)
      - Fiberglass Resins
   c. Quantity handled
      - 1-2 ounces per event (applies to all compounds)
   d. Spill prevention / response procedures
      - Sorbent pads used to contain and absorb any spills
      - All paints, solvents and resins stored in fireproof cabinets

3. Maintenance Yard
   a. Location
      - Directly outside of service shop
   b. Types of pollutants handled
      - Petroleum hydrocarbons
      - Algae
   c. Quantity handled
      - Low concentrations in approximately 1 gallon of water during bilge draining (petroleum hydrocarbons and algae)
      - 5-14 quarts petroleum hydrocarbons during oil changes
   d. Spill prevention / response procedures
      - Dirty bilge water drained to five gallon buckets and disposed of in 55 gallon waste water drum removed by Reno Drain Oil
      - Slotted drain down gradient of maintenance yard collects non-storm water discharges
      - Oil changes employ a tightly sealed vacuum pump to draw out used oil, new oil is dispensed through dripless nozzle on the end of flexible hosing

- Sorbent materials stored nearby in marina shop, near boat ramp, in rental office, and on pier for cleaning up any spills

4. Oil Room
    a. Location
        - Inside boathouse adjacent to service shop
    b. Types of pollutants handled
        - Petroleum hydrocarbons (waste oil, new oil, used oil filters, gear lubricant)
    c. Quantity handled
        - 14 quarts or less waste oil and new oil
        - 1-2 used oil filters per event
        - 8-12 ounces gear lubricant used per event
    d. Spill prevention / response procedures
        - Sorbent pads used to contain any spills
        - Secondary container on used oil tank, new oil drums
        - Used oil filters drained into used oil tank and placed in 30 gallon waste oil filter drum removed by Reno Drain Oil
        - Area kept clean and neat
        - Oil room surrounded by berm to contain spills

5. Battery Rack
    a. Location
        - Service shop
    b. Types of pollutants handled
        - Battery acids
    c. Quantity stored
        - 5-10 used batteries during operating season
        - 10-15 new batteries (spring)
    d. Spill prevention / response procedures
        - Batteries kept on wall rack, away from flammables
        - Used batteries disposed of by Interstate Battery, 333 South Carson Meadows Dr., Carson City, NV 89701, 775-883-6576
6. Marina
    a. Location
        - On Lake Tahoe
    b. Types of pollutants handled
        - Petroleum hydrocarbons
    c. Quantity handled
        - ±10 gallons fuel at fuel dock
    d. Spill prevention / response procedures
        - Sorbent pads and rags to contain and wipe up any spills located in bins on fuel dock

- Automatic shut-off on fuel pumps
- Fuel pumps manned by personnel

DUST AND PARTICULATE GENERATING ACTIVITIES

1. Sanding
    a. Location of activity
        - Fiberglass room
    b. Pollutant type
        - Particles of paint/fiberglass
    c. Pollutant characteristics
        - Fine particulates
        - May contain heavy metals
    d. Pollutant source
        - Boat surfaces
    e. Quantity
        - Minimal
        - Occurs 1 time per week
    f. BMPs
        - All sanding done with a dustless sanding system
        - All sanding done in fiberglass room where particulates can be controlled and removed

SIGNIFICANT SPILLS AND LEAKS

The North Tahoe Marina has reported no significant spills or leaks since May 1995.

NON-STORM WATER DISCHARGES

1. Hose water used during washing of boat bottom – refer to industrial activities section for a complete description of boat washing.

2. Draining of bilge water – refer to industrial activities section for a complete description of bilge draining.

EROSION AND SEDIMENT CONTROL

1. Existing soil stabilization
    a. Large portion of marina surface is impervious
    b. Unpaved surfaces are covered with mature vegetation
    c. Large boulders on shoreline reduce wave impacts and shorezone erosion
    d. Curbs gutters and rock drainages direct water flow away from potentially erodable areas
    e. Retaining walls bordering parking lot reduce bank erosion

2. No areas on property susceptible to erosion

3. No further BMPs planned

ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

1. All marina activities associated with potential pollutants occur indoors in the service shop or in the maintenance yard. It is highly unlikely that any pollutants handled in the service shop will come in contact with storm water, thus these pollutants will be negligible in storm water discharges. Spills that occur during activities that take place in the maintenance yard are cleaned up immediately with both sorbent materials and microorganisms that consume petroleum hydrocarbons. It is unlikely that any pollutants handled outside will be discharged to Lake Tahoe in storm water.

   Non-storm water discharges occur outside of the service shop, and are highly unlikely to come in contact with pollutant sources. Petroleum hydrocarbons may be present in negligible quantities in non-storm water discharges from boat washing. Bilge water contaminated with petroleum hydrocarbons is drained into buckets and disposed of in wastewater drums.

   Run-on of storm water from Highway 28, which borders the northern side of the marina, occurs during every storm event. There are no measures in place to control this run-off, which is likely to contain petroleum hydrocarbons, road salt, and sediments.

2. All potential pollutants are stored indoors. It is highly unlikely that any stored pollutants will come in contact with storm water or non-storm water thus there will be no pollutants present in any discharges.

NON-STRUCTURAL STORM WATER BEST MANAGEMENT PRACTICES

EXISTING BMPS

1. Good Housekeeping – maintaining a clean and orderly facility
   a. Marina facilities kept neat and clean
   b. No containers containing potential pollutants left unsealed or out of storage areas except during use
   c. All potential pollutants are stored inside service shop or fiberglass room
   d. No history of spills or leaks

Good Housekeeping is a very effective BMP to ensure that no pollutants spill into maintenance yard where they have the potential to come in contact with storm water or non-storm water discharges.

2. Preventative Maintenance – inspection and maintenance of facility equipment and systems
    a. Regular inspection and cleaning of all storm water drains to remove accumulated debris. Preventative maintenance is an effective BMP to ensure that slotted drains and drop inlets can continue to accept and direct storm water to sand oil separators or infiltration ponds
    b. Daily inspection of all vehicles and equipment to ensure proper function and confirm that there are no leaks that could potentially contribute pollutants to run-off.

3. Spill Response – clean-up procedures and equipment
    a. Sorbent booms and pads located near all areas of potential spillage (fuel dock, maintenance yard). Spill response is an effective BMP to ensure that spills are contained and absorbed quickly.

4. Material Handling and Storage
    a. All pollutants stored and handled inside service shop or fiberglass room. This is a very effective BMP to ensure that storm water does not come in contact with any pollutants. It also ensures that any spills remain within the boathouse and are unlikely to flow out into maintenance yard where the contaminant may come in contact with storm water or non-storm water discharges.

    b. All pollutants stored in sealed containers in fireproof cabinets. This is a very effective BMP to ensure that spills occur infrequently and are contained.

    c. Used oil in double walled tank, new oil in drums contained in separate room surrounded by a concrete berm and sorbent booms and diapers. This is a very effective BMP to ensure that leaks or any petroleum overflow does not spill onto oil room floor or spill into service shop where it could flow into maintenance yard and come in contact with run-off.

5. Employee Training
    a. All employees trained either individually or in a group upon hire.
    b. All employees instructed in the proper handling and storage of all pollutant containing materials.

c. All employees instructed in the proper methods used to clean up and contain spills and leaks.

Employee training at North Tahoe Marina is an effective BMP to ensure that all established methods of operation are followed.

6. Waste Handling / Recycling
   a. Regular removal of waste fuel / oil / anti-freeze by Reno Drain Oil. Removal by RDO is very effective BMP to ensure that there is no overflow spillage of petroleum hydrocarbons or paint thinners in waste storage shed. It also ensures that all potentially hazardous materials are disposed of according to state and/or federal law.

   b. Regular removal of solvent waste / unused paint / oil filters by Safety-Kleen. Removal by Safety-Kleen is a very effective BMP to ensure that there is no overflow spillage of toxic solvents in maintenance shops. It also ensures that potentially hazardous materials are disposed of according to state and/or federal law.

   c. Regular removal of contaminated rags by Aramark. Removal by Aramark is an effective BMP to ensure that rags are cleaned properly and no solvent residues on rags come in contact with storm water or non storm water discharges.

   d. Regular removal of used batteries by Interstate Battery. Removal by Interstate Battery is an effective BMP to ensure that battery acids/alkalis do not come in contact with storm water or non-storm water discharges and that potentially hazardous materials are disposed of according to state and/or federal law.

7. Record Keeping and Internal Reporting
   a. All record keeping and reporting is done by Jimmy Walsh and Cathy Eastes, the marina operators. This is an effective BMP to ensure that records are consistent and maintained on a regular basis.

EXISTING BMPS TO BE REVISED AND IMPLEMENTED

None

NEW BMPS TO BE IMPLEMENTED

1. Inspections
    a. Facility shall be inspected on a regular basis to ensure that pollutant sources are well-maintained and no potential for spillage or leakage exists. The SWPPP shall be updated to certify that adequate preventative and corrective actions are taken with regards to pollutant handling, storage and disposal.

2. Quality Assurance
    a. Marina operator shall ensure that all elements of the Monitoring and Reporting Program and the Storm Water Pollution Prevention Plan are being performed.

STRUCTURAL STORM WATER BEST MANAGEMENT PRACTICES

EXISTING BMPS

1. Overhead Coverage
    a. All pollutants present at North Tahoe Marina are stored under overhead coverage. This is the most effective BMP for ensuring that storm water and non-storm water do not come in contact with pollutants.

2. Infiltration Pits and Trenches
    a. One underground infiltration pit (I.P. #1) exists in the vegetated area between parking lot #2 and the maintenance yard. It receives water from drop inlet #1 in southeastern corner of parking lot 2.
    b. One underground infiltration pit (I.P. #2) exists in the vegetated area on the southern border of the maintenance yard. It receives water from drop inlet #2 located on the northern border of the maintenance yard.
    c. One underground infiltration pit (I.P. #3) exists under the pavement adjacent to the slotted drain running east to west in front of the boat ramp. It receives water from the adjacent slotted drain.
    d. One open gravel infiltration pit exists running east to west along path from marina office to dock. It receives water from the paved path.
    e. A dripline trench exists under the dripline of the marina office roof. It receives run-off from the roof.
    f. A dripline trench exists on each side of two boat racks. They receive run-off from the boat racks.

Underground infiltration pits and gravel infiltration trenches are an effective BMP for ensuring that sediments, and organic matter are settled out or degraded before the run-off infiltrates the subsurface and enters the groundwater.

3. Erosion Control and Site Stabilization
    a. Edges of driveway and maintenance yard are lined berms. This is an effective BMP to ensure that storm water and non-storm water discharges are routed towards the drop inlets and slotted drain.
    b. Most of marina land is paved. This is an effective BMP to ensure that erosion is prevented and sedimentation to the lake is significantly reduced.
    c. Remaining portions of marina land are covered with mature vegetation. Mature vegetation is an effective BMP for ensuring that rainwater run-off velocities are reduced, allowing water to better infiltrate soil and reducing run-off. In addition, root systems knit together soil particles reducing their likelihood of being eroded.
    d. Shoreline is reinforced with large boulders. This is an effective BMP for reducing wave impact and subsequent shorezone erosion.

4. Secondary Containment Structures
    a. New oil and used oil are contained in a separate oil room adjacent to the service shop. A concrete berm and several sorbent booms and diapers surround the new oil drums and used oil tank. This is an effective BMP for ensuring that any spilled oil is contained and can easily be cleaned up.

5. Sewage Pump-out Facility
    a. Sewage pump-out facilities are located on the fuel dock (two) and on land (one). They are open to the public and are in good working condition. This is an effective BMP for ensuring that the on-board sewage tanks are pumped and sewage is properly disposed of. The facilities need to be signed so that the public is better aware of the service offered.

6. Treatment
    a. Infiltration pits/trenches

    These devices are effective BMPs to ensure that storm water and non-storm water discharges are treated before discharge to lake or groundwater. They allow for the removal or natural attenuation of petroleum hydrocarbons, sediments and organic compounds before the run-off enters the lake.

EXISTING BMPS TO BE REVISED AND IMPLEMENTED

None

NEW BMPS TO BE IMPLEMENTED

North Tahoe Marina is investigating the possibility of implementing the following structural BMPs:

1. Regrading paved areas to better divert run-off to designated collection or treatment facilities.

2. Installing new slotted drains to capture greater volumes of run-off. It is proposed that these new slotted drains be installed across the entrance to parking lot #2, across the northern entrance to the maintenance yard, across the southern border of the maintenance yard, and directly in front of the entrance to the service shop. These slotted drains will either discharge to underground infiltration pit #2 or to a proposed treatment tank.

3. Installing a treatment tank to reuse/recycle discharged water. If approved, the treatment tank will recycle run-off captured by various drains. Treated water will be of high enough quality to wash boats, irrigate vegetated areas or be discharged to the sewer system.

SUGGESTED BMPS TO BE IMPLEMENTED

1. Signage on sewage pump-out facilities is required.

MAINTENANCE DREDGING

North Tahoe Marina has not performed any maintenance dredging in the last five years, nor do they plan on doing any in the foreseeable future. If it is determined that maintenance dredging is necessary, an applicable pollution prevention plan will be prepared.

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The marina operator shall conduct one comprehensive site compliance evaluation in each reporting period (Nov. 1 – Oct. 31). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised as appropriate and implemented within 90 days of the evaluation.

Evaluations shall include the following:

1. A review of all visual observation records, inspection records, and sampling and analysis results.

2. A visual inspection of all potential pollutant sources for evidence of or the potential for pollutants entering the drainage system.

3. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequately implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.

4. An evaluation report that includes:
    a. Identification of personnel performing the evaluation
    b. The date(s) of the evaluation
    c. Necessary SWPPP revisions
    d. A schedule for implementing SWPPP revisions
    e. Any incidents of non-compliance and the corrective actions taken
    f. A certification that the marina operator is in compliance with this General Permit. If certification cannot be provided, explain in the evaluation report why the marina operator is not in compliance with this General Permit.

The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions (Attachement A) numbers 9 and 10.

SWPPP GENERAL REQUIREMENTS

The SWPPP shall be retained on site and made available upon request of a representative of the Regional Board.

Any new BMPs that are needed at the marina in order to further reduce and prevent pollutants in storm water and non-storm water discharges shall be identified in the SWPPP shall be implemented by **October 15, 2003.**

1. The Regional Board may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this section. As requested by the Regional Board the marina operator shall submit a SWPPP revision and implementation schedule that meets the minimum requirements of this Section to the Regional Board. Within 14 days after implementing the required SWPPP revisions, the marina

operator shall provide written certification to the Regional Board that the revisions have been implemented.

2. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which:
    a. May significantly increase the quantities of pollutants in storm water discharge
    b. Cause a new area of industrial activity at the facility to be exposed to storm water
    c. Begin an industrial activity that would introduce a new pollutant source at the facility.

3. The SWPPP should also be amended if it is in violation of any condition of this General Permit, or has not achieved the general objectives of controlling pollutants in storm water discharges. The amended SWPPP shall be submitted no later than 30 days after the determination of violation or non-achievement to the Regional Board Executive Officer for review and approval.

PUBLIC ACCESS

The SWPPP is considered a report that shall be available to the public under Section 308(b) of the CWA. Upon request by members of the public, the marina operator shall make a copy of the SWPPP available for review directly to the requestor.

PREPARER

This SWPPP was prepared by:

Andrea Buxton	SWPPP Coordinator	11/14/00
Andrea Buxton	Title	Date

Jan Brisco (Consultant)

Attachment A

STANDARD PROVISIONS

1. Duty to Comply

The Discharger must comply with all of the conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The discharge shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this permit has not yet been modified to incorporate the requirements.

2. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit conditions.

If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified, or revoked and reissued to conform to the toxic effluent standard or prohibition, and the Discharger so notified.

3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to Mitigate

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

STANDARD PROVISIONS

5. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems, installed by a Discharger when necessary to achieve compliance with the conditions of this permit.

6. Property Rights

This permit does not convey any property rights of 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.

7. Duty to Provide Information

The Discharger shall furnish the Regional Water Board, State Water Board, or EPA, within a reasonable time, any requested information to determine compliance with this permit. The Discharger shall also furnish, upon request, copies of records required to be kept by this permit.

8. Inspections and Entry

The Discharger shall allow the Regional Water Board, State Water Board, or EPA, and local storm water management agency, upon the presentation of credentials and other documents as may be required by law to:

a. Enter upon the Discharger's premises at reasonable times where a regulated construction activity is being conducted or where records must be kept under the conditions of this permit;

b. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

c. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment) that are related to or may impact storm water discharge.

d. Sample or monitor at reasonable times for the purpose of ensuring permit compliance.

9. Signatory Requirements

a. All Notices of Intent submitted to the Regional Board shall be signed as follows:

STANDARD PROVISIONS

1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (2) the manager of the construction activity if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

2. For a partnership or sole proprietorship: by a general partner or the proprietary, respectively; or

3. For a municipality, State, Federal, or other public agency: by either a principal executive officer, ranking elected official, or duly authorized representative. The principal executive office of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

b. All reports, certifications, or other information required by the permit and requested by the Regional Water Board, State Water Board, EPA, or local storm water management agency shall be signed by a person described above or duly authorized representative. A person is a duly authorized representative if:

1. The authorization is made in writing by a person described above and retained as part of the Storm Water Pollution Prevention Plan.

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the construction activity, such as the position of manager, operator, superintendent, or position equivalent responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

10. Certification

Any person signing documents under Provision 9 shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false

information, including the possibility of fine and imprisonment for knowing violations."

11. Penalties for Falsification of Reports

Section 309 (c) (4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this general permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine or not more than $10,000 or by imprisonment for not more than two years or by both.

12. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Discharger from any responsibilities, liabilities, or penalties to which the Discharger is or maybe subject under Section 311 of the CWA.

13. Severability

The provisions of this permit are severable, and, if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

14. Reopener Clause

This general permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of USEPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations 122.62, 122.63, 122.64, and 122.65. If there is evidence indicating potential or actual impacts on water quality due to any storm water discharge, associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or an alternative general permit, or this permit may be modified to include different limitations and/or requirements.

15. Penalties for Violations of Permit Conditions

a. Section 309 of the CWA provides significant penalties for any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any permit condition or limitation implementing any such section in a permit issued under Section 402. Any person who violates any permit condition of this permit is subject to civil penalty not to exceed $25,000 per day of violation, as well as other appropriate sanction provided by Section 309 of the CWA.

STANDARD PROVISIONS

b. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties which in some cases are greater than those under the CWA.

16. Availability

A copy of this permit shall be maintained at the construction site during construction and be available to operating personnel.

17. Transfers

This permit is not transferable. A new owner/developer of an ongoing construction activity must submit a Notice of Intent (NOI) in accordance with the requirements of this permit to be authorized to discharge under this permit. An owner/developer who terminates all interest in the property (by sale of this property, or termination of contracts) shall inform the new/owner developer of the duty to file a NOI and shall provide the new owner/developer with a copy of this permit.

18. Continuation of Expired Permit

This permit continues in force and effect until a new general permit is issued or the Regional Board rescinds this permit. Only those Dischargers authorized to discharge under the expiring permit are covered by the continued permit.

Attachment B

NORTH TAHOE MARINA
EMERGENCY RESPONSE PROCEDURES
REVISED MAY 15, 1998

1. Emergency Coordinator
   A. Jim Walsh, General Manager
   B. Cathy Eastes, Alternate

2. For location and characteristics of all hazardous materials handled at North Tahoe Marina, please see attached facility maps and inventory.

3. Facility records regarding hazardous materials are stored in the Service Department and the Marina General Office. See attached map.

4. Inspections of hazardous materials storage will be made informally at least once a month.

5. Emergency Coordinators Authority and Responsibilities
   Emergency Coordinators have the authority to use their judgement in the event of an emergency and take any steps they deem necessary to control the situation.
   A. They shall alert staff and oversee all emergency actions taken by facility personnel to mitigate incident. Hand held radios and phone paging system will be used to notify personnel.
   B. The Coordinators shall notify any city, state, or federal agencies of the incident as required.

Placer County Administering Agency	530-889-7335
OES Warning Center	800-852-7550 530-427-4341
Kings Beach Fire Dept.	911 530-546-3434
National Response Center	800-424-8802

   C. The Coordinators shall assess the situation and make available all resources necessary to address the situation properly.
   D. The Coordinators shall determine if a fire or it's potential exists, the location of the incident, the extent of involvement and characteristics of the incident, identify any stored materials involved, and determine if any injuries have been incurred and arrange for medical care. If any local or state assistance is

required, Coordinators shall request such aid and determine if the incident requires evacuation of the facility and/or surrounding community and make the necessary notifications. The Coordinators shall act as liaison between the facility response team and any outside response team.

E. If a release, explosion or fire occurs, the Coordinators shall identify the characteristics, exact source, quantity of released materials, and the extent of released materials. Based on this information, the Coordinator will assess the direct and indirect effects of the emergency and thereby initiate any remedial action necessary to mitigate the situation.

F. If it is determined that human health and/or the environment outside the facility is in jeopardy, the Coordinators shall notify the local authorities listed in 5B and provide them with the following information:
   1. Full name and telephone number of person reporting incident,
   2. Name and address of the facility,
   3. Time and nature of the incident,
   4. Names and quantities of the hazardous materials involved,
   5. Any injuries and their seriousness,
   6. Any potential threats to human health and the environment outside the facility.

G. The Coordinator shall also determine if an airborne toxic release is involved. If so, he/she shall determine the wind direction. The Coordinator shall also determine whether any hazardous materials should be moved to another location, if electrical power should be shut off, if operating equipment should be shut down, if any equipment should be removed from the facility.

H. The Coordinator shall take all reasonable precautions during any emergency to insure that any additional fires, explosions or releases do not occur or spread.

6. **Notification of Authorities**
   It is understood by all Emergency Coordinators that it is imperative to act quickly and prudently whenever an incident occurs and that any appropriate agencies listed in 5B. above must be notified as soon as possible.

7. **Emergency medical assistance** can be obtained by dialing 911.

8. **Mitigation, Prevention or Abatement of Hazards**
   A. There are no schools or nursing homes within 1,000 feet of marina facility.
   B. A Spill Contingency Plan has been developed in cooperation with the Lahontan Water Control District to mitigate any spills of hazardous materials so they will not contaminate the lake. A copy is attached.

C. A specially designed storage area for 55 gallon drums of new oil and for the containment of waste oil is located in the Service Department . The area is sealed to prevent any leaks through the ground or walls.
D. Four 2000 gallon above ground gasoline storage tanks(Convaults) are installed in a cement bermed storage area to minimize the potential of leaks and fire hazard. Dual wall piping with electronic leak detection sensors are a part of the system between the Convault storage tanks and the dispensers.
E. The Safety Kleen Parts Washer Unit is serviced by Safety Kleen. The Emergency Coordinator has been through the Safety Kleen training program.
F. Reno Drain Oil Service collects all of our waste oil in accordance with all regulatory agencies. A sample invoice is attached.
G. Smoke detectors are in place at strategic locations in the Service Department.
H. The Service Department has an automatic sprinkler system and fire alarm.
I. Safety signs and no smoking signs are located at strategic locations in the Service Department and Fuel Dock.
J. Electronic and manual emergency shut off valves for the gas lines are in place.

9. Evacuation Procedures
Should it be necessary to evacuate the facility, the following procedures shall be followed:
A. All personnel/customers shall be advised by both hand held radio and by the telephone paging system to evacuate the premises and proceed to the established assembly point(upper parking lot on lakeside or employee parking area directly across highway from marina).
B. The Coordinator shall immediately notify the applicable Emergency Response Agency listed in 5B.
C. The Coordinator or designated personnel shall shut down the manual valves for the gas system.

10. After the emergency, all equipment will be checked and cleaned or replaced prior to restarting operations. The facility will be checked to see if it is ready to resume normal operations. All hazardous materials will be returned to normal storage or disposed of properly. Contaminated soil and surface water will be collected , if possible, and treated or disposed of.

TRAINING

Since the nature of the marina business is seasonal, there are many more employees in the summer than in the winter. The training program will be appropriate to the categories of employees listed below:

1. **Mechanics and Yard Personnel** are trained on all hazardous substances they come in contact with. They know how to properly dispose of waste and store hazardous chemicals in a safe, acceptable manner. They are also trained in safe vehicle operation.
2. **Dock Personnel** are trained at the beginning of each boating season to properly handle oil and gasoline. They are shown the location and proper use of safety shut off valves and whom to contact in case of an emergency.
3. **Office and Boat Rental Personnel** are given basic knowledge of what types of hazardous materials are used at the marina, how they should be handled, and whom to call in case of an emergency. They are also shown the location and proper use of safety shut off valves.

All year round employees will receive training regarding the types of hazardous materials they deal with including its physical state, reactivity, methods of use, and potential health impacts. MSDS are kept in the service department and main office where they are accessible to anyone.

Employees will be trained to know what their responsibilities are in following health and safety procedures. They will be refreshed on their job description, standard operating procedures, and protective equipment use. They will also be reminded they are responsible for their own safety.

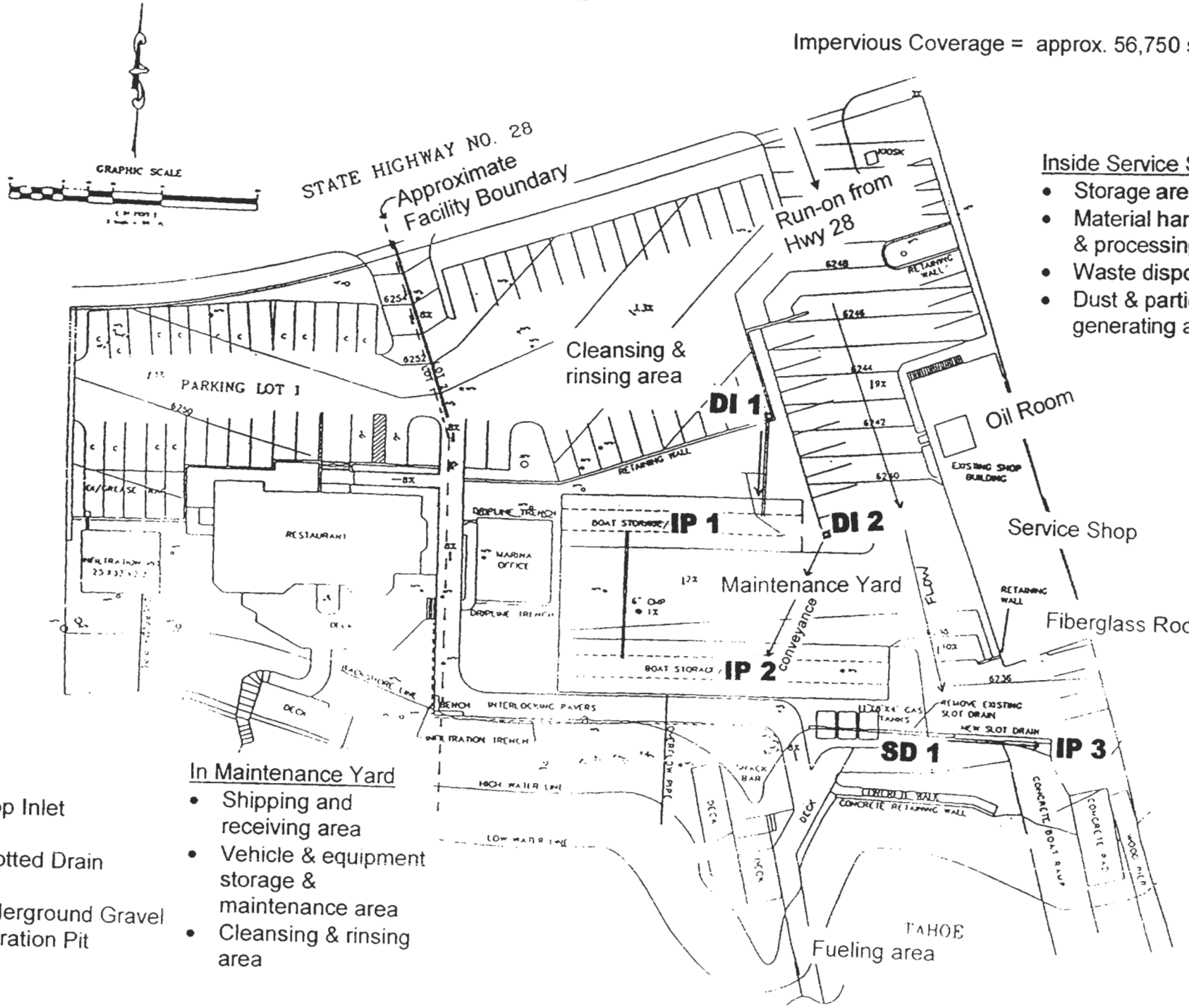
All employees will be given basic knowledge regarding the following:

1. Methods for safe handling, use and storage of hazardous materials.
2. Procedures for coordination with local emergency response organizations.
3. What to do in an emergency. Including any mitigation actions they are expected to take, notifications they should make and the appropriate evacuation procedures.
4. Location of and proper use of shut down valves and other emergency response equipment on site including fire extinguishers, brooms, shovels, absorbent materials, socks & booms.

Before beginning work, a new employee will be trained in the elements of the plan outlined above. Each spring before expanded operations begin, employees will be given a refresher training session.

Attachment C: Site Plan

Impervious Coverage = approx. 56,750 sq. ft.



Inside Service Shop

- Storage area
- Material handling & processing area
- Waste disposal area
- Dust & particulate generating area

In Maintenance Yard

- Shipping and receiving area
- Vehicle & equipment storage & maintenance area
- Cleansing & rinsing area

DI = Drop Inlet

SD = Slotted Drain

IP = Underground Gravel Infiltration Pit

ATTACHMENT D: LIST OF SIGNIFICANT MATERIALS HANDLED AND STORED AT THE SITE

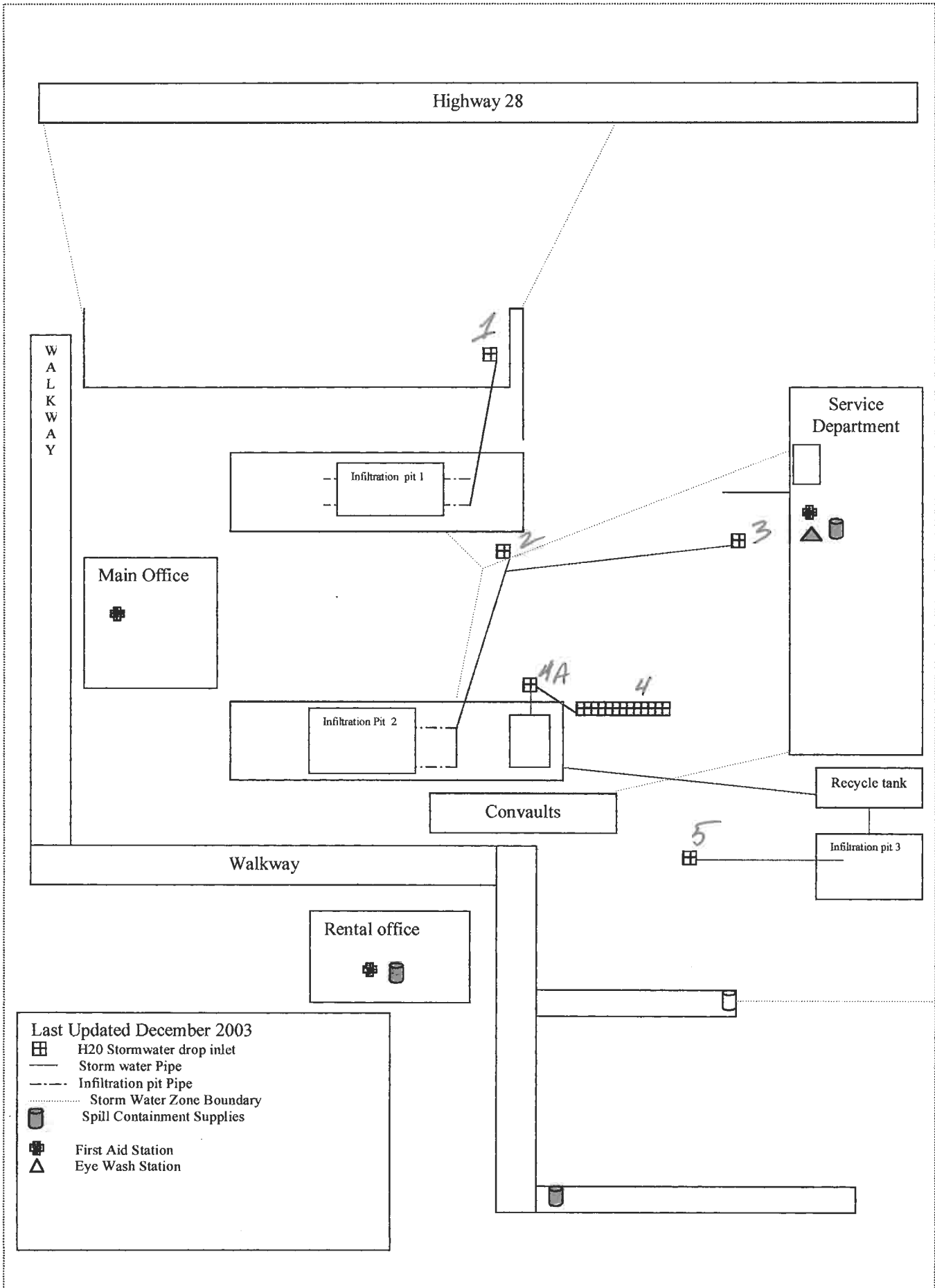
Material	Purpose	Quantity Stored	Storage	Handled	Frequency of Use	Disposal
Unleaded Gasoline	Boat Fuel	8000 gallons	Three 2000 gallon tanks, one 2000 gallon tank split into two 1000 gallon sections	Pumped through double walled flexible pipes to 3 fuel pumps on fuel dock	Daily throughout operating season	N/A
Waste Gasoline	Disposal of used gas	55 gallons	One 55 gallon drum in service shop	Waste gasoline poured into drum	4 times/year	Reno Drain Oil removes and disposes of waste
Waste Water	Disposal of contaminated bilge water	55 gallons	One 55 gallon drum in service shop	Dirty bilge water drained into bucket, then poured into waste water drum	4 times/week	Reno Drain Oil removes and disposes of waste
New Motor Oil	Engine Lubrication	330 gallons	Six 55 gallon drums in oil room in secondary containment in oil room	Dispensed from 55 gallon drums through rubber hose to boat engine	1 time/year/boat	N/A
Waste Oil	Disposal of used oil	300 gallons	One 300 gallon waste oil tank in secondary containment in oil room	Pumped from engine using vacuum to 30 gallon tank, then pumped into 300 gallon waste oil tank	1 time/year/boat	Reno Drain Oil removes and disposes of waste
Waste Oil Filters	Disposal of used oil filters			Crushed and drained on grate above 300 gallon waste oil tank	1 time/year/boat	Safety-Kleen removes and disposes of used filters
Paint	Painting boats	100 gallons	In fireproof cabinets in fiberglassing room	Applied with paintbrushes in fiberglass room	1-2 times/week	Safety-Kleen removes and disposes of unused paint
Gel-coat	Fixing nicks in paint	10 gallons	In fireproof cabinets in fiberglassing room	Applied with putty knife in fiberglass room	2 times/week	Waste is dried and disposed of in garbage
Acetone	Cleaning solvent	2-4 gallons	In fireproof cabinets in fiberglassing room	Dirty paintbrushes wiped clean with acetone soaked rags	2 times/week	N/A
Paint thinner	Cleaning solvent	2 gallons	In fireproof cabinets in fiberglassing room	Dirty paintbrushes wiped clean with paint thinner soaked rags	2 times/week	N/A
Gear Lubricant	Engine Lubrication	110 gallons	Two 55 gallon drums in oil room	Used during engine maintenance	1 time/year/boat	Reno Drain Oil removes and disposes of waste
Acetylene	Welding torch fuel	30 gallons	One 30 gallon tank in service shop	Combusted with oxygen, used to weld engine/boat parts	1 time/month	N/A
Safety-Kleen Solvent	Degreasing solvent	20 gallons	One 20 gallon Safety-Kleen unit in service shop	Engine parts washed in continuous stream of solvent in self-contained unit	2-3 times/week	Safety-Kleen removes and disposes of waste and refills unit with solvent
Carpet Cleaner	Carpet Cleaner	10-15 gallons	In service shop	Used in steam cleaner on carpet	1 time/year/boat	N/A

Anti-freeze	Engine Coolant	2-4 gallons	In service shop	Used in maintenance yard to top off engine coolant	10 times/year	Reno Drain Oil removes and disposes of waste
Potable Anti-freeze	Winterizing of Freshwater Systems	180 gallons	In service shop	Used in maintenance yard in freshwater systems of boats with on-board toilets/sinks/ showers etc...	200 times/year	Reno Drain Oil removes and disposes of waste
Batteries	Engines	5-10 used & 10-15 new	In service shop on wall-rack	Removed/installed in boat engines	2-3 times/week	Interstate Battery or Tom Sierra
Kerosene	Hot Water Heater	5 gallons	In service shop	Used in hot water heater for pressure washer	5 times/year	N/A
Fiberglass Resins	Fiberglassing	2 gallons	In fireproof cabinets in fiberglassing room	Used for small repairs to fiberglass hulls	1 time/week	N/A

ATTACHMENT E: ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES SUMMARY

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Marina Fueling Dock	Fueling of Motorized Watercraft	Spills and leaks during fuel pumping	Petroleum hydrocarbons	>Sorbent booms and pads for spill and overflow protection located nearby
		Overflow caused by topping off fuel tanks	Petroleum hydrocarbons	>Automatic shut-off valve on fuel pump when overflow detected
		Rainfall running off fueling area and rainfall running into and off fueling area	Petroleum hydrocarbons	>Employees trained on proper fueling, clean-up, and spill response techniques >Fueling area inspected regularly to detect problems before they occur >Fueling area located far from maintenance yard or driveway to illiminate run-on of storm water and non-storm water onto fueling area
	Pumping of Sewage	Spills and leaks during pumping of onboard sewage tanks	Nitrates / other organics	>Pump inspected regularly for tight seals and proper function
				>Three sewage pump-out facilities made available to public
Maintenance Yard	Boat Washing	Oily residues on outside surfaces of boats Algae	Petroleum hydrocarbons Organic matter	>Slotted drains adjacent to maintenance yard collects non-storm water run-off, diverts it to infiltration pit
	Bilge Draining	Oily residues in bilge water	Petroleum hydrocarbons	Dirty water drained into buckets and poured into 55 gallon waste water drum in service shop >Sorbent pads used to contain any bilge water spillage
Service Shop	Engine Maintenance	Greasy / oily engine parts	Petroleum hydrocarbons Safety-Kleen solvent	>All engine parts washed in self-contained Safety-Kleen unit >Safety-Kleen solvent is contained in Safety-Kleen unit and removed and disposed of by Safety-Kleen
	Storage of waste fuel/waste water	Spills and leaks during transfer of wastes from one container to 55 gallon waste drums	Petroleum hydrocarbons	>Funnels used to avoid spillage during transfer
Fiberglassing Room	Painting/Gel-coating	Containers of paint, gel-coat, paint thinner, acetone, used brushes	Paints may contain heavy metals Cleaning solvents (acetone or petroleum based)	>All painting/gel-coating done inside fiberglass room >Brushes cleaned with rags containing paint thinner or acetone >Rags deposited in laundry bag and picked up and cleaned by Aramark
	Sanding	Surfaces of boats being sanded	Particles of paint / fiberglass	>Sanding occurs inside fiberglassing room where particulates can be contained and cleaned-up
				>Sander equiped with vacuum to remove particles immediately

Marina	Oil Changes	Oil in boat engines	Petroleum hydrocarbons	>Sorbent pads used to absorb any spills >Tightly sealed vacuum pump removes used oil >New oil dispensed by dripless nozzel >Used oil disposed of in waste oil tank in oil room removed by Reno Drain Oil >Waste oil tank and new oil drums surrounded by secondary containment berm and sorbent booms
	Welding	Structural repairs	Acetylene	>Acetylene and oxygen contained in proper pressurized metal tanks
Oil Room	Storage of waste oil and new oil	Overflows or spills associated with 55 gallon new oil drums or 300 gallon used oil tank	Petroleum hydrocarbons	>Sorbent pads used to contain any spills >Secondary containment berm around oil drums/tanks contains any overflow >Area kept neat and clean, under overhead coverage


Highway 28
WALKWAY
1
Infiltration pit 1
2
3
Service Department
Main Office
4A
4
Infiltration Pit 2
Recycle tank
Convaults
5
Infiltration pit 3
Walkway
Rental office
Last Updated December 2003
H20 Stormwater drop inlet
Storm water Pipe
Infiltration pit Pipe
Storm Water Zone Boundary
Spill Containment Supplies
First Aid Station
Eye Wash Station

MONITORING AND

REPORTING PROGRAM

North Tahoe Marina

7360 North Lake Boulevard

Tahoe Vista, California

Submitted To:
California Regional Water Quality Control Board
Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, California 96150

Prepared For:
North Tahoe Marina
P.O. Box 189
Tahoe Vista, California 96148

Prepared By:
Quicksilver Consulting Chemists
P.O. Box 21122
Reno, Nevada 89515

October 12, 2000

MONITORING AND REPORTING PROGRAM

North Tahoe Marina

7360 North Lake Boulevard

Tahoe Vista, California

1. Objectives of Program

The objectives of this Monitoring and Reporting Program ("the Program") are to:

1.1 Ensure that storm water discharges, and non-storm water discharges at North Tahoe Marina are in compliance with the Discharge Prohibitions, Effluent Limitations, and Receiving Waters Limitations specified in National Pollutant Discharge Elimination System (NPDES) General Permit No. CAG616003, issued by the State of California Regional Water Quality Control Board - Lahontan Region ("the Regional Board"). For discharges associated with maintenance dredging, see Section 2 below for a special statement regarding the Monitoring and Reporting Program for such discharges.

1.2 Ensure practices at North Tahoe Marina to reduce or prevent pollutants in surface water discharges, storm water discharges, and non-storm water discharges are evaluated and revised to meet changing conditions.

1.3 Aid in the implementation and revision of the Storm Water Pollution Prevention Plan (SWPPP) required by Attachment D of NPDES General Permit No. CAG616003.

1.4 Measure the effectiveness of best management practices (BMPs) to prevent or reduce pollutants in storm water discharges.

2. Maintenance Dredging

Because maintenance dredging is not being contemplated by North Tahoe Marina in the foreseeable future, the present document does not include a Maintenance Dredging Montoring and Reporting Program. Such a program will be prepared and submitted separately in the event that maintenance dredging activities are planned for the marina.

3. Non-Storm Water Discharges

3.1 *Drainage Location*: The location for the drainage of non-storm water discharges

has been identified as Storm Drain #1 (slot drain near the end of the boat ramp, see Facility Site Map, Appendix A). Non-storm water discharges consist primar--ily of tap water used to cool boat engines while being run outside the Service Department.

3.2 *Frequency and Methodology of Visual Observations:* At a minimum of once per month during the marina's operating season, non-storm water discharges at Storm Drain #1 shall be visually observed for the presence of any discolorations, stains, odors and floating materials. These observations shall be made during scheduled marina operating hours. "Scheduled marina operating hours" is defined as the time periods when the marina is staffed to conduct any function related to industrial activity, but excluding time periods when only routine maintenance, emergency response, security and/or janitorial services are performed.

3.3 *Documentation:* Visual observations shall be documented on the Monthly Visual Observations of Non-Storm Water Discharges report form, a specimen of which is presented in Appendix B. The document shall include the date of the inspection, the name and signature of the individual making the observations, results of the observations, the corrective actions taken, if any, to reduce or prevent pollutants in non-storm water discharges, and other pertinent remarks.

3.4 *Sampling and Analysis:* No sampling and analysis of non-storm water samples are required for this program.

4. Storm Water Discharges

4.1 *Drainage Locations*: Four locations for the drainage of storm water discharges have been identified. These are Storm Drains #1, #2, #3 and #4. Storm Drains #2 and #3 are located at the southwest end and southeast end, respectively, of the parking lot area. Storm Drain #4 is located at the southeast end of the north boat racks (see Facility Site Map, Appendix A). Additionally, at the sole discretion of North Tahoe Marina's management staff, storm water entering the property from Highway 28/North Lake Boulevard via the two entrance driveways may be sampled from time to time to determine the level of regulated parameters and constituents entering the property from the highway.

4.2 *Frequency and Methodology of Visual Observations:* During the course of four storm events per operating season, storm water discharges at Storm Drains #1, #2, #3 and #4 shall be visually observed for the presence of any floating and suspended materials, oil and grease, discolorations, stains, turbidity, and odors.

These storm events shall be those occurring during daylight hours and shall be those preceded by at least three working days without storm water discharges. These observations shall be made during the first hour of discharge, and also during scheduled marina operating hours (see Section 3.2 above for definition of "scheduled marina operating hours").

4.3 *Documentation:* Visual observations shall be documented on the Visual Observations of Storm Water Discharges report form, a specimen of which is presented in Appendix B. The document shall include the date of the observations, the name and signature of the individual making the observations, results of the observations, the corrective actions taken, if any, to reduce or prevent pollutants in non-storm water discharges, and other pertinent remarks.

4.4 *Sampling:* During the first hour of discharge from the first storm event of the marina's operating season and from one other subsequent storm event in the same season, storm water discharges at Storm Drains #1, #2, #3 and #4 shall be sampled. The sample collection methodology will depend on the degree of precipitation from the storm. A storm with a high degree of precipitation is likely to generate storm water flows which will be relatively easy to sample at the point of discharge into the storm drain. A storm with low precipitation, on the other hand, may only generate relatively thin sheet flows which may require devices such as large syringes to manually aspirate the discharge and transfer the sample into the sample containers. Finally, some storms may not generate enough discharge to produce any collectable sample at all. The samples collected from each sampling location shall be distributed into appropriate containers and preserved with the appropriate preservatives as specified below:

Sample Container Type	Sample Volume	Preservative	To be analyzed for
Plastic	500 mL	Unpreserved	pH, Turbidity, Specific Conductance, Nitrite Nitrogen, Nitrate Nitrogen
Plastic	500 mL	Sulfuric acid	Total Phosphorus, Total Kjeldahl Nitrogen

The samples shall be labeled with sample location, date, time and initials of sample collector and immediately placed into an ice chest and packed in ice. The samples shall be either personally delivered or shipped by overnight courier service to Acculabs, Inc., 992 Spice Islands Drive, Sparks, Nevada 89431.

4.5 *Analysis:* The samples shall be analyzed by Acculabs, Inc. (State of California Environmental Laboratory Accreditation No. 2326) in accordance with the following EPA-approved analytical methodologies:

Analysis	Method No.
pH	EPA 150.1
Turbidity	EPA 180.1
Specific Conductance	SM 2510B
Nitrite Nitrogen	SM 4500NO_2-B
Nitrate Nitrogen	EPA 300.0
Total Kjeldahl Nitrogen	EPA 351.3
Total Phosphorus	EPA 365.3

Note: "SM" denotes *Standard Methods for the Examination of Water and Wastewater, 18th edition,* American Public Health Association/American Water Works Association/Water Environment Federation.

4.6 *Documentation:* Sampling and analysis activities of storm water samples shall be documented on the Sampling and Analysis Results report forms for the First Storm Event and the Second Storm Event, presented in Appendix B. Laboratory reports shall be attached to these forms.

5. Surface Water Sampling and Analysis

5.1 *Sampling Location:* Surface water samples from the marina shall be collected in the marina's harbor, away from the fuel pumps but within the boat traffic areas.

5.2 *Frequency and Methodology of Sampling:* A surface sample from the marina's harbor shall be collected on two specific days of the marina's operating season—Fourth of July and Labor Day. This sampling program is contracted to Quicksilver Consulting Chemists, Reno, Nevada, and the analysis is contracted to NEL Laboratories, Inc., Reno, Nevada. The sample shall be collected in accordance with the standard operating procedure presented in Appendix C, and shall be analyzed by EPA Method 524.2 for the following target analytes: benzene, toluene, ethylbenzene, total xylenes and fuel oxygenates including methyl *tert-* butyl ether (MTBE), *tert*-butyl alchol (TBA), *tert*-amyl methyl ether (TAME), diiso-propyl alcohol (DIPE) and ethyl *tert*-butyl ether (ETBE). EPA Method 524.2 is specified in order to obtain reporting limits which are lower than those customarily ob

tained by EPA Method 8260.

5.3 *Duration of Surface Water Sampling and Analysis Program*: The surface water sampling and analysis program as described in Section 5.2 shall be implemented for four sampling events, *i.e.*, for two operating seasons, in the years 2000 and 2001. Those target pollutants which are not detected in significant quantities after these four sampling events may be eliminated from future sample analysis or until the pollutant is likely to be present again.

5.4 *Documentation:* All sampling under this part of the Program shall be documented on a Field Sampling Record, a specimen of which is presented in Appendix C.

6. Annual Reports

An Annual Report shall be submitted by November 15 of each year to the Executive Officer of the Regional Board. The report shall be submitted on the Annual Report Form as provided by the Regional Board (reference correspondence from the Regional Board to North Tahoe Marina, dated September 27, 2000). The Annual Report shall include a summary of visual observations, sampling and analysis results, including laboratory reports, and the Annual Comprehensive Site Compliance Evaluation Report as required in Section 8 of the Storm Water Pollution Prevention Plan. If any activities required by the General Permit were not implemented during the reporting period, an explanation as to why they were not shall be provided.

Annual Reports shall be signed and certified in accordance with Sections 9 and 10 of the Standard Provisions (Attachment E of the General Permit)

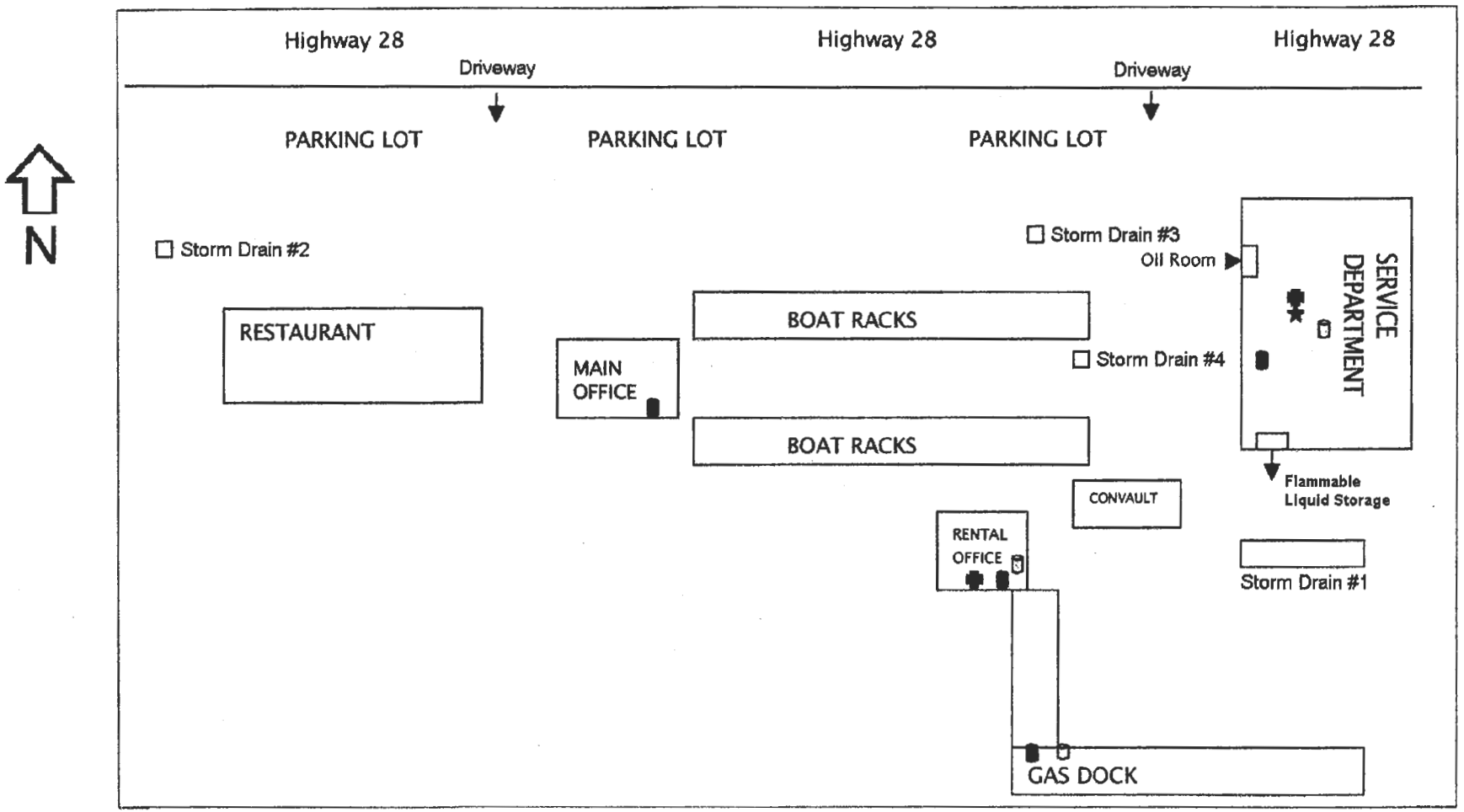
7. Record Retention

All records and reports documenting all aspects of the Program, as described above, shall be retained for a period of at least five years.

APPENDIX A

Facility Site Map and Sampling Locations

North Tahoe Marina
Facility Site Map



KEY:
- First Aid
- Eye Wash Station
- Fire Extinguishers
- Spill Containment Supplies

APPENDIX B

Visual Observations Report Forms
Sampling and Analysis Report Forms

2000
ANNUAL REPORT

FORM 2- MONTHLY VISUAL OBSERVATIONS OF AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

- Monthly dry weather visual observations are required of each authorized NSWD.
- Observe each authorized NSWD source, impacted drainage area, and discharge location.
- Authorized NSWDs must meet the conditions provided in Section D (pages 5-6), of the General Permit.
- Make additional copies of this form as necessary.

MONTH: DATE: __/__/__	Observers Name: ________ Title: ________ Signature: ________	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS MONTH?**	☐ **YES** ☐ **NO**	If **YES**, complete reverse side of this form.
MONTH: DATE: __/__/__	Observers Name: ________ Title: ________ Signature: ________	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS MONTH?**	☐ **YES** ☐ **NO**	If **YES**, complete reverse side of this form.
MONTH: DATE: __/__/__	Observers Name: ________ Title: ________ Signature: ________	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS MONTH?**	☐ **YES** ☐ **NO**	If **YES**, complete reverse side of this form.
MONTH: DATE: __/__/__	Observers Name: ________ Title: ________ Signature: ________	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS MONTH?**	☐ **YES** ☐ **NO**	If **YES**, complete reverse side of this form.

2000
ANNUAL REPORT

FORM 2- MONTHLY VISUAL OBSERVATIONS OF AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD EXAMPLE: Air conditioner Units on Building C	NAME OF AUTHORIZED NSWD EXAMPLE: Air conditioner condensate	DESCRIBE AUTHORIZED NSWD CHARACTERISTICS Indicate whether authorized NSWD is clear, cloudy, or discolored, causing staining, contains floating objects or an oil sheen, has odors, etc.		DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
			At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					

2000
ANNUAL REPORT
FORM 4 (Continued)- VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

- Storm water discharge visual observations are required for at least four storm events per operating season.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.
- Make additional copies of this form as necessary.

		#1	#2	#3	#4
Observation Date:	Drainage Location Description				
Observers Name: ______	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Title: ______	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Signature: ______	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

		#1	#2	#3	#4
Observation Date:	Drainage Location Description				
Observers Name: ______	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Title: ______	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Signature: ______	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

		#1	#2	#3	#4
Observation Date:	Drainage Location Description				
Observers Name: ______	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Title: ______	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Signature: ______	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

		#1	#2	#3	#4
Observation Date:	Drainage Location Description				
Observers Name: ______	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Title: ______	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Signature: ______	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

SIDE B

2000
ANNUAL REPORT
FORM 4 (Continued)- VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
/ / : ☐ AM ☐ PM				
/ / : ☐ AM ☐ PM				
/ / : ☐ AM ☐ PM				
/ / : ☐ AM ☐ PM				
/ / : ☐ AM ☐ PM				

SIDE A

2000
ANNUAL REPORT
FORM 1-SAMPLING & ANALYSIS RESULTS

FIRST STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S):_____ TITLE: _____ SIGNATURE: _____

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event									
			BASIC PARAMETERS					OTHER PARAMETERS				
			pH	Turbidity	SC			NO2-N	NO3-N	TKN	Total P	
	/ / ☐AM : ☐PM	: ☐AM ☐PM										
	/ / ☐AM : ☐PM	: ☐AM ☐PM										
	/ / ☐AM : ☐PM	: ☐AM ☐PM										
	/ / ☐AM : ☐PM	: ☐AM ☐PM										
TEST REPORTING UNITS:			pH Units	NTU	umho/cm			mg/L	mg/L	mg/L	mg/L	
TEST METHOD DETECTION LIMIT:												
TEST METHOD USED:												
ANALYZED BY (SELF/LAB):												

TSS - Total Suspended Solids SC - Specific Conductance NO2-N - Nitrite Nitrogen NO3-N - Nitrate Nitrogen TKN - Total Kjeldahl Nitrogen Total P - Total Phosphorus

SIDE A

2000
ANNUAL REPORT
FORM 1-SAMPLING & ANALYSIS RESULTS

SECOND STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S):_____ TITLE: _____ SIGNATURE: _____

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS for Second Storm Event									
			BASIC PARAMETERS					OTHER PARAMETERS				
			pH	Turbidity	SC			NO2-N	NO3-N	TKN	Total P	
	/ / ☐AM : ☐PM	: ☐AM ☐PM										
	/ / ☐AM : ☐PM	: ☐AM ☐PM										
	/ / ☐AM : ☐PM	: ☐AM ☐PM										
	/ / ☐AM : ☐PM	: ☐AM ☐PM										
TEST REPORTING UNITS:			pH Units	NTU	umho/cm			mg/L	mg/L	mg/L	mg/L	
TEST METHOD DETECTION LIMIT:												
TEST METHOD USED:												
ANALYZED BY (SELF/LAB):												

TSS - Total Suspended Solids SC - Specific Conductance NO2-N - Nitrite Nitrogen NO3-N - Nitrate Nitrogen TKN - Total Kjeldahl Nitrogen Total P - Total Phosphorus

APPENDIX C

Standard Operating Procedure for Surface Water Sampling
Field Sampling Record

Quicksilver Consulting Chemists
a division of The Silver River Group, Inc.

STANDARD OPERATING PROCEDURE

Title			SOP No.
SURFACE WATER SAMPLING, LAKE TAHOE MARINAS			3020.1
Date of Issue 08/22/00	Supersedes NEW	Page 1 of 1	Approved By

1. SYNOPSIS

This procedure describes the collection of surface water samples from boat marinas at Lake Tahoe on two specific days of the boating season (Fourth of July and Labor Day), in accordance with requirements of Lahontan Regional Water Quality Control Board's Board Order No. 6-00-36. The samples are analyzed for benzene, toluene, xylenes, ethylbenzene and various fuel oxygenates (MTBE, TAME, DIPE, etc.)

2. EQUIPMENT AND MATERIALS

2.1 Vials, for Volatile Organic Analysis (VOA), 40-mL, fitted with Teflon septum, preloaded with hydrochloric acid preservative.

3. PROCEDURE

3.1 Upon arrival at the marina, record the current weather conditions and air temperature on the Field Sampling Record (FSR) form.

3.2 Select the location of the sample collection point ("away from the fuel pump but within the boat traffic area") and record on the FSR form.

3.3 From a dock or boat slip, slowly immerse an opened VOA vial *just below* the surface of the water. Allow the water to completely enter the vial, then, with the vial *still underwater*, quickly cap the vial, making sure that no air bubbles are entrained into the sample. If any air bubble is present, submerge the vial again, open the cap and repeat the process.

3.4 Using indelible ink, label the vials with the marina's name, sample location, date and time of sampling. Initial the label.

3.5 Place the labeled vials in an ice chest containing ice or "Blue Ice" for transport and submittal to the laboratory. Follow all chain-of-custody procedures.

3.6 Request the laboratory to use EPA Method 524.2 (VOCs in Drinking Water) rather than Method 8260 in order to obtain lower reporting limits.

Quicksilver Consulting Chemists
a division of The Silver River Group, Inc.
P.O. Box 21122, Reno, Nevada 89515-1122
775-742-6838 • Fax 775-826-9255 • http://www.quicksilver.scienceave.com

FIELD SAMPLING RECORD

Client:		Date:	Air Temperature: °F @
Address:		Weather Conditions:	
City:	State, Zip:	☐ Drinking water ☐ Groundwater ☐ Surface Water ☐ Wastewater	
Phone:	Contact:	☐ Soil ☐ Liquid/Solid Waste ☐ Other: _____	
Fax:	Project:	Sample Type: ☐ Grab ☐ Composite: _____ hours @ ___-min. intervals ☐ Isco	
Sampling Ordered By: ☐ Client ☐ _____		☐ Composite of _____ samples ☐ Coliwasa	

Sample/Sampling Station Identification/Description	Well Casing Diameter	Well Depth*	Static Water Level*	Water Column	Volume Purged	Time Sampled	Samples Collected

Remarks:

* From top of well casing.

Samples Submitted To: _____ (Laboratory) _____ (Date)

Sampled By: _____ Date: _____

Copies to: ☐ Client ☐ Lab ☐ _____

Rev. 04/03/00