Lahontan Regional Water Quality
Control Board

EXECUTIVE OFFICER'S REPORT

July 2001

NORTH BASIN

1. ***Symposium on " Groundwater Contaminants – Characterization and Remediation of Emerging and Recalcitrant Contaminants" San Jose, California –*** *Richard Booth*

The Groundwater Resources Association of California and the Santa Clara Valley Water District sponsored a two-day symposium in June. About 200 people from industry, consulting, and the regulatory community attended.

The first technical session focused on the threat of solvent stabilizers to groundwater quality. The most common solvent stabilizer is 1,4-dioxane (not related to dioxin) and is commonly added to trichloroethene (TCE) in amounts up to 8% by volume to prevent TCE from chemically degrading. The California Drinking Water Action Level for 1,4-dioxane is 3 micrograms per liter. Solvent stabilizers are emerging as a class of chemicals with potentially harmful effects to groundwater quality because their remediation is not amenable to conventional pump and treat technologies and is generally resistant to in-situ biodegradation.

Researchers at the second technical session showed how improved techniques are used to obtain details of the geology of the subsurface on a basin-wide basis. The presentations demonstrated how techniques, such as borehole geophysics and aquifer testing, allow geologists to characterize the subsurface as hydrostratigraphic units. With knowledge of the locations, dimensions, and characteristics of the hydrostratigraphic units, geologists can more accurately model, hence predict, plume flow. Researchers are able to simulate MTBE contaminant transport and predict when MTBE would reach water supply wells and to calculate the uncertainty associated with the prediction.

In the third session, bioremediation was presented as the most promising advance in remediation of MTBE-contaminated groundwater. Natural aerobic (i.e., in the presence of oxygen) biodegradation of MTBE is less common than biodegradation of benzene, toluene, ethylbenzene, and xylenes (BTEX). Bacteria cultures that degrade BTEX compounds are present in most soils, but there are only about 20 naturally occurring bacteria cultures capable of degrading MTBE. Aerobic MTBE biodegradation is often limited by the availability of oxygen and can be enhanced by introducing air or oxygen releasing compounds into the subsurface. Enhanced anaerobic biodegradation is not generally feasible because anaerobic conditions are harder to characterize. Consequently, it is difficult to determine the limiting factor of

anaerobic bacteria that are capable of degrading hydrocarbons.
Innovative in-situ groundwater treatments, the topic of the fourth session, included theoretical and case studies of many different methods. Viable methods discussed included using molasses to stimulate growth of bacteria that degrade chlorinated hydrocarbons, dechlorination of chlorinated hydrocarbons using lactic acid (produced from fermentation of diary products), and chemical oxidation using hydrogen peroxide. One of the speakers, from Region 2 staff, encouraged using innovative technologies if the responsible party considers the consequences of failure and conducts a pilot test, if possible.

A common theme throughout the symposium was the role of the Regional Water Quality Control Boards as governing bodies to approve the use of groundwater remediation techniques, especially concerning innovative technology. Attendees generally agreed that innovation in groundwater characterization and remediation will be severely hampered if regulators do not approve new techniques. However, inappropriate use of remediation techniques, as a result of ignorance or exaggerated vendor claims, will waste money and will leave contamination in the groundwater.

After the four technical sessions, two panel discussions provided lively debate over MCL issue: derivation, use in the regulatory arena, and public perception. State Water Board staff and DHS argued MCLs are generally too conservative while attorneys for plaintiffs affected by groundwater contamination argued that drinking water should not contain concentrations of naturally-occurring chemicals above background and that drinking water should not contain any detectable quantities of man-made chemicals.

2. ***Tahoe Tom's Gas Station, El Dorado County*** - *Lisa Dernbach*

   In June, Board staff submitted comments to the responsible parties for the Tahoe Tom's Gas Station concerning the report *Final Remedial Action Plan*. The report discussed implementing additional corrective actions, such as advanced oxidation and bioremediation, to restore groundwater quality to background conditions. The comments stated the report was incomplete because it does not contain discussions required in the cleanup and abatement order. The parties were advised to submit the missing information to be considered in compliance with Board directives.

   In addition, I issued a letter of non-compliance to the responsible parties in July. The letter informed the parties that they were in violation with two provisions in the CAO: submittal of information demonstrating plume containment and submittal of soil contamination maps. The letter contained an August 3 deadline for the parties to submit information to the Regional Board showing compliance with these CAO sections.

3. ***Water Quality Assessment Section 303(d) List***-*Judith Unsicker*

   Several comment letters and sets of data were received from the public in response to the March 2001 solicitation of information for use in the Section 303(d) list update. Staff will use this and other readily available sources of information to prepare recommendations for changes in the list. A report summarizing the rationale for the

recommendations will be circulated for public review and responses to written public comments will be prepared. The Board will be asked to approve recommendations to the State Water Resources Control Board for changes in the list at its regular November 2001 meeting. The State Board will hold its own public participation process, and consider final recommendations to the U.S. Environmental Protection Agency, in early 2002.

The State Board does not plan to issue any formal guidance to Regional Boards on criteria to be used in the 2001-2002 listing/delisting recommendations. However, justification for proposed changes must be included in the administrative record. Region 6 staff have discussed and will use the following criteria to propose listing and delisting, as summarized below.

Data quantity and quality. Some states establish minimum requirements for the quality and quantity of data for use in listing decisions. Developing specific data quantity/quality thresholds for the Lahontan Region would be a lengthy, complex process. Such thresholds could probably better be addressed in the listing criteria policy which the State Board plans to adopt before the 2004 list update cycle. Region 6 staff will evaluate the data available for the current list update on a case by case basis, and make recommendations using a weight of evidence approach. Impairments due to single event (e.g. spill) which is not likely to reoccur will not be considered sufficient evidence for listing.

Antidegradation. U.S. Environmental Protection Agency (USEPA) guidance directs that antidegradation be considered in listing decisions. It could be argued that the presence of <u>any</u> non-natural chemicals in a water body is degradation (assuming that findings to allow degradation have not been made), and that such waters should be listed. Examples include monitored boat fuel chemicals from boat fuel in Lake Tahoe, and Donner Lake, and the presence of pesticides and PCBs, probably from atmospheric deposition, in some "pristine" waters of the Lake Tahoe Basin. Regional Board staff propose not to recommend listing for violations of the nondegradation objective unless a pollutant is present in a concentration which violates another water quality objective or adversely affects beneficial uses.

"**Pollution" vs. "pollutants".** The Clean Water Act distinguishes between "pollutants" (measurable physical or chemical parameters including sediment, and thermal discharges) and "pollution" ("the man-made or man-induced alteration of the chemical, physical, and biological, and radiological integrity of a waterbody"). "Pollution" may not always involve "pollutants"; for example, channelization of a stream, or human alteration of streamflows, may impair its biological integrity without involving pollutants, assuming that sediment is not a problem. Current federal TMDL regulations (40 CFR 130.7) indicate that TMDLs are required only for waters impaired by <u>pollutants</u>, Staff's conclusion is that waters impaired by "pollution" (including flow alterations) without "pollutants" should not be listed.

Toxic Substances Monitoring Program (TSMP) results. Under the State Board's TSMP, fish tissue samples are collected annually and analyzed for a variety of toxic

metals and organic compounds. TSMP samples involve a relatively small number of fish and are not statistically representative of the entire fish population. Previous State Board guidance resulted in listing of some waters where TSMP tissue concentrations exceeded human fish consumption criteria. Staff's belief is that waters should not be listed based on TSMP results alone, and that additional monitoring (of water, sediment and fish tissue) should be done to verify whether an impairment exists.

"**Natural" impairment.** The Clean Water Act definitions of "pollutants" and "pollution" reference human causes. These definitions appear to justify not listing water bodies which are impaired entirely by natural (e.g., geothermal) sources of chemicals, or by the impacts of natural phenomena such as floods or drought. Where there are no known human sources of pollutants in a watershed but it is unknown whether the impairment is natural, recommendations for listing will be made on a case-by-case basis.

Adequacy of standards. Some of Region 6's numerical water quality objectives were established in 1975 based on very limited monitoring data or on older published water quality criteria, and may not reflect natural background conditions of the affected water bodies or current scientific criteria for protection of beneficial uses. Staff's proposed approach is to recommend listing for waters where objectives have been consistently exceeded, but to consider update of the objectives, and possibly delisting, as resources permit.

Listing when attainment is likely. There are violations of the fecal coliform bacteria objective in streams of the Upper Truckee River watershed which appear to be strongly linked to the presence of cattle. The U.S. Forest Service, Lake Tahoe Basin Management Unit, has made a commitment in writing to manage grazing in this area so as to prevent future violations of standards. Since this commitment should lead to attainment of standards by the next listing cycle (in 2004) staff will not recommend listing the monitored streams. A similar approach will be taken with other impaired waters where attainment of standards by 2004 seems probable.

Intermittent waters. The Mojave River was listed in the 1980s due to the subsurface impacts of the "Barstow slug". Staff's current recommendation is that intermittent streams be listed only on the basis of data from water flowing on the surface.

4. ***Appeal of Decision Notice, Noxious Weed Control Program, Humboldt-Toiyabe National Forest –*** *Jason Churchill*

On June 18, 2001, the Executive Officer sent a Notice of Appeal in response to a Decision Notice/Finding of No Significant Impact (DN/FONSI) issued by the U.S. Forest Service, Humboldt-Toiyabe National Forest (HTNF) for its Noxious Weed Control Program. The HTNF encompasses parts of Mono, Alpine, Nevada, Plumas, Lassen, and Sierra Counties. The appeal was based on failure of the DN/FONSI (issued May 9, 2001) and associated Environmental Assessment (EA) to address Regional Board staff comments and concerns. The Noxious Weed Control Program would rely heavily on the use of herbicides. Specifically, the DN/FONSI and EA do not include adequate mitigation and monitoring requirements to ensure compliance with water quality

standards contained in the Basin Plan. The Basin Plan contains a regionwide water quality objective for pesticides (defined to include herbicides) stating that, "Pesticide concentrations . . . shall not exceed the lowest detectable levels . . ."

Regional Board staff met with HTNF staff on July 12, 2001 to discuss the appeal and seek a mutually acceptable resolution. HTNF staff proposed to issue a revised DN/FONSI, stipulating the following: 1) The HTNF will undertake chemical control of weeds only where there is a high likelihood that State water quality standards can be met; 2) a mutually acceptable programmatic Monitoring Plan to verify compliance with State water quality standards must be developed and approved by me in writing before any herbicide applications may proceed; and 3) the HTNF will provide an annual report to the Regional Board describing monitoring results, evaluating compliance with water standards, and explaining why alternatives to chemical treatment were deemed infeasible for specific projects. I have tentatively agreed to withdraw the appeal provided that HTNF reissues the DN/FONSI with the proposed language.

At the meeting, HTNF staff indicated that they do not expect to commence herbicide applications in the California under the Noxious Weed Control Program until next field season (2002). Details of the Monitoring Plan will be worked out between Regional Board and HTNF staffs prior to my approval.

5. ***Trout Creek Restoration Project*** *- Mary Fiore-Wagner*

On July 10, 2001 the South Lake Tahoe City Council voted 4 to1 in favor of awarding the contract for the final phase of the Trout Creek Restoration Project. The first phases of the Project involved constructing approximately 10,000 linear feet of stream channel, constructing access roads, and stabilizing the stream banks with sod and willows harvested from the Project site. The final phase of the Project (Phase III) consists of constructing tie-ins to the new channel, diverting flow into the new channel, partial filling of the existing channel, and creating 18 various wet ponds in the meadows.

Phase III of the Project met with some opposition because this phase of the project involves filling a portion of the existing Trout Creek that runs adjacent to several Ormsby Drive residences. The Ormsby residents are concerned that moving the creek will compromise the property and aesthetic values associated with their parcels. The Ormsby residents are also concerned that the wet ponds may create mosquito breeding grounds. To meet the Ormsby residents' concerns, the City of South Lake Tahoe analyzed various alternatives to the proposed Project. Alternatives included maintaining some flow in the portion of the existing Trout Creek running nearest the Ormsby parcels and eliminating three of the proposed floodplain wetlands closest to the Ormsby properties. The Council voted to support the Project that included eliminating three of the 18 wet ponds.

On June 13, 2001 the Regional Board granted an exception to a prohibition for the Trout Creek Restoration Project that included the creation of 18 floodplain

wetlands. Since the revised project will not result in any additional SEZ disturbance, fill, or excavation than specified in the Board's exception, the revised Project may proceed without additional Regional Board action.

6. ***Update on Squaw Valley Public Service District, Water Supply Well No. 3 and the Opera House UST Diesel Contamination, Placer County*** – *Tammy Lundquist*

Squaw Valley Ski Corporation (Ski Corp) installed a mid-level groundwater monitoring well, MW-9, in March 2001 to check potential migration of diesel contamination into a deeper zone. Plume migration into the deeper zone is a concern because the Squaw Valley Public Services District (SVPSD) Supply Well No. 3 is screened in the deeper zone.

Over that last several months, total petroleum hydrocarbons as diesel (TPHd) concentrations in MW-9 has declined from 120 ppb in March to 91 ppb in April to non-detect in May. However, the June 2001 water sample showed an increase to 110 ppb TPHd. Staff has requested Ski Corp to identify the specific hydrocarbon constituents detected in the groundwater monitoring wells to determine if the TPH reading is from either naturally decaying plant material or degraded diesel fuel.
Although the TPHd concentrations are only slightly above the taste and odor threshold of 100 ppb, Ski Corp and SVPSD have recently been discussing the possibility of wellhead treatment if TPHd migrates into SVPSD's Well No. 3. The well has been off-line since October 2000 because of the TPHd threat.

7. ***Fireworks Sampling in Lake Tahoe on the Fourth of July***- *Mary Fiore-Wagner*

After receiving citizen complaints that firework activity may contribute to the nutrient loading at Lake Tahoe, the Regional Board initiated a sampling event on July 4, 2001. Regional Board staff consulted with Dr. Glenn Miller of the University of Nevada, Reno to design a sampling routine that would evaluate the chemicals of concern found in fireworks. Dr. Miller referenced journal articles and various textbooks on pyrotechnic chemistry to determine that water samples should be analyzed for perchlorate (an oxidizing agent that generates a controlled explosion), various metals, mineral constituents, nitrate, and ammonia.

Regional Board staff collected a time series of samples before, during, and after the fireworks display. Of special concern was the amount of debris and spent firework casings observed floating in the water after the fireworks. Although preliminary data indicate that concentrations of Nitrate appear elevated after the fireworks display, the concentrations measured are still below the Receiving Water Objectives developed to protect Lake Tahoe. The results for perchlorate, metals, and minerals have not yet been received. This information will be used to evaluate pollutant loading and the significance of any water quality impacts from the firework events.

8. ***Update of Upper Truckee River and Trout Creek Fecal Coliform Monitoring Program, Summer 2001 -*** *Abigail O'Keefe*

Regional Board staff are continuing to monitor non-point sources (NPS) of fecal

coliform in the Lake Tahoe Basin. Samples are being taken five times a month at nine locations on the Upper Truckee River and Trout Creek. Because of the current low water level, station 9 in the Truckee Marsh (sampled summer 2000) cannot be sampled. In order to identify pre and post-grazing trends, samples will be taken before the cattle are present on W.M. Cattle Corporation property and one month after they are gone.

Regional Board staff conducted a pre-season on-site meeting on June 14, 2001 to discuss grazing management for the summer. Sixty cow/calf pairs and four bulls (approximately half as many as summer 2000) were brought onto the property on July 23, 2001. Cattle will not be allowed to water in the Upper Truckee River. Water will be pumped from the river to troughs in those paddocks that lack water supply. The grazing will be monitored and cattle will be moved to new lots when one-inch vegetation stands are attained.

Concentrations of fecal coliform ranged from 1/100 ml to 75/100 ml from samples taken since June 2001. According to the Water Quality Control Plan for the Lahontan Region, "fecal concentration during any 30-day period shall not exceed a log mean of 20/100 ml, nor shall more than 10 percent of the samples taken within a 30-day period exceed 40/100 ml. " No violations were noted during the month of June. On July 10, 2001 fecal coliform concentrations reached 75/100 ml, but staff conclude that the increase should not necessarily be attributed to the cows. All fencing was intact and no cows were near surface waters. Possible other sources include dogs, or people recreating, or wildlife mammals in the area.

If significant violations are noted this summer, staff will continue to work with the ranchers to improve Best Management Practices (BMPs) where needed to achieve compliance, in accordance with provisions of the "California Range Land Water Quality Management Plan" (SWRCB, 1995).

9. ***McKinney-Rubicon Springs Road***
Kara Russell

Lahontan staff participated in a field meeting on June 6, 2001 with Placer County, California State Parks – Off-Highway Motor Vehicle Recreation Division, the USFS, the League to Save Lake Tahoe, Friends of the Rubicon (a volunteer work force), and California Association of Four-Wheel Drive Clubs. The meeting was held to discuss the road repair/ reconstruction work and drainage improvements needed on the Rubicon Road to control erosion and prevent earthen discharges to adjacent surface waters. Placer County has submitted plans and a construction schedule to Lahontan detailing the repairs agreed upon at the field meeting. Placer County staff has scheduled several volunteer work weekends throughout the summer with Trustee Crew labor and Friends of the Rubicon to construct the improvements. The TRPA Erosion Control Team and the USFS are also assisting Placer County with the work.

A final field inspection has been tentatively scheduled for September 26, 2001 to review the completed repair work and discuss any remaining work to be done the following summer. Placer County Road Maintenance crews and Friends of the Rubicon are

scheduled to perform maintenance of the improvements in the Summer of 2002.

On December 1, 2000 the Executive Officer issued a Notice of Violation (NOV) to Placer County for violations of Cease and Desist Order No. 6-94-20. The Regional Board adopted the Cease and Desist Order (CDO) for unauthorized discharges of waste earthen materials from the McKinney-Rubicon Springs Road (Rubicon Road) to McKinney Creek. The NOV recognized that the County would need a year or two to complete all needed road improvements. The County completed approximately 80% of the work on time. Placer County is in compliance with the Notice of Violation, but not the CDO.

10. ***Lake Tahoe Interagency Monitoring Program – Nutrient and Suspended Sediment Loads, Yield, Trends, and Streamflow Data in Selected Watersheds, Tahoe Basin*** *- Bruce Warden*

The U.S. Geological Survey (USGS), in partnership with University of California-Davis (UCD) Tahoe Research Group (TRG), has collected water quality and flow data for selected watersheds tributary to Lake Tahoe beginning in 1988 under the Lake Tahoe Interagency Monitoring Program (LTIMP). Currently the program has 32 monitoring sites in 14 of 63 Lake Tahoe tributaries accounting for 152 square miles of the total 314 square miles of watershed area in the Lake Tahoe Basin.

A 1999 Regional Board contract with TRG provided funding to assist the USGS in: collating all LTIMP data into a standardized format for statistical and other quantitative analyses, rechecking the decade-plus database for Quality Assurance/Quality Control purposes (since both sampling design and chemical analyses have varied over the years), and calculating nutrient and sediment loads using the most current standardized state-of-the-art techniques. In 2000 a Regional Board contract was executed with the USGS to provide matching funds for the following tasks:

- Compare surface water hydrology and water quality data for the 20 primary and secondary gauged sites and 12 miscellaneous sites,
- Evaluate significant statistical relationships between water quality and streamflow,
- Compare upstream and downstream sites for nutrient and sediment loads and yields per square mile and rank all the watersheds,
- Conduct statistical trend analyses for both concentration and load of nutrients and sediments for 10 watersheds,
- Prepare a draft and final report for all the above tasks. The draft report has been supplied to Regional Board staff.

Results from these studies provide information for Regional Board Basin Plan waterbody-specific water quality objectives and for developing Total Maximum Daily Loads (TMDLs) for Lake Tahoe and its tributaries.

LTIMP Study Results-
The Upper Truckee River had the largest median monthly load for suspended sediment (34,200 kg), total nitrogen (413 kg), total phosphorus (101 kg), dissolved nitrate (64 kg) and dissolved ammonium (10.5). Trout

Creek had the largest median monthly load for Soluble Reactive Phosphorus (16.9 kg). These results are not surprising, since the Upper Truckee River and Trout Creek watersheds account collectively for approximately 60% of both drainage area and streamflow of the tributaries analyzed. However, data normalized for drainage area show that Third Creek in Nevada had the highest monthly yield (by area) for suspended sediment (3,590 kg/mi^2), total nitrogen (19.4 kg/mi^2), and total phosphorus (4.83 kg/mi^2). Incline Creek in Nevada had the highest monthly yield for nitrate (1.44 kg/mi^2) and soluble reactive phosphate (0.77 kg/mi^2). Edgewood Creek in Nevada had the highest monthly yield for ammonium (0.31 kg/mi^2).

The "good news" is that water quality trends for all nutrients indicated either decreasing or no change in concentrations for all 10 watersheds assessed. Trends in suspended sediment concentrations were either decreasing or unchanged in 7 of the 10 watersheds. However, three of the watersheds showed increasing trends in suspended sediment concentrations—Blackwood, General, and Ward Creeks, all on the west shore of Lake Tahoe.

These results suggest that the Regional Board should continue vigorous efforts to reduce nutrient and sediment loading to Lake Tahoe, since it is probable these efforts have been a factor in the generally positive trend in nutrient and sediment loading.

11. ***Lake Tahoe Basin Executives Meeting-*** *Lauri Kemper*

On June 20, 2001, the Tahoe Basin Executives met to discuss improvements to implementing the Lake Tahoe Environmental Improvement Program (EIP). The Lake Tahoe Basin Executives are the executives from all the public agencies involved in the EIP at Lake Tahoe including local governments, federal and state agencies. The Executives heard two independent reports on the problems with implementing and coordinating the EIP. Reports were presented by *Jones and Stokes* Consulting firm and the Tahoe Basin Science Advisory Group.

Consultants from *Jones and Stokes* (under contract with the Tahoe Regional Planning Agency) presented information gathered from several stakeholder meetings held within the Lake Tahoe Basin to identify constraints in implementing the EIP. Their report, *Evaluation of Constraints Affecting Implementation of the EIP*, identified two key challenges:

- "In the next 20 years, the number of EIP projects will increase 8 to 10-fold, compared to the number of projects completed between 1997 and 2000.
- Some agencies currently estimate that the costs for planning and permitting projects in the Basin are equivalent to 50% of project costs, compared to an engineering industry standard of 15-20% of project costs."

Jones and Stokes also identified six major areas of constraints or concerns: mission and thresholds, leadership, capacity, permit process, adaptive management, and maintenance funding. Additionally, they reviewed several regional programs around the nation and presented alternatives and improvements that could be implemented in the Lake Tahoe Basin to address the problems and constraints identified.

The Tahoe Basin Science Advisory Group presented a report, *Institutional Options for Policy, Science and Adaptive Management in the Lake Tahoe Basin.* The report focused on issues regarding the science behind the EIP and the need for an adaptive management ("learning by doing") process or program. The scientists and others have emphasized the need to ensure EIP effectiveness through rigorous evaluation and feedback.

Both presenters offered alternatives that included 1) improvements to the status quo, 2) TRPA as the lead agency responsible for EIP implementation and adaptive management and 3) Basin-wide collaborative leadership (formal interagency program management) recommended strategies involving increase collaboration.

The Basin Executives agreed that improvements in coordination and implementation were needed. They did not select an alternative but agreed to meet in smaller settings to begin addressing issues raised. Harold Singer agreed to lead a subcommittee to explore future direction in the areas of regulatory issues, research and monitoring and adaptive management. Dennis Machida, California Tahoe Conservancy, agreed to lead a sub-committee to evaluate solutions to resolve problems associated with project implementation. The sub-committees will present their recommendations to the entire Basin Executive Group at a future meeting to be held in August 2001.

12. ***Caltrans Tahoe Basin Construction Project Update-Quarterly Partnering Meeting-*** *Robert Erlich*

Several Caltrans District 3 personnel met with Regional Board, TRPA and City of South Lake Tahoe (CSLT) staff at a quarterly Caltrans partnering and project status meeting on July 10, 2001. Caltrans has been working with our staff and other agencies to identify design and construction issues. Caltrans expects to provide their next submittals for RWQCB review of three major Environmental Improvement Program (EIP) projects near the end of July. Caltrans currently plans to start construction in 2002 for Highway 50: Pioneer Trail to South Lake Tahoe Airport, and in 2003 for the Highway 50: CSLT-Ski Run Blvd-Trout Creek and State Route 89 Silvertip Drive to Meeks Creek projects.

Caltrans has also met with staff for early input on a planned 2003 project to reconstruct and enlarge infiltration basins along SR 267 near Brockway Summit. Planning for large projects along State Route 28 between Tahoe City and the Nevada State Line has begun. Since there is limited room for water quality treatment basins between SR 28 and Lake Tahoe, we have requested that Caltrans consider alternatives such as regional stormwater treatment facilities. Caltrans expects to complete a focussed feasibility study for treatment alternatives for Placer SR 28 later this summer. This year, Caltrans will construct a small project a Burton Creek and Watson Creek to repair damage from 1997 storms.

Tahoe Basin Winter Operations and Maintenance for Highways
Working with the Tahoe Basin Interagency Road Maintenance and Operations Committee (TBIRMOC) Winter Maintenance and Operations Subcommittee, Board staff has suggested developing basin-

wide specifications for sand, salt, and cinders. Board staff and other agencies have been compiling information on existing specifications used within the Tahoe Basin and in other states, such as Colorado, where air quality requirements mandate a reduction in fine particulates. Caltrans and CSLT have already analyzed several potential and existing sources of sand and cinders. Differences in sample preparation, extraction and analytical methods need to be resolved before agencies can accurately compare sample results and adopt specifications. The Subcommittee also needs to select an appropriate method to describe the durability of abrasives. To better assess water quality impacts from fine particulates and nutrients used in winter road operations, Board staff sent a letter requesting information from Caltrans and municipal NPDES permitees in California on 1) specifications, 2) sampling, extraction, and analytical methods used, and 3) expected quantities of abrasives and deicers to be ordered for use in the 2001-2002 snow year.

After contacting current and potential suppliers, Caltrans District 3 has adopted a new traction sand specification for fiscal year 2001-2002. The new specification includes a maximum Total Phosphorus content of 10 ppm for sand used within the Tahoe Basin. The specification also reduces the allowable percentage passing through a #200 sieve (0.075 mm) from 5% to 3 %, and establishes new limitations on allowable percentages passing through #50 (0.297mm) and #16 (1.18mm) sieves. The Caltrans specifications should help control water quality impacts from phosphorus and fine sediments. Staff will continue to work with Caltrans and other agencies in the Tahoe Basin to identify and reduce nutrient and sediment loading by promoting tighter specifications for nutrient content, size gradation, and durability for abrasives and deicers to be used in 2002-2003.

SOUTH BASIN

13. ***Molycorp, Human Health and Ecological Risk Assessment (HHERA) for the Mine Site at Mountain Pass –*** *Curt Shifrer*

On June 20, 2001, Regional Water Quality Control Board staff (Board staff) attended a public meeting in Baker. San Bernardino County held the meeting to present the conclusions and recommendations for the final Mine Site HHERA Report. Tetra Tech, a consulting firm hired by the County, completed the Report in June 2001. The County hired Tetra Tech to assess potential environmental impacts associated with the proposed future mining operations over the next 30-years. The County is also overseeing the preparation of an Environmental Impact Report (EIR) for the 30-year mine plan. The HHERA will be an important part of the EIR. The County plans to circulate the Draft EIR for comment in September 2001. Questions from members of the public, present at the June 20, 2001 meeting, indicate more concern with risks to school children and residents than with risks to plants and wildlife (ecological risks).

The HHERA Report includes estimates of both cancer and non-cancer risks that could result from exposure to substances associated with the mining operation, including lanthanide metals, heavy metals, radionuclides as well as diesel and gasoline combustion products. The study found the risk of cancer for offsite residents and school children to be within the range determined by both the U.S. and California Environmental

Protection Agencies to be acceptable. The estimate of non-cancer risks using air modeling showed a possible inhalation risk to some offsite residents due to lanthanide metals. Molycorp prevents human exposure to mine-related pollutants in underlying ground water by providing residents alternate sources of domestic supply water. The risk assessment found several areas, consisting of surface impoundment's, contaminated soil (wind-blown tailings) and wastewater seeps that may pose a significant risk to plants and animals.

The HHERA Report proposes actions to reduce risks and monitor effectiveness of these actions. These recommended actions and monitoring will be addressed further in the Draft EIR. Molycorp is currently under a Cleanup and Abatement Order (CAO) requiring it to clean-up pollutants in ground water and soils. Currently, Molycorp is in compliance with the schedules contained in the CAO.

14. ***Regional Board Issues a Cleanup and Abatement Order (CAO) to Pacific Gas & Electric (PG&E) Hinkley, San Bernardino County –*** *Joe Koutsky*

On June 29th I issued a CAO ordering PG&E to cease creating a threatened condition of nuisance from irrigating alfalfa fields in Hinkley. The California Air Resources Board (CARB) detected trace amounts of airborne hexavalent chromium during air monitoring near the irrigation site.

Since 1991 PG&E has been removing chromium from ground water by pumping ground water from the aquifer and spraying the water on two alfalfa fields located north of PG&E's compressor station. During this irrigation process the hexavalent chromium is converted to trivalent chromium and is chemically bound within the upper few feet of soil in the fields.

As a result of the Hinkley community's concerns expressed in a public meeting, and the recommendations presented in a Public Health Assessment (PHA), the California Department of Health Services, Environmental Health Investigations Branch (CDHS-EHIB), requested the CARB to conduct ambient air monitoring of the area near PG&E's East LTU. In April and May 2001, as part of a follow-up to the PHA, CARB sampled air and detected airborne hexavalent chromium levels at the fence lines and at the nearest residence of the East LTU. No measurements were taken further than 1/8 mile from the field.

As a precautionary measure, I ordered PG&E to "immediately abate the creation of a threatened nuisance by eliminating any air-born discharges of hexavalent chromium originating from the ground water remediation system." PG&E voluntarily turned off the irrigation systems.

As a result of this action, the California Environmental Protection Agency, Office of the Secretary issued a press release outlining the findings, actions, and reasons for the CAO. CDHS-EHIB also mailed a Fact Sheet to all residents in Hinkley providing

questions and answers about the air sampling.

15. ***Alternate Sampling and Reporting Program for Stormwater*** *- Gene Rondash*

Three mining companies in the region (National Cement, Portland Cement, and Briggs Mine) have coordinated on a proposed pilot program for stormwater sampling and reporting. The proposed pilot program would last 16-24 months and allow the dischargers to evaluate and report ground water data trends of selected constituents nearest their current stormwater discharge points during the wet and dry seasons.

Each of the participants are in an area that has produced only one qualifying stormwater sampling event in the past three years. The statewide general permit allows for the Regional Boards to approve alternate sampling and reporting programs that have the potential to improve the effectiveness of the region's stormwater urban runoff program.

Analyses of ground water data from near the storm water discharge points would allow the dischargers to determine if there are impacts from stormwater runoff and propose Best Management Practices (BMPs) or changes to current BMPs in their annual report. The proposed pilot project will establish data on the effectiveness of the alternate sampling program. If successful, the alternate sampling program could be approved as part of stormwater sampling program requirements with clearly defined criteria for each participant.

16. ***Air Force Plant No. 42 Site-Wide Remedial Investigation/Feasibility Study*** - *Tim Post*

Air Force Plant No. 42 announced at the June 2001 Environmental Restoration Advisory Board (ERAB) meeting, that the Remedial Investigation/Feasibility Study encompassing all five Operable Units is scheduled for release in August 2001. The document covers all the environmental investigations that have been completed, presents the results of the site-wide risk assessment and, proposes cleanup alternatives for the sites determined to pose an unacceptable risk.

This document is the result of culmination of many years' work on the site and represents a major milestone in the characterization and cleanup of the facility. Regional Board and the Department of Toxic Substances Control staff, members of the ERAB, and members of the public will all have 60 days to comment on the draft document.

17. ***IMC Chemicals, Trona*** - *Kai Dunn*

Improving Technology - IMCC continues to investigate alternative methods to support site-specific analytical monitoring and compliance testing as required in the Waste Discharge Requirements (WDRs). On June 27, 2001, a Laboratory Technical Peer Review Group started to review the analytical data during biweekly conference calls to ensure that the study is rigorous and technically valid. Board staff will continue to participate in the Peer Review Group to review the analytical studies and to provide comments to the data evaluation.

Compliance with Board Orders - Daily reporting data from IMCC shows that the interim effluent limitations set forth in the WDRs were not exceeded during the months of May and June 2001, but nine and nineteen, respectively, bird deaths were reported during the same time period. IMCC has completed

construction of the bird resting pool and is evaluating bird use of the pool. As part of work required under the Board's Cleanup and Abatement Order, IMCC and its consultants have conducted activities for characterization of areas of concern on Searles Dry Lake. The characterization activities contain a series of investigations to: 1) characterize the horizontal and vertical distribution of Constituents of Concern (COCs) in process ponds and channels and sediments, and 2) characterize and confirm the remediation of surface spills identified by previous investigations. Work will occur over the summer and into the fall of this year. Board staff will continue to review information submitted to ensure progress is made toward reaching complete site characterization.

Basin Plan Beneficial Uses - IMCC is in the process of collecting information to support work scheduled for this fiscal year, regarding potential site-specific beneficial use designations for Searles Lake. Board staff may recommend that the Regional Board consider at the September 2001 meeting, amending WDRs for the facility, allowing an implementation schedule for final effluent compliance limits consistent with the schedule for determining appropriate beneficial uses. This would extend the existing WDR schedule for setting and enforcing final effluent limits. Interim effluent limits would be in effect until final limits are adopted by the Regional Board.

18. ***Owens Lake Southern Zones Dust Control Project –*** *Joe Kenny*

The Environmental Protection Agency and the Great Basin Unified Air Pollution Control District have classified the southern Owens Valley as a Serious Non-attainment Area for air quality, due mainly to particulate emissions from Owens (Dry) Lake. The City of Los Angeles Department of Water and Power (LADWP) is constructing facilities to implement dust control mitigation measures. The dust control project is being designed and constructed in phases. Construction for Phase I began last year, and Phase II, which covers the southern zones, is scheduled for construction in October 2001**.**

The proposed project will combine the dust control strategies of shallow flooding, managed vegetation and gravel cover. Shallow flooding with water from the Los Angeles Aqueduct will raise the shallow ground water level to the level of the lakebed surface, saturate the surface and control dust emissions. Managed vegetation will consist of irrigation of areas to grow salt tolerant grasses. Irrigation tail water will be captured and stored for recycling in the irrigation system. Potential water quality impacts from construction of the dust control measures are regulated under the Statewide General NPDES Construction Storm Water Permit. The City must identify appropriate Best Management Practices (BMPs) it will use as part of its Storm Water Pollution Prevention Plan (SWPPP) that is required to be submitted to the Regional Board staff.

Regional Board staff have participated in meetings with LADWP regarding the project and have requested the City to file a Report of Waste Discharge (ROWD) for the long-term operation of phase II of the project. Monitoring will be required as a part of the General NPDES Permit for the construction and post-construction activities, within the Owens Lake Dry Lake Bed.