Project Description are non-operational after Labor Day. The construction equipment would be operating from the same parking lot to be used by patrons of the Tahoe Queen operations. Traffic control in the Ski Run Marina parking lot would be provided, if necessary. No significant impacts are anticipated.

K. Population

1. The alteration, distribution, density, or growth rate of the human population of the area.

The proposed project does not involve residential or commercial construction of housing or building space. Phases I and II would occur on the bed of Lake Tahoe which is fee-owned by the State of California, managed by the State Lands Commission. The area of the Lake between elevations 6223' and 6228.75' contains a public trust easement, allowing the public lateral passage along and use of the shoreline at those locations.

Fencing will be placed around the perimeter of the construction site. Signs will be posted on the adjacent shoreline area indicating the use of heavy equipment and the anticipated duration of the project. It is anticipated that this remediation project would have no significant impact upon the distribution of the human population of the area.

L. Housing

1. Affect existing housing, or create a demand for additional housing.

The proposed project does not involve construction of residential dwellings nor a business or project which would create a demand for additional housing. No significant impacts have been identified.

M. Transportation/Circulation

1. Generation of substantial additional vehicular movement.

Heavy equipment would be transported to the Ski Run Marina and operated in the shorezone as described in Project Description. It is anticipated that approximately 135 20-yard dump truck trips would be generated from the transport of extracted material from the Phase I and II

remediation area over a three-week period. Three dump trucks would utilize the route shown on Attachment H-1. An average daily number of truck trips for Phase I and II would be 16-20.

For material removal from Phase III, approximately 40 20-yard truck trips would be required with an average of 16-20 truck trips per day. This impact would be temporary, and would occur during the Fall of 1994, which is a slower tourist season. Hours of operation would be 8:00 a.m. to 6:30 p.m. It is anticipated that no traffic controls on public streets or highways would be needed for this operation. The Ski Run Marina is located directly off of Highway 50 at Ski Run Boulevard. No significant impacts have been identified.

2. **Affect existing parking facilities, or create a demand for new parking.**

Applicant proposes to use the southwest corner of the Ski Run Marina parking lot for temporary staging of equipment and erosion control/water diversion materials. Applicant represents that the Fall tourist season usually drops to 100 guests per cruise - four cruises per day. The Ski Run Marina presently maintains 225 parking spaces. The area needed for the remediation project staging and construction crew parking would be approximately 4 parking spaces. This project would not significantly affect the use of parking facilities for the marina.

3. **Substantial impact upon existing transportation systems.**

Three 20-yard dump trucks would be used to transport the material removed from Phase I and Phase II locations and would utilize State Highway 50 (Lake Tahoe Blvd.) to Sawmill Road as shown on Attachment H. This should not create a significant impact upon existing transportation systems. No significant impacts are anticipated.

4. **Alterations to present patterns of circulation or movement of people and/or goods.**

Dump trucks would utilize existing public roadways to transport material removed from Phase I and II of the shorezone. The roadways would not require closure or traffic restrictions to enable this project to proceed. No significant impacts have been identified.

5. **Alterations to waterborne, rail, or air traffic.**

The remediation project is located within the body of Lake Tahoe. Phases I and II are located above the present lake water elevation. Phase III involves material removal from the existing inner marina. The inner marina contains water but is not connected to the freshwater of Lake Tahoe due to low lake water elevations and the ongoing shortfall of weather which replenishes the Lake. The project is proposed in the Fall of 1994 to minimize impacts to tourist uses. Also refer to discussion in M.1., 2., and 3., above. No significant impacts have been identified.

6. **Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians.**

As described in M.-4., above, no significant impacts have been identified to traffic.

N. **Public Services**

1. **Fire protection.**

The project does not propose construction of structures requiring fire protection. The project is located in the City of South Lake Tahoe which provides fire protection services. No significant impacts have been identified.

2. Police protection.

This project does not propose any activity or construction which would require addition or change in the existing police protection services provided to this project area. No significant impacts have been identified.

3. **Schools.**

This project does not propose construction of residential dwellings which would necessitate the need for additional schools. No impacts have been identified.

4. **Parks and other recreational facilities.**

The proposed remediation project will occur within a sandy beach area which could be accessed by the general public. Signs would be posted on adjacent access areas indicating that heavy equipment is in operation and identifying the anticipated duration of the project. The project is proposed to occur in the Fall of 1994 which is

a slower tourist season. Operations at the Ski Run Marina are scaled back to coincide with the tourist season. No significant impacts have been identified.

5. **Maintenance of public facilities, including roads.**

The proposed project envisions approximately 135 20-yard truck trips during the three week period to remove material from Phases I and II of the project site. This would not significantly impact the maintenance needs for existing public roadways. No significant impacts have been identified.

6. **Other governmental services.**

This project would require monitoring by several governmental agencies from staging to cleanup/restoration. This impact would be temporary, and reimbursement for these services would be the responsibility of the applicant or as stipulated in any ongoing or proposed settlement agreements. No significant impacts have been identified.

O. **Energy**

1. **Use of substantial amounts of fuel or energy.**

Fuel would be needed to operate the heavy equipment as described earlier during the conduct of each phase of this project. Fuel would be obtained at local service stations. This impact would not be significant. Locally operated construction equipment would be used. Any electrical energy usage would be accessed from existing sources at the Ski Run Marina. No significant impacts have been identified.

2. **Substantial increase in demand upon existing sources of energy, or require the development of new sources.**

No significant impacts as described in O.1., above.

P. Utilities

1. **Power or natural gas.**

This project would not require the need for significant amounts of power or natural gas. Also refer to discussion in O., above.

2. **Communication systems.**

This proposed project would not require the need for construction or operation of communication systems. No impacts have been identified.

3. **Water.**

A small amount of domestic potable water and non-chlorinated water may be necessary to be used for dust abatement at the remediation and disposal sites. One tank truck would be on standby at each site. Water would be obtained from a well at the Amacker Ranch site or from approved temporary extraction of Lake waters. This impact would be a minor temporary impact to public water supplies. No significant impacts have been identified.

4. **Sewer or septic tank.**

The proposed project would not require the need for additional sewer or septic tank systems. It is a remediation project involving the removal of material from the shorezone and disposal at an offsite location. The Ski Run Marina maintains restrooms which may be used by the construction crew. No significant impacts have been identified.

5. **Storm water drainage.**

The proposed project does not involve the construction of new impervious structures requiring construction of storm water drainage systems. However, there is an existing storm water drainage system which may be temporarily diverted if necessary during Phase III of the project. Please refer to Attachment A and K-2.

Should it be necessary, The City of South Lake Tahoe's Wildwood drainage may need to be temporarily diverted. Wildwood drainage consists of two 48" CMP's that discharge into the southwest corner of the Ski Run Marina. The diversion proposal involves diversion of the two 48" CMP's into one 48" flexible CMP by using an aluminum storm discharge apron in a reverse fashion. The apron would be placed directly below the discharge area

and would catch all runoff. The proposed 48" flexible CMP would be placed on the west side of the marina for temporary discharge into a small sediment basin to be built along the west side of the existing Ski Run Marina pier.

The final drainage diversion method would be reviewed and approved by the City of South Lake Tahoe, TRPA, and Lahontan Regional Water Quality Control Board. No significant impacts are anticipated.

6. **Solid waste and disposal.**

The proposed project would not require the need for new solid waste and disposal facilities. The proposed project is of a temporary nature, and the Ski Run Marina maintains these facilities which would be utilized, if necessary. No significant impacts have been identified.

Q. **Human Health**

1. **Creation of any health hazard or potential health hazard (excluding mental health).**

The proposed project would not create a health hazard or potential health hazard. To date, the material tested for Phases I and II contains nitrates and phosphorous which have been determined to be suitable for disposal at the Washoe Meadows State Park restoration site. Water and sediment material from the inner marina, Phase III, is required to be tested for toxicity. Once all material is tested, as directed by TRPA and Lahontan Regional Water Quality Control Board, the material would either be transported for disposal at Washoe Meadows State Park, or it would be transported out of the Lake Tahoe Basin to an approved disposal facility. No significant impacts have been identified which cannot be significantly minimized through project modification.

2. **Exposure of people to potential health hazards.**

The proposed remediation project influence area will be posted to advise the public of heavy equipment operating within the vicinity. Appropriate areas of operation would be fenced for public safety. Any non-potable water extracted from the remediation area would be disposed in the South Lake Tahoe Public Utility District sewer system, or pumped into a truck designed for water containment and disposed at an approved location. No significant impacts have been identified.

R. Aesthetics

1. The obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?

The proposed remediation project would be visible from the adjacent shore areas of Lake Tahoe. This impact would be temporary, lasting approximately three weeks for Phase I and II, and possible two more weeks for completion of Phase III. The remediation work is proposed in the Fall of 1994 when fewer numbers of tourists are present. No significant impacts have been identified.

S. Recreation

1. An impact upon the quality or quantity of existing recreational opportunities.

The proposed project would be conducted in the Fall of 1994 when recreational opportunities at the Ski Run Marina have been scaled back due to a decrease in tourists at this time. Heavy equipment would be operating in the shorezone of Lake Tahoe. The public would still be able to walk laterally across the shore area between the remediation project and the water. Signs would be posted identifying the use of heavy equipment on the beach. Fencing would be used where appropriate. No significant impacts to recreational opportunities have been identified. Impacts have been minimized by seasonal timing of operation and short duration of the project.

T. Cultural Resources

1. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archaeological site?

Phase I and II of the proposed project is located below high water lakeward of an existing commercial marina. The shore area has been heavily impacted by public uses. The proposed project involves removing a specified quantity of material in Phases I and II to about a one-half to one-foot depth. The inner marina would be dredged to a depth previously authorized to maintain navigability. There is no excavation proposed of any significant depth which would require a detailed evaluation of any possible prehistoric or archaeological

significance. No significant impacts have been identified.

2. **Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?**

   This project does not propose any impacts to any prehistoric or historic buildings, structures or objects. The remediation project is located within the sandy beach influence area of the Ski Run Marina, located in South Lake Tahoe, El Dorado County. No significant impacts have been identified.

3. **Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?**

   No. Refer to discussion in T.1., 2., and 3., above.

4. **Will the proposal restrict existing religious or sacred uses within the potential impact area?**

   There are no known sacred or religious uses of the beach within the project influence area. No significant impacts have been identified.

U. Mandatory Findings of Significance

1. **Does the project have the potential to degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

   The remediation project is proposed to improve the environmental conditions of the project influence area. As described in environmental issue areas, above, no significant impacts have been identified. The project is not located within mapped fish habitat. The project is located in an area identified as degraded habitat which may or may not be capable of supporting the California-listed Tahoe Yellow Cress. No plants exist within the project area according to a 1994 site inspection by TRPA staff. The site will be inspected by qualified individuals under the direction of the State Lands Commission, the California Department of Fish and Game, and the Tahoe Regional Planning Agency prior to start of operations to ensure that any existing plants would be

properly protected.

2. **Does the project have the potential to achieve short-term to the disadvantage of long-term, environmental goals?**

   No, as described in U.1., above, the project is proposed to improve environmental conditions. Appropriate project modifications have been proposed to minimize impacts to the extent possible. No significant impacts have been identified.

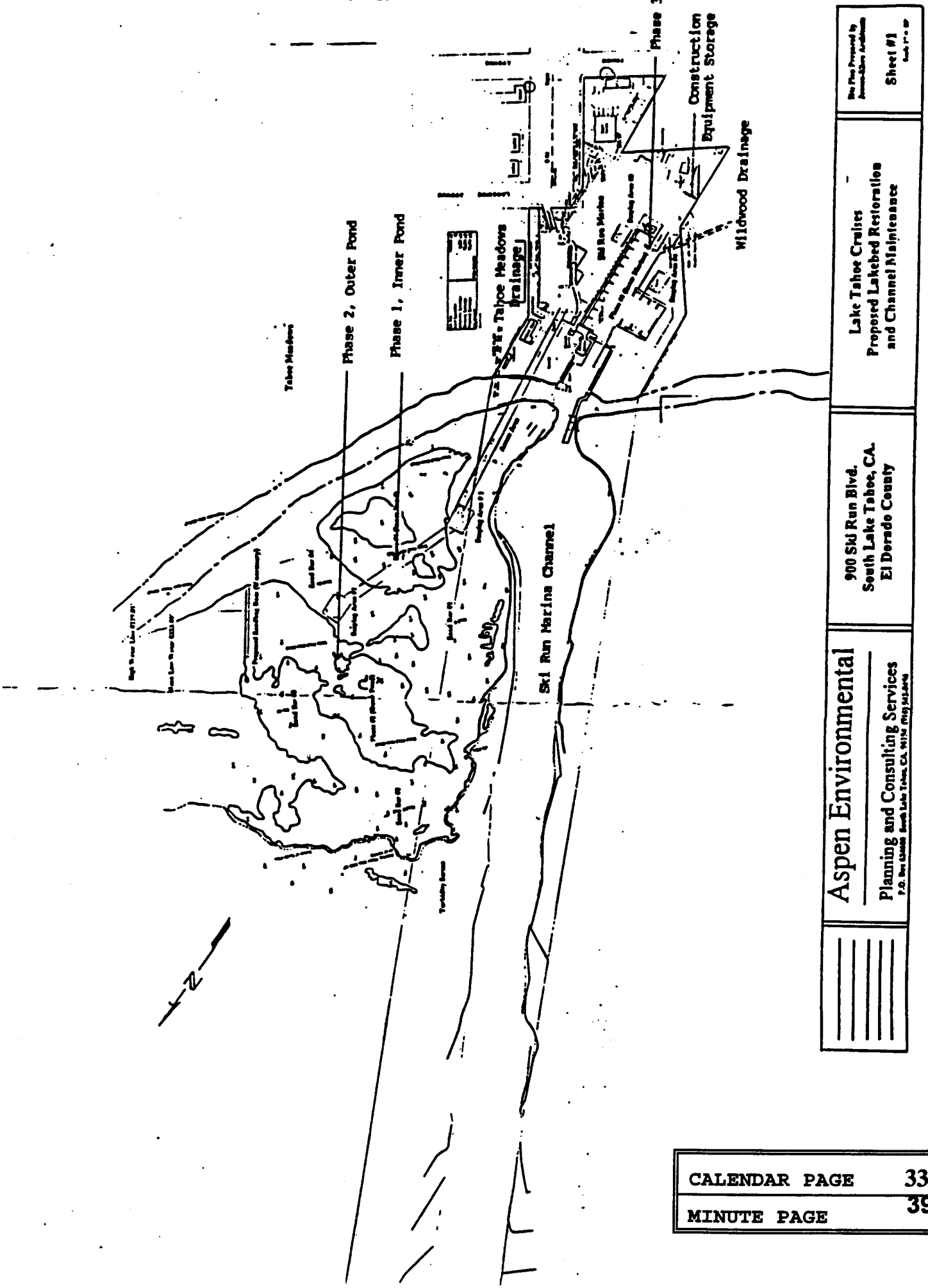
3. **Does the project have impacts which are individually limited, but cumulatively considerable?**

   The project as proposed would create temporary impacts which have been minimized to levels which are not considered to be significant. A Monitoring Program will be prepared and considered with proposed adoption of this environmental document.

4. **Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?**

   The project as proposed involves supervised removal of a specified quantity of material to be disposed at the Washoe Meadows State Park, or at another approved disposal location out of the Lake Tahoe basin. Project modifications proposed, in conjunction with monitoring to ensure compliance, minimize impacts identified, none of which have been found to be significant.

ATTACHMENT A



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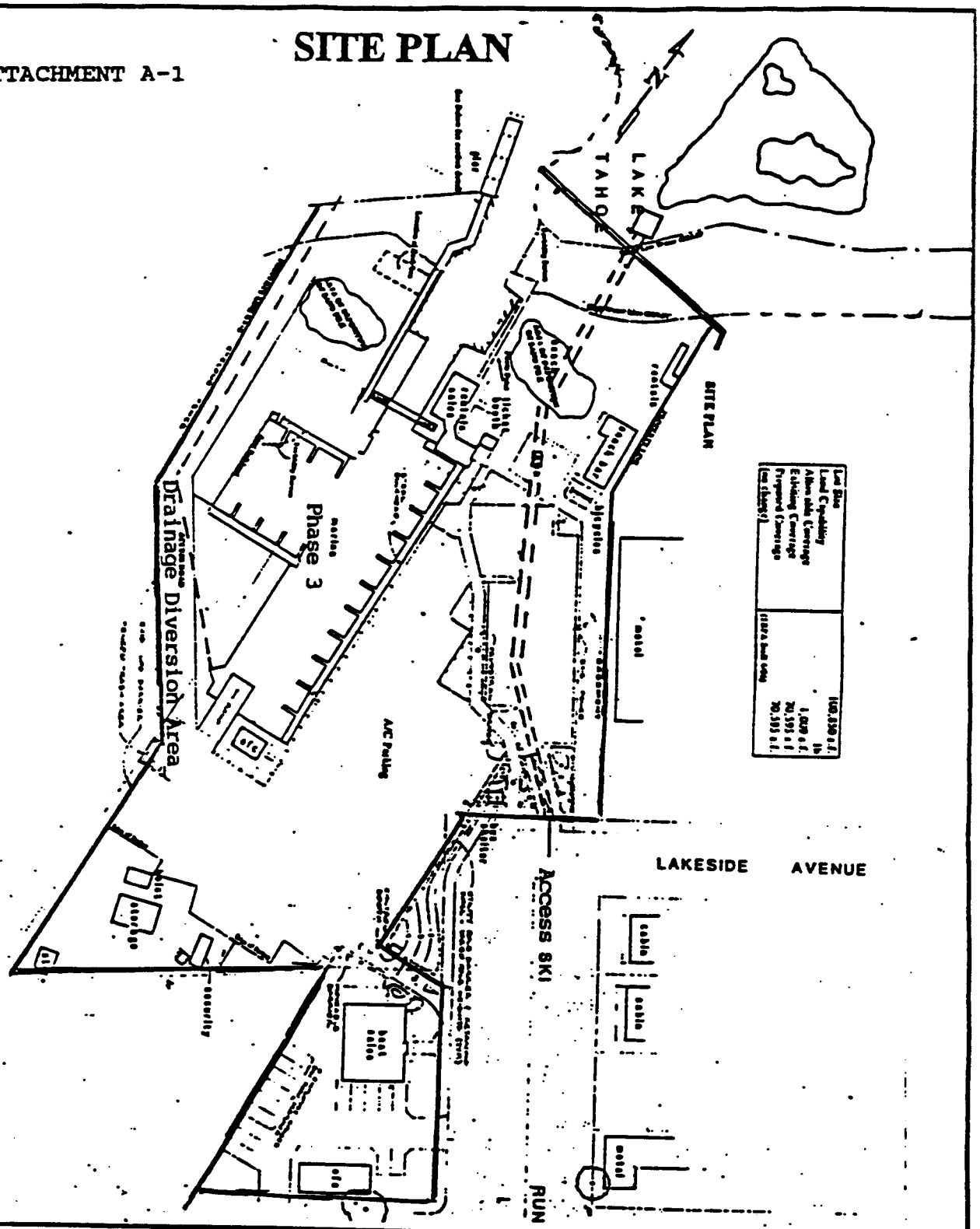
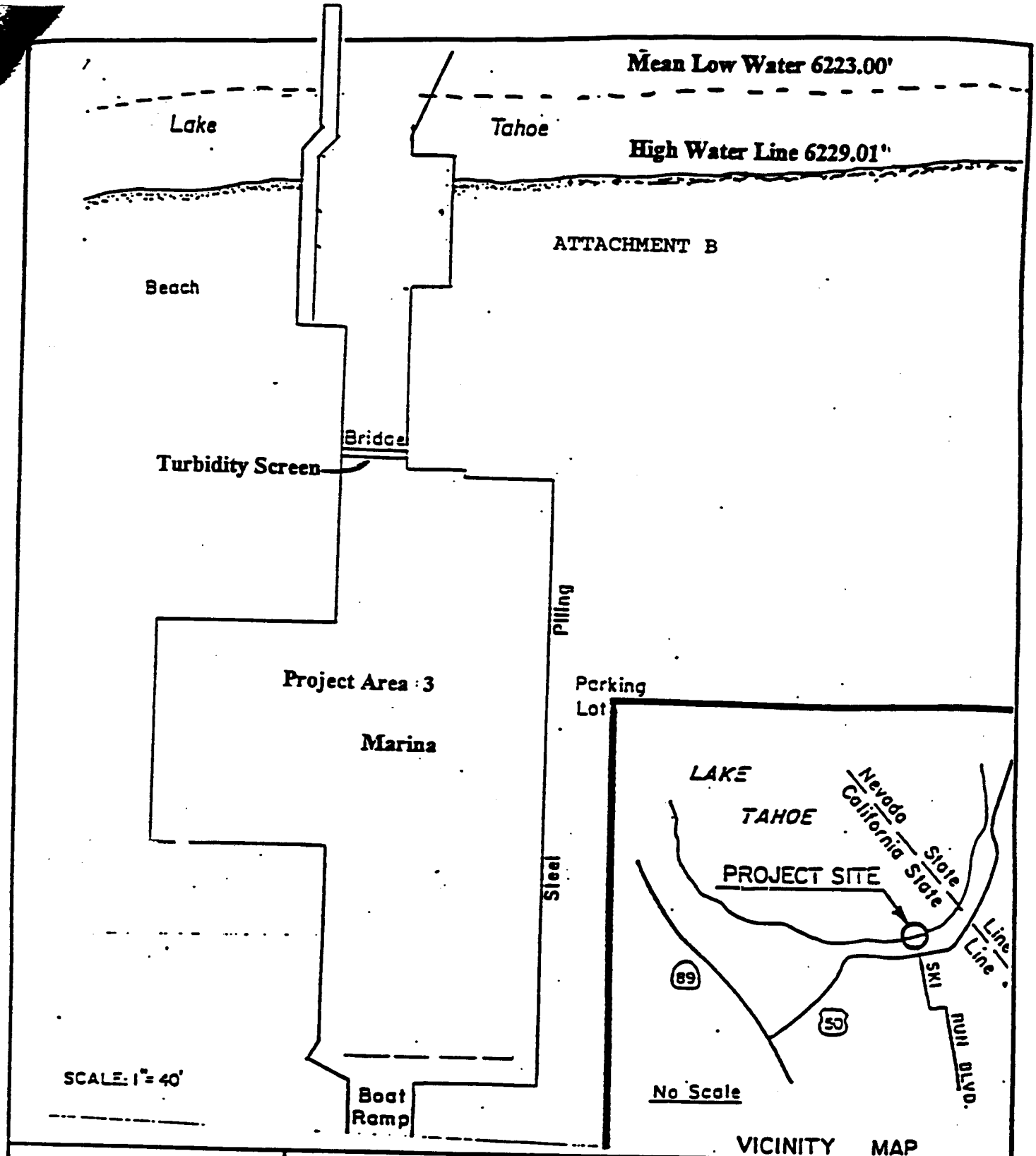
ATTACHMENT A-1

SITE PLAN



Ski Run Marina Remediation Proposal	**Aspen Environmental** Planning and Consulting Services P.O. Box 624608 South Lake Tahoe, CA 96154 (916) 542-0454	900 Ski Run Blvd. APN # 27-051-09 El Dorado County Drawn By: Mike Dill 8/5/94 Sheet ___ of ___



Ski Run Marina Remediation Proposal	**Aspen Environmental** Planning and Consulting Services P.O. Box 624608 South Lake Tahoe, CA. 96154 (916) 542-0454	900 Ski Run Blvd. APN # 27-051-09 El Dorado County Drawn By: Mike Dill 8/5/94 Sheet — of —

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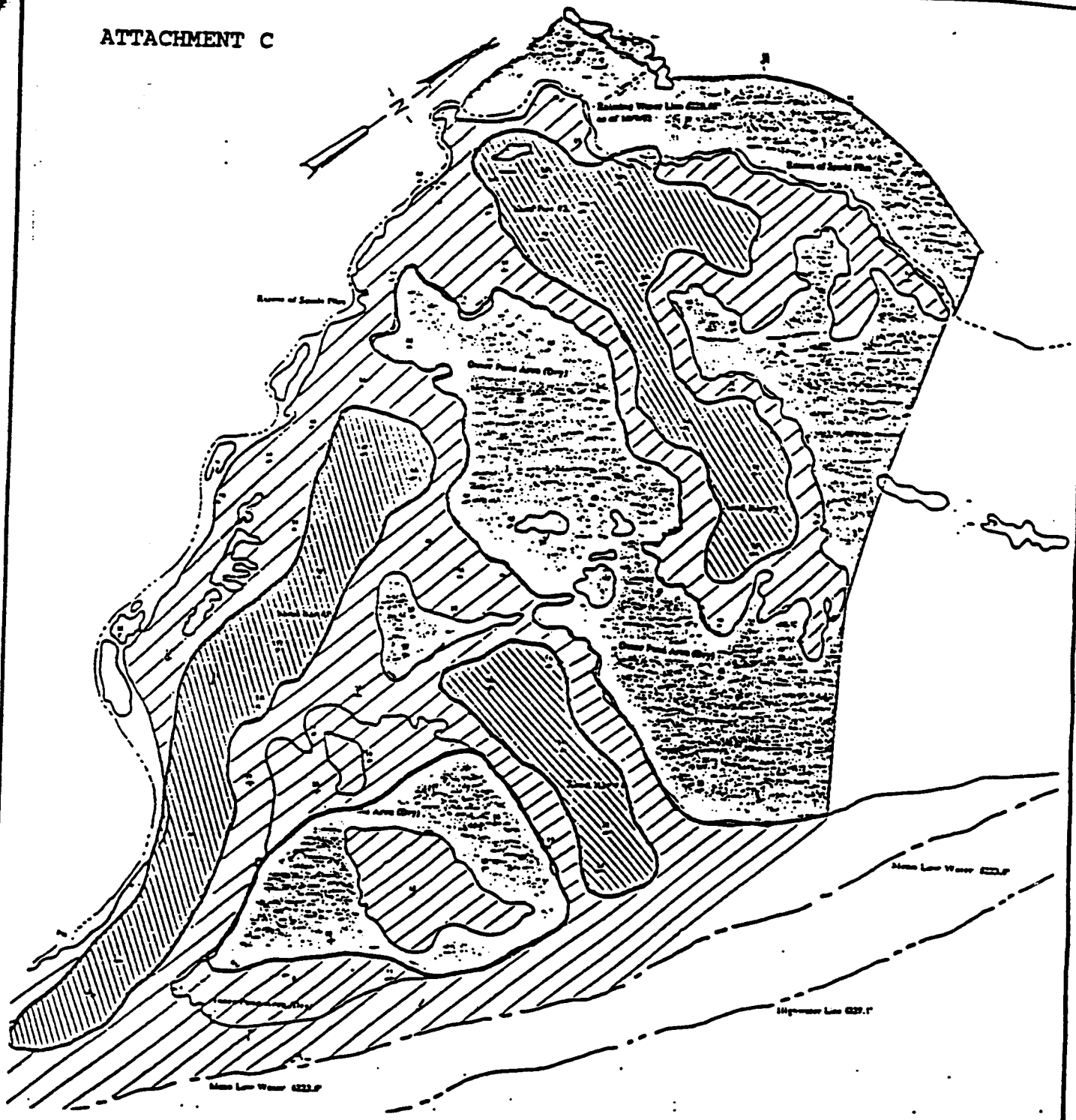
ATTACHMENT C



Ski Run Marina Remediation Proposal	**Aspen Environmental** Planning and Consulting Services P.O. Box 624608 South Lake Tahoe, CA. 96154 (916) 542-0454	900 Ski Run Blvd. APN # 27-051-09 El Dorado County Drawn By: Mike Dill 8/5/94 Sheet of

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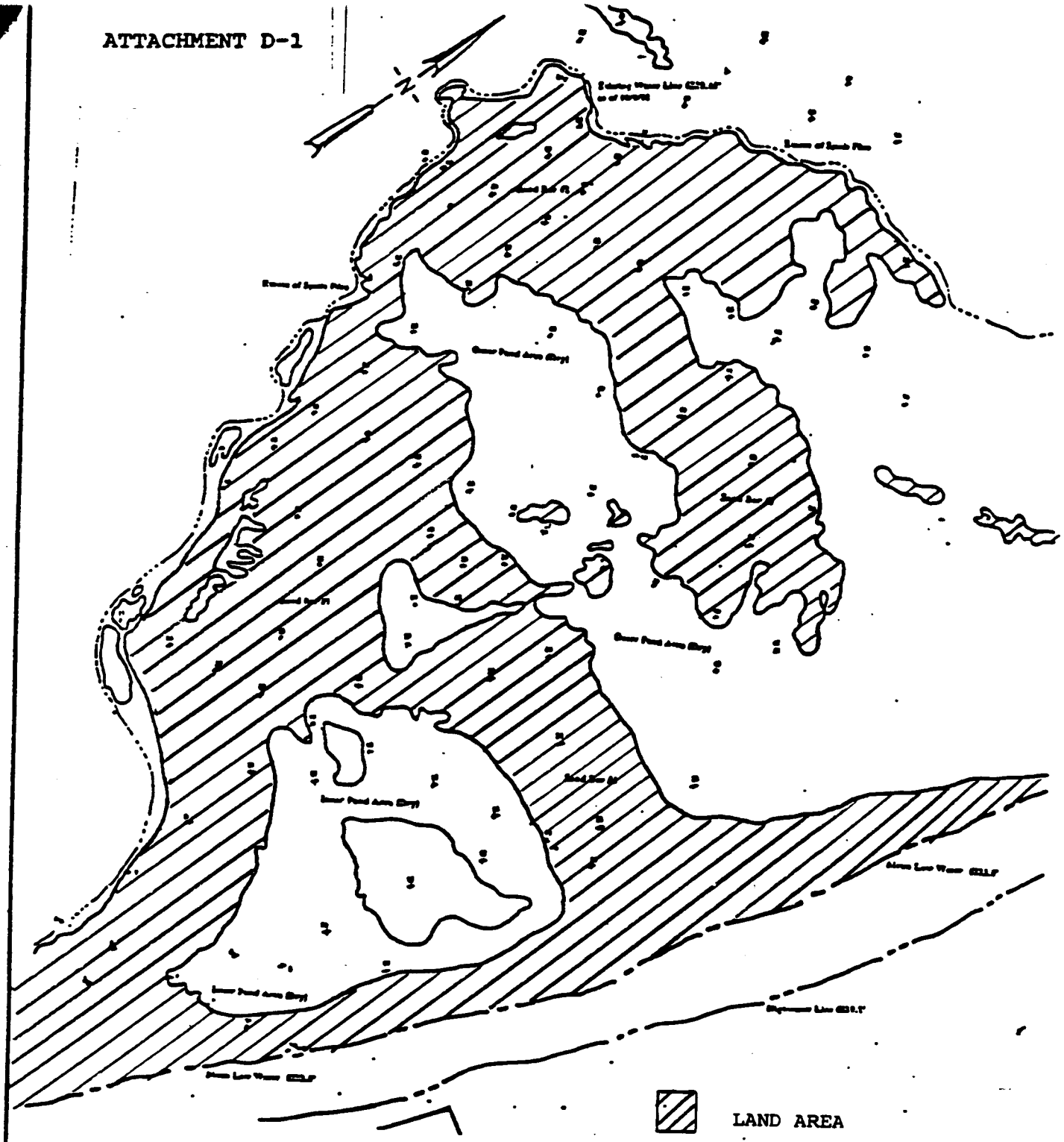
ATTACHMENT D-1



Ski Run Marina Remediation Proposal	Aspen Environmental Planning and Consulting Services P.O. Box 624608 South Lake Tahoe, CA. 96154 (916) 542-0454	900 Ski Run Blvd. APN # 27-051-09 El Dorado County Drawn By: Mike Dill 8/5/94 Sheet of

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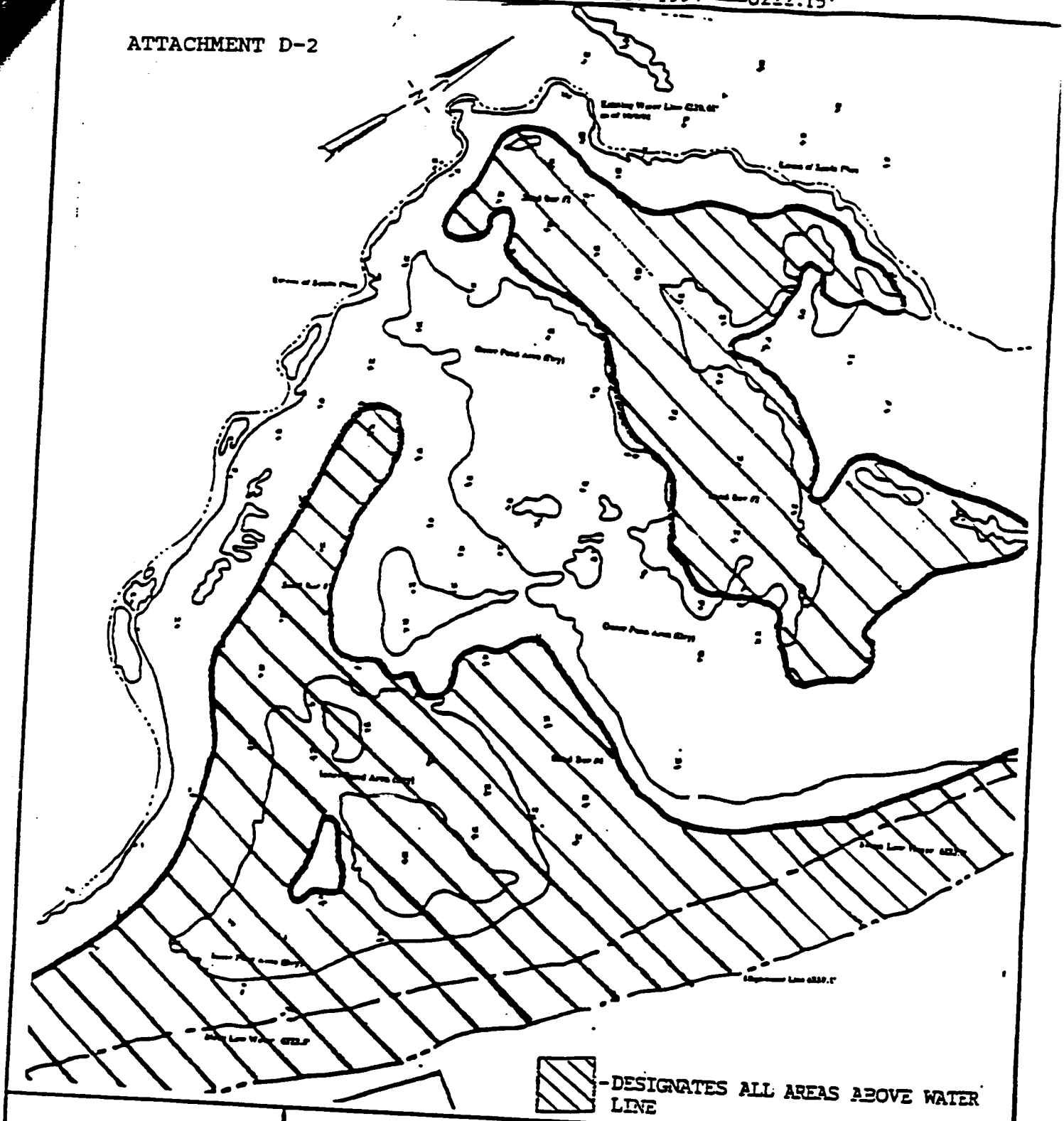
PREDICTED WATER LINE ON AUGUST 15, 1994 —6222.15'

ATTACHMENT D-2



Ski Run Marina Remediation Proposal	Aspen Environmental Planning and Consulting Services P.O. Box 624608 South Lake Tahoe, CA. 96154 (916) 542-0454	900 Ski Run Blvd. APN # 27-051-09 El Dorado County Drawn By: Mike Dill 8/5/94 Sheet __ of __

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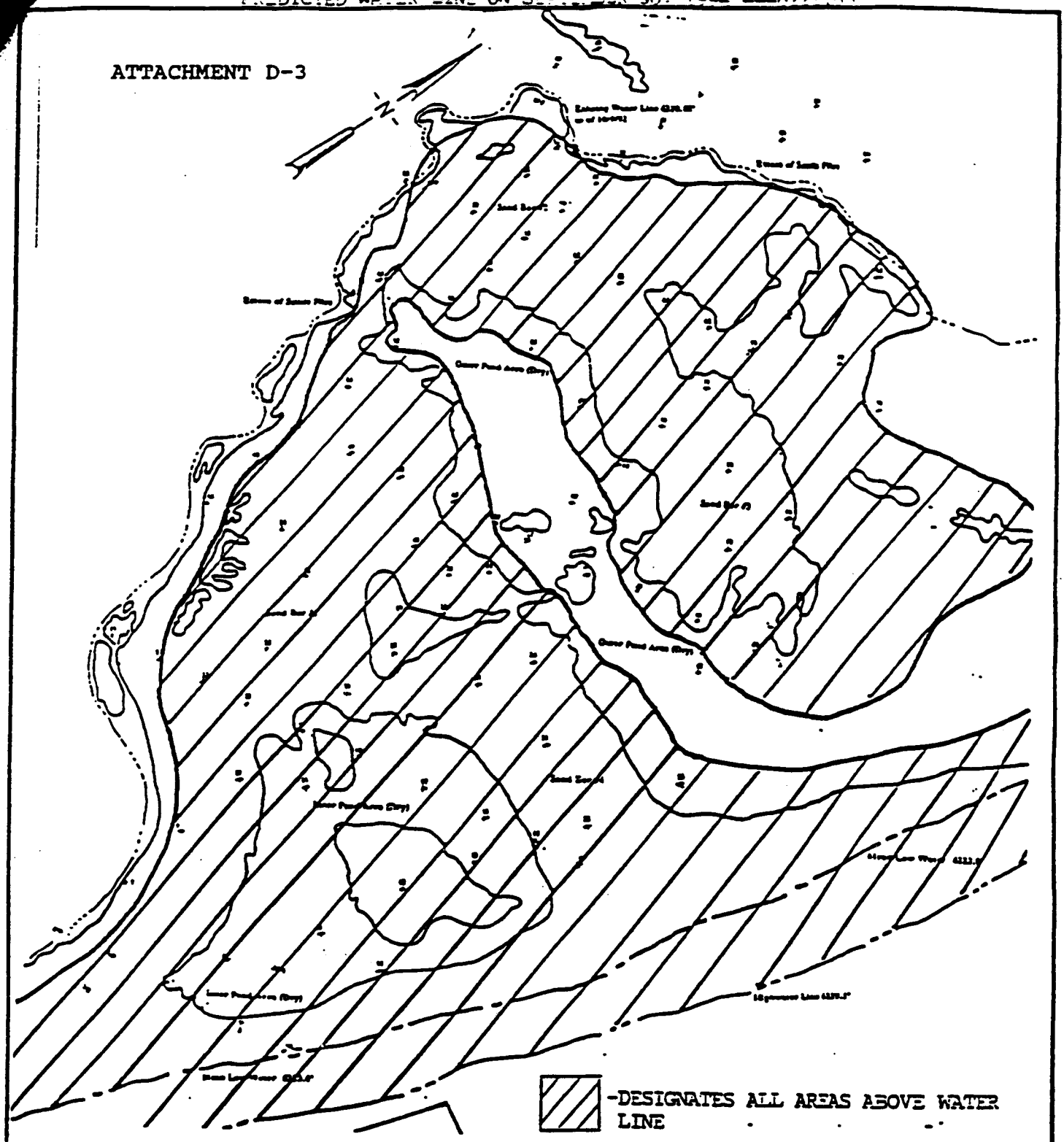
PREDICTED WATER LINE ON SEPTEMBER 30, 1994 ---6221.65'

ATTACHMENT D-3



Ski Run Marina Remediation Proposal	Aspen Environmental Planning and Consulting Services P.O. Box 624608 South Lake Tahoe, CA. 96154 (916) 542-0454	900 Ski Run Blvd. APN # 27-051-09 El Dorado County Drawn By: Mike Dill 8/5/94 Sheet 331.63 of 4002

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ATTACHMENT E

Tahoe Chemical Laboratories, Inc.

P.O. BOX 4515 STATELINE, NV 89449
(702) 588-4912

August 29, 1987

Mrs. Suzanne Nielsen
Lake Tahoe Cruises
P.O. Box 14292
S. Lake Tahoe, CA 95729

Dear Mrs. Nielsen:

The following are the results of the water submitted for analyses. Collected on August 25,1987

Aliquots of the samples were taken using the % solids and analyzed.

SAMPLE	% SOLIDS	TOTAL PO4 mg/l as P	KJELDAHL mg/l as N
1 A	25	29	10.6
1 B	15	46	4.8
2 A	20	21.9	6.4
2 B	10	4.3	4.2
3 A	40	18.8	11.3
3 B	25	11.6	11.9
4 A	40	22.3	19.0
4 B	12	5.8	3.2
5 A	60	39.3	24.2
5 B	10	5.6	4.7

The samples were well mixed and allow to stand for 24 hrs. The supernatant was removed and then analyzed.

SAMPLE	NO3 mg/l as N	KJELDAHL mg/l as N	NH4 mg/l as N	TOTAL PO4 mg/l as P	ORTHO PO4 mg/l as P
1 A	.041	.027	.017	.225	.157
1 B	.015	.018	.014	1.3	1.2
2 A	.024	.024	.014	.022	.016
2 B	.036	.045	.033	.012	.011
3 A	.011	.020	.017	.074	.059
3 B	.006	.063	.049	.041	.035
4 A	.026	.042	.033	.090	.074
4 B	.026	.044	.032	.059	.045
5 A	.066	.150	.095	.061	.046
5 B	.031	.573	.469	.051	.031

It is my understanding that the dredge produces 20% solids when pumping. Due to the inconsistency of the % solids the following table is provided for correction to 20% solids, however, it was assumed that the contribution of the supernatant for PO4 and N was negligible and was ignored.

SAMPLE	KJELDAHL mg/l	KJELDAHL @20% mg/l	PO4 mg/l	PO4 @20% mg/l
1 A	.042	8.5	.117	23.3
1 B	.032	6.4	.305	61.1
2 A	.042	8.4	.110	21.9
2 B	.042	8.4	.043	8.6
3 A	.026	5.6	.047	9.4
3 B	.048	9.5	.046	9.2
4 A	.047	9.5	.056	11.2
4 B	.027	5.4	.048	9.7
5 A	.040	8.1	.065	13.1
5 B	.047	9.3	.056	11.1
AVERAGE	.039	7.9	.089	17.9
S.D.	.007	1.5	.076	15.3
EXCLUDING SAMPLE 1 B				
AVERAGE			.065	13.1
S.D.			.026	5.3

The following are the results of the 5 specimens from the harbor area. Due to majority of N and PO4 being in the solids and grass, the analysis was performed on an aliquot of the grass and solids and not the water in the given proportions.

SAMPLE	H2O ml/l	GRASS gms	SOLIDS gms	KJELDAHL mg/gm	PO4 mg/gm
A	870	35	270	.4	.8
B	850	29	263	.4	3
C	860	29	214	.6	3
D	640	20	318	.7	2
E	850	48	305	.8	2
AVERAGE				.6	2.2
S.D.				.2	.8

IKN/gm Sol!

1 lb = 454 gms
N/lb = 454 x .6 = 272 mg/lb or .3 gm/lb
PO4/lb = 454 x 2.2 = 998 mg/lb or 1 gm/lb

Excluding 5B the average NH3 for the supernatant was .034 mg/l as N.

1 lb of muck contains 272 mg/lb of N.
272 mg/lb/.034 mg/l = 1 lb of muck / 8000 liters of slurry.

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Excluding 1 B the average ortho PO4 in the supernatant was 0.053 mg/l as P.

1 lb of muck contains 998 mg/lb of P.
998 mg/lb / .053 mg/l = 1 lb of muck / 18,830 liters of slurry.

1 cubic yard = 765 liters
1 gm = 1,000 mg
1 l = 1,000 gm of water

CONVERSION TO CUBIC YARDS

Assuming 20 % solids in slurry = factor of 5.

5,500 cubic yards x 757 L / yard x 5 = 20.8 10^6 liters of slurry.

5,500 cubic yards = 20.8 10^6 l x .034 mg/l = 708 gms of N.

5,500 cubic yards = 20.8 10^6 l x .053 mg/l = 1,100 gms of P.

CALCULATION OF CUBIC YARDS OF MUCK TO REPLACE
N & PO4 DISPLACED BY DREDGING

Ignoring the specific gravity of the muck 1 cubic yard of muck = 765 l x 1,000 gms/l / 454 gms/lb = 1,690 lbs.

5,500 yards of slurry = 708 gms of N / .3 gms/lb = 2,360 lbs of muck.

2,360 lbs / 1,690 lbs = 1.4 yards of muck to displace N.

5,500 yards of slurry = 1,100 gms of P / .998 gms/lb of muck = 1,100 lbs of muck.

1,100 lbs / 1,690 = .65 yards of muck to displace PO4.

Sincerely,

Ronald R. Newton

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Chemex Laboratories, Inc.
Analytical and Environmental Chemists
EPA Lab ID #NV004
(702) 355-0202
FAX (702) 355-0817

ATTACHMENT F

LABORATORY REPORT

Report To: Lake Tahoe Cruises
P.O. Box 14292
South Lake Tahoe, CA 96151

Lab Report No.: 10120
Account No.: CRUIS

Telephone: 916-541-3364 Ext. 856 Fax: 916-541-3130

Work Authorized By: Mike Dill
Date Sampled: 06/08/93
Number of Samples: 14
Source: Ski Run Marina
Chemex Control No. 93-4030 thru 4037
Notes:

Date Submitted: 06/08/93
Sampled By: Tahoe Research Group
Your Reference:

Parameter	Sample [illegible]					
	mg/L (S)*	mg/L (E)	mg/L (S)	mg/L (E)	mg/L (S)	mg/L (E)
Nitrate Nitrogen	2.0	0.50	7.2	1.8	1.4	0.35
Ammonia Nitrogen	<0.2	<0.05	1.9	0.44	<0.2	<0.05
TKN	9.6	2.4	38	9.4	3.6	0.89
Total Phosphorus	0.32	0.079	1.4	0.34	0.089	0.022
Sol. Reactive Phosphorus	<0.04	<0.01	<0.04	<0.01	<0.04	<0.01

Remarks:
1. * mg/L (S) = mg/L in sediment, mg/L (E) = mg/L in elutriate.
mg/L (S) = 4 [mg/L (E)] since elutriate was obtained by extracting one part of sediment (by volume) with 4 parts of Lake Tahoe water (by volume).
2. TKN and Total Phosphorus were run on elutriate decant "as-is". Nitrate-Nitrogen, Ammonia-Nitrogen, and SRP were run on elutriate decant, filtered through 0.45-μm membrane filters.

cc: John Reuter, Tahoe Research Group, U.C. Davis.

Analysis By: Joyce/Lettice/Nannini
Date: 06/28/93

Approved By:
Date: 06/28/93

992 Spice Islands Drive, Sparks, Nevada 89431 • P.O. Box 21122, Reno, Nevada 89515

CHEMAX Laboratories, Inc.
Analytical and Environmental Chemists
EPA Lab ID #NV004
(702) 355-0202
FAX (702) 355-0817

LABORATORY REPORT

Report To: Lake Tahoe Cruises

Lab Report No.: 10120

Parameter	[illegible]		[illegible]		[illegible]	
	mg/L (S)	mg/L (B)	mg/L (S)	mg/L (B)	mg/L (S)	mg/L (B)
Nitrate Nitrogen	2.0	0.50	0.84	0.21	3.1	0.77
Ammonia Nitrogen	0.22	0.056	<0.2	<0.05	0.68	0.17
TKN	16	3.9	4.4	1.1	32	8.1
Total Phosphorus	<0.04	<0.01	0.081	0.020	0.81	0.20
Sol. React. Phosphorus	<0.04	<0.01	0.041	0.010	<0.04	<0.01

Parameter	Outfall Pond				[illegible]	
	A		B		A	
	mg/L (S)	mg/L (B)	mg/L (S)	mg/L (B)	mg/L (S)	mg/L (B)
Nitrate Nitrogen	1.8	0.45	3.8	0.95	2.3	0.58
Ammonia Nitrogen	1.8	0.46	1.1	0.27	<0.2	<0.05
TKN	108	27	12	2.9	7.4	1.8
Total Phosphorus	0.048	0.012	<0.04	<0.01	0.48	0.12
Sol. React. Phosphorus	<0.04	<0.01	<0.04	<0.01	<0.04	<0.01

Remarks:

Analysis By: Joyce/Lenice/Nannini

Date: 06/28/93

Approved By: [signature]

Date: 06/28/93

992 Spice Islands Drive, Sparks, Nevada 89431 • P.O. Box 21122, Reno, Nevada 89515

CHEMAX Laboratories, Inc.
Analytical and Environmental Chemists
EPA Lab ID #NV004
(702) 355-0202
FAX (702) 355-0817

LABORATORY REPORT

Report To: Lake Tahoe Cruises

Lab Report No.: 10120

Parameter	Inner Pond		Mid-Site			
	B		A		B	
	mg/L (S)	mg/L (O)	mg/L (S)	mg/L (O)	mg/L (S)	mg/L (O)
Nitrate Nitrogen	1.1	0.28	1.2	0.30	3.3	0.83
Ammonia Nitrogen	<0.2	<0.05	<0.2	<0.05	0.36	0.089
TKN	48	12	3.4	0.85	16	4.1
Total Phosphorus	1.1	0.28	0.17	0.043	<0.04	<0.01
Sol. React. Phosphorus	0.061	0.015	<0.04	<0.01	<0.04	<0.01

Parameter	Results		
	Lake Bottom		Lake Surf.
	mg/L (S)	mg/L (O)	mg/L
Nitrate Nitrogen	2.2	0.55	<0.02
Ammonia Nitrogen	1.6	0.41	<0.05
TKN	33	8.3	0.18
Total Phosphorus	2.1	0.53	0.013
Sol. Reactive Phosphorus	<0.04	<0.01	<0.01

Remarks:

Analysis By: Joyce/Lettice/Nannini

Date: 06/28/93

Approved By: [signature]

Date: 06/28/93

992 Spice Islands Drive, Sparks, Nevada 89431 • P.O. Box 21122, Reno, Nevada 89515

CALENDAR PAGE 331.69
MINUTE PAGE 4008

CHEMAX Laboratories, Inc.
Analytical and Environmental Chemists
EPA Lab ID #NV004
(702) 355-02
FAX (702) 355-0

LABORATORY REPORT

Report To: Lake Tahoe Cruises
P.O. Box 14292
South Lake Tahoe, CA 96151

Lab Report No.: 11274
Account No.: ASPEN

Telephone: 916-541-3364 Ext. 856

Fax: 916-541-3130

Work Authorized By: Mike Dill
Date Sampled: 01/26/94
Number of Samples: 15
Source: Ski Run Marina
Chemax Control No. 94-0581 thru 0594 & 0813
Notes:

Date Submitted: 01/27/94
Sampled By: Tahoe Research Group
Your Reference:

Parameter	Results			
	#1A		#1B	
	mg/L (S)*	mg/L (E)*	mg/L (S)	mg/L (E)
Nitrate Nitrogen	0.092	0.023	<0.08	<0.02
Ammonia Nitrogen	7.6	1.9	3.5	0.87
TKN	108	27	48	12
Total Phosphorus	1.9	0.48	2.4	0.60
Sol. Reactive Phosphorus	<0.04	<0.01	<0.04	<0.01

Remarks:

1. * mg/L = mg/L in sediment, mg/L (E) = mg/L in elutriate. mg/L (S) = 4[mg/L (E)] since elutriate was obtained by extracting one part of sediment (by volume) with 4 part of Lake Tahoe water (by volume).
2. TKN and Total Phosphorus were run on elutriate decant "as-is". Nitrate-Nitrogen, Ammonia-Nitrogen, and SRP were run on elutriate decant, filtered through 0.45-μm membrane filters.

cc: John Reuter, Tahoe Research Group, U.C. Davis.

Analysis By: Joyce/Lettice/Nannini

Approved By: Colin A. Zettlei

CALENDAR PAGE 331.70
Date: 02/08/94
MINUTE PAGE 4009
Date: 02/09/94

CHEMAX Laboratories, Inc.
Analytical and Environmental Chemists
EPA Lab ID #NV004
(702) 355-02
FAX (702) 355-08

LABORATORY REPORT

Report To: Lake Tahoe Cruises
Source: Ski Run Marina

Lab Report No.: 11274

Parameter	Results			
	#2A		#2B	
	mg/L (S)*	mg/L (E)*	mg/L (S)	mg/L (E)
Nitrate Nitrogen	<0.08	<0.02	<0.08	<0.02
Ammonia Nitrogen	2.2	0.55	1.0	0.25
TKN	48	12	20	4.9
Total Phosphorus	0.56	0.14	0.68	0.17
Sol. Reactive Phosphorus	<0.04	<0.01	<0.04	<0.01

Parameter	Results			
	#3A		#3B	
	mg/L (S)*	mg/L (E)*	mg/L (S)	mg/L (E)
Nitrate Nitrogen	<0.08	<0.02	<0.08	<0.02
Ammonia Nitrogen	0.64	0.16	0.96	0.24
TKN	22	5.4	21	5.3
Total Phosphorus	6.4	1.6	0.72	0.18
Sol. Reactive Phosphorus	<0.04	<0.01	<0.04	<0.01

Remarks:

Analysis By: Joyce/Lettice/Nannini

Approved By: Colin A. Lettice

Date: 02/08/94
Date: 02/09/94

CALENDAR PAGE	331.71
MINUTE PAGE	4010

992 Spice Islands Drive, Sparks, Nevada 89431 • P.O. Box 21122, Reno, Nevada 89515

EMAX Laboratories, Inc.
Analytical and Environmental Chemists
EPA Lab ID #NV004
(702) 355-02(
FAX (702) 355-08

LABORATORY REPORT

Report To: Lake Tahoe Cruises
Source: Ski Run Marina

Lab Report No.: 11274

Parameter	Results			
	#4A		#4B	
	mg/L (S)*	mg/L (E)*	mg/L (S)	mg/L (E)
Nitrate Nitrogen	<0.08	<0.02	<0.08	<0.02
Ammonia Nitrogen	2.0	0.50	1.2	0.29
TKN	23	5.7	21	5.2
Total Phosphorus	0.48	0.12	1.0	0.26
Sol. Reactive Phosphorus	<0.04	<0.01	<0.04	<0.01

Parameter	Results			
	#5A		#5B	
	mg/L (S)*	mg/L (E)*	mg/L (S)	mg/L (E)
Nitrate Nitrogen	<0.08	<0.02	<0.08	<0.02
Ammonia Nitrogen	0.96	0.24	1.0	0.25
TKN	22	5.5	24	6.1
Total Phosphorus	1.8	0.46	0.06	0.015
Sol. Reactive Phosphorus	<0.04	<0.01	<0.04	<0.01

Remarks:

Analysis By: Joyce/Lettice/Nannini

Approved By: Colin A. Zetter

CALENDAR PAGE Date: 02/08/94	331.72
MINUTE PAGE Date: 02/09/94	4011

992 Spice Islands Drive, Sparks, Nevada 89431 • P.O. Box 21122

Laboratories, Inc.
Analytical and Environmental Chemists
EPA Lab ID #NV004

(702) 355-02
FAX (702) 355-08

LABORATORY REPORT

Report To: Lake Tahoe Cruises
Source: Ski Run Marina

Lab Report No.: 11274

Parameter	Results			
	#6A		#6B	
	mg/L (S)*	mg/L (E)*	mg/L (S)	mg/L (E)
Nitrate Nitrogen	<0.08	<0.02	<0.08	<0.02
Ammonia Nitrogen	0.60	0.15	0.48	0.12
TKN	18	4.5	15	3.8
Total Phosphorus	0.56	0.14	<0.04	<0.01
Sol. Reactive Phosphorus	0.10	0.025	<0.04	<0.01

Parameter	Results				
	#7A		#7B		Lake Water
	mg/L (S)*	mg/L (E)*	mg/L (S)	mg/L (E)	
Nitrate Nitrogen	<0.08	<0.02	<0.08	<0.02	<0.02
Ammonia Nitrogen	3.8	0.95	9.6	2.4	<0.05
TKN	40	10	68	17	0.13
Total Phosphorus	0.88	0.22	0.24	0.06	0.15
Sol. Reactive Phosphorus	<0.04	<0.01	<0.04	<0.01	<0.01

Remarks:

Analysis By: Joyce/Lettice/Nannini

Approved By: Colin A. Zetts

Date: 02/08/94

Date: 02/09/94

CALENDAR PAGE	331.73
MINUTE PAGE	4012

992 Spice Islands Drive, Sparks, Nevada 89431 • P.O. Box 21122, Reno, Nevada 89515

ATTACHMENT G

15:30 John Reuter, SLC Samples Accepted for Chemes Labs 71
Mike Gill, LTC. [signature] 8 June 1993

Ski Run Marina 1987-88 Dredging Project

Lake sediment - soil samples.

1. Sand Bar #1 - A
2. Sand Bar #1 - B.
3. Sand Bar #2-3 - A
4. Sand Bar #2-3 - B.
5. Sand Bar #4 - A
6. Sand Bar #4 - B.
7. Outer Pond - A [topwos mudlayer]
8. Outer Pond - B.
9. Inner Pond - A
10. Inner Pond - B.
11. Mid-site - A
12. Midsite - B
13. Lake Bottom Original

Collected 5 gallons Tahoe Water for elutriate + background

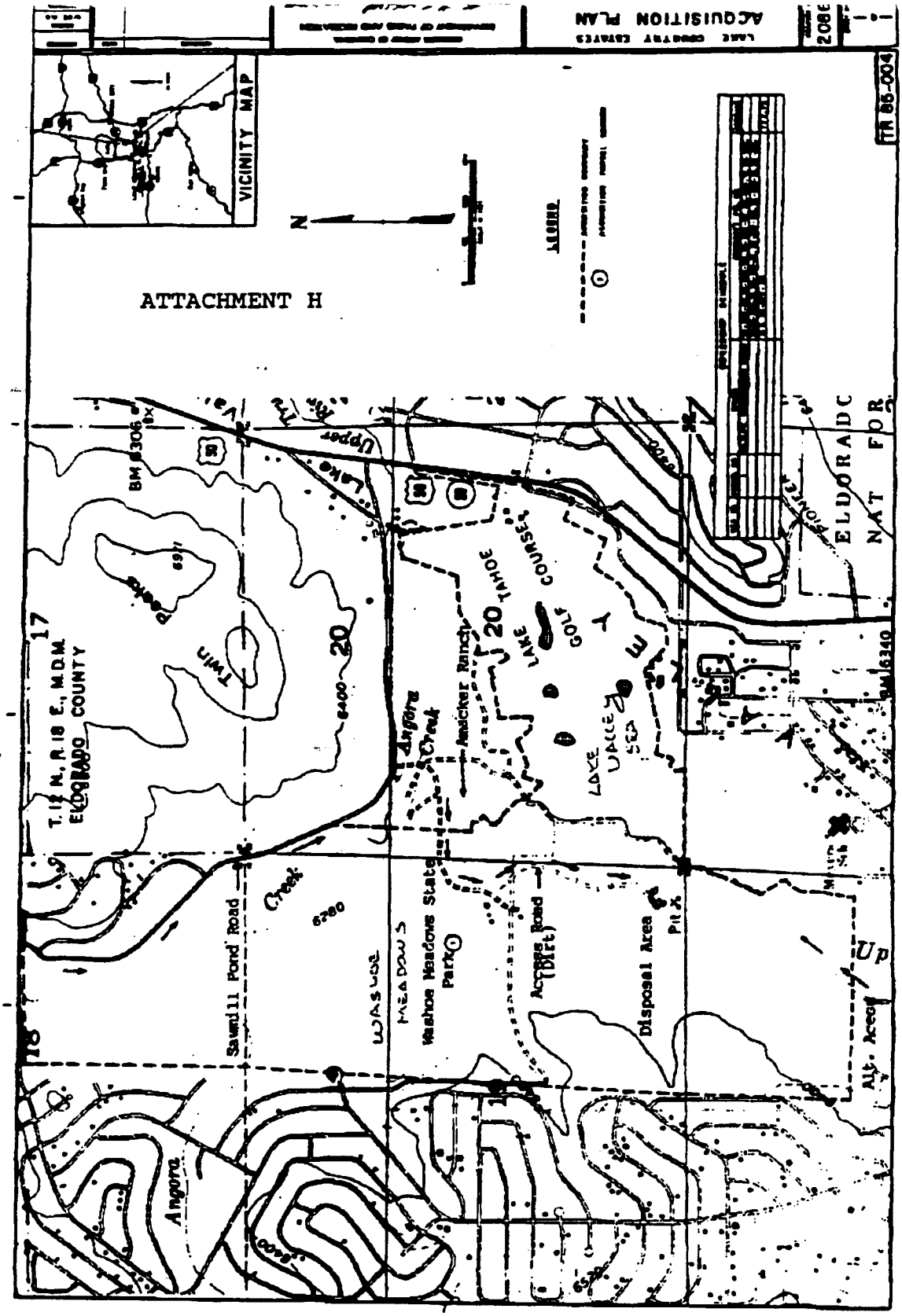
D Standard Elutriate Extraction = 4 part Tahoe H_2O to 1 part Soil. (V:V)
- Shake 30 minutes, settle 2hr, then decant raw H_2O.

D tests. Filtered water = NO_3, NH_4, SRP
Raw Water = TP, TKN.

all bags are Separate samples

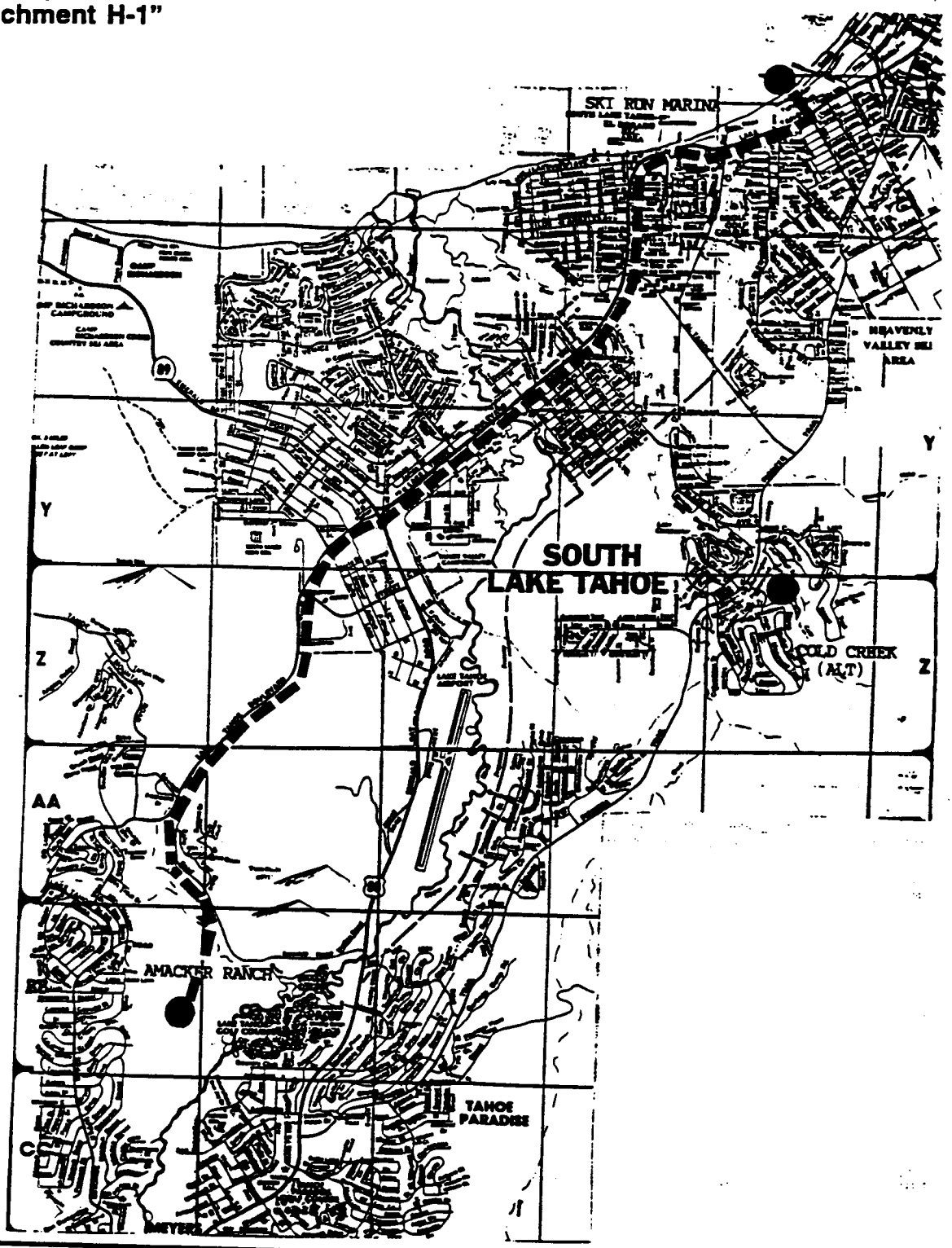
CALENDAR PAGE 331.74
MINUTE PAGE 4013

ATTACHMENT H



CALENDAR PAGE	381.75
MINUTE PAGE	404

"Attachment H-1"



Ski Run Marina
Remediation
Proposal

Aspen Environmental
Planning and Consulting Services
P.O. Box 624608 South Lake Tahoe, CA. 96154
(916) 542-0454

900 Ski Run Blvd.
APN # 27-051-09

Drawn By: Mike Di
Date 6/22/94 Sheet ___ of 4

El Dorado County
CALENDAR PAGE 331.76
MINUTE PAGE 4015

AMACKER CONSTRUCTION
P. O. BOX 7035
SO. LAKE TAHOE, CA 96158

PROPOSAL and CONTRACT

ATTACHMENT I

Date SEPT 22 1994

To LAKE TAHOE CRUISES INC
JOE THIEMANN

Dear Sir:

WE propose to furnish all materials and perform all labor necessary to complete the following:

SUPPLY (1) LOADER CAT 966 SIZE WITH 4YD BUCKET. WT APPROX 43,000 LB. CAT DOZER D-5 TO D-6 SIZE APPROX. WT 32,000 TO 38,000 LB. THESE TWO MACHINE WILL BE USED TO REMOVE + LOAD OUT MATERIAL FROM LAKE. (1) D-5 CAT DOZER TO PUSH + SPREAD MATERIAL AS TRKS HAUL MATERIAL INTO OLD AMACKER PIT. WILL SUPPLY 20 YD TRKS TO HAUL AWAY MATERIAL WILL FURNISH + INSTALL NECESSARY EROSION CONTROL + BARRICADE FENCING. SUPPLY + INSTALL LANDING MATS FOR TR AFFIC ON BEACH. WE WILL NOT BE HELD RESPONSABLE FOR ANY UNFORSEEN BREAKAGE THAT MAY RESULT IN AN OIL SPILL. LAKE TAHOE CRUISES INC WILL FURNISH ANY + ALL INS OR BONDS THAT MAY BE REQUIRED THIS NOR CONSISTS OF THE SKIBUN MARINA DREGED SPOILS REMOVAL PROJECT APPROX 300 YDS TO BE REMOVED.

All of the above work to be completed in a substantial and workmanlike manner according to standard practices for the sum ONE HUNDRED AND FORTY SIX THOUSAND FIVE HUNDRED — Dollars ($ 146,500.00)

Payments to be made ON COMPLETION

as the work progresses the value of ONE HUNDRED per cent (100 %) of all work completed. The entire amount of contract to be paid within TEN days after completion.

Any alteration or deviation from the above specifications involving extra cost of material or labor will only be executed upon written orders for same, and will become an extra charge over the sum mentioned in this contract. All agreements must be made in writing.

Respectfully submitted,

By [signature]

ACCEPTANCE

You are hereby authorized to furnish all materials and labor required to complete the work mentioned in the above proposal, for which _____ agree to pay the amount mentioned in said proposal, and according to the terms thereof.

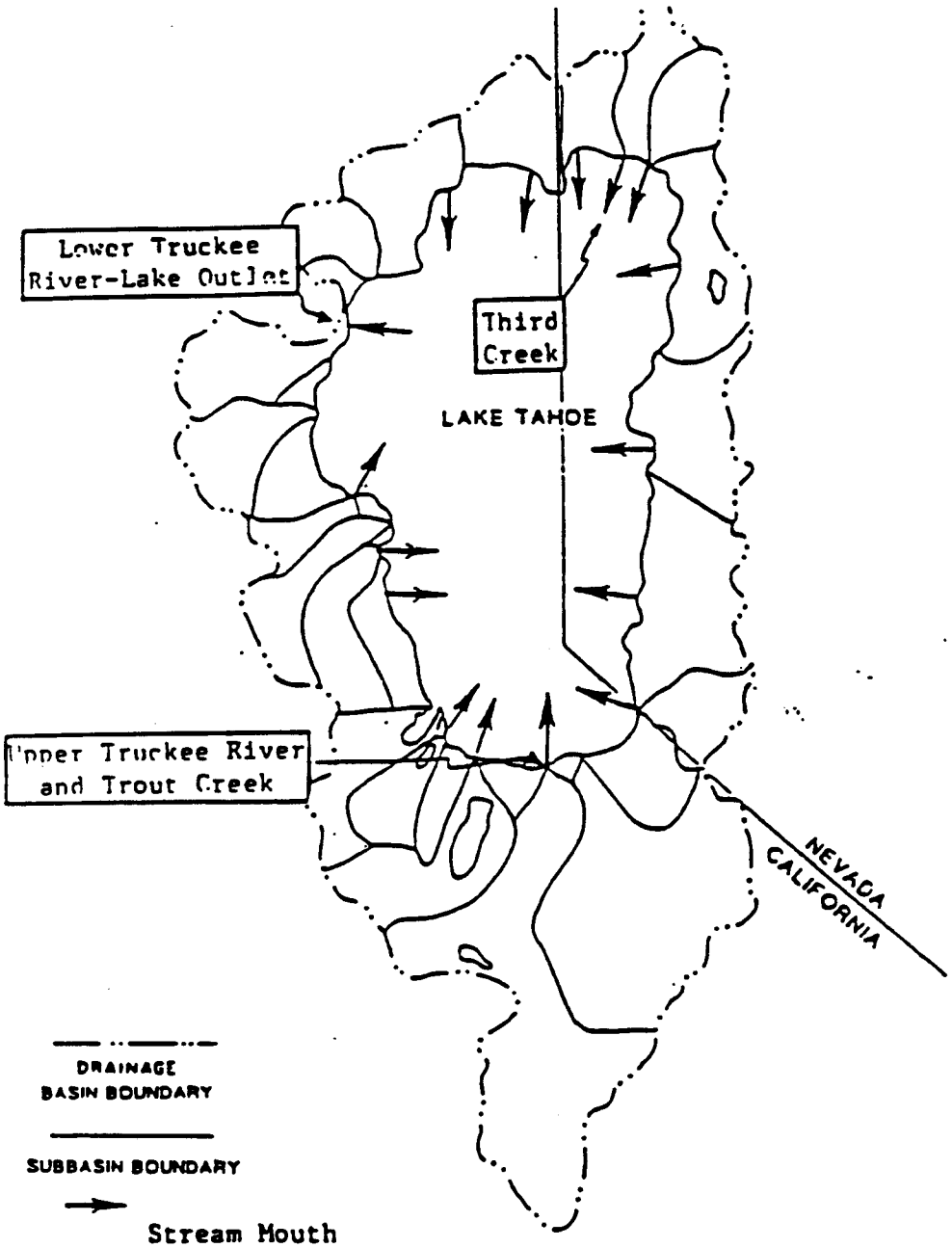
ACCEPTED

Date _____, 19__

SEP-22-94 THU 08:32 AM AMACKER CONSTRUCTION 9165776322 P.02

CALENDAR PAGE	331.77
MINUTE PAGE	4016

ATTACHMENT J



Source: Osborne & Others, 1985

FIGURE IV-20

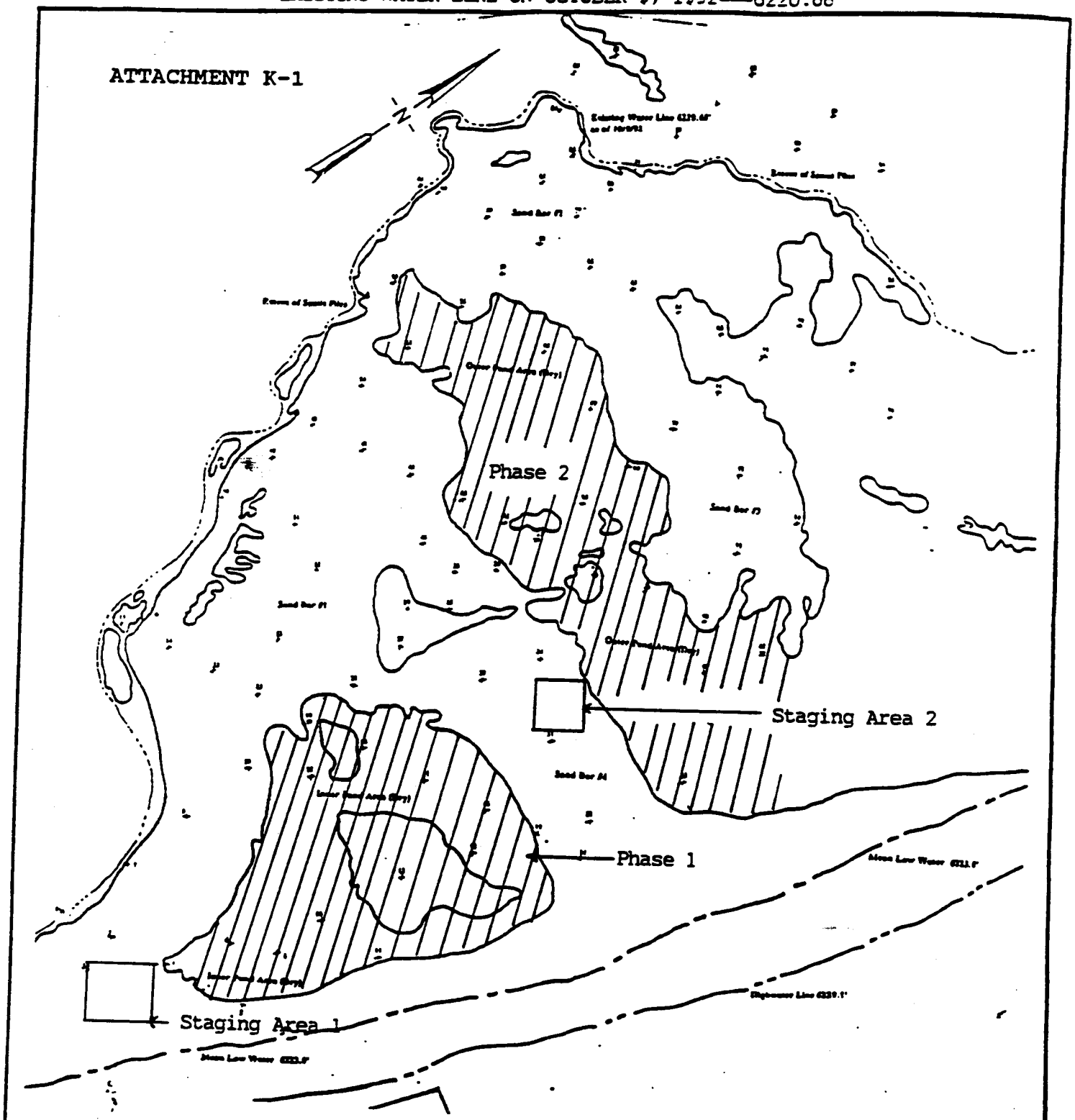
SCALE IN MILES

0 6.7

MAIN SOURCES OF STREAM TRANSPORT SEDIMENT IN LAKE TAHOE

lsa

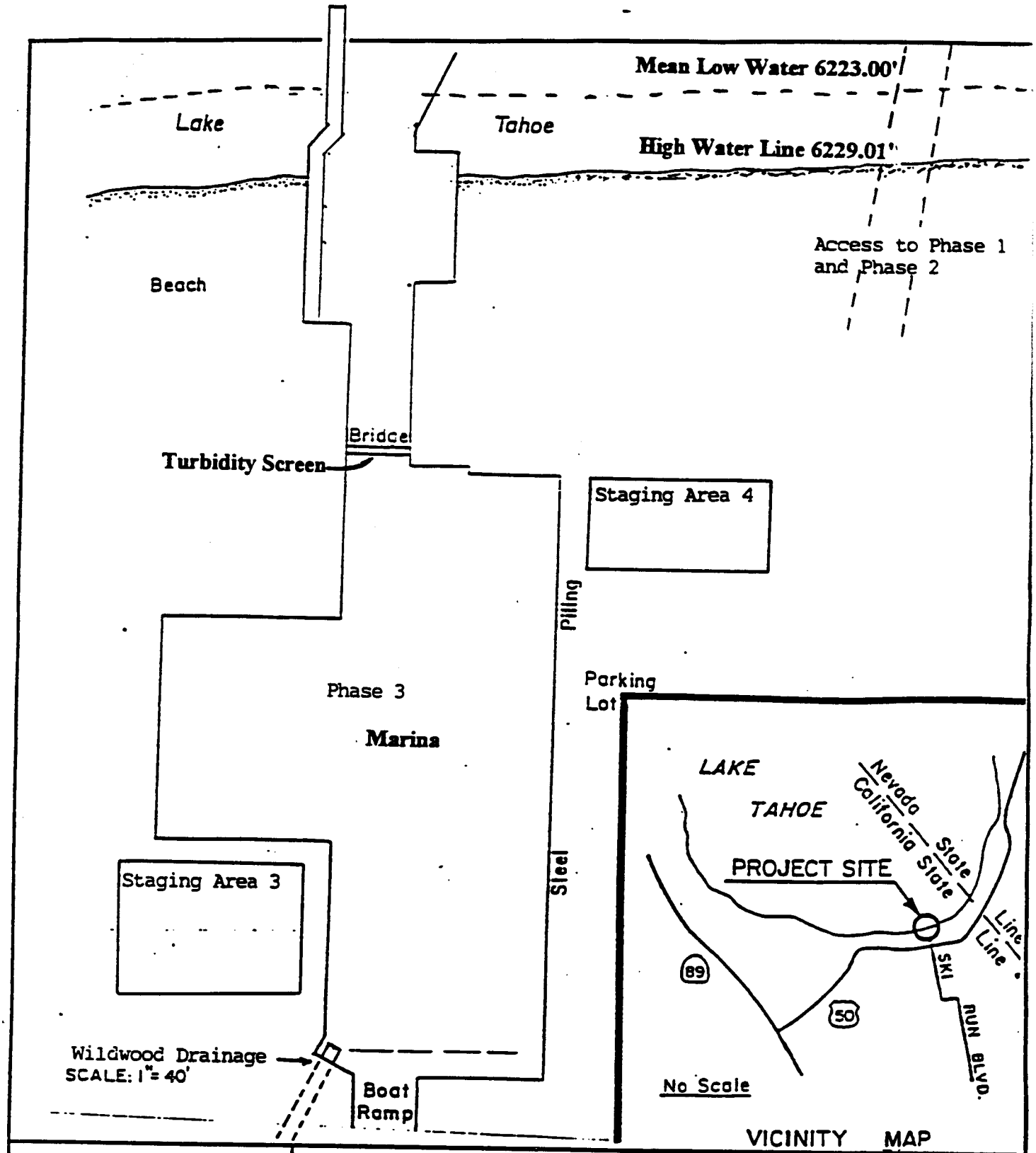
EXISTING WATER LINE ON OCTOBER 9, 1992——6220.68'



Ski Run Marina Remediation Proposal	**Aspen Environmental** Planning and Consulting Services P.O. Box 624608 South Lake Tahoe, CA. 96154 (916) 542-0454	**900 Ski Run Blvd.** **APN # 27-051-09** **El Dorado County** **Drawn By: Mike D** **8/5/94 Sheet of**

CALENDAR PAGE 331.79
MINUTE PAGE 018

ATTACHMENT K-2



Ski Run Marina Remediation Proposal	Aspen Environmental Planning and Consulting Services P.O. Box 624608 South Lake Tahoe, CA. 96151 (916) 542-0454	900 Ski Run Blvd. APN # 27-051-09 El Dorado County Drawn By: Mike 8/5/94 Sheet of

CALENDAR PAGE 331.79a
MINUTE PAGE 4049

DEPARTMENT OF PARKS AND RECREATION
SIERRA DISTRICT HEADQUARTERS
P.O. DRAWER D
TAHOMA, CA 96142
(916) 525-7232

ATTACHMENT L

June 27, 1994

Mr. Mike Dill
Aspen Environmental
Planning and Consulting Services
P.O. Box 624608
South Lake Tahoe, CA 96154

Dear Mr. Dill:

This is to confirm our interest in securing 2700 cubic yards of fines and organic materials for restoration projects at Washoe Meadows State Park. It is our understanding the materials will be made available, and you will provide rough grading, at no cost to the State.

Aspen Environmental will secure all appropriate permits. Final details of the disposal and stabilization of the material needs further discussion between Aspen and the State. If you have any questions, please feel free to give me a call at 525-9523.

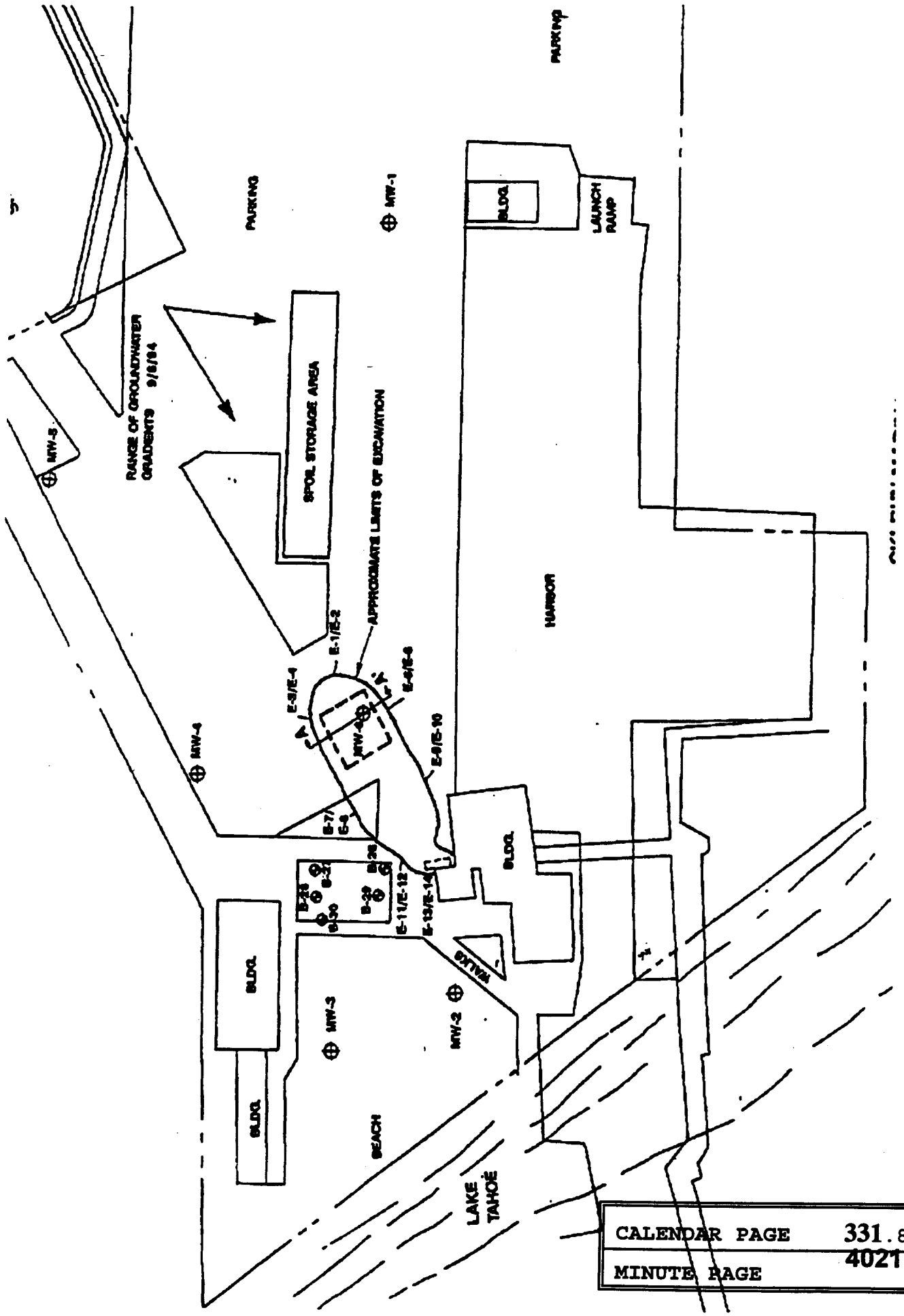
Sincerely,

Robert G. Macomber
District Superintendent

cc: Gary Walter - Resource Ecologist
Grover Sector

CALENDAR PAGE	331.80
MINUTE PAGE	4020

"Attachment M"



Spill Contingency Plan

This spill contingency plan shall be reviewed by all agencies. Once reviewed and approved, copies of this document shall be posted at the marina, on all equipment, at the Ticket Booth, and filed with the Project Manager and Equipment Operator

Equipment:

Boom Kit
Sorbent Pads
Absorb-it Booms
Disposal Container
Protective Gear

Location:

Pier: Boom Kit
Ticket Booth: Sorbent Pads, Absorb-it Booms, Disposal Container and Protective Gear
Equipment: Sorbent Pads, Protective Gear

1. Downed Equipment or leaking Equipment

A. Notify Project Manager, Harbor Master, Agencies
B. Place Proper boom around equipment
C. Identify Problem
D. Once problem is determined, fix problem or isolate.
E. Place Sorbent pads in contained area and absorb all waste
F. After all waste is absorbed, remove pads and dispose of in solid waste container for approved disposal.
G. Remove boom. If boom kit was used - clean boom and return to the proper location. If absorb-it boom was used - dispose of the used boom in the solid waste container.
H. Return any un-used equipment to the boom container or Ticket Booth.
I. Notify Office to call for pick-up of solid waste.
J. Notify all agencies of clean-up.

2. Gas spill -All harbor and equipment operators are to be trained in spill contingency procedures.

A. Fuel Spill

1. Turn off all motorized equipment in the vicinity of the spill
2. Notify Project Manager, Harbor Master, and Regulatory Agencies.
3. Use proper boom kit to contain and spill
4. Place Sorbent pads inside contained area to adsorb fuel
5. Once the fuel is totally absorbed, remove all pads and dispose of pads in solid waste container
6. If using boom kit, remove from area to clean. If using the absorb-it boom, dispose of in the solid waste container.
7. Notify office of hazardous waste pick-up
8. Notify all regulatory agencies of clean-up

B. Oil or Hydraulic Fluid Spill

1. Notify Project Manager, Harbor Master, and regulatory Agencies
2. Determine size and need of spill control. If large, contain with boom, and place Sorbent pads inside to absorb waste. If small, place Sorbent pads directly on waste.
3. Once the waste is totally absorbed, remove the pads and dispose of in the solid waste container.
4. Notify office of solid / hazardous waste disposal.
5. Notify all regulatory agencies of clean-up

C. Onshore or on asphalt spill

1. Follow guidelines above
2. Place absorbing sweeping compound on the spill area to absorb any remaining waste
3. Remove any contaminated earth or sand material
4. Notify all regulatory agencies of spill clean-up

ATTACHMENT O

LIST OF ADJOINING PROPERTY OWNERS
for SKI RUN MARINA REDEDIATION PROPOSAL (27-057-09)

1. 27-040-30
   Tahoe Beach and Ski
   Way Stations Inc.
   3601 Lake Tahoe Blvd.
   S.L.T., Ca. 96150

2. 27-052-01
   El Dorado Improvement Corp.
   1801 Century Park East #1700
   Los Angeles, Ca. 90067

3. 27-051-02, 11, 10
   Michael Phillips
   P.O. Box 1560
   Mora Bay, Ca. 93443

4. 27-061-02, 03
   South Tahoe Redevelopment Agency
   P.O. Box 1210
   S.L.T. Ca. 96156

5. 27-063-16
   Cheveron Inc.
   & TX. Dept. P.O.Box 285
   Houston TX. 77001

6. 29-101-18
   Leonard Werbin
   1962 Daggert Ct.
   S.L.T. Ca. 96150

7. 029-101-19
   Richard Karnan
   John Nemes
   3630 Fillmure St.
   San Francisco, Ca. 94123

8. 29-101-20
   John Whitney
   P.O. BOX 2512
   Stateline, Nevada 89449

9. 29-101-22
   Donald Goodrich
   P.O. Box 4583
   S.L.T. CA. 96157

10. 29-101-23
    Gibbins, Muthew
    28 La Creanda
    Vallejo, Ca. 94590

11. 029-108-01/29-101-21
    Tahoe Meadows Inc.
    1125 Toulumne St.
    Vallejo, Ca. 94590

12. 29-106-07
    Gerald & Susan Trautman
    P.O. Box 58
    Tustin, Ca. 92681

13. 29-106-06
    Margaret Albrink
    Albrink Trust
    817 Augusta Ave.
    Morgantown, WV. 26505

14. 29-101-24
    Kathryn Bedeau
    825 47th St.
    Sacramento, Ca. 95819

SKI RUN MARINA REMEDIAL ACTION

PROJECT DESCRIPTION AND MONITORING PROGRAM

The project applicant is proposing to remove material deposited at the Ski Run Marina (SRM) as a result of the 1987-88 dredging operation which deposited the dredge materials on the lake bottom. Approximately 3000 cubic yards of fines and organics trapped in the pond areas, along with approximately 800 cubic yards of material from the marina will be removed. In addition, recent observations of the project site show that the area immediately to the east and south of the dredging spoils, towards the lakeshore, has been draped by a 1-3 inch layer of brown fines. This resulted from the creation of a quiet area for settling due to the placement of the original dredge materials and is a new condition since the last major field sampling program conducted in late 1992. Removal of these materials will also be part of the project. Another 2700-3000 cubic yards of sand from the original dredge materials, which have formed the existing sand bars, will be rearranged at the site with the goals of removing a safety hazard, promoting nearshore water circulation, assisting littoral transport of sand, and discouraging future build-up of fines and organics in the area.

The proposed project will be conducted in an area of at least 5 acres or more to the extent that fines will be removed from the ponded areas as well as from those locations immediately to the south and east of the dredged spoils (e.g., adjacent to the beach). This project will not involve activities in the waters of Lake Tahoe. The project is limited by the present water's edge and 6223 LTD. The projects consists of three phases. Phase I will be the removal of fines and organic materials trapped in the inner pond area (see site plan). This involves an area of approximately 1.3 acres (56,500 square feet) with an average removal depth of approximately 1 foot, or about 2,000 cubic yards. Once the material is removed, the existing sand bars and island will be redistributed and contoured to improve drainage patterns, enhance water circulation, and improve the natural littoral transport of sand in the area. Phase II will remove the fines and organics trapped in the outer pond area (see site plan). This consists of an area of 1.24 acres (54,000 square feet) with an average removal depth of 0.5 feet, or about 1,000 cubic yards. Following removal of the fines from the outer pond, rearrangement of material from the existing adjacent sand bars will occur. Concomitant with Phases I and II will be the removal of the fines in the nearshore area immediately to the south and east; however, significant regrading will not be done in this area. Phase III will include the removal of muds and sand materials from the inner marina. As proposed, the marina will be dredged to the previously approved maintenance dredging depth, at elevation 6,219. All removed material would be hauled offsite to a TRPA approved disposal location. Presently the project applicant is working with California State Parks to dispose the dredge material to restore the gravel pit at the Washoe Meadows State Park.

Project Background

Ski Run Marina, a commercial recreational boating marina, contains a turning basin and a navigational channel to accommodate the Tahoe Queen tour boat operation and existing concessions operating out of the Ski Run Marina site. The access channel to the docking facilities at Ski Run Marina is approximately 1500 feet long by 100 feet wide and extends into Lake Tahoe from Ski Run Marina in a northerly direction. The channel provides access for the Tahoe Queen which operates from this location.

In 1987/88, the applicant applied for and received permits to conduct maintenance dredging of the Tahoe Queen's navigational channel from the Tahoe Regional Planning Agency and the Lahontan Regional Water Quality Control Board. These permits indicated that a total quantity of 5,500 cubic yards of material could be dredged to a lake elevation of 6219'. The permits allowed the material to be disposed in the Lake east of the marina at the water line. This channel was dredged between early December, 1987 and late February, 1988 and then again between early April, 1988 and early August, 1988.

Necessary permits, however, were not obtained from the United States Army Corps of Engineers or the State Lands Commission to perform this maintenance dredging. As a result, the State Lands Commission and the Attorney General brought suit in 1990 against Lake Tahoe Cruises, Inc., El Dorado Improvement Corporation, the owner of Ski Run Marina, and T. J. Ragan, the dredging contractor who performed much of the work. The lawsuit seeks injunctive relief requiring removal of the dredged material and remediation of the site, damages for trespass and nuisance on state-owned sovereign lands, and monetary penalties for unlawful business practices. The Plaintiff also contends that the Defendant dredged in excess of the quantity and depth authorized in the TRPA and Lahontan Regional Water Quality Control Board permits.

Under the terms of the proposed agreement which the parties have reached in principle in order to settle the litigation, Lake Tahoe Cruises, Inc. would be required to fund, contract for, and perform the dredge spoil remediation project described herein, including the preparation of plans and engineering methods for clean up, removal and regrading of dredge material, and the obtainment of all required regulatory permits and environmental studies necessary to implement the remedial action.

Most of the dredged material from the 1987/88 project were disposed east of the navigational channel, and since that time have not significantly dispersed. The positioning of this material created two isolated and/or semi-isolated areas--an inner poind area (near the shoreline) and an outer pond area (farther offshore) (refer to Attachment D-1). The existence of these areas has created an area where the fines and organic material has accumulated.

The project description that follows is separated into three sections, removal of fine materials, disposal of excavated fine materials, recontouring of remaining dredged material and a detailed work plan.

WORK PLAN - PHASES I, II AND III

Proposed Work Schedule

Details of the proposed work schedule will be determined after the California State Lands Commission Meeting in November, 1994. The work schedule will include:

- dates for installing all BMPs and mitigation measures,
- anticipated weather forecasts,
- the emergency spill contingency plan and its operation,
- training of on-site personnel,
- project weatherization,
- the potential for pumping of wastewater from the inner marina,
- mobilization of the contractor's equipment,
- initiation of Phases I, II, and III monitoring,
- project completion dates,
- final inspections.

Preconstruction Activities

Prior to project initiation, a site inspection will be conducted under the guidance of State Lands Commission to determine changes in site conditions since 1992, and the most appropriate types of equipment to be used under present site and climatic conditions. If site conditions dictate it, specialized equipment capable of working in wet, muddy or snowy conditions will be recommended. This inspection will determine excavation depths and to identify those areas which will require regrading.

After the contractor is selected and all agency approvals have been obtained, initial pre-construction activities and preconstruction surveying will be performed by the contractor. Initial project activities include installation of BMPs and steel matting, preparation of staging areas, installation of pop-fencing and filter fabric fencing, and completion of baseline surveys of the project site and the adjacent beach and pre-construction survey staking. The applicant will provide a California Registered Land Surveyor to perform surveying and staking. The survey staking portion of the project will be done in conjunction with staff from the State Lands Commission. The project applicant will submit a phased staking and grading plan for (a) removal of the fine mud deposits and (b) recontouring of the sand bar areas to State Lands Commission within three (3) days from approval of the project. State Lands will review and comment on the applicant's plan within three (3) days from receipt of the staking and grading plans.

On a date as early as possible following permit approval, there will be a preconstruction site meeting with all the regulatory agencies as well as the project manager, contractor, property owner, and project applicant. The meeting will discuss and review proposed BMPs, the staking of the site, and evaluation of the ingress and egress, review of the Spill Contingency Plan, and

inspection of spill management equipment, a review of all proposed construction equipment, the review of all conditions of approval, and the time frame for each phase of the proposed project.

Given the likelihood of continuing precipitation and winter weather conditions, it is critical to demonstrate that the proposed excavation equipment can perform safely and effectively under wet or muddy conditions. If equipment performance is inadequate, then specialized equipment will be required. At the preconstruction meeting the agencies will be provided with a 30 day weather forecast from the National Weather Station in Reno. Bad weather contingency plans will be discussed and agreed to. If inclement weather is anticipated, agencies will provide specific requirements for site containment These requirements will include but not be limited to the following. The removal of all equipment from the lake and shore area, containment of all staging areas, covering of the excavated pond areas with plastic tarps, implementation of additional BMPs, and a complete site analysis and report submitted to the agencies including a status report and expectations for restart of the project. If it is apparent that stormy weather may continue, the project manager will recommend whether work activities should continue or be postponed. If postponement occurs, all staging areas will be removed from the backshore, stabilization of any exposed areas will be performed as quickly as possible, and final inspections will take place. Stabilization and inspections will also be performed at the disposal location.

Construction Activities (Phase I and II)

Removal of Fine Materials

The proposed removal of the fines and organics trapped in the two pond areas, the lakeshore area immediately to the south and east of the project, and marina, will occur in two phases. Phases I and II, will remove trapped fines and organics from the inner and outer pond area and areas adjacent to the beach and redistribute the remaining sand bars on the lake bottom. Phases I and II are proposed to be conducted in the late fall 1994, prior to that time when rain, snow or inclement weather makes the project unfeasible.

The removal process will consist of using either conventional equipment, including a rubber-tired front end loader and water-tight dump trucks or equipment specialized for operation in wet and muddy environments. This later precaution for specialized equipment was made necessary by the early arrival of winter precipitation conditions in November, 1994 before project approval was received. As of November 7, 1994, both the inner and outer ponds contained standing water.

An equipment feasibility demonstration will occur prior to project initiation to assure all parties that the proposed equipment and approach will work, given the present and possibly adverse site conditions. The State Lands assigned project manager will supervise the depth to which the equipment operator will scoop out the fines and organics from the inner and outer ponds, marina, and other locations (see site plan). The project manager will ensure that there is always a sufficient buffer between the removal depth and the natural lake bottom anticipated to be at least 4 inches. The material will be placed directly into the water-tight dump trucks and transported to an approved off-site location.

There will be two staging areas for the dredge materials removal operation. The proposed Phase I staging area will be established just below the high water line east of the SRM pier and just to the west of the Tahoe Meadows property line. The proposed Phase II staging area will be immediately east of the outer pond area at approximately 6,222 feet, on exposed lakebed and dredge materials. Steel mats will be placed in the shorezone area for the water-tight trucks to drive on during the staging process including the loading of the fine dredge materials. Turbidity screens and/or hay bales will be placed around all three staging areas as a sediment/turbidity Best Management Practice (BMP) or as required by TRPA, Lahontan RWQC and other responsible agencies.

Every effort will be made to stay off the beaches and keep construction vehicle traffic on the lake bed to a minimum. The project manager will have complete control over the movement of construction equipment at the project site to avoid unnecessary activity in this area.

If the inner and outer pond areas are not dry by the time final permits are received, the project applicant will coordinate with the project manager to dewater the ponds prior to material removal. Depending on lake level, dewatering may include building a temporary sand bag dam on the eastern side of the outer pond to isolate it from the main body of Lake Tahoe. The project applicant proposes to pump any ponded water into a water truck for removal. All water removed will be disposed in accordance with requirements of Lahontan RWQB. The justification for the proposed dewatering is that any proposed removal of materials under wet conditions will be environmentally more demanding than under dry conditions. Specialized equipment may be necessary for excavation and land grading under wet and muddy conditions.

Disposal of Excavated Fine Materials

The fines and organic materials excavated from the ponds and immediate adjacent areas will be transported in water-tight trucks to a site approved by TRPA. In order to reduce the vehicle miles traveled, the preferred site would be one that is close to the marina. Presently, the Washoe Meadows State Park gravel pit located off Sawmill Pond Road in South Lake Tahoe is being evaluated as a possible disposal site. Restoration of this site is being considered by California State Parks and the fines and organic materials removed from the project area would greatly enhance revegetation efforts of that site. Bob MacComber with California State Parks has written a letter of agreement for accepting the excavated materials. Other options are being evaluated in case there are problems with the Washoe Meadows State Parks site. Other possible disposal sites are being considered by the California Tahoe Conservancy and the South Lake Tahoe Redevelopment Agency.

Recontouring of Remaining Dredged Material

To fill in the depressions resulting from the removal of the fine materials and to recontour the site, the project applicant proposes to utilize the dredged material which currently forms the existing sand bars. This is intended to accomplish two main objectives. First, it will provide a

lake bottom contour designed to minimize further entrapment of fine materials. Second, recontouring of the sand bars will be an initial step towards re-establishing pre-project conditions of nearshore currents and littoral sediment transfer.

Following the removal of the fine organic materials, project approved equipment (based on equipment demonstration and recommendations from State Lands Commission and the Office of the Attorney General) will be utilized to recontour the remaining dredged materials into a more stable configuration. Regrading includes filling and compaction, where appropriate, in the inner and outer ponds where materials are removed and recontouring the remaining materials. After pre-staking and excavation of the fines are completed, the project manager will determine the most appropriate way to fill in the pond areas, layering if necessary to promote compaction. Compaction techniques will include the use of water, mechanical equipment, a portable vibrator, and the appropriate blending methods for the material. For blending purposes, material will be sampled from the adjoining properties to determine the appropriate blends to ensure necessary continuity and equal density in the backshore, and to avoid future erosion.

A final post recontouring survey of the site will be required to ensure the appropriate contours have been achieved, and to provide documentation of project completion. Approximately one year from project completion, representatives from the lead agencies will perform a site evaluation to determine project effectiveness, recontouring benefits, and environmental impacts. If necessary, and at the request of the agencies, additional surveys of the site may be required. The final configuration of the project site after regrading will be subject to approval by State Lands Commission and will consider, to the extent possible, wave climate and littoral circulation processes.

Construction Activities - Phase III

Removal of sediment from the inner Ski Run Marina will not be done when active drainage from the surrounding areas is occurring. If any water remains in the marina, it will be disposed of in accordance with Lahontan regulations. The marina will be inspected two weeks prior to material removal for standing water. Turbidity screens will be installed under the SRM bridge prior to Phase III initiation. The project manager will be present at all times during the removal operation to ensure that the removal is consistent with the maximum approved removal depth of 6,219 feet, and to ensure that all permitting conditions are followed. For the material removal, a backhoe or other State Lands Commission approved equipment will operate on the east side of the marina in the parking lot. The material in the southeastern portion of the marina will be removed first, placed in trucks, and hauled to the approved disposal site. Upon completion of the excavation of materials from the eastern portion of the marina, removal of material from the western side of the marina will commence. Upon final cleanup of the marina, an inspection will be requested for the removal of the turbidity screens.

Final Cleanup

The final cleanup of the site will commence immediately following recontouring of the sand bars or the termination of the project. Final cleanup will consist of the removal of the staging areas, removal of the steel mats, raking of the beach and staging areas, removal of the turbidity screens, other MBPs, and cleanup of other affected areas designated by the project manager. Once the final cleanup is completed, final inspections will be requested and conducted as soon as possible. All incomplete work or clean up activities will be noted and attended to immediately.

Mitigation Measures

The following mitigation measures are incorporated into the project to reduce significant or adverse environmental impacts to an acceptable level.

Earth Placement of steel mats in the shorezone where truck traffic is proposed. Actual placement of steel mats will be coordinated by project manager. The steel mats are Army Landing mats that interlink and are anchored to the lakebed. They are approximately 18' x 14' in size. They will also be used in staging areas on the beach. Temporary stockpiles will be covered with plastic tarps at the end of each work day. Stockpiling of material for longer than two days without the approval of the project manager is prohibited.

The material disposal site will be rough graded to California Department of Parks and Recreation specifications in conjunction with proposed restoration plans for the Washoe Meadows State Park site.

Site Cleanup and Restoration of the Remediation site and Material Disposal site, will be completed as described on Page 11, of the Proposed Negative Declaration prepared by the State Lands Commission (October 1994).

Water Quality Turbidity screens, hay bales, filter-fabric fencing, and other Best Management Practices will be used as required; water-tight trucks will be used to transport sediments removed from beach and inner marina areas.

Groundwater test wells at the Ski Run Marina site (depicted on Attachment M) will be protected by the use of barricades, pop-fencing and orange ribbon.

A Spill Contingency Plan (refer to Attachment N of the Proposed Negative Declaration) will be implemented to minimize impacts relating from equipment fuel/petroleum product leaks/spills.

To minimize the impact of construction vehicles tracking soils and material onto the roadways, the use of steel army mats will be used in the staging areas. Lake Tahoe Cruises will provide a truck washing area in the southwest corner of the Ski Run Marina Parking lot to remove any sand or earthen materials from the trucks. Runoff from truck washing would be contained in an adjacent previously-disturbed but moderately vegetated area.

At the entrance to the proposed Washoe Meadows State Park disposal site, the Amacker Construction Company has a truck washing area for removal of earthen material from tires and hulls of the vehicles. If necessary, the access roads into the Washoe Meadows State Park may also be watered using a 4500 gallon water truck. There is no grading proposed for the dirt access road to Washoe Meadows State Park.

Testing will be done of inner marina water quality for petroleum products, heavy metals and other toxics as required by Lahontan Regional Water Quality Control Board and the Tahoe Regional Planning Agency prior to disposal. Proposed disposal methods, pending water quality testing, have been described in Phase III Operations, of the Proposed Negative Declaration. Any further water quality mitigation measures specified by other agencies will be satisfied.

Traffic Traffic direction will be provided, if necessary, in the Ski Run Marina Parking Lot.

Public Safety Public safety signs and fencing will be provided around all work areas and the remediation site until the project is completed.

Air Quality Dust abatement involving the use of a 4500 gallon water truck containing non-chlorinated water will be on standby for use at the extraction and disposal sites.

Vegetation - Disposal Site A grassy area located on the Ski Run Marina property which will be affected by construction vehicle access will be replaced with sod upon completion of the project.

Restoration of impacts will be made as directed by California Department of Parks and Recreation, if any, to meadow area presently under restoration.

Proposed Project Monitoring

The State Lands Commission project manager, or its designated representative, would be present at all times during the material removal and redistribution of material to ensure that the conduct of the project is consistent with the Ski Run Marina Project Description and Monitoring Program.

Prior to project initiation, project baseline conditions on-site and along the adjacent beaches will be documented by visual inspection and ground photography providing coverage from Timber Cove pier to the west and Lakeside Marina to the east. Local site surveys will be conducted to cover the project affected area. Upon project completion, similar documentation and surveying will be conducted. Annual photography and selective surveying is recommended for at least a five-year period following project completion.

Water quality sampling will be performed in the inner marina both before and after sediment removal. Other water quality monitoring, as required by Lahontan RWQCB and TRPA will be performed.

A Detailed Work Plan will be finalized in cooperation with the United States Army Corps of Engineers, Tahoe Regional Planning Agency, Lahontan Regional Water Quality Control Board, California Department of Fish and Game, City of South Lake Tahoe, and South Tahoe Public Utilities District.

Project Checklist Below is a progress checklist for use of the project manager during monitoring of the project.

A. Verification in insurance and performance bonds.
B. Verification of mitigation measures in place and performing to agency standards.
C. Verification of construction hours. (8:00 am - 6:00 pm)
D. Quantity of material and number of truckloads each work day.
E. Documentation of the use of water trucks including estimated water volume.
F. Verification of construction/excavation within established lateral/horizontal limits.
G. Verification of control points established for depth of removal.
H. Verification of control points established to ensure desired reconfiguration.
I. Verification of compaction and fill placement techniques used.
J. Verification of hour - end of daily construction.
K. Securing of material removed from the site daily, including rough grading.
L. Management of pedestrians and public access during and after working hours.
M. Verification of safety plan.
N. Storage and containment of all fuels and lubricants off site.
O. Review of proposed management procedures for problems that arise from excavation, transportation, or grading.
P. Daily work and problems reports shall be submitted to all regulatory agencies including all information listed above.
Q. Verification of emergency spill plan and inspection of equipment necessary to perform spill management.