PROPOSED FINAL

PROGRAM ENVIRONMENTAL IMPACT REPORT

ON

GRAVEL REMOVAL FROM THE LOWER MAD RIVER

PART 2 OF 2 - COMMENTS / RESPONSES

Humboldt County, California
SCH #92083049

Humboldt County
Board of Supervisors

Stan Dixon ..... District 1
Roy Heider ..... District 2
Julie Fulkerson ..... District 3
Bonnie Neely ..... District 4
Anna Sparks ..... District 5

Prepared as Required by the Mad River MOA
Under the Direction of the Humboldt County Board of Supervisors
through the Assistance of Douglas Jager, PhD.

Prepared for: **Humboldt County Planning & Building Department**
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13.0 COMMENTS AND RESPONSES TO RECIRCULATED DRAFT PEIR

Pursuant to CEQA Guidelines Section 15132, the following is a list of persons, organizations and public agencies that commented on the recirculated Draft PEIR, SCH 92083049.

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Comment Letter No. 1

Person, Organization or Public Agency making comment
Dun & Martinek, Attorneys at Law
Bill Davis
730 Seventh St.
Eureka, CA 95501

Comment ID Number	Response
1-1	Comment noted. Response: The operators, through their attorney have agreed to amend their reclamation plans and incorporate the EIR mitigation measures into their mining operations for the first five year review period described in the draft EIR.
1-2	Comment regarding Mit-1 accepted. Response: The following statement has been inserted into Mit-1. Previously, this condition was implicit in Mit-1. It is now expressed explicitly. The SDRC will review all input, from operators, as well as others and apply information gained to the annual review, planning, and reporting procedures.
1-3	Comments noted. Response: The rest of this letter contains information that should be reviewed and evaluated by the SDRC. No additional response is required herein.

Comment Letter No. 2

Person, Organization or Public Agency making comment
Planning Division of the Planning & Building Dept.
County of Humboldt
Thomas D. Conlon, Director
3015 H Street
Eureka, CA 955001-4484

Comment ID Number	Response
2-1	Comment regarding project description accepted. Response: This comment is concerned with the clarity of the project description. Some changes have been made in the noted portions that will clarify the project description and the preferred alternative. Readers will still have to differentiate between text that is describing what the project is, what the preferred alternative is, what the project and the preferred alternative are expected to accomplish, and how the project and preferred alternative will be implemented.
2-2	Comment accepted. Response: This is primarily a legal issue; however, I cannot resist rising to the bait. Each of the approved extraction sites has an approved reclamation plan. Revised reclamation plans may have to stand the test of their own environmental analysis. If they conform to the EIR and preferred alternative, as developed herein, they may qualify for a negative declaration. The adaptive management and monitoring program is described in Section 6. What seems to bother some people is that this is a continuous, time-sensitive, flexible adaptive program that is difficult to review under CEQA. It is not too surprising that certain planners, politicians, managers, lawyers, accountants, and others are having trouble with the "Adaptive Management" approach that is proposed for this project. It may be that CEQA, although a most comprehensive piece of legislation, is inadequate to deal with the complexity of this approach. If so, that is a fault in the legislation, not in the concept of adaptive management. If CEQA is not inadequate in this respect, it certainly is not readily adapted to this approach. A typical discrete project, such as a shopping mall or a housing subdivision has a discrete beginning, a fixed plan with well-defined, often codified standards, a definite site, an exact grading plan, an identified set of environmental impacts and mitigation measures, and a discrete end. Enforcement is simple. Occupancy permits can be withheld until all specified required conditions are met to the satisfaction of the lead agency. A watershed or river management project is immediately recognized as being different and much more complex. In most watershed projects we are dealing with forces of nature in which there is a good deal of uncertainty and risk that is not found in simple, discrete planning problems and projects.

Adaptive watershed and river management planning is an ongoing continuous complex iterative process with information concerning a changing environment, emerging problems and the results of past actions constantly being fed back into the project planning process. The resulting information is used to suggest incremental changes in the ongoing project. When incremental changes in the ongoing project are made there may also be a need for changes in the monitoring program. These are not just the ideas of this writer. The proposal for adaptive management came out of the Mad River Scientific Committee and much the above discussion should be credited to ideas found in modern texts such as Hydrology and the Management of Watersheds by Brooks, Ffolliott, Gregersen, and Thames (1991).
In closing, the principle, if not all the details, of the adaptive management concept described in this EIR seems to have the support of many, but not all, who have responded to this EIR. Postponement of the adaptive management plan seems out of the question.

2-3 Comment noted.

Response: Again this is primarily a legal or strategic question rather than an environmental issue. But it cuts to the heart of adaptive management. Refer to PRC 2207 (a), (b), and (c) for information on annual reporting requirements. If a comprehensive reclamation plan exists will a CEQA document be required if the acreage disturbed by surface mining changes from one year to the next? if the volume extracted changes from one year to the next? or, if the river shifts to the right? or to the left? Perhaps, the question should be rephrased: Under what conditions will annual incremental changes in mining and monitoring strategy be subject to CEQA?

2-4 Comment accepted.

Response: The summary section has been modified accordingly.

2-5 Comment accepted.

Response: Here again we are dealing with uncertainty and the forces of nature. Rarely can we be 100 percent certain of anything. The statements have been reevaluated and revisions have been made in an attempt to comply with your comment.

2-6 Comment accepted.

Response: I don't know the answer to your question. probably public works. Which department will be held accountable if the levee fails due to a lack of maintenance and under what authority can they choose to ignore the risks and uncertainties associated with having a levee alongside an aggrading or degrading river? If not Humboldt County, then what other agency?

2-7 Comment noted.

Response: The confusion between the project and the preferred alternative has been clarified.

2-8 Comment noted.

Response: These items are discussed in Section 6.

2-9 Comment noted.

Response: The alternatives section has been revised; although it remains different then the original draft.

Comment Letter No. 3

Person, Organization or Public Agency making comment
State Lands Commission
Environmental Services Section
Mary Griggs
1807 13th Street
Sacramento, CA 95814

Comment ID Number	Response
3-1	Comment noted. Response: Comment concurs with the EIR. No response required.
3-2	Comment noted; Response: Temporary summer bridges are required across many Northcoast rivers, for a variety of reasons. The flow conditions and navigability of the Northcoast rivers vary tremendously during the year. During the low-flow summer period portaging through shallow water and around obstacles has occurred throughout history. Therefore, the potential need to portage around a few bridges over several miles of river during the low-flow period is not considered a significant adverse impact. (There were no more than two summer bridges in the project area during 1993.) The County cannot control the size of the boats used nor the skills of the boaters. Consequently, the risk of being injured while trying to navigate under a bridge is considered to be an unavoidable potentially significant adverse impact. Because neither the County, the operators, nor your office can control the size of boats, we cannot respond to your request for "adequate" clearance. For these reasons, gravel operators installing summer bridges will be required to develop a safety plan and to post notices describing the hazard, upstream from each bridge site. It is appropriate that these requirements be incorporated in their revised reclamation plans.

Comment Letter No. 4

Person, Organization or Public Agency making comment
Department of Conservation
Deborah L. Herrmann
Environmental Program Coordinator

Comment ID Number	Response
4-1	Comment accepted. Response: Mit-2 has been modified as per your advice.
4-2	Comment accepted. Response: Mit-3 has been clarified as per your suggestion.
4-3	Comment accepted. Response: Mit-6 has been modified as per your advice.
4-4	Comment accepted. Response: Mit-7 has been clarified as per your suggestion.
4-5	Comment accepted. Response: Your comment suggests a change that would mix the impact statement with the mitigation. Mit-1 is described in detail in Sections 2.3 and 5.1. Abbreviated annotated references to Mit-1 are made throughout the impact statement portion of the document. Statements directing the reader to Sections 2.3 and 5.1 have been added where the abbreviated references have been made. Mit-1 specifies that various extraction methods and prescriptions will be considered and used. The SDRC, with assistance from CDFG and other experts will have to interpret the significance of extraction impacts on fish.
4-6	Comment noted. Response: Mit-1 specifies that various extraction methods and prescriptions will be considered and used. The SDRC, with assistance from CDFG and other experts will have to interpret the significance of extraction impacts on fish.
4-7	Comment accepted. Response: Mit-6 has been modified accordingly.
4-8	Comment noted. Response: Mit-1 specifies that various extraction methods and prescriptions will be considered and used.
4-9	Comment accepted.

Response: Mit-7 has been modified. See comment 4-4.

4-10 Comment accepted.

Response: The following statement was added with regard to Mit-1, mitigating impacts Wild-1 through Wild-7. Significance as related to impacts regarding wildlife will be determined by the SDRC, during annual wildlife surveys and in consultation with the CDFG and other experts.

4-11 Comment accepted.

Response: See response 10. The changes in response 10 apply here.

4-12 Comment accepted.

Response: Mit-7 has been clarified as per your suggestion.

4-13 Comment noted.

Response: Watering roads for dust abatement is a common practice. No performance standards are known at this time. Watering at least twice per day will help alleviate the potential problem. It may be possible to entice a graduate student to research this subject more thoroughly.

4-14 Comment accepted.

Response: Mit-7 has been clarified as per your suggestion.

4-15 Comment noted.

Response: No change warranted. The Mad River is a dynamic ecosystem. There are many reasons for monitoring. Mitigation and monitoring will be done on a continual basis. Monitoring must come before mitigation. Without monitoring, the SDRC will not know what vegetation to avoid, where to apply offsite revegetation, and what other possibilities may develop. After mitigation, monitoring will be required for compliance and effectiveness.

4-16 Comment noted.

Response: No change is warranted. The first sentence of Mit-9 is inclusive. The second sentence is redundant but will be left for emphasis.

4-17 Comment noted:

Response: Refer to response 4-15 for partial response. Because the river is a dynamic system problems and solutions emerge over time. Not all of the possible mitigation sites are known. Obviously, if access is denied to a particular piece of property, that revegetation will not be possible under this program. Other areas will have to be used for mitigation.

4-18 Comment noted.

Response: Mit-1 contains much more than just monitoring. It is the guts of adaptive management. Please refer to Section 2.3 for a detailed description of Mit-1 and Section 6 for operational details. Significance and threatened are relative terms that will have to be interpreted by the SDRC and, depending upon the specific resources, with the help of other experts.

4-19 Comment noted.

Response: No response required at this time. Humboldt County will submit all required reports.

4-20 Comment noted.

Response: No response required at this time.

4-21 Comment noted:

Response: The decision to establish a MRTAC will be the responsibility of the County Board of Supervisors. If such a committee is established, the Board should also establish the role of the MRTAC.

Comment Letter No. 5

Person, Organization or Public Agency making comment

Department of Transportation
Cheryl S. Willis, Chief
Transportation Planning Branch
P.O. Box 3700
Eureka, CA 95502-3700

Comment ID Number	Response
5-1	Comment accepted. Response: The concept of setting red line or red zone has been discussed many times and site-specific structure-related red lines will likely be designated by the SDRC. Most people agree that these red zones have been reached at the Highway 101 bridges, Highway 299 bridges, HBMWD surface water intake, and at the North Coast Railroad Authority bridge. If the SDRC does not adopt this concept in their prescriptions, members of the CCL can ask the SDRC to formally do so. The SDRC would then be required to review and respond to those concerns and requests.
5-2	Comment accepted. Response: The key word was excessive aggradation. However, you raise a good point. The text has been revised to emphasize your point.
5-3	Comment accepted. Response: Change has been made.
5-4	Comment accepted. Response: Change has been made.
5-5	Comment accepted. Response: Change has been made.
5-6	Comment accepted. Response: The following statement has been inserted in the annual extraction planning process (located on page 194 in the draft PEIR) If the SDRC should consider any extraction method which would excavate below the depth of the thalweg within one mile upstream or downstream of a State highway structure, Caltrans will be notified and invited to participate in and review the prescription and prescription planning process.
5-7	Comment accepted.

Response: The following paragraph has been added to the monitoring section (located on page 198 in the draft PEIR).

The vertical datum used for surveying, planning, and monitoring on the Mad River will be the North American Vertical Datum 1988 (NAVD 88).

Comment Letter No. 6.

Person, Organization or Public Agency making comment
Department of Fish & Game
Richard Elliot, Regional Manager
601 Locust Street
Redding, CA 96001

Comment ID Number	Response
6-1	Comment accepted. Response: Because fish use of the river-extraction area varies seasonally the timing of the extraction operations is important. Timing is now covered primarily through the 1603 process. However, Mit-1 specifies that various extraction methods and prescriptions will be considered and used. These prescriptions include timing. The SDRC, with assistance from CDFG and other experts will have to interpret the significance of site-specific extraction prescriptions on fish and respond accordingly.
6-2	Comment accepted. Response: Your ideas have been explicitly incorporated into Mit-1 under the discussion of impact Veg-1.
6-3	Comment accepted. Response: Your concerns have been incorporated into Mit-3
6-4	Comment noted. Response: The Mad River is a dynamic ecosystem that is constantly being influenced by the forces of man and nature causing what humans to perceive as problems which must be monitored to periodically emerge and disappear. An issue may appear during a winter storm that may require daily monitoring. Six months later the "problem" may have dried up and only require an annual follow-up. Consequently it would be impossible and totally speculative to attempt to describe all of the monitoring that may be required during the next five years. However, there are some issues that we know must be addressed. Consider channel morphology. We know some combination of river profiles, river cross sections, river maps, river photographs, computer assisted drafting and computation models, ground surveying, aerial surveying, DTM's, EDM's, GPS, and GIS will be used. No doubt, new technology will be introduced during the first five-year period. And, if history repeats itself, some agencies may modify their monitoring requirements on a nearly annual basis. Recognizing the above uncertainties an expanded monitoring section has been provided.
6-5	Comment accepted. Response: The subjects of enforcement, authority, and responsibility are discussed in an expanded Section 6.

Comment Letter No. 7.

Person, Organization or Public Agency making comment
Humboldt Bay Municipal Water District
Royal E. McCarthy, President
Board of Directors
828 Seventh St.
Eureka, CA 95501

Comment ID Number	Response
7-1	Comment noted. Response: This is not a significant environmental point. However, staff appreciates your support for an interim 5-year management program.
7-2	Comment noted. Response: This is not a significant environmental point. Staff is certain that the SDRC will contact you regarding a cooperative monitoring program.
7-3	Comment noted. Response: This is not a significant environmental point. There are many pieces to the puzzle, including channel morphology data, that may not become available until late into the low-flow season. More than likely, hard data on channel morphology in the narrow water district reach will be collected late in the season while extraction is in progress elsewhere on the river. The SDRC will then use that information on river condition and trend to analyze the effects of management and flow on the river ecosystem and adjust future management decisions based on that input. Obviously, site specific detailed extraction plans can be made only after the water level has receded. Lastly, when significant information is lacking the SDRC will proceed with conservative prescriptions.
7-4	Comment noted. Response: The SDRC will be striving to provide and maintain a river channel that will provide the normal beneficial uses of a river. Staff believes the SDRC will begin by establishing red zones at significant structures such as bridges and the water district surface water intake. Given the available information, it is unlikely that the SDRC will establish red zones or write prescriptions that will encourage further degradation at these structures.
7-5	Comment does not raise a significant environmental point. Response: This is really a policy decision that must be made by the Board of Supervisors or under other authority at the lead agency. Staff has proposed options but the final EIR is written with the understanding that the Board of Supervisors may request the formation of a MRTAC committee and that if they do so they will also have a specific set of charges for that committee. It is also understood that the Board of Supervisors may elect to not appoint a MRTAC at this time.

7-6 Comment noted.

Response: This is not a significant environmental issue but it is an important issue that has been raised in many letters. Enforcement, is described in an expanded Section 6. Furthermore, we have a statement from the operator's attorney stating that the operators will incorporate the PEIR mitigation into their amended reclamation plans and mining operations for the first five years of this interim management program. See Comment 1-1. There is the possibility of preparing a 5-year MOA if the Board of Supervisors and other concerned parties so desire. Furthermore, progress is being made towards developing a county-wide mining ordinance which may become effective during the next five years. All concerned parties should lobby for appropriate enforcement language in that ordinance. Beyond that, the county will eventually have to address a county-wide gravel management plan.

7-7 Comment noted.

These are not major environmental points but they are reasonable questions which may not have satisfactory answers at this time. The budget issue is a concern that will most likely be resolve resolved by the Board of Supervisors. The budget may have to be prepared in a consultative atmosphere and ultimately approved by the operators. However, a developing County ordinance may also be able to address and resolve

If the operators or others do not like the recommendations of the SDRC a consultative process or public review may be able to resolve the differences. Appeals through normal planning department procedures may be the last resort.

7-8 Comment noted.

This is not a major environmental issue. Actually the preferred alternative is a flexible resource management plan based on monitoring resource condition and trend. It may appear vague but it is very effective in the hands of objective, professionals. The fact that it is flexible will allow incremental refinements to be made continuously. Refer to response 2-2 for more discussion on this subject.

Comment Letter No. 8

Person, Organization or Public Agency making comment
Sierra Club
Redwood Chapter North Group
Susie Van Kirk
P.O. Box 238
Arcata CA, 95521

Comment ID Number	Response
8-1	Comment noted. Response: Committee formation is not a major environmental issue but it is obviously a difficult issue. If not, it would have been resolved by now. The plan has been revised to more thoroughly discuss the committee formation process. These are policy problems and policy problems ultimately must be resolved by the Board of Supervisors and not by staff. The process you describe may also be resolved and incorporated through the developing County mining ordinance and what may eventually become a county-wide gravel resource management program or plan. In the mean time, we have what the optimists hope will be an interim 5-year period to begin resolving some of the recognized problems existing on the Mad River.
8-2	Comment noted. Response: Enforcement has been described in an expanded Section 6. Additionally this issue should also be covered in a County-wide mining ordinance.
8-3	Comment noted. Response:
8-4	Comment noted. Response: The SDRC must recognize when outside expertise is needed. The SDRC will use consultants to cover certain subjects as needed. For example, a wildlife biologist will continue to monitor extraction areas and advise the SDRC on the need for incorporating mitigation measures in the annual extraction plans. Likely, the SDRC will also request that some vegetation analysis work be done by other consultants.
8-5	Comment noted. Response: It means that the Mad River is a dynamic ecosystem subject to the uncertain, unpredictable, and often violent forces of nature. Prior to the last few years, nearly every major written document known to this writer regarding the Mad River bemoaned terrible aggraded conditions in the river. It means that the processes of channel aggradation and degradation are subject as much to the

whims of nature as they are to the activities of man and diesel power. It means that the plan is flexible enough to respond to changes in the river environment.

Had the engineers who designed the threatened structures in the Mad River had better understanding of these processes, more funding, and better technology we might be better able to adapt to a degrading river.

8-6 Comment noted.

Response: Staff agrees.

8-7 Comment noted.

Response: Staff agrees.

Comment Letter No. 9

Person, Organization or Public Agency making comment
Redwood Region Audubon Society
Lewis L. Klein
P.O. Box 1054
Eureka, CA 95502

Comment ID Number	Response
9-1	Comment noted.

Response: Your comment concerns the objectivity of committee members who might also work in the mining industry. Staff has addressed this issue in Section 6. Ultimately, the decision will rest with the Board of Supervisors. However, I cannot resist imposing my thoughts on you. True professional objectivity does not come and go depending upon who you are working for. It does no good to tell a client what they want to hear if it is not, in fact, the truth. Furthermore, it may be truly impossible for any committee member to be totally objective. As humans, our views, informational data base, and attitudes are influenced by life experiences and our immediate surroundings.

An operator might want to express concerns similar to yours if a committee member had worked for the CDGF, the Audubon Society, the Sierra Club, or any other group affiliated with the environmental industry, or if a potential committee member was a member of a specific environmental group.

Given the same immediate data base, professional experts will have different opinions regarding solutions to perceived problems. These are then resolved through education, consultation, and debate. Why should we be concerned if individually, the SDRC members have different outside interests, are pro-business, pro-environment, pro-fish, or pro-anything as long as, collectively, they are professional and pro-river?

If the majority of the committee thinks that an individual member is out-of-step they can first try to resolve their differences and failing to do so they can approach the Board of Supervisors or their designee for relief. If an individual committee member feels that a committee decision is inappropriate that member can write a minority report. A well-written minority report on a significant issue could, with some effort, result in a temporary injunction until additional analysis is undertaken.

Regarding SMARA 2774(b) there are three possible solutions to this perceived problem. First, the word "may" in the third sentence might allow an inspector to have worked for the "mining operation". Second, 2774(b) obviously does not prevent an individual from being employed by other mining operators. And, lastly, the individual who actually does the required SMARA inspection may be a County employee who is not a member of the SDRC but who utilizes findings of the SDRC as a partial basis for the required SMARA inspection.

Winding down on this issue is the fact that there may be few qualified individuals in this region who are concerned enough about the issues that they will be willing to put up with the requirements that this project is going to impose on the SDRC members.

One last question on this issue. What better way to gain practical experience and added expertise than to work in the industry?

9-2 Comment noted.

Response: Discussion on cumulative impacts has been strengthened. Mit-3 has been revised.

9-3 Comment noted.

Response: Enforcement has been described in an expanded Section 6. Additionally this issue should also be covered in a County-wide mining ordinance.

9-4 Comment noted.

Response: Channel degradation is a problem. The need for channel aggradation is great in some areas and not so great in others. Some operators and land owners claim that degradation is not a major problem throughout the entire project area. The SDRC will have to keep an open mind on this issue.

9-5 Comment noted.

Response: Staff is not sure that these effects are presently significant. However, it will be the duty of the SDRC to monitor these issues and to react accordingly when writing future extraction and mitigation prescriptions.

9-6 Comment noted.

Response: Mentioning sea lions and fish eating birds does not mean that they are second in importance. Nor is there any evidence that gravel extraction and processing is first in importance. That sea lions and fish eating birds are consuming large numbers of Mad River salmonids is undeniable. Staff doubts that there is any study that has accurately ranked the relative importance of factors that have influenced the decline of salmonids in the Mad River.

9-7 Comment noted.

Response: You are in error. The sentence was correct as written. However, it has been modified for clarity.

9-8 Comment noted.

Response: Mit-1 is comprehensive and is the essence of the incremental adaptive management and monitoring program.

9-9 Comment noted.

Response: You raise a good point. That section has been revised accordingly.

9-10 Comment noted.

Response: you raise some good points here. Opportunities to mitigate for past vegetation losses will continue to arise in this very dynamic river ecosystem. The Veg impacts and Mits have been revised accordingly.

9-11 Comment on scenic impacts noted.

Response: you are correct. The visual impact statements have been revised.

9-12 Comment on noise impacts noted.

Response: The noise impact statements have been revised.

9-13 Comment on enforcement noted.

Response: SMARA is designed to protect environmental resources and enforcement of SMARA is required. Refer to revisions in Section 6 for clarification.

9-14 Comment on allocation of aggregate noted.

Response: Written agreement does not seem necessary. Compliance with SMARA as enforced through the application of reclamation standards and the adaptive management plan is all that is required.

9-15 Comment noted.

Response: The County is required to enforce SMARA and that makes reclamation plans binding. Requiring the SDRC to provide supporting rational helps assure that the required information will be obtained in a useful format. If the operators or the public find fault with the SDRC they can appeal through normal planning channels or through other channels that may be approved by the Board of Supervisors.

9-16 Comment on appeals by the public.

Response: The entire SDRC process is subject to public review. If the operators or the public find fault with the SDRC they can appeal through normal planning channels or through other channels that may be approved by the Board of Supervisors.

9-17 Comment noted.

Response: The suggested change in wording has been made.

9-18 Comment noted.

Response: You have misinterpreted the tone of this paragraph. The MOA Scientific Committee has learned that very careful, explicit instruction and good communications are needed in order to obtain the required information in a timely and effective manner.

9-19 Comment noted.

Response: Minor change in wording was made as suggested.

9-20 Comment on public review noted.

Response: This discussion is similar to comment 9-16. Please refer to response 9-16.

9-21 Comment noted.

Response: Your wording improves the document and the change has been made.

9-22 Comment on reclamation plan review process noted.

Response: This subject and the specific sections in SMARA is found in Section 6.

9-23 Comment requesting minor revisions noted.

Response: Suggested revisions have been made.

9-24 Comment on appeal process noted.

Response: This section had been revised.

9-25 Comment on public review process noted.

Response: Your suggestions have been incorporated in revising this section.

9-26 Comments on budgetary process noted.

Response: This section has been revised. As currently structured the SDRC is to be affiliated with the Planning Department. The SDRC budgets will be approved through that department. Funding will be derived from assessments made against gravel extraction.

9-27 Comment on monitoring noted.

Response: The monitoring section has been revised. However, the complete details of the monitoring program will be developed by the SDRC and the SDRC will not be formed until after this document is completed and approved. Furthermore, it must be understood that the monitoring program must be flexible to accommodate unforeseen developments over the life of this project.

9-28 Comment on costs noted.

Response: Your suggested wording had been added.

9-29 Comment on monitoring noted.

Response: See response 9-27.

9-30 Comment on wildlife surveys noted.

Response: Minor word change was made as you suggested. Other revisions were also made in this section which may address your concern.

9-31 Comment on conflict of interest.

Response: The conflict of issue matter is a policy decision that will have to be resolved by the Board of Supervisors. The disclosure approach presented in this document was adequate for all parties concerned in the 1992 MOA. The Board of Supervisors may judge it adequate or inadequate now. Refer to response 9-1 for additional discussion on this issue.

9-32 Comment on extraction level accepted.

Response: This discussion has been revised and clarified.

9-33 Comment on extraction levels accepted.

Response: Changes made accordingly.

9-34 Comment regarding General Plan Standards noted.

Response: Ambiguity removed. EIR is not contrary to the General Plan. If extraction is now kept in balance with recruitment the degradation-related river conditions will not improve. Extraction must be below recruitment until river conditions and trends show adequate improvement. The SDRC and affected agencies will be able to judge "adequate improvement".

9-35 Comment on extraction accepted.

Response: Changes made accordingly.

9-36 Comment on extraction standards noted.

Response: Some general standards are presented in Section 6.

9-37 Comment on appeals noted.

Response: Actions by the SDRC will be appealable through the Planning Department unless the Board of Supervisors elects to establish an alternate procedure.

9-38 Comment on takings and preferred alternative.

Response: The statement in question starts out by indicating that there is debate on the takings issue. There does not appear to be any exaggeration in this statement, just uncertainty due to debate. Staff believes that the preferred alternative project remains so.

9-39 Comment on Housing Element noted.

Response: The Housing Element cites the need for additional housing and therefore the need for aggregate products or substitutions for same.

9-40 Comment on Section 9.2 accepted.

Response: you are correct. The list was incomplete. Modifications have been made.

9-41 Comment noted.

Response: Perhaps the final document alleviates some of your concerns.

9-42 Comment on public trust and primary purpose of the project noted.

Response: You misjudge the intent of the document. There is a common thread throughout and that is to improve existing conditions, rather than just avoiding catastrophic conditions, immediate or otherwise.

Comment Letter No. 10

Person, Organization or Public Agency making comment
David S. Kruger, Attorney
3359 18th St
Eureka, CA 95501-2773

Comment ID Number	Response
10-1	Comment on alternatives noted. Response: Staff has added alternatives and has attempted to incorporate your ideas in alternatives section.
10-2	Comment on replacement of SDRC members. Response: This is an important issue. The plan mentions some things to look for as far as committee member expertise. The ultimate decision regarding this process is up to the Board of Supervisors. They may wish to keep this responsibility or they may want to delegate it elsewhere.
10-3	Comment on barren bars and vegetation impacts. Response: The vegetation impacts and mitigations have been modified accordingly.
10-4	Comment on roads on river bars and terraces noted. Response: Mit-8 and Mit-9 have been modified per your suggestion.
10-5	Comment on reclamation obligations noted. Response: Revised reclamation plans will be evaluated for this criteria. Enforcement will then occur through SMARA.

Comment Letter No. 11.

Person, Organization or Public Agency making comment
California Trout
Fred Neighbor, Attorney
494 H Street
Arcata, CA 95521

Comment ID Number	Response
11-1	Comment on entitlements and enforcement noted. Response: Entitlements are upper limits. Enforcement is provided through SMARA. See Section 6 of the EIR. SMARA required enforcement of instream reclamation plans must logically be able to limit and regulate extraction if reclamation is not occurring.
11-2	Comment on aesthetic, recreational, and noise impacts noted. Response: These impact statements and related mitigation measures have been revised.
11-3	Comment on CEQA review of SDRC decisions. Response: This is a legal issue that staff can not resolve here. We have what appears to be an impossible situation. For environmental reasons, CDFG and others impose a short 120-day operating season (June through September) during the low-flow period. Yet, planning must be based on an annual review which can only begin after the collection of data during the low-flow period. If you are correct CEQA imposes a time-consuming process on a discretionary project which must be carried out each year during a very short period. What is needed is a State certified program that would exempt the process from CEQA review at this stage. However, that is not likely to occur anytime in the near future. It seems that the SDRC actions will be at least as restrictive as the 1603 process which is exempt from the CEQA review procedure. The EIR and plan limits the discretion of the SDRC to conservative actions and decisions that will provide river reclamation and have no significant adverse impacts.
11-4	Comment on fisheries noted. Response: The SDRC and the CDFG will be monitoring and reviewing these issues during the project. The SDRC will review the significance of these issues while developing extraction plans.
11-5	Comment noted. Response: The enforcement and authority issues are well developed in Section 6.

Comment Letter No. 12

Person, Organization or Public Agency making comment
Michael J. Scalici

Comment ID Number	Response
12-1	Comment noted. Response: This is useful information. The SDRC will review it.
12-2	Comment noted. Response: Staff perceives this as a major project that would require the removal of levees, and the conversion of private agricultural land to aquatic and riparian habitat. Such a project would be beneficial for the fisheries, wildlife, and hydrologic environment. However, a project of this magnitude would require some form of river corridor management plan and an intensive CEQA analysis.

Comment Letter No. 13

Person, Organization or Public Agency making comment
Humboldt County Department of Public Works
Donald C. Tuttle

Comment ID Number	Response
13-1	Comment noted. Response: Enforcement procedures and authority are described in Section 6.

Comment Letter No. 14

Person, Organization or Public Agency making comment
Rising Sun Enterprises
Mr. Robert Brown
1864 Myrtle Avenue
Eureka, CA 95501

Comment ID Number	Response
14-1	Comment noted. Response: These agencies have responsibilities for certain Mad River resources. If they have concerns and do not respond they will be negligent. If they do not respond and the SDRC believes that they should have concerns, the SDRC can ask for follow up discussions.
14-2	Comment noted. Response: The SDRC will follow up the hatchery situation closely.
14-3	Comment noted. Response: The information is noted. The SDRC will review all pertinent information that is provided to them.
14-4	Comment noted. Response: It makes sense that the SDRC will want to document this information.
14-5	Comment noted. Response: The rock cascade that you describe is an important feature. The SDRC will continue to monitor this site. The swimming hole that is now filled with gravel is an indication of past channel aggradation.
14-6	Comment noted. Response: An ideal retrofitting of the Highway 299 bridges would include removing the mid-channel piers and supports. The rest of this letter provides background information that the SDRC should review. No further response required now.

Comment Letter No. 15

Person, Organization or Public Agency making comment
Trinity Associates
Mr. Aldaron Laird
P.O. Box 820
Arcata, CA 95521

Comment ID Number	Response
15-1	Comment noted. Response: It is quite obvious that CEQA does not make it easy to evaluate an adaptive management program. Refer to response 2-2 for additional discussion on the complexity of the problem.
15-2	Comment noted. Response: Refer to the monitoring discussion in Section 6.
15-3	Comment noted. Response: The material you refer to in the September, 1993 document appears to be a single very specific methodology for monitoring channel morphology. It does not appear to be adequate for monitoring other river resources. Nor, does it appear to be an aggregate resource management plan. A single flawed criteria was established to determine when extraction would be allowed. These are the reasons that this material was not incorporated in the present document.
15-4	Comment noted. Response: The present preferred alternative does indeed require that the SDRC develop coordinated extraction plans based on "new conditions annually". That is its strength. The management adapts to the river resource conditions and trends.
15-5	Comment noted. Response: CEQA is deficient when it comes to long term, time-sensitive adaptive management that must respond to changing environmental conditions that can not be precisely predicted.
15-6	Comment noted. Response: This is a good point. But, changing the name will not alter the true function of the committee. If the SDRC rejects an operator's extraction proposal it is in effect, contributing to the design of an alternate proposal. Ultimately it would likely come down to the SDRC telling an operator: "If you do it this way, we will approve it. CEQA and the courts would require that we not hide the true

function of the SDRC by changing its name when we will not be able to effectively change its role. The proposal for a SDRC stands.

15-7 Comment regarding the composition of the proposed SDRC is noted.

Response: The process for selecting the committee has been rewritten in Section 6. Some of your points are incorporated in that section.

15-8 Comment noted regarding theoretical conflict of interest.

Response: This is a policy decision for the Board to make. See response 9-1 for a lengthy discussion of this point.

15-9 Comment noted.

Response: Staff has rejected the concept of a SRC. See response 15-6. The duties and selection of the SDRC differ and are described in Section 6.

15-10 Comment noted.

Response: Staff agrees that the SDRC will refine the monitoring program. Unfortunately, the SDRC is not yet authorized to function.

15-11 Comment noted.

Response: All reports and findings of the SDRC will be available for public review.

15-12 Comment noted.

Response: Staff does not believe that the changes in the document will require recirculation.

15-13 Comment noted.

Response: The alternatives section has been expanded.

15-14 Comment noted.

Response: See Alternative Number 9. This proposal is overly restrictive and would ultimately encourage poor management of the river's resources in that it would discourage instream storage of aggregate. The fact that this proposal was included in the last version of this EIR resulted in a vote of "no confidence" by the industry and delayed the entire EIR by several months.

The possibility of no extraction at some or all of the sites exists in the preferred alternative. This would be required by SMARA if compliance with the reclamation plans can not be achieved.

15-15 Comment noted.

Response: Terrace mining is given adequate consideration in this EIR.

Letter 1

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March 24, 1994

TO: Board of Supervisors
Planning Director
FAX 445-7299
445-7446

RE: Comments to Draft Final Mad River PEIR.

Introduction. My clients (Arcata Readimix, Mercer Fraser, Redwood Empire Aggregates, Eureka Readimix, and Mad River Sand and Gravel) have asked that I update my previous comments to the 1993 draft PEIR, respond to the 1994 draft, and provide a summary of their views and opinions in doing so.

This introduction is intended to both express my clients general support for the MOA/PEIR process and to describe some of their concerns (not just "environmentally significant concerns, but concerns regarding the goals and methods of the entire process). As a preliminary matter, please note the operators support for the MOA/PEIR process includes their implicit and hereby express agreement to incorporate the PEIR mitigation measures into amended reclamation plans for their mining operations during the first 5 year review period described in the PEIR. This introduction also serves as an opportunity for me to make some personal observations on this now 3 years old process and project. 1-1

It is now some years since we set forth on this project with our high hopes in hand. Somewhat tattered and strained we are ready to commit this project to the final approval process. What we have learned (as predicted by Dr. Matt Kondolf and as evidenced by the controversy surrounding the proposed "mathematical" or "formula" management proposal in the previous draft PEIR) is that science cannot, by itself, answer all of our questions or resolve our differences. We are, for better or worse, condemned to trust in human judgment and the scientific committee review process if we are to develop a management system which simultaneously respects, preserves, and protects private property rights, the human economic and social community, the riverine environment, and, ultimately, the river itself.

Because I have become so personally involved, over the last several years, in this matter of analysis and management of river resources I will introduce these comments on the PEIR with a few of my own reflections and observations regarding the river and us. These initial comments arose out of a trip to the State Senate to address the California Senate Subcommittee on River Restoration and Protection. Before travelling to Sacramento for that all day Tuesday hearing and a Monday afternoon meeting with the Army Corps of Engineers to discuss the new federal 404 jurisdiction, I spent the weekend out on the banks of the Mattole River mulling over this matter of rivers and people. I contemplated the river and the political processes by which we attempt to subject it to our varied and competing uses.

I searched for a common ground, a perspective, from which, like a fulcrum point, it might be possible to bring together the various factions and viewpoints whose conflict threatens to prevent the development of optimum management policies and practices. I tired of reading the law and environmental documents and turned to the writings of the great California poet, in his own right a naturalist and conservative commentator on human society, Robinson Jeffers.

Jeffers' poems reminded me that, as I would later describe to the Senate Subcommittee on Rivers, we must not forget the omnipresent fact that the rivers were here before humanity arrived. And, as Jeffers believed, these rivers in one form or another will be here long after humanity is gone or its population significantly diminished by operation of inevitable natural and historic forces. The goal, in the relatively short duration of our dominion over these riverine environments is, at least, to leave them in as good a condition as we found them and, if we are fortunate, to leave them in a cleaner and better condition. Simply ceasing mining in the Mad River project area will not secure either goal.

Jeffers' poem, November Surf, captured that specific personal vantage point for which I had searched:

> "...But all seasons
> The earth, in her childlike prophetic sleep,
> Keeps dreaming of the bath of a storm that prepares up the long coast,
> Of the future to scour more than her sea-lines:
> The cities gone down, the people fewer and the hawks more numerous,
> The rivers mouth to source pure...."

Floods and earthquakes strike with such effect, but we continue to rebuild in their wake. It will be long into the future before the extreme reduction in human use and occupation of the rivers sought by the "environmentalists" might be realized and it

may only be realized after a fundamental change and reduction in the entire human population in the region and state. On the other hand, it is not acceptable that the rivers suffer serious injury as a result of their human uses. Our duty in the present, pending some future cataclysmic change, is to respect and attempt to understand the river and in order to harmoninze competing uses and properly manage the resource to the best of our abilities. (A copy of Jeffers' poem is attached.)

In order to preserve, protect, and "steward," the rivers (entire watersheds, identified reaches, or individual project sites) we must first attempt to understand them, to come to terms with their variety and unpredictability. To understand the rivers we must think in geological, not human or political, time. Rivers are ultimately creatures of eons and eras, not years or days. They are the products of seasons, floods and droughts, earthquakes, continental drift and plate tectonics, erosion across entire mountain ranges. They are not the products of governmental regulation or centralized planning and we need to remember this when we attempt to manage them.

To manage our multiple and competing uses of the rivers, based on our limited ability to understand them -- scientifically or otherwise -- we must behave not as partisan political adversaries but, as Jeffers might have put it, as good responsible citizens of California and Humboldt County. In the interest of protecting both the river and the community, we must make the effort to work together for our common good and to protect the river resources from harm while preserving the distinctive, individualistic economic basis of our peculiarly American culture with its fundamental freedoms and relatively high standard of living.

The operators take seriously the perspective that the rivers are our inheritance and are our childrens' future inheritance. Very simply, the operators need a sustained yield to maintain their businesses. As described herein, the operators believe that they have been utilizing mining techniques that are consistent with a sustained yield. The operators believe they have been good stewards of the river, contrary to the perception by many that they have willingly harmed the river out of greed or ignorance.

In far too many cases mere perception, intuition, and emotional reaction are the basis of statements that the operations are harming the environment. What is absent is, often, an empirical, scientific, long term, and pragmatic analysis of alleged problems. The real problems on the river need to be inventoried, measured (where they can be), and addressed by direct observations and reasoned analysis. While neither I nor my clients agree with all of the reports and contents of the PEIR we look at it as an important step in establishing that inventory of real as opposed to perceived issues and problems. Only policies based on reasoned analyses and objective assessments of the needs of the river and

the community will achieve the stated goals.

The operators have provided a number of examples where mere perceptions of possible harm dictated unreasonable or harmful results. Past mining techniques included winter flow draglines, a method which may now turn out to be environmentally sound (depending on the time of year it is utilized) even though, because it was perceived to be damaging to the environment, it has not been permitted by regulatory agencies for some years.

As another example, "bar skimming" to less than a 3% finished grade was perceived to be damaging to the river and was restricted by regulatory agencies. Operators asked for reasoned, scientific analyses supporting that policy. No substantial supporting scientific analyses were ever provided to the operators by the regulatory agencies. Recently it has been determined that a standardized fixed finished slope of 3% is not necessary to protect the river at many points and more sight specific prescriptions are appropriate. Because of the imposition of the 3% slope, between approximately 1988 and 1991, bar skimming was rendered economically and practically unfeasible. In many cases the gravel bars are naturally inclined at less than 3% slope, which means they could never be mined by skimming under the arbitrary rule. (It now appears the source of the 3% slope rule was a handbook on proper slopes for drainage ditches.)

As a direct result of the 3% arbitrary slope requirement (based on the "perception" that such a slope requirement would prevent "perceived" risks of harm like stranding of fish) agencies suggested and approved trenching as an alternative mining method. Agency staff directed or assisted operators in placing trenches adjacent to and in the main river channel.

As a result, the trench at the Arcata Readimix site collected silt and mud while redirecting the river into the south bank, causing erosion. (It was while refusing to complete the destructive trenching that William O'Neill, Arcata Readimix, and his brother were cited by Dept. of Fish and Game for violating their 1603 agreement, which resulted in this law office requesting Bonnie Neely and the Secretary of Resources to assist us in coming up with a method of resolving the disputes between operators and agencies -- the MOA and PEIR.)

Meanwhile, at the upper end of the project area (Guynup, Emmerson, Blue Lake, and Christie bars), the trenches had the beneficial effect of helping to maintain channel stability, reduce streambank erosion, and provided mineral resources -- but they were perceived by environmentalists as destructive of the river. As it turns out the trenches were not, according to some of the scientific opinions we have received, properly designed or placed so as to maximize any potential benefits.

There was also, and still remains, a commonly expressed perception that surface mining caused stranding of fish. The operators have consistently stated that they do not observe any stranding at their sites, yet the perception and allegation persists that mining traps fish. At the recent arbitration regarding the Arcata Readimix operation testimony was given that, in what amounted to some 125 years of collective experience on the river project reach by Fish and Game wardens, only two adult fish were ever found to have been possibly (not certainly) stranded as a result of surface bar skimming.

The operators believe the real threats to the fish are not mining operations but appear to be mammals at the mouth of the river, poachers, predatory birds, and possibly the electrified weir and obstruction to upriver migration at the fish hatchery. At least those factors should be looked at. Focusing on gravel mining, to the exclusion of other factors, may distract us and prevent a real assessment of the multiple human uses and natural factors that may impact the riverine environment. Where we disagree with the PEIR or the technical reports we are looking for evidence to support our positions. In other words, we are trying to participate in the scientific data collection and analysis, we are not ignoring or repudiating it.

We need to constantly remind ourselves to put things into perspective. Instead of tending to focus only on gravel mining, the other projects, activities, and uses that impact fish and wildlife or recreational values must be identified and analyzed. For example, if fish are alleged to be distressed by mining activity, what does electroshock from the current in the weir and herding into pens at the state hatchery constitute on the scale of 1 to 10 of fish distress?

It has been alleged that noise from operating equipment would disturb the migrating fish. This kind of allegation would appear to be reasonable and would appeal to those who want to eliminate or restrict gravel mining. Such a "perception" produces an assumption of harm to fish which then serves as a "perceived" basis for implementing restrictive policies -- all without support of scientific analysis or empirical fact. Yet, when the biologist, Doug Parkinson, dove in the ponds near the Arcata Readimix site, the noise he heard was trucks going over the 299 bridge and the North Bank road -- noise from the mining operation tractors was not the predominant auditory impact. In other words, the "perceived" or projected impact by noise -- which appeals to a common sense intuitive perspective -- was not empirically verified.

What happens is, in the real pragmatic world of money and politics, agencies and "environmentalist" organizations shift the burden of monitoring, studying, and evaluating the resources onto users through fees and study costs. The operators have to prove they do not harm a resource, as opposed to agencies or others

having to affirmatively prove mining significantly harms a resource, like the fish. This effectively puts the operators in the position of having to pay for the monitoring, research, analysis, inspection, review, etc., of the rivers that would otherwise be the agencies' responsibility. This also subjects the operators to constant criticism for failure to produce perfect studies or evaluations -- though perfection is impossible -- and provides a basis for ongoing threats of litigation for failure to provide adequate justifications for continuing mining operations -- unless the operators are willing to buy out of law suits by agreeing to "mitigation," like parks, reforestation projects, or other projects not directly related to the business of mining.

Again, the single minded focus on the mining operations may distract us from identifying real sources of adverse impacts. It is difficult to perceive, for example, how it can be alleged that mining noise distresses fish more than having lures, worms, bright red eggs, lead weights, etc. hurled at them or the experience of being caught and released by human fish enthusiasts. We seem to endlessly talk about studying the impacts of mining, without ever discussing serious proposals to study other potential sources of more serious impacts on fish and wildlife -- which studies would obviously have to be paid for out of agency or private organizations' pockets.

We are making real progress in obtaining agency assistance in monitoring the rivers. The Water District has proposed to work with the operators in monitoring the river (although we cannot agree to the DTM system as a best or mandatory technique). CalTrans has indicated they may be able to start regular monitoring at their bridges and they will certainly be monitoring the mouth of the river. I am certain the Fish and Game Department can perform effective river monitoring at the Hatchery and Blue Lake City or the County can monitor their facilities or areas of concern. There is real cooperation developing between the mining operators and the agencies with structures or areas of concern in the project area.

In concluding these introductory observations I would like to make it very clear operators agreed to participate in the MOA and PEIR process because, in large part, they believe the studies generated by this process will vindicate their claims that much of the river has not been degraded and the lower project reach from the Essex canyon down to the 101 bridge has maintained channel stability because of mining. It is worth emphasizing, at this point, that of all the numerous agencies, organizations, and individuals who claim to be concerned with the river and its wildlife only the operators have produced a comprehensive and costly preliminary study of the river project area and its resources in the form of this PEIR, the MOA, and related studies. The total cost, when factoring in all direct PEIR/MOA costs and indirect associated costs for consultants, attorneys, studies,

fees, licenses, alterations to previous mining and processing practices, etc., is in the range of $1,000,000.00.

The following comments are similar to or identical to those offered last year. Hopefully, this time, the responses to these comments will either (i) directly address and resolve the operators concerns or (ii) will recommend further data gathering and analysis during the first 5 year review period to resolve the operators concerns, since river science is new, is not exact, and is speculative (see Kondolf report, App. A, and text of the PEIR). We recognize, therefore, that some of these comments raise questions or issues that may only be resolved over the next several years under the supervision of the scientific committee.

In the interest of making it easier for you to respond to these comments and in order to better address many of the issues and questions raised, both in these comments and in the PEIR itself, our suggestion is that the PEIR/ARMP should contain some form of the following general provisions:

(i) operators should be encouraged to obtain studies of their sites (e.g. historical descriptions of flow patterns, river location and depth, flood events, general geomorphological characteristics, etc.), the project reach, the river basin, wildlife studies, etc.; and

(ii) those studies or data should be appended to the annual scientific committee reviews of their individual sites under the condition that they are properly identified as operator contributions to that annual reporting process.

1-2

General comments regarding "degradation" and river elevations. The scientific studies, according to the operators, tend to overstate or "assume" the existence of "degradation" in the river's bed throughout the project reach. Vic Guynup, for example, believes the studies underlying the PEIR are "biased" towards under estimating recruitment and over estimating degradation.

1-3

- In the attached photos and comments, evidence is provided that the Guynup site is not degraded and aggraded bar conditions are causing bank instability with resultant damage to fish habitat.

- The photos at the Christie Bar and commentary provide evidence of aggradation at that site and bank instability with resultant damage to fish habitat.

- The 1960 photo of the Mercer Fraser site shows a rock formation that is still present and in relatively the same position vis a vis the river.

- The operators are still obtaining evidence in the form of statements and photos to support their claim that the 1941 CalTrans 299 bridge cross section is either inaccurate or the major degradation occurred prior to the extraction in the project reach during the 1950s to present.

- The commentary on the REA Graham Bar site describes culverts that, since the early 1960s, have carried the low flow and indicate no degradation of the thalweg at this site since at least that time.

Rather than merely discounting evidence of degradation, the operators are looking for further analytical data that can confirm or disprove allegations of perceived or real degradation or aggradation. The operators provide this evidence in the pursuit, simultaneously, of sustained yield mining and protection of the river resources through accurate scientific analysis.

The present PEIR corrects some of the excesses of the previous document. The underlying studies and PEIR still tends to emphasize sand and gravel extraction as the main cause of any degradation, while understating the other hydrological, natural, and man-made forces. For example:

- building, filling, and blowing Sweasey Dam

- naturally occurring scour at even well designed bridge footings and poor design and placement of existing bridge footings

- flood control projects

- weirs and other projects associated with the hatchery and water district

- variability of flows controlled by Ruth Dam

- variability of quantity and duration of seasonal precipitation

- availability of upstream materials after earthquakes, fires, or droughts, etc.,

all may have contributed to changes in the river bed.

These factors should be studied during the next few years and they should be expressly identified in the text of the PEIR, as factors other than mining that may have impacted the river environment, including alteration of river elevations.

Sweasey Dam. Sweasey Dam was built in the 1930s. It captured

much or a majority of the bedload transported until after it was blown out. Even when full it would have had to encourage upstream congestion. The impacts of Sweasey Dam have not been systematically studied.

One of the very probable impacts of the dam was the drastic reduction of bedload and early winter peak flows entering into the lower Mad. The CalTrans 1941' cross section at the 299 bridge shows an aggraded river bed. (Note that Sweasey Dam was built only three years before the cross section was taken.) Assuming that the cross section is accurate, for the sake of discussion, perhaps the Sweasey Dam held back bedload and the lower reach eroded during the 1940s. This would be consistent with the reduced elevations in the next recorded CalTrans cross section in 1961. Certainly the dam had at least a significant, if not quantified, impact on bedload deposition in the lower Mad.

The Sweasey Dam contained some 3,000 acre feet of stored sediments. (PEIR) When it was blown in 1970 the sediments theoretically washed down river, or so it would appear. Yet, Dr. Jager has indicated there may still be significant quantities of material stored in the up river reaches which have not been transported down stream. It is also not known how much of the total volume of material washed into the ocean. After the dam was blown it is alleged a wave of bedload transported downriver. There is no evidence supporting the contention that a wave of bedload moved down the river as opposed to a fairly rapid decline in the volumes stored behind the dam with rapid transport down to the depositional areas of the lower river and large volumes of excess, undeposited material being flushed out the mouth of the river to the Pacific Ocean.

CalTrans representatives, at a meeting in mid-March 1994, indicated that one of the possible causes of the movement of the mouth of the Mad River northward may be the immense volume of sand and particulate material that entered the river system immediately after the blowing of the dam. That particulate matter would have dumped into the ocean and would have been washed back as sand dunes, blocking the normal flow of the Mad River at its mouth.

Fish Hatchery. Cross sections and monitoring in this reach of the river should be performed by the California Department of Fish and Game, in concert with the annual monitoring and analyses by the scientific committee and operators.

Operators believe the hatchery utilizes well water, not river water. The scent of the well water causes the fish to draw to the hatchery ladders which drain the well water into the river channel. The fish do not, therefore, migrate upstream. The weir is electrified which would discourage natural fish from migrating up river. These management practices should be reviewed during the next few years to analyze impacts on the fishery.

The operators believe any plans to improve the Mad River fishery will have to include a review of the hatchery program and its impacts -- not just mining operations and their impacts. Operators report a letter was written several years ago by a hatchery manager indicating that channeling the lower reach up to the Guynup bar, by trenching, would improve the chances of fish successfully migrating upstream to the hatchery intakes or beyond.

It is appropriate to point out at this time, that local and regional Department of Fish and Game staff have been instrumental in assisting the County to develop its mining program and river monitoring practices. We must particularly compliment Gary Stacey for his efforts to resolve differences and to create a "state of the art" management and monitoring system. It was Banky Curtis of DFG who along with Supervisor Bonnie Neely organized the first scientific review committee.

Guynup site. Vic Guynup has stated that there has been no degradation of the streambed, thalweg, or water surface elevation at his site, since he first began mining the site just downstream of the hatchery. (See the attached photographs, one set is taken to show the aggraded gravel bar and the other to show the impact to the streambank from riverflows diverted by the aggraded areas.) Vic has performed bank stabilization work and has previously channeled the river in cooperation with the Department of Fish and Game. None of that activity appears to have contributed to or caused any degradation at this site, which is at the uppermost end of the mined reach of the river, even with the volumes extracted during the recent drought years.

Vic Guynup is concerned that the main river channel may shift away from the Blue Lake Bridge, across Hatchery Road at a point upstream of the bridge toward human habitations. According to Vic, the river has a natural tendency to turn upstream of the present bridge site. Vic believes that his bank protection and channeling efforts at his bar and the work at the Emmerson, Blue Lake, and Christie Bars have helped to maintain the river in its present course beneath the Blue Lake Bridge.

According to Vic, during flood stage, if channeling is not done yearly, the river erodes the South bank and other portions of the river bank at his and Emmerson's sites. Since the 1964 flood over 4 acres have been lost at the Guynup site. If this is allowed to continue the river will cut a new channel and return to its old course -- requiring the construction of a new bridge for use during low water flows in the new channel. Vic reports that the former owner of the home at the junction of West End Road and Fish Hatchery Road lived there prior to the 1964 flood. After 1964, because of his concern the river would return to its old course, he had Mr. Guynup channel the river to maintain the present course of the river. Vic believes that if channeling is not done during

normal years winter high water will hit the aggrading gravel and bounce into the north bank, putting pressure on the Blue Lake Bridge. As described above, these kinds of issues should be addressed and analyzed in the future annual reviews.

As the attached photos indicate there is some bank erosion and consequent degradation of the fish habitat which, according to Vic, is the result of the aggraded condition of his site which forces the high flows into the banks -- a condition that would not occur if the river were properly channeled.

Blue Lake Bridge. Recorded elevations at the Blue Lake bridge, according to environmental consultant Bob Brown, do not support claims that there has been any significant degradation at that site. Any 1-2' variations may be accounted for by transitory seasonal changes in the riverbed, drought conditions, may be an artifact of choice of measurement locations, or may be accounted for by analysis of naturally occurring scour patterns associated with the bridge's footing construction and design. The County should do monitoring at this site.

Emmerson, Blue Lake, and Christie Bars. At the Emmerson, Blue Lake, and Christie Bars there has been significant recruitment during 1992-93 season and the previous trenches appear to be filled after the 1993-1994 season. Operators indicate you can visually observe that the bars are at or above their historical elevations by observing the trees and banksides adjacent to the bars. (See the attached photos of the erosion control boxes placed in the bank of the Christie Bar and the statement describing historic aggradation at this reach of the river.)

Over the last two winters these sites have had significant recruitment in the pits and trenches dug with the cooperation and under the supervision of the Department of Fish and Game. The trenches and pits all appear to be full of sand and gravel which should permit much greater downstream migration of material in the coming winters, according to the PEIR analysis.

Recruitment required to fill previous trenches and pits should be considered when calculating volumes transported and recruited during the last two winters. Note that the filling of the trenches and pits from earlier mining operations (the trenches were designed and excavated under the supervision of the Department of Fish and Game 1603 Agreement process) required a great deal of recruitment during the last two winters. The volumes required to fill the trenches was, according to operators, over 150,000 cubic yards throughout the lower Mad River. Adding this amount to estimated surface recruitment volumes indicates significant recruitment in excess of the historical averages identified in the Draft PEIR and appendices. Based upon such volume estimates and during discussions in early May of 1993, operators indicated that they believe there has been more than 300,000 cubic yards of recruitment

in the entire lower Mad River during the 1992-93 high flow season.

Railroad Bridge and adjacent site. The railroad bridge is downstream from Christie Bar and Simpson's lands, which appear to be near their historical elevations. A visual inspection of the railroad bridge revealed that the footing, under which a stick was apparently poked during pre-extraction inspections during 1992, was in fact constructed in parts or stages and was not a uniform structure. A shell of some 6" or more surrounds what appears to be the original footing. The original footing may, therefore, extend down further than the shell.

The existence of the shell, the implied two-stage construction activity, and the unknown depth of the inner footing materials are not fully discussed in the PEIR. Also, as of early to mid-May of 1993, sand and gravel has recruited around the shell-footing such that no stick could be pushed under the shell's edge.

It would appear that, according to an operator familiar with concrete and readimix products, the footing was not designed or installed properly, there was an attempt to repair or cosmetically conceal the original footing by placement of a shell, the repair or cosmetic shell is not functioning and is disintegrating, and the original concrete material and method of construction is not structurally appropriate or safe for the use to which it has been put. At least this matter should be studied during the next several years.

See the attached letter from Alfred Christie describing repair work performed in 1968; indicating that the 1955 and 1964 floods and the Sweasey Dam (described above) may have had more to do with localized scour than sand and gravel mining over the last 40 years.

The railroad bridge site was independently mined during the last decade and the PEIR does not describe the relative significance of that direct mining of this specific site, compared to the indirect impacts resulting from up and down river mining operations, on elevations at the bridge site. Hydrological factors, peculiar to that reach of the river wherein the bridge is placed, may also account for degradation at the site independent of headcutting, scour, or reduced recruitment due to other mining operations both up and down river.

Note, both up river and down river from the railroad bridge there has been substantial recruitment of material during the 1992-93 high flow season, which appears to be in amounts greater than those predicted in even the highest years in the PEIR. Yet, this particular site has not received proportionately increased recruitment over the low flow 1992 elevations. Perhaps there were unrecorded trenches at this site or the river degraded during the Sweasey Dam period and it will simply not aggrade again at this location?

Essex Bar. Fred Bott alleges the river surface and streambed have not degraded significantly or at all since he first became involved with the site many years ago. Operators, like Mr. Bott, have provided anecdotal data regarding river elevations that does not appear to be consistent with some of the analyses and other data provided in the PEIR.

In this instance, Mr. Bott bases his observations on hard rock formations that abound at the site and which have maintained relatively constant shape. At those hard rock formations the water level is approximately where it was many years ago during the various seasons, while the bar surfaces during the drought varied in elevation by many feet. See the attached statement and 1960 aerial photograph showing the top of the hard rock formations and a rock pile extending into the river at a moderately high flow, during a dragline operation. That same rock pile is still observable at approximately the same position during relatively high flows and, after the 1992-1993 and 1993-1994 high flows the 1960 Essex bar appears to be very similar in configuration to the present bar. See the attached description of the Essex Bar and history of the site provided by the operators.

Again, the recruitment volumes in 1992-1993 appear to be consistent with the anecdotal reports of the operators which indicate "normal" year recruitment volumes are much higher than those described in the Draft PEIR. This pattern of significant recruitment, after what the operators have referred to as a "normal year" (normal for recruitment, which they indicate occurs before waters reach a five year event level), appears to have occurred throughout the area described in the PEIR. For example, Essex Bar (Mercer Fraser) appears to have fully recruited to some 4-5' over its 1992 elevations during the winter of 1992-1993.

Water District site. The operators had a number of concerns about the Water District site and allegations that the operators have harmed the site or water quality at the well intakes. These concerns often are expressed in the form of stories regarding the history of the site and operations there.

There are statements obtained by the operators which indicate that problems associated with water quality may not be solely or primarily the result of changed bed elevations but may be caused, at least in part, by irregularities in the as-built facilities. See the statement by Donald Graham. These matters are beyond the scope of this PEIR.

At least, the PEIR should state that a more detailed study of the water district site and the causes, nature, and extent of any degradation at the wells and pulp mill intake should be pursued as part of the annual review process. Cooperation between the operators and the district in studying any problems at the well and

intake sites should be encouraged and may be one of the most important products of the PEIR.

The Water District should use a system of annual monitoring that will permit a consistent analysis of the river bed above and below the site; e.g. the Fish & Game 1603 standard monitoring techniques are used by the operators. The DTM method is only accurate, according to various sources, within 6" of elevation. This makes it very difficult to utilize in larger bar areas, like the Arcata Readimix site, when calculating reduced volumes of recruitment.

299 Bridge and adjacent sites. The old 299 Bridge was built in the 1940s. According to Fred Bott, the bridge is constructed on top of pilings, placed at compaction standard depths. The pilings go many feet below the surface of the river. According to Fred Bott and Victor Guynup, since the time when the bridge was built many acres of land have been lost due to the influence of the river after it hits the bridge pier. Operators believe it was poor engineering to build a bridge that called for a pier in the curve of a river. See the statement of Donald Graham

After the 1992-1993 high flows, at the 299 bridge there has been recruitment both up and downstream of the bridge, yet the footings remain much as they appeared last year. Operators have indicated that the placement of the bridge in a narrowed reach of the river characterized by hard rock banks and bottom areas, given the particular nature of the design, contributed significantly to or caused the degradation discussed at this point in the river. Fred Bott stated that when a water pipe was put across the river, upstream of the bridge, they had to drill bedrock and had a very difficult time placing the pipe in the bottom of the river. The bedrock bottom, according to Mr. Bott, maintains the general river elevation in the vicinity of the bridge.

At the 299 Bridge site the operators believe the river's bottom (thalweg elevation) was, at least temporarily, far lower than it is at present. There has been reference made to a redwood trunk buried deep beneath the 299 bridge footings (discovered when core samples were taken).[1] The location of a tree at what are believed to be below present sea level elevations may indicate an actual change in sea level or gross changes in surface levels relative to sea level due to the geologic movement of the immediate

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[1] Bob King, Redwood Empire Aggregates, has indicated that redwood trees would not have naturally grown down to the low water channels edge because of the heavy flows during the winter, which would have destroyed any such growth. He also noted that redwood trees could not stand, or there would be evidence of their having stood, on the high water banks of the river.

area or the entire watershed during earthquakes.[2] Could such gross changes in sea level or surface elevation relative to sea level account, in part, for movement of the mouth northward or changes in the river's streambed elevations and morphology? (Note: Tectonic movements are mentioned in the Kondolf report.)

Just up river from the 299 bridge is a line of rocks or questionable origin. Some say they were purposefully placed there. In any case, the attached photos show the rocks during the low flow phase and the impact they have on moderately high flows - causing turbulence at the base of the 299 bridge footings. The impacts of this "weir" should be analyzed and it should be considered for removal or modification.

Arcata Readimix and Redwood Empire Aggregates sites. These sites appear to suffer from a reduction of available material, compared with historic levels. Bill O'Neill reports there is some reduction of the water's surface elevation at the 299 Bridge, but the change in water elevation does not begin to approach the numerical level of degradation reported in the PEIR (over 10'). The amount of the reduction is, according to Bill O'Neill, overstated in the PEIR. He indicated that visual inspection of the 299 Bridge footings and adjacent banks shows that it would be almost impossible for the riverbed elevations to have been as high as those described in the PEIR in 1941. Further visual inspection of the footings and analysis of historical photographs should be performed at this site. Anecdotal evidence may be available which will clarify what conditions prevailed in the riverbed at the time the bridge was built.

Mr. O'Neill attributes much of the reduction of bar material to weirs at the Water District site and upstream extraction removing sand and gravel before it moves down to the Arcata Readimix site. (There is no single clear description of the actual transport rates and impacts of upstream mining on downstream sites, or the impacts of downstream mining on upstream sites, in the Mad River study area.)

Some mining, according to Bill O'Neill, is presently possible, without impacting the 299 Bridge or water district sites. Further, Mr. O'Neill indicates that water surface elevations at hard rock formations near his main office site are presently at or near historic levels; further supporting the operators claims that alleged degradation has been overstated.

Channeling this year and in future years at the Arcata Readimix, Redwood Empire Aggregates, and other sites may be

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[2] During the recent earthquakes the bed of the ocean near Petrolia rose approximately 3' and the King Range peaks moved approximately 19", according to press reports at the time.

appropriate to control the stream channel, protect fisheries characteristics, and generally improve the lower riverine habitat. There is significant bankside erosion near the 299 Bridge which would be reduced or eliminated if the Arcata Readimix site were channeled to move the river towards the center of the present streambed. Fish migration and holding patterns in the lowest reaches of the extraction area may be encouraged by trenching at the sites.

Redwood Empire Aggregates site. See the attached letter from Mr. Bob King, describing the low flow culverts that have been present at the site since the early 1960s. The river still flows through these culverts, as it did during the early 1960s - indicating there has been no significant degradation of the thalweg at this site.

101 Bridge. The 101 Bridge was also built by Mercer Fraser. It was built on steel pilings. According to Fred Bott, the streambed elevation is the same or higher than it was when the pilings and concrete bridge piers were installed. Fred Bott, Mercer Fraser, has offered to visit the river with the scientific team to show them where the river was at the time of construction.

The pilings were driven to the CalTrans approved penetration depths. On top of the piling and around the upper portion of the piling a cofferdam was built and filled with cement. The cement placement was below the present riverbed. Mr. Bott believes the configuration of the footings and cement will assist in evaluating historic river elevations during future annual reviews and studies.

From the bridge on down the river there is considerably more mud than up river. The mud has a tendency to replace gravel during the flooding of the riverbed. For example, during the peak high flows, the motion will move the gravel down stream. When the river is dumping into the ocean during high tide, the lower reach backs up with water and sediment. The current slows and silt or mud is deposited in the lower reach.

Recruitment volumes during the 1992-93 rainy season and estimates of "normal" or average recruitment. Again, the recruitment volumes during the 1992-93 winter appear to be consistent with the anecdotal reports of the operators which indicate "normal" year recruitment volumes are much higher than those described in the Draft PEIR. This pattern of significant recruitment, after what the operators have referred to as a "normal year" (normal for recruitment, which they indicate occurs before waters reach a five year event level), appears to have occurred throughout the area described in the PEIR. For example, Essex Bar (Mercer Fraser) appears to have fully recruited to some 4-5' over the 1992 elevations.

The River Institute Report, attached to the PEIR, discusses

future studies that will be necessary to obtain an "accurate" estimate of recruitment, as versus a "crude" estimate based upon existing available data. The absence of scientific data sufficient to support an "accurate" estimate of recruitment should not serve as a justification for prohibiting gravel mining while future data is gathered. The PEIR and regulatory processes require substantial, not perfect evidence, supporting approvals of projects. In this case, as discussed in the Kondolf report, river science is itself not exact or capable of "accurate" predictions of future river behavior.

Scientific formulas predicting total annual recruitment rates, cited by the River Institute, give projected annual recruitment volumes between 100,000 to 1,200,000 tons of recruitment per year - even though the data input into the different formulas is the same. This wide range of projected annual recruitment volumes, or high degree of variability between theoretical models, highlights the limits of river science methodologies. The limits of scientific analysis and predictions of river behavior should be emphasized in the Final PEIR and its findings. (See the Kondolf study description of variability and the limits of scientific prediction.)

River's mouth, estuary, and fishery. The movement of the mouth of the river and changes in the estuary were beyond the scope of this PEIR. It is the operators' opinion that the estuary and mouth do not presently serve as holding areas for mature or juvenile salmonids, as they did in the past. Also, it should be noted that, in years past, the mouth of the river used to become blocked by beach sands and had to be manually opened to permit fish to enter the river.

Spawning in the lower river. According to fish biologists interviewed by the operators in preparing their comments, high waters during seasonal rains destroy eggs and flush young fish out of the lower river. The operators believe that little or no spawning occurs in the project area. The operators, based on their consultants evaluations, believe there is some very, very limited attempted spawning caused by the hatchery fish remaining in areas where viable spawning is not possible due to seasonal river flows after the hatchery closes its doors to the migrating fish. There are also reports that the hatchery weirs interfere in upstream migration by native and hatchery bred returning adults. According to the operators and their consultants, fish primarily use the river channel in the study area for travel between the waters of the Pacific Ocean and the hatchery and upstream spawning and rearing areas.

The PEIR should include a request that a study be performed, as part of the annual review process, to evaluate spawning activity. If the operators are correct the state law should be amended by removing the Emmerson and Guynup sites from the Fish

and Game Code section 1505 jurisdiction and relocating the lower spawning area boundary immediately below the Fish and Game hatchery.

Mad River's historic course and channel morphology. Mr. Alderon Laird has prepared maps and is completing a study describing the history of the Mad River channel morphology for the State Lands Commission. The maps are presently available and Mr. Laird has indicated they may be available for inclusion in the final PEIR. If the maps or study are available they should be included in the final PEIR.

Impacts of Ruth Dam. Operators report that, prior to the dams being built on the upper river, the summer flows would all but dry up in much of the study area. Controlled release of water from Ruth Dam has changed this pattern. What, if any, impact on the fishery or mining sites results from the controlled flows? Could they cause or contribute to the movement of the river mouth to the north or a reduction of total sediment volume or composition in the riverbed?

Impact of canneries, seals, and predatory birds on mature and juvenile fish. Seals at the mouth and predatory birds are believed to contribute significantly to the death rate among both mature and juvenile fish during their life cycle in the Mad River watershed. I have been informed that canneries used to place nets across the Mad River, taking all or most of the fish going up river during the earlier 20th century. (See the attached report, "Effects of Marine Mammals on Columbia River Salmon Listed Under the Endangered Species Act" and the historical study, App. C) All of those non-mining related factors should be analyzed or, at least, identified as having a significant adverse impact on the fishery in order to accurately assess causes of declines in fish runs.

This is particularly important, since there is no significant evidence that the sand and gravel mining has in fact caused a diminished salmon or steelhead run. Where there is no such impact, or such impact is highly speculative, the PEIR should so report.

Plant and other animal life. The need for or desirability of successive stages of vegetation, often apparently including non-native species of annual and perennial plant materials, is better described in the new draft PEIR than in the 1993 PEIR.

The possibility of maintaining early, middle, and later staged materials needs to be addressed in the light of the need by the community for sand and gravel resources and any potential increase in risk of flood damage from mature vegetation in the stream

channel.[3]

There are sections of the river which are not subject to mining permits and approvals. Can those areas be maintained in a later stage, while mined areas might be maintained as areas where early stage characteristics prevail?

Navigation and summer bridges. Recreational and other uses are discussed, but I do not recall an adequate description of the fact that railroad car/summer bridges cannot be raised to a level where they will permit navigation by boats beneath them. The river is neither wide enough or deep enough at many points during the low flow periods to permit easy navigation by row boats, drift boats, canoes, kayaks, etc.

The PEIR should address the fact that bridges may impact what little recreational boating would occur, but that such boating should not provide an excuse for rendering operations impossible by the imposition of impractical bridge height requirements. In this case there is an overriding consideration which dictates allowing for a significant adverse impact, if one exists.

Economic significance of mining and the public trust. One of the protected uses that is to be considered when managing an area subject to an alleged public trust[4] is the commercial or economic use of the resource at issue. In this case, the public obtains essential products and services from mining operations in the Mad River streambed. There is no established or known economical alternative to mining the riverbed. (See discussion of project alternatives and quarries in the PEIR; App. M & O.) Even if mining operations caused significant adverse impacts on the environment the County could approve operations, subject to the mitigation measures, based upon overriding economic significance of those mining operations for the whole community.

The ultimate project at issue in reviewing and approving this PEIR is the preservation of the community and its way of life while also protecting the environment and other projects within the lower

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[3] There is no significant discussion of the previous study by the Army Corps of Engineers identifying the Mad River as an imminent flood hazard and calling for immediate steps to reduce or eliminate the risk of flood damage in the project area.

[4] I wish to point out that the inclusion of streambeds, that are otherwise outside of area subject to tidal influences, in the public trust domain is not an historically established principle of law. See, for example, the dissent in State of California v. Superior Court (Lyon) 29 Cal.3d 210, opposing the inclusion of non-tidal streambeds, between the ordinary low water and high water marks, within the domain subject to a public trust.

reach of the Mad River. Such a purpose is consistent with the public trust responsibilities of the County as lead agency under the various state and federal environmental quality regulatory schemes. These issues need to be emphasized in the final PEIR.

Increasing minimal extraction amounts, flexibility. The PEIR is encouraging, but the minimal amounts of prescribed extraction in the Draft PEIR (125,000 to 150,000 cubic yards per year) should be increased as further evidence confirms natural recruitment in significant amounts above those hypothesized in the Draft PEIR.

The estimates in the PEIR, for example, do not appear to include recruitment from sources downriver of the gauging station, such as the North fork and other streams below the hatchery.

The PEIR must provide a flexible mechanism for increasing amounts of extraction when circumstances warrant. This mechanism may be most effective if it is part of the annual review process required by SMARA; combining SMARA, Fish and Game 1603, and PEIR suggested reviews into one annual process.

Moratorium on further permits and approvals. Because of the costs associated with the development of this PEIR, it is unfair to permit or authorize operations at any sites or by any parties not included in the present draft PEIR without first obtaining a proportional payment of the PEIR costs. Any such amount should be held in the mining trust fund and should be pro-rata redistributed to the operators based on the amount of their previous contributions.

Any new or further permits or approvals of mining operations, other than those identified in the PEIR, should be subject to a condition that they be performed in a manner that will not adversely impact or reduce the volumes available to the operations identified in the PEIR.

Based upon figures in the PEIR, Planning Department staff have tended to discuss total extraction amounts as being around 817,000 cubic yards each year. The 800,000 cubic yard figure is misleading, it is based on the "up to" amounts in reclamation plans, permits and vested rights determinations. The "up to" volumes are generally included in permits or vested rights determinations to take into account historical maximum extraction amounts not averages. Further, the 800,000 plus number is both inaccurate and very misleading because it is obtained by adding the maximum amounts addressed in reclamation plans to other permit "up to" amounts. This is an extremely inaccurate method of describing actual or potential extraction because reclamation plans do not serve as entitlements to operate. Note, the table on page 5 of the River Institute Report shows that during the last 5 years an average of 280,000 cubic yards was actually extracted - which, the operators believe, is consistent with or greater than historical average annual extraction amounts.

Payment for river management plans, fees and reporting by "exempt" operations. The cost of the river management plans should be paid for by an annual assessment of a cubic yard extracted amount (for operations over a specified amount, e.g. 500 cubic yards at any one site), including payments by larger exempt operations. Operations that are for any reason exempt from SMARA or County surface mining permit processes should be required to report extraction methods, amounts, and locations in order to eventually obtain accurate sediment budgets and inventories, valid transport and recruitment data, and economic analyses of the need for and use of the river resource. Such reports may be based on fair estimates of total extraction, to reduce unnecessary bookkeeping. A fixed fee or per yard amount should be assessed on smaller exempt operations to help pay the cost of County lead agency review of the river. The Water District, CalTrans, Department of Fish and Game, and other agencies should assist in performing cross-sections, aerial overflights,[5] water quality analyses, fish inventories, vegetation studies, etc. in the interest of reducing the costs to the operators and the County.

Permanent repository for data, annual reviews, studies, etc. We would also recommend that the Board of Supervisors, either as part of or separately from the PEIR, request the Humboldt County Surface Mining Advisory Committee to make a recommendation on a place and method of accumulating all data and reports generated by this process for future reference and review by the public, operators, scientists, agencies, etc.

Acknowledgements page. An acknowledgments page should be added, as in the 1993 PEIR. Those responsible for the MOA should be identified and recognized for having made the whole thing possible. The whole process started at the request of the operators and of Supervisor Bonnie Neely when Secretary of Resources, Douglas Wheeler, authorized his staff, Mike Chrisman, Christine Sproul, Susan Bruns, and others to attempt to produce an MOA. Special thanks are really due Christine Sproul and Susan Bruns, who spent hours on the phone with me drafting and redrafting the MOA in order to put together a consensus between the various parties and agencies. The County Planning Department, the Board of Supervisors, and the various state agency staff and legal counsel assisted with the development of the final MOA.

Conclusion. In concluding, what we need is a fair process

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[5] Operators and their agents have indicated that aerial photos of the entire length of the river may provide an adequate basis for developing cross-sections, monitoring river morphology, and analyzing plant life in the streambed area. If that is the case, aerial photos may be a cheaper alternative to multiple field surveys to develop cross-sections.

that involves both operators and qualified engineers from the County in an annual review of river conditions. SMARA requires annual reviews, in any case, as does the Department of Fish and Game 1603 Agreement process. What we do not need are a bunch of bureaucratic rules, fixed operating conditions, and speculative proposals for resource management that confound common sense and sound business management practices.

The annual review process will undoubtedly end up being very similar to the present scientific committee reviews. The annual review process provides the County with the ability to determine whether the reclamation plans are being adhered to and whether operations are consistent with the final reclamation standards. The annual reviews should coincide with the Department of Fish and Game reviews under the 1603 Agreement program.

The purpose of the review process is to provide efficient, accurate summaries of the previous year extraction, pre-season analysis and operation proposals, and post-season data and review of completed operations. Our goal, in other words, is to exercise common sense in developing scientifically grounded river management practices. In the long run, the operators believe, the scientific analyses will confirm, in the main, that the previous operations were relatively safe for the environment and the fish.

To accomplish the operators and scientists goals enforcement powers, perhaps the authority to issue infractions, must be granted to County agency personnell. This matter should be referred to the Surface Mining Advisory Committee.

My clients -- the Mad River sand and gravel operators -- wish this PEIR process had been more efficient and, therefore, less costly. They expect that, based on the lessons learned, future projects of this kind will be more efficient and economical. They want you to know of their very real concern that the process be maintained as an efficient and effective method of managing extraction and that the process not become overburdened with bureaucracy, redundancy, and costly but unnecessary data collection and analysis. They expect cooperation from all the concerned agencies. Finally, although registering their concerns and disagreements with the PEIR, they have put their faith and trust in the scientific committee review process, under the supervision of our local Board of Supervisors and County as lead agency, and will do everything in their power to support and cooperate with the scientific committee and its individual members.

Very truly yours,

DUN & MARTINEK

William O. Davis

ATTACHMENTS

1. November Surf, Robinson Jeffers.

2. "Effects of Marine Mammals on Columbia River Salmon Listed Under the Endangered Species Act," D. L. Park, 1993

3. Photos and Commentary provided by operators. (Originals of photos are available through Rising Sun Enterprises; text will be editted, reprinted, and resubmitted prior to the public hearing for the Final PEIR.)

November Surf

Robinson Jeffers, from
Thurso's Landing, 1930-31

NOVEMBER SURF

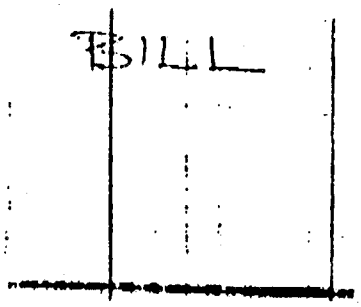
Some lucky day each November great waves awake and are drawn
Like smoking mountains bright from the west
And come and cover the cliff with white violent cleanness: then suddenly
The old granite forgets half a year's filth:
The orange-peel, egg-shells, papers, pieces of clothing, the clots
Of dung in corners of the rock, and used
Sheaths that make light love safe in the evenings: all the droppings of the summer
Idlers washed off in a winter ecstasy:
I think this cumbered continent envies its cliff then. . . . But all seasons
The earth, in her childlike prophetic sleep,
Keeps dreaming of the bath of a storm that prepares up the long coast
Of the future to scour more than her sea-lines:
The cities gone down, the people fewer and the hawks more numerous,
The rivers mouth to source pure; when the two-footed
Mammal, being someways one of the nobler animals, regains
The dignity of room, the value of rareness.

"Effects of Marine Mammals on Columbia River Salmon Listed Under the Endangered Species Act"

Prepared by D. L. Park
June, 1993

EFFECTS OF MARINE MAMMALS ON COLUMBIA RIVER SALMON LISTED UNDER THE ENDANGERED SPECIES ACT

Recovery Issues for Threatened and Endangered Snake River Salmon
Technical Report 3 of 11



Prepared by

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Prepared for

U.S. Department of Energy
Bonneville Power Administration
Division of Fish and Wildlife
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Portland, OR 97208-3621

Project No. 93-013
Contract No. DE-AM79-93BP99654

June 1993

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[1] Don Chapman Consultants, Inc., Boise, ID

EXECUTIVE SUMMARY

Most research on the Columbia and Snake Rivers in recent years has been directed to downstream migrant salmon (Oncorhynchus spp.) losses at dams. Comparatively little attention has been given to adult losses. Recently (1991), an estimated 378,400 adult salmon and steelhead (O. mykiss) were unaccounted-for from Bonneville Dam to terminal areas upstream. It is now apparent that some of this loss was due to delayed mortality from wounding by marine mammals. This report reviews the recent literature to define predatory effects of marine mammals on Columbia River salmon.

Spring/summer chinook salmon (O. tshawytscha) have been observed by National Marine Fisheries Service biologists at Lower Granite Dam with bites, scars, and open flesh wounds caused by seals (sea lions) (Pinnepeds). During the last three years, the incidence of marks has ranged from 14 to 19.2% with about one-third of the marks consisting of open wounds. This gives cause to believe substantial losses are occurring from direct predation in the Columbia River estuary and further losses occur as fish die from wounds as they ascend the river.

The Marine Mammal Protection Act of 1972 has eliminated predatory losses of seals and sea lions except those caused by killer whales. With protection, seal and sea lion populations are now at or possibly exceed historic levels.

In British Columbia, harbor seals (Phoca vitulina) increased from about 9,000 animals during the mid-1970's to about 90,000 in 1988. The Oregon herd (central Oregon coast to Grays Harbor) now stands at about 12,000. The Columbia River herd (part of the Oregon herd) is conservatively estimated to be 3,000 animals. The Columbia River herd has been growing at rates of 6 to 11% per year since 1978.

California sea lions (Zalophus californianus) have also increased substantially with protection, but their population is more migratory than that of seals and they probably spend less time in the river. Mature bulls (at least some) are year-long residents on the coast and have been observed in the Columbia River up to Bonneville Dam. Though much larger than seals, they are far less abundant and likely of minor consequence as salmon predators in the river. Because of the importance of seals, seals are given extensive treatment in this report.

Harbor seals seem to prefer feeding on small fish such as herring (Clupeidae), anchovies (Engraulidae), and smelt (Osmeridae). Small fish <15 cm form about 62% of their diet and those fish over 15 cm, including salmon, provide the balance. On a numerical basis, salmon provide <1% of fish eaten. However, because most salmon eaten are in the large category, they may provide more than 10% of the total biomass consumed. In Oregon, the average seal weighs about 56 kg and requires about 2.8 kg of fish daily for weight maintenance. Estimates of salmon consumed by seals ranged from 20% of the Oregon commercial landing in 1980 (Harvey 1988) to 59% of the catch in 1991 (Kaczynski and Palmisano 1992).

Seals are nomadic and most of the Columbia River herd resides outside the Columbia much of the year. It has been postulated that seals follow the smelt

(eulachon) into the river in January. I hypothesize that during January-February the abundant smelt provide much of the fish needed by seals. However, the smelt run is of short duration, and as spring chinook become available (some runs enter the river in February) seals turn to salmon as the smelt run passes upriver.

Using food habit and consumption rate data of others, I estimate that 3,000 seals would take about 22,500 spring/summer chinook salmon during a 100-day period from late February through May. Fish consumed were from various stream sources, so perhaps 20% or about 4,500 fish (conservative estimate) were Snake River spring chinook (I separate spring-run from summer-run fish because no estimate of upriver losses for summers could be established).

Bite marking (including scars and open wounds) observed at Lower Granite Dam provides solid data that Snake River salmon are being lost to seal predation and delayed mortality. A marine mammal expert viewed photographs of injured salmon and identified the bites as those made by harbor seals. Since the photograph sample was obviously small, it is possible or even likely that some marks were made by sea lions. For several reasons, I attribute them to seals.

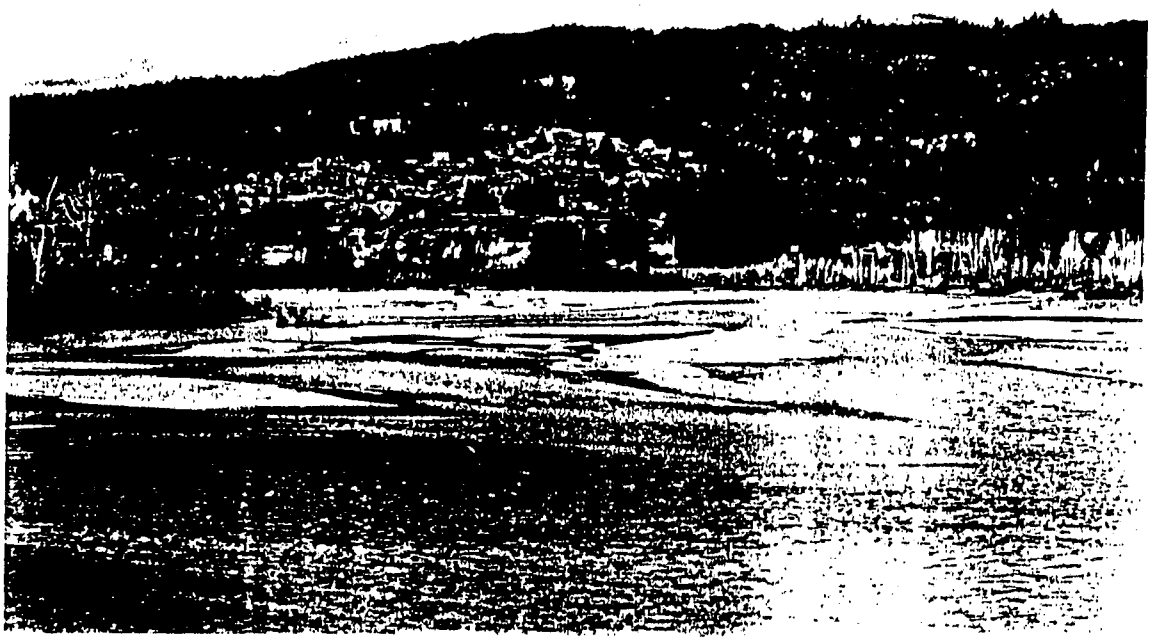
Based on data from Lower Granite Dam, predatory attacks were more severe on spring chinook than summer-run fish. In 1991, 20.9% of the spring chinook were scarred compared with 9.4% of the summer-run fish. In 1992, 17.4% and 7.6% were marked from the respective spring and summer runs. This suggests that some stocks of wild spring chinook were fished heavily by seals.

Bite marking observed leads to suspicion that delayed mortality after predation (interdam loss) was substantial. I estimate that interdam losses due to seal bites during 1990 to 1992 were about 3,600; 1,500; and 2,900 in respective years. Additional prespawning mortalities between Lower Granite Dam and the spawning areas were 2,900; 1,100; and 2,300 during the same years. In 1992, total mortality was 9,700 or about 3,900 wild spring run adults (includes estimates of direct predation, interdam loss, prespawning loss, and assumes that 40% of the run were wild fish).

There may be a competitive interaction between marine mammals, juvenile hatchery fish, and young wild fish. Herring and other small fish are important food sources of all three groups of animals. In years when salmon survive poorly in the ocean, lack of prey species for salmon may be made worse by grazing by marine mammals. Also, abundant hatchery fish have been and continue to compete with the wild fish for a finite food supply. I speculate that numerous hatchery fish released each year into the Columbia River may provide an attraction for holding marine mammals in the estuary while they feed on juveniles and adults as they pass through at the same time.

Historic high populations of marine mammals must be addressed. A holistic approach to management is a basic requirement. One approach is to amend the Marine Mammal Protection Act of 1972 which is in the process of re-authorization (1993). Action is required now to take into account threatened Snake River salmon.

GUYNUP BAR PHOTOS AND COMMENTARY



Photos taken 2/23/94.

Refer to fact sheet in regard to Blue Lake bridge.

Photos taken 2/23/94.

These two photos confirm that the river has not degraded at the Guynup bar.

Photo showing the gate is approximately the center of the bar. At the time the photo was taken, the river depth was approximately 4 feet at the center of the channel.

Photo #2 is of the bar shown on the lower side of Photo #1. Notice the riffles in the river in comparison to the level of the shore-land. The water level at this point is 2 - 3 feet in depth. It also shows no degrading of the river at the Guynup site.

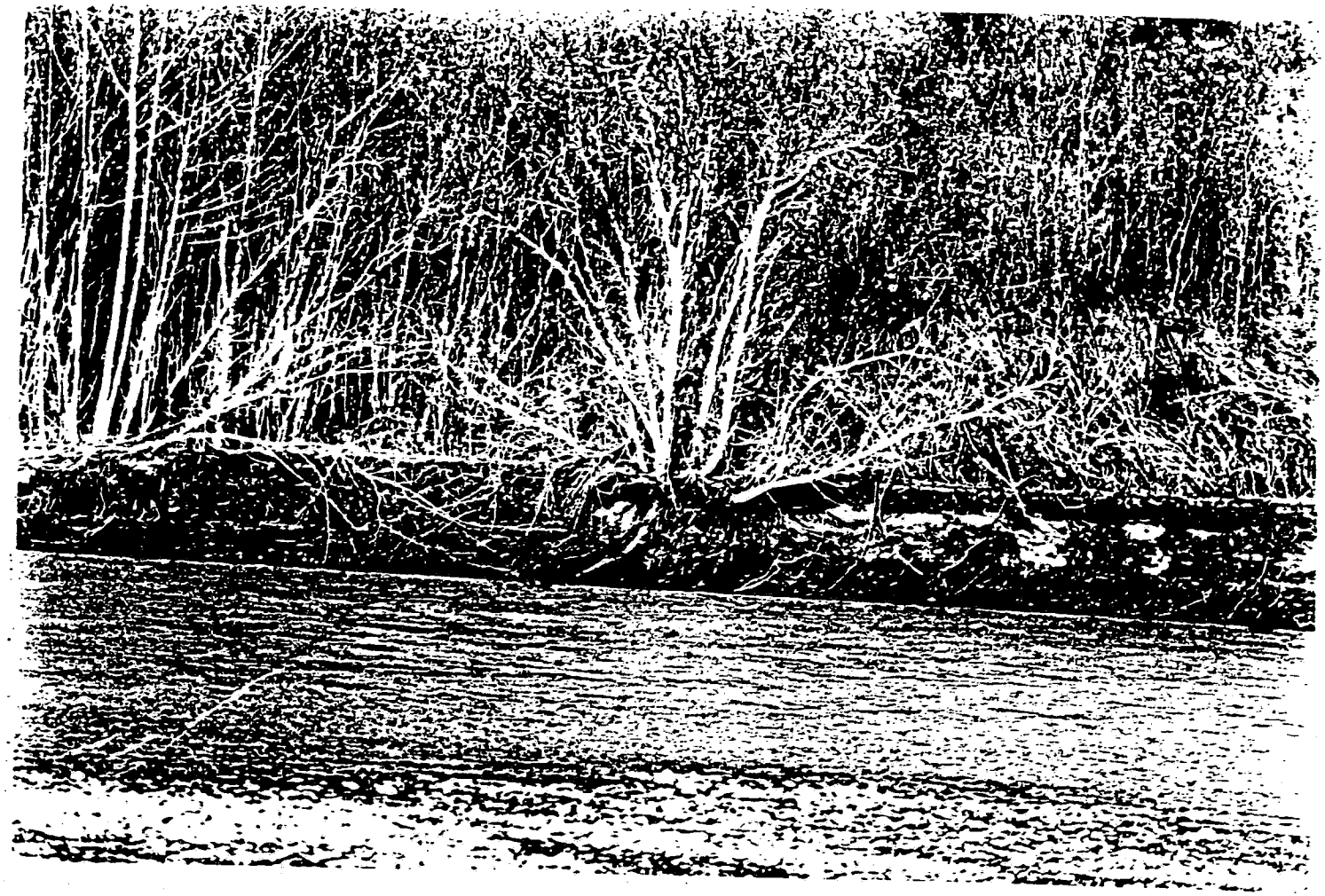


Photo taken 2/23/94.
Photo #3 shows that the lack of gravel removal causes loss of fish habitat and erosion, as mentioned in the fact sheet.

Information not taken into consideration in the 2/94 study.

Mad River has been a source of gravel supply for over 100 years. From the year of 1800 the majority of the rock was removed from starting at the Mercer Fraser Co. bar adjacent and a part of the Humboldt Water District wells down river. The larger tonnage removed below the 299 bridge. Operations were discouraged up river beyond the Humboldt Water District site due to cost of transportation from point of gravel procurement to point of rest. The mining sites actually consisted of only approximately 4,000 feet of riverbed for over 100 years.

Up river mining up until 1970 was of a very low tonnage -- less than 15% of the total tonnage removed came from up river.

The location on the river where it was mined constantly from the 1800s until the last few years, was mined year-round by using drag lines for removal during the winter months. These same locations today are within a few feet of normal level today. During these years, the deep holes dug in the river bed were a haven for fish coming up stream to spawn. From those early years to the present time, the lower river channels filled with minerals and mud to the present state. Reference information reveals that Mad River and Eel River are within the 2% factor of the highest erosion rivers of the world. There is opinion that logging of up river areas has added to the soil erosion. This is a give and take opinion as the soil in the upper basin is slipping and moving continuously due to the soil type and underlying formation. Removing timber from soils as mentioned actually discourages the slipping of soils as the trees growing in soil where a hardpan exists under the topsoil discourages taproots, the root system is only in the topsoil. During heavy winter weather the wind on the trees causes a leverage action that causes the soil to break loose and move.

The continuous movement of soils downstream increases the filling in of river channels. This in turn during heavy water runoff causes the river to erode its banks and widen out the stream bed. This then reduces production of fish habitation. The water becomes warm and water life that developes due to warmer water is not an acceptable habitat for trout, salmon or steelhead. Salmon and steelhead cannot spawn in the riffles that are so shallow that a ten pound fish's back is practically out of the water coming up stream.

The answer to the problem of better fish habitation is to have the lower levels of the rivers continuously channeled. Up stream low water levels should also be deepened.

At the present time is is pitiful to watch the sea lions destroy thousands of salmon as they wait in the mouth of our rivers for high water to come to enable the fish to travel over the build-up of many years of sediment.

The local Mad River mining operators offered to deepen the channel to the extent of removing materials they would not benefit from at no cost to the taxpayers. The offer was turned down by the State Fish and Game Department.

Until the politics are removed from the Fish and Game Department, there will not be fish habitation improvement. They obtain tremendous power by environmental organization. Until management of the rivers is placed in the hands of people that are not working under these pressures, the fish will continue to be caught in the middle and will continue to deteriorate. Industry will be constantly blamed for the problems. The state of Washington is a good example. The sea lion population has incrased to the point of actually destroying the steelhead runs. Due to political pressure the sea lions are protected and the fish runs no longer exist. Fish runs will continue to deteriorate until non-biased people are delegating the management of the rivers.

By implementing a common sense approach, working hand in hand with industry, improvement of the fish habitation could be accomplished at very low cost to the taxpayers. The Mad River fish habitation cannot be compared to a river where the drainage area is either predominantly rock formation or soils formation that is not continuously moving. Mad River must be constantly channeled in given areas to substain the fish being able to move up stream for spawning. A portion of the channeling will have to be done up river beyond the given area that industry is now operating. The channeling up stream could be done by the mineral operators on the lower river area at very little cost to the taxpayers.

The riverbed at the Mad River Sand & Gravel (Guynup) site has not receded in the last 40 years. The gravel formation shows that at one time probably in the 1800s, the riverbed extended one-quarter of a mile to the north as the soils in the fields are predominantly gravel.

At approximately one-quarter mile inland, the elevation increases 12 to 15 feet. The soil from that point continues to the north fork of Mad River and is a loam type soil with occasional scattered rock.

Guynup has owned the present Guynup site since 1964. During the years from 1964 until the Dept. of Fish and Game started regulating the gravel removal, with the exception of the one year that they sanctioned Guynup to channel the river from the Simpson property line downstream for approximately 1200 feet, Guynup kept the river channeled to avoid the river eroding the northern bank of the river the years that the river was not channeled and of this present date.

During an average rainfall, whenever the river comes up a minimum of 3 to 7 feet, the vegetation, soil and prime fish habitat is washed downriver due to lack of channeling.

The river at the site which parallels the majority of the Guynup Mad River Sand and Gravel site, has an elevation the same as it was in 1964. The land as described in the above has been farmed for over 50 years. The elevation of the field adjacent to the river is within 3 to 4 feet of the river elevation. There are trees growing in the area that are proven benchmarkers that the river has not receded on the Guynup site with the exception of a minor part of the bar that comes back to the original depth even in a low water runoff.

It is very easy to condemn and imagine how one is going to control Mother Nature, but seldom does this type of thinking produce what the dream was at the start. Generally people that have lived and worked and worried about their very livelihood on the river and the ocean have a layman's understanding that can enable all parties concerned to more successful endings. For instance, a river such as the Mad River that floods heavily beyond its present banks, moving millions of tons of sediment downstream, destroys its usefulness for fish habitat and other usues, has only one way to retain or recover to the public satisfaction. That is by riverbed management. Riverbed management has predominantly two choices to protect fish, fish habitat, and wildlife refuge and beautification:

1. Channel the river in extremely shallow areas. This will decrease bank erosion, plus water for fish to move upriver in or rest and spawn.
2. Some areas by removing a build-up of the river bottom directly opposite the given area will remove the pressure from the banks at given location - control the river to avoid widening of the river.

In the Mad River study the point is made that gravel removal from the lower Mad River, which even during the highest years of removal does not consist of over 7,000 feet of bed, is the major contributing factor of bank erosion ten miles or more upstream.

Geographics show that even during the early years when gravel removal was quite remote, the river was eroding its bank and cutting new channels from the beginning of mankind.

In the hills at an elevation of 300 feet or more above the riverbed in the Korbel area, the soil is full of mineral substance that came from where the river once flowed. There was no known river extraction in those years.

The predominant factor that must be challenged in the Mad River study is that the people involved in preparing this study must explain how many miles upstream have been effected by 4,000 to 6,000 feet of gravel removal downstream.

March 18, 1994

Dear Bill:

These photos were taken on March 9, 1994.

Photo #1 is the lower bar of Mad River Sand & Gravel. The right-hand area is approximately 200 feet down river from the photo you already have showing a gate. The growth in the center of the photo is the approximate property line between my property and the Emerson-Bob King bar.

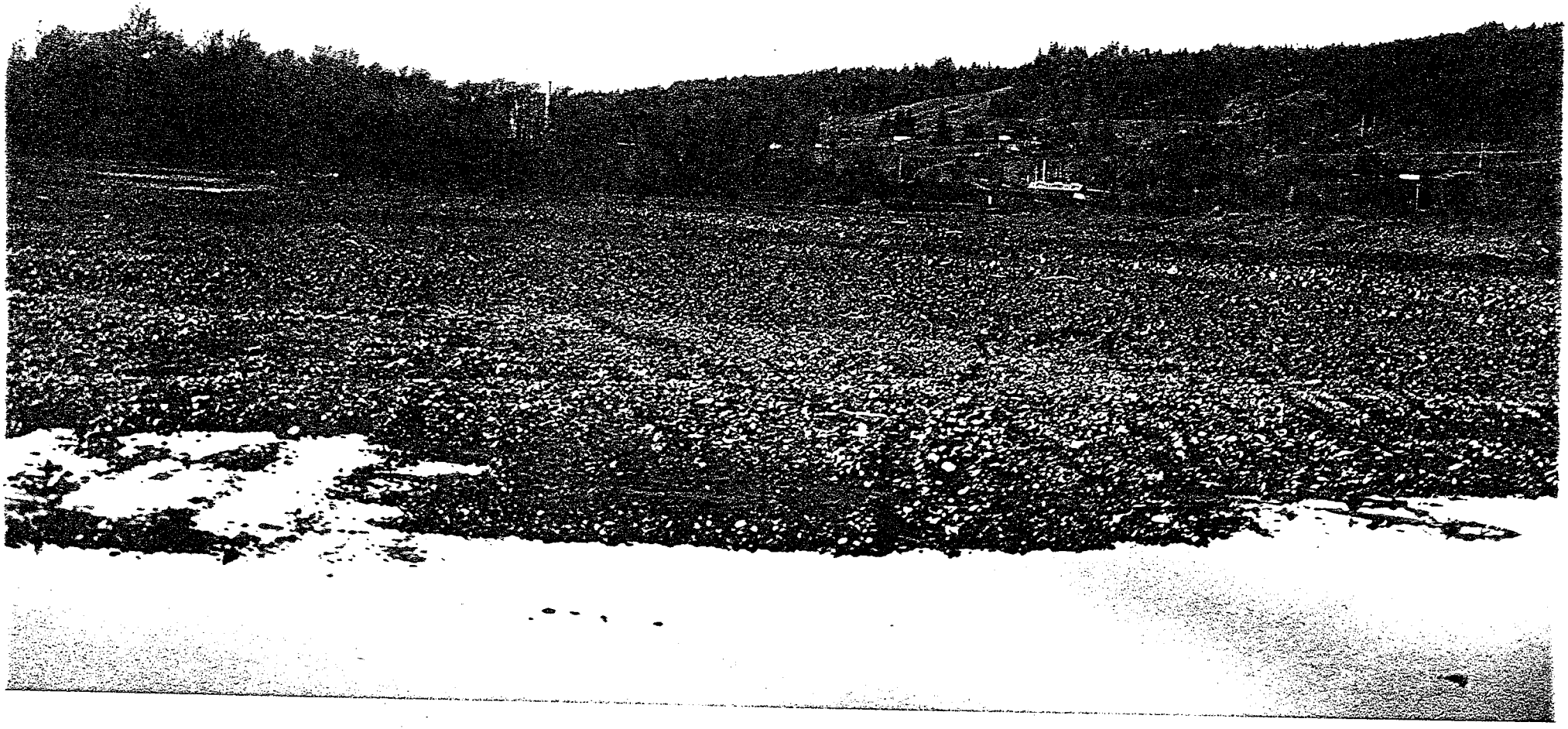
Photo #2 is the up-river bar on the lower side below the Simpson property. This photo is on the south side of the river directly opposite the up river section of the bar shown in the photo you have showing lumber in storage on Simpson property. This photo is on the south side of the river and is a section of the bar that is crowding the river to the north east side causing erosion.

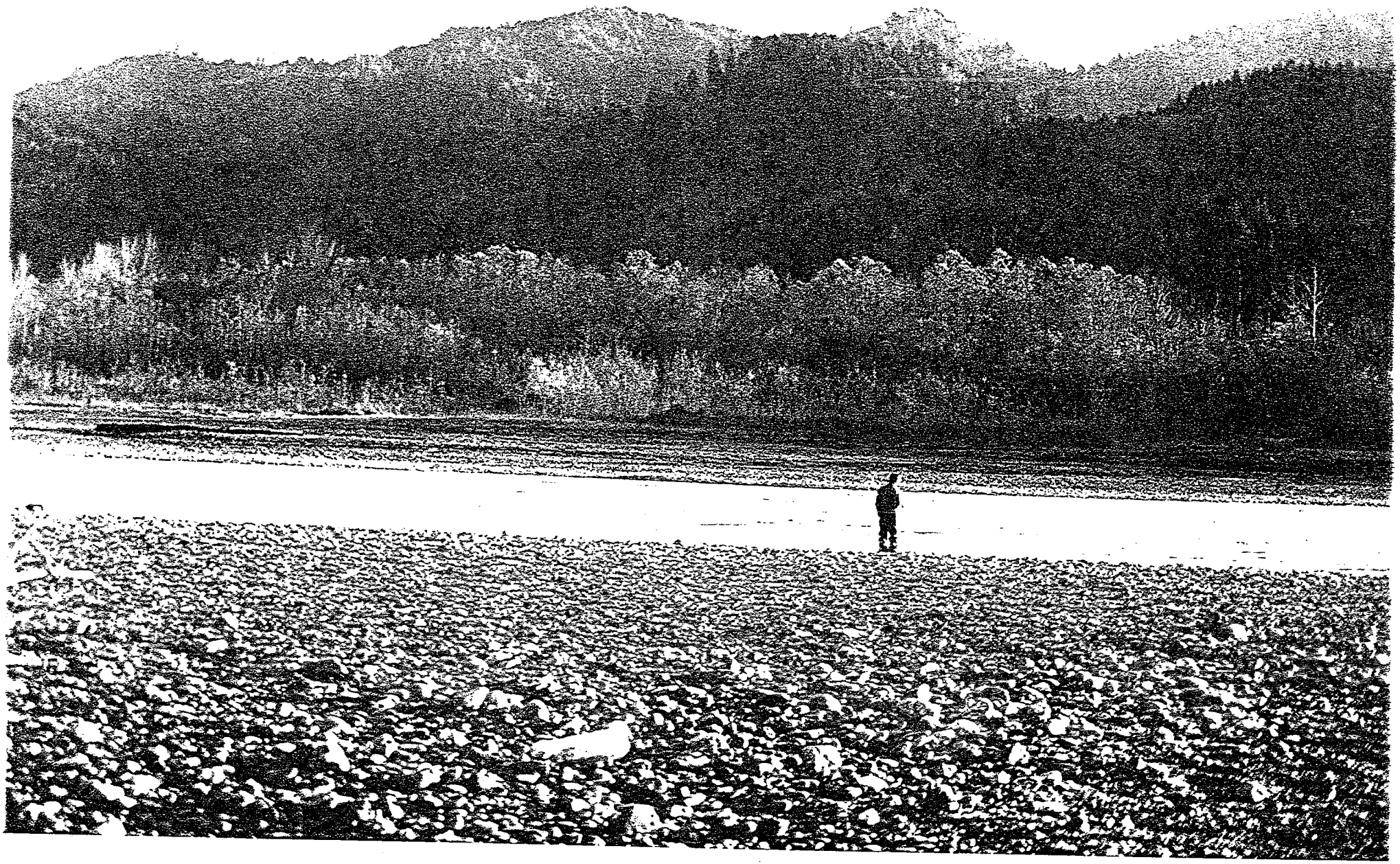
Photos #3 and #4 show downstream from photos #1 and #2.

Photo #5 shows how the gravel buildup is crowding the river to the north, causing the river erosion as mentioned above.

Please feel free to call me over the weekend or anytime if you need my help.

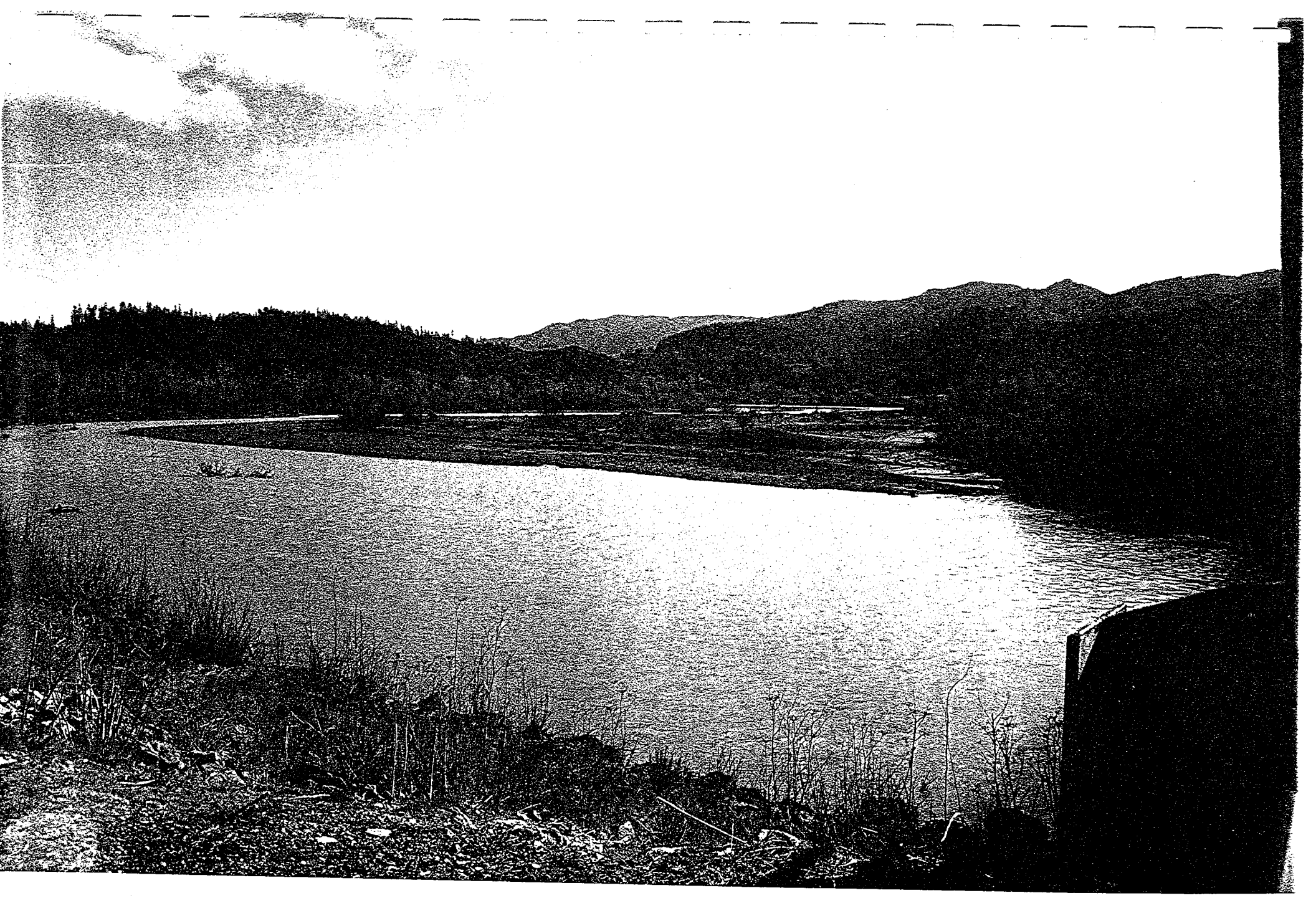
HOME: 445-9402
SHOP: 826-2131 (Let this phone ring for an extended period of time).

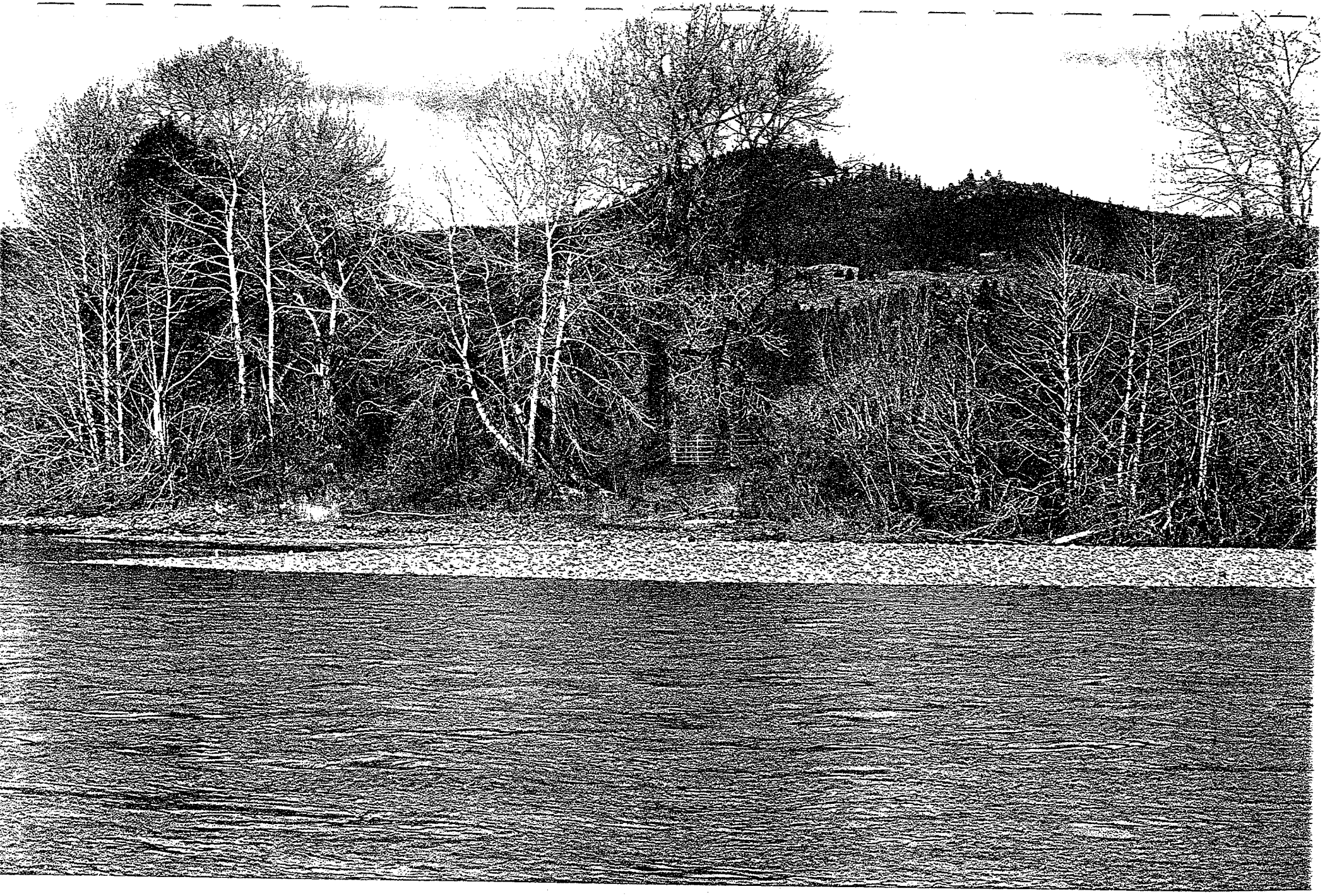


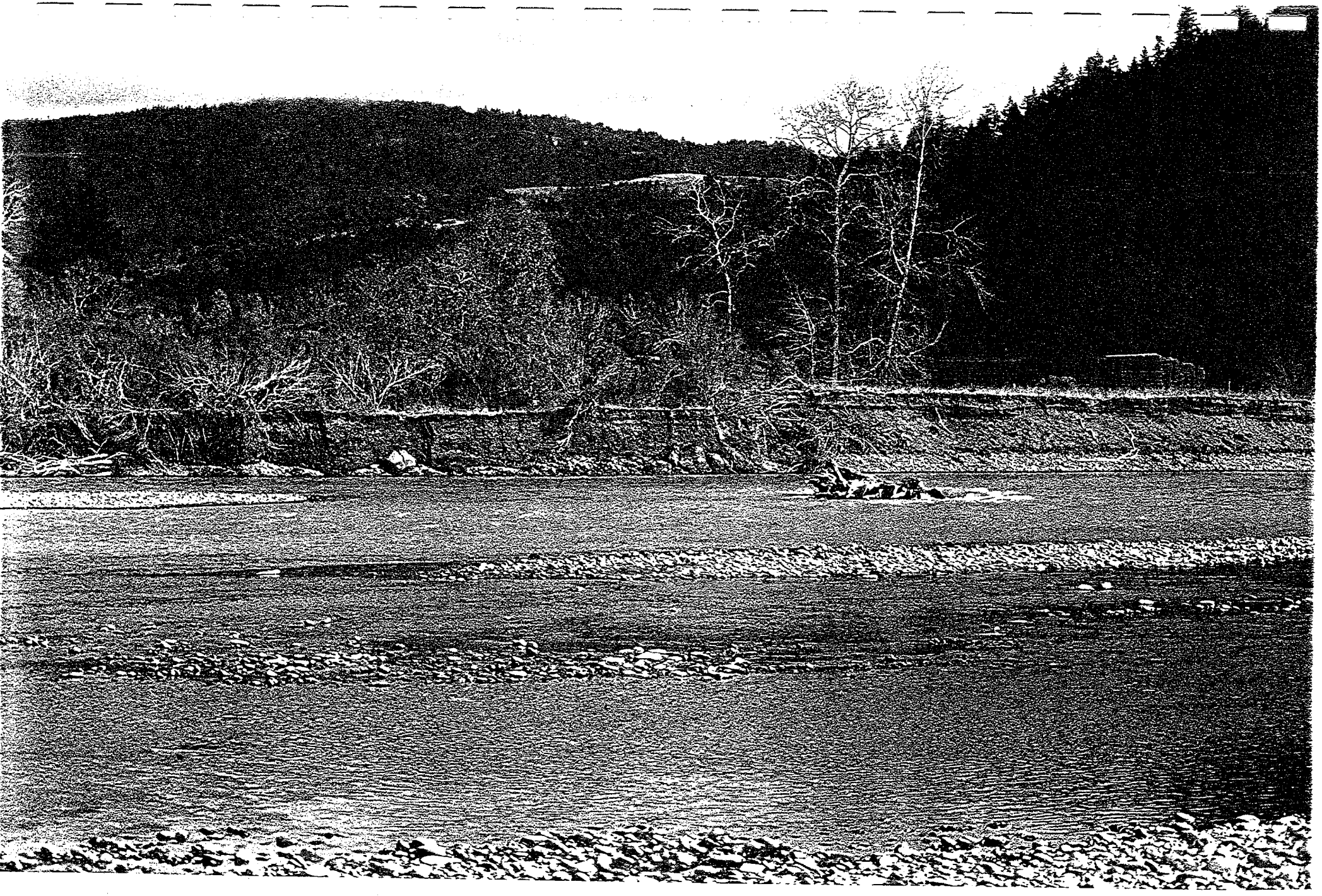


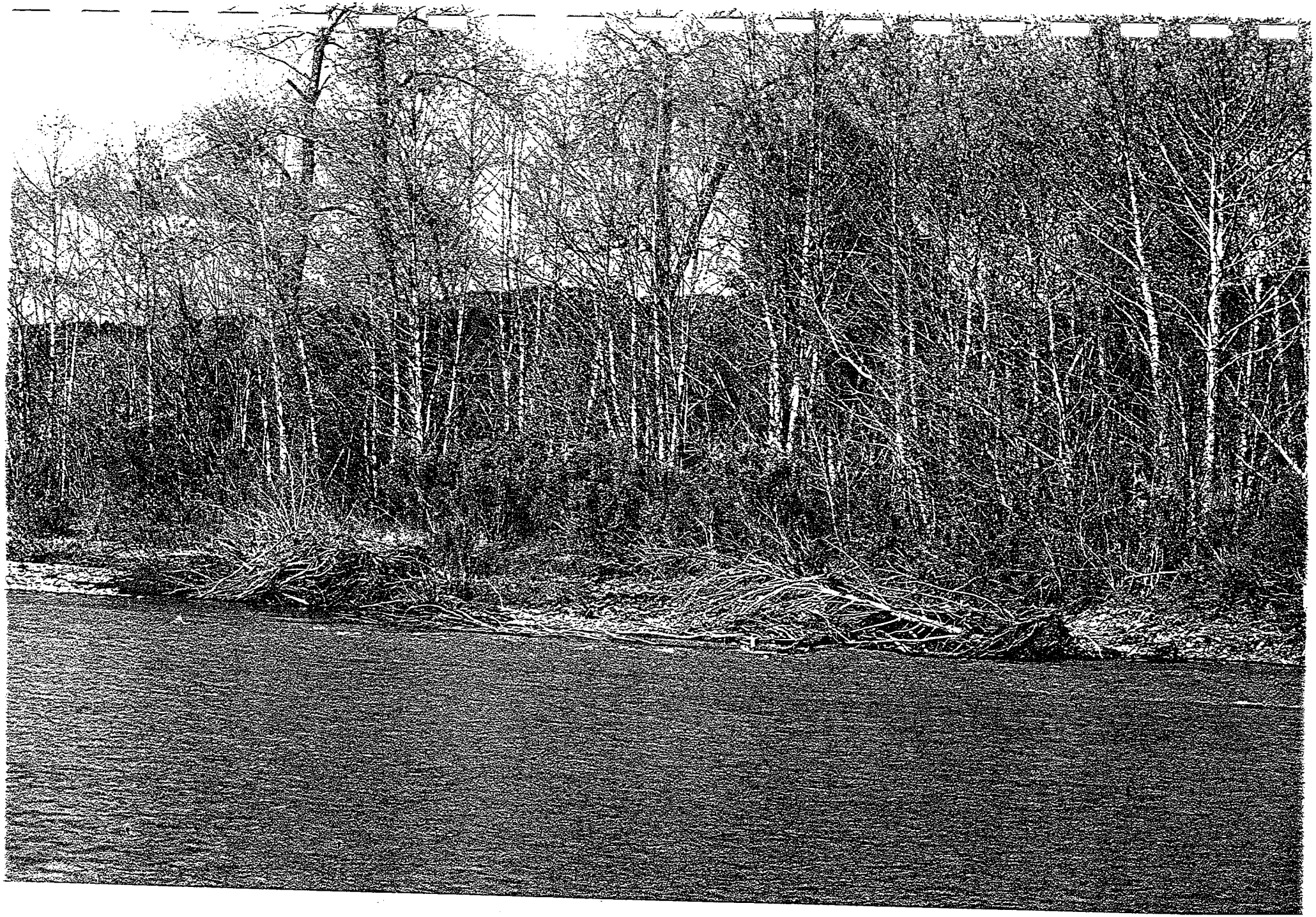
Photos taken Febraury 23, 1994

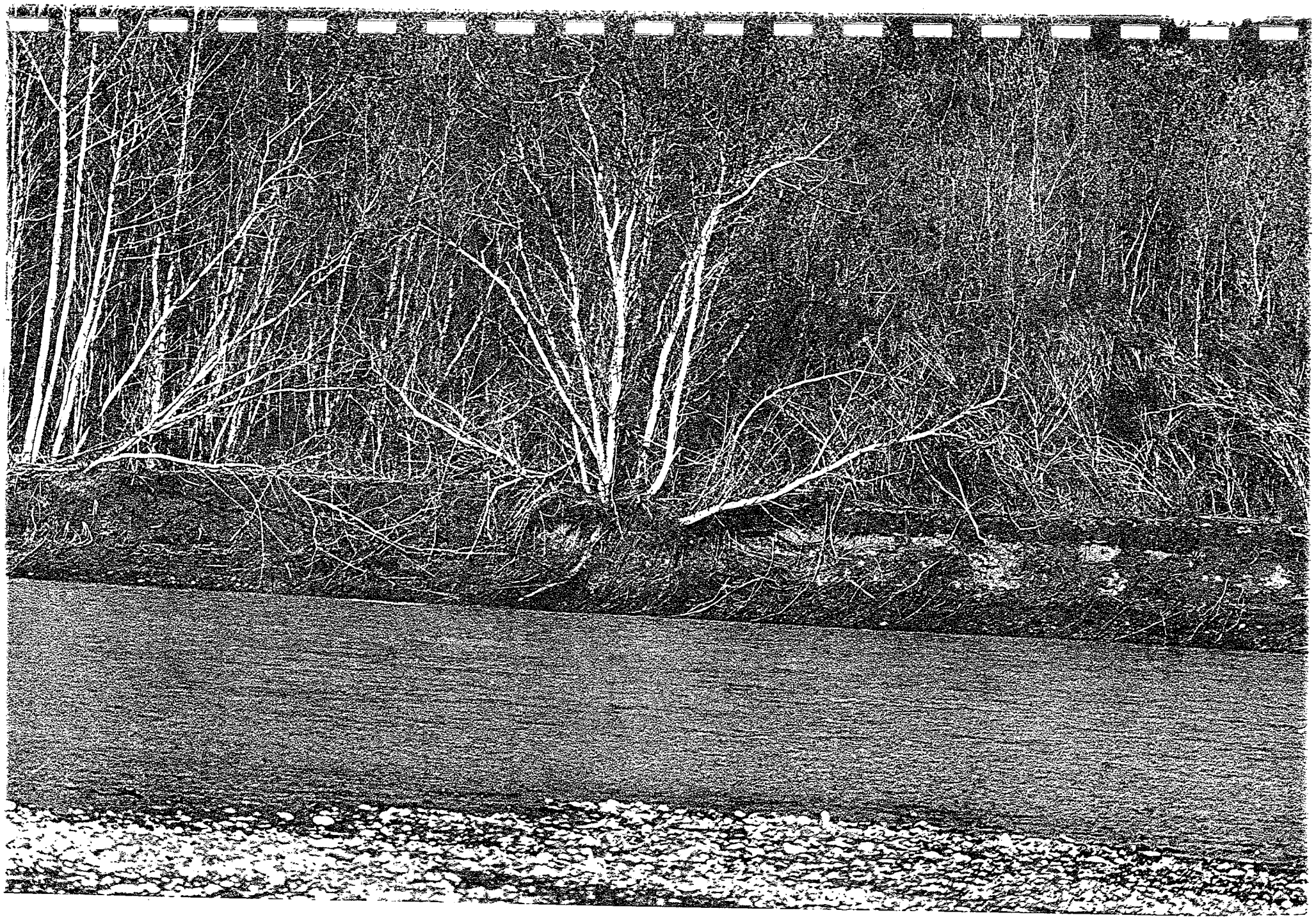
These are the banks opposite the riverbed in the March 9, 1994 photos.

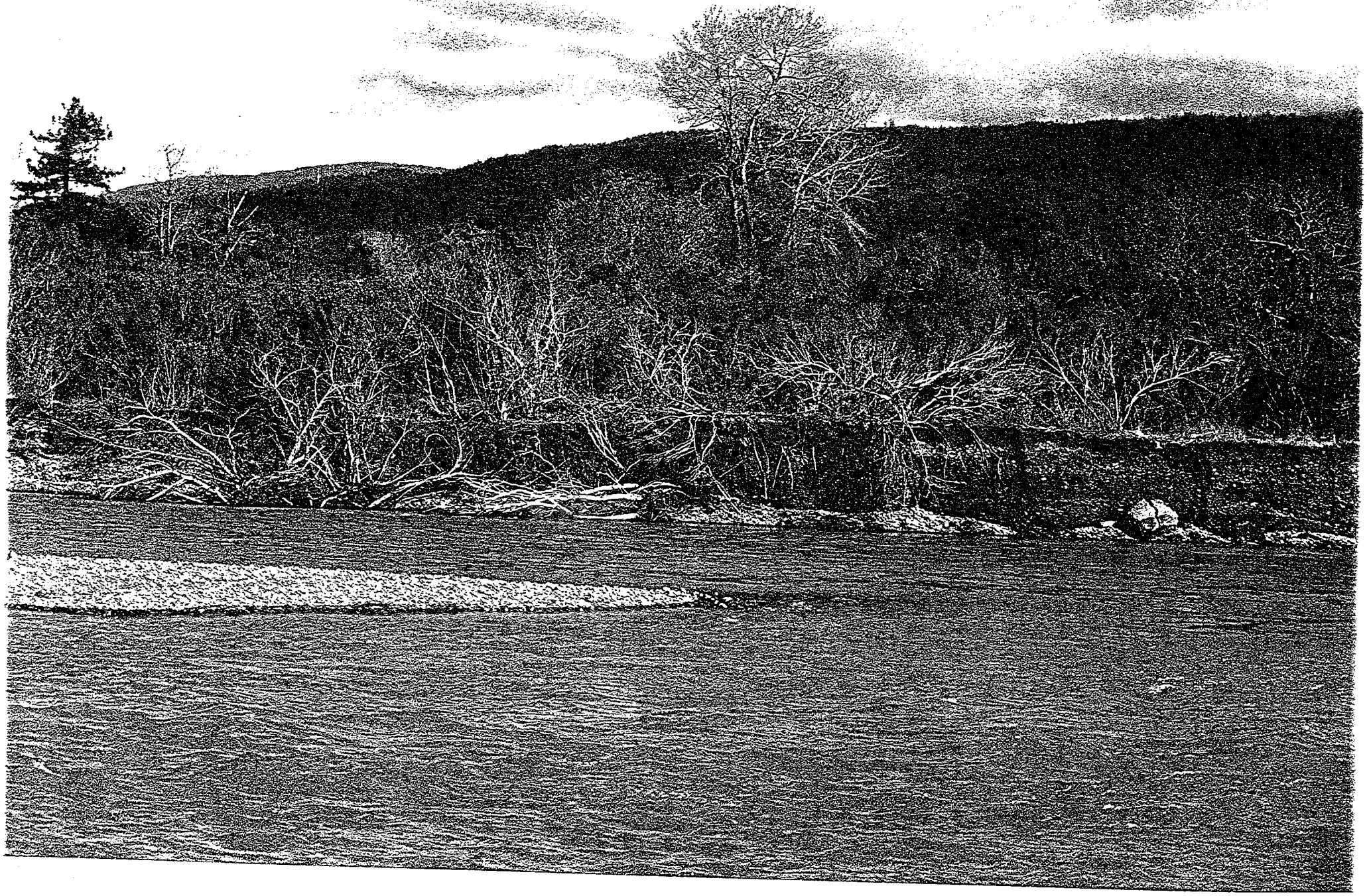












CHRISTIE BAR PHOTOS AND COMMENTARY

March 15, 1994

Alfred Christie
P.O. Box 213
Blue Lake, CA. 95525

To Whom It May Concern:

I take exception to the direction of discussions that are taking place regarding the use of the river bar for which I currently have a lifetime lease. This bar has been used as a primary source of income for my family for many years. The Christie family has owned the ranch this bar is on since 1944, the extraction of gravel from this bar has been on-going since 1948. It is our assertion that (1) the river bar has more gravel now than in previous years, (2) the undermining of the bridges is not primarily due to the extraction of gravel, and (3) extracting gravel at the current proposed levels diminishes our ability to exercise reasonable property rights.

When first purchased, the Christie ranch consisted of approximately fifty acres of river bar, which was ten (10) percent of the ranch; as a result of river action over the years, the ranch now has approximately three hundred acres of river bar which consumes sixty (60) percent of the ranch. This, along with the construction of Highway 299 through the ranch, has greatly reduced the earning capacity of the ranch, and my ability to earn a living has been greatly diminished if I were to rely solely on cattle production.

It has come to our attention there are some discrepancies concerning the current levels of gravel in the Mad River. Along with this letter, I am sending some pictures showing one exposed box, others are still covered with gravel, which were placed by my father, Al Christie, in 1946 to control bank erosion in this area. The gravel has built up over the years to a level which is greater than the depth of the gravel prior to the 1964 flood. The 1964 flood built up the level of the land and the resulting filling in of gravel over the years has come up to this new level. The amount of current gravel is greater than the amount of gravel that has existed in previous years. Not only is the gravel amount greater because of the depth it is also greater because of the width. The river bar in 1946 was approximately two hundred yards wide and now is approximately one mile wide.

It is our assertion that gravel removal is not the primary cause of the undermining of the bridges. In 1968, when minimal gravel extraction was taking place, problems with the underpinnings of the Mad River railroad bridge existed. Marvin Wright, a licensed contractor, was hired to repair the center support column of the railroad bridge. I was also paid by Marvin Wright for the use of my labor and loader to correct this problem. I mention this to show that problems have continued to plague these bridges throughout the years even when the extraction level of gravel was less than the current level being allowed.

While many forces have been instrumental in reducing the land's ability to provide in a way for which the land was originally purchased, the forces changing the shape of the land have always opened new opportunities. For example, as the river bar grew in size, the ability to extract a greater amount of gravel compensated for the loss of pasture land.

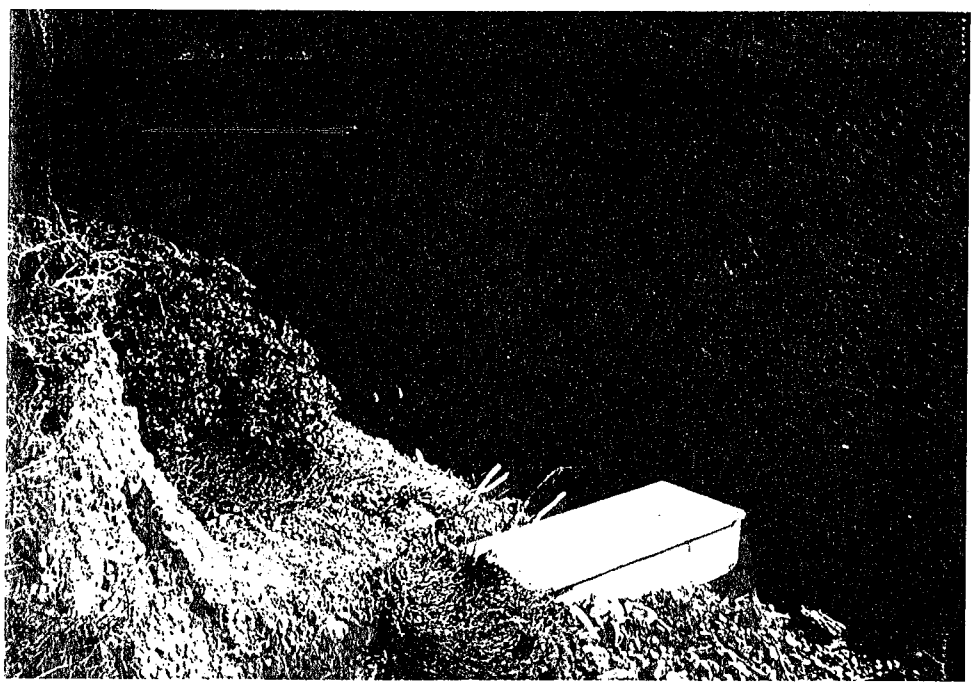
Sufficient income from ranching can no longer be made from pasture; mining of gravel is a necessary component of how the land might best be used. Not only does mining of the gravel provide income for my family, it also is a part of Humboldt County's production potential; as such, it provides many jobs directly on the bar, as well as a large number of jobs that are related to trucking, construction, and highways. We need to continue to extract gravel from this bar, and at a level greater than currently being proposed. This benefits not only the Christie family but also Humboldt county.

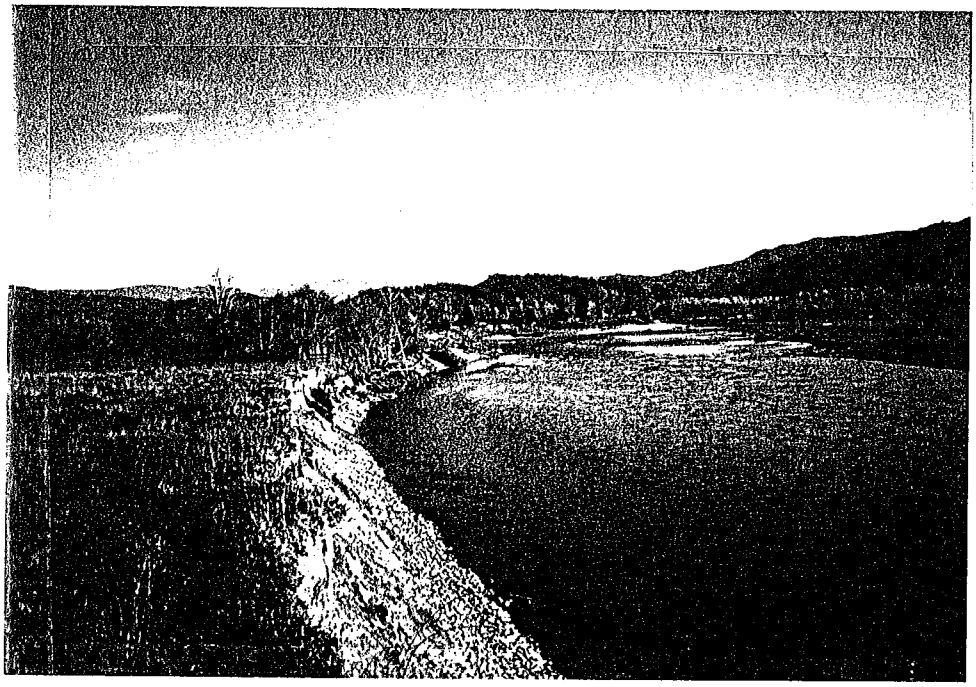
Income from gravel has been the major source of income for my mother Phyllis Christie since the death of her husband in 1976, and provides necessary funds to support the needs of her physically disabled son who requires twenty-four hour care. We desire to maintain this capability.

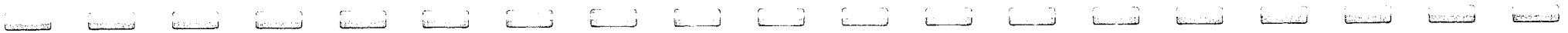
Reducing the ability to extract gravel from our bar amounts to condemnation without compensation. It reduces our ability to exercise reasonable property rights. If the limits suggested are enforced, you have reduced my ability to earn a living and to use my property in a prudent and efficient manner.

Sincerely,

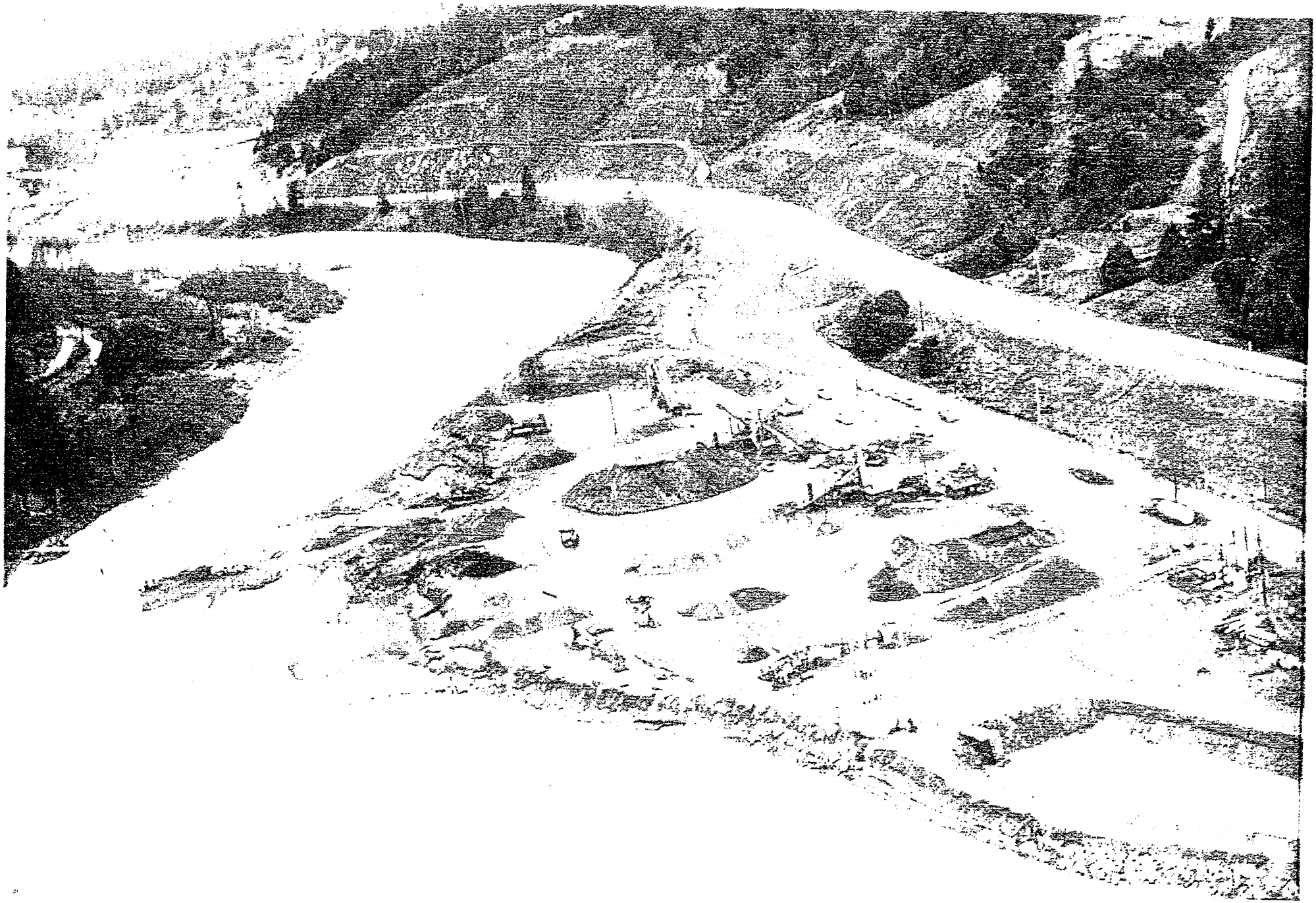
Alfred W. Christie







ESSEX BAR PHOTOS AND COMMENTARY



Mercer-Fraser Company - Essex Yard operated from 1940 through 1975 as an aggregate producing facility for all types of construction materials. The yard contained a rock crushing- gravel screening and washing plant, office, scales, etc. The yard produced approximately 80,000 tons of aggregates per year. There was never any problem of obtaining gravel from the riverbed, as replenishment occurred annually and the river channel remained stable.

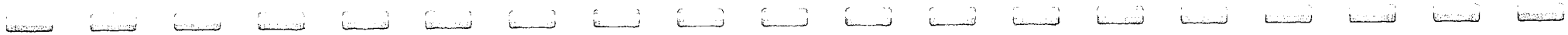
The Humboldt Bay Municipal Water District constructed several Ranney wells in the Mad River above and below Mercer-Fraser Company property. This was in the 1960s. The wells did not perform properly due to the density of the gravel bed whereby water did not reach the collector pipes at the bottom of the wells. In order to increase the capacity of the Ranney well adjacent to Mercer-Fraser Company property, the District hired Townsend & Hipner Contractors to make an opening in the side of the well at the summer level of the river, thus allowing the river to flow directly into the well. This was done in the mid-1960s. To this date, February, 1994, the water is still flowing into the well disallowing the contention that the river gradient has lowered. This same procedure was done at their downstream well and is working satisfactorily.

299 BRIDGE PHOTOS AND COMMENTARY

299 Bridge - Cause of Erosion of the Bridge Piers

1. Bridge is built in a narrow section of the river.
2. Location in the bend of the river.
3. Rock located directly up stream helps to create turbulence.
4. Piers located in a river bed create turbulence. 299 bridge location as factor #1 - 2 - 3 multiplying the turbulence factor.

In reference to Fred Bott of Mercer Fraser Co., this company's former site has piling driven in the 1940s that show the bed level of the river has increased within a few thousand feet above the bridge.



Donald Graham
1706 Guintoli Lane
Arcata, CA 95521
(707) 822 1060

March 14, 1994

To Whom It May Concern:

Re: Environmental Impact Report
On Gravel Removal Removal from
the Lower Mad River

One of my concerns is the washing out of the area around the bridge piers of the 299 Highway Bridge.

I would like to bring to your attention the fact that for years the State of California owned and operated the upper end of the gravel bar just down stream from the bridge. They hauled the gravel away from that gravel bar in large amounts to construct other highway projects. They also advertised and sold the gravel bar as a gravel pit with the potential that a buyer could use it as a gravel pit. It was sold as excess land by the State of California to its present owner.

My family owned the gravel bar upstream from the bridge for many years. After the Humboldt Bay Municipal Water District put in their plant, on their part of the bar, they changed the natural flow of the river by placing obstructions upstream. These obstructions caused the flow of the river to shoot over to the south side of the river to where their plant is. Then rather than returning the channel to the natural channel before the river left their

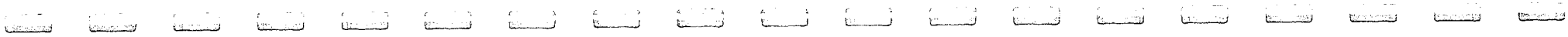
property, they sent the river down stream through the middle of our property.

In 1983, after more than ten years of the Water District denying us access to our property, the Water District sold gravel on their own bar. Their operator stripped our gravel bar.

The Water District was the only one that removed or rearranged gravel on that bar since around 1971. This property now belongs to the Humboldt Bay Municipal Water District.

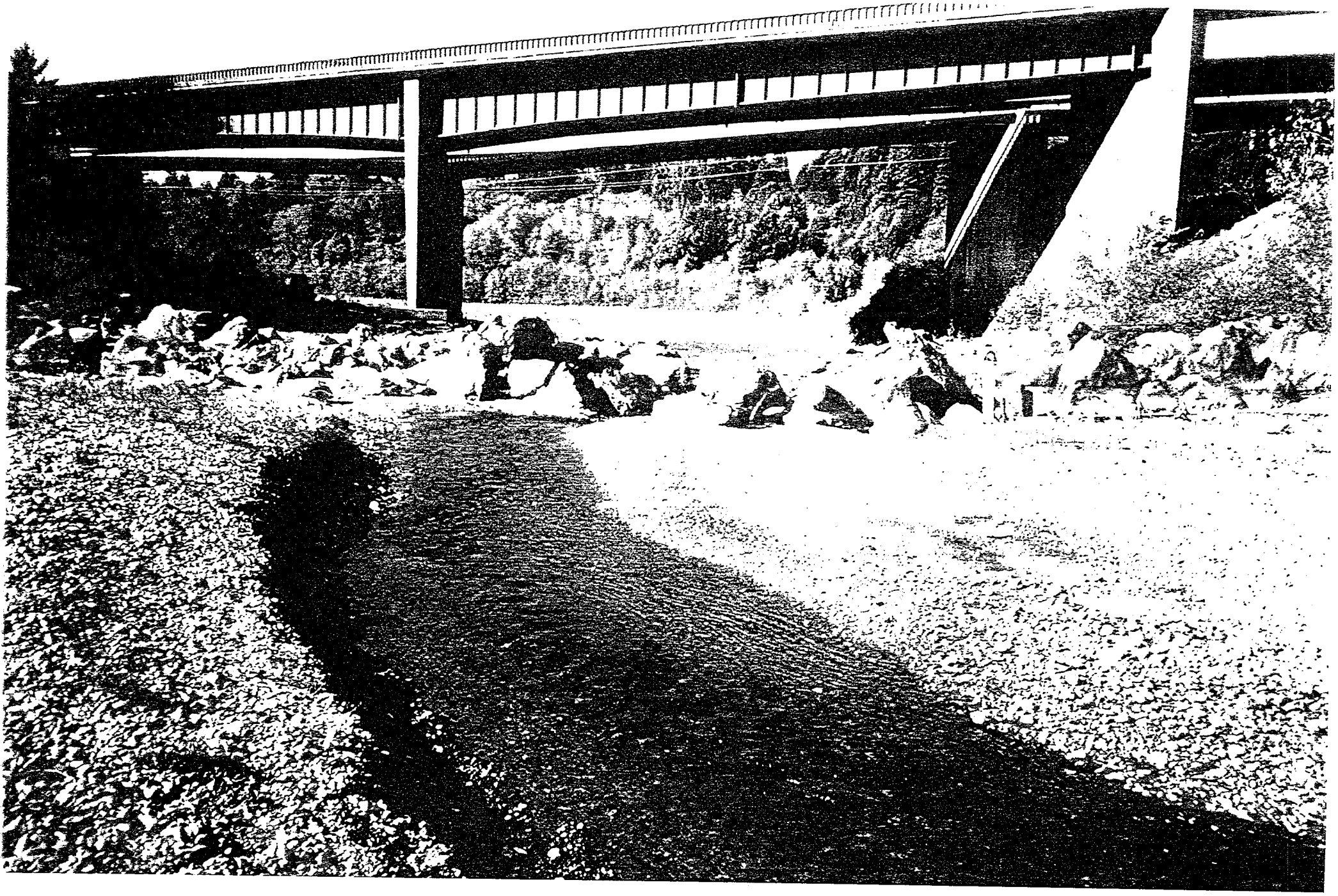
Donald Graham

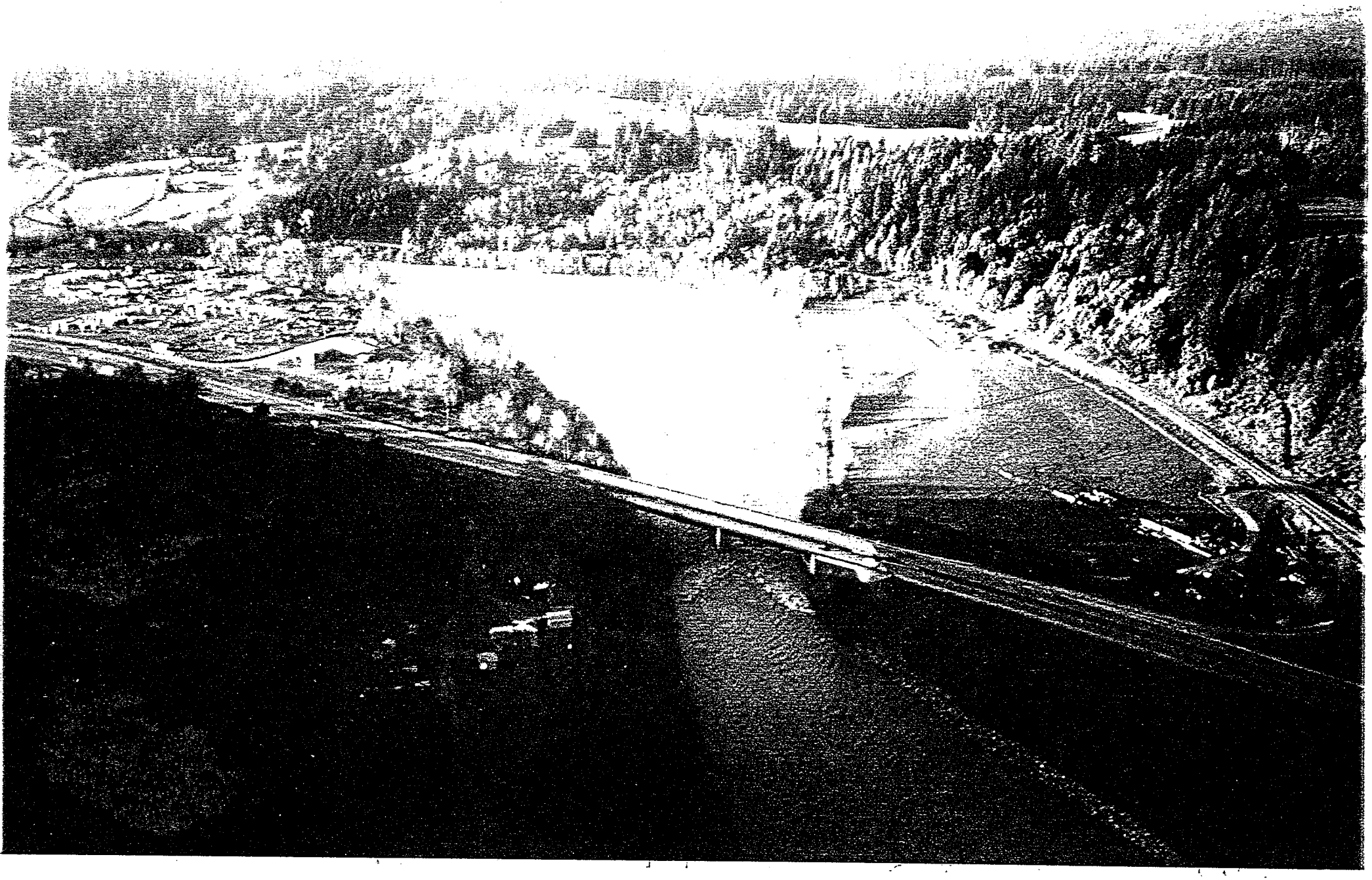
Donald Graham



Rock weir above 299 bridge.

The origins of the rock weir are uncertain. The photos, taken at the time of 1993 low flow conditions, show the rocks (which do not appear to be naturally placed) and an aerial view showing the current being directed directly at the foot of the 299 bridge. The operators believe the weir causes significant alteration of river flow leading to, among other things, scour at the 299 bridge footing.





REA SITES COMMENTARY

EMMERSON BAR
BLUE LAKE BAR
GRAHAM BAR

Redwood Empire
AGGREGATES

1540 GIUNTOLI LANE
POST OFFICE BOX 299
ARCATA, CALIFORNIA 95521-0299
TELEPHONE (707) 822-4853
FAX (707) 822-5676

TO WHOM IT MAY CONCERN:

RE: Program Environmental Impact Report
(Gravel Removal From The Lower Mad River)

I have been working on the Mad River in one capacity or another managing gravel plants since I came to Humboldt County in 1962. I have been watching the Mad River and the gravel bars since 1962. The gravel bars would always replenish after the winter storms up until the drought years. I believe the gravel bars will replenish if we have normal rainfall. The gravel has been removed from the side banks on the Lower Mad River but the river bottom elevation itself has not changed in my opinion. There is no degradation of the river, just drought and below normal rainfall.

Since 1962 on the Lower Mad, the pipes on the Graham bar have been at the same location. They have held the river during low flows ever since. If the elevation of the river bottom at that location had degraded the pipes would be high and dry.
Based upon my personal experiences and observations, since 1962, it is my conclusion that if the Mad River had degradation of the river bottom, the bank erosion at the Emmerson bar east side, the Levy bar south side, and the Blue Lake bar at the mouth of Powers Creek (Daves Creek), also known as Blue Lake Sewer Ponds, would not be occurring. The bank erosion at these locations is because these huge gravel bars are building and forcing the river into the adjoining banks.

Robert J. King

101 BRIDGE COMMENTARY

101 BRIDGE (Page 170-171) - This bridge was built in . At that time Fred Bott of Mercer Fraser Co. built the bridge and Fred reports that the piling were driven to meet required penetration . On top of the piling and around the upper portion of the piling a cofferdam was built filled with cement. The cement placement was several feet below the now existing riverbed, plus the piling that are under and attached to the cement foundation. From the bridge on down the river there is considerably more mud than up river. The mud has a tendency to replace gravel during the flooding of a riverbed. For example, during the peak of flooding time, the motion will move the gravel down stream. When a river is dumping into the ocean during high tide, the area within a given distance will back up. The current slows down on the latter hours of a storm runoff and the mud will drop where the gravel has moved on up to the point of seeking its own level.

In the past years, up stream of the bridge within a few thousand feet, the river was mined heavily for years which lowered the riverbed at this point.

The economics of the gravel sales versus removal of a more costly truck haul encouraged the constant repeated mining. This has had some effects at the bridge location due to the hole directly adjacent created a dam-like effect in front of a hole causing a slight degradation.

When considering the foundation under the piers, the effect of the small amount of washing around the pier is so minute that the bridge subject being made an issue is an opinion that would have had to be made by persons that did not do their homework on the subject.

Letter 2

PLANNING DIVISION
OF THE PLANNING AND BUILDING DEPARTMENT
COUNTY OF HUMBOLDT
3015 H STREET
EUREKA CA 95501-4484 PHONE (707) 445-7541 FAX (707) 445-7446

Comments on the Recirculated Draft Program Environmental Impact Report on Gravel Removal from the Lower Mad River, February 1994

24 Mar 94

The following are comments prepared by the Humboldt County Planning and Building Department on the Recirculated Draft Program Environmental Impact Report on Gravel Removal from the Lower Mad River, dated February 1994. As described in the PEIR Prologue, page and line numbers are referenced as 46/21; meaning page 46, line 21.

PROJECT DESCRIPTION

The Project Description appears to be a limited version of the project description from the Draft and Proposed Final PEIR, along with additional new language. Below, we have highlighted several sections which describe the project.

3/5 "The project is the development and implementation of a flexible Mad River aggregate management program, monitoring program, and reclamation plan, standards, and practices review process."

3/11 The PEIR will initially review and evaluate the impacts of the "preferred alternative project"

4/14 "The project eventually became the preferred alternative of continuing the commercial extraction of riverrun sand and gravel, in limited quantities, from up to 10 specific sites located along the lower Mad River ..." 2-1

4/18 "The project includes the formation of a Scientific Design and River Committee and a flexible, site specific adaptive management and resource monitoring and protection plan which develops, implements, and monitors comprehensive environmentally-sound mining strategies and reclamation standards for limited continued commercial extraction of riverrun materials from the lower Mad River."

4/25 "The project includes a continuing relative-resource monitoring program from which adaptations to the management plan and reclamation plans can be made as needed."

5/7 "The project will be implemented by developing an adaptive management plan, an adaptive monitoring program, and as needed, revised reclamation plans for those eight project sites that are currently permitted and have approved reclamation plans."

5/23 "An objective of this management plan is to develop over time a dynamic set of adaptive mining and reclamation strategies..."

29/36 Mit-1 also appears to describe the "project".

190/5 "The preferred project alternative is to limit and design Mad River annual gravel extraction operations under a flexible adaptive gravel management and resource monitoring protection plan."

211/30 "The project is the development of a flexible management strategy which will respond to monitoring information, the development of amended reclamation plans which will conform with the PEIR and management plan, and the development of mitigating measures for extracting sand and gravel from up to 10 sites along the lower Mad River."

2-1 CONT.

We are concerned that the project description does not present an "accurate, stable, finite description" as required by CEQA. We recommend that the project description section be revised to clearly and accurately state the project description, and that the project description be consistent throughout the PEIR.

In addition, we strongly believe that Counsel should review the postponement of developing the adaptive management program; adaptive monitoring program; reclamation plan(s)/strategies and standards, and; criteria for forming, selecting, monitoring and managing the SDRC, in relation to *Sundstrom v. County of Mendocino.*

2-2

3/53 Under what authority will "minor annual changes in appropriate adaptive mining, monitoring, and reclamation plans" <u>not</u> be subject to CEQA?

2-3

<u>SUMMARY</u>

Pursuant to CEQA Section 15123, the Summary section shall identify each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect. The format of this section has been changed from the Draft and Proposed Final. The new format lists the effects (Section 2.2), then lists the mitigation measures (Section 2.3), but does not create a nexus between the significant effect and the mitigation measure(s) that would reduce or avoid that effect.

2-4

We are concerned that this format change does not comply with CEQA Section 15123 and recommend that Counsel be consulted.

<u>IMPACTS AND MITIGATION MEASURES</u>

Individual mitigation measures do not clearly state they will reduce adverse impacts. Examples are shown below:

2-5

29/46 "This mitigation measure **may** also help sustain..."

29/46 "...it is **possible** that this mitigation measure **may** be able to help reduce the significance of the potential adverse impacts..."

30/28 "This mitigation measure **should** maintain the identified impact at a level of insignificance."

57/25 "In time, this mitigation measure **may** reduce the present cumulative impacts of be degradation to a level of insignificance."

58/58 "The SDRC...shall **attempt** to gain..."

2-5 CONT.

We believe that both the summary and discussion sections for each impact should be revised to remove language that is indecisive. In addition, the discussion of each mitigation measure should clearly identify the person(s) and/or agency(s) responsible for implementing, monitoring and enforcing the mitigation measures along with the authority to do so. Pursuant to CEQA, the monitoring must include quantifiable measures to insure compliance.

Pursuant to CEQA, a mitigation measure that **may, should** or **attempts** to reduce an impact cannot be concluded as having reduced that impact to a less than significant level. If a mitigation measure cannot absolutely reduce the significance of an impact, the impact must be identified as remaining significant even after mitigation.

160/22 Which department of "Humboldt County" needs to monitor the river bed elevations in this reach in order to evaluate the risk of undermining the RSP, and under what authority.

2-6

ALTERNATIVES SECTION

The "Preferred Alternative" appears to be part of the "project". Please refer to comments earlier on the Project Description.

It is not clear if the intent of the "Mad River Adaptive Gravel Management and Resource Protection Plan" is to replace or supplement the existing approved reclamation plans, or is an entirely separate agreement between the operators, the County, and the Department of Conservation. Also, it is not clear if the "Plan" is intended to be mitigation.

2-7

We are extremely concerned that the Management and Resource Protection Plan does not provide quantifiable monitoring standards; does not cite authority for monitoring agencies; does not fully describe timing, implementation, monitoring or enforcement; does not provide a public input/appeal process; nor specify clear roles or procedures for involved persons, organizations or agencies.

2-8

If the Plan is mitigation and the County is intended to be the responsible agency for monitoring and enforcing the "Plan", either by staff or through the SDRC and the MRTAC, at a minimum, the following information must be included with the plan:

- Funding source (if it is intended to be funded from the Humboldt County General Fund, a detailed budget including line item expenditures must be included)
- Clear roles and procedures for involved persons, organizations or agencies
- Annual review schedule, including CEQA review
- Agreement/contract between operators and County
- Agreement/contract between the County and the SDRC and MRTAC
- Quantifiable monitoring program per CEQA

2-8 CONT.

The Recirculated Draft has removed specific sections within the alternative discussion that were included in the Draft and Proposed Final PEIR. These sections were included in the Draft and Proposed Final pursuant to CEQA and include a comparison of alternatives and a discussion of the superiority of the alternative. We believe these sections should be added to the document, or Counsel should be asked to review the document for compliance with CEQA.

2-9

If you have any questions regarding these comments please contact Sidnie L. Olson, Senior Planner at (707) 445-7549, ext. 27.

PLANNING DIVISION OF THE HUMBOLDT
COUNTY PLANNING AND BUILDING DEPARTMENT

Thomas D. Conlon
Director

STATE OF CALIFORNIA

PETE WILSON, *Governor*

STATE LANDS COMMISSION

LEO T. McCARTHY, *Lieutenant Governor*
GRAY DAVIS, *Controller*
THOMAS W. HAYES, *Director of Finance*

Letter 3

EXECUTIVE OFFICE
1807 - 13th Street
Sacramento, CA 95814

CHARLES WARREN
Executive Officer

March 23, 1994

File Ref.: SD 92-08-17.3

Mr. James T. Burroughs
Projects Coordinator
The Resources Agency
1416 Ninth Street, Room 1311
Sacramento, CA 95814

Attention: Nadell Gayou

Ms. Sidnie Olson
Humboldt County Planning Department
3015 H Street
Eureka, CA 95501

Dear Mr. Burroughs and Ms. Olson:

Staff of the State Lands Commission (SLC) has reviewed the Recirculated Draft Program Environmental Impact Report (DEIR) on Gravel Removal from the Lower Mad River, SCH #92083049. Based on this review, we provide the following comments.

The DEIR, page 29, items Rec-2 and Rec-3, relate to summer bridge crossings which could impact recreational users of the river. Such recreational users may include, but not be limited to, canoers, driftboaters, kayakers and tubers. The document, pages 31 and 189, Mit-22 and Mit-23, states that this impact would be addressed by posted signs warning of such crossings. We concur with the conclusion of the DEIR that such mitigation will not reduce the impacts to less than significant. 3-1

As mentioned in the DEIR, page 33, staff of the SLC are "concerned that all summer bridge crossings be constructed or placed with sufficient clearance above the water elevation to allow safe passage under the structure". It is our opinion that the public has rights of free navigation on waterways such as the Mad River under the Public Use Right Doctrine, sometimes called the Public Navigational Easement. See People ex rel. Baker v. Mack, (1971) 19 Cal.App.3d 1040 and Hitchings v. Del Rio Woods Recreation and Park District, (1976) 55 Cal.App.3d 560. We therefore strongly urge that span-type crossings with adequate clearance, be required as a mitigation measure in the document. 3-2

We appreciate your consideration of these comments. If you have any questions, please contact Diana Jacobs at (916) 445-5034.

Sincerely,

MARY GRIGGS
Environmental Services Section
Division of Environmental
Planning and Management

cc: Dwight E. Sanders
Diana Jacobs
Jim Frey
OPR

Letter 4

State of California

THE RESOURCES AGENCY OF CALIFORNIA

M E M O R A N D U M

To: Mr. Douglas P. Wheeler
Secretary for Resources

Date: March 10, 1994

Sidnie L. Olson
Humboldt County Planning Department
3015 H Street
Eureka, CA 95501

From: **Department of Conservation**
Office of Governmental and Environmental Relations

Subject: Recirculated Draft Program Environmental Impact Report (DPEIR) on Gravel Removal from the Lower Mad River.
SCH# 92083049

The Department of Conservation's Office of Mine Reclamation has reviewed the Recirculated Draft Program Environmental Impact Report (DPEIR) for gravel removal from the lower Mad River. The following comments, organized by DPEIR page and line number, are offered to assist in your review of this project.

Page/line	Comment	
29/61	Mit-2 prescribes agency monitoring of infrastructure that could be impacted by channel erosion and updating the Scientific Design and Review Committee (SDRC) on current conditions and restrictions. It should further describe that the SDRC will consider the reports in prescribing mining criteria at affected sites.	4-1
30/8	Mit-3 does not describe what measures will be undertaken if access to eroding river banks is not obtained. Mit-3 should state that "excessive" bank erosion will be defined by the SDRC.	4-2
30/31	Mit-6 prescribes monitoring of fish spawning activities. It should indicate that the SDRC, in consultation with additional experts of their choice, will provide measures that will be included in the annual mining prescriptions to offset impacts to spawning sites.	4-3
30/40	Mit-7 indicates monitoring wildlife for five years will be undertaken. It should be clarified that SDRC mining prescriptions will be guided by the monitoring information and close direction from the Department of Fish and Game, and comprehensively reviewed after five years to further direct the project.	4-4

Page/line	Comment	
89/5-13	Creation of broad, shallow channels that could impede fish migration is the impact identified under Fish-1. Fish-1 should indicate that several grading methods will be considered by the SDRC in prescribing mining methods that will address this possible impact. Mit-1 should state that "significance" will be defined by the SDRC.	4-5
89/35-35	Fish-2 describes migration barriers. Mit-1 should indicate that several grading methods will be considered by the SDRC in prescribing mining methods that will address this possible impact. Mit-1 should state that "significance" will be defined by the SDRC.	4-6
89/60	Mit-6 proposes monitoring. This is baseline information. The measure should more clearly state that the information will be used to develop appropriate mining prescriptions.	4-7
91/18	Mit-1 calls for monitoring. This is baseline information. The measure should more clearly state that the information will be used by the SDRC in developing appropriate mining prescriptions.	4-8
99/19	Mit-7 solely prescribes monitoring. It is not mitigation.	4-9
99/26	The term "significant" in relation to wildlife habitat is not defined. The document should indicate how significance will be determined.	4-10
99/33	The term "significant" in relation to wildlife habitat is not defined. The document should indicate how significance will be determined.	
99/47-59	Wild-2 addresses "excessive noise" as a possible impact to wildlife and refers to Section 5.11 of the PEIR for additional information. The term "excessive" is not defined in terms of wildlife impacts and Section 5.11 only addresses impacts to humans. Monitoring of decibel levels in regard to wildlife should be proposed.	4-11
100/5	Mit-7 solely prescribes monitoring surveys for baseline information. It is not mitigation and does not address noise impacts. The measure should more clearly state that the information will be used to develop appropriate mining prescriptions.	4-12

Page/line	Comment	
100/30	Mit-11 states that haul roads will be watered to ameliorate dust production and potential dust impacts to vegetation and wildlife habitat. Performance standards are not provided. Without them, it will not be possible to determine if the proposed mitigation is effective. At a minimum, dust coatings at selected sites should be measured and insect population information should be gathered for baseline information against which to measure the success of the proposed mitigation measure.	4-13
100/40	Mit-7 solely prescribes monitoring. It is not mitigation. The measure should more clearly state that the information will be used to develop appropriate mining prescriptions.	
101/1	Mit-7 solely prescribes monitoring. It is not mitigation.	
101/25	Mit-7 solely prescribes monitoring. It is not mitigation.	4-14
101/50	Mit-7 solely prescribes monitoring. It is not mitigation.	
102/15	Mit-7 solely prescribes monitoring. It is not mitigation.	
112/14	The monitoring proposed under Mit-1 is not mitigation. **Avoidance** and **offsite revegetation**, also included under Mit-1, are actual mitigation measures.	4-15
112/36	Mit-9 states that no new stockpiles will be established in riparian forests. This measure should be clarified since "riparian forest" is described as a specific phase of riparian vegetation. Language should be included to address all or some of the seral stages to riparian forest.	4-16
112/49	Veg-2 identified the indiscriminate removal of riparian vegetation as an impact. Neither Mit-1 (112/55) nor Mit-2 (112/61) describe mitigation to offset this potential impact. Mit-1 does not describe any mitigation and Mit-2 does not specify how banks will be revegetated if access is denied.	4-17

Page/line	Comment	
113/31	Veg-3 describes potential impacts to the successional development of gravel bars, terraces, and riparian vegetation. Mit-1 describes monitoring which is not mitigation. It also includes the phrase "when significant terraces or stands of vegetation are threatened..." The term "significant" in relation to terraces and vegetation is not defined, nor is the term "threatened." We recommend that specific, quantifiable standards be used to define these terms.	4-18
194/41	The Department of Conservation's Office of Mine Reclamation requires that an annual report of reclamation compliance be submitted by July 1 of any given year. The information collected during the evaluation phase should include all reporting requirements. The annual report should include all information considered by the Scientific Design and Review Committee (SDRC) in each site specific evaluation and prescription.	4-19
196/6	The Department of Conservation's Office of Mine Reclamation has 45 days to comment on amendments to reclamation plans. The PEIR should reflect that revised reclamation plans will be submitted to the Department prior to final approval.	4-20
200/25	The Department strongly supports the concept of a Mad River Technical Advisory Committee (MRTAC) to oversee the SDRC process. The TAC should be comprised of technical staff from those agencies that signed the Mad River Memorandum of Agreement. The approach taken to resolve technical issues and the impartiality of the scientific committee members is equally important to an effective adaptive management process. Please contact Mike Sandecki at (916) 324-4026 as the Department's representative in the MRTAC effort.	4-21

If you have any questions concerning these comments, please contact James Pompy at (916) 323-8567.

Deborah L. Herrmann

Deborah L. Herrmann
Environmental Program Coordinator

Letter 5

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

PETE WILSON, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 1, P.O. BOX 3700
EUREKA, CA 95502-3700
TDD PHONE 707/445-6463
(707) 445-6412

March 11, 1994

1-Hum-101-89.63
1-Hum-299-1.5/5.6
Recirculated Draft PEIR on
Gravel Removal from the
Lower Mad River
SCH #92083049

Ms. Sidnie L. Olson
Humboldt County Planning Department
3015 H Street
Eureka, CA 95501-4484

Dear Ms. Olson:

We have reviewed the Recirculated Draft Program Environmental Impact Report (PEIR) for the annual surface mining of sand and gravel from ten sites along the Lower Mad River, from the old Sweasey Dam site downstream to the Hammond Bridge, which is downstream of the Route 101 Mad River Bridge. We have commented on the proposed project in letters to the County on the Draft PEIR (dated July 3, 1993) and on the Proposed Final PEIR and Aggregate Resource Management Plan (dated October 22, 1993). We now offer the following comments:

We commend the County for: 1) removing the verbiage from the Draft PEIR stating "the County has very limited authority to implement mitigation, ... monitoring and enforcement of the PEIR and ARMP automatically defaults to the state and federal trustee and responsible agencies"; 2) developing the preferred alternative which includes an agent for the County, the Scientific Design and Review Committee (SDRC) that annually prescribes the location, method and level of gravel extraction permitted; 3) including State and federal agencies in the annual review of the SDRC management prescriptions (page 191); and 4) acknowledging that "large entitlements will not be extracted unless the SDRC prescribes them" (page 8).

As stated in previous letters, establishing a red line elevation at or above the current river bed elevations at bridge structures ensures existing structures would be protected from further degradation. The PEIR (page 200) does discuss establishing a "red line" elevation and some alternatives on how to use the red line, but we recommend the PEIR identify the criteria (e.g, elevation of the river bed at highway bridges shall not drop below the top of the existing bridge footings or below the

5-1

current January 1994 river bed elevation, whichever is lower) that will be used to determine establishment of a "red line" elevation. 5-1 CONT.

According to PEIR mitigation measure Morph-1 (page 57, line 10) "no extraction or extraction rates below average net recruitment can lead to channel aggradation and excessive channel aggradation can create significant adverse effects." Caltrans has repeatedly stated that structures on the Mad River would benefit from significant aggradation; therefore, we recommend that references to negative impacts ("significant adverse effects") from aggradation of the river bed at Caltrans bridge structures should be eliminated from the Final PEIR. 5-2

PEIR monitoring responsibilities recommendations:

1. Mitigation measure Mit-2 (page 57, line 62) should be changed to reflect monitoring by Caltrans, not Caltrans Division of Structures. 5-3

2. Mitigation measure PU&S-8 (page 176, line 152) should be changed to reflect monitoring by the Department of Public Works, not Caltrans. 5-4

3. Mitigation measure PU&S-18 (page 180, line 29) should be changed to reflect monitoring by Caltrans only, not the Department of Public Works. 5-5

According to the PEIR, the goal of the adaptive management plan (page 190, line 42) is to "achieve a degree of dynamic equilibrium between these processes by using monitoring data to support professional scientific judgement in an annually iterative feedback loop." The PEIR theorizes that (page 195, line 32) "it is hard to imagine that the four scientists could agree on a prescription package that would cause irreparable damage during one extraction season." Caltrans agrees with this statement with the exception of trenching. Trenches located adjacent to structures can induce significant rapid river bed degradation which can have significant adverse impacts on structures. We recommend that Caltrans be included as a "review" agency during the annual prescription review for any prescriptions which propose trenching within one mile upstream or downstream of a State highway structure. 5-6

As stated in our October 22, 1993 letter, we continue to recommend that, due to a recent change in the control datum for the State of California, "the vertical datum used for both 5-7

surveying and monitoring on the Mad River be changed from the National Geodetic Vertical Datum 1929 (NGVD 29), referenced in the ARMP, page 9, paragraph 6, to the North American Vertical Datum 1988 (NAVD 88)."

5-7 CONT.

Should you have any questions, please call Dave Carstensen at (707) 441-5813.

Very truly yours,

CHERYL S. WILLIS, Chief
Transportation Planning Branch

cc:Mike Chiriatti
State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

Resources Agency

Letter 6

STATE OF CALIFORNIA—THE RESOURCES AGENCY PETE WILSON, Governor

DEPARTMENT OF FISH AND GAME
601 LOCUST STREET
REDDING, CA 96001
(916) 225-2300

March 23, 1994

Mr. Thomas D. Conlon, Director
Humboldt County Planning and
Building Department
3015 H Street
Eureka, California 95501

Dear Mr. Conlon:

SCH 92083049 - Draft Program Environmental Impact Report (PEIR), Gravel Removal on the Lower Mad River, Humboldt County (County)

The Department of Fish and Game (DFG) has reviewed the recirculated draft PEIR on gravel removal on the lower Mad River. We are pleased to see that the recirculated draft PEIR responded favorably to many of the concerns we raised in our June 11, 1993, and our October 25, 1993, comment letters on the earlier version of the draft and final environmental impact reports (EIRs) for this project.

The County should be commended for allowing preparation and recirculation of this draft PEIR due to the substantial changes made in the earlier documents in response to agency and public input. This new document is a positive step toward dealing with the complex environmental issues surrounding the extraction of gravel from the Mad River. We offer the following comments and recommendations for changes and additional information that we believe should be fully addressed in the final environmental document for this project. In addition, the DFG hereby includes by reference the earlier comments and concerns we have provided the County on prior versions of the draft and the final PEIR for this project.

Our comments will focus on three main concerns with respect to the adequacy of the document:

1) Mitigation measures proposed for minimizing or avoiding the potentially significant adverse impacts to fish and wildlife that can be caused by gravel extraction.

2) Presentation of a more <u>detailed</u> description of the proposed monitoring program and the mechanism through which changes in mitigation measures and site-specific extraction operations will be made.

3) Implementation of a specific, reasonable, and environmentally sensitive enforcement program by the County to ensure compliance of the gravel operators with all of the mitigation measures and monitoring activities that will be contained in the final EIR.

1) Mitigation Measures

Gravel extraction operations have the potential to adversely affect anadromous fish during their migration, spawning and rearing activities. The document addresses these impacts reasonably well except for two areas. The first area is the potential for extraction activities to trap or strand migrating juveniles and adults if operations are conducted close to the river's edge while fish are migrating. The second area is the increase in prespawning mortality of adults and mortality of rearing juveniles due to various stress-induced factors caused by the presence and vibration of extraction equipment operated close to the water's edge.

While the degree and significance of this impact is not well understood or documented at this time, we believe some precautions should be taken in terms of timing of operations on the river bars. This is especially true now with the recently documented continuing declines in anadromous fish stocks on the north coast. The recent petitions for listing coho salmon and steelhead trout under the State and Federal endangered species acts as well as the proposed zero commercial and sport fishing harvest of coho off of the entire Pacific Coast is an example of the extremely poor state of the fisheries. We recommend the final PEIR include a mitigation measure that establishes a core operating period of June 1 - September 30 for extraction operations, followed by a two-week period until October 15 for reclamation activities only. Exceptions to this core operating period may be granted by the DFG under its 1603 streambed alteration agreement process provided various regional and site-specific conditions, operating criteria and data collection needs are met and fish and wildlife resources are protected. 6-1

Another aspect of this issue regarding timing of operations is minimizing conflicts between extraction and public fish and wildlife oriented recreational use of the river. The timing restrictions discussed above would help minimize those conflicts when public fish and wildlife oriented recreational uses of the river corridor are greatest.

We note the draft PEIR identifies riparian habitat as a significant resource and concludes no additional damage to these habitats will result from gravel extraction. While we agree that 6-2

individual project specific mitigation can be designed to avoid impact to riparian vegetation, we believe the County and the operators should be looking for ways to restore and expand this very important habitat type. This objective can be accomplished through development of new stands of riparian habitat in conjunction with high terrace shallow pit mining and longer range planning that focuses gravel extraction in areas that would promote natural development of riparian stands of different age structure and species diversity. We recommend a discussion of these possibilities and specific recommendations for their implementation as mitigation measures be included in the final EIR. 6-2 CONT.

The DFG also has a concern regarding riparian habitat Mitigation #3 (Mit-3) discussed on page 30 and 112 which proposes revegetation of eroding banks. While we would agree that this mitigation objective can be desirable, it is unclear as to where such activities would occur, whether or not unstable banks to be revegetated are located along gravel bars, and how revegetation efforts would be funded. We recommend this issue be addressed in the final EIR. 6-3

2) Monitoring Program

The draft PEIR mentions monitoring in numerous sections and discussions dealing with designs for extraction, evaluating impacts, changing reclamation practices and other issues. Unfortunately, the overall discussion of a monitoring program, which will be crucial to the success of everyone's efforts to date in resolving gravel mining issues on the Mad River, appears to be scattered throughout the document rather than located in one comprehensive and readily identifiable section. We recommend the draft PEIR be modified to include a specific and comprehensive section describing the various specific aspects of the proposed monitoring program that must include physical as well as biological parameters. This section should also include a description of a clear nexus between the responsibilities of the Scientific Design and Review Committee (SDRC) for ensuring monitoring is accomplished and by whom, the annual reclamation plan review process, the underlying extraction activities proposed for each site each year and annual reclamation techniques to be employed at each site. 6-4

3) Enforcement

In our opinion, the issue of ensuring that the County adequately and effectively enforces all of the required mitigation measures and project operating conditions contained in the final EIR is one of the most important issues yet to be 6-5

resolved. The draft PEIR is virtually silent on this extremely critical issue and we strongly recommend this important shortcoming be rectified in the final EIR. We believe the document should clearly propose and thoroughly discuss the mechanism under which the County can take effective and rapid enforcement action against an operator who chooses to challenge or ignore the recommendations developed by the SDRC for site-specific extraction, reclamation or monitoring activities. Because this document places so much emphasis on relying on the SDRC process to minimize direct and cumulative impacts of gravel extraction on a whole host of riverine resources, we believe it is paramount for the County to ensure absolute compliance with the results of the SDRC process. If this is not done, there is a very large potential, due in part to the economics and competitive nature of the gravel extraction industry, for this entire process and all that we have accomplished working together the past three years to unravel.

Another ramification of not having the ability to adequately enforce the provisions of this process is how the US Army Corps of Engineers (Corps) may react when, pursuant to recent changes in the Clean Water Act that gives them greater regulatory authority over gravel mining, they decide whether or not to adopt the local process the County has developed for dealing with gravel extraction operations. The Corps will likely be making their decision within the next year or so. Consequently, having an effective County process in place, which must include an adequate enforcement program, may allow retention of greater local control over gravel mining activities.

6-5 CONT.

We believe there are several options for developing an effective enforcement program for gravel extraction operations. One option would be to revise the County's existing surface mining ordinance to deal more specifically with gravel extraction operations. The ordinance should incorporate the SDRC process, annual review of reclamation plans and monitoring requirements. Another option would be development of an infraction code for violations that has adequate penalties and economic disincentives capable of discouraging noncompliance. Under either of these options, it would also make sense to ensure there is an adequate enforcement staff within County government that is dedicated to enforcing gravel mining issues. This person(s) could interact with DFG staff, as well as other governmental personnel and private individuals involved with data collection, site inspections and the annual review process for reclamation plans. This additional staff could be funded by the gravel operators much like the SDRC will be.

We urge the County to give our comments adequate consideration and change the final EIR as we have proposed. If you have any questions regarding our comments, please contact staff biologist Mr. Gary B. Stacey of my staff at the letterhead address or by phone at (916) 225-2233.

Sincerely,

Donald Koch

Richard L. Elliott
Regional Manager

cc: Mr. Gary Stacey
Department of Fish and Game
Redding, California

HUMBOLDT BAY MUNICIPAL WATER DISTRICT

828 SEVENTH STREET. P. O. BOX 95 · EUREKA, CALIFORNIA 95501

OFFICE 707-443-5018 ESSEX 707-822-2918

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Letter 7

March 17, 1994

Attn: Sidnie Olson
Building & Planning Department
Humboldt County
3015 H Street
Eureka, California 95501-4484

Dear Ms. Olson:

The purpose of this letter is to comment on the Recirculated Draft PEIR on Gravel Removal from the Lower Mad River, dated February 1994.

In general, we are pleased that this draft of the PEIR incorporates actions that assert County authority to annually review, monitor and prescribe parameters for currently permitted gravel extraction operations. Although we feel that gravel extraction regulation should be ultimately accomplished via a well structured Aggregate Resource Management Plan (ARMP), using a monitoring/prescribing team of scientists for a five year period, seems a reasonable compromise to us. We therefore support adoption of the preferred alternative, termed Mad River Adaptive Gravel Management and Resource Protection Plan, with the following considerations: 7-1

1. In order to evaluate the status of lower Mad River, the scientific team will require not only the site specific data outlined in the DPEIR, but also an overall understanding of the level of gravel recruitment of the river reach from the fish hatchery to the estuary. We feel this can best be accomplished via a coordinated survey of the lower Mad using some form of digital terrain modeling (DTM). Recent workshops have focused on the use of aerial photography as a valid and cost effective way to obtain the data needed to generate DTM's. We support such an effort and would be willing consider paying a pro-rata share of the costs for the flights, photography and subsequent modeling - to the extent our interests and property are involved. 7-2

2. Item #2 under "Annual Extraction Planning Process" (p193, lines 61-64, and p194, lines 1-6) requires statements of concern about extraction operations from CCL's by May 1 of each year. This deadline will not be a problem for HBMWD if the river channel is low enough for proper surveying. If the water levels are too high, it will be difficult for us to assess the effect of prior year operations by that date. 7-3

3. The DPEIR does not specify a desired riverbed condition that could guide the scientific review team in their deliberations. For example, are we striving to maintain a minimum baseline, establish a thalweg redline, or a reach certain level of aggradation? If such guidelines are not possible now, the reasons should be stated and the guidelines should be developed as part of the ARMP process discussed in item #7 below. 7-4

4. Since the preferred alternative depends heavily on the credibility and expertise of the scientific team, we feel the integrity of the screening and selection process for replacements of current team members is crucial. We agree with the proposal outlined in Section 7.2 of the DPEIR to form an oversight committee called the MRTAC. It might be advisable to invite Corps representation on the MRTAC, since they are now asserting jurisdiction over gravel extraction operations. 7-5

5. The DPEIR does not discuss how the preferred alternative will be made binding during the five year interim management period. Is the MOA to be renewed each year, or is there to be some other type of agreement between the parties to abide by the review team's decisions, prescriptions and data interpretation? We ask this question because there is still no specific legal opinion or framework offered in the DPEIR to define the County's authority. 7-6

6. There several potentially divisive issues in the adaptive management plan outlined in the preferred alternative. For example: a) What if the annual budget is exceeded, or if the funding sources refuse to provide sufficient funding?; or b) What if the operators or Concerned Citizens List (CCL) do not like the prescriptions or other decisions made by the review team? Some of these potential problems may be resolved, as the DPEIR says, during thoughtful public review between extraction seasons. It is also likely that many issues will be addressed if there is an agreement as noted in item #4 above. It may be advisable, however, to consider an arbitration process for those issues that come to total impasse. 7-7

7. The final PEIR should clearly state that one of the goals to be reached during the five year interim management period is the adoption of an ARMP. 7-8

Our agency is encouraged by and appreciates the sincere efforts all parties to this issue are putting forth to find a solution.

Sincerely,

Royal E. McCarthy
President, Board of Directors

cc: William O. Davis, Attorney at Law

SIERRA CLUB
Redwood Chapter
North Group
POST OFFICE BOX 238
ARCATA, CALIFORNIA 95521
March 23, 1994

Letter 8

Humboldt County Planning and Building Department
Attn: Sidnie L. Olson
3015 H Street
Eureka, CA 95501-4484

Re: Recirculated Draft Program EIR
Gravel Removal from the Lower Mad River, February 1994

Dear Ms. Olson:

I have already taken advantage of earlier opportunities to make both written and oral comments to Doug Jager and others regarding the PEIR, as have Lewis Klein and Fred Neighbor. Many of those detailed comments have been resolved, so I will not focus on those kinds of comments, but rather on those issues, which I feel are significant and are of considerable concern to me. They are: 1) the total authority vested in the Scientific Design and Review Committee, primarily because of confidence in the four men now on the SDRC; 2) the document's failure to provide an enforcement procedure to ensure compliance; and 3) the lack of opportunity for participation which protects the public's legal standing.

1. The SDRC is granted authority to "monitor, review, guide, limit, design, and modify gravel extraction activities, reclamation activities and mitigation activities in the lower Mad River area." (PEIR, 191\14) The SDRC will monitor not only sand and gravel recruitment and design plans for where, how, and in what amounts gravel will be extracted each year, it will also "verify operator compliance." (PEIR, 190\61) Moreover, the committee will monitor all "related river resource conditions," which I assume means biological factors. (PEIR, 190\60) This entire process will be directed by a SDRC-generated budget which is contingent upon the operators' support. (PEIR, 197\8; 198\51) The document also identifies members of the SDRC, creating a relationship with four scientists for whom I have complete respect and trust, but upon whose personal shoulders the success of this strategy cannot rest. (PEIR, 191\27-38) And finally, the document asks all parties involved to stand back and let the SDRC resolve the complex issues of river management. (PEIR, 200-17)

I want to make it clear that I have no concerns about the integrity of the present SDRC and these comments are in no way meant to cast any doubts about the four gravel meisters. But we cannot institutionalize a process for managing gravel extraction on the Mad River that rests on four specific persons, namely Doug Jager, Randy Klein, Andre Lehre, and Bill Trush, who are present today, but will, undoubtedly, move on at some point. Ensuring a professional and independent SDRC is critical, but what is being proposed places the SDRC at risk of political manipulation and ties its activities to a purse whose strings are held by the operators. How independent will the SDRC remain as present members are replaced by the Board of Supervisors and as its budget is reviewed and, I assume, controlled by the operators? 8-1

We need a process that clearly puts into place a SDRC process that removes it from personalities, political manipulation, and undue influence by interests that conflict with professional objectivity.

2. Provisions to force compliance with annual operating plans, mitigation measures, and revised reclamation plans are not present in this document. The SDRC will monitor for compliance, but if there are violations, there is no authority or process for requiring operators to correct problems or to penalize them where there is overt disregard of annual operating plans and mitigation measures. Violators of this plan and\or the County's SMARA ordinance are not threatened with enforcement action either because there is no will on the County's part or no automatic consequences. 8-2

Monetary fines have not been applied either by the State or the County in the case of SMARA violations and, therefore, do not act as disincentives. A procedure for restricting or prohibiting operations where intentional violations occur needs to be set in place and implemented. It is important to the success of this effort that the law be applied firmly and even-handedly so that the operators have certainty and a level playing field from which to conduct their businesses.

The Surface Mining Advisory Committee is recommending to the Board of Supervisors that it institute an infractions procedure for surface mining violations. This would apply not only to operations that fail to obtain entitlement, but also to those operations that violate reclamation plans, mitigation measures, and annual operating plans. Such a system would strengthen this management strategy's effectiveness.

3. The public participation process in this document is totally inadequate. We are allowed to comment after the fact, i.e., after an operating season when any appeal process is meaningless. I want an opportunity for participation that 8-3

ensures me full legal standing; that is not provided for in this document. 8-3 CONT.

I have several other comments. It is unclear how "related river resource conditions and trends" will be monitored, since many of these biological elements are not within the professional expertise of the presently-constituted SDRC. How will monitoring of riparian habitat or bird species be conducted and, if needed, who will incorporate the mitigating conditions into annual operating plans? Will the operators pay for wildlife surveys that look at both control and project areas to compare species and use level? 8-4

The primary mitigation measure in this document for preventing impacts is extraction levels that are less than replenishment, yet on page 199, alternatives within the project discuss extraction levels that may be set at or above net recruitment. What does this mean? 8-5

The PEIR proposes that after five years, the entire project will be thoroughly evaluated by the SDRC, a public hearing will be held, and recommendations for modifying the plan, monitoring program, and reclamation plan review will be considered. (PEIR, 196\61) Since the SDRC will be, in some measure, reviewing its own performance and the effectiveness of its decisions, this process should be subject to CEQA review to allow for full public and agency comment to encourage a broad and objective evaluation. 8-6

A process which puts gravel extraction management within a structure of data gathering and analysis, and an adaptive plan which responds to that information and the river's needs is a giant step forward. I support this effort and hope for its continued progress. Thank you for consideration of these comments. 8-7

Sincerely yours,

Susie Van Kirk

Susie Van Kirk,
Conservation Chair

Letter 9

REDWOOD REGION AUDUBON SOCIETY

P.O. BOX 1054, EUREKA, CALIFORNIA 95502

March 24, 1994

Humboldt County Planning and Building Dept.
Attn.: Sidnie L. Olson
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RRAS COMMENTS ON
THE RECIRCULATED DPEIR
on Gravel Removal from the Lower Mad River
SCH #92083049

INTRODUCTION & GENERAL COMMENTS

This report contains some excellent features. Almost all the material is presented in a straightforward and well organized manner. And even though much of this DPEIR's contents have appeared in earlier versions before , the writing in this edition made much of the information seem fresh and clear. The introductory portions to many of the sections were well done, and the brief discussion of the potential physical impacts of differing types of extraction methods (Section 1.7) was particularly helpful.

Unfortunately, major problems remain, although some progress may have been made. This EIR claims to deal with cumulative impacts but does so in an impermissibly restricted fashion. Mitigation standards, with the exception of those designed for controlling degradation, are too vaguely defined, and their development impermissibly deferred to some future date. The scope and range of the proposed mitigation measures are too restricted, and in some critical areas are so weak that they will obviously be ineffectual. Assessments of environmental impact significance appear to be based primarily on the status quo, not appropriate for cumulative analyses. The legal basis for proposing annual mining prescriptions remains tenuous, and compliance may be impossible to obtain unless some type of unequivocal "contract" between the operators and the lead agency are entered into. In addition, the degree of independence required for the Scientific Design and Review Committee, if it is to function as effectively as this PEIR envisions, is seriously compromised by the proposed budgetary mechanism, and conflict of interest provisions within this PEIR.

Many of the problems noted in our earlier comments of July 2, 1993 have not been surmounted. There are still no consistent and reliable standards for monitoring biological, recreational, noise and traffic impacts. The responsibilities and jurisdiction of the Planning Department, SDRC, CDFG and other state agencies are still muddled. The ability of the public to provide effective oversight and scrutiny is unclear, and not legally secured. The financing required for effective monitoring, and for proposed mitigation measures is still shaky. The development of a viable mechanism for allocating gravel extraction quantities between operators is glossed over. And the required enforcement

protocols and procedures to secure compliance with mitigation and proscribed operating conditions are absent. Hence we think many of our comments of July 2, 1993 are still relevant. Those comments are incorporated by reference into this current response, and a copy is enclosed.

SOME SDRC COMMITTEE ISSUES

As proposed in this PEIR, the role of the SDRC will be critical to all major aspects of monitoring, mitigation and enforcement. A pivotal additional task is the committee's responsibility to design the yearly management proscriptions. For example, **Mit-1** on page 29 lines 36-59, reads "After reviewing available data and evaluating river resource conditions and trends the Mad River SDRC shall prescribe variable annual site-specific extraction locations, extraction volumes, and extraction methods. The Mad River gravel operators may then extract sand and gravel at these specified locations using these specified standards and volume limitations. **...The potential success of this mitigation measure is dependent upon the combined expertise of the Mad River SDRC, the ability of the SDRC to reasonably monitor, judge, and apply flexible mining strategies to a dynamic river system, and on future hydrologic and geologic processes. This mitigation , Mit-1, will reappear many times throughout this document and shall be used to reduce, minimize, or eliminate many of the actual or potential adverse impacts that are identified in this PEIR.**" (Bolding L.K.)

Comments --- Without a full measure of certainty in the **objectivity** of the scientific committee, any confidence that the results would be fully protective of the public's interest is likely to be misplaced.

So much of the success of this adaptive management plan is in the hands of the SDRC -- as the above quote indicates -- that if the public or trustee agencies were not assured of the qualifications of the individuals composing the committee, there would be little incentive to buy onto the essentially "trust me" mitigation measures offered in this PEIR. Thus the credentials of "combined expertise", are reassuring, and "flexibility" can be interpreted as "adaptive" rather than impermissibly vague. However, if acceptable standards of objectivity are flaunted the entire process could and should be questioned. In this context, the discovery that the conflict of interest standards proposed in this PEIR do not meet even the minimal standards of existing law is unsettling.

SECTION 2774.(b) of SMARA specifically prohibits the kind of proposal for controlling Conflicts of Interest that are outlined in this DPEIR for the individuals conducting annual reviews. This is a crucial point since the annual review mechanism is being proposed as the legal cornerstone for the entire mitigation structure of the current EIR. 9-1

> SECTION 2774.(b) "The lead agency shall conduct an inspection of a surface mining operation within six months of receipt by the lead agency of the surface mining operation's report submitted pursuant to Section 2207, solely to determine whether the surface mining operation is in compliance with this chapter. In no event shall a lead agency inspect a surface mining operation less than once in any calendar year. The lead agency may cause such an inspection to be conducted by a state-registered geologist, state-registered civil engineer, state-licensed landscape architect, or state-registered forester, who is experienced in land reclamation **and who has not been employed by the mining operation in any capacity during the previous 12 months.** All inspections shall be conducted using a form developed by the department and approved by the board. The operator shall be solely responsible for the reasonable cost of the inspection."

Interjected throughout this DPEIR are additional provisions that have the result of seriously limiting the independence and potential objectivity of the proposed Scientific Design and Review Committee. The problems are explored below in our specific comments on material appearing on pages 190 through 200 of this DPEIR. These provisions would facilitate the ability of gravel operators to control, debilitate, remove, or reconstitute the scientific committee, if the committee's recommended operating and reclamation proscriptions or monitoring requirements are perceived as too restrictive or expensive. (See Specific Comments below.)

9-1 CONT.

CUMULATIVE IMPACTS

From the very beginning (pg. 1, lines 1-10) this PEIR takes an impermissibly narrow view of what is to be analyzed and evaluated. Cumulative impacts are defined as just those impacts caused either by gravel extraction or bed degradation. On the other hand CEQA guidelines and case law indicate that cumulative impacts are meant to be analyzed on the basis of the nature of the impacts themselves, not on the identity or similarity of causes. "Cumulative impacts are...two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts... cumulative effects are sometimes equated with synergistic effects. A legal adequate cumulative impacts analysis... is an analysis of a particular project viewed over time and in conjunction with other related past, present, and reasonably foreseeable probable future projects whose impacts might compound or interrelate ...." Although the above collection of quotes may seem solely academic, in the context of this PEIR it has some very practical effects, particularly when it comes to evaluating how this PEIR has gone about analyzing and framing mitigation measures for impacts on riparian vegetation.

At several places in this PEIR there is a commendable emphasis on the importance of riparian vegetation along the river for habitat. (See for example pg.112, lines 1-10) --- Yet the only controllable activities and forces discussed which may have contributed to the currently depauperized amount of riparian forest are haul road building, extractions interfering with vegetative succession, and changes in water table depth. The only mitigation suggested is that pockets of existing "established riparian vegetation will be taken into account in the writing up of annual extraction prescriptions and no new haul roads are planned to be built through them." Controls on other activities, even on the same parcel in which gravel extractions are taken place, either by the gravel operators or others are ignored. Measures which the Lead Agency should or could take, which would control some of the additional cumulative impacts on riparian habitat or those activities which are preventing the redevelopment of significant riparian stands go unnoted with the exception of Mitigation measure Mit-3: "The SDRC shall monitor river banks in the project areas and shall attempt to gain access and permission to initiate bank-stabilizing revegetation practices at sites where bank erosion is excessive and where revegetation may reduce the erosion rate."

9-2

As a mitigation for the cumulative loss of riparian forest along the Mad River attempts to gain access and permission to initiate revegetation can hardly amount to much. Regulatory controls on destabilization, mitigation funds and grant sources for private revegetation efforts should also have been considered within this EIR to mitigate for obviously significant cumulative impacts. Regulatory controls on destruction of existing riparian areas by activities other than haul roads and extraction should also been discussed.

Among the more important purposes of a Program EIR is to provide the occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action, and allow the Lead Agency to consider broad policy

alternatives and programwide mitigation measures ... when the agency has greater flexibility to deal with basic problems or cumulative impacts.

Cumulative effects are not limited to just the effects of identical types of projects. If riparian habitat is very important and becoming very scarce, all the causes that might be contributing to this situation are supposed to be analyzed in a Program EIR, and appropriate mitigation fashioned. In this PEIR that would include greater control or elimination of already existing stockpiles, e.g. the County's in the area opposite Emmerson Bar, greater control on OHV riding within the forests, and greater control on clearing and felling operations along the river, on parcels owned or not owned by gravel operators. This required approach is not taken in this EIR. Also neglected is any discussion of enhancement efforts for riparian corridors. 9-2 CONT.

Furthermore this PEIR is insufficient in that any cumulative analysis requires a discussion of projects which may have been or are likely to be exempted as individual projects from CEQA review and SMARA regulation. None have been noted.

ENFORCEMENT MATTERS

At several points in this PEIR, reference is made to amendments to the reclamation plans which will bring them into conformity with the PEIR and the management plan. It would have been helpful if there had been a more explicit description of the types of revisions anticipated. In a vacuum, it is difficult to evaluate the feasibility of guaranteeing compliance with flexible adaptive mitigation and management prescriptions through an approach calling for revisions of reclamation plans without seeing a reasonably concrete example. Is Appendix J in Volume 2 of the earlier EIR the model that is proposed for adoption? If it is, it ought to have been referenced and the modifications that would be required to conform it to the preferred adaptive management plan proposed here.

Little has been provided in this PEIR on new compliance measures. In combination with the past record of total lack of enforcement actions for environmental crimes and SMARA noncompliance by Humboldt County, it is difficult to shake the belief that the conclusions of the Proposed Final ARMP (Sept. 2, 1993) have been contravened. Realistically, all regulatory authority over existing operations has and will likely continue to default to the state and federal trustee and responsible agencies. In fact, putting the monitoring, proscriptive and enforcement efforts of the SDRC under the indirect supervision of state agencies, as outlined as an alternative in section 7.2, rather than the gravel operators and Board of Supervisors, as currently proposed, would be highly beneficial The PEIR proposes no feasible other solution to the enforcement problem. The simple "trust me" approach with no history of effective enforcement to give it any credibility, and no feasible new measures proposed to ensure effectiveness will not suffice. Realistically, almost everyone with any experience with what has been going on in this County for the past 10 years, would have to agree that only the "threat" of state agency intervention has provided incentive enough to uphold the conditions of the MOU over the past two years. 9-3

SPECIFIC COMMENTS

pg. 57, lines 9-15.

"No extraction or extraction rates below average net recruitment can lead to channel aggradation and excessive channel aggradation can create significant adverse 9-4

effects. However, channel aggradation is needed in localized areas at this time to reduce the cumulative effects of past degradation."
Comments --- It is not clear why the writer believes that aggradation is needed only in localized areas. Almost all of the material in the PEIR on this subject seems to indicate that throughout the reach, at least from the hatchery to the 101 bridges, degradation is THE problem. 9-4 CONT.

pg. 65, lines 46-62.
Impact H20Qlty-3: "Skimming as an extraction method has the potential to create a broad, shallow channel increasing the surface area of the flowing river, and potentially increasing channel braiding and water temperatures. Generally the native fish species of the Mad River prefer cool water. Increased water temperatures could potentially have a significant adverse effect on these native fish species. (PS/LS)"
"Mitigation Measures -- Mit-1: The SDRC will implement site-specific extraction prescriptions that will maintain this identified impact at a level of insignificance." 9-5

Comments --- Is there not already some evidence that prior gravel extraction methods have contributed to the problems of increased channel braiding and increased low flow water temperature problems? And are not these effects significant?

Page 83, lines 30-45. (5.5 Fisheries and Habitat),

Comments --- Here we have a good example of how cumulative effects are being handled in this PEIR and how stereotypical and convenient self-serving biases are interjected. Ignored are all the obvious synergistic and cumulative interactions between gravel operations, ancillary operations such as former road building, other kinds of operations such as permanent culvert introductions into the river, garbage, wrecked cars, agricultural developments, run off etc.. Yet mentioned as second in importance as a possible cause in the decline of the fisheries are marine mammals, and fish eating birds.

> "The fisheries aspect of this PEIR will concentrate on the anadromous fish populations because they appear to be the most sensitive to the riverine conditions which are influenced by gravel extraction. The PEIR considerations are influenced by the Mad river Fish Hatchery, the species involved, adult migratory needs, spawning habitat concerns, summer habitat needs, and juvenile migration patterns. Beyond gravel extraction, there are other factors influencing salmonids in the Mad River which may [UNDERLINE L.K.] be beyond the scope of this PEIR. These include, but are not limited to fish-eating birds, concentrations of seals and sea lions at the mouth of the river, and poachers. Although we have no hard data we believe sea mammals and poachers take a significant portion of the adult anadromous fish resource, particularly in low flow years. Fish-eating birds devour large quantities of juvenile fish." 9-6

pg. 90, line 60.

Comments --- We are assuming that the omission of the word "not" is a typographical error and will be corrected in the FPEIR. 9-7

pgs. 89-91.

Comments --- Almost all adverse effects to the Fisheries are to be mitigated with Mit-1. The only additional mitigation measures proposed are some consulting with F&G on summer bridge placement and removal, and the following: Mit-6: "The Scientific Design and Review Committee and the California Department of Fish & Game will monitor fish spawning activity in the Mad River extraction area in an attempt to determine the significance and success of spawning activity and how that activity might be influenced by gravel extraction. The Scientific Design and Review Committee will meet and confer with the California Department of Fish & Game regarding extraction methods that will allow extraction to continue without impacting spawning habitat." ...Significance after Mitigation - Less than significant. "There is evidence that the extraction methodology and amounts can be limited to allow extraction to continue without significantly impacting spawning habitat." 9-8

Comments --- The only real evidence apparent on this fisheries issue is that there are still anadromous fish spawning or attempting to spawn in the river. The PEIR presents no further evidence on this matter except for the conclusory statement by CDFG.

pg. 107, lines 13-25. (Sensitive Plant Species)

"An inquiry was made to the Natural Diversity Data Base with regard to the presence of rare, threatened and/or endangered plant species within the project area. There are no records of any such species within the study area. Additionally, a review of the Inventory of Rare and Endangered Vascular Plant Species' (CNPS, 1988) and the California Department of Fish and Game's Special Plant List (CDFG, 1991) did not reveal any species which would be expected within the habitats found in the study area. As of this writing, no rare, threatened and/or endangered plant species have been found in or near the project area." 9-9

Comments --- The discussion of possibly "endangered communities" mentioned on page 40 of this PEIR should have been included and explored in more depth in this section of the PEIR. On page 40, the additional text is added to the above paragraph. "However, the North Coast Chapter of the California Native Plant Society has expressed an interest in having the North Coast Black Cottonwood Riparian Forest listed with the California Natural Diversity Data Base as an endangered habitat type (Keeler-Wolf, 1993).

pgs. 111 -113.

Comments --- In discussing the vegetative characteristics of specific sites, the following comment is made about Graham Bar. "The northerly bar, across from the processing plant, is at the edge of a moderately-aged stand of mixed forest vegetation, which has developed within the last twenty-five years. Several low-lying areas within the forest are wet enough to support emergent vegetation. There are no stands of forest vegetation of equal or greater size downstream."

On pages 112-113 there is a discussion of the impacts on vegetation and recommended mitigation measures. Mitigation measure M-1 remains the most important measure for all 3 types of vegetation impacts acknowledged to be at least potentially significant. Two sentences are added to Mit-1 in this section however which do not appear in most or any of the other sections. Their inclusion here, I think, demonstrates the overall weakness of Mit-1 with few clearly defined standards and methods to effectively control significant effects. It also illustrates the ineffectualness resulting from the narrow concentration of this EIR on just site specific aspects of the gravel extraction techniques themselves. 9-10

In this section Mit-1 reads as follows:

"Mit-1: The implementation of Mit-1 includes site specific and project area monitoring of riparian habitat characteristics and disturbances. See Table 1.4-2 for preliminary information regarding the percentages of the project-area river reaches that are subject to direct impact disturbance through excavation and the percentages that are not subject to direct excavation disturbance. These "open areas" plus areas avoided within the ownerships of extraction sites help support botanical and wildlife habitat diversity. Information obtained by monitoring disturbances and vegetation presence and diversity throughout the entire project area will be used by the SDRC while selecting specific extraction sites, while determining quantities to extract, while designing extraction methodologies, and while considering site specific mitigation measures. Avoidance and offsite revegetation are just two of the alternatives that the SDRC can consider when they find significant stands of vegetation are threatened. This safeguard will assure that gravel extraction-induced disturbances to riparian vegetation will be less than significant. [Underlining L.K.]

9-10 CONT.

The section quoted above brings up several other questions. What other alternatives do they have in mind? Are they implementable? What is the likelihood they would result in successful riparian protection and enhancement? Do they go beyond mitigation measures 3, 8, and 9 which we as we have already indicated have major shortcomings and limitations? I would think that a discussion of these matters would be necessary in this PEIR, and was disappointed that it did not occur.

pg. 124. -- (Scenic Impacts)

Comments --- In the context of potential problems along and in the Mad River and the importance of the extraction industries to the construction industry in Humboldt County, impacts to views are probably of minor importance. Nevertheless it is difficult to ignore the misreadings of CEQA contained in this section. It ignores Cumulative Effects entirely and seems to misinterpret the purpose of the PEIR by suggesting that if anything is already a "permitted use" it was not supposed to be addressed. To this reader at least, the primary purpose of this PEIR was to address the issue of how one goes about regulating projects already "permitted" or "authorized" by the County so that their direct and cumulative impacts were ameliorated or minimized.

9-11

This section seems to take the existing situation as the reasonable baseline and dismisses the possibility that the river itself has at least some aesthetic significance independent of any particular or specific public view. In this sense, it appears to be misreading the CEQA Guidelines quoted on page 123, lines 39-41, and Public Trust Values and Doctrine applicable to the Mad River.

pgs. 134-145. (Noise)

Comments --- The noise issues should be dealt with in a more forthright way.

There is no way of avoiding the fact that these operations generate an enormous amount of noise. Whether residences will be impacted obviously depends on intervening distances and topographical characteristics of the location. Recreational users and fishermen are a different matter. The public through various doctrines and laws have the right to recreate and fish at all times and all places between the banks of a navigable river. The noise levels created by excavation and processing within the banks of the river and the rights of fishermen and recreationists are irreconcilable given current technology, and the arbitrary nature of 100 foot setback noise standards. Lead and

9-12

responsible agencies might agree that the economic and social benefits of cheap construction materials override the interests of recreationists and fishermen despite constitutional guarantees, but that kind of solution may not withstand legal challenge. In my opinion the better way is to design mitigation --- perhaps offsite from the extraction and processing areas --- which would at least partially compensate.

Dedications of land for trails, small parks, and hauling out spots along the river which could serve as sanctuaries from unnatural sounds and provide at least some of the more important attributes of a natural river aesthetic would seem to be the appropriate types of mitigation to have been considered. Money or land for those purposes ought to have been one of the mitigation measures proposed in this DPEIR. 9-12 CONT.

pgs. 140-143.

Comments --- Ownership of residences should not determine if noise impacts are significant. Where the noise levels are unacceptable at the exterior of a residence owned or controlled by a gravel operation, a better way to handle the impact would be clear and enforceable restrictions on the sale or rental of these dwellings to the public.

pgs. 144-145.

"The project will not increase existing noise impacts along the river. Therefore, although the existing noise impacts on the river are sometimes significant and unavoidable the project noise impact would be less than significant. (LS/LS)"

Comments --- This approach is not proper. It demonstrates that this aggregate management program is at least partly sham, and not meant to remedy or even work through the problems caused by former non-enforcement of regulations, and improperly obtained entitlements.

pgs. 190 & 191.

Although the introduction to the preferred alternative has a reassuring tone, it reveals many of the weakness's of the proposed mitigation measures. Specifically it includes no mechanism legally binding gravel operators to comply with annual review prescriptions. The line 33 acknowledgment that the operators and the County "recognize" that gravel operations are to be regulated is legally insufficient. On line 27 it is not at all clear how comprehensive the term "functioning stream channel" is to interpreted, and whether it includes all the biological parameters which are proposed to be monitored in other portions of the PEIR.

We are suggesting that lines 33 thru 9 of pages 190 and 191 be rewritten as follows:

> The Mad River gravel operators and the County will recognize through the signing of suitable development contracts that mining activities and reclamation activities are to be regulated to protect the public trust and beneficial uses of the river. These include but are not limited to: water conveyance, sediment transport, recreation, wildlife habitat, fish habitat, fish passage, water supply, and gravel mining. Erosion, scour, deposition, sediment transport, and a host of other physical and biological processes occur in the river channel environment. The goal of this adaptive management plan is to achieve, over a period of years, a degree of dynamic equilibrium between these processes by using monitoring data to support professional scientific judgment in framing specific annual operating, reclamation, and mitigation conditions and standards.

9-13

The plan provides for continuing commercial extraction of riverrun sand and gravel, under specified circumstances, from sites located along the lower Mad River between the Blue Lake hatchery weir and the U.S. Highway 101 bridges. It is a flexible, site and river reach specific adaptive management plan, which will result in environmental protection, the protection of public structures and environmentally-sound mining and reclamation strategies allowing some limited but continuing commercial extraction of riverrun materials from the lower Mad River as long as conditions do not deteriorate any further.

The adaptive management plan and flexible mining strategies require monitoring of the project-area, and its resources to estimate sand and gravel recruitment and replenishment, to monitor all related river resource conditions and trends, to verify operator compliance, to determine the impacts of past mining, and to evaluate and regulate annual mining strategies. The combined monitoring, annual evaluations and regulation should lead to appropriate, flexible, environmentally-sound mining strategies which may vary from year to year and site to site. Under this plan the location, method, and level of extraction will be developed annually through a consultative process between the operators and a Scientific Design and Review Committee (SDRC) acting as an agent for the lead approval agency (Humboldt County). A mechanism for review of the SDRC management prescriptions and activities by responsible state and federal trustee agencies and the public is included.

9-13 CONT

pgs. 192-193. (General Duties of the SDRC)

"Under this plan, the duties of the SDRC include: .....

"3. Each year the SDRC shall prescribe the amount, location, and method of sand and gravel extraction at each of the permitted operating sites in the lower Mad River extraction area.

An attempt to develop a formula-driven method for allocating gravel to each operator during periods of low recruitment and replenishment was rejected by the operators. The operators have indicated that they will accept the extraction prescriptions of the SDRC."

9-14

Comments --- In some kind of written and enforceable agreement? This acceptance must be in some form of written and easily enforceable agreement.

pg. 193, lines 20-40.

Comments --- It is not clear how the operators will formalize their acceptance of the extraction prescriptions of the SDRC. (See above) In light, of the County's acknowledged reluctance and inability to enforce the present Mining Ordinance and the provisions in the General Plan for environmental protection, it is imperative that this acceptance be done in a legally binding fashion. Moreover, the requirement that the SDRC provide supporting rationale to the operators with every request for information, lines 25-29, yet be able to modify their monitoring program and statement (lines 30-38) without an appeal procedure provided to the general public as well as the operators is faulty and not in keeping with CEQA's requirement for maximum public involvement.

9-15

"The SDRC shall develop a monitoring program to obtain the information needed for making decisions regarding extraction locations, extraction levels, and extraction prescriptions. In response to the need or lack of need for specific information, the SDRC shall modify the monitoring program, with justification, to obtain the information which is needed to evaluate river physical and biological resource conditions and trends which may be influenced by gravel extraction and processing activities." 9-16

Comments ---- Will these changes be appealable by the general public or just responsive to the complaints of operators as implied by the preceding paragraph? Any change in the scope of the monitoring studies should be appealable by the general public in a forum and form which would be reviewable in a court of law.]

pg. 193, lines 60 -64.

Requiring the public and agencies to frame every concern they might have about the management and monitoring plan with "site specific supporting facts and reasoning" is overly burdensome and seems designed to intentionally chill criticism. If the purpose is to **encourage** specificity in the complaint rather than stifle comment, it would be better revised so that the sentence ends with an "if possible". 9-17

pg. 194, lines 12-20. (Annual Extraction Planning Process)

"During the month of May the SDRC shall meet with the operators, the operators' engineers or other agents of the operators, as needed to communicate the committee's needs for planning information. The SDRC shall guide the operators and the operators' engineers so they can provide the required information in the most timely and cost-effective manner. 9-18

Comments --- With the two "shalls" in this sentence it looks to be an operator proscription for justifying easy dismissal of some or all of the SDRC team if they don't provide what the operator agents believe are sufficient guidance. The tone of this paragraph speaks volumes about the anticipated independence and objectivity of the SDRC.

pg. lines 194, lines 29-34.

Comments --- This should have a minor revision. "The SDRC can proceed with its job in an effective manner [L.K. ---**only** ---L.K.] when the required planning and monitoring information is provided in a timely manner and in a format which readily lends itself to review and analysis." 9-19

pg. 195, lines 13-35.

"Several individuals have suggested that an opportunity for public review should be provided at this point, after the prescriptions are written but before extraction begins. This does not seem practicable.....This is a time for the trust agencies and environmental groups to let the gravel operators apply the SDRC prescriptions. It is hard to imagine that the four scientists could agree on a prescription package that would cause irreparable damage during one extraction season. The time for thoughtful public review is between extraction seasons and not during the shortened low-flow extraction season." 9-20

Comments --- There needs to be a mechanism that assures that the criticisms and comments of the public will be taken seriously. Some mechanism which will allow for legal review or intervention. The inclusion of the word "thoughtful" in the above quote is unnecessarily didactic. It sets a highly subjective standard and unnecessary burden for essential public review. It is agreed that providing for meaningful public review in the period between annual review of current river conditions, the writing of proscriptions, and the commencement of mining would be almost impossible. That is exactly why a standard of public review cannot be limited to complaints based on "current" conditions. (See Comments below.) 9-20

pg. 195, lines 58.

Comments --- As this line is now written, it suggests that both the operators and the SDRC have an equal voice in approving extraction provisions and alternative mining methods. It should read, As river conditions and technology change, alternative methods of extraction may be developed and recommended by the operators and other public agencies or the public. The alternative methods may be reviewed and approved by the SDRC. 9-21

pg. 196, lines 36-38.

Comments --- It is not clear to this reader that the "reclamation plan review process" really provides for meaningful and effective opportunities for monitoring and enforcement. Some discussion of this matter is necessary as well as the specific sections of SMARA that are relied upon for this conclusion. 9-22

pg. 196, line 52.

Comments --- The word current should be deleted from the following sentence and the words, if possible inserted at the end. "Verbal comments should be followed by succinct written statements of ~~current~~ site specific Mad River gravel extraction related concerns with site specific supporting facts and reasoning, if possible. On page 195 of this PEIR it was explained that it was not practicable for public criticism to occur before extraction begins. If this is the case, requiring that statements of concern be required to provide "current" supporting facts would be virtually impossible. 9-23

pg. 196, line 55.

Comments --- A better procedure is required for resolving issues of concern than making a hearing discretionary with the Planning Director. 9-24

pg. 196, lines 46-64. (Public Review)

"All prescriptions and reports of **[L.K. ---the following should be added: with supporting information including aerial photos]** the SDRC shall be on file at the Humboldt County Planning Office where they will be available for public review. Members of the public or others who wish to comment on or appeal the committee's actions can do so by contacting the Humboldt County Planning Director or the Chair of the SDRC. Verbal comments should be followed by succinct written statements of current site specific 9-25

Comments --- With the provisions of this PEIR and the time constraints of public review on annual prescriptions of the gravel extractions for the following season, the "currency" provisions for public criticisms will gut any effective public participation. The wording requiring specificity and currency should be removed or radically revised.

These above provisions for current information are also contradicted by the following paragraph on page 195, lines 40-50."This is a time for the trust agencies and environmental groups to let the gravel operators apply the SDRC prescriptions. It is hard to imagine that the four scientists could agree on a prescription package that would cause irreparable damage during one extraction season. The time for thoughtful public review is between extraction seasons and not during the shortened low-flow extraction season." 9-25 CONT.

pg. 197, lines 6-14. (SDRC Budget)

"The SDRC must have an annual operating budget if it is to plan an effective resource protection monitoring program. The SDRC shall prepare a budget request and submit it for approval by the operators and the Board of Supervisors. Refer to Section 7.2 for an alternative budget approval process." ---

Comments --- The above process is clearly undesirable. It appears to ensure that the gravel operators will control the Committee through the budgetary process. There is no way that this adaptive management plan will work, incorporating standards of objectivity that are necessary to ensure that appropriate mitigation actually takes place, if the operators are allowed to control the budget of the group that is supposed to be monitoring their compliance with regulations and mitigation measures designed to protect the general public. The alternative solution of a MRTAC (Mad River Technical Advisory Committee) suggested in 7.2 (page 200) would be better, though not necessarily the best solution. What is required is a guaranteed budgetary figure that would insure that the job is done with minimal political and financial interference, particularly from those who would stand to profit from relaxed compliance and relaxed mitigation measures. Without a high degree of assured independence, objectivity, and scientific competence over the period the SDRC will function, the Adaptive Gravel Management and Resource Protection Plan will flounder. If the County's Board of Supervisors and trustee agencies knowingly weaken the necessary standards of competence, objectivity and independence by putting the control of the budget in the hands of the gravel industry, and by not upholding a firm and rigorous policy on conflicts of interest (see earlier comments), this PEIR cannot be perceived as anything but a sham. 9-26

pg. 197.

Comments --- The proposed monitoring program should be spelled out in this PEIR with concrete standards. Complete details are not necessary, but more than examples are essential for the public to be assured that important environmental values will not be overlooked. Formulations of selected examples or "kinds of questions", are insufficient. 9-27

pg. 198, lines 54-60. (Costs & Reimbursements)

"Some work of the SDRC will be of a general nature and the costs shall be spread among the operators. Some work of the SDRC will be site specific for particular operators and that cost shall be borne by the individual operator. Thus, it will be to the operator's advantage to provide the SDRC with the necessary planning information in a format that will reduce the operator's overall combined engineering and SDRC fees. 9-28

Comments ---Something like the following should be added to the above. No mining operation will be permitted or allowed to continue unless the past year's prorated expenses for the SDRC have been paid or placed in an escrow account if they are being protested as excessive. Obviously a mechanism for resolving disputes over costs will also be necessary. 9-2 CONT.

pgs. 197 & 198, lines 56-10. (Monitoring)

"Effectiveness Monitoring. Is the project accomplishing the desired effects? Is the gravel industry surviving? Are river resources at risk? Are there fewer complaints regarding noise on the river? Has the risk of bridge failure been reduced? Are migrating fish still gaining access to the tributaries?"

Comments --- Are these to be the only significant biological measures? 9-29

"These are the kinds of questions that the monitoring program must answer. The SDRC shall carefully design and implement the monitoring program. The SDRC shall also annually review the established monitoring program and revise it as needed."

Comments --- The Monitoring Plan should be in this PEIR. That it is not more fully fleshed out is a major failure.

pg. 198, lines 40-45.

"Other forms of monitoring would [L.K. this should read will--L.K.] include annual wildlife surveys to determine if sensitive species are located near extraction sites or elsewhere in the project area. This process is described somewhat in mitigation number seven. 9-30

Comments --- The purpose of these wildlife surveys is or should not be just to determine if sensitive species are located near extraction sites or elsewhere in the project area. The possibility that there are any downward trends in populations numbers which might be correlated with the amount or types of gravel extraction as well as other impacts on the river, its resources and riparian vegetation should also be consistently monitored.

pg. 199, lines 1-26.

The conflict of interest provisions are inadequate. As noted in an earlier portion of these comments, this item is very important for several reasons. One of the most important is the pivotal burden placed on the SDRC with respect to designing management proscriptions and evaluating mitigation success. For example, **Mit-1** on page 29 lines 36-59, reads, "After reviewing available data and evaluating river resource conditions and trends the Mad River SDRC shall prescribe variable annual site-specific extraction locations, extraction volumes, and extraction methods. The Mad River gravel operators may then extract sand and gravel at these specified locations using these specified standards and volume limitations. Under present conditions the approximate total annual volume prescribed shall be below the approximate average annual net recruitment rate as determined by the Mad River SDRC. In time, this mitigation measure may reduce the present cumulative impacts of bed degradation to a level of insignificance. This mitigation measure may also help sustain a viable Mad River Sand and Gravel industry. Therefore, if localized or extensive channel aggradation becomes a problem in the future, it is possible that this mitigation measure may be able to help reduce the significance of the potential adverse impacts associated with excessive channel aggradation. **The potential success of this mitigation measure is dependent upon the combined expertise of the Mad River SDRC, the ability of** 9-31

the SDRC to reasonably monitor, judge, and apply flexible mining strategies to a dynamic river system, and on future hydrologic and geologic processes. This mitigation , Mit-1, will reappear many times throughout this document and shall be used to reduce, minimize, or eliminate many of the actual or potential adverse impacts that are identified in this PEIR."

Comments --- Without a full measure of certainty in the **objectivity** of the scientific committee, any confidence that the results would be fully protective of the public's interest is likely to be misplaced. This is even more the case because standards of environmental soundness toward which mitigation are directed are so poorly defined in this EIR. At best it seems as if they have been defined as maintaining the status quo, and from the environmental and public trust viewpoint this is inadequate as the cumulative impacts of gravel extraction and other land practices on this stretch of the river have already had considerable adverse impacts.

pg. 199.

"The SDRC shall participate in the Mad River extraction designs and resource monitoring reviews as a team. It is understood that no member of the SDRC will consult privately regarding the extraction of instream sand and gravel from the lower Mad River extraction area. If the Mad River operators need Mad River gravel extraction related advice or other similar information they may consult with the SDRC but not with an individual member of the SDRC; or, they may go elsewhere for the advice they seek."

"It is also understood that the provisions of this plan will not limit members of the SDRC from consulting on other matters near or within the lower Mad River extraction area or on gravel-related matters outside of the lower Mad River extraction area. 9-31 CONT.

"It is possible that members of the SDRC will provide gravel-related consulting services to Mad River gravel operators, various public agencies, environmental groups, or others outside of the Mad River watershed. The degree to which such consulting occurs should be monitored. Therefore, each member of the SDRC shall disclose all economic interests in and income from (including income of more than $250 from any single source) any business or activity which is related in any way to gravel operations in Northern California. Disclosure shall be accomplished annually, during the month of January for the previous calendar year, by filing a statement of economic interest at the Office of the Humboldt County Clerk."----

Comments --- This is not nearly enough. ---SECTION 2774.(b) of SMARA specifically prohibits this class of Conflict of Interest with respect to the Annual Reviews.

> SECTION 2774.(b) The lead agency shall conduct an inspection of a surface mining operation within six months of receipt by the lead agency of the surface mining operation's report submitted pursuant to Section 2207, solely to determine whether the surface mining operation is in compliance with this chapter. In no event shall a lead agency inspect a surface mining operation less than once in any calendar year. The lead agency may cause such an inspection to be conducted by a state-registered geologist, state-registered civil engineer, state-licensed landscape architect, or state-registered forester, who is experienced in land reclamation and who has not been employed by the mining operation in any capacity during the previous 12 months. All inspections shall be conducted using a form developed by the department and approved by the board. The operator shall be solely responsible for the reasonable cost of the inspection."

pg. 199, lines 30-64. (7.0 Alternatives Within the Project)

"Because rivers are dynamic ecosystems and river management is a "speculative science" **[L.K. --- This is really overstating it. It would be better if read that** 9-32

river management is not a precisely predictive science. ---L.K.] "the preferred project is a flexible adaptive monitoring and management program that will be administered by a team of scientists. The project design is flexible so the project can respond to changing river conditions. Therefore, there are monitoring and design alternatives which may not be adopted initially but could be adopted during the project life. In fact, some future **[L.K. monitoring?? --L.K.]** alternatives may not be currently recognized. 9-33 CONT.

"7.1 How to determine the allowable total annual extraction level? 1. Extraction level may be determined by monitoring the project area recruitment with extraction may be set at, above, or below net recruitment."

Comments --- The preceding sentence makes no sense and provides too much loophole flex. To provide flexibility with some responsibility it should read as follows: Extraction level may be determined by monitoring the project area recruitment, and extraction may be set at, above, or below the net recruitment of any one year.]

"Extraction may be based on:" **[L.K. This should read The overall extraction level for the river reach may be based on any of the following: ---L.K.]**

a. actual annual net recruitment or
b. on the long-term average annual net recruitment or
c. on a floating average annual net recruitment with either a short, medium, or long time base for the floating average. See the report by Doug Jager attached to the September, 1993 Proposed Final PEIR on Gravel Removal from the Lower Mad River (Attachment 2) for more information and analysis of floating averages. 9-33

2. **[L.K. Site specific extraction levels may --- L.K.]** 2. ~~Extraction level~~ may be determined by monitoring site specific gravel bar replenishment with extraction set above, equal to, or below **[L.K. --any year's ---L.K.]** replenishment.

3. "Extraction level may be set after monitoring river resource conditions and trends more so than by monitoring recruitment or replenishment." 9-34

Comments --- The above is wholly ambiguous and contrary to the existing General Plan Standards which at least call for long term extraction to be in some sort of balance with recruitment.

pg. 200, line 10.

"4. Extraction locations and amounts may be controlled by permits and excavation standards." -- 9-35

Comments --- A change here is essential if this PEIR is to have any regulatory relevance for the operations already permitted or granted vested rights by the County. This section MUST read as follows: Extraction locations and amounts may be controlled by annual reclamation prescriptions and excavation standards.

"5. Extraction locations, methods, and amounts may be controlled by judiciously applying some combination of alternatives one through four which is in fact what has been suggested as the preferred alternative. It is time for the trust agencies, gravel operators, and environmental groups to let the scientists attempt to resolve and monitor the complex issues of river management. In this situation flexibility and adaptation is needed. Standards may be developed in the future. 9-36

Comments -- Some standards are needed, even if of only of a general nature. The above will not suffice. Control of everything, without standards, in the hands of the scientists practicing "speculative science", with the control of the scientists in the hands, pockets,

and check accounts of the operators via budgetary approvals, site specific fees, and permissive conflict of interest standards, compounded with an easy dismissal of any recalcitrant SDRC scientists on grounds of dissatisfaction with service, is not acceptable. 9-36 CONT.

"The SDRC shall develop a monitoring program to obtain the information needed for making decisions regarding extraction locations, extraction levels, and extraction prescriptions. In response to the need or lack of need for specific information, the SDRC shall modify the monitoring program, with justification, to obtain the information which is needed to evaluate river physical and biological resource conditions and trends which may be influenced by gravel extraction and processing activities." 9-37

Comments --- Changing the monitoring studies should be appealable to whom ???? Will these changes be appealable by the general public or just responsive to the complaints of operators as implied by the preceding paragraph?

page 202, lines 30-40. (8.0 Alternatives to the Project)

Comments --- The "takings" problem as applied specifically to this alternative are exaggerated. See *First English Evangelical Lutheran Church v. County of Los Angeles,* 210 Cal.App. 3d 1353 (1989). The exaggeration makes this alternative seem less feasible than it actually is. This alternative would more effectively minimize potential negative impacts to the environment and threats to public structures and utilities, yet require the collection of appropriate data and preparation of a more detailed and comprehensive plan for managing all the river's resources. It is clear that it would not be very attractive to gravel operators, but given the uncertain feasibility of legal compliance with the preferred alternative, and the many doubts engendered in this DPEIR concerning the future independence, objectivity, and legal authority of the SDRC, it would seem to me that this alternate would have been the preferred option. 9-38

On the other hand, if the issues and ambiguities revolving around cumulative impacts, assured compliance, monitoring and mitigation standards, enhancement opportunities, and full SDRC objectivity, independence, and responsiveness to general public concerns are more fully worked out there would be more justification for retaining the currently preferred alternative in its preferential status.

pgs. 208-9. (Growth Inducing Impacts of the Project)

It is not clear what relevance the citations to the Humboldt County Housing Element have to this EIR, particularly the section referring to the "frightening" prospects of litigation. What might have served the public, law makers, and agencies better was some appropriate and basic information. For example, what percentage of the total cost of the average house in Humboldt County is attributable to the cost of natural aggregate products. That basic piece of economic information appears neither in this DPEIR nor in the wildly speculative, disorganized and barely intelligible Appendix M by John Grobey. 9-39

pgs. 211 & 212. (9.2 Short-Term vs. Long-Term)

"....Unregulated or poorly regulated gravel extraction can lead to a series of cumulative and long-term effects which could adversely affect the state of the environment. These effects are: 9-40

"Extraction of bed material in excess of average replenishment causes the bed to degrade upstream and downstream of the site of removal.
Bed degradation can undermine bridge supports, pipe lines, or other structures.
Excessive degradation may adversely alter the aquatic habitat.
Excessive degradation can deplete the entire depth of gravelly bed material, exposing other substrates that may underlie the gravel, which could in turn affect the quality of aquatic habitat.
If a flood plain aquifer drains to the stream, groundwater levels can be lowered as a result of bed degradation.
Lowering of the water table can alter riparian wildlife habitat.
Excessive degradation can impact fish migration and spawning habitat.
Rapid bed degradation may induce bank collapse and erosion.
The reduction in size or height of bars can cause adjacent banks to erode more rapidly or to stabilize, depending on how much gravel is removed, the distribution of removal, and on the geometry of the particular bend."

9-40 CON

Comments --- In this list of long term effects and impacts, the only ones listed are those related in some way to river bed degradation. The continued deterioration and possible elimination of functional riparian habitat, nor non degradation effects on the fisheries are not even mentioned as possible long term effects.

"The project is the development of a flexible management strategy which will respond to monitoring information, the development of amended reclamation plans which will conform with the PEIR and management plan, and the development of mitigating measures for extracting sand and gravel from up to 10 sites along the lower Mad River. Eight of the ten sites already have County authorization to mine sand and gravel from the Mad River.... If this project or a suitable alternative is not adopted, the Mad River gravel industry will remain poorly regulated [L.K. --- by the County] and without review or mitigation. If extraction is allowed to continue under those conditions, the above impacts are likely to occur. The severity of many of the impacts, and how soon they will occur, depends upon the rate of bed degradation. The impacts would be significant and may be irreversible."

9-41

Comments --- If the above description of the project is accepted, the overall evaluation of this PEIR would have to be something like this: The only substantial mitigation proposed in this EIR is the formation of the SDRC. Its standards are poorly developed with the exception of limiting total gravel extraction in the project river reach to somewhere under annual recruitment in some years, and prohibiting extractions that will directly impair public structures. All its other goals and standards are either poorly defined or unfeasible proposals lacking a solid legal foundation.

PUBLIC TRUST ISSUES

Some of the most central issues concerning Mad River extraction and Mad River resources have been avoided, not resolved, in this DPEIR. While it is true that some empirical issues require additional information, and a 5 year period of monitoring and flexible management may be in order, not all the important issues fall into that category because they underlie the scope and likelihood of success of the initial monitoring program and the possibilities of flexible management in the intervening initial period. One such issue is the responsibility and jurisdiction of the County to administer and take responsibility for protecting Public Trust values. This DPEIR avoids all discussion of the County's responsibilities in this regard apportioning the responsibility to the State Lands Commission (pg. 33, lines 6-11). Hence there is no critical query anywhere in this EIR of the PREMISE that the primary purpose of this project is to maintain instream gravel

9-42

mining operations at the highest levels possible without creating immediately catastrophic conditions. 9-4 CONT.

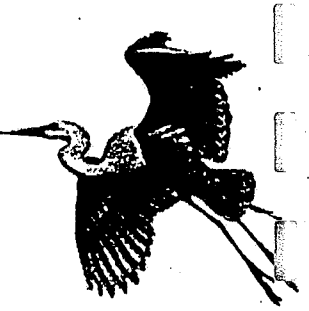
Thank you for your attention to these comments.

Sincerely

Lewis L. Klein

Lewis L. Klein
for the Conservation Committee

REDWOOD REGION AUDUBON SOCIETY
P.O. BOX 1054, EUREKA, CALIFORNIA 95502



Attention: Sidnie L. Olson
Planning and Building Departments
County of Humboldt
3015 H Street
Eureka, CA 95501-4484

RRAS COMMENTS ON PDEIR for Gravel Removal from the Lower Mad River
SCH #92-083049 --- 7/2/93

INTRODUCTION & GENERAL COMMENTS

This appears not to be the usual kind of EIR. The County was required to prepare it, or have it prepared, as part of a MOA between several state agencies, the County, and three gravel operators on the Mad River. Within the MOA the EIR was designated to be "a programmatic EIR", and its declared purpose was to "evaluate the cumulative effects of gravel extraction operations on the natural resources of the Mad River...." This relatively unique impetus or origin, and its specially emphasized function makes it somewhat more difficult to evaluate for adequacy than would normally be the case. Adequacy of an EIR is easiest to judge when the project to be implemented is clearly defined. In this instance, it seems to be not altogether clear in the minds of the authors of this DEIR, what the project is. It is certainly not clear in the mind of this reader.

In an oblique fashion the PDEIR seem to indicate that the project is a management plan which hopefully will regulate the entitlements so that significant damage to public utilities and structures (facilities), public trust values, and natural resources does not occur. "This PEIR will be used to approve an Aggregate Resource Management Plan (ARMP) for sand and gravel extraction on the lower Mad River." -- pg. 2). For the Lead Agency this is really the only possible project since they have already approved entitlements with wholly inadequate review. Yet on the first page and next to last page (pg. 191) we are told that "The project is the extraction of sand and gravel from 10 sites along the lower Mad River." It is however admitted that "Unlike most projects which trigger an EIR, this is not a proposed activity. Eight of the ten sites already have County authorization to mine sand and gravel from the Mad River. " All this appears not be consistent with the rule that "An accurate stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR." (County of Inyo v. City of Los Angeles (1977)

Part of the problem may be the multiple definitions given to Program EIR in the Guidelines.

Section 15168. **Program EIR**

(a) General. A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

(1) Geographically,

(2) As logical parts in the chain of contemplated actions,

(3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or

(4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

Clearly there are choices available as to how a program EIR will be defined. We believe that the project is or should have been the development of a regulatory program of rules, regulations, plans, or other general criteria to govern the conduct of gravel operations already entitled by the County. This focus is not clear within the DPEIR.

The DPEIR covers a wide range of topics. Background information on the physical setting and current permitting status of the 10 gravel operations is clearly presented. However within the text of Volume 1, the background information on the biological-environmental settings is sketchy and incomplete. In some cases this is rectified by the Consultant reports in Volume 2, but in some instances the material in Volume 1 is inconsistent with material in Volume 2. (Several examples are given below) Moreover it is clear from comments within the consultant reports that the collection of biologically critical data was severely impaired by limitations of time and season. Thus our judgment is that the empirical information and studies of the biological resources of river are very incomplete. Data sampling at critical periods, e.g. for seasonal breeding birds in riparian habitat, are totally lacking in this PDEIR. If this material is either not presented or to be provided only in the Final PEIR, the purpose of public and agency review and comment will have been subverted.

The impression created by many of the mitigation statements in the DPEIR that these matters would be covered in the "annual review" are an unjustifiable leap of pure faith. No implementable provision, no protocol, and no financial arrangements are discussed or presented in this EIR for any such work nor any standard developed by which impairment or improvement to biological values could be evaluated. This is particularly blatant with respect to the frequently repeated H_2OQlty-3a mitigation measure, the Annual Review.

If the annual review protocol outlined in Appendix J of the Program EIR by Rising Sun Enterprises, an agent for the major gravel operations, is meant to provide the substance for either mitigation measure H_2OQlty-3a (annual review) or a management program it inadequately deals with at least the following essential topics some of which have been identified in the DPEIR as areas where potentially significant impacts are likely to occur:

1. Consistent and reliable monitoring for biological, recreational, noise and traffic impacts, and cumulative and offsite impacts;
2. Responsibilities and jurisdiction of Planning Director relative to CDFG and other state agencies;
3. Secured role for meaningful public scrutiny of annual monitoring and gravel extraction data (some of which may be claimed to be proprietary), and input into revisions of reclamation practices and standards, and environmental protection measures;
4. Establishment of the baselines for maximum depth of extraction for the various mining methods;
5. Financing of required monitoring, particularly for necessary offsite monitoring;
6. Enforcement protocols and procedures;
7. Allocation of annual Gravel extraction amounts between operators.

The information necessary to regulate impairment to public trust values has not been directly addressed in this document. It should have been.

It is difficult to see how those agencies with responsibilities in the fields of recreation and natural resource protection will be able to responsibly base their decisionmaking with the mitigation and monitoring in these particular topical areas so vaguely defined and undeveloped in the DPEIR From our point of view the deferral of specified mitigation for biological and recreational impacts and the very sketchy formulation of monitoring proposals is a serious problem. The mitigation proposed in the DPEIR is inadequate assurance that instream gravel operations will not impair significant ecological, public trust and recreational values. Nor does the PEIR provide a convincing analysis of options that will.

This DPEIR will need recirculation and a new comment period when the annual regulatory and monitoring program has been fleshed out, and when the minimal data collection essential for

determining potential impacts on biological values has been made ready for public review. (SEE BELOW FOR more specific COMMENTS ON BOTANICAL AND BIOLOGICAL REPORTS)

This DEIR is valuable in that it firmly establishes that over the past 15 years, Humboldt County has managed its river resources poorly, ignoring both its own public trust and police power responsibilities and its own surface mining regulations and laws. Either by calculated or by casual indifference a very serious situation has been allowed to develop on the lower reaches of the Mad River

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SPECIFIC COMMENTS

pg. 19 (Vegetation) There is some evidence and a good deal of well informed sentiment that North Coast Black Cottonwood Riparian Forest habitat should be listed within the California Natural Diversity Data Base as an endangered habitat type. (See Bulletin of the California Native Plant Society, Vol. 23, No.2 -- 1993)

pg. 28 --- In the spirit of emphasizing material that is already contained in DPEIR, I have underlined portions of the three most critical policies regulating mineral and energy resource extraction in the County's General Plan for purposes of putting into perspective the substantive material in this PDEIR.

3. **Ensure that adverse environmental effects are prevented or mitigated to the fullest extent feasible** and that mined lands are reclaimed to a usable condition which are readily adaptable for alternative land uses under the General Plan.

5. **Ensure** elimination of residual hazards to the public health and safety.

9. **Extraction of instream sand and gravel is not to exceed average annual replenishment** level (annual bedload), except when the bedload left from a previous flood is greater than the average annual replenishment or if the projects emphasize fishery enhancement, flood control or bank protection.

pg. 30 The conclusion that "...the mitigation measures proposed in this PEIR will ensure that gravel extraction on the Mad River conforms with the established goals and policies of the local coastal and general plans." is too optimistic. Several significant impacts will not be reduced to insignificance, and as discussed above and below many of the mitigation and monitoring measures are vague and undeveloped. Any assessment that the mitigation measures proposed in the PEIR will **ensure** that gravel extraction within the banks of the Mad River will conform to the General Plan is unwarranted and premature.

pg. 35 --- Without a better description or citation of what the "adopted" regulations of the RWQCB, USACOE,and CDFG are with respect to the installation and removal of summer bridges there is no way for the public to independently evaluate the conclusion that mitigation measure H_2OQlty-2b will mitigate the impacts of summer bridge installation and removal to insignificance.

pg. 36 --- As noted elsewhere in these comments, this mitigation measure is far to vaguely described to judge its effectiveness on this particular impact and the many others for which it is the primary proposed mitigation.

pg. 39 --- Mitigation Measure Morph-1a should be rewritten as follows:

Extraction volumes shall be below the **average** annual replenishment rate **as determined in this PEIR and as readjusted at approximately 5 year intervals based on the analysis of annual review data**.

This mitigation measure will assure that bed degradation does not continue, and will provide for bed aggradation. This mitigation measure, **effectively implemented and enforced over a long enough period of time**, will reduce the cumulative impacts of bed degradation to a level of insignificance. Monitoring shall be performed by the HCPD and CDFG **with all the collected data reviewable by other state agencies and the general public.**

pg. 40. Mitigation measure Morph-2a should have the following added as a final sentence. Monitoring of aquatic habitat values shall be part of the annual review process.

Mitigation Morph-3b should be rewritten as follows: The HCPD and CDFG shall develop [or have developed] by 1995, a restoration, preservation and revegetation plan. Implementation of this plan will help restore and enhance already degraded riparian, riverine and wetland habitats. The costs of implementing this program will be paid for by the gravel operators.

pg. 41 (Impact Morph-5) --- There are better alternatives for flood protection than allowing the river bed to continue to degrade.

pg. 59 --- The data supporting the conclusion that "Currently the majority of fish using this reach are rejected hatchery fish." should have been provided for public review and comment. This is one of those biological parameters that ought to be included within any annual or periodic review.

pg. 61 --- More information on the spawning, migration, and holding behavior and habitats of the Mad River Coastal Cutthroat trouts is needed. Since all or most of their Mad River habitat is within the public trust easement zone, the responsibility of demonstrating no harm should be borne by the gravel operators. Provisions for providing good data on this subject will have to be incorporated into some type of periodical review.

pg. 64 The river stretch between the Hatchery Road bridge (Blue Lake Bridge) and the Fish Hatchery is protected and noted as a significant spawning area in Section 1505 of the Fish and Game Code. That legislative declaration was made either in 1972 or prior to that date. It is difficult to believe that that declaration at that early date was made on the basis of rejected hatchery fish.

pg. 68 The value of riparian forests as wildlife habitat cannot be emphasized enough. One additional quote from a 1992 Oscar Larson report on the Biological Conditions in the Eel River Delta is offered as an example. "The values of riparian habitats for terrestrial wildlife are unparalleled within temperate-zone ecosystems, a conclusion which includes riparian habitats in the Eel River delta." pg. 24) Moreover as was stated above there is some evidence and a good deal of well informed sentiment that North Coast Black Cottonwood Riparian Forest habitat should be listed within the California Natural Diversity Data Base as an endangered habitat type. (See Bulletin of the California Native Plant Society, Vol. 23, No.2 -- 1993)

Given the importance of riparian habitat, and the mandates of CEQA and the MOA authorizing this PEIR to particularly analyze **cumulative** impacts, it is puzzling why there is no analysis of the cumulative effects of **past** gravel removals in combination with other types of developments impacting riparian forest, e.g. land clearing for development, firewood collection and timber and agricultural clearing. These should have been assessed in this DPEIR.

There may be effects of noise even on acclimatized wildlife. (See below for citations.)

pg. 72 "Bald Eagles are rare in Humboldt County [listed as endangered both in California and the United States. It is a California Protected Species.] Three nests are known in the county, one is above Korbel. Scattered sightings of Bald Eagles along the coastal portion of the Humboldt Bay area may refer to this pair and its offspring, or an occasional outside visitor. There are no current or proposed gravel operations in the vicinity of the Bald Eagle habitat."

In the final PEIR this statement has to be corrected, and also supplemented with relevant necessary information so far lacking. First, with the correction. All current and proposed gravel operations in this DEIR are *IN* Bald Eagle habitat. The Bald Eagle habitat in this area encompasses all those places the resident birds might be expected to feed on fish, or on other birds. This would include spent and living salmon, steelhead, cutthroat trout and all other instream Mad River fish above a minimal size. Since this was clearly indicated in the Consultant's report (Appendix D, pg. 11 -- "care must be taken to preserve the integrity of salmon and steelhead habitat in the study area as these are the main food sources for Bald Eagles locally."), it is possible that the writer of the DEIR meant just in the vicinity of a known Bald Eagle nest. But even if that were the meaning, it requires supplemental information. How close can a gravel operation be to Bald Eagle nest before we are assured that there will be no disturbances? As it stands, several operations

listed in this EIR are, I believe, within 1.5 miles of a known nest. One project proposed in the EIR may be closer (the upper Simpson Bar). And at least one gravel operation which in the past has claimed exemption from SMARA and CEQA, a Simpson operation on the N. Fork of the Mad River, may be within 2 miles of the Bald Eagle Nest.

Will these gravel extraction operations be required to undergo a CEQA review for impacts on Bald Eagle habitat and nesting site before they are renewed or initiated, or is this DEIR going to be the only analysis that can be expected?

If the River-Aggregate Management Plan had been the project analyzed in this EIR, as it should have been, I expect that management protocols for the protection of this and all other significant biological values, would have been reasonably developed and could have been reviewed for impacts and likely success in this EIR. It is unfortunate that this was not done.

There are likely to be other Species of Special Concern on the lower Mad River that have not been noted in the DEIR, e.g. yellow-breasted Chat. Information collected on these and the breeding survey of wildlife which was to take place from April through June should be provided for public review and comment.

pg. 75 Mitigation measures Wild-1b and Wild-1c should be rewritten. Currently they read as follows:

Wild-1b --- No new haul roads shall be constructed through riparian vegetation without first consulting the County Planning Department and CDFG. CDFG shall determine, in consultation with the County Planning Department, if the proposed haul road ill impact significant riparian vegetation. If the haul road will significantly effect established riparian vegetation, the haul road shall either be realigned or redesigned. Monitoring will be performed by HCPD and CDFG.

Wild-1c --- All gravel stockpiles shall be maintained in such a manner to assure no encroachment into significant wildlife habitat occurs. Monitoring by CDFG.

It is suggested that the above two mitigation measures be rewritten as follows in order to comply with CEQA requirements and purposes for which this PEIR were prepared.

Wild-1b --- No new haul roads shall be constructed through riparian vegetation <u>without the County Planning Department first completing an Initial Study in consultation with the California Department of Fish and Game.</u> If the haul road will significantly effect established riparian vegetation, the haul road shall either be realigned or redesigned.

Wild-1c --- All <u>existing</u> gravel stockpiles shall be maintained in such a manner to assure no encroachment into significant wildlife habitat occurs. Monitoring by CDFG. <u>New stockpile areas shall require a Grading Permit. Potential environmental effects shall be assessed in an Initial Study. CDFG shall be consulted by the Humboldt County Planning Department prior to completion of the Initial Study.</u>

pg. 78 (Vegetation)

Given the mandates of CEQA and the MOA authorizing this PEIR to particularly analyze **cumulative** impacts, it is puzzling why there is no analysis of the cumulative effects of **past** gravel removals in combination with other types of developments on critical aspects of the vegetation: e.g. structural and taxonomic diversity, introduction of alien plant taxa and displacement of native flora. These types of cumulative impacts should have been assessed in this DPEIR yet there seems to have been almost a purposeful avoidance of the subject. "There has been no attempt to quantify vegetation removal and/or disruption, as the details of individual permit applications are not known at this time." (See also Sections 1 & 2 of Appendix H --- report of Karen Theiss & Associates)

It is hard to see how even the description of the current botanical situation can be considered close to adequate when the field survey was conducted in February and the consultant indicates that "Most of this area was either under water or had been recently inundated..." (Appendix H --- pg. 3)

When more intensive field studies, encompassing additional seasons have been performed, and some discussion and analysis of cumulative impacts has occurred, this section of the DPEIR should be recirculated to the public for additional review and comment.

pg. 83 --- The permitting and regulatory implications of some of the observations are vague and relatively uninformative. Part of the problem undoubtedly derives from the faulty project description as discussed above. For example, on this page it is stated that "These ponds and backwater areas likely meet the wetlands criteria of both the California Department of Fish and Game and the US Army Corps of Engineers." What regulations or mitigations are possible for possible impacts to these areas are not discussed. The original consultant's report Appendix H, pg. 3 indicates that the issue will have to be addressed on an individual permit basis in the future, but from the Lead Agency's perspective, all entitlements have already been issued without addressing the issue.

pgs. 85 -93 (Vegetation Impact Statements and Mitigation Measures)
The most frequently cited mitigation in this section is H_2OQlty-2b (Annual Review). Our comments on this mitigation measure are noted above.

pg. 110 (Traffic) The criteria used to determine what is an "acceptable Level of Service (LOS) should have been given. Both the criteria and the standard depend on the nature of the roads and the size of the community, and are not full standardized and non-controversial. Besides I do not think that the standards for an acceptable LOS have been adopted within the County General Plan (although I haven't had time to check this nor do I know whether the City of Blue Lake has adopted such a standard).

pg. 115 (Noise) --- "The County retained Rising Sun Enterprises to gather and analyze information on noise and traffic resulting from historic gravel extraction operations; and to analyze the effect of historic gravel extraction operations on the recreational use of the project area. (This could and should have been broadly interpreted as a mandate to inquire into how the noise and access limitations to the river imposed by active gravel operations has historically affected recreational opportunities and the nature of recreation along the Mad River. An analysis or discussion of these parameters seems to have avoided in this document and section with the exception of the author's conclusory statement that additional impacts have been brought on solely as a consequence of increased residential development and recreational use over the last 35 years. And I would take issue with these contentions as representing the whole and objective picture.

An additional component may be the increasingly widespread attitude that the primary, best, and highest use of our local river environments and public trust lands may not be for an extremely noisy type of industrial development. This is why a really first hand analysis of alternative sites for the extraction of aggregates is necessary. River habitats are likely to be too important to sacrifice, if other places can provide the materials or even some of the materials necessary even if at somewhat higher monetary costs.

pg. 117. "For the purpose of this study, noise measurements were taken by RSE, at and adjacent to the processing and extraction areas and nearby receptors. [???]. This is not altogether clear, particularly the usage jargon of "receptors". For river recreational purposes and for some wildlife impacts, the appropriate measurements should have been taken at those ***public trust locations*** nearest to the operations. As it is almost all the levels probably exceed those cited in the Humboldt County General Plan, and the Local Coastal Plans even when they are judged to be insignificant, e.g. Noise-8 pg. 127

The Local Coastal Plan standards are quoted below.

C. Standards for Industrial Development that Impact Residential Zones.

(1) **Noise.** All noise generating operations shall be buffered so that they do not exceed the exterior ambient noise level by more than 5 dB(A). ...

D. Standards for Industrial Development that Impact Non-Residential Zones.

> (1) **Noise.** Mitigating measures shall be required where necessary to insure that noise generated by industrial operations does not exceed 70 dB(A) anywhere off the site premises.

Moreover there are also indications in the literature "that introduced noise is disruptive to normal functioning of a variety of wildlife species....And "[r]epeated exposure to elevated noise levels may be expected to result in long-term hearing loss and/or impairment, while single event noise exposure may result in short-term impairment." (Humboldt County Beach & Dunes Management Plan, 1992, pg. 131)

Some of the suggested mitigation measures if implemented will be at least partially effective in reducing the noise levels to nearby residences, e.g. Noise 7a pg. 126. But given the present state of aggregate extraction and processing, it may be impossible to adequately mitigate for noise impacts to public trust and recreational uses of the river, and in some cases for closeby residences or residences in unusual topographic relationships to a processing or excavation site. In my opinion this situation calls for an exceptionally broad, intensive, and possibly creative approach to mitigation possibilities, including attention to possible off-site mitigation measures. In the case of recreational and public trust uses, some attention to potential off-site portage and trail areas around and away from excavation sites should have been explored. For wildlife impacts restoration of riparian habitat sufficiently distant from gravel operations should have been considered. And for impacts to residences, in addition to buy outs (e.g.Noise-7a - pg. 126), funds for compensation or to provide additional insulation ought to have been explored. Certainly development restrictions on additional residential subdivisions in the area of established extractions should also be part of any mitigation package that will allow mining and processing in these areas to continue. And some sort of provision for requiring the incorporation of new noise reducing technologies as they become available should be incorporated as a mitigation measure.

In general, the investigation of mitigation measures for noise impacts in the DEIR is inadequate, although some of the suggested mitigation measures (Noise-7a, Noise 9a & b) may be partially effective in reducing some of the impacts.

Analysis of Alternatives (pgs. 173 - 188)

pg. 173 --- "The actual determination of how far below replenishment extraction must be, will be discussed in the Aggregate Resource Management Plan (ARMP)." It is incredible that this central aspect of any regulatory or mitigation program has not been discussed and evaluated in this document. If it will be left to a later Aggregate Resource Management Plan, this ARM will have to be circulated and analyzed in a subsequent EIR, and this would appear to defeat the purpose of this PEIR. ("This PEIR will be used to approve an Aggregate Resource Management Plan (ARMP) for sand and gravel extraction on the lower Mad River" --- pg. 2.) Moreover, if this aspect of mitigation is not effectively discussed in this PEIR, I believe that the only alternative available in this DEIR that could possible pass muster for legally adequate mitigation would be some variation of Alternative 3 --- a temporary moratorium.

pg. 179 --- Within the discussion of Water Quality - Alternative 3, there is some notice of other impacts to water quality which would continue or increase (the discussion is not at all focused here) despite a moratorium on gravel extraction. It would appear to me that in the context of the impacts of gravel operations on the river environment these additional impacts would have to be considered minimal, but if they aren't, and if important enough to receive attention and be considered important enough to detract from the environmental benefits accruing from a moratorium, they should have been included in the body of the EIR as part of the cumulative impact analysis.

pg. 179 & 180. --- The discussion of Channel Morphology/Recruitment - Alternative 3 includes the following statements. "This alternative would protect all natural resources of the project area from impacts of gravel extraction operations. However, because of the dynamic nature of the river and the habitats associated with it, and the existing recreational use of the river, there may be impacts to the channel morphology and gravel recruitment that are not a result of gravel

extraction operations. For example, drought years will reduce the potential for gravel recruitment, and major flood events have the capacity to alter the river course."

It is difficult to see how the "existing recreational use" of the river would have a significant impact on Channel Morphology and Gravel Recruitment. Moreover, although it is true that flood events and drought years may have an enormous impact on gravel recruitment and channel morphology, how this relates to the benefits of a temporary moratorium is not clear. Surely, a several year moratorium on gravel extraction could significantly reduce the danger to public utilities and structures.

pg. 181 --- The impacts of poaching on the fisheries of the Mad River if believed to be potentially significant should have been incorporated into the cumulative impact analyses of this DPEIR.

Pg. 182 --- Negative impacts to riparian habitat in addition to those that have occurred as the consequence of gravel extraction should have been part of the cumulative impact analyses. Mitigation controls of any sort that would reduce the cumulative impacts should have been devised and discussed. Thus controls on the removal of riparian vegetation for other purposes, e.g. firewood, if they would alleviate the cumulative loss of riparian habitat should have been dealt with in this PEIR. This would be an essential component of any meaningful river management plan and should also have been included here.

Pg. 185 --- It is difficult to imagine how "existing recreational use of the river" could have a significant impact on exiting public utilities and structures.

Pg. 187 --- In the section discussing the comparative environmental superiority of alternatives, Alternative 4 is dismissed with the conclusion that impacts would be similar or greater than the project. There is not enough evidence nor analysis in this DPEIR to support that position. Nor is there enough evidence and analysis to support the statements on page 188 for this same alternative . The lack of evidence for a "guarantee" that owners of other sources of aggregate would be willing to sell aggregate to a specific group of operators at a "reasonable" cost does not make this alternative "remote and speculative." A reasonable analysis of alternative aggregate sources is an essential component of proper management, (See Appendix B -- Consultant Report of G. Mathias Kondolf) and should be part of any document that will be utilized to approve an Aggregate Resource Management Plan ("This PEIR will be used to approve an Aggregate Resource Management Plan (ARMP) for sand and gravel extraction on the lower Mad River" --- pg. 2.)

pg. 188. ---- Alternative 1 (the Extraction Equal to Replenishment Alternative) is mischaracterized here. It would not "greatly lessen the impacts of the project" it would only delay and perpetuate the severe cumulative effects documented in other parts of the PDEIR. For example, it would not in any way remedy or ameliorate the serious structural undercutting of bridges, revetment structures, nor solve the Ranney water collector and direct diversion facility problems of HBMWD.

The benefits of Alternative 2, (Extraction Below Replenishment) are overstated here. It would only reduce a few of the identified significant impacts, primarily those associated with channel degradation. It would have only minor ameliorative effects on Noise Impacts, Traffic Impacts, and cumulative impacts to riparian habitats.

Alternative 3 (Moratorium) appears to be correctly described as the environmentally superior alternative, however the dismal legal and financial implications depicted of imposing a moratorium appear to be highly exaggerated. It is hard to believe that a temporary moratorium of one to several years given the likely harm to the environment and public structures documented in the appendices of this DEIR would be judicially determined to be either a permanent or temporary taking. [See: *First English Evangelical, Lutheran Church of Glendale v. County of Los Angeles* 210 Cal.App.3d 1353; 258 Cal.Rptr. 893 (Cal.App. 2 Dist. 1989)]

Short-Term vs. Long-Term (pg. 191)

The discussion following the list of cumulative and long-term effects highlights some of the major problems in the way the "project" has been defined in this DPEIR. The appropriate project of this PEIR is really a program for the regulation of 8 gravel operations which received

authorizations, entitlements, and plan approvals without the proper prior environmental review. Some believe that these activities can be regulated through an annual SMARA review process. The plan for accomplishing this should have been the project or at least one of the major components of the project that this PEIR analyzed. This gravel management program, and its alternatives are not adequately described in this DPEIR. It is clear that continuation of these projects in the same manner that they have operated or been allowed to operate in the past may create irreparable harm to the environment, and other public trust values, in addition to damaging public facilities that will jeopardize public safety and can be remedied only at considerable expense to the taxpayer. "Meeting market demand for aggregate" is not adequate reason for a continuation of past bad practices or for not including what should have been included within this DEIR.

Thank you for your attention.

Lewis L. Klein
for the RRAS Conservation Committee

David S. Krueger
Attorney

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Letter 10

March 28, 1994

Humboldt County Planning and Building Dept.
Thomas D. Conlon, Director
3015 H Street
Eureka, CA 95501

Comments on Recirculated Draft Program EIR on Gravel Removal from Lower Mad River

The new Draft PEIR is much better than previous attempts at a Mad River PEIR. This document retains some of the better parts of previous documents while clarifying its focus and objectives. There appears to be broad consensus that some form of adaptive management is the best solution for the Mad River. This document appears to reflect a sincere and direct effort to implement an objectively administered form of adaptive management. While there are serious shortcomings in the Draft PEIR, the tone of the document is sincere, and I am therefor optimistic that the necessary changes can be made. I commend the authors for the considerable effort this draft represents.

Project Description

The project description is a dramatic improvement on the descriptions of scope and application of the PEIR in previous attempts at an EIR for the Mad. The lack of a clear focus in previous Draft EIRs resulted in those attempts floundering in a sea of unanswerable questions.

The most important change is making clear that this document is not intended to support the issuance of conditional use permits. By avoiding the issues related to the establishment of a right to operate a gravel mining operation in the first place (a scope that was not ruled out in previous EIR attempts) many difficult issues are avoided.

Insufficient Range of Alternatives

Section 8.0 lists seven alternatives to the preferred alternative. All seven of the alternatives are not realistic for adoption. Alternative 1 involves abandoning the attempt to make the operations legal; which is correctly described as "both undesirable and unacceptable" (and add to that illegal). The other six alternatives involve stopping gravel mining on the Mad River, a result no one has advocated and which is not plausible for adoption. While these

10-1

alternatives are valuable as a "no action alternative" and to examine other unworkable, or only partially workable, alternatives, they are not sufficient. These alternatives do not constitute a range of reasonable alternatives required by Public Resources Code § 21100(d). Where alternatives that are reasonably capable of adoption exist, a reasonable range of such alternatives must be considered.

In the section entitled "Alternatives Within the Project" (Section 7.0), there is a list of alternative approaches to various key issues without analysis of those approaches. The "alternatives within the project" listed in section 7.1 (pp. 199-200) are much closer to the alternatives envisioned by CEQA in terms of being reasonable alternatives. However, these alternatives are not analyzed as alternatives and are not proposed to be alternatives to the preferred alternative.

The part numbered "5" in this section (p. 200) suggests applying some combination of the previous four possibilities. Part 5 then goes on to plead "to let the scientists attempt to resolve and monitor the complex issues of river management." This plea cuts to the heart of the difficulty that has been experienced in attempting to apply CEQA analysis to an adaptive management proposal. The very substantial advantage of adaptive management is its flexibility in dealing with both a dynamic river system and limited data on which to base predictions. As is pointed out at page 191, "The science of river management is not so well advanced to allow rigid formula-driven decision making to dominate the planning and monitoring process." In order to adopt a flexible approach, the SDRC needs considerable latitude.

10-1 CONT

The need for flexibility does not mean that there cannot be meaningful substantive alternatives proposed. The Draft PEIR contains at least one prescription directing the actions of the SDRC. Relative to the issue of bed degradation, the SDRC is instructed to "establish a total average annual extraction rate that is less than average annual net recruitment." (p. 193, l. 6-9) Such objectives can be prescribed to establish a range of reasonable alternatives without excessively interfering with the flexibility necessary to make adaptive management workable.

Ideally, policy issues should be addressed in the range of alternatives, while methods and annual prescriptions can be left to the SDRC. The issues of overall objectives and acceptable levels of risk should be addressed by a discussion of alternatives. The range of alternatives should include a range of objectives from no bed degradation and a moderate risk of degradation to the no mining alternative. (The analysis of alternative sources of aggregate should be retained as the analysis is valuable in explaining why those alternatives will not completely meet the needs for aggregate.)

As one of the intermediate alternatives, and as my preferred alternative, I would recommend an objective of even division of estimated net recruitment between aggradation (to "pay back" the river some of the gravel "debt" caused by historic unregulated mining) and extraction, with a reasonably high level of confidence that resource protection objectives will be met. This alternative should recognize that after the five years of implementation, the need for further aggredation would need to be reviewed and possibly adjusted.

Selection of the Preferred Alternative

Since there is no range of reasonable alternatives described I cannot confidently comment on alternatives. As noted above, my preferred alternative would be an even division of recruitment between extraction and riverbed restoration. Alternatives which have been proposed in previous Draft PEIRs have not reserved near so much recruitment for the river.

Previous proposals have suggested mining on the order of ninety percent of recruitment, and then debated how best to measure recruitment. While I am willing to leave it to the SDRC to determine the most appropriate method for determining recruitment during the five year period this process is in effect, I consider mining nearly equal to recruitment to be unacceptable. 10-1 CONT

It is estimated that for 30 years mining has been 342% of replenishment. In previous proposed preferred alternatives, the objective was to only leave 10% of net recruitment per year for replenishment. After the river has degraded to the brink of a crisis these plans proposed a solution that included virtually no moving back from the edge of catastrophe. A nine million yard gravel debt should not be repaid at the rate of one six hundredth of the debt (fifteen thousand yards -- less than one fifth of one percent) per year.

An added advantage of dividing the net estimated recruitment is that it reduces the risk of adverse impacts due to the uncertainties inherent in river management.

Replacement of Members of the SDRC

Adaptive management works best when the decision-makers have wide latitude. Public accountability of decision-makers is greatest when there is little latitude. For adaptive management to work well, there must be sufficient trust in the integrity of the decision-makers to allow considerable latitude. The SDRC, as presently composed, has the trust of the people involved representing the various interests. I fear that if the composition of the SDRC were to change, the replacement members might not have the same level of trust among the various parties to the controversy. If new members are appointed to the SDRC, it will be critical that each new member have a reputation of objectivity and forthrightness. Even the appearance of bias will threaten the success of any adaptive management proposal. 10-2

Impacts and Mitigations

Barren River Bars:

Veg-3, page 22, acknowledges that gravel mining will suppress the development of riparian habitat and may prevent the succession to river terraces and the subsequent vegetation changes. This impact is labeled "PS/LS." The "LS" tag does not appear supportable, since the proposed mitigation seems to only address impacts to existing vegetation and terraces. The concern is the suppression of the development of vegetation and terraces. If I am misinterpreting the paragraph at page 113, lines 31 to 37, the language should be changed to state that proportionate offsite revegetation will be required when the SDRC finds that mining is probably suppressing the development of vegetation or terraces. 10-3

The potential scope of this problem is disclosed by extracting information from Table 1.4-2 (p.6). In the approximately nine mile reach of the river where mining will take place (between Highway 101 and the hatchery weir), two thirds of the river miles will be "extraction sites." This fact should be noted when describing the significance of the impacts barren bars will have. The impacts of barren bars are cumulative with the impacts from other riverside activities such as the Hatchery, the Blue Lake levees, bridges, grazing, off-road vehicle use and water pumping facilities.

10-3 CONT

Additionally, these barren river bars are not addressed in View-6, page 24, even though the resulting condition is probably the largest visual impact that is covered by this PEIR (most of the other visual impacts described do not relate to the SMARA issues that are relevant to this document). The aesthetic impact from the river is labeled "LS/LS." The reason given for considering the impact to be less than significant is that "these operations are permitted and the preferred project will not cause any significant increase in these visual impacts." The fact that an operation may be permitted does not excuse analysis of the impacts, and the measure of the impact is not the present degraded condition of the river bars.

The existing permits or vested rights for these operations do not limit the SMARA analysis of ongoing impacts of the operations. The disturbance of river bars and terraces is the result of mining activity that is subject to SMARA. The impacts of mining on vegetation is no less the subject of SMARA and no more affected by the existence of permits than the impacts of mining on bed degradation.

10-4

Also, the measure of impact is not the degree of change from the present condition of the river. The current state of the river is a function of the chronic disturbance of the river bars and terraces by mining. The measure of the impact is what the condition would be without the impact. The reclamation obligations under SMARA are for impacts from mining from 1976 on. The question is what the vegetation and appearance would be absent mining from 1976 to the present, and then projected into the future.

Because of gravel mining, barren river bars are a dominant visual feature from the river through much of the project area. The visual impact is significant. The visual impact from some of the locations other than the river which were analyzed also need to be changed to reflect the visual impact of having suppressed vegetative development on river bars.

A few of the bars where the operations occur, would not be likely to develop significant vegetation or topographic relief even in the absence of mining. However, other bars would have become vegetated and portions of the bar developed into terraces.

Barren river terraces are an unavoidable and significant impact of mining. The impact can, however, be mitigated. CEQA requires agencies to implement feasible mitigation measures for projects that will otherwise cause significant adverse impacts. (Public Resources Code §§ 21002, 21081) As a condition of continuing mining, operators must be required to offset this impact by protecting and restoring some other degraded portion of the river. The cost of such mitigation could be minimal. Simply gating or blocking inappropriate river bar access and

some basic revegetation could accomplish this objective. The result would be to restore some riparian vegetation and, consequently, habitat and improve the appearance of the river; restoring a measure of naturalness to the river setting.

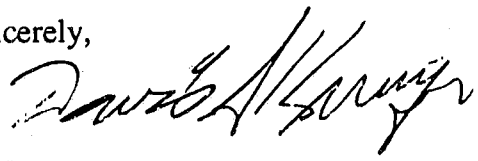
Roads on River Bars and Terraces:

Controlling the creation of new haul roads is discussed. However, the impact of the suppression of vegetation by continued use of roads or haul paths is not addressed. On river bars, the continued use of haul roads and paths prevents river bars from developing vegetation. This impact can be mitigated by consolidating haul paths to eliminate unnecessary paths and replanting any unnecessary or abandoned paths. 10-4 CONT.

Baseline For Impacts

In various places, the Draft PEIR analyzes impacts in terms of change from the present condition of the river. The operators have reclamation obligations under SMARA for all mining since 1976. The analysis of impacts should be comparing the impacts of mining since 1976 to the condition the affected area would be in absent the impacts of mining during that period, and projecting those conditions into the future relative to analyzing continuing impacts. 10-5

Sincerely,



Letter 11

FRED NEIGHBOR
ATTORNEY AT LAW

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TELEPHONE: 707/ 822-3000

RECEIVED
MAR 24 1994
HUMBOLDT COUNTY
PLANNING COMMISSION

March 24, 1994

Sidney Olson, Senior Planner
Humboldt County Planning Department
3015 H Street
Eureka, California 95501

Re: Recirculated Draft PEIR on Mad River Gravel Removal

Dear Ms. Olson:

California Trout hereby incorporates by reference the letter is submitted on June 30, 1993, regarding the PEIR for Mad River Gravel Removal. California Trout believes that the concerns it raised in that letter are still pertinent and relevant to the current PEIR. In addition, California Trout offers the following comments regarding the recirculated PEIR:

1. The New PEIR, like its predecessor, fails to meet the legal standards required of law.

An EIR is a detailed informational document prepared by a lead agency that analyzes a project's significant effects and identifies mitigation measures and reasonable alternatives. Guidelines Sections 15121(a) and 15362. CEQA does not grant an agency new powers independent of the powers granted to the agency by other laws when devising mitigation. (Public Resource Code section 21004, Guidelines 15040(b).) The PEIR concedes repeatedly that the County has already, either through permitting or vested rights granting, entitled the project operators to extract a cumulative amount of 817,000 cubic yards of material. The proposed alternative and mitigation for these operations is to "restrict and limit extraction" (currently) to below the average annual net recruitment. Using Dr. Lehre's and DWR data, that the annual recruitment is in the range of 150,000 to 200,000 cubic yards, the County must restrict operations to about one-fifth their entitled extraction volume. How is the County, as lead agency, going to legally impose and enforce this restriction? What enforcement modalities does the County have if operators elect to extract at the level of their entitled volumes? The PEIR discusses, under Alternatives 2 and 3, the possibility of a "taking" if the County imposed a moratorium or prohibition on gravel extraction. However, the PIER fails to discuss whether a limitation to one-fifth their entitled volumes could raise a "taking" issue. 11-1

The PEIR implies, but never makes explicit, that the participatory operators would voluntarily abide by the proposed alternative and mitigation. Voluntary compliance is not legally significant and, further, the PEIR presents no documentation from the operators (i.e., declarations, letters of intent, etc.) which indicate even their voluntary willingness to abide by the criteria of the PEIR. Even if such documentation was presented, it would not cure the inherent defect of this PEIR. The County must be able to legally impose and legally enforce the conditions of mitigation; and, in fact, it cannot. 11-1 CONT.

The PEIR suggests, as has DFG, that under the annual review provisions of the Reclamation Plans, the lead agency can regulate the "operation." However, legal authority, particularly City of Ukiah v. Mendocino, 192 Cal. App. 3d 1324, 263 Cal. Rptr. 340 (1st Dist. 1987) held that the permitting/entitlement aspect of an operation is separate and distinct from the reclamation phase and that you cannot challenge or restrict the entitlement through the Reclamation Plan process. California Trout would support the County in its challenge to this legal holding, but believes that the County is vulnerable on this issue and particularly in light of the fact that County staff so rigorously defended the operators' claims of vested rights.

The PEIR also manifests patent inconsistencies. For a document to legally constitute an EIR, that document must analyze the project's significant effects and identify mitigation measures and reasonable alternatives. (Guidelines sections 15121(a), 15362.) The PEIR identifies aesthetic/recreational and noise impacts as significant yet it fails to propose any mitigation whatsoever for those impacts. Instead, the PEIR states that the preferred alternative will not "increase" or "change" these impacts and that the existing impacts are "permitted." This issue clearly manifests the legal inadequacy of the PEIR. The PEIR in essence concedes that the County cannot impose mitigation for the noise and aesthetic impacts for existing operations. Yet, PEIR repeatedly asserts that the County can impose mitigation which will "limit" the amount of extraction through the SDRC process. If the County can impose mitigation measures to correct for river degradation, then it also has the power to impose mitigation for noise and aesthetic impacts, or in the alternative undertake a statement of overriding consideration which would require specific factual analysis and ultimate findings. The recreational/aesthetic uses of the Mad River are significant now, and will become even more significant in the future. If the fisheries can ever be reestablished, the Mad River would become a mecca for anglers. It already is known statewide and nationally for its winter-run of Steelhead and literally thousands of anglers (who spend thousands of dollars) come here during December through March. 11-2

Therefore, the County must assess and discuss mitigation for the noise and aesthetic impacts of the existing operations. Additionally, the PEIR needs to explicitly state how the County will enforce the conditions of mitigation.

2. The Future Decisions and Determinations by the SDRC, Agent for the County, Will Constitute Discretionary Projects and Require CEQA Review.

CEQA applies to "discretionary projects." Public Resources Code section 21080(a); CEQA Guidelines section 15268. A "discretionary project" is one that requires the exercise of judgment or deliberation when the public agency decides to approve or disapprove a particular activity. 11-3

Clearly, the SDRC procedure and decision undertaken annually will constitute a discretionary project. The fact that the County will "restrict" the scope, method, type and intensity of annual extraction operations" every year in essence creates new discretionary projects each year. Without environmental review pursuant to CEQA, the County's actions could result in adverse impacts. Thus, CEQA review and process is imperative and legally required. The PEIR tries to tip-toe around the issue, but it does not make it. This yearly process would be more acceptable if the County had legal commitments from the operators that they would abide by the SDRC determinations (or if the operators agreed to the revocation of their entitlements), but without this "ingredient" the process is flawed.

3. Other Issues.

(a) The PEIR fails to address the issue of the potential listing as endangered for the Coho Salmon.

(b) The PEIR again discusses that spawning below the hatchery is perhaps a "hatchery phenomena," yet the PEIR fails to state what kind of fish are involved in this phenomena. Clearly, if any Coho or Chinook Salmon are using the project area for spawning, then the County must carefully assess and protect these fish. It is nice t hat the County has deleted references to "sacrificing" fish for gravel. 11-4

4. Conclusion.

The PEIR is an informative approach to the Mad River gravel problem. However, because of significant legal flaws, it cannot attain the legal status of an EIR. Until the County can assert "real" legal regulatory authority over all phases of the gravel operations on the Mad River, the PEIR is merely academic and cannot meet the legal requirements of an EIR. Because it lacks the legal stature of an EIR, it is not certifiable. 11-5

The PEIR presents some important information and provides a version of how gravel extraction can be managed on the Mad River. The SDRC process has great potential, particularly in light of the integrity existing members have brought to this matter. However,

until either the operators voluntarily relinquish their entitlements or the County revokes their existing entitlements, the PEIR is without legal substance. It would behoove the County and the operators to make the state clean and, then, implement the ideas and substance of the PEIR, along with further considerations. 11-5 CONT.

Thank you for your consideration of this matter.

Sincerely,

Fred Neighbor

FRED NEIGHBOR, for
California Trout, Inc.

FN:kms

Letter 12

Received 3-24-94

TO: Doug Jager

FROM: Michael J. Scalici

RE: Mad River Gravel EIR: The Role of Gravel Extraction on River Mouth Processes

Having spent the last 3 years collecting both field and historic data regarding the factors affecting the behavior of the Mad River mouth, I have come to the following conclusions:

1). The littoral zone around the Mad River mouth has adjusted to a decadal-scale balance of sediment input. A portion of these sediments are derived from upstream sources, a portion from littoral sources, and a portion from natural oscillation of the river mouth position.

2). The behavior of the river mouth is affected by changes in the relative contribution of each of these sediment sources. Should one source be reduced, another source will be increased to make up the balance.

3). The December, 1964 flood event scoured the lower Mad River so that the volume of tidal prism increased dramatically.

4). In the 6 years following this event, sediments were "sucked in" to the Mad River estuary in order to fill this hole. This is readily seen in the aerial photographic record.

5). By 1971, these sediments were flushed out of the estuary as tidal prism volume reached a threshold whereby there was a net removal of sediments from the estuary to the nearshore zone beginning around this time. With a deficit of sediments reaching the mouth from upstream sources, the river mouth adjusted to this reduced supply by obtaining these sediments from the dunes fronting the McKinleyville bluffs.

6). The further the river mouth migrated, the greater the tidal prism volume, resulting in a positive feedback which further perpetuated the river mouth migration.

7). The Mad River mouth is in a HIGHLY UNSTABLE position and erosion will continue to occur at Clam Beach in order to maintain the balance of sediment supply there.

12-1

I have a solution for solving the river mouth dilemma whereby the gravel operators contribute to the solution and are not part of the problem. This solution would entail re-establishing the lower river to spread laterally as it is geomorphically should. It would entail increasing riparian forest cover in the lower river delta. It would use a number of materials, such as gravel, locally procured sand, brush, to recreate a natural meander belt

12-2

in the lower Mad River delta.

I am very interested in sitting down with the Board of Supervisors, the gravel operators, the scientific group, affected land owners, McKinleyville Community Services District, the Army Corps, FEMA, etc., and work out a solution. The river mouth must be able to oscillate around its historic range and dunes need to start building up again fronting the McKinleyville bluffs if we want protection from storm surges. 12-2 CONT.

I hope my message gets through to those in power.

Sincerely,

M Scalici

Michael J. Scalici

Letter 13

MEMO

HUMBOLDT COUNTY
DEPARTMENT OF PUBLIC WORKS

DATE: *March 22, 1994*

TO: *Sidnie Olson, Senior Planner*

FROM: *Donald C. Tuttle, Environmental Services Manager* DCT

SUBJECT: *DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT-GRAVEL REMOVAL FROM THE LOWER MAD RIVER*

****

The Natural Resources Division of the Public Works Department has reviewed the re-circulated Draft Program Environmental Impact Report on gravel removal from the Lower Mad River. Although there are some map errors, we find the document to be adequate and workable provided the mitigation measures are carried out. Provision for appropriate sanctions for failing to do so should be included in the Final Program Environmental Impact Report. 13-1

Letter 14

RISING SUN ENTERPRISES

TO: Sidnie Olson, Humboldt County Planning Dept. and the Humboldt County Board of Supervisors

FROM: Robert Brown, AICP, Rising Sun Enterprises RB

RE: Recirculated Draft PEIR on Mad River Gravel Removal Comment Letter 1:

DATE: March 24, 1994

Comments Regarding the Mad River EIR Mitigation Measures and the Aggregate Resource Management Plan

Mitigation #2, page 29, line 61

The mitigation monitoring plan should include the formal mechanism and description of the type of information to be requested. This may best be approached through an MOA; otherwise, how will this mitigation measure have any teeth? What happens if these other agencies do not provide the annual data requested?

More specifically, CalTrans should provide cross-sections at Highway 101 and 299 bridges, rock slope protection at the mouth of the Mad River as well as the Mill Creek bridge. The County should be responsible for cross-sections at the Mad River Beach RSP, the Hammond Bridge, the Blue Lake levee, the Hatchery Road Bridge, the Lindsey Creek Bridge, the Warren Creek Bridge. The Department of Fish & Game should be responsible for cross-sections at the hatchery weir area and the RSP below the hatchery. The railroad should be responsible for the bridge over the Mad River as well as the bridge over Warren Creek. Humboldt Bay Municipal Water District should be responsible for cross-sections at the pumps and other structures as well as the waterline crossings. The U.S.G.S. should be responsible for the cross-section at the gaging station. The City of Blue Lake should be responsible for the cross-section adjacent to their sewer ponds. 14-1

Mitigation 6, page 30, line 31

The SDRC should review the pre-1993 DFG Hatchery Management Plans and/or strategies as well as the Interim Management Plan during the period when the hatchery is closed. Analysis of the pre- and 14-2

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post-management plans by the committee should be submitted into the record as part of the data base necessary to analyze fisheries impacts. I also believe strongly that closure of the hatchery would effect the fisheries sufficient enough to warrant that such a decision should be subject to the CEQA process and that the County request DFG accordingly. 14-2 CONT.

Comments Regarding the Aggregate Resource Management Plan

1. In review of some of the information included in the EIR as well as the previously compiled appendices (April, 1993), there are statements and/or conclusions that have been made based on limited amounts of information. In contacting several individuals that have historically been on the river, in addition to operators who have a long history on the river, it appears that there are substantial amounts of historic information that have not been incorporated into the conclusions of this study. Furthermore, there are additional photographs of which several of the operations are trying to compile copies of to provide additional information. Therefore, it should be realized that the conclusions on the EIR as well as information in the appendices are based on the available information at the time of the report. With the inclusion of Mitigation Measure #1 establishing the Mad River SDRC it should be noted that as additional information is provided, this be utilized for management decisions in addition to the information included in the EIR and appendices. 14-3

2. Though management strategies are proposed for the commercial gravel operations below the fish hatchery, I think it is important to have a policy to obtain streambed extraction information for materials removed by upstream activities including those associated with the timberlands as well as Ruth Dam. There should be a policy to either require landowners to submit extraction volumes and locations or obtain this information through 1603 application/monitoring requirements issued by the Department of Fish & Game. This should be incorporated into the Aggregate Resource Management Plan. 14-4

RISING SUN
ENTERPRISES

TO: Sidnie Olson, Humboldt County Planning Dept. and the Humboldt County Board of Supervisors

FROM: Robert Brown RB, AICP, Rising Sun Enterprises

RE: Recirculated Draft PEIR on Mad River Gravel Removal Comment Letter 2:

DATE: March 24, 1994

Comments Regarding the Highway 299 Bridge Over the Mad River and Nearby Impacts

I met with Bill O'Neill and Ben Spini on March 22, 1994. Ben Spini is the landowner that has lived downstream of the bridge since the 1930's. Ben Spini recalls that approximately where the rocks are upstream from the 299 bridge there used to be a wooden railroad bridge at the upstream side and a metal vehicular bridge between the railroad bridge and the present location of the Highway 299 bridge. When he came back from World War II the older Highway 299 bridge was constructed and the other two bridges were gone. The pilings that are seen amongst the rocks could have been part of the wooden railroad bridge and that some of the rock there may have been generated as part of the construction and/or demolition of those bridges. He supported the idea that some of the rock was a result of excavating at this location (1960) for placing the 51 inch diameter water line that crosses the river. Others commenting on this have felt that rock was placed at this location to cover the water line in order to help protect the water line. This would particularly be the brown colored material that looks native to the location. The newer gray rock that was placed at this location is similar to the riprapping that recently occurred on the Water District's banks on the upstream right bank. Placement of this newer riprap may have removed whatever slight covering of gravel was found around the native rocks, thereby making it appear that the rocks recently became more exposed by "degradation" of the riverbed. 14-5

Upstream from the rocks, to the best that Bill O'Neill and Ben Spini recall, the river looked similar with no signs of degradation. Bill O'Neill pointed to a rock where he used to dive off when he was 15 years old (1954). It was an 8' jump into the pool and it appears that it is approximately the same at this time, though the pool is no longer there; therefore, degradation around the 299 Bridge seems to be isolated between the rocks and the bridge.

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However the rock was placed at this location, it is imperative that it is removed. In talking with Cathy Crossett with CalTrans there are no plans to remove the rock as part of their bridge improvements. The rock appears to be on Water District property. The EIR should, as a mitigation measure, require CalTrans and the Water District to coordinate efforts for its removal. 14-5 CONT.

The EIR Appendix F, Section 3 on page 26 discusses the "degraded condition of the river from indicators such as . . . exposure of older silt and clay rich sediments." In talking with Ben Spini and Bill O'Neill, both remember that during the construction of Highway 299, east of the Highway 299 bridge location, that at the first road cut, considerable amounts of clay material was removed from this location and transported west across the 299 bridge to a road on the north side of the bridge. Trucks carried the clay down and dumped it onto the riverbed. This is the source of the clay material that shows up at different locations at the Johnson-Spini Bar.

Ben Spini indicated the extent of erosion that occurred after the 1964 (81,000 c.f.s.) and 1972 (54,000 c.f.s.) floods. The 1955 flood did not significantly impact the agricultural land downstream from the 299 Bridge. However, the 1964 flood resulted in the loss of 3-4 acres of land. Though the 1955 and 1964 floods were similar in discharge, the westbound 299 was built between those two floods. When the bridge was being constructed, Ben Spini's dad informed the crews that they were placing the pier footing incorrectly and that it would result in "corkscrewing" of the river and would result in erosion occurring on his banks. This subsequently occurred shortly after and water since the building of the new bridge has been directed to his banks during high flow events. Ben Spini has spent considerable effort placing riprap and planting willows to stabilize the bank. He also caused the river to be placed against the left bank. Recently he has been having problems with beavers in the area cutting the willows that were planted for bank protection. (As a note of interest there are remains of several pilings along the roadway adjacent to the riprap which, according to Ben Spini, were part of a railroad line that followed the river on this side of the river towards North Bank Road.)

The EIR should also require as a mitigation measure that Any bridge improvements done to Highway 299 Bridge should include measures to correct the deflection of the river that occurs from the footings of the 1960 bridge. 14-6

RISING SUN
ENTERPRISES

TO: Sidnie Olson, Humboldt County Planning Dept. and the Humboldt County Board of Supervisors

FROM: Robert Brown RB, AICP, Rising Sun Enterprises

RE: Recirculated Draft PEIR on Mad River Gravel Removal
Comment Letter 3:

DATE: March 24, 1994

**Comments Regarding the Mad River,
Particularly That Portion Above the Hatchery Road Bridge**

Appendix F, Section II, "Channel Bed and Bank Erosion," pages 5 and 6 describes "degradation occurring at the Hatchery Road Bridge." Other places in the EIR refer to degradation of the streambed at the Emmerson and Guynup gravel bars.

The following provides additional information regarding the bridges at this location. Prior to 1956 there was a small wooden bridge crossing the North Fork of the Mad River. Even earlier, such as the 1940's, the County had an all-season wooden bridge built across the Mad River where it had previously flowed. In addition, there was an old wooden bridge crossing the North Fork of the Mad River. According to sources in the City of Blue Lake, the County bridge over the Mad River was shortly removed after it was built by high flows. Attempts to repair and/or rebuilt the bridge were also thwarted by following high flows. The County then began to build seasonal wooden bridges across the Mad River for the summer season. These were designed so that the river would flow over them during the winter but allow them to remain. However, these also were removed by high flow.

The wooden bridge crossing the north fork of the Mad River was replaced by a concrete bridge in 1956. You can note from photos (attached) that the new bridge has a much wider span than what was necessary previously for the North Fork Mad River. It was shortly after this bridge was built that the Mad River began to flow under this bridge (1962). Some reports indicate that the County was doing work in the riverbed up by the Mad River and that this caused the river to flow under the North Fork Bridge. Some even are of the opinion that this was intentional by the County. It is said that the County as tired of replacing and rebuilding their bridges across the Mad River and felt that it was easier to maintain the one bridge over the North Fork and that was the reason the bridge was built to handle both rivers.

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The Appendix further describes that the bridge survived the flood of December, 1964; however, it was removed by high water during 1981 which was an average type flow and nowhere near the 1964 flood. I would question statements that would suggest that overall degradation of the streambed would cause the bridge to collapse. It could be speculated that bedload deposited after the 1964 and 1972 floods as well as the demolition of Sweasey Dam changed bed elevation such that the bridge was not able to take the velocity of the flows through the reduced clearance under the bridge or that flows were directed at the pier at an angle that the bridge was not designed for.

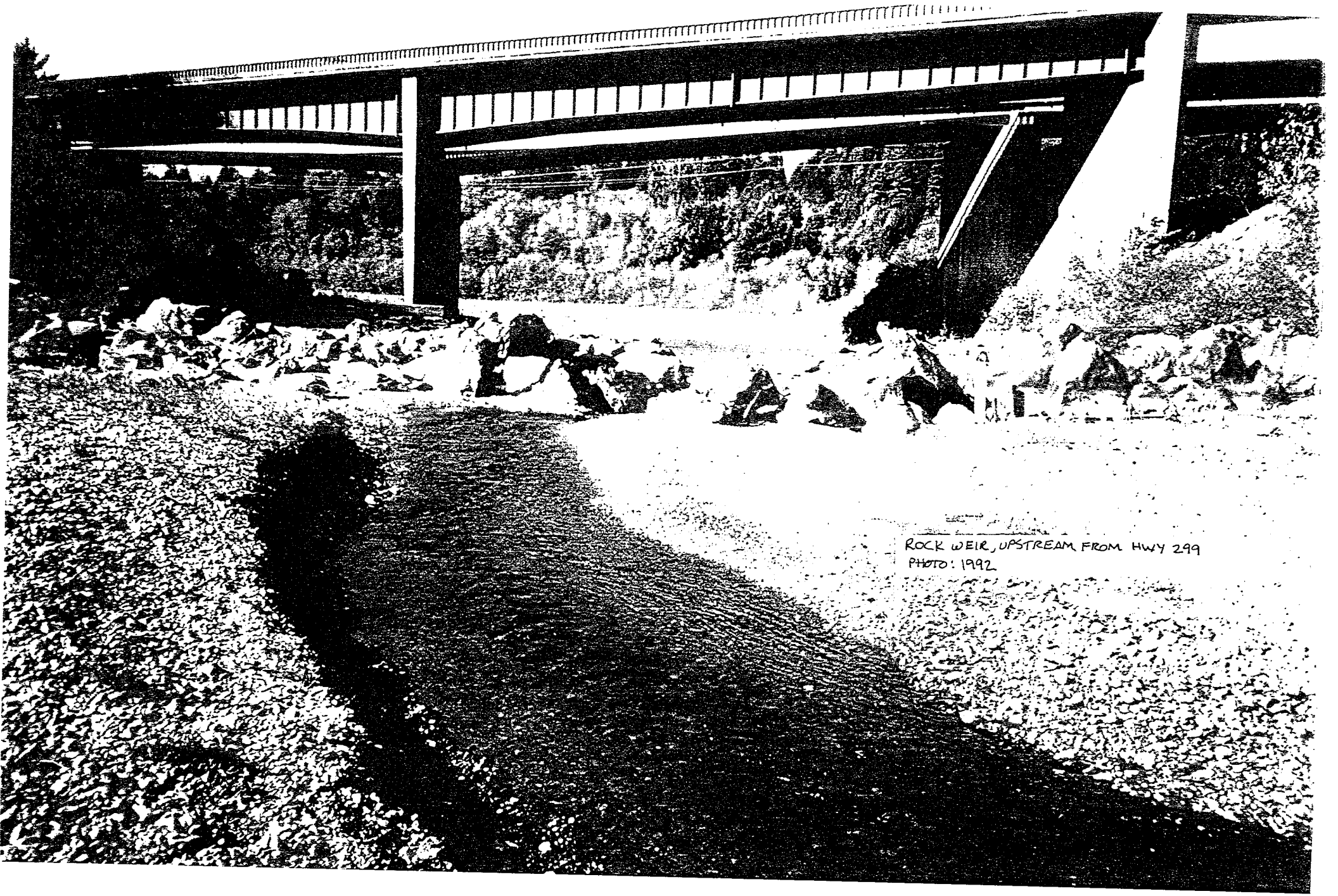
During between 1962 when the river migrated north and 1981 when the bridge collapsed, the EIR Appendix F indicates that over 5,000,000 cubic yards was extracted from the river in the reach near Blue Lake and this was twice as much as the amount of bedload transport that occurred past the Fish Hatchery Bridge and that this resulted in a mean bed lowering of about 3'. According to Vic Guynup who operates Mad River Sand and Gravel this is contrary to what is visibly discernable looking at the gentle slopes of adjacent lands. He has not seen any bed degradation since the early 1960's at this location. The information in the Appendix does not take into account the amount of recruited material that was washed away from Mr. Guynup's land (which resulted in converting what had been alfalfa fields to the large gravel area at the southwest portion of the upper gravel bar).

The estimates of bed degradation of 3' from extracting twice as much of the estimate of bedload transport depends on 5,000,000 cubic yards being extracted between 1962 and 1981 in this reach of the river. This amounts to an average of 250,000 cubic yards per year. The average bedload transport (utilizing the average 25,000 cubic yards per year) is equal to half of the extraction rate indicated in appendix information. Given the amount of bedload that would have been deposited in the 1964 and 1972 floods and as a result of the demolition of the Sweasey Dam as well as normal rainfall years, it is hard to imagine that bedload transport was this low during between 1962-1981. Discussions with gravel operators in this reach indicated that they experienced plentiful aggradation during those years.

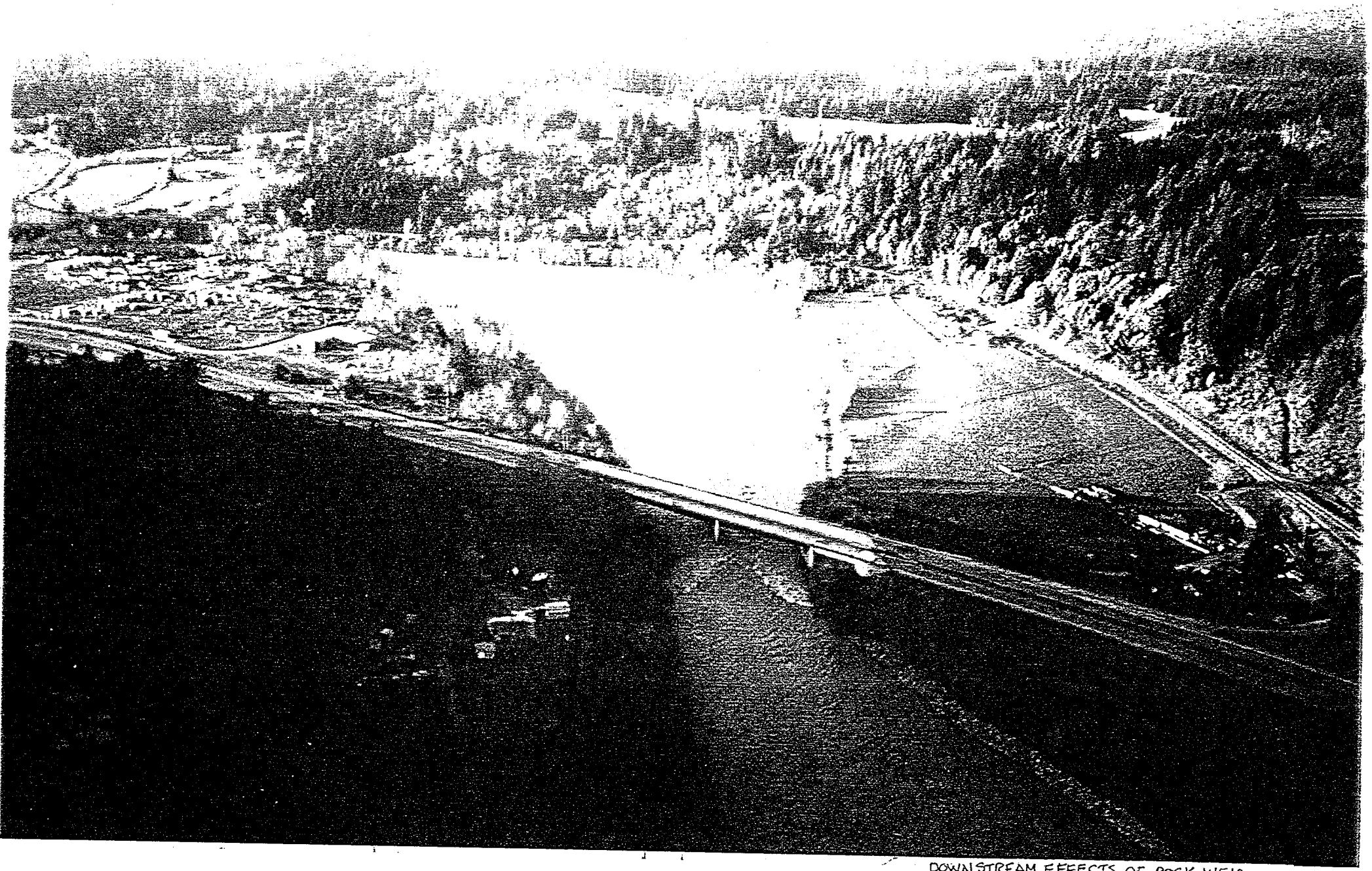
Mr. Guynup, who has owned his site since 1964, has managed the river to keep the river channelize to avoid the river eroding the northern bank of the river. The river at this site which parallels the majority of the Guynup Mad River Sand and Gravel site has an elevation the same as it was in 1964. The land as described in the above has been farmed for over 50 years. The elevation of the fields to the east adjacent to the river is within 3'-4' of bankfull discharge. There are trees growing in the areas that are proven bench marks that the river has not receded on the Guynup site. Mr. Guynup continues to express the concern for aggradation and the need to channel the river in this location to prevent erosion to the adjacent banks as well as provide enough depth in the river to allow passage of fish. He

continues to be interested in removing the buildup of the gravel bars directly opposite the areas of erosion to remove the pressure from the banks and to control the river from widening.

It is important that this reach of the river is managed not only to allow bedload materials to pass down to the lower reaches but also to reduce pressure of the river to erode the banks, promote the passage of fish in this section (where sports fishing pressure is high.) These concerns should be incorporated in the annual review and prescriptions for gravel removal methods and volume.

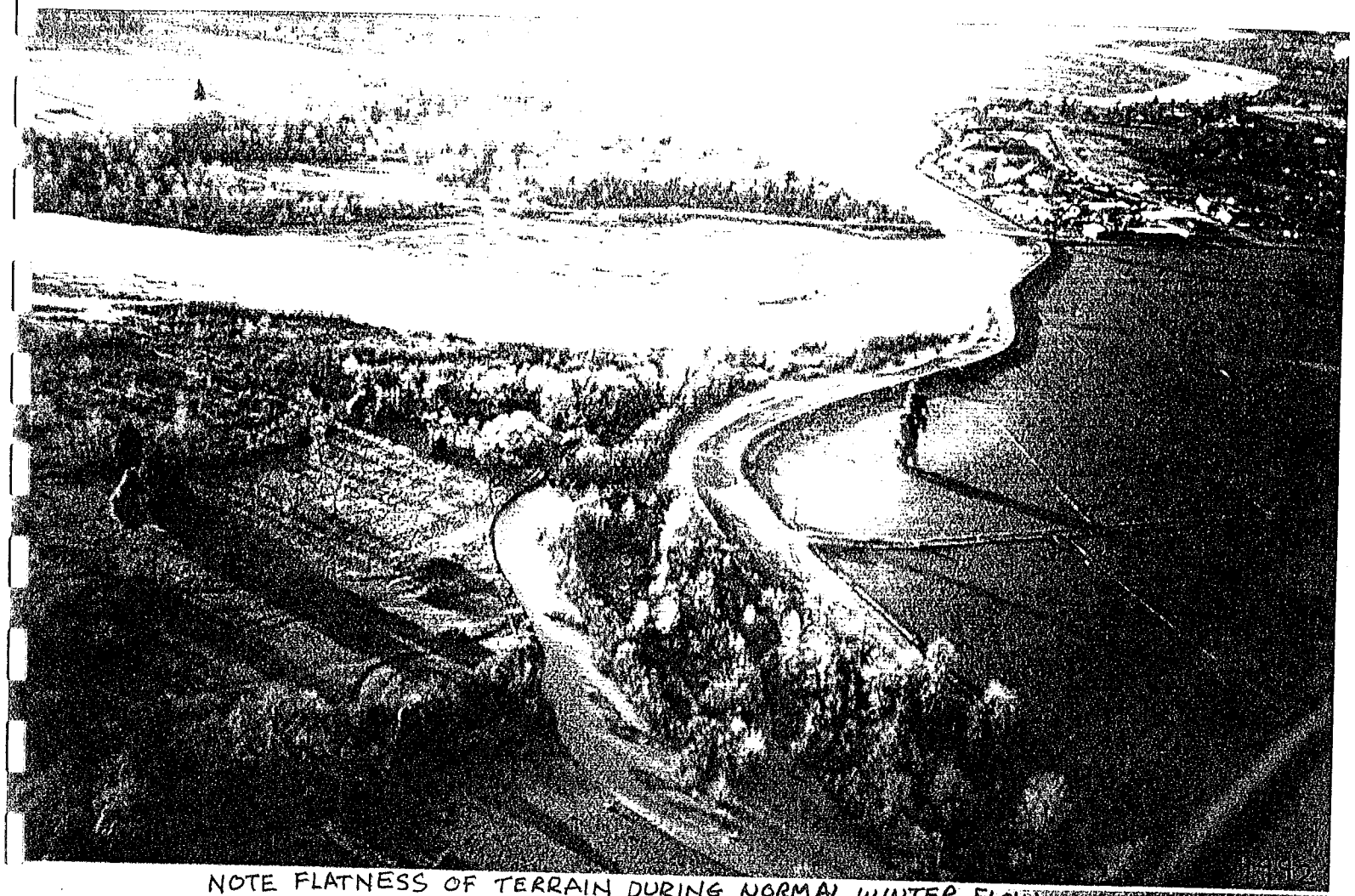


ROCK WEIR, UPSTREAM FROM HWY 299
PHOTO: 1992

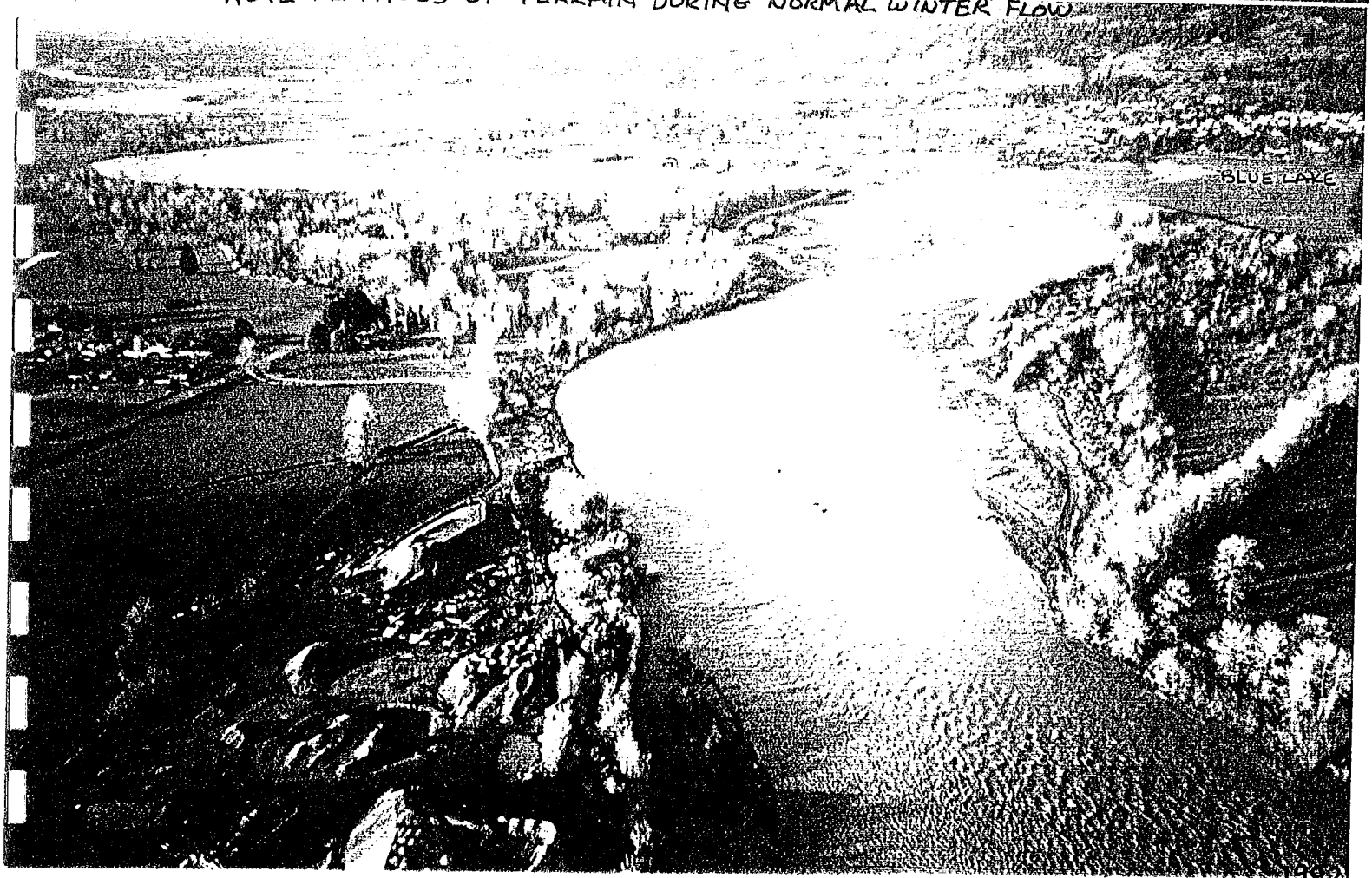


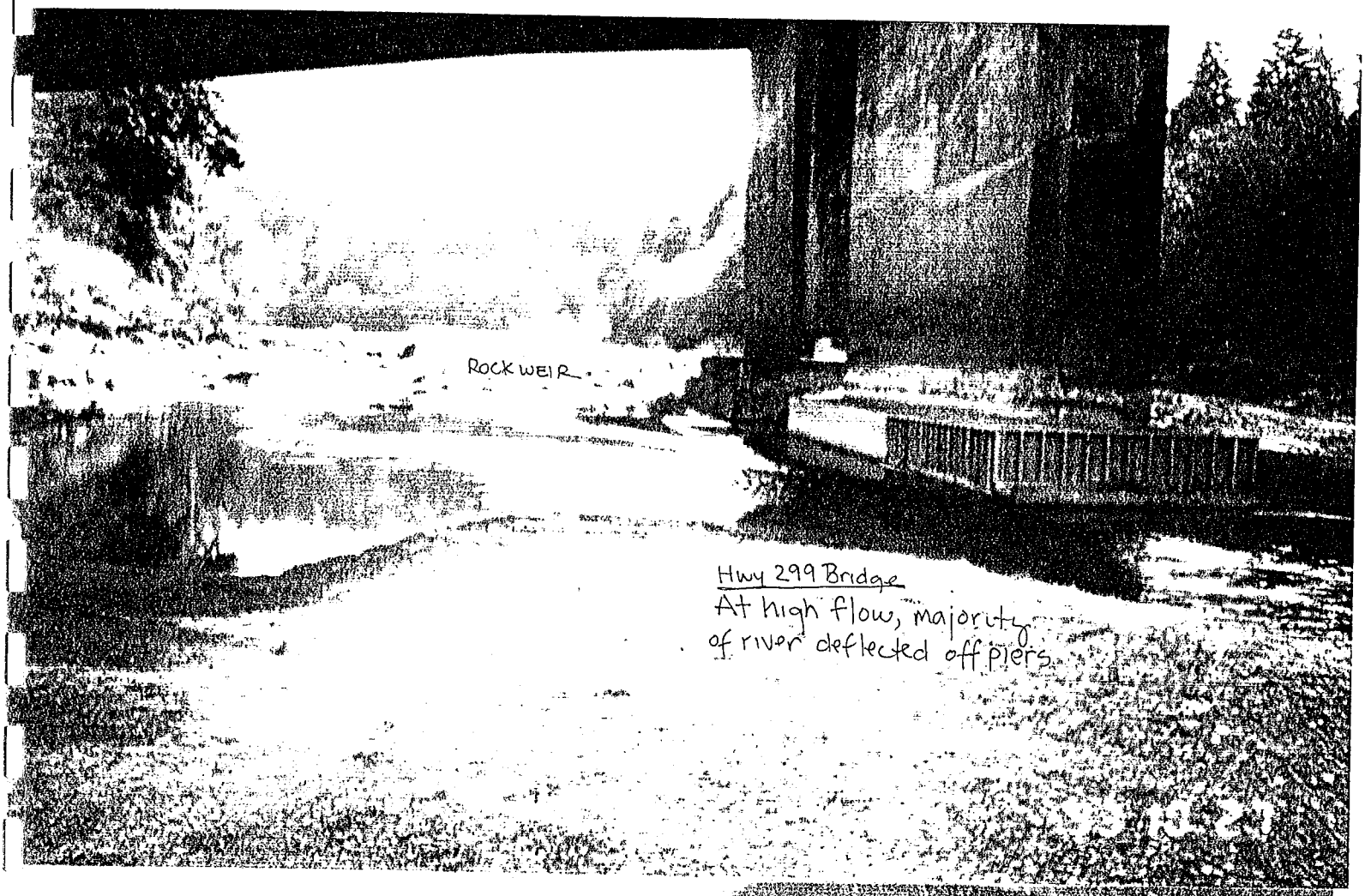
DOWNSTREAM EFFECTS OF ROCK WEIR
AND HWY 299 PIERS

1992

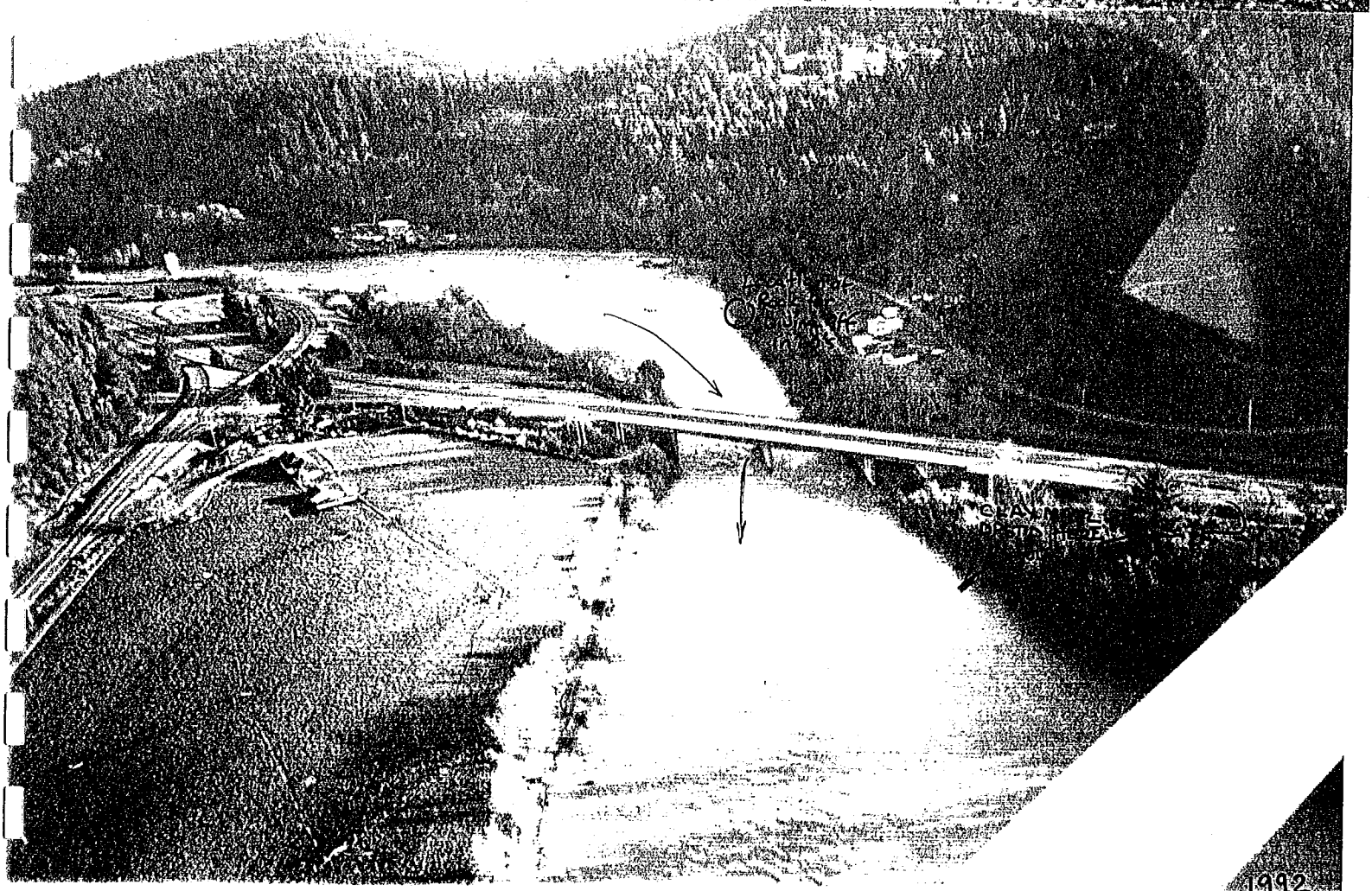


NOTE FLATNESS OF TERRAIN DURING NORMAL WINTER FLOW





Hwy 299 Bridge
At high flow, majority of river deflected off piers.



1992