Section 9.0

Public Comments: June 19, 2003 Public Meeting

Public comments and letters August 2001-August 2003

Comments/Questions
June 19, 2003 Public Meeting
Leavenworth High School

Cathy Mulhall's group:

1. Is this study driven by salmon/fish recovery issues?
2. I question the overall purpose for the study. The purpose has not been made clear. Is the storage of water for current needs or future needs?
3. Has the aesthetic impacts of putting in the Dam been overlooked?
4. The current river system within this water system is healthy, why look at this lake and not others? What are the potential river system impacts?
5. Who benefits from this project? Who needs the water?
6. I am concerned about the possible increase in water temperatures. Has this impact been addressed?
7. Per the consultants, both models meet current and future water needs, but what % of storage is actually needed? There are big differences between the capacities, how could both meet the needs?
8. Why not just build a pipeline from the Columbia River?
9. What other alternatives have been looked at to meet the water needs? Have similar studies been done to look at other alternatives?
10. Has water conservation been looked at as an alternative?
11. In our most recent drought year the only impact to salmon was the current fish ladder in Leavenworth. What is the impact of adding more impediments for the fish?
12. Was algae and other possible bacteria addressed in the study?
13. What amount of cfs is required for the estimated population growth of 26,000? Are the cfs outlined in this study enough to meet the needs?
14. What will happen to this document once it reaches Olympia? Who do we call in Olympia to be heard?
15. How nay more studies before implementation?
16. What is the timeframe to find out if this thing is going forward or not? How long will we have to live in fear that this may move ahead?
17. What is the likely hood of this study/project going away altogether?

Comments:

Water Needs:

1. I don't think that the water needs(who needs the water) was clearly spelled out for us.
2. The Water Needs Assessment was not specific enough.

Technical Feasibility:

1. The Dam type they selected will work.

Legal Feasibility:

1. Better have a lot of cash for litigation.
2. I don't think that this project should get a permit.

3. Can State Parks refuse to give an easement for this property?

Environmental Impacts:

1. What are the costs to the environment from an aesthetic point of view? The beauty of the lake will be lost.
2. The consultant states that no adverse affects would come from the 1870.3 level, I don't think that that is true!
3. Erosion will be severe.
4. I don't like the loss of bird habitat.
5. This project won't truly aid salmon.
6. The "plus side" of having the boulders deeper in the water therefore making boating safer is a crock. The rock currently on shore will now be below the water line.
7. Bull Trout was not talked about early in the process. They were largely ignored but are now part of the final.
8. This fish thing has been stretched to be a convenient excuse to get this project looked at. The fish will be damaged more than helped!
9. Will 100 cfs for 2 month really help anyone? I think only the irrigators will benefit.
10. We need hard facts.
11. There will be significant affects on the vegetation.
12. I seriously doubt the conclusion that 1870.3 will not affect erosion or life in and around the lake.

Socioeconomic Impacts:

1. I purchased my property for recreation use, specifically for the beach. Our grand children come to play and stay. I don't want to be selfish, but I don't know who will benefit? You have seen the faces of the Land owners who will lose so much, much more than just property. But, we have not seen the faces of those who want this project, who benefits from our loss?
2. We won't be compensated for loss of our beach.
3. What about the economic impact on our community. I don't think that people will want to come here anymore.
4. Our place was purchased for recreation. We've paid our taxes. We deserve to be heard.
5. The study suggests that we won't be adequately compensated.
6. I don't think the true facts have been given.
7. There will be impacts on the State Parks ability to provide services. And, how many kids will want to go to camp with no beach? The YMCA and the Campfire Girls need to be heard as well.
8. I am worried about water damage to my foundation.
9. I disagree with the minimization of the recreational impacts. For boats, hikers and campers, etc.

Jennifer Jerabek's group:

Water Needs:

1. Why is fish the priority? What about agricultural and farming needs?
2. " It is difficult to quantify that 1870 will have enough benefit to make the project worthwhile" (As a biological benefit to fish) Dudley Riser.
3. Financial impact, quantify loss of access/recreation to beach for landowners- ¼ of the year same for fish and for people.
4. If you lost access to ¼ of your pool, would you build it if you couldn't use it in the summer?
5. What benefit is Dam to future population?
6. Why are water rights being issued if there isn't enough water?
7. Is one goal of project to provide water for existing irrigation structures?

Environmental Impacts:

1. Trees that can't tolerate water will die when lake level rises. Ponderosa Pine/Fir, there would be a round ring of dead trees around the lake.
2. Quantify impact to homeowners of increased erosion, downed trees, turbidity from winds, and high water levels. Also turbidity impact of fish.
3. What about increase in algae growth and milfoil due to slowing of water? Less of a buffer area between fertilized lawns and lake-increase eutrophication and weed growth.
4. Quantify impact of water based recreation and fishery.
5. Quantify impacts on mosquito breeding season due to change in lake levels/West Nile Virus concern.
6. Consideration of heavy boat use during peak recreation-erosion of bank and shore.
7. Quantify financial loss of beach property.

Technical Feasibility:

1. Concern about choice of material (rubber) for dam. Inappropriate for this type of use. Concrete/Rock better for safety concerns.
2. Dam not impervious to gunfire/vandalism, and trees could puncture rubber material.
3. Attractive nuisance/public access issues at proposed site.
4. Consider alternative sites vs. flooding lake.
5. Has dredging lake been considered? So you create a lake vs. flooding an existing lake.

Legal Feasibility:

1. Can we sue (for property loss, docks, etc.?)
2. Can't use boat hoist/stationary docks when lake level is up.
3. Will existing boat docks be grandfathered in and who will pay to replace them?
4. 1870 proposal mitigation costs will not be minor as stated in study.
5. Does mitigation include legal costs?

6. High end costs identified in study to replace docks were too low.
7. In 2001, $15,000 for 60 feet with three pilings plus $1000 in permits.
8. Negative impacts are not quantified in study-have been minimized in report.
9. How can recommendation be made with out cost benefit analysis?

SocioEconomic Feasibility:

1. How can recommendation be made with out cost benefit analysis?
2. Dam to accommodate for future population growth will require cultural change (plants, landscapes for arid lands, zero lawns).
3. Why put boat launch below dam?
4. Consider dam elsewhere vs. flood existing mountain lake that is currently functioning well for fish habitat. Create a dam and reservoir elsewhere.
6. Wind is west to east, not from north.

Jeanette's Group:

Water Needs:

1. Did they figure the agricultural shrinkage when they calculated water use?
2. Where and to who, and why is water exported, distributed, or diverted?
3. DOE water use require…….would this change this requirement related to instream flows..ie. change in allowances for instream flows?
4. What is the difference between agicultural use and residential use related to quantity/amount?
5. Shortfall of 50,000 af…….at higher level there is only 20% improvement. On a scale of 1-10, what is the value of the improvement relative to the impact of the project? (loss of use, environmental, erosion, etc.)
6. Stated that the benefit to instream flows re: fish passage = low flow years. How often (%) are there low flow years ie. 1/10 years 1/50 years?
7. What agricultural areas would the water flow to?
8. What if the lake gets drawn down below average levels…can this happen? What if what we have stored isn't adequate…..will you pull more water?
9. 20% make up of shortfall of instream flow does not equal the negative impact.
10. We have estimated watershed….we are making conclusions before we gathered the evidence/data. Specifically the "watershed planning study."

Technical Feasibility:

1. Is the dam going to influence the Nason Creek Flows?
2. Will the reservoir classification on Lake Wenatchee require any special uses of the lake based on reservoir classification?
3. Do you have a copy of tax parcels that have been recorded from the technical feasibility study? Have all the parcels been recorded? Can property owners get copies?
4. Would any additional structures at the outlet of the lake increase potential winter flooding?
5. Will there be a study of potential erosion effects at higher levels?

6. How are minimum instream flows being determined by DOE? How was the minimum set?
7. If the permit lapsed, how can they go ahead with the project? If permit process is reestablished, how long will it take?
8. In terms of regulating flows, how will this be accomplished? Will a person be monitoring/adjusting air in dam? Air compressor? Noise?
9. At 1870 the lake would be 2 feet higher in August and 1 foot higher in September. What about July?
11. Are there only 2 levels if a dam is proposed? What about other levels?

SocioEconomic Feasibility:

1. How was the 25% value arrived at? Those months are the "use months".
2. How come there is no SE impact at the 1870 foot level since the beach is gone?
3. What is the SE impact of those below the lake? Was an impact study completed? If not, is it being considered?
4. In the presentation there was a list of existing uses…why was the use of beach missing?
5. SE effect to properties not on the water…related to those who come to use the beach…what is the SE impact?
6. will there be property compensation should a flood occur because of a failure to operate the dam appropriately?
7. Patterns of change in property values…why will there be no additional study?
8. I question the total cost of the project in relation to assessed land value…..how can this cost be determined when property value continues to increase?
9. How could compensation be calculated is structures such as docks and boat houses need to be moved or raised?
10. Are permits going to be required for this? What is the process for this?

General Comments:

1. The months July-October (based on the information from a 30 year resident) receive 98% of the use….not used in other months at all. Use of beaches in other times cannot be equated to the 25% value.
2. The study ignored the usage of the property owners and public of all the beach front of the lake….It's not just the private beach use. Public use is also a value from June – October.
3. The model they use does not place weight on beaches to specific properties. Equating the beach use to the entire property value must be at 100% ie. The property without the beach has no value…therefore the weighted value is 300-500%
4. I would like to see property values quantified, not averages, etc. Are we talking about real or assessed values? Are we going to evaluate real value for North and South Shore at a real market gross impact?

Environmental Impacts:

1. Why is the temperature change listed as a benefit?
2. What about the wetlands? Where is the information?
3. What is the effect on water fowl, other creatures? Mosquitos?
4. Are fish ladders totally effective for fish passage?
5. Will there be a special permitting process for modification of shoreline if lake is raised…ie. To create beaches/bulk heads at the lower level?
6. Describe how increased flow coming from lake outlet willl reduce temps in the wenatchee river?
7. Why are we putting a dam on one of the last natural lakes in Washington with year round access?
8. Who is actually after the water? City of wenatchee? Others? Certainly it isn't fisheries.
9. Describe in detail how wetlands would be replaced (spawning and rearing beds).
10. Is there a full environment impact report/study if the dam actually gets proposed?
11. I feel the environmental statement was skewed….promoted benefits.

Rich McBride's Group:

Socioeconomic Impacts:

1. Even in the lowest years few orchard acres were affected.
2. Orchards are acutally being removed.
3. Dollar value of shoreline calculation: uncertain of model; may be unreliable.
4. Assumptions of value may be flawed.
5. Slope relationships between the south shore and north shore vary greatly.
6. ¼ year calculation unrealistic, use annual basis.
7. Question the population projections.
8. What is the value of destroying the last natural lake in the state?

Environmental Impacts:

1. What will it really take to study the wetlands at lake wenatchee?
2. Emphasis has been on fish-what about other wildlife mammals?
3. Mosquito issues-likely to increase.
4. Fish biologist indicates that this project is not essential to fish, it might be beneficial however.
5. The aquatic plants-likely concern with milfoil.
6. Erosion-higher water level will increase erosion regardless of wind strength.
7. Time that the dam is in operation coincides with highest wind.
8. Wetlands, plants, and foilage near shore will be adversely affected.
9. What is the impact on the "fault line" at south shore with higher level?
10. The current sand beaches severely impacted-many current beaches will become rocks.
11. Who really benefits from this project?

12. No actual salmon run numbers studied-(biologists: salmon runs were okay anyway even in drought years).
13. Even in drought years, irrigation wasn't impacted.

Legal feasibility:

1. "United States Forest Service made statement that us government owns riverbed"
2. Will the "shoreline acquisition" be a process of condemnation or owner consent?

Technical feasibility:

1. Uncertainty of bull trout using fish ladders.
2. What is the life of the bladder?
3. We can build anything in this age-bigger question is, "should it be built?"

Water needs:

1. Population projections in question-study looked only at lake wenatchee, should look beyond.

General comments:

1. The project team did great job.
2. How many years would it take for population to use storage?

Cindy duncan's group:

Water needs:

1. Is there truly a water need?
2. Why is the state mandated flow at plain higher than the natural flow?
3. Is this a stop gap for 25 years? What about the next 50 years?
4. Why did they use data from the 1940's rather than current data? And, to obtain current, relevant, on site data?
5. Is there evidence that Lake Wenatchee causes endangered species-when Lake Wenatchee is reported to have best natural run in the state?
6. Will raising the lake level raise water temperature? Increase water stagnation? Algae? (killing frye)
7. Over a 12-month cycle down stream flow is not a benefit 8 months.

Environmental Impacts:

1. How will they help people who live on land adjacent to streams, culverts, and mosquitos?
2. Will algae increase by the flooding of tributaries?
3. Will beach erosion cause damage to water quality, property usage and property value?
4. Will there be more floating debris created by high water?

5. Will old drain fields be flooded? Impacts?
6. What is the effect on homeowners who draw their drinking water from the lake? (Septic Flooding)
7. Will the parasites in the lake increase? (Health/Medical Problems)
8. What would happen if there was a 500 year flood? Would the dam hold? What if it did or didn't? The debris?
9. Why are the highest fish runs occurring during draught or low flow years?

SocioEconomic Impacts:

1. I have a steel piling clock with rails long side the dock-my launching floats raise and lower with the water. How will this be taken care of?
2. Will wave action cause water to go over my dock?
3. Do submerged docks create a navigational hazard?
4. Will the state government agencies bring condemnation or eminent domain proceedings against each property owner?
5. Does the State, County, and other local governments place fish and mosquitos ahead of taxpayers?
6. Who is going to pay for this? How?
7. How will they compensate for loss of value of property fairly?
8. What law gives the project promoters the right to proceed?
9. Where does the project go from here? Does one agency pick it up as a promoter?
10. Would the attorney general office represent the state/county in any proceedngs pertaining to property?
11. Who would pay litigation costs?

General Comments:

1. The draft report ignores the impact on bull trout-this suggests bias in the report preparation.
2. Why was the designated consultant given the right to use dated information to arrive at their conclusion?
3. Who is going to benefit ultimately if the dam goes in? Who is it for?
4. This table is emphatically against the project.

Millie's group:

Water needs:

1. Is the primary benefit really domestic and commerical rather than continuous capacity for fish?
2. Is the irrigation benefit for landscape not agriculture?
3. Will holding the water increase water temperature and pose a health hazard for those who depend on the lake for drinking water?

4. This is not needed to benefit fish, we already have the healthiest natural systems in the state for fish.
5. The limited time available for the public presentation did not allow for clarificaiton of the need for the project and its benefits.

Technical Feasibility:

1. The prototype model of a "rubber" dam is in a snoqualmie river waterfall area and not a fish habitat area.
2. Ongoing operation, maintenance, and security costs are not addressed.
3. How proven is the effectiveness of the rubber dam technology?
4. The trend appears to be to take out dams, why are we considering putting one in?

Legal Feasibility:

1. I would anticipate numerous law suits since we have a natural system that already meets our needs.
2. Were tribes suing for water rights in the Wenatchee Basin?
3. There are some second-class shorelines that would require purchasing an easement. In the event the owner would not sell would they impose eminent domain?

Environmental Impact:

1. Will we increase stagnant water and increase risk of contamination, mosquitos, and west nile virus, etc.?
2. What would be increased damage to shoreline, docks, boat houses, etc?
3. What alteration would occur to wetlands, vegetation, wildlife?
4. Were trees without other surrounding vegetation counted as "vegetation" in the vegetation line?
5. What is the risk of increased growth of algae?
6. The area is aleady prone to landslides. Water and undercutting slope would lead to further erosion.
7. Will old septic tanks contaminate the lake?
8. This would severely harm salmon runs in the system, the presentation was not honest regarding this issue.

SocioEcononomic Impact:

1. This would have a negative impact on property value on the lake.
2. State Park is popular and has a positive impact on upper valley, this would diminish enjoyment of the park.
3. How will we pay for it?
4. This project being under consideration impacts the ability to buy and sell property while the outcome is unknown.

5. In the meantime, property assessments rise (assuming high values) and some tax options may be lost by 2004 (eg. Capital gains benefits)
6. People are stressed because a lot of people said no to this 2 years ago and I feel stress that this will harm a treasured lake.
7. What would need to be done to prevent people from floating over the dam and what would the aesthetic impact be?

General Comments:

1. I see no benefit to the people, the environment, or the fish to putting in a dam.
2. I am opposed to the project.
3. Why must man always try to have an impact on nature?
4. The economic cost of easement acquisition, installation, maintenance, etc. exceeds the benefit.
5. A moratorium on growth should be considered as an alternative to impact on the natural system.
6. It seems that the marketability of my property around the lake has to suffer to improve the marketability of orchards selling out, etc. down river.
7. We should celebrate the wild natural system we have, not destroy it.

Spence Taylor's Group:

Water Needs:

1. How reliable is the criteria used?
2. I am not for anything that increases growth in the valley.

SocioEconomic Impacts:

1. The intensified use of the property during short summer season does not justify prorating property loss over 12 months. Therefore: the actual loss should be 70-90%, maybe even 100%, rather than 25%.
2. Our family cabin is only used during summer months. This would impact us significantly.
3. What is the current level today?
4. Would it be possible to have elevation marker at State Park?
5. With the financial condition of our state, who is going to pay for this?
6. Who has the authority to make this decision? When will they?
7. If water is raised and land owners lose their beaches…then they will have to go and pay for beach use at the State Park.
8. Need a study on the number of septic systems affected at 1870' level.
9. What will the impact on the mosquito population be? How about West Nile Virus?
10. What is the plan to determine loss of value?

Environmental Impacts:

1. How much has been done to study impact of tributaries?
2. Would there be any reduction of stream flow when the dam is deflated? Channel restriction of dam? 3 highest floods have occurred during November-December.
3. How will this prolonged period of high water affect vegetation in delta area?

Legal Feasibility:

1. If this goes through, what is going to be the legal process to acquire property along the shoreline? Ie. Condemnation or negotiation?
2. Is there going to be a difference between primary and secondary shoreline acquisition?
3. This is totally stupid. A crazy idea.

Technical Feasibility:

1. How do augmented streamflows affect temperature? Is it significant? Is it significant for recreation (lake and river)?

General Comments:

1. Was there any cost estimate for other offsite storage?
2. Why not study other storage options? (that don't affect so many people)
3. Does this type of dam have a solid proven record?
4. What is the purpose of this?
5. Fish have been doing well for thousands of years, why change it?

Mary Jo Sanborn's Group:

Water Needs:

1. If orchard industry is in decline, what does that do to orchard water demand and population growth?
2. What is crop use by month?
3. Is residential use higher or lower than agiculture?
4. What are the tourism impacts (rafting, etc.) to different flow timing?

Technical Feasibility:

1. What is acceptable high water mark for each property owner?
2. Will new high water mark be accepted by regulatory agencies?
3. What rate will storage be captured?
4. Is easement still valid in deeds because was originally stipulated for hydro power?

5. If Dam is built, prefer lower elevation because of lower cost, fewer problems regarding inundation.
6. There may be alternatives elsewhere in Basin that no one considered.

Legal Feasibility:

1. What recourse will landowners have for increased impacts? (ie. flooding structures more frequently)
2. County needs to have a way to devalue property if beach is lost.
3. Buyer survey not adequate, needs to compare before and after, case by case evaluation. There are very different impacts to different properties.
4. Compensation should not be based on square footage lost, but on percent of beach lost.

Environmental Impacts:

1. Will Dam be fish friendly?
2. What does storage of water do to water quality, especially for people who pump out of the lake?
3. Continuous flushing of lake keeps water quality good.
4. Substantial damage to south side of lake (wind).
5. Building a dam to increase flows to help salmon is a red herring. Better justification for project needed.
6. Seems odd to be adding a dam in today's environmental/political climate.
7. Water quality will decrease with a dam.
8. Damage to the wetlands will be significant (No WSE fluctuation).

SocioEconomic Impacts:

1. Does anyone on the lake win with this project?
2. What are the impacts to the Chelan County tax base?

General Comments:

-----Original Message-----
From: Jeffmonda@aol.com [mailto:Jeffmonda@aol.com]
Sent: Saturday, July 28, 2001 7:59 AM
To: Mike Kaputa
Subject: Lake Wenatchee

Dear Mr. Kaputa,
My family has been a property owner on the shores of Lake Wenatchee since 1951. I am also an avid outdoorsman. As a result of both, I have some serious questions about the "water storage" study of the Lake Wenatchee system.

There have been three reasons provided for the need for this study; irrigation, flooding, and fish.

Could you please provide answers to the following questions.

1. Has the irrigation water taken from the Wenatchee river ever been turned off due to drought? If it has, what year?

2. As I understand, the flooding of the Wenatchee River does not cause property problem. There have been floods on the lake itself. If a dam is put in that raises the overall level of the lake, what will happen when those same type of spring floods hit. I realize that dams can be used to regulate water flow during flood seasons, but it cannot lover the lake any lower that low water mark before a dam is put in place.

3. Because the Wenatchee basis is home to several endangered species, it seems that placing a dam in the pathway is against common sense. The old Tumwater dam was never felt to be a problem, but it was this year. Now we are talking about placing another dam in the system. Is there any study that has ever shown that placing a dam in a river can help endangered fish?

4. Who is backing this idea? Because there is no money in irrigation, flood control or putting dams in rivers for "fish protection," I am suspicious that there is something that has not been stated. That something I suspect is hydroelectric power. Has there been active interest in hydroelectric power for this dam by any parties that may profit financially from electrical production?

I am not an environmentalist, as I do believe that mankind must use the environment. As you can tell by the questions presented, I do have some serious concerns about this project. As I see it, the property owners of the lake will not like it as they will loose all there beaches and it will not provide protection from the big floods. The irrigators will not see benifit as, unless I am wrong, there is not an increased need for irrigation from the Wenatchee River. The salmon will not benefit from the dam.

8/28/01

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August 23, 2001

BROWN AND CALDWELL
Environmental Engineering & Consulting

Michael Kaputa, Director
Chelan County Watershed Program
411 Washington Street
Wenatchee, WA 98801

91219.012

Subject: An Alternative to Lake Wenatchee Storage

Dear Mike:

In response to the proposed study to investigate the feasibility of impounding water at the outlet of Lake Wenatchee, Brown and Caldwell suggests an alternative storage proposal for the WRIA 45 Planning Unit to consider. The alternative storage would use groundwater storage in the watershed aquifers. Currently, we are studying the cumulative impact of water right transfers on the timing of irrigation groundwater return flows to the tributaries and mainstem of the upper Yakima River. We are under contract with the City of Cle Elum and Kittitas County to conduct this study as part of preparing an EIS for the proposed Trendwest resort development near Cle Elum. We hypothesize that irrigation return flow via stored groundwater significantly regulates river flow during the fall spawning period for Chinook salmon. The regulation is similar to that of an irrigation reservoir that stores high flows during the wet season and releases them in the dry season. The return flow regulation differs from the reservoir regulation by delaying the storage and release by several months. By understanding the irrigation groundwater return flow processes that results in the current flow timing in the Wentachee River watershed, we will be able to estimate the amount of flow regulation attainable by groundwater storage.

Brown and Caldwell suggests that the groundwater return flow and storage processes be investigated to determine two key components of the aquifer storage alternative for WRIA 45. First, the investigation would provide a range of flow variability in which mainstem flows be managed using the groundwater return flow processes to enhance fish flows during the late summer spawning season. Second, the investigation would assess the potential for recharging the excess surface water using wells and/or basins and recovering the groundwater using wells during low flow periods. The process of storing excess surface water supplies in groundwater aquifers, or aquifer storage and recovery (ASR) is being successfully all throughout the western United States. ASR could attain additional enhancement of flow to the enhancement potential of irrigation groundwater return flow management.

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Mike Kaputa
August 23, 2001
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Very truly yours,

BROWN AND CALDWELL

Tom Martin, P.E.
Principal Engineer

thm

cc: Jim Oliver, R.G. (Brown and Caldwell)

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From: BHoaglan@aol.com
Sent: Monday, September 03, 2001 6:24 PM
To: Mike Kaputa
Subject: Dam at Lake Wenatchee

Hi Mike,
My name is Bill Hoaglan and I live on the Wenatchee River about 4 miles below Plain in an area called Meacham Flats. During the record setting floods in the winters of 1990 and 1995 our Meacham Flats suffered some real damage, In fact the Wenatchee River nearly changed coarse leaving Meacham Flats as an island, we installed a Band-Aid repair so we could get back in to our homes, but I am afraid one more Grand Daddy flood will do us in.
This study that you are working on, would it or could it be beneficial in flood control, or could it take some of the sting out of a major flood? Looking at the USGS archives on the Plain gage station, I see that traditionaly all these major floods occur late November through December undoubtly due to a winter warm-up and rain on snow. I am aware of such a control dam on the Yakima at Lake Ketchless which seamed to solve their problem.
Thank you for looking into this from a flood control aspect. Bill Hoaglan, (509) 763-3748

From: Chuck Whittlesey [chuckwhittlesey@msn.com]
Sent: Thursday, September 06, 2001 9:52 AM
To: Mike Kaputa
Subject: Re: Lake Wenatchee Water Storage Study
Thanks for the note Mike. I'm happy this will provide more room. I didn't know where the school is since they are pretty far from most of us who are affected. My concern is that there are so very many folks impacted by this who live elsewhere (outside the immediate watershed and greater NCW area) who are unfamiliar with the area outside their cabin/property. These folks are difficult to get to a meeting as it is. If things change that make it seem more difficult then they are less likely to attend (human nature). I am wondering why this is not in the Lake Wenatchee area and not on a weekend rather than at night in an area not affected. It seems as though this gets more difficult rather than easy. I'm sure you have considered what is easiest for the residents of the entire watershed rather than what is most simple for those who are considering this action.

By the way, did you see the article regarding fish and water flows in the Wenatchee World two days ago? It commented on the current near record low water flow in the Wenatchee River; a once in a lifetime event. And the fisheries guy who commented on how it affected the Chinook salmon and other fish said it was not a problem for them! Pretty telling if any dam is put in to provide better flow for fish. Lowest flow in history, no problem for fish, first sockeye season in a long time, record catches, record return of salmon in the river, healthiest watershed in a long time. Do we need to mess with what seems to be working? Is this the best use of money? Also there is the new endangered plant in the confluence of the White and Little Wenatchee. I hear that flooding the peninsula would kill the plant. I can't remember what the name of it is but I do know that there is an organization that has scattered many thousands of seeds of that plant in the area just to ensure it is growing in the area.

Have you determined that any anticipated "flow regulation" that would result from a dam would certainly affect those property and home owners on the upper portion of the Wenatchee River just above Tumwater Canyon? Have all of those folks and all the folks

some distance back from the river been notified of this impending action and the meeting? I have spoken with some of them and they don't know about this and they are concerned.

What about the Washington State Park system, US Forest Service, National Park Service who are all land owners and stake holders around the lake and river as well? Have they all been notified? Are there any Native American interests in the watershed? What about all the other regulating and other impacted and impacting agencies such as NMFS, WDFW, Corps of Engineers, etc.?

Will consideration of proposals from private consulting firms include firms who have a current or recent contracts with the county or your organization, be accepted? There is a built in perception of bias and/or conflict of interest if that is the case. How do you intend to overcome the perception that any company working for you will be biased toward supporting what you want rather than providing true science from which unbiased decisions can be made? If any company who has worked for you recently is seen as having a "lock" on the contract because of incumbency then it may create a perception that will negate the findings and in the end just have the effect of squandering the money. Close scrutiny should be paid here to ensure the best neutral image is maintained.

Thanks for the note regarding the latest change in the meeting site. I still haven't seen it in my mail box. I'm concerned that many folks get their mail the traditional way and they will be getting a change (no matter how slight) shortly before the meeting and this will have a chilling effect on whether they will attend. I'm also concerned that not everyone in the watershed has got notice yet. It can be argued that placing a dam in one of the countries remaining few healthy watersheds is a high profile issue. Such an issue will affect EVERYONE in the whole watershed and beyond. Is the public properly notified? If not, then any effort to move forward is rendered flawed and any money spent is squandered.

I look forward to meeting you soon.

Chuck Whittlesey

From: Norland [lwnw@home.com]
Sent: Friday, September 07, 2001 7:18 PM
To: Mike Kaputa
Subject: water storage study at lk wenatchee
mike,

Is this a done deal and we property owners are going to lose low beach waterfront? Is It really is strange that you are proposing to build a dam at the foot of lk wenatchee. This is a true alpine lake and how could you ruin the natural beauty of this area with another flood control device. If you are worried about flood control, DAM the white and little wenatchee rivers.

From: Jeff Thiel [thiel@bondhub.com]
Sent: Saturday, September 08, 2001 7:47 PM
To: Mike Kaputa
Subject: Water Storage Study emailing lists
I would like to be put on the email list to receive updates about the Water Storage Study on Lake Wenatchee. I own a home at the lake.

I have several questions about a dam on the lake:
1. who will receive the water? specifically, what are the names of the individual farmers or utility districts that would take more water out of the river downstream than they are taking today?
2. who will pay for the costs of the dam?
3. who will compensate property owners on the lake for loss of waterfront property?
4. what impact will the dam have on salmon spawning habitat? will it flood the spawning beds just below the outlet to the lake?

I would much prefer water conservation programs than see one of the only large natural alpine lakes in the state dammed.

Jeff Thiel
Director and Co-founder, BondHub Inc.
(206) 832-2663 x130
www.bondhub.com
jeff.thiel@bondhub.com

September 12, 2001

Chelan County Watershed Program
411 Washington Street
Wenatchee, WA. 98801

To Lake Wenatchee Watershed Project Team.

My name is Sandy Butler and I live at 16060 Cedar Brae Road, Lake Wenatchee (formerly known as the "South Shore Road"). I write this letter to express my opposition to any damming of Lake Wenatchee for water storage or any other purpose. My opposition stems from three primary concerns: environmental, aesthetic, and financial impacts.

Environmental Impact (most important)
The continued manipulation of the environment by human beings for our own needs must not continue. When many river dams are being re-evaluated and retrofitted to allow a more natural flow of life, how can we consider adding another dam? The planet as a living organism is telling us in a multitude of ways it is suffering. While we will never be able to destroy it completely, we may damage it so severely that it will no longer sustain many species including our own.

In the mailer I received entitled, Legislature Approves Water Storage Study Funds, there appeared a statement in the second paragraph which sums up my concern for areas such as Lake Wenatchee. The statement reads, "*. . . in this over allocated basin.*" How did this area become over allocated in the first place? Why do we think this dam will solve the problem of over allocation in the future? Why not think in terms of stopping the over use of this area and it's resources? Such as looking at controlled use of the area's current water supply and stopping any new growth in water usage.

This dam may solve the problems which we are presently facing but what about tomorrow and the many tomorrows to follow? What effect will the higher water level have on the current trees that do not stand in water year round? What will raised water levels do to the lake temperature and consequently the salmon populations, aquatic plants, and otters among a few? Again I say, we as human beings can no longer manipulate the Earth to our needs as if it were here for our use only. We have taken enough, we've changed enough, and we've used enough of the Earth's resources for our benefit. We must find other solutions to the water problems we face.

Aesthetic Impact
The piece of property on which I reside was purchased by my family in 1983 and has been my full time residence since 1997. Even as I write this letter I am sitting at the lake shore thankful for such a beautiful place to live. Certainly I have many things in my life for which I am grateful. However, on this particular day following one of the most sorrowful and horrific events in the history of humankind, I am especially thankful for this peaceful and precious piece of the Earth on which I reside.

A dam on Lake Wenatchee will change the landscape forever. Many residents have lovely and serene beaches during the low water period of the year. The permanent high water condition a dam creates will eliminate the lake shore for most Lake Wenatchee residents and visitors. That prospect just seems unacceptable.

Financial Impact
The financial impacts on residents are many but primary among them are property value and loss of investments already made.

For most Lake Wenatchee residents, a significant portion of their property value is based on the properties relationship with the lake. A reduction in the amount of beach or a reduction in the quality of the beach will impact the value of most waterfront property on the lake.

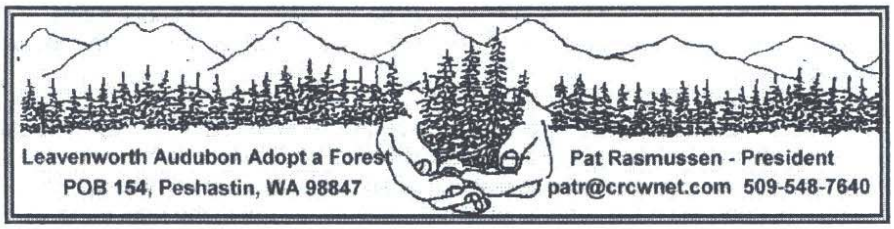
Secondly, I have made specific investments in a dock and boat lift on the beach. These investments will be entirely lost if a dam is installed and the year round water level of the lake is increased. As a fixed income family this would be a significant financial investment to lose.

In closing, it is important to leave this water system unaltered and natural. Nature is life in perfect balance and nature will maintain that balance if we just leave it alone! If this area is out of water, then nature is saying "enough". We must stop making decisions based solely on today's issues and never lose sight of the future consequences of those present day decisions. Let us gently use the Earth's resources with respect and gratitude.

Thank you for your time and consideration,

Sandra L. Butler

Sandra L. Butler



September 13, 2001

Wenatchee Watershed Planning

RE: Proposed dam on Lake Wenatchee

We are shocked that such a proposal to build a dam on Lake Wenatchee and turn it into a reservoir would even be considered or discussed. Up until now Wenatchee Watershed planning has been going in generally good directions. The Chelan County PUD has put much planning into restoration work for their HCP. Farmers in the Icicle and Peshastin Irrigation Districts have focused on taking the initiative to do voluntary projects that would improve salmon habitat. They put the 3.5 mile long Tandy Ditch into a pipe, reducing by a half the amount of water they would take out of the stream. Trout Unlimited has projects in the Entiat, Mission Creek, Icicle, Chumstick and Peshastin Creek watersheds to improve fish passage and provide overwintering for young fish.

Until this time, all have had a positive, pro-active, voluntary attitude to do the right thing.

Suddenly all that is turned around. A proposal to dam Lake Wenatchee and make it a reservoir is a stupid idea. And it shows incredible lack of understanding of how this river system functions. Have we really sat in all these watershed meetings, and still understand so little what we are doing?

The Wenatchee River watershed is one of the few remaining functional river systems in the Northwest, where 14 salmon species are listed as endangered or threatened. The sockeye salmon run that spawns in the White River and uses Lake Wenatchee to grow in before heading to the ocean is the second largest sockeye run in the lower 48 states, one of only two viable runs in the Columbia Basin. The reason for this is that it is one of the few naturally flowing river systems left. Who would even dream of ruining that?

I was so shocked that I decided to find out whose idea this was. It turns out that a few years ago, Rick Smith of the Wenatchee Reclamation District, had a meeting with Linda Parlette, George Sellar and Clyde Ballard where he proposed the idea. Last winter, with the drought approaching, he saw a chance to get it through and approached the legislature with the idea. Without asking any of the

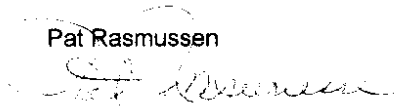
rest of us who care about Lake Wenatchee, he got $250,000 of public funds dedicated to this study that has no chance of going anywhere. It is a total waste of public funds.

We are not going to allow the best, functional river system left in the region to be ruined by a dam. Pursuing even the idea of such a dam will make our whole watershed planning effort look foolish. It will attract lawsuits in an area where people of good will have spent a lot of time and money doing the right thing, in part to avoid lawsuits. People all over the region are taking out dams – who would dream of proposing one?

This is a bad idea. It must be stopped now before $250,000 of public funds are wasted. In the future, Rick Smith should talk to the rest of us before he goes to the legislature to get money for something that would so alter a lake we all treasure. The money must be given back to the legislature so it can be used on something useful.

We would like to go on record as stating that we will do all that is legally necessary to stop this foolish project.

Pat Rasmussen



From: Dick and Karen Knight [fortknight.dk@verizon.net]
Sent: Friday, September 07, 2001 6:43 PM
To: Mike Kaputa
Subject: Lake Wenatchee Dam

Hello, Mike:
My name is Dick Knight. We own a home on the north shore of Lake Wenatchee. It is my understanding that the study for a dam proposes to keep the water level at the normal high water mark. Do you have information that explains this further? Prior to attending the meeting on September 13, we would like to understand where the water line would be on our property and how long during the summer this line would typically be maintained.
Thank you for your assistance.

From: orcatom [orcatom@msn.com]
Sent: Sunday, September 09, 2001 6:34 PM
To: Mike Kaputa
Subject: Lake Wenatchee Water Storage Study

Thank you for the notification of the Water Storage Study
Public Meeting.

In terms of the study and public meetings I would offer the
following. Many owners of recreational property on the lake and surrounding areas live west of the mountains. In fact I know some that live east in Spokane and south
to Cathlamet. The point is your letter was postmarked 9/5 and did not arrive at my address in Seattle until this weekend. That gives very little time to rearrange schedules to attend the public meeting on the 13th in Leavenworth. In fact I am going to be out of town and will be unable to attend what I consider a very important meeting that can have an impact on the residents and users of Lake Wenatchee for generations to come. Therefore I would like to go on the record as stating I feel this is unfair and adequate nofication, at least two weeks, needs to be given to residents who live outside the area and own property in the area to attend the public meetings. I would also know what the law states in terms of notification of property owners regarding public meetings in Chelan County.

I consider myself an open minded person but as a water front property owner on Lake Wenatchee and having relatives that have had property on the lake for
over 60 years I have to say the thought of damming
one of few free flowing natural lakes of this magnitude in the state has very little appeal. This is especially true with all the studies and talk regarding tearing down manmade
obstructions to natural waterways in locations throughout
the state. Time has proven them to be unwise decisions
and detrimental to the environment over the long term.

Please place me on any email, mailing lists or other forms
of communication so I can stay abreast of the study and also please provide me with a recap of the public meeting
that will be held next week.

Thank you.

Tom Borgen
1914 5th Street
Kirkland, Wa. 98033
Phone; 206-954-5953

From: WGATOR3@aol.com
Sent: Tuesday, September 11, 2001 9:00 PM
To: Mike.kuputa@co.chelan.wa.us
Cc: Lisa de Vera
Subject: Lake Wenatchee

Mike, please put me on the list to receive information regarding the potential dam at Lake Wenatchee.
I am a little surprised that the state would consider building a dam at the outlet of the lake. It is fairly evident based on past experience that this would have a negative impact on fish. The natural ecosystem that currently exists is very healthy. A major reason is the natural flood and drought cycles that positively affect the lake. A dam creates a resivour of which we have plenty in the region for water storage. If you take a look at them they are also very unsightly when drained (i.e. Snow Lakes) or during low water years.
The dam in the Tumwater Canyon was a hindrance to fish passage this year and undoubtedly caused the demise of many fish. The dam in Shelton on the Goldsborough was recently removed because of the negative impact on fish. Maybe the state "experts" should study these situations and see if it can draw any corollaries.
Hopefully better uses for our time and money can be identified.

Sincerely,

Wally Gibbons

From: GEGibbons@aol.com
Sent: Wednesday, September 12, 2001 11:48 AM
To: Mike Kaputa
Cc: parlette_li@leg.wa.gov
Subject: Lake Dam

Mike, want to make sure I am on your Lake Wenatchee Storage mailing list. I am totally opposed to the project, and think the 250K could have been spent for much more important local projects. Have heard the meeting site has been changed and do hope to make the meeting.
Jerry Gibbons

From: robert.weisel@usbank.com
Sent: Friday, September 14, 2001 2:57 PM
To: Mike Kaputa
Subject: Lake Wenatchee

At the Thursday meeting regarding the Lake Wenatchee Water Storage Study, you mentioned a gentleman who had started a Friends of Lake Wenatchee group. Could you please provide me with his name, the correct name of the group, and any contact information.

As an additional question to be answered by the study, I suggest the following:
Given the strong salmon run at Lake Wenatchee this year when the snow-pack was extremely low (60% of normal at Stevens Pass), what indications are there that low flow in the Wenatchee River is negatively impacting salmon migration? In addition, has the impact that higher lake levels will have on fish habitat at Lake Wenatchee been studied? If so, what were the results?

Thank you very much for your assistance.

Bob Weisel

From: Friend of the Lake Wenatchee Watershed [FriendoftheLakeWenatcheeWatershed@communities.msn.com]
Sent: Friday, September 14, 2001 10:19 AM
To: Friend of the Lake Wenatchee Watershed
Subject: How high?

New Message on Friend of the Lake Wenatchee Watershed

From: John & Kathy Zipper

The question many people asked was "How high will the lake level be raised?" Without some idea of the range of possible dam heights to be considered in the study, how can we reasonably be expected to respond with "public input"?

I am concerned about the lack of information available at the 9/13 meeting. The presentation did not include enough specifics to give property owners an idea of the range of possible dam heights. I have emailed to Mike a request for additional info regarding river flows and the needs of the irrigators and fish. When I recieve more info, I will post it.

When I asked Mike and Rick "How much additional river flow is needed?" at the meeting, they didn't know and stated that the purpose of the study is to answer that

question. The answer to that question will determine the dam height. Basic information regarding river flows and the rough range of needs for fish and irrigation is very likely already available. If the basic info is not provided, I believe that the deadline for "First public input" should be extended.

From: William Harris [wharris4@san.rr.com]
Sent: Tuesday, September 18, 2001 12:12 PM
To: Mike Kaputa
Cc: Tamzin@austin.rr.com

Mike Kaputa

Re: Dam at Lake Wenatche

While I realize there can be reasons for changing nature, the stated reason in this case is to store water for the river. This dry summer probably upset some people along the river.

We have owned a cabin on the south side of the lake for over 30 years. The high water mark reaches the entrance to the cabin. The water recedes to give us "a beach" by the time we gather for a family reunion 2-4 weeks each summer. Our cabin is still a cabin, the beach is our living room. We stay at our cabin, it is not a lodging for distant skiing or hiking trips.

In effect this dam would remove our gathering place. It would also remove most other activities enjoyed on this shore, reading, sand casting, imaginative play with driftwood, walking along the edge, in short our whole day is spent there.

I’m sure everyone can find environment reasons to support their wishes. I would point out that several of our cedar trees are unstable as it is and more water would undermine them.

The present environment has endured for eons. Please let it continue as nature intend. Do not make it a swamp full of mosquitos. Mrs. W.A. Harris lot #42

From: Friend of the Lake Wenatchee Watershed
[FriendoftheLakeWenatcheeWatershed@communities.msn.com]
Sent: Tuesday, September 18, 2001 3:35 PM
To: Friend of the Lake Wenatchee Watershed
Subject: Coalition to oppose dam

New Message on Friend of the Lake Wenatchee Watershed

From: Gayle Craig

September 18, 2001

Dear Fellow Lake Wenatchee Property Owner:

If you attended the Lake Wenatchee dam study meeting on September 13th, you probably share the frustration and concern many of us have over the total lack of information and answers we were given at the meeting. If you were waiting until you had more information from Chelan County, the Chelan County Watershed Program, the Wenatchee Reclamation District, and Senator Linda Evans Parlette before you decided whether or not this dam proposal is a threat to the Lake Wenatchee waterfront property owners, you have no more information now than you did before the meeting! Two days after the terrorist attack on the United States, this was a very difficult time for all of us, yet many people still made the round-trip drive to Leavenworth, in the middle of the work-week, only to have the County coordinators strategically put us into groups with facilitators that, by design, had no connection or knowledge about Lake Wenatchee or the dam proposal. And then we left, still not knowing: how high is "normal high water" ?, will they be able to lower the lake level below the natural low water level (visualizing Lake Chelan or Keechelus or Lake Tapps in the winter) ?, "normal high water level" for how many months of the year?, and what about compensation for our deeded second class shorelands or lost property values? There are many many mor questions and issues, and although we didn't expect all the answers, we thought we would get some information to base our opinion on.

Well, we did learn one thing -- we need to form a coalition to get some answers and determine what action we need to take to protect our property. If you are a Lake Wenatchee property owner who opposes this project, we need your membership and support. We need to be organized so we can get some answers and take whatever action is necessary to protect our lake frontage. If you wish to join us to actively oppose this dam proposal, send us your name, Lake Wenatchee property address(es), mailing address, phone, and email.

Sincerely,

The Craig Family

email: scraig@lwproperties.com

Gary and Gayle Craig, 509-763-3579

17575 North Shore Drive, Leavenworth, WA 98826

Steve and Kelly Craig, 509-763-3578

17225 North Shore Drive, Leavenworth, WA 98826

From: Friend of the Lake Wenatchee Watershed
[FriendoftheLakeWenatcheeWatershed@communities.msn.com]
Sent: Wednesday, September 19, 2001 11:59 AM
To: Friend of the Lake Wenatchee Watershed
Subject: In opposition to the dam!

New Message on Friend of the Lake Wenatchee Watershed

From: Chuck Whittlesey

Friends,

Gayle has summed up her impression of what appears to be the first, last, and only public meeting regarding a study to determine where they are going to put a dam at Lake Wenatchee. It was strange to be in a room of so many people who oppose this concept of damaging the last un-molested watershed in the Pacific Northwest and have no public comment allowed. Senator Parlette, and County Concilman Hawkins stood by as democracy was trampled. Our tax dollars were spent by the bureaucrats as they implimented their grand plan to spend more of our tax dollars to put a dam on Lake Wenatchee and damage our property.

I am aghast at the swift skill by which they rammed their position down our throats, rushed us through a hollow process of group discussions, and pushed us out the door. I commend them on one thing: the effective stiffling of public opinion and democratic

process prior to ruining the environment in the name of endangered fish. Can you believe that Rick Smith actually got up in front of the group and said that he wanted to dam the river in order to improve water flow. That is the same as saying do away with girls in order to protect their virginity. Twisted logic at its highest level of blind arrogance. These are bureaucrats and public servants who have morphed into a self serving cabal over which they intend us to have zero control.

It would seem that time has come to organize and bring suit in order to stop this travesty from continuing forward.

Look forward to a more focused name for a more focused organisation. We then need to establish some leadership roles and begin to fill them with folks who can effectively carry the issues forward. As is always the case in circustances like this, money will need to be raised to pay for legal assistance and advice. We then need to have the resolve to see this through to an end that is satisfactory for the homeowners and taxpayers on the Lake and River.

Please continue to encourage others to join this site and look for further info regarding this dam issue.

Chuck Whittlesey . . .

From: Friend of the Lake Wenatchee Watershed
[FriendoftheLakeWenatcheeWatershed@communities.msn.com]
Sent: Sunday, September 30, 2001 9:38 AM
To: Friend of the Lake Wenatchee Watershed
Subject: New member

New Message on Friend of the Lake Wenatchee Watershed

From: Bob Nilsen

I oppose the dam proposal at Lake Wenatchee as well. I live at 23300 Lake Wenatchee Hwy, and windsurf, swim & fish in the lake. It's one of the most beautiful lakes I've ever seen and find it unthinkable that someone who has actually seen the lake would like to change it. I've lived here for 12 years and have seen the lake rise and drop naturally. I belive the natural rising and dropping of the lake level is important to maintaining the clean shorelines. To hold the water at a constant level would certainly eliminate that

cleaning action. We already know what dams do to fish runs, we've spent millions on those studies already in the Columbia River drainage. I guess we need to take a closer look at our legislators and what they represent.

-----Original Message-----
From: Snyder, Jeri (SEA) [mailto:jeris@prestongates.com]
Sent: Monday, October 01, 2001 3:50 PM
Subject: Lake Wenatchee Water Storage Feasibility Study

Dear Senator Parlette; Mr. Kaputa, Ms. de Vera, Ms. Walker and Chelan County Commissioners:

We are writing this letter to give our concerns about the proposed dam at Lake Wenatchee.

First, we would like to point out that many property owners around Lake Wenatchee are "absentee" property owners, who live and work out of town and therefore would be unable to attend public meetings held during the week; and, not held at the Lake. In addition, any public meetings held mid-week in the fall/winter make it impossible for those absentee owners to attend.

Second, why was this meeting not held at the Rec Club at the Lake? This would be comparable to holding a public meeting about issues involving the City of Wenatchee in Cashmere. Public meetings that affect Lake Wenatchee should be held at Lake Wenatchee - not Leavenworth.

The meeting held on September 13th was taped and transcribed. We've had a chance to listen to the tape and would like to comment about the comment made that there has not been much participation in the watershed study and/or this proposal by people around the lake. Please see our first and second points above. It is obvious that you are not aware of the type of ownership which exists around the Lake. You know now about a group of property owners and interested persons called "Friends of Lake Wenatchee" which has been in existence since 1980. We formed to help protect the Lake and surrounding forests from over or inappropriate development, logging and now a proposed dam. We all have one goal and that is to keep Lake Wenatchee and its environment as pristine and untouched as possible. The pressures on this Lake both natural and man-made have been enormous.

We have the additional following concerns:

1. The drawings and diagrams shown at the meeting were out of date and inaccurate. We invite all of you to tour the lake by boat to see the homes, docks and millions of dollars of improvements on the lake, the wetlands and public shore lands. On the north shore, there are homes every 50 feet and some stacked behind each other. On the north and south shore, almost every piece of private lakeshore land has been developed. Do you have the numbers? You should be working with current, up to date information, maps and photos, not ones from 1930 so your study will report the proper impact of this proposed project.

2. Location: The site for this proposed dam is not appropriate. The

lake is heavily populated and a high recreational site for the public of this State (and others). IF a water storage facility is really necessary, why not Tumwater Canyon. The impact of such a dam in the Tumwater would be much less than at Lake Wenatchee and, the Tumwater already has a "dam" in place. This site seems much more logical.

3. Fish: When dams are being torn down to benefit fish, building another one seems completely inappropriate. This year has been the best run for fish in a decade. Adding yet another obstacle in their spawning path, putting a dam in the middle of the Chinook spawning grounds, just does not make sense or add up. Clearly, you cannot state "fish" as a reason for this dam.

4. Irrigation. It was stated in the meeting that there has been an over appropriation of water and irrigation rights in the Wenatchee River basin. The $250,000 should be spent to education farmers and land owners about conservation now. Not put a band aid on the problem. Orchards are disappearing rapidly from the valley. Is irrigation really an issue here?

5. River Free Flowing: The Wenatchee River is one of the last free-flowing rivers in the state of Washington and it make no sense to put a dam at the mouth. This river should stay untouched and natural for the benefit of generations to come.

6. Drought Year/Floods: Any data taken this year would be inaccurate in regard to water levels and flows because of the drought. For this reason, this study should not even be taking place at this time. Do you have accurate information about the floods that have occurred on this lake and the impact on the area in the last 15 years? This would be vital information to any study. These events were horrific and impacted the lake and property owners around the lake. We have videos of the 1990 flood.

7. Lake Wenatchee Wetlands: The wetlands around the lake are vital to the environment there, and are part of a very fragile wetlands ecosystem in the Cascade mountains. These would be destroyed. We simply cannot justify this project at the risk of losing them.

8. Septic Systems and Drinking Water: There are homes and septic systems that would be flooded if the water level was increased to 10 feet over the mean high water mark. Do you know how many people take their domestic water supply from the Lake? Clearly this is a public health issue that should be addressed.

We are opposed to this project and are frustrated that $250,000 of our tax money is being used to "study" it. It simply does not make sense and is NOT a "win-win" situation for anyone, especially Lake Wenatchee.

Ted and Jeri Snyder
(members of Friends of Lake Wenatchee)
15690 Cedar Brae Road
Leavenworth, WA 98826
(509) 763-3199

From: Robbie Cape [rcape@microsoft.com]
Sent: Monday, October 01, 2001 11:47 AM
To: Mike Kaputa
Subject: Lake Wenatchee Water Storage

I just wanted to quickly record my opposition to this project, and even the study. I have read over the meeting notes, and want to reiterate all the points against the project.

I don't see how, even at this early stage, the benefits of this project will outweigh the costs/opposition to it. My sense is that the county could very well be wasting valuable time and money with this study.

Anyhow, that's my vote.

Thanks for listening.

- Robbie

October 4, 2001

Chelan County Watershed Program
411 Washington Street
Wenatchee, WA 98801

Attn: Mike Kaputa

Dear Sir:

For the last 38 years, my wife and I have owned a house on 200 feet of lakefront on the South Shore of Lake Wenatchee. I am writing to express concern over possible plans to build a dam at the lake's outlet for water storage. I see major problems with this that would affect us personally.:

1. One of the delightful features of our property is a sandy beach in front of the house, along with a rocky shoreline covering the rest of our frontage. We would expect a dam, to be effective, would raise the lake level to permanently cover our beach, along with the rest of the second class shorelands (which we own) in front of the lakefront lots.

2. In 1990 and 1995 we had "100-year-floods" (or was it 500?) on the lake. Any additional water storage in the lake might alleviate downstream flooding but would worsen flooding around the lake itself.

3. We have a dock which, for most of the year, is accessible from our beach. The only time we cannot accessit (without swimming) is during the brief period of highest snow melt runoff, usually in June. Using the lake for additional water storage would increase the length of time we could't access our dock, possible through most of the summer and into the fall. Under present regulations we could not add a walkway over the beach to get to the dock. Also, depending on the water storage level, the shore end of our gangway could be under water anyway.

Unfortunately, we were unable to attend the September 13 public meeting on the subject. Pleawe accept this letter as part of our input to the study process. We feel strongly that the benefuts, if any, of the proposed project will accrue downstream, while its negative impact will weigh on the property owners on the lake.

Shortly after we bought the property in 1963, there was a major proposal to build 3 dams on the Wenatchee River, including one at or near the lake's outlet. Fortunately, that one was shot down in flames at the time. Hopefully history will repeat on this one.

Via Outlook

PAGE 2

Just this past year we made a major investment to strengthen and upgrade our house. We find the thought very dismaying that our beach may be flooded and our dock rendered useless in the near future.

Yours very truly,

Orlien N. Becker

Margot L. Becker

Orlien N. Becker
Margot L. Becker
16120 65th Avenue S.E.
Snohomish, WA 98296-8722

Telephone 425-485-1084

no E-mail

From: charlie carmody [soundsaboutright@yahoo.com]
Sent: Sunday, October 07, 2001 9:33 PM
To: Mike Kaputa
Subject: Lake Wenatchee Water Storage Feasibility Study-Community Meeting Notes

ascii Mr. Kaputa, thank you for the information withregards to:
(1) Lake Wenatchee Storage Study Public Meetingon Sept., 13, 01.
(2) Proposed Work Plan Schedule distributed at the meeting.
(3) Your efforts with regards to Rick Smith'sPowerpoint presentation.
If these are the questions that were presented to you and your staff, and must be answered before a successful study of the proposed installation of a dam for water storage, fish ladder, and possibly a small auxillary generator can be initiated, then...I must say, it looks like an event in a movie I saw, " Class Action" with Gene Hackman. Hackman asked one lawyer firm for information it possessed to help his case. The firm gave Hackman every scrap of paper it possessed which inundated Hackman's firm with useless information in an attempt to cloud the real issue, and to stall the proceedings. I find it interesting that all the "Groups" are headed by women. I also find it interesting that all the property owners directly effected by the outcome of the study were not contacted by these "Groups", myself included. I think emotion needs to be taken out of the survey, with regards to dock costs, and private beach size and use as criteria for this study. The majority effected by this prodject need to be heard, even if it means going "door to door". There are thousands who will be effected by the desisions proposed by a commity. There is a real possibility of water shortages, now and in the future. Scientific estimations on studies are simply un-acceptible even if 1% are correct. In my opinion, for the water sheds, irrigation, and municipalities effected by drought and electricity fluxuations, simply for these three reasons...exclusive of the numerous questions presented at the meeting, the scrutiny of this prodject needs to be informed, fair, and presented with compassion for those effected adversely. Although my property will not be effected directly, (my property is on Dirty Face mountain (2.88ac) near the previous site of the Cougar Inn) I am certainly interested in the completion of this commity or study. Please let me know if I can help. Thank you and your staff be taking the time to inform. All the best.
Charles J. Carmody
soundsaboutright@yahoo.com

October 7, 2001

To: Mike Kaputa
Chelan County Watershed Program
411 Washington Street
Wenatchee Wa 98801

Fr: Robert Nilsen
23300 Lake Wenatchee Hwy
Leavenworth, Wa. 98826

Re: Dam project

Dear Sir,
I think in this new era of warming ocean currents and (el nino) we have found that the weather patterns are very unpredictable. We had two 100 year floods in the early 1990's. I think the potential for flooding has become much greater today. I was wondering how the dam would be protected from all the logs & stumps that are present in the lake during extreme flooding? Would there have to be a log boom across the lake in the deeper water above the state park? If so that would render the boat launch at the state park useless. If the log boom were placed below the state park boat launch in the shallower water there would be the likelihood of a log jam forming and possibly breaking. The property below the dam on Cedar Brae rd it seems would be at extreme risk during flooding. Would there have to be slope protection below the dam and for how far downstream? Would those property owners have to sacrifice their property for the embankment? How many acres of land would have to be cleared adjacent to the dam for construction staging area and access roads? It seems that the lake acts as a natural safety valve or water overflow during extreme flooding, so if you keep the lake at its high water level during flood season heavy rain & runoff would affect the river almost immediately. Also the sudden drop in water elevation at the dam would create much more turbulence downstream for miles below the dam. Would the 207 bridge have to be upgraded? It just seems like there would be an increased risk of flood damage all the way to the Columbia River. Who controls the water flow? US Army Corp of Engineers? It seems that for a project of this size there would have to be federal funding. How long does that take and do you really want to get the federal govt. involved in developing one of the finest recreational treasures in Chelan Co.

I've worked for 30 years on pipeline projects in river beds, Corp of Engineers dam projects, slope protection along rivers, built marinas and have seen the damage to riverbeds as a result of those projects. I think that if the public were aware of the tremendous impact a project like this has on the environment, they would surely be against it. There are other alternatives for maintaining enough water to get through drought periods. Maybe you could spend some of that $200,000 to look at those alternatives.

Thank you
Robert A. Nilsen

P.O. Box 65
Snoqualmie, Washington 98065

October 15, 2001

Mike Kaputa
Chelan County WAtershed Program
411 Washington Street
Wenatchee, Washington 98801

Dear Mr. Kaputa:

Thank you for sending the Lake Wenatchee WAter Storage Study report.

We want to be on record for opposing the project. How much of our beach would be submerged by your project? We've been told the "going rate" for lake front property is about $4000 per running foot. We own 120 feet.

Why do you believe it necessary to build a dam?
One year with less precipitation than normal should not warrant such action.

Yours truly,

Robert & Marie Jarrett

Robert & Marie Jarrett

From: Donald Melton [dkmelton@hotmail.com]
Sent: Monday, October 22, 2001 2:07 PM
To: Mike Kaputa; Lisa de Vera
Subject: Lake Wenatchee Storage Feasibility Study
October 22, 2001

To Whom It May Concern:

We are writing this letter to express our concern about the proposed dam at Lake Wenatchee. We have owned our property at Lake Wenatchee for over 25 years and find the proposed dam on the lake to be the worst idea we have heard of since the old "WPPSS" fiasco of the 1970's. It is a very bad idea.

The idea that we (the residents and property owners) need to bail out Chelan County because it has "oversold" existing water rights is absurd. Why not simply buy out the oversold water rights directly? It would make much more sense then destroying a lake and it's eco-systems, not to mention the investments of millions of dollars of private property. It is a very bad idea.

Who will compensate the property owners for this "taking" and consequential "damages" to our properties if the project is built. We do not want the dam built, we want the lake left as it is today.

The argument that the water is need for irrigation purposes is also absurd in a time when the traditional agricultural industry of Chelan County is going bankrupt because of foreign competition and changing world economic market conditions. Save our precious resource for all to enjoy.

Stop the feasibility project now before you waste any more money.

We are co-owners of the property located at 15700 Cedar Brae Road and we represent the view and ideas of the entire "family" which contains 12 individuals of voting age.

Don and Penny Melton
3819 Bagley Avenue North
Seattle, Wa 98103
dkmelton@hotmail.com

Mussen Properties
C. C. "Skip" and Kay A. Mussen

1415 Jefferson Street
Wenatchee, WA 98801
(509) 662 5759
Fax (509) 664-3244

October 25, 2001

Mike Kaputa
Chelan County Watershed Program
411 Washington Street
Wenatchee, WA 98801

Dear Mike:

Thank you for sending the report of the September 13, 2001, meeting in Leavenworth which I was unable to attend. The meeting was about the proposal to dam Lake Wenatchee to establish a water reservoir.

My original intention was to be neutral on the subject until I found what the proposed lake level would be and how it would affect my property at 16335 North Shore Drive on Lake Wenatchee.

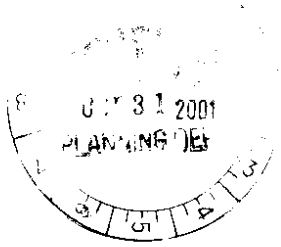
After reading your report I have decided that to wait until some more information would be available would be too late. Such discussions as raising the level 10 feet, or even 5 feet, would seriously impact my property. My home is right on the beach. We had water in our crawl space under the cabin during both the 1990 and the 1995 floods.

I also am concerned about the structure of the committee, where only three property owners would serve. This puts the property owners, who have a lot to loose, in a distinct minority on the committee. The agency people, I think, would be all for the project no matter the loss to the property owners.

Therefore, you can put me down as opposed to the project.

CHARLES C. "SKIP" MUSSEN
16335 North Shore Drive
Lake Wenatchee

29 October, 2001



Michael Kaputa
Chelan County Watershed Program
411 Washington Street,
Wenatchee, WA 98801

Dear Mr. Kaputa,

Reference is made to the Lake Wenatchee Water Storage Study and your request for comments.

The following comments are submitted for consideration and inclusion in your study. I have been involved in three major floods at Lake Wenatchee, 1980, 1990 and 1995. I have personally observed the disastrous impact of these floods on the properties along the north shore of Lake Wenatchee, especially the property of Ann K. Hoyt, 16181 North Shore Drive.

In each case a weather system known locally as the "Pineapple Express" brought excessive moisture into the Pacific Northwest. When a low pressure area stalled over the Cascade mountains, excessive flooding resulted on both sides of the Cascade Mountains. The resulting run off reaches Lake Wenatchee causing the lake level to rise rapidly. There is not enough room at the mouth of the lake to let the excessive water move on without flooding. This was not always the case.

When Highway 207 was moved to it's present location, the road bed was built up forming a dam across the low area where excess waters had always flowed during times of flood, thus avoiding damage to property on the lake. Add to this obstruction the flood waters from Nason Creek which now must flow to the present location of the Wenatchee River before they can drain down stream. Nason Creek forms, in effect, a hydraulic dam at the mouth of Lake Wenatchee.

In 1980 the flood waters rose to with in six inches of the floor of the cabin belonging to Ann K. Hoyt. Her small basement and outbuildings were flooded. In 1990 and again in 1995 the water rose to 23 1/2 inches inside her cabin. I believe that the difference between the water levels in 1980 and 1990 / 1995 was that there was less vegetation in the later years due to the heavy logging and thus more water reached the drainages at a faster rate than in 1980. Once the flood waters flowed over highway 207, the level of the lake seemed to stabilize and when the rains stopped the flood waters receded from the cabin in about 24 hours in each case.

To place any further obstructions at the mouth of Lake Wenatchee or in the Wenatchee River is inviting greater flooding than we have already experienced. We do not need a dam at the mouth of Lake Wenatchee. We need to keep this lake in it's natural state. Leave Lake Wenatchee alone.

Sincerely,

David M. Klinger
P.O. Box 537,
Leavenworth, WA 98826-0537
(509) 548-5480
dklinger@rightathome.com

From: Bill Robinson [WCTU@mindspring.com]
Sent: Wednesday, October 31, 2001 10:30 AM
To: Mike Kaputa
Subject: Lake Wenatchee Storage comments

Oct. 29, 2001

Mr. Michael Kaputa
Director
Chelan County Watershed Program
411 Washington St.
Wenatchee, WA 98801

Mr. Kaputa:

On behalf of the Washington Council-Trout Unlimited, thank you for developing a very professional process for addressing the issues which surround the Proposed Lake Wenatchee Storage project. Your format for running the Public Meeting on this proposal in Leavenworth, WA on Sept. 13, 2001 was well thought out. The breakout sessions certainly helped to maximize the time allotment for discussion of the proposed project's "needs assessment".
There was certainly a potential issue which could have very acrimonious-the basic misunderstanding that the project proposal should not go forward despite the state legislative directive. In listen to several groups around the one I attended, this was certainly an issue which a number of interests continued to vocalize-we do not want this project so lets save $250,000 and not proceed.

In any event, upon review of the summary meeting notes they track fairly well with the notes which I had taken. Additionally, the issues raised seem to be a fairly consistent across the various groups.

Our interest lies in several arenas, environmental/ fisheries, community issues and process.

We urge your agency to go back to the basics and review why this proposal has not been successfully implemented since first being proposed in the 1920's. There must be a thread of commonality which runs through all of the years and proposals as to why this proposal has failed to be supported across time.

Fisheries and Environmental Concerns:

We most certainly have major concerns regarding the impacts to anadromous and resident salmonids which utilize Lake Wenatchee and the upper basin tributaries. The fact that the upper basin tributaries are the spawning and rearing habitats for 3 stocks of salmonids listed as "Endangered" under the Endangered Species Act most certainly creates significant legal and environmental problems. The fact that the 3 "listed species" spring chinook, summer steelhead and bull trout have critically low populations and that the sockeye population is not stable but any stretch of the imagination. Our concerns here revolve around the degradation of critical habitat and wetland inundation, passage and generation impacts, flow regimes which affect water quality and quantity in the reach immediately below the project to the confluence of Icicle Creek and on to the confluence of the Columbia River. The proposed study must address the impacts of the flow regimes on the salmonid and benthic communities at all lifehistory stages.
The spring chinook and steelhead populations are limiting factors to fisheries management process which certainly are recognized impacts to treaty fishing rights and non-treaty fishing privileges throughout the Columbia River system and are dealt with in the context of US v Oregon, Pacific Fisheries Management Council and North of Cape Falcon fisheries management processes. Spring chinook, additionally are a component of the Pacific Salmon Treaty (the spring chinook produced at the USFWS Nat'l Fish Hatchery are an "index stock" which is monitored by the PST). It is the position of the WCTU that there be no negative impacts to the salmonid resources affected by this proposal.

Not no net loss-no loss at all.
We believe that this is a position which will be held by the treaty tribes and the state and federal family of agencies as well.

Community and Process Concerns:

In listening to the crowd at the meeting, there was certainly a feeling of hostility in this arena.
It appears that the state legislature got out in front of itself with this proposal without regard to the local constituent base. Or perhaps only a segment of the local community interests were being brought forward. It appears that the project proponents are pushing this proposed study forward as a win/win for people and fish-benefits to the communities in the Wenatchee River watershed and flows for fisheries resources.

This doesn't pass the "straight face test" for example when one looks at property rights issues in the area surrounding Lake Wenatchee, local health issues such as impacts on septic systems above the proposed storage dam. Neither are the flows for fish.

There is a significant disconnect between the community interest groups.
Many see the proposed project as a veiled attempt to access more water for interests in an already over appropriated basin.
Many also see the lack of scientifically based support for the proposal regarding the water flow needs of the fisheries resources throughout all lifehistory stages. Most will agree that flows which purport to meet the needs of salmonids- do not under these types of "flows for fish" projects. We are seeing this tact in many area's of the country and the impacts upon review are certainly not as "pro-fish" as proponents would have people believe. The development of the "Advisory Committee" also needs to be addressed. It was apparent that several very significant interest groups were not included in public process. The lack of representation fro the recreational fishing community and the recreational boating industry came to mind immediately. There was also the lack of clarification as to the identification of who were the "environmental and conservation" were. It also appeared that there was poor communication/involvement between your agency and the treaty tribes in this project. All in all, it was apparent that the local public involvement component of the proposal was not well thought out.

We are also concerned about the development of the mitigation package for this proposal. It is our belief that in the end, if all the impacts of this proposal are accurately identified, that this project will not "pencil out" financially. Perhaps this is the "common thread" which has run through all of the previous iterations of the proposal-back to the 1920's.

The WCTU has a policy which looks at storage proposals on a case by case basis. Our basic criteria is that the projects provide real benefits to salmonid resources at all lifehistory stages, do not degrade water quality or quantity standards for the project area and that they provide economic sense and fiscal responsibility to the public.

We remain very interested in the Lake Wenatchee Water Storage Study process. Please keep our organization on any and all mailing lists and apprised of opportunities for public involvement.

Yours in Conservation,

Bill Robinson
Executive Director
Washington Council-Trout Unlimited

From: Steve Craig [scraig@lwproperties.com]
Sent: Wednesday, October 31, 2001 1:15 PM
To: Mike Kaputa; Lisa de Vera; Sarah Walker; John Hunter; Buell Hawkins; Ron Walter; Linda Evans Parlette (E-mail); Mike Armstrong (E-mail); Clyde Ballard (E-mail)
Subject: Lake Wenatchee Dam Proposal

Dear Chelan County Watershed Department, Elected Chelan County Commissioners, and Elected Senator and Representatives of the 12th District:

My wife Kelly and I own waterfront property on Lake Wenatchee, where we have resided together full-time for the past 5 years. We are not of the high-wealth, technology-employed property owners with no 'roots' to the area that so many in the Wenatchee Valley believe all lakefront property owners to be. Instead I would consider ourselves 'locals', as I personally have lived on Lake Wenatchee for the past 22 years. In addition, my parents own waterfront property, where the reside full-time, and my brother and his wife also own lakefront property; he lived here for 20 years. Therefore our concerns stem from many years of experience at Lake Wenatchee.

We are very concerned that the pending feasibility study is a one-sided affair on behalf of orchardists and farmers in the lower Wenatchee valley, whereas the property owners of Lake Wenatchee would bear the costs of such a development.

I have talked with nearly 200 property owners in the Lake Wenatchee area. Please let it be clear that we all feel that the feasibility study, in itself, is a waste of valuable budget resources. Nonetheless, the County Watershed Department has made it clear that the feasibility study will proceed, and given this be the case, there are significant concerns that must be addressed:

1. Taking of our Private Property. Artificially raising and maintaining the level of the lake is a direct attack on our private property rights. Many of yourselves as publicly elected officials have advocated the preservation of property rights. Conversely, the proposed dam would cause a taking of our private property, and thus a depredation of our property rights. A high percentage of our overall property values come in the form of the actual beach frontage and inherent lake usage as the lake currently exists. Artificially raising and maintaining the lake would directly take away and impact these assets to our properties.

2. Residual Effects on Shorelands. Maintaining the lake at the average high water level would have negative residual effects on the shorelands.

Ecological. First, there would be significant erosion of the shoreline banks and soils, with the deposits going directly into Lake Wenatchee and the lower river system. Preventing erosion has been a foremost priority in shoreline regulation reform, including Chelan County's adoption of new shoreline regulations in July, 1999. If the State and County adopted regulations to prevent erosion, it does not make sense to create ecological conditions that would result in further massive erosion?

Additional Taking of Property Rights. Since citizens began owning private property on Lake Wenatchee, we have made improvements to the portions bordering the lake. If the level of the lake is raised and maintained at the normal high water mark, many of these improvements eroded, and thus damaged

or destroyed. These include landscaping, docks, boathouses, retaining walls, decks, and even cabins. Again, these improvements are assets to our property, and damaging or destroying them would be considered a taking of our property.

3. Salmon and Steelhead. These migratory fish have been navigating the rivers of the Columbia River system for tens of thousands of years, quite possibly even longer, and have experienced both droughts and floods of greater magnitude than anyone can comprehend. The very fact that these fish still exist today proves that water levels are not the cause of their recent decrease in numbers, nor would artificially maintaining higher stream flows be the answer to a resurgence in numbers. The decrease in the numbers of these fish has occurred at the same time as society has constructed hydroelectric dams on the Columbia River. In a time when we are adopting new shoreline regulations, changes in forestry practices, modifying fish harvest regulations, and even breaching dams, why would we would we create another impediment to these fish?

4. Flooding. Lake Wenatchee has experienced three massive floods since 1980, resulting in significant damage to homes and property. Please understand that these floods occurred when there were no artificial barriers preventing water to be released from the lake. Inevitably, the lake will flood again. However if there is an artificial dam preventing water from being released as nature had intended, the financial damages will be multiplied compared to previous years. Are the County and/or State governments prepared to bear the financial liability of these additional damages?

We are opposed to this project, and it is very apparent from the very outset that the financial and environmental costs of such a project greatly outweigh any potential benefits.

Sincerely,

Steve and Kelly Craig
17225 North Shore Dr.
Lake Wenatchee, WA
(509) 763-8056

12-7-01

Dear: Senator Parlette
County Commissioners
Mr. Kaputa
Ms. de Vera
Ms. Walker

Please review and add my comments to the public hearing process being conducted by your committee on the Wenatchee River Dam Proposal. My concerns and confusion are further amplified when we currently have similar proposals to breech dams rather than build new ones. Also, this proposal was made and decided against about 25 years ago. Is this something that we need to review every quarter of a century or when we have a drought year?

I have reviewed most of the comments from the public meetings that have been held to date and agree with many of the points raised. I do not wish to repeat the same points, so I will limit my comments to just a few points.

++ Bridge Built in 1941 On Highway #207

This bridge was build in 1941 by the Washington State Department of Transportation at a site approximately 500 yards East of the original bridge built in the early 1900, s. Enclosed are documents found in the archives with all of the construction detail and design provided by Pacific Car and Foundry. Mr. Farhad Bira is still searching for information that details how much the road area was raised and the extent to which the river channel was narrowed. Old timers on the Lake believe many of the high water floods that we have experienced in the last twenty years are directly attributable to outflow being restricted. Some may even claim that this was in effect created a DAM by limiting the outflow of the water from Lake Wenatchee. The roadbed of Highway #207 was also raised approximately 12" after the flood of 1995. A study needs to be made to determine the history of flooding before and after the building of the 1941 bridge. The design and drawings will be forwarded to the committee and any other engineering documents as received.

++ Property Values at Risk on Lake Wenatchee

A print out will be provided of all the properties by parcel number as part of the documentation to support valuations of just the waterfront properties on Lake Wenatchee. The Lake contains approximately fourteen miles (75,320 feet) of water front property, both private and public. According to recorded real estate sales in the last three year property has been selling for $5,000 per front foot. The potentially affected property values without improvements is approximately $376,600,000. There are approximately 220 homes and cabins with an approximate value of $250,000 each, adding another $55,000,000 in value. The committee needs to consider the potential loss in property values of some significant percentage (%) of $486,600,000. This would include loss of property taxes and the damage claims brought forth by every property owner affected. None of these figures include the commercial properties and the forty homes along Brae Burn Road that would add another $4,000,000 of potentially damages properties.

++ KALER GLEN WATER RIGHTS AND PERMITS

Eight years ago a very controversial and contested water permit was granted to Kaler Glen to draw water from Nason Creek and from the Washington State Forestry property above Kaler Glen. It is public knowledge that an eighteen hole golf course used tremendous amounts of water. Since this study is about water use, some analysis should be made as to the water take allowed under the permits granted. Documentation of the water used should be available from the water logs required as part of the permit requirements.

++ Coalition of Columbia Basis Irrigators Petitioning NMFS to De-list Seven Species of Fish

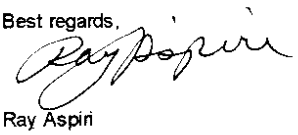
Your committee is reviewing the merits of building a low level dam on the Wenatchee River out of consideration for the Columbia Basis farmers and orchardist. At the same time the same affected individuals are formally petitioning NMFS to de-list seven other stocks in the Columbia and have served notice of their intention to litigate the issue. There is also a coalition of environmental and fishing groups who are seeking to intervene in the **ALSEA** case with an appeal. Further information can be found under Alsea Valley Alliance v. Dept. of Commerce (99-6265-HO,Or) (Sept. 13, 2001)

notice of their intention to litigate the issue. There is also a coalition of environmental and fishing groups who are seeking to intervene in the **ALSEA** case with an appeal.

In summary, the proposal to build a low level dam on the Wenatchee River is ill-conceived and significantly a more complex issue than the proposed study envisioned when passed by the legislature. I cannot support this proposal as a viable option to conserve water with all the untenable consequences that this presents to fisheries, property owners and recreational user of Lake Wenatchee and all the rivers systems above and below the Lake.

Thank you for reading the material I have provided. If there is more information that I can provide, please let me know.

Best regards,



Ray Aspiri

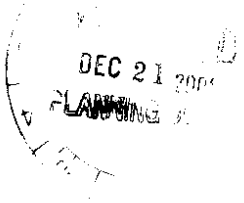
Lake Wenatchee and Vashon Island Resident
Member of the Friends of Lake Wenatchee Forests

8808 SW Glen Landing, Vashon Island, Wa. 98070
(206) 567-4049 Alt. # (206) 441-7290

Confederated Tribes and Bands
of the Yakama Nation

Established by the
Treaty of June 9, 1855

December 17, 2001



Commissioner Ron Walters, Chairman
Chelan County Board of Commissioners
350 Orondo
Wenatchee, WA 98801

RE: Proposed water storage in Lake Wenatchee.

Dear Commissioner Walters:

Over the past couple years the Yakama Nation has enjoyed an increasingly favorable relationship with Chelan County in the area of natural resource protection and enhancement. We look forward to advancing this relationship in time.

Both Chelan County and the Yakama Nation recognize that protecting and enhancing our natural resources, and specifically our aquatic and fisheries resources requires a commitment beyond the level which many of our neighbors and citizens recognize in their daily lives. Often, this commitment is even beyond the courage that our leaders have to offer. Our leaders must be direct and diligent in protecting natural resource values that have been long established in law (Tribal Treaty obligations, Endangered Species Act, Clean Water Act, State mandates, etc). The Yakama Nation has appreciated the recent and enthusiastic response that Chelan County as expressed in recognizing these interests. We support this and offer some words of encouragement.

The proposal for enhanced water storage in Lake Wenatchee is not an acceptable response to water shortages in the Wenatchee Basin. The Yakama Nation asks Chelan County to not hide behind the veil of fish protection and enhancement water to justify a dam on Lake Wenatchee in order to address the over-appropriation for out-of-stream uses. Clearly, this is a proposal that protects and likely enhances agricultural interests. Although the Yakama Nation is generally not opposed to development of agricultural interest, we strongly disagree with any attempt by Chelan County to blur or confuse agricultural interests with fish (anadromous salmonid) recovery interests.

Respectfully, we ask that Chelan County meet with the Yakama Nation to discuss several pivotal issues:

- What evidence is there to suggest that salmonid recovery will be enhanced by additional Lake Wenatchee storage capacity?
- How much capacity is envisioned and what are the likely engineering options to provide this storage capacity and how might these options incorporate fish passage considerations?

- What species will be positively affected and what might be the negative effects to fishery interests?
- In what life stages will survival be enhanced and why is this increased survival expected?
- How would additional storage be used to augment a "natural flow regime" for the main-stem Wenatchee that would enhance flow modifications to current irrigation activities?
- Finally, how will all additional water storage be used in the agricultural community during "low" flow years? Will these interests have additional water beyond their ability now and how would this water be "appropriated" between fish and agricultural interests?

Clearly, all of our governing bodies are looking for solutions towards the significant and substantial impacts that continue to impact our salmon, and our aquatic and riparian resources. With the recent and continuing changes in Chelan County's approach in natural resource issues, we are encouraged that there is a substantially greater awareness in salmonid recovery interests. However, until Chelan County can address the basic questions we have stated above, it is not clear why this proposal is being presented in such a noticeable public format. Will the public come to expect something that is not feasible or defensible?

The Yakama Nation is very concerned that public perception within the Wenatchee Valley will come to expect that additional manipulations to the watershed will "fix" past problems with salmonid production. This is the same perception that (generally) Euro-Americans and other emigrants have "understood" for the past 150 years. Have we not learned yet? What is different about this proposed project?

As always, the Yakama Nation is interested in a continued and productive dialog with Chelan County. We look forward to your timely response to this letter. If you have specific or technical questions, please do not hesitate to call my staff representative, Lee Carlson at 509-865-6262.

Sincerely,

Virgil Lewis, Sr., Chairman
Fish and Wildlife Committee
Yakama Nation Tribal Council

cc: Lee Carlson
Bob Rose
Mike Kaputa

From: ASPIRIENT@aol.com
Sent: Tuesday, January 22, 2002 7:56 AM
To: Mike Kaputa; scraig@lwproperties.com
Cc: john.zipper@zipperzeman.com
Subject: Re: Lake Wenatchee Watershed Storage

Mike: A number of individuals who participated with "The Friends of Lake Wenatchee Forrest" could provide some valuable input on the Dam Proposal. It would be helpful if there is a project plan that defines the elements of the project that are to reviewed and a timetable for scheduled meetings of the committee. Is there a committee that you plan to form? Who is currently on the committee? How many members are needed and who is needed to make the committee representative of all the divergent interests? How often will the committee be meeting? What are the responsibilities of the committee members and do they have a voice or vote on the final recommendations? Where will they meet?

There are a number of individuals, including myself, who would participate if the meetings can be help monthly for the six month term of this project.

Best regards,

Ray Aspiri

Lake Wenatchee Water Storage Feasibility Study

Instead of identifying the 3-5 top issues as requested, I offer an alternative approach… Since this is a feasibility study, with the emphasis on whether this project is capable of being done or carried out, the study should focus on the following aspects of feasibility:

Technical
Economic
Legal
Social/Environmental.

For each of these areas, there are a number of questions that need to be addressed that will, collectively, answer the question of project feasibility.

Technical Feasibility
-Is the geology at the proposed dam site capable of supporting a structure that can effectively store water and provide fish passage; and, what would this structure look like?
-What would be the potential additional water storage capacity of the lake with a structure and what would the "footprint" of the pool be?

Economic Feasibility
-What would be the direct cost of the project including the planning costs, construction costs, opportunities foregone, mitigation measures, etc?
-How would use of stored water translate into economic benefits?
-What is the predicted effect on property values?

Legal Feasibility
-Does this proposed action meet existing federal, state and local laws and regulations?

Social/Environmental
-What would be the estimated benefits of this project including flood control, irrigation, fish, etc?
-What would be the short-term and long-term impacts to lakefront property owners including: private, state and federal lands?
-What would be the effect on lake limnology and species movement through the lake and around the lake?
-What would be the extent and environmental effect on lands inundated by this project including change in character, shoreline wildlife, bank erosion, etc?
-What direct and indirect effects would the dam have on the life cycle of Spring Chinook*, Sockeye*, Bull Trout* and Steelhead* and other fish?

Note: The fish species denoted with (*) must be fully addressed in this feasibility study. Spring Chinook, Steelhead and Bull Trout are listed species and the Sockeye run is the second largest in the continental United States. How will the dam at the outlet of the Lake affect these important species? How much juvenile rearing habitat will be affected by the project and how will the habitat loss affect the listing and recovery of these species? (April 12, 2002)

Glenn Hoffman

-----Original Message-----
From: Jeffmonda@aol.com [mailto:Jeffmonda@aol.com]
Sent: Tuesday, April 16, 2002 11:32 AM
To: Mike Kaputa
Subject: Lake Wenatchee

Mike,
The meeting at Leavenworth was a good meeting. My question that I asked to the committee was not answered. The question that needs to be answered is:

Is the committee going to determine if it is feasable to build a dam?

The idea of a feasability study is that somebody has to make a recommendation based on the data. If the data produced by the company hired to do the study does not address the concerns of the committee, then the study is invalid. If the committee does not review the findings and determine if it is feasable to build the dam, there is no way to say those concerns are addressed.

I want it to go on record that every Lake Wenatchee land owner that I have talked with is very againts "waisting" the money on this study.

Sincerely, Jeff Monda, MD

From: Barbara_KellyRingel@r1.fws.gov
Sent: Thursday, April 25, 2002 2:19 PM
To: nsmith@nwi.net
Subject: Lake Wen storage study

Nancy,

A few quick thoughts on top priorities for scope of study:

1. Direct and indirect impacts to fish.
- How dam will impact migration in Wenatchee, specifically the juvenile bull trout (6-12 inch typically) migrating up to Lake Wenatchee from the Chiwawa River. It is possible that we could conduct a small radiotag study of these juvenile fish if time and funds allow.
- Impacts to chinook and sockeye salmon spawning in the Little Wenatchee and White River.

2. Modeling of how water storage would affect flows throughout the entire Wenatchee River, compared to the natural hydrograph. Also include information about water diversions in the system.

Another note, if the group at some time would like Judy DeLaVergne and I to present information about bull trout and movement patterns we could do that. Thanks

Barbara Kelly Ringel
U.S. Fish and Wildlife Service
7501 Icicle Road
Leavenworth, WA 98826
509-548-7573
509-548-5743 FAX

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1. What is the cost/benefit of this project. Is this project necessary or can it's goals be achieved through other means?

-Can conservation and other agricultural system improvements provide a comparable savings of water for less cost, making the

project unnecessary?

-How can an accurate assessment of the loss of aquatic habitat, as a result of this proposed storage project, be determined,

can it be mitigated and by whom?

2. What are the impacts of the proposed storage project to the fisheries resources of the Wenatchee River for all life history

stages of listed stocks and stocks of concern

-Identify the impacts of the proposed project to downstream/upstream juvenile and adult migratory life history stages including

fish passage.

-What are the proposed flow regimes for the proposed project? What are the intended and unintended consequences to both

juvenile and adult, anadromous and resident life history, particularly during the spring run off and low flow periods between

July and October?

-Is a higher, more moderated flow regime beneficial to fish at all life history stages? Better than the naturally functioning

hydrograph which currently exists?

-Will there be a hydropower component included in the proposed project? What are the effects of this on migrating salmonids?

How long will it take to get F.E.R.C. approval and license for such a venture and at what cost?

3. How will growing the reduction in agricultural lands and the increase in land development throughout the basin effect water rights

and water diversions as a result of this proposal? Can agricultural water rights be transferred to development uses? Are any

"savings" from such transactions left instream?

4. The proposed project will negatively impact a significant number of private landowners both above and below the proposed project.

What financial resources are available to mitigate for certain litigation? Who / what is the responsible party that will have to pay

the litigation costs and the potential damages.

5. How can a "no net loss of habitat or fisheries resources" be achieved given the magnitude of impacts associated with this

proposed project on the Wenatchee River ecosystem?

Bill Robinson

Executive Director

Washington Council-Trout Unlimited

WCTU@mindspring.com <mailto:WCTU@mindspring.com>

206-932-6959

Steve Craig - landowner

listed below are some of the major concerns of the landowners on and around Lake Wenatchee.

1. Bridge Built in 1941 On Highway #207. This bridge was built in 1941 by the Washington State Department of Transportation at a site approximately 500 yards East of the original bridge built in the early 1900's. Much of the road area was raised and the river channel was narrowed. Old timers on the Lake believe many of the high water floods that we have experienced in the last twenty years are directly attributable to outflow being restricted. Some may even claim that this was in effect created a DAM by limiting the outflow of the water from Lake Wenatchee. The roadbed of Highway #207 was also raised approximately 12" after the flood of 1995. A study needs to determine the history of flooding before and after the building of the 1941 bridge. The design and drawings will be forwarded to the committee and any other engineering documents as received.

2. The conceived dam site would be further up-stream and likely be higher in elevation than the bridge and road described above. Under similar weather conditions that contributed to the previous floods, a dam would further compound flood level water heights. This will cause additional damage to lakefront homes and improvements to the tune of hundreds of millions of dollars. A study needs to determine the magnitude of additional flooding caused directly by the dam, and access the dollar value of the damaged properties.

3. Lakefront property owners own the 2nd class shore lands in addition to their normal property, which of course add a tremendous value to property owners. Holding the water level high through the spring, summer, and fall would be a taking of these lands. A study needs to determine the loss in property value for which owners would need to be awarded damages.

4. Holding the water level high would negatively affect our ability to use our waterfront properties. Because lakefront usage largely drives lakefront property values, the overall value of our properties would decrease given the loss of "desirability" of lakefront properties. A study needs to determine the loss in property value for which owners would need to be awarded damages.

5. Holding the water at a higher level will cause the lands, buildings, improvements, etc. above the higher water line to be further damaged. Lake Wenatchee is a notoriously windy lake, with waves commonly 2-3 feet high. Holding the water high will cause additional erosion waves carve away the increasingly saturated soils. The normal high water already comes up the base of several lakefront cabins; holding the water there will damage the stability and safety of these structures . A study needs to determine the loss in property value for which owners would need to be awarded damages.

6. Domestic water supply and septic systems. Many property owners, both lakefront and non-lakefront, take their domestic water supply directly from the lake. While some property owners have converted to the P.U.D. sewer system, many properties still operate traditional septic systems with drain fields right down by the lake. A study needs to determine the ecological effect these potentially flooded septic systems will have on the quality of the domestic water supply (and of course to fish and wildlife as well).

Comments from Karl Halupka:

For bull trout, flow augmentation in the Wenatchee River resulting from dam releases during the midsummer period would be unlikely to have substantial benefit for either migrating adults or rearing juveniles. Bull trout adult migration through the Wenatchee River downstream of the Lake typically occurs during high flow periods. In the late spring/early summer they move upstream during snowmelt hydrograph peaks, and in the fall they move downstream after fall rains have begun. Most juvenile rearing occurs in the Chiwawa River and in or upstream of the Lake.

All life stages of bull trout would, however, be adversely impacted by needing to use passage structures at the dam to complete their complex migrations. Because bull trout movements in the drainage are so complex, the passage structures at the dam would need to pass effectively both large migratory adults and smaller juveniles in both directions during all months of the year. Adults moving upstream after overwintering in the Columbia River and mainstem Wenatchee would encounter the passage structure en-route to the Lake and upstream spawning tributaries, and during downstream migrations to overwintering areas. Adults that overwinter in the Lake and spawn in the Chiwawa would encounter the passage structure during their downstream movements to spawning areas and upstream movements to winter in the Lake. The level of juvenile migration throughout the system is unknown, but some level of movement is expected.

Lisa de Vera

From: Bill Bauer [mayor@cityofleavenworth.com]
Sent: Tuesday, June 11, 2002 10:53 AM
To: Lisa de Vera
Subject: RE: May 30, 2002 Minutes and Revised Scope of Work

Lisa,

A couple of thoughts on the Lake Wenatchee Feasibility Study.

1. Water Needs- Would there be "new" water rights created, how much and how would they be allocated?

2. Environmental Impact- Would "new wetlands" be created? Where? What impact on current owners of those properties?

Thanks for the prompt minutes and the good work.

Bill Bauer, Mayor
City of Leavenworth

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From: Daniel.R.McDonald
Sent: Wednesday, January 22, 2003 5:12 PM
To: Lisa de Vera
Subject: Ordinary High Water Definition

Lisa:

A while back you asked me for the definition of Ordinary High Water that I read at the meeting of the Group and shortly after that Bob Montgomery sent you an e-mail in which he said the following: "Ordinary High Water (OHW) definition was read from a court case involving Lake Whatcom. In that case a supporting argument on defining the high water mark was derived from an earlier case which stated "?.soil which is submerged so long or so frequently, in ordinary seasons, that vegetation will not grow on it, may be regarded as a part of the bed of the river which overflows it." The inference is the bed is below the OHW. Washington State DNR told us that the courts are using the line of vegetation as the OHW, which is the demarcation between uplands and 2 (superscript: nd) class shorelands. The 2(superscript: nd) class shorelands are located waterward of the OHW and extend to the line of navigability. The line of navigability is to the depth for customary commercial vessel draft plus 1 or 2 feet additional depth. DNR said that it is 6-10 feet of depth. We didn't attempt to define the line of vegetation in the meeting ? that is usually defined by a biologist at the site. That may differ slightly in different parts of the lake but we won't know until we look more carefully at it."

I thought that he was answering that question, but in recent review I realized that I had not answered your directly so I thought I had better do that now. My definition comes from "Waterfront Titles in the State of Washington" by George N. Peters Jr., published by the Chicago Title Insurance Company. This was sent to me by the DNR's expert in this area as a very good summary of the issues dealing with shorelands. In the definition section it says: Ordinary High Water - The visible line of the bank along non-tidal waters. Sometimes referrted to as the line of vegetation, although the latter term is not technically the same. Boundary between uplands and shorelands on navigable waters. Line of Vegetation - Sometimes, though not technically correct, referred to as the boundary between uplands and shorelands..... In addition this contact at DNR said that they considered the Line of Vegetation and Ordinary High Water as equal to each other. He said that the reason that they use the Line of Vegetation is because the courts turn to that because water courses and shorelines change over time and the Line of Vegetation will change with it whereas a more rigid survey method doesn't change. Hence this semi-subjective measurement rather than a more objective measure.

Dan McDonald

From: Bruce Jacobsen
Sent: Monday, February 24, 2003 10:10 AM
To: Lisa de Vera
Subject: RE: Lake Wenatchee Water Storage Meeting Notice WED Feb. 26th 6:30 PM, Leav City Hall

I would like to comment by email, and I hope that is acceptable. I am one of many people who have a vacation home at lake wenatchee, so Wednesday night meetings are hard to make in Leavenworth.

First, I acknowledge there are multiple uses for water, and living next to a former orchidist, I understand farming's import to this region.

But I have several issues about what is going on:

A. At least from a distance, it seems accepted that this will occur, and folks are planning on how it will occur. I truly wonder if a dam makes
any sense for the following reasons:

1. Endangered species. Given that putting a dock in the water takes extra permitting, given fishing is forbidden for some species, my common sense makes me wonder. I also have seen the dams and the efforts to remediate salmon breeding, and they seem less than sucessful. But that's not scientific information, I just wonder about being at cross-purposes here: a hatchery, docks hard to put in, no fishing, and a dam?

2. The current use of the lake. 75 years ago if you had built a dam, few would have noticed. Now lake Wenatchee has become a major recreational site. There are tens of millions, if not hundreds of millions, of vacation homes. Property on Ray's side of the lake sells for $500,000 or the like. Just multiplying through, and saying: hmm, if you reduce values by even 5%.... Produces a huge cost.

This too is a community. The damage to the value here seems incredibly high. It seems an incredibly unlikely lake to view as a watershed for farmers, as opposed to one that is used by an active community.

3. The current use of the lake, part II. In addition to the homes, there is are incredibly highly used state parks, a YMCA camp, and so on. How about the beach at the state park, for instance? The sheer quantity of people who use this lake for recreation is enormous.

4. The current economy. The state is slashing spending to sheer essentials. We cannot afford health care for poor families, teachers for schools, keeping open state parks, but we can afford another study of this dam. It just seems odd. Five years ago, of course, I would not have said this.

5. My neighbor's opinion. He is an ex-farmer from Wenatchee. He cannot believe this is worth the investment to build a dam. He thinks the cost of the studies, the likely of environmental lawsuits, not to mention building it, will so outweight any benefit to farmers. He doubts this project would have afforded any benefit to him when he ran his orchard. His point of view: If they want to help farmers, $25,000/year would be 10X more valuable than this dam.

6. The general state of farming. There is a glut of apple production right now, and everyone is moving to specialized crops.

7. Efforts of the county (I got the survey) to diversify the economy. Well, flooding the front yards of the high-tech people who love this region isn't actually showing a commitment to a diversified economy. I know it is second homes for many, but I would not be surprised if there were an increasing number of high-tech startups in Leavenworth next time the economy turns.

8. The community's support for wildlife. From the Nason Ridge effort, to open space efforts in the White River, this community is voting with significant efforts and dollars that they want the wildlife, beauty and recreational opportunities of this region preserved. I understand the legitimate demands of farmers, but the amount of the economy already supported by recreation: mountain springs lodge, the state parks, the houses being built by local contractors, Kahler Glen, strikes me as very big number. And increasing. And the lake really is the hub of it all.

In general, I must admit I just do not understand why it is in the county's efforts to pursue this.

Respectfully yours:

Bruce Jacobsen

Lisa de Vera

From: Juris Vagners [vagners@aa.washington.edu]
Sent: Monday, April 07, 2003 6:04 PM
To: Lisa de Vera
Subject: Re: Lake Wenatchee Water Storage Feasibility Study

Hi Lisa!

In reviewing the latest information on the Feasibility Study, I note the

following paragraph:

"A Shoreline Erosion analysis will be done in the following manner. Obtain existing wind speed and direction data from the Stevens Pass weather
station (the closest station with wind data) and calculate potential wave
heights along various sections of the lakeshore of Lake Wenatchee. The wave
height calculations will be based upon fetch length and wind duration. The
calculation will be performed for existing conditions and with-project conditions to compare the wave heights at different elevations and time periods when water may be impounded at higher elevations.
Note: A direct correlation between lake level, wave height and potential shoreline erosion cannot be prepared as topographical, soils and
structure elevation and condition information along the lakeshore is not available. However, the height and duration of waves at various lake levels
will provide an indication of potential changes in shoreline erosion."

Having lived at Lake Wenatchee for the last four years (and frequently visited for ten years before then) I would like to offer the observation

that basing wind speeds on Lake Wenatchee on Stevens Pass weather station
data would severely bias the findings. I have been an active wind surfer on
the Lake for the last fifteen years, so I have had ample opportunity to correlate wind speeds on the Lake with what is reported as the prevailing
conditions at Stevens Pass. To put it succintly: Unless you have a reasonable amplification factor to use, the Stevens Pass wind speeds have
little to do with the actual wind conditions on the Lake. Reported westerly
winds of fifteen to twenty miles per hour on the Pass are usually a good

indicator that it is blowing on the Lake, but the wind speeds on the Lake
are usually twice that, if not more, due to the unique orientation of the
Lake valley as well as the driving forces of the pressure differential between Western Washington and Eastern Washington.

As we say in the wind surfing world - westerly winds on the Pass are an indication that it may be "nuking" on the Lake, but you don't know what sail to rig until you actually get there.

Please consider a more careful analysis of the situation.

Juris Vagners
Professor Emeritus
Aeronautics and Astronautics
University of Washington

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Lisa de Vera

From: D. SATTERFIELD [davesfield@attbi.com]
Sent: Wednesday, May 28, 2003 8:00 PM
To: Lisa de Vera
Subject: Comment on Lake Wenatchee Water Storage Feasibility Study

As landowners on the Lake Wentachee S. Shore, we are extremely concerned about the possibility of higher water levels throughout the summer. Our lot is very steep with the usable portion being the beach. Higher water levels could potentially cover 75-100% of our normal summer recreation area, and adversely affect the use and enjoyment of our property.

We are also concerned about the proposed dam blocking access to the Wenatchee River from the lake and the State Park boat launch. We regularly paddle our kayaks from our property to the headwaters of the river, and continue downstream to Plain. The proposed dam would make this enjoyable trip impossible.

Without a usable beach at our property, our resale value would be greatly diminished.

As property owners, we appear to have nothing to gain and much to lose if this project is completed.

We would like to attend the June 19th meeting , but it is on a Thursday and we would have to take off two days of work to attend. Seems like you are trying to make it more difficult for landowners that live outside of Chelan County to be involved. It would be much more convenient to hold the meeting on a Friday.

Molly and David Satterfield
23417 Edmonds Way
Edmonds, WA 98026
Phone: 425 672-4679

Comments received post final report:

From: Al Hillel
Sent: Tuesday, July 01, 2003 11:10 PM
To: Lisa de Vera

Subject: Re: (no subject)

THE LETTER BELOW IS ALSO SENT AS AN ATTACHMENT IN THIS EMAIL.

July 22, 2003
Dear Ms. DeVera,

I am writing to offer my opinions on the Lake Wenatchee Dam Proposal. I am a property owner on the north shore since 1985. A number of issues have been discussed regarding the feasibility of constructing a dam, as well as some of the benefits and losses associated with building the dam. Overall, in my 18 years observing the lake, water levels, and erosive abilities of the waters in high wind conditions, I am opposed to the dam, and see very little that has been suggested as a benefit that would warrant consideration of the project. I will outline my thoughts as numbered entries below.

1- Salmon: A number of comments were made suggesting the potential benefit to the Lake Wenatchee salmon runs, such as maintaining water levels for upstream migration, and stable water levels for egg hatching. As a first point, about 3 years ago, when the lake was at its lowest in about 20 years, the salmon run was one of the largest recorded, suggesting that the salmon are not in need of managed water levels. I had the opportunity at the last "town meeting" to talk with Dudley Reisen, the fishery consultant for the feasibility study, in my small discussion group. He pointed out that the success of salmon runs is multi-factorial, and depends on the hatch of the salmon run originally, the water temperature, ocean storms, the level of predator populations, and ocean storms. The "belief" the flow levels need to be managed for the salmon is completely unfounded, and of interest, according to Mr. Reisen there is no association in Lake Wenatchee with the health of a particular year's salmon run and water level. Where is the chart in this feasibility study that reports on year v. salmon run population? There is no such chart because there is no correlation between the two. Perhaps more simply stated, the salmon have been coming into Lake Wenatchee (the few that make it past all the other dams) for 50,000 years without water level regulation, and it is rather presumptuous to suggest that our management is likely to improve conditions for them. Dr. Reisen offered that there are no reliable studies in the fishery literature to support a belief that managed water levels will benefit the salmon runs. In any case, the dam would not prevent the levels from dropping in a dry year, but would instead delay the drop by about 5 weeks. Low water time will be changed from August to September. Salmon used to laying eggs in August with the anticipation that the stream levels will not drop significantly would, if the dam were in place, perhaps be laying their eggs in the soon-to-be dry bushes.

2- Shoreline: Changing the shoreline could have drastic effects. One

issue is the vegetation, again which has been in place for eons. What is the estimate of numbers of trees lost? What is the management of dead trees? Will they be cut and stumps left in place? Will the trees be left to fall into the lake along the shore? What will happen to the areas of shoreline such as the northeast-undeveloped area where trees grow to the waters edge? Will the trees die? What will happen to the marshlands at the west end of the lake? Where is the wetlands report that discusses raising the water levels in the marshes?

On another note, the north shore, starting from about one mile east of the western end of the lake, takes an enormous impact from the wave action during the frequent high winds that create white caps. The undeveloped areas along the north shore have reached a stable condition, with either rocky shores, or shallow beaches that temper the wave action during high surf. When the water level is raised, how many years will it take for the shoreline to readapt? Will it readapt in our lifetimes? What will be the impact of the erosion into the lake?

The questions of shoreline erosion begin to have an enormous economic and individual impact when the areas that are developed undergo examination. A tour along the north shore shows a number of "solutions" that cabin owners have adopted to deal with the wave action. Some have left natural rocky beaches when their property is deep enough to allow a cabin between the shoreline and road. Others have built "bulkheads" of various designs to raise the level of the shoreline so that they could build a cabin. Even at the current water levels, were the feasibility study to interview landowners, the difficulties of maintaining these bulkheads would become apparent. Erosion is a big factor, and in the years that the water levels stay high in June, it is not uncommon to have areas of the developed shoreline washed away. How will these protective beaches and bulkheads be managed after the dam is built? Most cabins are built at a height above the lake to allow for high water in all but the 100-year flood level. With increased erosion, and a dam in place to impede runoff, how will these shorelines be protected? In the event of the rapid thaws that occur every few years, will the impede outflow change a high water level to a flood level (the difference between "high" and "flood" is 12 to 18 inches)? Who will improve these current bulkheads for a higher water level? Who will maintain the damage to the cabin "yards" and the cabins themselves when these "floods" occur when they might not have otherwise occurred? Who will decide whether such "floods" occurred due to the dam or due to "nature", and thereby decide in each instance if compensation is appropriate?

3- Lake Wenatchee, in addition to being a wonderful natural resource, is a prime recreation area. For these purposes, many properties have docks. The levels of the docks have been designed to be useable primarily from late June to early September based on usual water levels. If the lake were raised, these docks would not be useable until early August at the soonest. How will this be managed? For instance, my fixed docks cost about $18,000 nine years ago. To redesign, and rebuild them would be an expensive undertaking. How will this be managed? Who will do the building, and who will assure that it is done to good standards? Will the Chelan County building department, SEPA, Fish and Wildlife, and the Army Corps of Engineers (all of whom reviewed and had to approve the plans before I could build my dock) approve a redesign, even though the regulations have changed since 1994? Since concrete docks are not longer allowed, will these agencies grant exceptions so

that my neighbors and modify their docks to the new water level? Or will the old concrete docks need to be removed since these will now be "new docks"? Who will pay for this, who will manage it? The value of Lake Wenatchee waterfront is about $5000/ft. If the shoreline becomes more hostile due to wave action, if the yard between the cabin and lake is narrowed, if the cabin is more in jeopardy at high water level, what will be the dollar/ft value? Will it be $4000/ft? Or maybe $3000/ft? Or if the cabin is very close to the water will it be $2000/ft? Or if the building lot becomes unbuildable, will it be $500/ft?

In summary, a dam on Lake Wenatchee has no precipitating need, has no clear benefit, has innumerable unanswerable concerns, and will have a natural and economic impact that could be devastating. In an era in which we are realizing the adverse effect of previously built dams and trying to find the funds to dismantle them, it seems unconscionable and irresponsible to plan on putting in a dam in one of the last accessible natural lakes in Washington. It seems inconceivable and irresponsible to build a dam on a lake that supports one of the few viable (although endangered) salmon runs left in the state of Washington when it is clear that there is no known benefit to the salmon, and a multitude of immeasurable risks to the salmon.

It also is remarkable that this effort to consider a dam on Lake Wenatchee follows the passage of the Shoreline Protection Act, which prohibits and activity that would cause a change within 100 feet of any shoreline.

Were this a totally undeveloped lake, the concerns could be focused on the issues of the impact to nature, but this is a very developed lake with enormous economic value. The costs to compensate and rebuild the properties would be staggering, and likely be 10 to 20 times the actual cost of the dam. In the most conservative case, if the value of the shoreline was assessed at a drop of $1000/ft due to the loss of beach area, for the over 300 properties, this would be over 30 million dollars. A more realistic estimate would be 70 to 80 million dollars. This figure would not include the cost of bulkheads, maintenance of these bulkheads, changes to cabins needed to accommodate the new water level, and changes to docks to adapt to the new water level. Overall, the economic compensation would easily exceed $100,000,000 as an initial cost, with additional economic impact at risk depending on the possible erosion and incidence of flood levels.

Clearly, this dam would have an enormous impact in a delicate ecology, and with no compelling reason (such as frequent flooding of the Wenatchee River) to build this dam, continued efforts to justify it are irresponsible. If the dam were built, at the risk of tremendous environmental and economic costs, what will be the legacy? As inhabitants of an extraordinary natural resource, are we compelled to try to extract every possible product of the environment? When will we have extracted enough? How big an ecological mortgage is the limit? If we investigate and perceive more equity, shall we always re-mortgage to the limit? Or slightly beyond the limit to be sure we got it all? Aren't there times when we should leave a bit of a margin in case we are wrong? A dam on Lake Wenatchee is an unwise venture for the sake of limited benefit at the risk of enormous, unrecoverable loss.

Al Hillel

From: Barb Larimer
Sent: Thursday, July 31, 2003 8:20 PM
To: Lisa de Vera
Subject: Lake Wenatchee Water Storage Feasibility Study

We are a family of 14 parents and children who have had a cabin at 15470 Cedar Brae Road since 1972. (Lot 25 and the east half of Lot 26) This past year we invested in a significant upgrade of this cabin.

We want to express our deep concern about changes in water levels at Lake Wenatchee. We have reviewed the study recently posted on your website and find that it raises as many questions as it purports to answer. We have observed first hand for many years the effects of natural changes in the Lake levels on the small beach in the front of our cabin and on the dock we built long ago. These have been quite significant and we are concerned that the higher water levels at certain times of the year will increase these effects nearby.

We all are very disturbed that others would have another natural shoreline altered in this manner. We all are very concerned that the change that is being studied would be proposed for the benefit of a small agricultural interest when not only the present property owners, but all the residents of the State of Washington would bear the loss of this great shoreline. We need to protect our natural shoreline, not destroy it.

What also would happen to the water quality? We have drunk water straight from the lake for over 30 years.

It is also difficult to discern the motives behind this proposed project. It is hard to determine who the beneficiaries are for whom we on the lake would be taking the risks of altered lake levels, loss of wetlands, fish habitat, perhaps even safety.

We are frankly very skeptical about a project which appears to offer significant impact on the lake for a relatively small amount of intermittant, additional flow. Please keep us on any contact lists you decide to maintain. Our family's contact is Barbara Larimer, 3016 30th Avenue West, Seattle, WA 98199. Her email address is b.larimer@comcast.net.

LARCO, a family partnership

From: JDBraun
Sent: Friday, June 20, 2003 1:44 PM
To: Lisa de Vera
Subject: Water Storage comments
We believe this study was a tremendous waste of tax payer money. It would have been more logical to study all possible water storage areas in Chelan County, such as the Little Wenatchee and Icicle Canyon. Each member of this committee should give an opinion as to his thoughts about its validity.
Dick & Joan Braun

From: Bruce Jacobsen [bruce@thejacobsens.com]

Sent: Monday, July 21, 2003 1:22 PM

To: Lisa de Vera

Subject: RE: Lake Wenatchee Water Storage Feasibility Study-Final

Comments

The dam makes no sense. Studying this project further makes no sense. A. The endangered species issues are unstudied (why?) and preclude this being a viable candidate. In a lake where building a dock is highly problematic, a dam makes no sense. B. The economic costs were understudied, underestimated. The lost of value to the current home owners; the consequent lost of tax dollars; the cost of buying land rights; the diminishment of recreational value and hence dollars -- are huge costs. The simple logic of: we're going to diminish the values of houses that already exist, so we can increase the value of houses yet to be built, or build more of them -- escapes me.

The supply of water may be a limiting factor to development. Why not just turn off the water on some existing homes so you can build more, or tell current homeowners they can use only 1/2 their current water?

From: Dana Aspinwall

Sent: Wednesday, July 30, 2003 6:16 PM

To: Lisa de Vera

Subject: Lake Wenatchee Dam Study

This should not be called a study as it is a compilation of data used to support a project in which the reports' authors hope to gain thedesign contract--a clear conflict of interest to objectivity. It is designed to make the public accept the least obnoxious alternative. Weprefer the "No Action" alternative. This company spent so much time on site that they believe that the Blue Grouse Lodge is on the lake and that there is a golf course in the White River valley (neither of which is even close).

In spite of opptomistic comments to the contrary, property values would be negativelyaffected, and the purchase of second class shorelands would be much more expensive than estimated. (We will not give up ours without a fight) I also have property in the lower White River that would be negatively impacted. We cannot agree with the conclusion that the effect on property owners is "not significant". Many of the conclusions are based on conjecture and the report says that the "effects are unknown". Beaches will be gone and new erosion will be at the expense of improvements. Who knows what effect the resulting turbidity would have on water temperature and the many private water systems on the lake. Old and new logs and debris will be floated and be a hazzard to boaters, docks and seawalls. Any restrictive structure in the river including the side abuttments that the proposed dam would rise against will increase the damage caused by flood events.

The major environmental impact is barely mentioned. The hydroperiod in the delta at the west end of the lake would be devastating. There is more than an uphill move of willow and sedges. It is heavily forested with Red Osier Dogwood, Cottonwood, Aspen, Western Red Cedar, Grand Fir and in some higher islands Douglas Fir, White Pine and even Ponderosa Pine They now tolerate the short seasonal inundation but would die from an extended period of high water table The waters would be choked by oxygen robbing organic matter. The "side channel habitat" would be warm, stagnant water that would mostly breed mosquitos. With mosquito bourne diseases making it to our state, it becomes a health concern as well. (not to mention the effect on the recreation tourist of a longer mosquito season) Also there is the possibility that the extended high water would allow the White River to form a new outlet into the lake about one quarter mile south of the former Cougar Inn site, which would lead to silting in the bay and further impact private property.

Finally, this is a proposal that has always been a bad one, has been turned down repeatedly over the last 70 years and needs to die now, A quarter million dollars of taxpayer money has been

wasted on this "study". Technical feasability does not mean that it is a wise use of public funds. The costs to the property owners, Chelan County and the enviroment far outweigh the benefits. The proposed project does not provide the current needs which is admittedly on the decline. We want to live on a lake--not a reservoir. Thank you.

Earl Landin and family

–

July 30th, 2003

Lisa deVera
Project Coordinator
Chelan County Natural Resource Program
411 Washington Street
Wenatchee, WA 98801

RE: 15300 Cedar Brae Road and Water Storage Consultant report

Concerns and Considerations:

1. **Consultant's methodology of valuing 2nd class shorelands**. As a land owner currently holding these rights, I believe the manor in which Jones & Stokes applied the DNR model was not properly matched to the historical parameters at Lake Wenatchee. Therefore, I believe that Jones and Stokes' estimate of monies needed to obtain 2nd class shoreland lease rates at $1.4 - $3.5 million at the 1870.3 level are significantly under valued and the math and attitude for arriving at these numbers are inaccurate. Facts I believe that Jones and Stokes' overlooked are as follows and I ask that these issues be addressed in the overall decision.

   A) It is my understanding that Jones & Stokes (J&S) used a simple averaging methodology in assessing the values for North Shore and South Shore properties. One should note that:
      - There are more linear feet of shoreline on the North Shore with 2nd class shorelands than there are on the South Shore, and
      - Assesed values on the North Shore on average, are three times that of the South Shore. The methodology that J&S, should have been used should have included a weighted average calculation in order for J&S to determine the value per square foot of second class shorelands. This would have returned a more accurate value per square foot to the study giving the decision makers a realistic view of the amount of money that would be needed. Should the J&S numbers be used without this correction, the project would be immediately over budget. Why was their no weighting in their calculation?

   B) It is my understanding that J&S did not conduct proper research and ignored testimonies from Realtors in the area and two landowners on the committee in applying another model. Again, a misrepresentation. In this case, since testimony was issued, and any basic research company could have arrived at the same conclusion, leads me to believe that the data was intentionally ignored, thereby causing another inaccurate result. As I understand it, the methodology used was historically inaccurate data to determine the gross value of second class shorelands. J&S multiplied the gross value of second class shorelands by a factor of 25% since the 2nd class shorelands supposedly would only be flooded 3 months of the year (i.e., 25% of the year). However given the seasonal nature of Lake Wenatchee, the months of July, August, and September account for nearly 100% of the use of these 2nd class shorelands. Again, I understand numerous testimonies were given, and I would like to understand why this data was ignored. My and other lakefront owner's value are tied to this period of recreational use. Why was this data ignored?

C) Flooding would affect my ability to use and would devalue my property as the beech is the one use we have of the property. I understand that J&S did not account for a very noticeable factor – many of the lakefront properties are very steep. Why was Beachfront, which accounts for the vast majority of the overall values of many lakefront parcels not considered in J&S' math? Common sense, the law of economics and history show us, that during the past 100 years, when those things which create value of property are eliminated (i.e. beaches that are submerged by water, thereby eliminating alternative uses / activities on the property), the property values fall dramatically. Therefore, the math used and assessment methodology, should more correctly place additional weight on the significance of these shorelands, realistically in the range of a 300% to 500% multiplier. Again, why was this ignored in this study?

2. **In the study, where are the landowner categories of**:
   - lake-view and neighboring properties which utilize many of the County, State, and Federal beaches, and
   - those properties on the Wenatchee Riverfront which also benefit from lower water levels during July, August, and September?

   It seems that the latter would be at direct risk of substantial flooding in the event of dam breakage or severe leakage. Again, history shows us that property values will devalue with just the knowledge of a dam being up-river from these riverfront properties. Why were these categories not included in the study as they would have impact on the decision?

3. **Dock Value:** Being a dock owner, I believe, ney I know, that there has been inadequate analysis on the true costs of adjusting existing docks, boathouses, retaining walls, etc. in order to work with a water level of 1870.3. For example, Table 5.1-2 on page 5-6 of the report states that docks have a high value of $14,400. I have a very simple dock. Docks for the past several years have increased in cost due to the rise in products used, environmental concerns, and limitations on construction methods and heavy permit fees. For example, my dock, three years ago, cost me almost $16K and I have a very simple floating dock. Therefore, the $14,400 number is questionable. I am aware of several dock systems at $20,000 - $30,000, all within 300 yards of my property. These incorrect base prices combined with a lack of assessment of how many systems will need modifying have resulted in an inaccurate assessment of the total overall costs of constructing a water storage facility. Therefore, it begs the question; How was the $14,400 number derived and did anyone take into consideration the last three years of governmental requirements for Dock, anchoring and piling construction?

4. **Legal fees.** I did not see any areas in the report that addressed or attempted to address the huge legal costs of building a dam as landowners, environmental groups, or the like, or any lawsuits to be filed to block any such proposal, especially with the inaccuracies currently within the report. These lawsuits would undoubtedly last for 5-10 years, and the costs need to be properly addressed in calculating an overall cost of a dam.

5. **Wind / wave analysis.** I have to be frank here. This analysis had to be based on a relative calm wind day, not the norm. I have lived here for over three years now. I live on the South Shore at the Southeast end of the lake. Wave heights commonly exceed those calculated in this report. For example, it is stated that wave heights of 1.2 feet will result at the southeast end of the lake when there are 25 MPH winds at a water level of 1872.4 feet. Even under normal low summer water levels, I have experienced wave heights of 3+ feet crashing over the dock and my beachfront erodes quickly. Therefore shoreline erosion will occur in much greater magnitude than this report forecasts, having negative effects both on property values and lake ecology. Additionally, the high water mark rises due to the energy behind the wave. I did not see any studies showing the effect of the energy on the 3 ft+ waves (i.e. if water is already high, how much higher will it go with this energy behind each and every wave?). How did the consultants come up with what appears to be a very inaccurate number?

6. **Market Savvy:** Property devaluation cascading, should have been considered in the report. If a dam is constructed, the aspects of the waterfront property will be compromised, and thus the waterfront parcel will drop in value. Since values cascade to non-waterfront property, the value of the non-waterfront property must decline to a level where buyers are once again attracted. Said another way, Lake Wenatchee waterfront properties, which have historically been the highest valued properties in the area, will decline due to the negative changes of Dam construction and use. Because properties that are near high valued properties, traditionally move with the market, all other properties in the area rise or decline based on value (i.e. should the

waterfront property rise in value, the non-waterfront properties rise in value as well. Subsequently, should the waterfront property sink in value, their market demand is affected by the lower cost of waterfront property. Therefore lakefront and non-lakefront property in the Lake Wenatchee area are all affected. I did not see any consultant numbers, criteria, or recommendations in this area. Was this addressed?

7. **Historic Structures:** I have two cabins on my property that were built in I believe 1929. If they are not historic, they are at least grand-fathered in and are currently standing on my property. One we are fixing up to turn into another sleeper cabins. It has a fairly new roof on it and we just leveled it. Under the water levels identified, they would be put in jeopardy as one of the cabins is closer to the water than the main structure. How will this affect my right to enjoy the use of my property?

I am disappointed in what appears to be the lack of thoroughness by the consultants, or possibly a complete disregard of the instantly recognizable data and historical analysis available. But it is obvious to landowners both waterfront and non-waterfront alike that 1870.3 and 1872.4, will have titanic effects on sinking property values both on and around Lake Wenatchee as well as incredibly expensive litigation and mitigation of Risk.

Sincerely,

David R. Starr
Waterfront Owner

Doug Weber
16601 Northshore Drive
Leavenworth

Home Address
17700 Bear Creek Farm RD NE
Woodinville, WA 98077

July 31, 2003

Public Comment on Lake Wenatchee Water Storage Feasibility

The Lake Wenatchee water storage feasibility study suggest that supplementing stream flow in the upper Wenatchee River during late spring, summer, and early fall would benefit spring Chinook salmon migration, spawning, and early life history survival. The following data indicates that this precept is incorrect.

Figures presented below are compiled from two data sources: average stream inflow recorded at Plain over the months of July through October in the years 1957 to 1978; and escapement of naturally produced spring Chinook salmon in the upper Wenatchee River and its tributaries for the years 1961 to 1978.

The average four-month flow data covers the time period when one or more of the operating alternatives presented in the feasibility study would be releasing Lake Wenatchee storage water into the Wenatchee River. Escapement data (number of spawning spring Chinook) is shifted: four years to the left (Figure 1) to represent flow conditions when the parents were migrating and spawning and the progeny undergoing early egg development; and shifted three years to the left (Figure 2) to represent flow conditions during rearing, and for some yearlings, outmigration (other yearlings outmigrate the following spring).

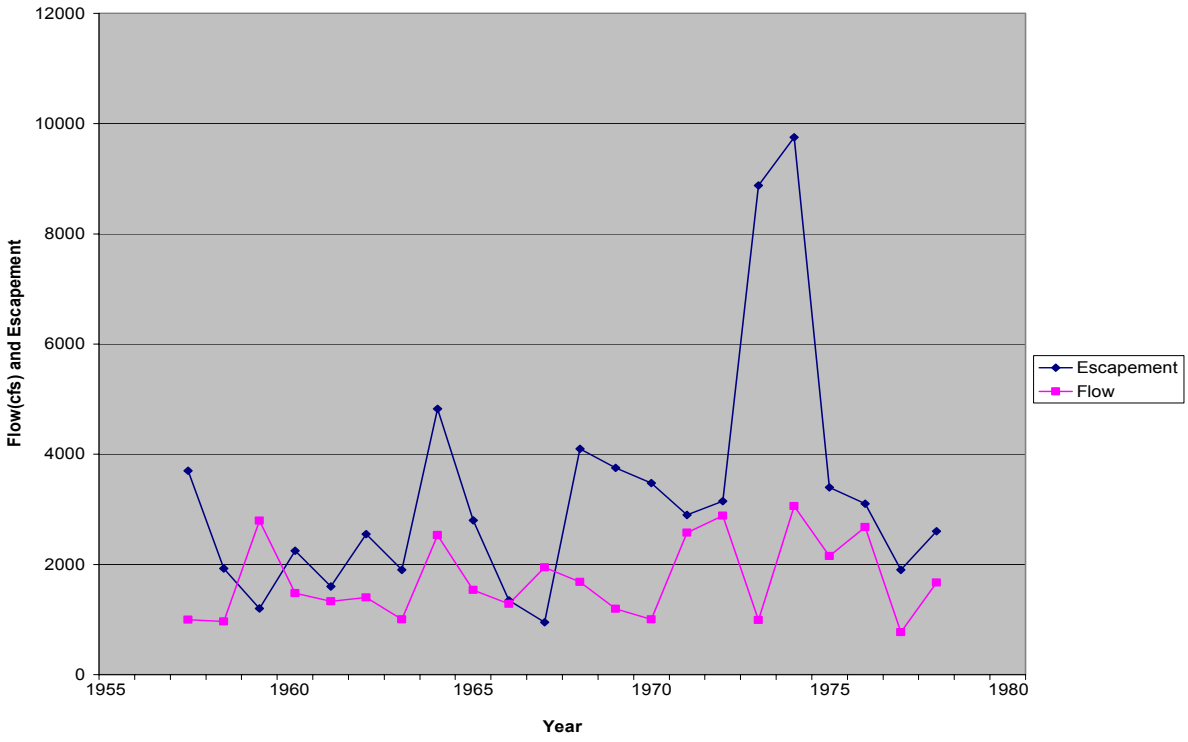


Figure 1. Average July through October instream flow at Plain (Years 1957-77) compared to spawning escapement of naturally produced spring chinook salmon to the upper Wenatchee River four years later (1961-81).

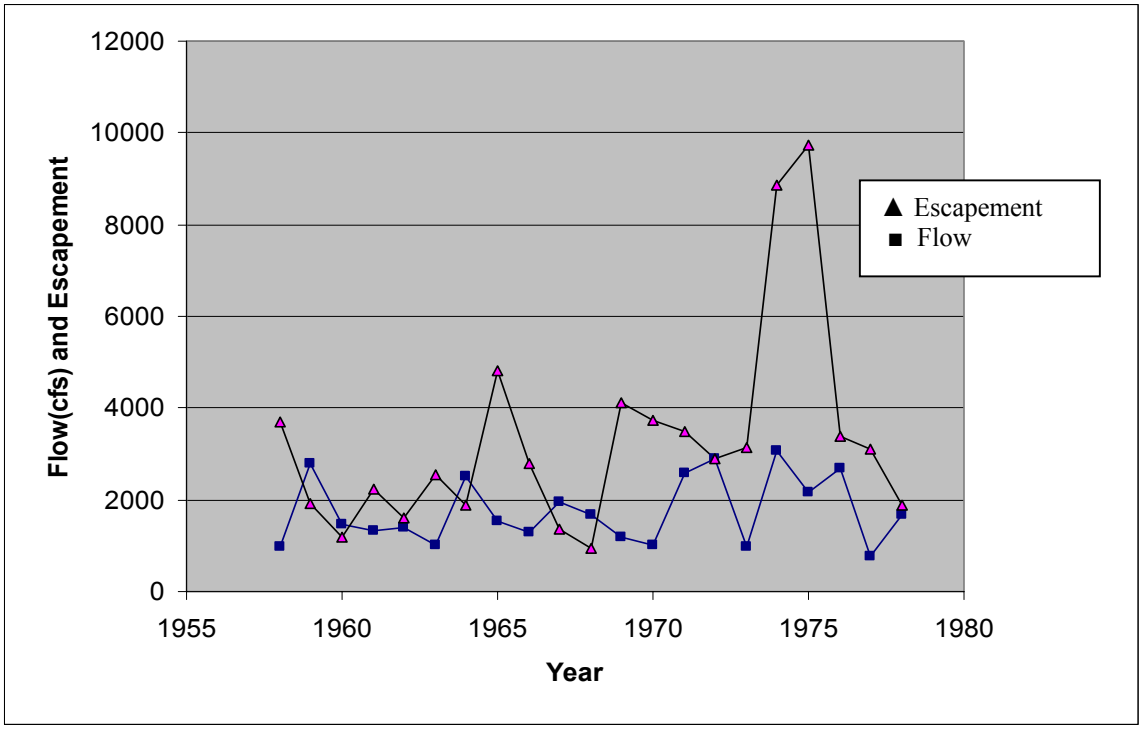


Figure 2. Average July through October instream flow at Plain (Years 1957-77), compared to spawning escapement of naturally produced spring chinook salmon to the upper Wenatchee River three years later (1962-81).

The data in figures 1 and 2 is replicated in figures 3 and 4 as escapement versus instream flow. The low R^2 values shown in the later two figures indicate little linear relationship between stream flow during late spring / summer / early fall months and chinook escapement three and four years later.

Figure 3

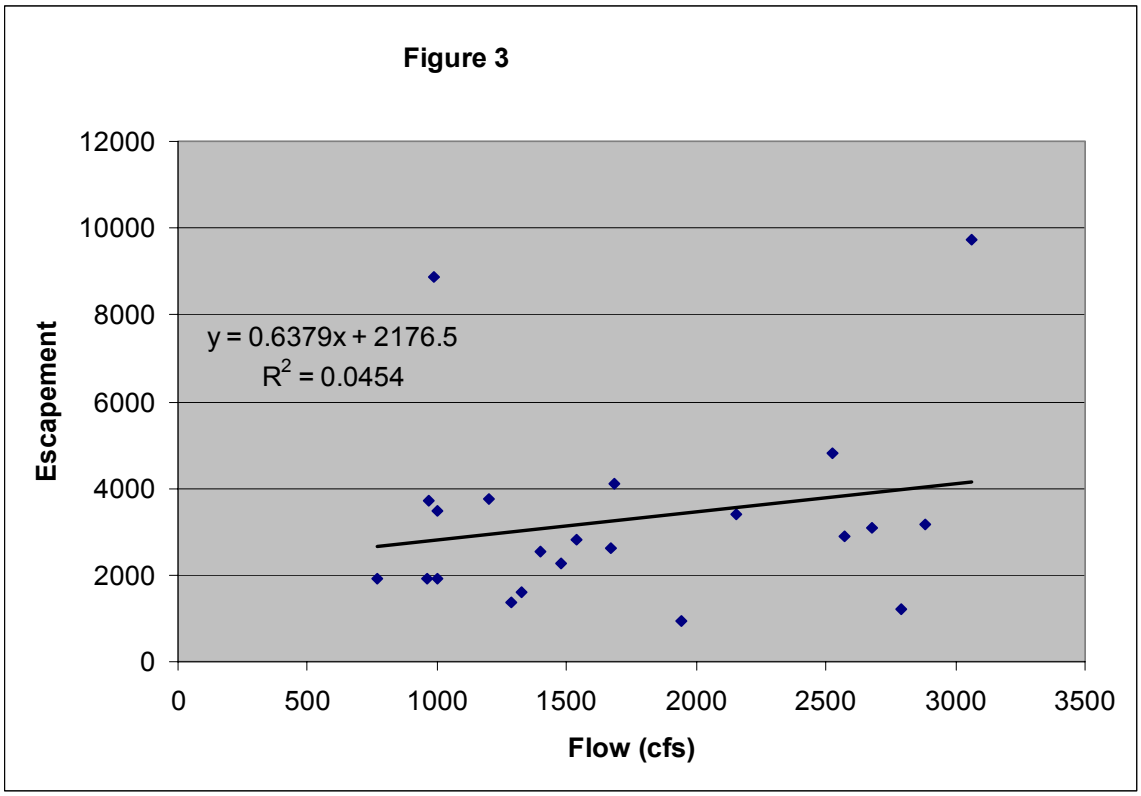
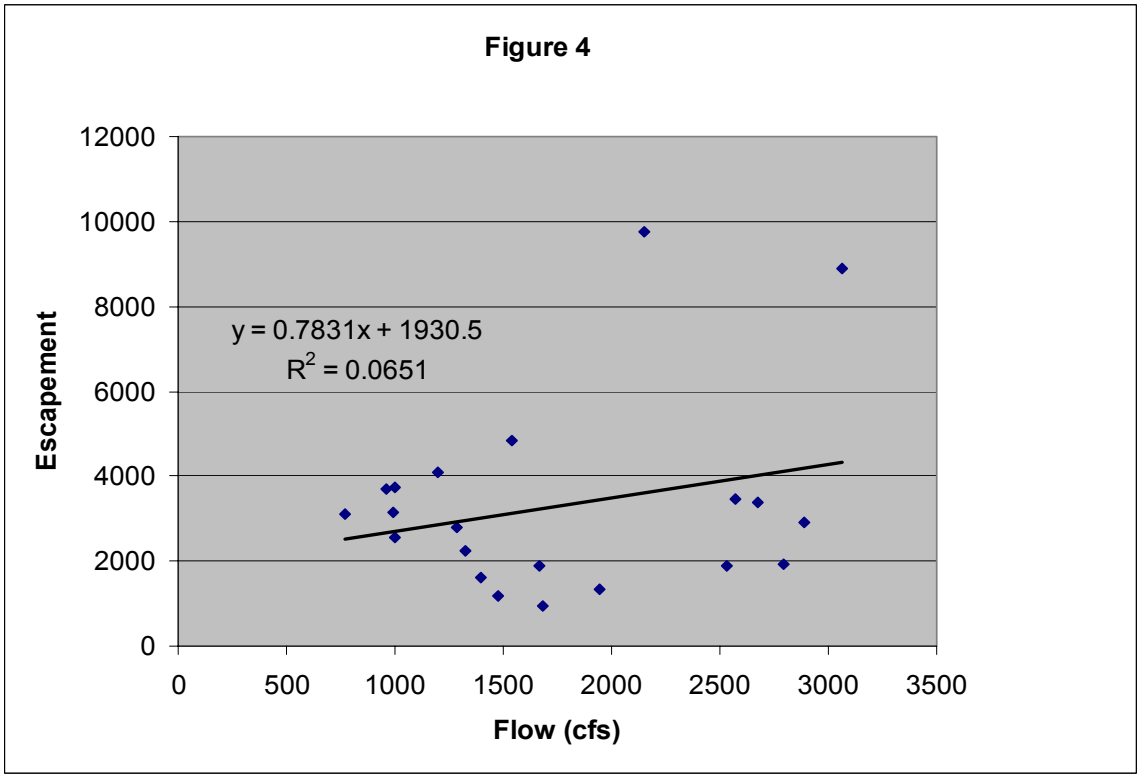


Figure 4



In addition, if supplemental water flow from July through October were to benefit wild spring chinook in the upper Wenatchee River this would effect less that 20 percent of the naturally produced population since over 80 percent of the escapement is to the tributaries.

Thus, justification for the rubber damn will have to stand on merits other than being of benefit to migration, spawning, and rearing of wild spring Chinook salmon.

From: Eric Hipke
Sent: Tuesday, July 01, 2003 12:28 AM
To: Lisa de Vera
When I first heard that a study was being done to dam Lake Wenatchee I laughed about how somebody had managed to fool some grant money into their pockets. It's hard to believe that in this day and age with all the talk about removing dams around the NW that something this outrageous would be suggested. Well, I'm no longer even smiling because the process has continued on farther than I thought rational thinking possible.

Lake Wenatchee is one of the few glacial valley lakes of its size that have not been dammed in Washington. It is as free flowing and natural as it was when it was created. It would be a crime to upset the balance that exists with the ecosystem, the animals and the humans.

If you raise the normal fluctuating level of the lake, you don't have to be a scientist to know that increased erosion will take place. The trees closest to the water will fall as their roots are saturated and undermined. The land those trees used to hold in place will be washed away by wave action. Then the hillsides will start sliding into that void. Any kid that's sprayed a hose at the base of a mound of dirt can tell you that's what will happen.

It will take years for that scenario to play out. But when it does and the damage to the cabins, roads, sewer lines, and campgrounds starts occurring, you can bet the lawsuits will start pouring in. And with all the Microsoft money that's come into the area recently, you can bet the Chelan taxpayers will be paying for some costly court battles against high priced lawyers.

And then there's the ecologic loss of the wetlands at the head of the lake and the increased erosion will cloud the clear water of the lake itself. The effect on the existing fish and wildlife would most likely be detrimental. It all adds up to a dam being a bad idea.

If we humans are running out of water in the area, maybe we should realize that we are getting to big for our britches in the area and need to limit growth. Possibly in the near future we'll be able to manage our water more efficiently with improvements in conservation and farming techniques. Who knows? But please, let's not destroy the natural Lake Wenatchee valley with a shortsighted blunder.

Sincerely,
Eric Hipke

From: ASPIRIENT@aol.com

Sent: Monday, June 23, 2003 6:56 PM

Greg: Thank you for making a very good point. There should be some positives, such as benefiting the agricultural and residential development that have water need needs that go beyond forecasted availability. There are also requirement to increase the in-stream flows to support fish during the drought years. This process has demonstrated that a delicate balance exists between competing needs. I am confident that those needs can be met in the future with technology and conservation that uses water more effectively. Best regards, Ray Aspiri The Friends of Lake Wenatchee Forests

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Lisa deVera
411 Washington Street
Wenatchee, WA 98801

Re: Lake Wenatchee Water Storage Feasibility Study

A dam at the outlet of Lake Wenatchee might be technically feasible but it is a poor option if the effort is to provide additional water in the Wenatchee watershed. It is pretty clear from reviewing the previous studies that adequate water is available to the Wenatchee Irrigation District to provide for the agriculture needs of the Wenatchee watershed. Draught years in the 20's and 30's prompted the early studies – but despite low flow years the Wenatchee Irrigation district has had adequate water. The only problem for fish has been since the new fish ladder was put in at the Tumwater Dam – water had to be diverted by a wood diversion system. The salmon seemed to be able to jump the Tumwater Dam even in low years. And the salmon returns have never been higher. It is obvious that the need for water is not agriculture, not salmon but to provide water to the homes and businesses that will be built as the orchards are pulled out. The projected growth in Leavenworth, Cashmere and Wenatchee has been covered in recent articles in the Wenatchee World. If the Peshastin Port site is developed many homes will be required, and a stable water supply required. But putting a 10-foot inflatable dam at the outlet of Lake Wenatchee will not make a significant input to the anticipated water needs.

When the major effort in the United States is to preserve natural eco-systems and habitat, and remove offending dams, especially in the Northwest, it is mind-boggling that anyone would seriously want to destroy the most significant remaining natural lake-river spawning system producing natural Sockeye salmon and Chinook salmon whose runs have never been healthier. The lake-river systems are healthy because they fluctuate naturally, the spawning beds, food chains, lake shore, water temperatures are natural and not destroyed by a dam that mitigates all of the above.

Water needs will become critical and solutions will need to be found. But putting a dam on Lake Wenatchee is a poor choice. Even though technically feasible, I think the socioeconomic and environmental impacts are just too great – the costs too high. Many of the summer homes would lose their waterfront. The residents of Lake Wenatchee are considered somewhat unusual in that they tolerate a constantly changing shoreline, somehow exist with hordes of mosquitoes, and

have adapted to constant winds, waves and cold water. We love it – Lake Wenatchee is a retreat, Lake Chelan is a resort. We don't want a lake with a fixed, sterile shoreline, warm water, Milfoil, sucker fish, and destroyed spawning beds in the lower Little Wenatchee and White Rivers.

Other options need to be investigated. Water conservation efforts should be maximized. I am told that the micro irrigation systems conserve large amounts of water. Help orchardists convert from the old overhead and large volume under tree sprinklers to the new micro systems. Investigate putting a high dam in Tumwater Canyon and develop a much better and safer road following the railroad down the Chumstick. The Tumwater is scenic, but it can be explored by boat. Only the Alps and a very few cabins would be effected. Consider a dam on Ingalls Creek. It would have no effect on salmon or other fish, and would not destroy or displace summer homes or recreation. It could provide significant water storage with little environments impact.

Finally, it seems to me that a great number of Washington citizens would be largely deprived of an escape to a pristine outdoor experience. The Lake Wenatchee State Parks at both the Glacier View end and North and South Parks would lose a great deal of their waterfront as would the Lake Wenatchee YMCA Camp and Girl Scout Camp at Zanika Loche.

I feel the State of Washington has much better uses of its resources than continue the study of putting a dam on Lake Wenatchee. It has twice before been deemed not practical. Please put it to rest once and for all.

Gerald and Barbara Gibbons
16215 North Shore Road
Leavenworth, WA

From: greg overturf
Sent: Tuesday, June 24, 2003 6:20 AM
To: Lisa de Vera
Subject: Lake Wenatchee Water Study

Lisa; thanks for the opportunity to make a few comments. The study that was conducted was put together rather well and did contain most of the information to be able to move forward in the process. However there is more information that the contractor has indicated that could be made available or will be required in order to allow the project to gain the required permits. Tiering to previous studies required for the salmon enhancement program if it was based on "sound science" rather than a knee-jerk reaction should be included. I was at Lake Wenatchee last week and noticed more docks/floats have been constructed over recent years and was wondering if the owners had to comply with the Corp permitting process to construct them- Is lake Wenatchee considered a navigable water and does it fall under the Corp of Engineers permitting process.
Thank you.
Greg Overturf
Sitka, AK

From: Gwendolyn Walsh
Sent: Friday, July 25, 2003 10:51 AM
To: Lisa de Vera
Subject: Lake Wenatchee Dam

Lisa and whoever else:

I have been unable to attend the meetings recently, due to having my foot in a cast, but I have downloaded the report, so have a sense of what is going on. I have been going to Lake Wenatchee since 1960 when my husband did research for the Leavenworth Hatchery. Our family purchased a 100 foot lot and built a cabin at the West end of the lake on Northshore drive in 1975. We have seen many seasonal changes and watched many salmon runs in the fall. I am very opposed to the alteration the the natural cycles of Lake Wenatchee by any kind of dam(inflatable or otherwise), as it is one of the best examples of how natural cycles work in the whole Northwest. In the year 2001,(I think) when everyone was worried about low water, I hiked up Mt. Mastiff and saw that the Spring water was still flowing off the mountain in Mid-September. Although the natural cycle of flows altered the lake level, I saw that there was still plenty of water for over 300 returning Chinook salmon on one section of the Wenatchee river. It was a great year for sockeye as well. Lake Wenatchee is rich in all kinds of biological life in the outlets of the Little Wenatchee and White River where they flow into the Lake. Any artificial alteration of Lake levels in those areas would cause irreversible damage to that ecosystem. These are very significant wetlands which should be protected. We are 3 generations of Lake Wenatchee property owners, and we all object strongly to altering the lake with any kind of dam device. Not because of what it would do to our property, but because of the damage to the ecosystem. At a time when people on the Missouri River, the Elwa,, and the Columbia River are rethinking old decisions to build dams and altering natural ecosystems, I think it is time for humans to get wise and stop trying to change nature. The fish runs will certainly be impacted, and so much else will be as well. It is obvious that this whole project is more about politics and financial gain to a few. We owe it to future generations to put a stop to this project. This lake has been studied before and rejected for dams, so lets listen, and stop further studies. Washington State has so many other needs, lets not waste money. So, our family votes to Stop The Dam(n) Project NOW. Wendy Walsh, 18000 Bear Creek Farm Road, Woodinville, 98077// 17815 Northshore Drive

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From: jhipke@juno.com

Sent: Tuesday, July 15, 2003 8:26 AM

To: Lisa de Vera

Subject: Feasibility

Public comment,

Your study appears well done and organized. The meeting presentations clear and informative. We would have enjoyed more about the working functions of the dam. My concerns are a reflection of a home owner, viewed from five generations on the same site and in the same cabin. I have seen water quality change with construction, terrane destruction. I remember periwinkle, muscles and clear rocky bottom. A beach alive with frogs. I fear the decline will escalate. It is our water source. My grandparents chose to build on the lake shore. They loved the native vegetation of our hillside. It was not vanquished for construction We have had many high water experiences inside our cabin and crawl space, the clean up and property damage considerable. During OHW our dock, and sandy beach are covered. An old growth ceder, at

waters edge will surely die if OHW is extended/These are my additions to the study for your consideration. I, of course, hope there will not be a dam constructed.

Sincerely, Suzanne Hipke 15360 South Shore Road

From: Jeff Monda

Sent: Sunday, July 20, 2003 6:14 PM

To: Lisa de Vera

Subject: Re: Lake Wenatchee Water Storage Feasibility Study Final Report

Lisa,

I have reviewed the final study. I think there are some significant weak areas. I believe that the conclusions about the affects on the fish are very unfounded. I would like to see any evidence that a dam has ever improved conditions for fish. To say that putting a dam in would improve the natural river system for the fish is outlandash. This system is one of the only remaining river systems that mankind has not ruined. The Lake Wenatchee drainage has functioned well for millions of years without intervention to improve instream flows. A conclusion like this calls into question the whole study.

Sincerely,

Jeffrey Monda

Land owner at Lake Wenatchee.

To: Lake Wenatchee Storage team and Consultants

From: John Zipper

Date: June 23, 2003

Comments regarding June 4, 2003 draft report and information presented at June 19, 2003 meeting

General comment 1: The report has apparently been modified after the June 4 draft. These modifications were presented in summary form at the June 19 meeting, but a revised draft was not submitted to the project team for review and comment. The following comments are based on my interpretation of the current state of the report.

General comment 2: The project team established a scope of work for the study and prioritized the scope during several meetings prior to consultant selection. The environmental and socioeconomic impacts of the project were given high priorities by the project team. Once the

consulting team was on board, the scope of work was negotiated with County representatives (without input from the project team), and some of the critical impact issues were, (in my opinion), given lower priority than the team had earlier decided. Despite attempts to modify the scope, we were left with a fairly general look at impacts of the project. As stated in the June 4 meeting, the elements of the scope were given approximately equal priority in the scope of work. The end result of this is a general look at impacts of the project, which does not satisfy the concerns of lakefront property owners.

Socioeconomic impacts: The valuation of second class shorelands, and private land between OHW and elevation 1872.4, was not accurately depicted by the recent revisions. The DNR formula apparently was used to represent the loss of value caused by flooding these lands for 25 percent of a year. The months of flooding are the only months that waterfront recreation uses of these lands are feasible due to weather constraints and the typical recreation season of June through September. The values should be based on 100 percent loss of use rather than 25 percent. The cost impact of flooding beaches presented on June 19 is low by a factor of 4.

Environmental impacts: I submitted information on June 4 to document geologic conditions on over one mile of the south shore, at the 1872.4 elevation mark. In summary, for over one mile of shoreline, flooding to elevation 1872.4 will increase erosion of the toe of steep slopes, causing damage to slopes and improvements constructed on theses slopes. This information should be incorporated into the final report. I understand that the scope of work did not allow evaluation of individual parcels. We are talking about a condition that is prevalent on well over a mile of shoreline and is easily confirmed by visual reconnaissance of the shoreline. This condition should be acknowledged in the report.

Environmental impacts: I've listened to concerns raised by Fish & Wildlife about bull trout impacts since the project team meetings began. The final report should acknowledge those concerns and specifically state whether the project will or will not impact bull trout. If the project impacts to bull trout are a potential fatal flaw, the report should so state.

Environmental impacts: It is my understanding that the 1872.4 alternatives will kill all trees located at or below this elevation. This is a serious impact that should be described in plain terms. Trees have an economic value. The value of shoreline trees should be addressed in the report.

Conclusions: If the 1872.4 alternatives introduce fatal flaws, the report should so state. The impacts that have been generally identified are numerous, and it is my opinion that a more negative conclusion than "problematic" is appropriate. Consider something along the lines of "The 1872.4 alternatives are probably not feasible due to the impacts to wetlands, shoreline vegetation and improvements, economic impacts to property owners, recreation, and _____."

From: Katy Hipke Sent: Monday, July 28, 2003 3:47 PM

To: Lisa de Vera

Subject: Lake Wenatchee Water Storage

Having read the Lake Wenatchee Water Storage Feasibility study, I fail to see that the benefits of this plan and any of its proposed alternatives outweigh the risks. Ecological impacts from loss of fish habitat, wetlands, soil stability, and water quality degradation, to name a few, and economic impacts to personal property and recreation are significant factors that in my opinion far outweigh this relatively easy "fix" to water shortage issues. A better solution might be found in conservation. Or more realistic planning. I emphatically oppose the damming of this beautiful free-flowing glacial lake,

Katy Hipke, 718 W. Highland View Drive, Boise, Idaho 83702

From: Michael S Lesky
Sent: Wednesday, July 23, 2003 6:14 PM
To: Lisa de Vera
Subject: lake wenatchee project

Greetings,

I wish to have this comment included in Section 9.0. I am in favor of moving forward with this project for the following reasons. The first and most important reason in my estimation is the maintaining of instream flow. The state has mandated the maintenance of specific instream flows and if these flows drop below set points, constraints have and will be place upon watersheds. These constraints fall upon all, especially in light of an Endangered Species residing within this watershed.

I favor and support the raising of the lakes level to the OHW level. However, I would interject that water be released earlier than August 23. Wenatchee river sockeye need minimum stream flows sooner than this. This was quite evident in 2001 when sockeye could not ever get up the fish ladder, below the candy shop. The PUD had to construct water diversion to increase ladder flow rates.

Lastly, by maintaining instream flow rates the county and state will avoid a possible claim against them at a later date. These claims have proved costly in past history, not only to local agencies, but to entire valleys and communities. Not just local landowners. I understand that this project is still a long way from initiation, however, at this time and having seen the study I am in favor of continuing and moving towards completion.
Thank you
Michael S Lesky

From: WHTRVRRD@aol.com
Sent: Thursday, July 31, 2003 4:59 AM
To: Lisa de Vera
Subject: Re: Lake Wenatchee Water Storage Feasibility Study-Final Comments

Lisa,
Following is my comment with respect to the final report on the suggestion to

dam Lake Wenatchee.

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Lake Wenatchee Water Storage Study

First and foremost, we must remember this is only the final report of a FEASIBILITY STUDY. There are no excavators or ready-mix trucks waiting at the foot of Lake Wenatchee. At this time no capable group has 'volunteered' to manage the idea to a completed project. In fact, there is no real proof that we need to dam Lake Wenatchee to increase the flows in the Wenatchee River. For that matter, the need to increase the late season flows in the River can be questioned based on recent salmon returns.

Before we look further at damming Lake Wenatchee we need to examine other options. We must also be open to accepting new options as we look at those we are aware of.

OPTIONS
1) Water storage (Damming of Lake Wenatchee and other bodies of water) and controlled release to augment flows.
2) Replace the open irrigation canals with closed pipe systems. Account for water diverted compared to water delivered.
3) Practice water conservation in all current human uses.
4) Restore the streambeds and banks of streams like Nason Creek, Chumstick Creek, Peshastin Creek, Mission Creek, and the Wenatchee River where man has relocated the streams for his convenience.
5) Change the property tax laws that are forcing landowners to convert their property from agriculture to housing. I.E., a minimal property tax augmented by a tax based on the returns from the crop.
6) Use the growth management act (Amended or modified) to our benefit instead of fighting it.
7) Inventory all water wells and the use to which the water is being put. In the process, account for all so called exempt wells. This process should not be used as a threat or way to shutdown undocumented wells.
8) Encourage beaver activity where they do not harm human activity or the property owner is willing to accommodate them.
9) Reward conservation without threatening water rights.

The solution to the water problem in the Wenatchee River Valley is not just local. We need adjustments to local, state, and federal statutes to solve our water problems.

Paul K. Gray
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Confederated Tribes and Bands of the Yakama Nation

Established by the Treaty of June 9, 1855

August 5, 2003

Chelan County Natural Resource Program
Lisa de Vera, Project Coordinator
350 Oronado St.
Wenatchee, WA 98801

RE: Comments regarding the Lake Wenatchee Water Storage Project

Dear Ms. De Vera,

Thank you for this opportunity to provide comments on the proposed Lake Wenatchee Storage Project. I am including a copy of a letter that we sent to Commissioner Ron Walters in December 2001, expressing our early concerns about the project and I will express our comments on the study in relation to how they address those initial concerns.

YN pivotal issues are depicted in **Bold;** MWH report excerpts are depicted in *Italics*:

What evidence is there to suggest that salmonid recovery will be enhanced by additional Lake Wenatchee storage capacity?

> *The operation of the rubber dam to augment flows in the mainstem Wenatchee River during late-summer/early-fall could provide some benefit to the upstream migration and holding of adult steelhead, chinook, and to a lesser degree coho salmon. The degree of potent ial benefit would be related to the amount and timing of flow available*
>
> *Supplemental water released to the mainstem Wenatchee River during late -summer/early-fall may potentially enhance to varying degrees the amount of spawning habitat available to chinoo k in the mainstem Wenatchee River.*
>
> *If the fall rains coincide with the end of the period of supplemental water and water levels are not subsequently reduced during incubation, the increased spawning habitat could benefit spring and summer/fall chinook. Negative impacts to incubating chinook embryos could occur if areas used for spawning are subsequently dewatered during the period between flow augmentation from the Lake Wenatchee Water Storage project and the onset of the fall rains.*
>
> *The project could not provide enough water to substantially reduce the occurrence of Wenatchee River flows falling below instream flows set by Chapter 173 -545 WAC.*

We interpret the results of the study to indicate that there is no clear benefit to salmon recovery as a result o f additional Lake Wenatchee storage. The design would not ensure that minimum instream flows were met annually and the success of supplemental flows is dependant on fall rains starting simultaneously with the expiration of supplemental flows.

How much capacity is envisioned and what are the likely engineering options to provide this storage capacity and how might these options incorporate fish passage considerations?

A review of potential population growth and growth in municipal, domestic, industrial and agricultural water use was made. From the perspective of population growth and growth in forecasted municipal demands, the estimated increase in water demands over the next 20 years is: 7.3 cfs on a peak daily basis and 1,868 acre-feet annually.

It was estimated the increase in irrigation demand from approval of those applications to be 8 cfs; the estimated effect on streamflow is a reduction of 5.6 cfs. The estimated increase in municipal and domestic demand is 7.3 cfs and the estimated effect on streamfl ow is a reduction of about 5 cfs.

The effect on streamflow from future municipal and domestic demand and from approval of pending water right applications for irrigation is an estimated reduction of about 10.6 cfs.

The project would supply more than enough water to meet future municipal and domestic water needs in the Watershed.

The largest potential water need is for instream flow. Chapter 173 -545 WAC has set minimum flows for the Wenatchee River and some tributaries. Hydrologic analyses have determined the average shortfall between Wenatchee River streamflow (measured at Plain) and the minimum flows is 17,500 acre-feet per year. In 2001, the shortfall was 50,400 acre -feet for the time period of July to October.

To enable seasonal storage and release of water from Lake Wenatchee, an inflatable rubber dam was identified as the most suitable type of structure for the site. The rubber dam would be located on the Wenatchee River approximately 1,600 feet downstream of the mouth of the lake where the river is narrowest.

The rubber dam requires construction of a concrete structure to support the 10 -feet high (maximum) by 200-feet long black rubber bladder. The concrete structure would be mostly submerged and hidden from view except at the sides of the channel where sloping walls would be visible. When deflated (for most of the year) the rubber dam will be submerged and not visible. A fish ladder is required and would likely sit on the north side of the river adjacent to the state park. The fish ladder would be a concrete structure with 15-feet wide weirs and a total rise of 5 feet.

The project operation is not anticipated to affect juvenile outmigration in the tributaries or in Lake Wenatchee, provided suitable fish passage facilities are integrated into the dam design.

Future agriculture needs are small to non-existent. Future municipal/domestic needs are for 539 AF by 2025, but enhanced conservation efforts could save up 600 AF. The greatest potential need then is for instream flow supplementation. The consultants indicted that the inflatable dam need only be operated during years with less than normal flows, but that becomes problematic. Under low flow conditions, the dam becomes an insurmountable barrier to fish passage, so an effective fish ladder is required. The ladder described in the report operates at 30-40 cfs, which might not be sufficient if large numbers of fish are present. The report does not adequately consider the effects on fish passage through the lake, both upstream and downstream, as a result of decreased flows during storage periods.

What species will be positively affected and what might be the negative effects to fishery interests?

The operation of the rubber dam to augment flows in the mainstem Wenatchee River during late summer/ early-fall could provide some benefit to the upstream migration and holding of adult steelhead, chinook, and to a lesser degree coho salmon. The degree of potential benefit would be

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related to the amount and timing of flow available The largest benefits to mi gration and holding would likely be to steelhead and summer chinook during the lowest flow years, since these species spawn in the mainstem Wenatchee, and they would likely spend some time holding in the river prior to spawning.

Supplemental water released to the mainstem Wenatchee River during late-summer/early-fall may potentially enhance to varying degrees the amount of spawning habitat available to chinook in the mainstem Wenatchee River. If the fall rains coincide with the end of the period of supple mental water and water levels are not subsequently reduced during incubation, the increased spawning habitat could benefit spring and summer/fall chinook.

Negative impacts to incubating chinook embryos could occur if areas used for spawning are subsequently dewatered during the period between flow augmentation from the Lake Wenatchee Water Storage project and the onset of the fall rains.

The report concluded that there would not be a negative impact to any local tribal fishery, but it did not examine the impact to the Zone 6 tribal fishery. The report also did not examine the potential negative eff to redds that, as a result of supplemental flows, are constructed in areas that will become shallow water aft supplemental flows cease. Those redds become subject to freezing.

In what life stages will survival be enhanced and why is this increased survival expected?

Operation of the rubber dam will not affect high-flow rearing habitat in the mainstem Wenatchee River.

The release of water stored in Lake We natchee during late-summer/early-fall may temporally increase the amount of low-flow refuge habitat and may afford some benefit to juvenile salmon species rearing in the river, The effects of extending the period of high water levels in Lake Wenatchee duri ng the summer on juvenile fish rearing in the lake and at the mouths of the Little Wenatchee and White rivers are unknown. Higher water levels throughout the summer could benefit juvenile fish rearing in the wetland complex on the western end of the lake i f the higher water levels help maintain open water and transportation corridors between ponded areas and the main lake.

However, baseline information on the habitat condition, use and productivity of this wetland area is not available.

The project operation is not anticipated to affect juvenile outmigration in the tributaries or in Lake Wenatchee, provided suitable fish passage facilities are integrated into the dam design.

The release of water stored in Lake Wenatchee during late-summer/early-fall could coincide with the peak of sockeye spawning in late September. Although it is unknown if sockeye spawn along the shoreline of Lake Wenatchee, the species is known to use this type of habitat in other lakes. Reduced lake levels during the period of sockeye spawning could result in redds being built in areas that would subsequently become dewatered as the stored water is released to the mainstem Wenatchee River. Thus, there is some potential negative impacts to lake-shore spawning (if it occurs) related to all of the alternatives.

Release of water stored in Lake Wenatchee to supplement late-summer/early-fall flows in the mainstem Wenatchee River will result in the lowering of the lake levels and potential stranding of juvenile fish rearing in the littoral are as.

It is believed that trapping and stranding effects would be minimal in this area because of the complex morphology occurring within the wetland habitat, and the generally low temperatures expected during the summer because of vegetative shading and connection with groundwater.

The operation of the rubber dam will temporally increase the mainstem river minimum instream flows during the late-summer/early fall period and may help maintain or restore connections with off-channel habitats that could otherwise become dewatered or isolated from the main channel. The effects of this would likely be relatively small due to the comparatively low amount of water that would be supplemented to the lower river compared to natural flows. The operation of the rubber dam will not affect side-channel habitat in the tributaries, upstream of the lake influence. However, higher water levels throughout the summer in Lake Wenatchee could result in increased open water and transportation corridors between off channel areas in the wetland complex on the western end of the lake, including the lower portions of the tributaries, and the main lake.

High water temperatures are a limiting factor for salmonids in the mainstem Wenatchee River during the summer and potentially for salmonids near the mouth of the Little Wenatchee River. The operation of the rubber dam may provide little if any temperature benefits however additional studies, including temperature modeling is required.

Although specific field studies were not conducted that would help to define incremental benefits in terms of fish habitat relative to different streamflows, it can be surmised that such benefits in terms of supplementation of 50-100 cfs, would be relatively small when considering the channel dimensions of the Wenatchee River. River widths in the range of 150-200 ft. are not uncommon, especially in wide riffle habitats, and even under extremely low flows (e.g. 300 cfs at Plain) the additional 50 to 100 cfs for a short period of time (one month) would likely result in relatively small changes in water depth (» 1-2 inches).

How these changes in water depth translate into changes in fish habitat is not known. However, extremely low flows that occur during warm summer months can create especially stressful conditions to fish. During such periods, the provision of even relatively small amounts of flow may temporally and spatially benefit fish populations. Clearly, the potential environmental impacts and benefits of the Lake Wenatchee Water Storage Project warrant further consideration.

Some of the applications, such as those contained in the Peshastin Creek basin, would not likely be approved as the basin is closed for further appropriation from June 15 to October 15. The difference between the forecast future water needs and the quantity applied for is mostly due to water right applications for irrigation. It appears those applications are primarily for landscape or lawn irrigation and not commercial agriculture. It was estimated the increase in irrigation demand from approval of those applications to be 8 cfs; the estimated effect on streamflow is a reduction of 5.6 cfs.

The report is clear that a great deal more information is needed before this question can be adequately addressed.

How would additional storage be used to augment a "natural flow regime" for the main-stem Wenatchee that would enhance flow modifications to current irrigation activities?

No growth in self-supplied industrial and commercial water use is forecast unless additional water is made available that would not be subject to interruption from low streamflow levels and minimum instream flows set by Chapter 173-545 WAC.

A review of agricultural water use was made and the following conclusions were made: Agricultural water use accounts for an estimate of 68,000 acre-feet of consumptive use (either water

consumptively used by crops or exported outside the Wenatchee River Watershed) The area of irrigated agriculture appears to be stable and not declining.

There is a substantial area of land that is currently zoned for residential use that can be converted from agricultural use.

Our opinion is that although annual water use may decline if that land is developed, peak water use may not change. The peak water demands are important as they have the most immediate effect on streamflow. A review of water right applications was made to compare to the predicted future water demands.

The current applications are requesting 43 cfs from surface water and 10.9 cfs from ground water.

The types of use requested on the applications are primarily municipal and domestic for surface water and irrigation for ground water.

Most of the applications, if approved, would be subject to minimum instream flows and therefore interruptible during low streamflow periods.

The largest potential water need is for instream flow. Chapter 173 -545 WAC has set minimum flows for the Wenatchee River and some tributaries. Hydrologic analyses have determined the average shortfall between Wenatchee River streamflow (measured at Plain) and th e minimum flows is 17,500 acre-feet per year. In 2001, the shortfall was 50,400 acre -feet for the time period of July to October

Basically, the report says that the need for future irrigation water is very small and that the alternatives considered in this study would not store enough water to meet the minimum instream flows under low flow conditions.

Finally, how will all additional water storage be used in the agricultural community during "low" flow years? Will these interests have additional water beyond their ability now and how would this water be "appropriated" between fish and agricultural interests?

The effect on streamflow from future municipal and domestic demand and from approval of pending water right applications for irrigation is an estimate d reduction of about 10.6 cfs.

The largest potential water need is for instream flow. Chapter 173 -545 WAC has set minimum flows for the Wenatchee River and some tributaries. Hydrologic analyses have determined the average shortfall between Wenatchee River streamflow (measured at Plain) and the minimum flows is 17,500 acre-feet per year. In 2001, the shortfall was 50,400 acre -feet for the time period of July to October.

The project could reliably supply between 50 cfs and 75 cfs for the month of September and early October. That water would be used to augment instream flow in the mainstem Wenatchee River and/or to offset future water needs in the Wenatchee River Watershed. The project would supply more than enough water to meet future municipal and domestic water needs in the Watershed. The project could not provide enough water to substantially reduce the occurrence of Wenatchee River flows falling below instream flows set by Chapter 173-545 WAC.

This scenario of maintaining water levels at El. 1870.3 appears to be feasible and cost-effective and warrants additional study if a demand for the water exists and the potential impacts from implementation are less than alternative instream flow augmentation or water supply projects.

If water is stored to elevation 1872.4, The storage project would impound an estimated 12,300 acre-feet in excess of historic low water levels. The average difference in lake water levels in August would be 3.9 feet; in September 2.6 feet. The project could reliably supply between 100 cfs and 200 cfs for the month of September and early October.

That water would be used to augment instream flow in the mainstem Wenatchee River and/or to offset future water needs in the Wenatchee River Watershed. The project would supply more than enough water to meet future municipal and domestic water needs in the Watershed. The project could not provide enough water to substantially reduce the occurrence of Wenatchee River flows falling below instream flows set by Chapter 173-545 WAC.

It is our opinion storage to El. 1872.4 is problematic and would be difficult to implement because of impacts to wetlands and to waterfront property.

The report concludes that the greatest need for water is to augment instream flows but, the storage elevations considered are insufficient to provide the volume required to meet minimum instream flows under low flow conditions. The storage elevations considered would be sufficient for future municipal water needs but storage brings environmental and fish passage effects that might negate any benefit. Water conservation efforts could provide the same volume. Finally, agricultural needs seem to be steady or declining. Any future water rights developed would be interruptible rights under low flow conditions which are the only times that storage would be activated.

We continue to believe that the Lake Wenatchee/Wenatchee River system is functioning fairly well. It will not benefit by being turned into a storage project. We believe that the MWH report supports this position. Certainly, we can build an inflatable dam but the adverse environmental and ecological effects far outweigh any meager storage benefits gained.

Again, thank you for this opportunity to provide comments. If there are any questions please feel free to give me a call at (509) 865-6262 or email to lcarlson@yakama.com.

Sincerely,

Lee C. Carlson
Yakama Nation Fisheries Program

LCC
Enclosures (1)

cc: Paul Ward
Carroll Palmer
Virgil Lewis

Confederated Tribes and Bands
of the Yakama Nation

Established by the
Treaty of June 9, 1855

December 17, 2001

Commissioner Ron Walters, Chairman
Chelan County Board of Commissioners
350 Orondo
Wenatchee, WA 98801

RE: Proposed water storage in Lake Wenatchee.

Dear Commissioner Walters:

Over the past couple years the Yakama Nation has enjoyed an increasingly favorable relationship with Chelan County in the area of natural resource protection and enhancement. We look forward to advancing this relationship in time.

Both Chelan County and the Yakama Nation recognize that protecting and enhancing our natural resources, and specifically our aquatic and fisheries resources requires a commitment beyond the level which many of our neighbors and citizens recognize in their daily lives. Often, this commitment is even beyond the courage that our leaders have to offer. Our leaders must be direct and diligent in protecting natural resource values that have been long established in law (Tribal Treaty obligations, Endangered Species Act, Clean Water Act, State mandates, etc). The Yakama Nation has appreciated the recent and enthusiastic response that Chelan County as expressed in recognizing these interests. We support this and offer some words of encouragement.

The proposal for enhanced water storage in Lake Wenatchee is not an acceptable response to water shortages in the Wenatchee Basin. The Yakama Nation asks Chelan County to not hide behind the veil of fish protection and enhancement water to justify a dam on Lake Wenatchee in order to address the over-appropriation for out-of-stream uses. Clearly, this is a proposal that protects and likely enhances agricultural interests. Although the Yakama Nation is generally not opposed to development of agricultural interest, we strongly disagree with any attempt by Chelan County to blur or confuse agricultural interests with fish (anadromous salmonid) recovery interests.

Respectfully, we ask that Chelan County meet with the Yakama Nation to discuss several pivotal issues:

- What evidence is there to suggest that salmonid recovery will be enhanced by additional Lake Wenatchee storage capacity?
- How much capacity is envisioned and what are the likely engineering options to provide this storage capacity and how might these options incorporate fish passage considerations?

- What species will be positively affected and what might be the negative effects to fishery interests?
- In what life stages will survival be enhanced and why is this increased survival expected?
- How would additional storage be used to augment a "natural flow regime" for the main-stem Wenatchee that would enhance flow modifications to current irrigation activities?
- Finally, how will all additional water storage be used in the agricultural community during "low" flow years? Will these interests have additional water beyond their ability now and how would this water be "appropriated" between fish and agricultural interests?

Clearly, all of our governing bodies are looking for solutions towards the significant and substantial impacts that continue to impact our salmon, and our aquatic and riparian resources. With the recent and continuing changes in Chelan County's approach in natural resource issues, we are encouraged that there is a substantially greater awareness in salmonid recovery interests. However, until Chelan County can address the basic questions we have stated above, it is not clear why this proposal is being presented in such a noticeable public format. Will the public come to expect something that is not feasible or defensible?

The Yakama Nation is very concerned that public perception within the Wenatchee Valley will come to expect that additional manipulations to the watershed will "fix" past problems with salmonid production. This is the same perception that (generally) Euro-Americans and other emigrants have "understood" for the past 150 years. Have we not learned yet? What is different about this proposed project?

As always, the Yakama Nation is interested in a continued and productive dialog with Chelan County. We look forward to your timely response to this letter. If you have specific or technical questions, please do not hesitate to call my staff representative, Lee Carlson at 509-865-6262.

Sincerely,

Virgil Lewis, Sr., Chairman
Fish and Wildlife Committee
Yakama Nation Tribal Council

cc: Lee Carlson
Bob Rose
Mike Kaputa

June 30, 2003

Lisa DeVera
Chelan County Natural Resource Program
411 Washington Street
Wenatchee WA 98801

Subject: Lake Wenatchee Storage Feasibility Study

Dear Ms. DeVera:

I would like to take this opportunity to thank the staff of the Chelan County Natural Resources Program, Montgomery Watson Harza and Montgomery Water Group for their fine effort in compiling the data for such a diverse project. Also, Nancy Smith, our facilitator, did a great job of bringing our project team to focus on the issues at hand and extrapolating the information of the group.

Wenatchee Reclamation District has been putting water to beneficial use in this watershed for over 100 years and is proud of its efforts in stewardship in the maintenance and operation of its irrigation system supplying water to over 9,000 users in its 34-mile canal system. A state-of-the-art fish screen is in place owned and operated by Chelan County Public Utility District.

The storage project was and still is a possible tool to help with the management of water for instream flows in this watershed. There are still many questions and concerns that need answers before a project proponent would move forward with this project.

Wenatchee Reclamation District is one of the initiating bodies of watershed planning undertaking all four elements of quantity, quality, instream flows and habitat. Along with the City of Wenatchee and Chelan County, Wenatchee Reclamation District has a commitment to the process and to the people of Chelan County.

Future water use and needs will continue to tax our water supply. Alternative storage, conservation and good management of our precious water resources will continue to be a challenge in the future.

Sincerely,

Ricky J. Smith
Superintendent

From: Steve Craig
Sent: Tuesday, June 24, 2003 2:07 PM
To: Lisa de Vera;
Subject: Comments on the consultant report

As a full-time resident on Lake Wenatchee for the past 23 years, and as the owner and broker of Lake Wenatchee Properties, Inc., a real estate firm specializing in waterfront sales on Lake

Wenatchee, I feel the project consultants need to consider the following points in accessing feasibility of water storage on Lake Wenatchee:

1. Valuing 2nd class shorelands. The manor in which sub-consultant Jones & Stokes applied the DNR model was not properly matched to the parameters at Lake Wenatchee. Therefore their estimate of purchasing 2nd class shoreland lease rates at $1.4 - $3.5 million at the 1870.3 level are significantly low. Here's why:

a) In applying the model, Jones & Stokes took a simple average of the assessed values for North Shore and South Shore properties. Given that (i) there are a greater number of linear feet of shoreline on the North Shore with 2nd class shorelands than the South Shore, and (ii) average assessed values on the North Shore are three times that of the South Shore, Jones & Stokes should have used a weighted average model in order to determine the value per square foot of second class shorelands.

b) In applying the model, Jones & Stokes multiplied the gross value of second class shorelands by a factor of 25% since the 2nd class shorelands would only be flooded 3 months of the year (i.e., 25% of the year). However given the seasonal nature of Lake Wenatchee, the months of July, August, and September account for nearly 100% of the use of these 2nd class shorelands. Numerous testimonies was given by myself and the other two landowners on the committee, as well as public attendees at the bi-monthly meetings, that lakefront property values are greatly tied to summer use.

c) In applying the model, Jones & Stokes did not account for a very obvious factor that exists at Lake Wenatchee - many of the lakefront properties are very steep, and the beachfront accounts for a huge majority of the overall values of many lakefront parcels. In other words, if the beaches are submerged by water, it is not possible to do alternative uses / activities on the property. Therefore, the model should place additional weight on the significance of these shorelands, quite potentially in the range of a 300% to 500% multiplier.

2. Through my profession, I commonly find that County Assessor values are lower than true market values - many times up to 25%. Paragraph 5.1.1.2.2, page 5-7, refers to the Assessor's comments of an average per front value of $5,000 for land, which I concur on this statement. Given that these higher values are more accurate, all mathematical analysis on effects to property values, purchase of 2nd class shorelands, etc. should be based on these more accurate numbers.

3. Two other landowner categories have been completely ignored in determining the effects to property values - (i) lake-view and neighboring properties which utilize many of the County, State, and Federal beaches, and (ii) riverfront properties on the Wenatchee River which also benefit from lower water levels during July, August, and September, plus would be at direct risk of massive flooding in the event of dam breakage or severe leakage. Just the stigma of a dam being up-river of these riverfront parcels will have an effect on values.

4. There has been inadequate analysis on the true costs of adjusting existing docks, boathouses, retaining walls, etc. in order to work with a water level of 1870.3. For example, Table 5.1-2 on page 5-6 of the report states that docks have a high value of $14,400. However I am aware of

several dock systems at $20,000 - $30,000. These incorrect base prices combined with a lack of assessment of how many systems will need modifying have resulted in an inaccurate assessment of the total overall costs of constructing a water storage facility.

5. Wind / wave analysis. Through my years of observation, wave heights commonly exceed those calculated in this report. For example, it is stated that wave heights of 1.2 feet will result at the southeast end of the lake when there are 25 MPH winds at a water level of 1872.4 feet. Even under normal low summer water levels, I have experienced wave heights of 3+ feet! Therefore shoreline erosion will occur in much greater magnitude than this report forecasts, which will have effects both on property values and lake ecology.

6. Legal fees. This report has made no attempt to address the huge legal costs of building a dam as landowners, environmental groups, etc. file lawsuits to block any such proposal. These lawsuits would undoubtedly last for 5-10 years, and the costs need to be properly addressed in calculating an overall cost of a dam.

7. Market economics - the trickle down effect. Property values throughout the Lake Wenatchee / Plain areas are tied together. Buyers make decisions to purchase a property based on the costs and benefits each property provides. For example, a buyer may elect to purchase a non-waterfront parcel with a view of the lake for $80,000 because a waterfront parcel directly across the street is selling for $350,000. The benefits of owning waterfront property are not worth the additional $270,000 premium in the buyer's opinion. If a dam is constructed, the aspects of the waterfront property will be compromised, and thus the waterfront parcel will drop in value. Now that same buyer may choose to purchase the waterfront parcel given a relatively smaller difference in price. There is now less demand for the non-waterfront property at $80,000, thus finally the value of the non-waterfront property must decline to a level where buyers are once again attracted.

The trickle down effect is very real. Lake Wenatchee waterfront properties, which have historically been the highest valued properties in the area, would see their values decline due to the negative changes to the properties. All other properties in the area would then decline in value too as their market demand is affected by the lower cost of waterfront property. Therefore we're not just talking about lakefront property values being affected, we're talking about all properties in the area.

The bottom line is that both alternatives, 1870.3 and 1872.4, will have huge effects on property values both on and around Lake Wenatchee.

Steve Craig
Owner / Broker
Lake Wenatchee Properties, Inc.

E-mail scraig@Lwproperties.com
Website www.Lwproperties.com
PH (509) 763-3578

From: Tim Beard
Sent: Thursday, July 31, 2003 11:57 PM
To: Lisa de Vera
Subject: Comments Re: Lake Wenatchee Water Storage Feasibility Study

July 31, 2003 SENT VIA Email (lisa.devera@co.chelan.wa.us)
and FAX 509-667-6527

Ms. Lisa deVera
Project Coordinator
Chelan County Natural Resource Program
411 Washington Street
Wenatchee, WA 98801

Re: Lake Wenatchee Water Storage Feasibility Study

Dear Ms. Vera:

In response to the above feasibility study, I provide the below comments.

I am totally against the idea of creating a dam on Lake Wenatchee. This is a wonderful and beautiful natural lake, which was the main reason I chose to buy my residence in 1992. I believe that is also the main reason why other property owners on and around the lake choose to make homes there. It should be left in its natural state.

Before the idea of a dam, which serves only the interest of others who would not negatively be impacted by such a project, goes any further, significant investigation and consideration should be given to other alternatives that could meet the future needs of those other areas and interests. Some ideas to consider include:

- the use of wells.
- capture and storage of a portion of the winter/spring heavy water flows from the Wenatchee River for subsequent use. Such storage could be created in resorvoirs close to areas identified as needing additional water (e.g., Leavenworth, Dryden, Cashmere, Peshastin, etc).
- creating artificial lakes in canyons by damming other water ways (e.g., Icicle Creek).
- the acquisition of additional water from other areas
- raising the level of Lake Chelan, a lake that is already dammed, and piping water to the areas of need. An increase of just one-half to one foot in Lake Chelan from the spring rains and snow melt would provide a tremendous amount of additional water.
- don't allow additional development if water resources are not available.

The Conclusions section of the study states that the proposed alternatives "…could ***not*** (emphasis added) provide enough water to substantially reduce the occurrence of Wenatchee River flows falling below instream flows set by Chapter 173-545 WAC." Undoubtably, there will be more "drought" years in the future in which water supply will fall short of demands. This

will most likely be true whether this or other projects are implemented. However, the only thing that is certain about the project studied here is that, if implemented, a natural lake and those who own property around it will only be negatively impacted, and the "goal" of the project which benefits others will not be met.

Any future money spent on addressing the goals of the project should be spent looking at other solutions. Lake Wenatchee should be left alone.

From: Griff, Vicki
Sent: Saturday, July 19, 2003 10:26 AM
To: Lisa de Vera
Subject: Public Comments on Lake Wenatchee Dam Proposal

I worked for a major Federal water resource agency. Because of this expereince, I see several FATAL FLAWS in your "study" which trouble me. I will mention just four:

1. Your "planning" is totally backward! You don't START with a project, then try to justify it (especially when it is a 1930 irrigation project and your own "study" denies a growing need for irrigation).

2. Where is the Economic Analysis?
Where are the estimates of the Benefits and Costs, the B/C ratio? Where is the quantification of the negative impacts of this project? For example, the flooding of beaches, loss of recreation, increased erosion, etc. Interestingly, you don't even pretend it is an economically justified project.

3. What about alternative dam sites? In 1930 Lake Wenatchee was largely devoid of homes and little thought was given to its environment, private property impacts, water based recreation and endangered fish runs. If (and that's a mighty BIG "If") a dam were even economically justified, why not consider alternative dam sites, why flood an existing lake?

4. Why have you tried to stifle public comment? We attended the first public meeting and were disappointed that you did not allow questions, you did not permit public comment. Rather, you broke us into small groups with "facilitators" taking notes. The Open House announcement you mailed for the June 19, 2003 meeting said that there would be a "public comment" period at 7:45 PM. We expected – finally – a chance for us to stand up and voice our questions and concerns in front of the audience and a court reporter. But no, you changed the agenda from a 7:45 PM "public comment" period to "small group sessions"

Burying my letter and your "facilitator" notes in the back of your "feasibility report" does NOT constitute Public Involvement. Why are you so afraid to do an economic analysis, to consider alternative dam sites, to even allow public comments??

Vicki Griffith
16609 N. Shore Dr.
Leavenworth, WA 98826

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30 July, 2003

Chelan County Natural Resources Program,
Attn: Lisa deVera,
411 Washington Street,
Wenatchee, WA 98801

Dear Ms. deVera,

Below are my comments in response to the Lake Wenatchee Water Storage Feasibility Study Final Report for inclusion in Chapter 9 of that Report.

As a home owner who's year around residence is located on the north Shore of Lake Wenatchee, I am opposed to any project which will manipulate the natural rise and fall of the lake. Damming the mouth of the lake would be a violation of my property rights and deny me the use of a portion of my shore during warmest time of the year when I need and use it most.

My home is located on the North Shore and receives the direct brunt of the wind and waves which come out of the west and northwest. This is because of the fact that the lake is situated in a southeast -northwesterly direction and the high mountain ridges on either side of the lake impact the generally northwest winds. A prolonged rise in the lake level would subject the structures on my property to greater damage than would occur normally.

In my view this project is a short sighted review and does not represent the true situation at Lake Wenatchee. I concur with the thoughts expressed by my neighbors in an article "Lake Wenatchee deserves a better study" published in the Wenatchee World Opinion Page on 3 July, 2003. A copy of that article is attached. To dam this natural lake is unwarranted, unproductive and unnecessary. Do not proceed further with this idea.

Sincerely,

Ann K. Hoyt
16181 North Shore Drive,
Lake Wenatchee,
Leavenworth, WA 98826

To: Lisa Devera
From: Tom Borgen
17867 North Shore Drive
Lake Wenatchee, Wa.
Re: Feasibility Study

In fairness to the perceived needs of the County in terms of seeking additional water sources I have attended meetings and read as much as possible regarding the proposed water storage plan for Lake Wenatchee prior to contacting you regarding my thoughts.

The bottom line is this when you cut through the statistics, assumptions and everything else that was

put into the models and use some common sense its evident that the cost to the environment and the land owners property outweighs the benefit of the proposed dam.

Here are three reasons

1. If the water were at the proposed level during the summer many banks, beaches and bulk heads will not stand up to the additional wear and tear, its hard enough now during the high water months. Look up and down the lake and its very evident that the higher water levels will cause significant erosion and damage.

2. Have members of the study team visit the lake on one of the many windy weekends in the summer. When you combine the higher water level with the two to three feet high swells caused by the winds coming from the west at 25 MPH plus you are going to have problems. There is a reason the NW wind surfers have Lake Wenatchee dialed into their weather beepers, its one of the two best spots in the NW to catch high winds during the summer. The combination of wind and high water in my opinion is not being taken seriously.

3. Paddle up the White River or Little Wenatchee and envision the raised water level during the summer months. Again common sense will tell you that the habitat will be destroyed or altered by tampering with nature and raising the water level to a point where it should not be during that time of the year.

In summary, Lake Wenatchee and its water shed is a natural wonder, one of the few natural lakes that has not yet been tampered with. Its time to take a stand to protect it and therefore the proposed dam project should be rejected.

Thank you.

Subject: Comment on Lake Wenatchee Water Storage Feasibility Study
From: Doug Weber 16601 Northshore Drive, Leavenworth//mailing address 17700 Bear Creek Farm Rd. Woodinville 98077

29July 2003

I have known of, lived on, and lived with Lake Wenatchee for the past 40 years and find that one of the pleasures of the lake is experiencing seasonal variations which include dramatic changes in water levels following Fall rains, Spring runoff, and the more subtle Summer ups-and -downs. How dull and banal it would be to view a stagnant, undynamic situation for months on end if the Lake were a water storage facility.

Apart from aesthetics, I have a more practical concern when it comes to raising the water level. My property has a stone retaining wall where it borders the Lake. Wind driven waves beat at this wall for about 3 months every Spring, then the water lowers, erosions subsides, and waves only shift the beach sands about. Experience has demonstrated that with annual maintenance and occasional repair, the wall can handle this short term high water level and wave action.
With ordinary high water(1870.4 ft) for six months of the year, the retaining wall would be short-lived. With impoundment water at 1872.4 feet and wind, there would likely be uncontrollable erosion and annual basement flooding, a situation which would leave me very disgruntled.

Portions of the Lake Wenatchee Water Storage Feasibility are well presented with careful and well documented analysis. Other portions are hypothetical and subjective.

Over all, I believe that using Lake Wenatchee as a water storage facility is not justified, unnecessary, and in the end would be more costly and more detrimental than beneficial. The people, animals, etc., residing in the Wenatchee Basin have gotten along just fine for many, many years with natural instream flows. Thus, "why try to fix it if it ain't broke?"

All my neighbors and I are very opposed to this project.

From: GERSMNT@aol.com
Sent: Thursday, July 31, 2003 1:40 PM
To: Lisa de Vera
Subject: Lake Wenatchee Water Storage Feasibility Study

Please be advised that I, Gerry M. Salkowski, Trustee am the owner of three waterfront lots on the South side of Lake Wenatchee, to wit: Lot's #41, #42, #44 and I further represent Mason & Nancy Smith, M.D. who own lot #43. The total water frontage is approximately 455.2 feet.

We are against the construction of any new dam at either of the suggested levels because of the loss of beach and dock usage. We believe that the loss to us particularly at the higher suggested level will be substantial.

Naturally, the public interest must be served but if the lake is dammed, we would expect to be compensated in accordance with the 5th amendment to the constitution which requires just compensation for private property taken for public use.

Sincerely,

Gerry M. Salkowski, Trustee
representing Lot's #41, 42, 43, 44

From: Tom & Marilyn Fleming
Sent: Tuesday, July 08, 2003 9:06 PM
Subject: Lake Wenatchee dam

Comments. I am a land owner on north shore Lake Wenatchee. I am against water storage dam for following reasons;
1. This is one of the few undammed glacier fed lakes. Putting in a dam would change the tourist appeal of the area. the sense of enjoyment of this natural area has not been taken into account.
2. Raising the level for several months a year would change vegetation around lake and cause a "bath tub like" ring at edges thus changing aesthetics.
3. There may be unintended and unexpected input on environment including fish habitat e.g.. raise in water temperature or other changes in biosphere.
4. There may be flooding of foundations or septic systems or other unanticipated changes.
5. The cost does not include purchase of boat houses, docks or other fixed structures which would be flooded.
6. My land plus many others will lose beaches during flooding times causing loss of enjoyment of lakeside areas.
7. State park plus other properties would lose valuable beaches and boat launches.

8. The need for this water has not been demonstrated. If there is a need for agriculture has the possibility of a pipeline from the Columbia been investigated?
9. Ruining the habitat and surroundings of the lake for a small increase in useful use of water is not justified.
10. The increased flow to the Wenatchee river for 2-3 months does not warrant use of dam and elevating the level of the lake for several months.
11. Use of the dam opens up the possibility of drawing down the Lake in the future if water needs increase.
12. Recreational use of Lake will be dramatically changed
13. Cost of dam does not include maintenance or running of dam; also does not include possibility of damage to dam. Also there is no entity that has agreed to run dam.
14 Cost does not justify building dam; also no source of funds or way to pay back has been identified.
15. Economic loss to land holders is impossible to determine ahead of time. Loss of value to landowners is not taken into account.
16. Land erosion around edge of lake could cause irreparable damage.
17. Benefit to fish and other aquatic habitat can be estimated but not known for sure.
18. Many dams have caused damage to the environment and removal is being recommended by many. Another dam is not needed.
19. Finally the need for this additional stored water for 2- 3 months a year has not been demonstrated.

Therefore I recommend that this idea be dropped. The Lake Wenatchee Water Storage Feasibility Study shows this to be a bad idea and not worth pursuing. There are many unanswered questions including economic impact, whether the dam is needed, and irreparable damage to lake environment. Lets stop this consideration of the dam before any more money is spent on a bad plan for a dam. Lets not put in a dam that might need to be removed in 10 - 20 years due to damage to the environment. Please inform our legislators that this has been investigated as mandated by legislature and found not to be justified.

From: Brett Baba
Sent: Thursday, July 31, 2003 2:31 PM
To: Lisa de Vera
Subject: Lake Wenatchee Water Storage Study

I am an owner of a waterfront property along the south shore of Lk. Wenatchee. The property has 100' of water-frontage and supports an existing house built in the 1950's, which is located near the water.

I am writing to express my fervent opposition to the 5 proposed alternatives being considered that would involve water storage at the lake and the attendant increase in water levels during the summer months.

My opposition is based on the loss of property value we would experience, the loss of beach, the likelihood of damage to the existing structure and the effects of erosion on the property. In addition I object to the deleterious effects a dam would have on fish migration.

The Feasibility Study states that there are no case studies on which to base expectations for lakefront property values subject to increased water elevation on a natural lake. It is stated in part 5.3.1 that *"increase in water elevations could affect shoreline property values and potentially slow the rate of increase in property values*,.."

My family, other users of the house and I are among those residents who place a very high value on "*beach accessibility during the summer months."* Paragraph 3 of part 5.1.1.2.2 indicates that beach accessibility is a large part of the perceived value of lakefront properties. We would be very bitter over the loss of our beach and hurt by the subsequent loss of property value.

When we purchased our weekend house, we did so with the expectation that we would have a beach.

Because it was built in the 1950's, our house is near the water and has a basement that is at a low elevation. Extreme high water has entered the structure in the past. Clearly, increased water elevations put us at additional risk for structural damage. The upland portions of our land are occupied with ingress/egress easements and steep slopes. The existing house occupies the only place on the parcel that is buildable.

Lake Wenatchee is unique in the state for it's recreational quality and accessibility. I see the water storage scheme as very damaging, and urge you to abandon it.

Brett Baba
16000 Cedar Brae

From: Gwendolyn Walsh [grendyl@earthlink.net]
Sent: Saturday, July 26, 2003 9:51 AM
To: Lisa de Vera
Subject: Water storage Feasibility Study

Lisa:
I sent you an e-mail earlier, but I forgot to mention that if the water levels in Lake Wenatchee are raised to the levels described in the Feasibility report, they will cover both my well and my neighbor's wells. These are dug wells which were installed 30 years ago, and function perfectly all year. Raising the water levels will contaminate the wells and render them useless.
This is totally unacceptable. This is also another reason why I am very opposed to the possibility of a dam on Lake Wenatchee. Thank you. Wendy Walsh, 18000 Bear Creek Farm Road, Woodinville, 98077, // 17815
Northshore Drive, Lake Wenatchee

From: jhipke@juno.com
Sent: Thursday, July 24, 2003 7:11 AM
To: Lisa de Vera
Subject: Lake Wenatchee Dam Comments

My family are owners of the the cabin on lot 14 Cedar Brae. Our Lake Wenatchee address is 15360 So. Shore Road. The cabin is on the lower part of the property and has been affected by floods several times in the past. I think the proponents of the dam should have staked the high water level caused by the dam on each property so we would know exactly the damage caused. We have a nice sandy beach and an old log crib dock. During spring runoff the dock gets covered for a few weeks and the water sometimes comes up to the cabin. During the summer though we have full use of the beach and the dock.

It appears that whether the 1870.3 ft. or the 1872.4 ft. water level caused by the rubber dam is used, either level will ruin our beach and put our dock under water during the summer. Also some trees close to the water in the spring may die as their roots will be continually wet.

With the damage to properties like ours. the State Park, the U.S.Forest Service land, the wet lands at the head to the lake, and the fish, this dam should not be built.

From: Karen Webster [websterca@attbi.com]
Sent: Monday, June 23, 2003 6:08 PM
To: Lisa de Vera
Subject: Lake Wenatchee water storage proposal

Dear Lisa:

I attended the June 19, 2003, meeting at Cascade High School in Leavenworth concerning the Lake Wenatchee Water Storage Feasibility Study. My husband Clifford and I are property owners on the lake and have just completed this month a new home at 16050 Cedar Brae.

I did not know about the water storage study until about two weeks ago, so I was glad for the opportunity to listen to both the consultants and property owners on this issue.

We would like you to know that as property owners, we are not in favor of this water storage proposal that would raise the level of the water on Lake Wenatchee. As I listened to all of the information presented last Thursday, it was apparent to me that there were more negatives than positives. Even the impact to fish and wildlife seemed slight, and perhaps even negative if you consider what the project would do to the surrounding wetlands. One of the prime reasons for owning property at Lake Wenatchee is the ability to use the beach area in the summer months. Should this project be implemented, our property would not have any beach at all at high water, which would negatively impact the usability and the value of this property.

Please add our voices to those that are strongly opposed to this project.

Thank you,
Karen Webster
206-935-6451
email: websterca@attbi.com

From: Kenneth D MacDonald Sent: Friday, June 13, 2003 3:40 PM
To: Lisa de Vera
Cc: Bob Bugert (E-mail); Mike Kaputa
Subject: Re: Lake Wenatchee Water Storage Feasibility Study

Lisa and Mike, I took a real quick look at the feasibility study today. I would have to agree the fish section lacks substance. Besides some editorial needs to fix some mistakes (in my view) and reflect new info, there is not enough information to draw any conclusions about fish; ESPECIALLY since passage is not included. Call me crazy but I would assume fish is going to be a huge issue on this. It would seem to me that the studies listed in the end of the document are definitely needed to see if the changes to fish habitat are significant or not and in which direction. I am still disappointed that this project is ahead of the watershed planning effort and instream flows and until those efforts are complete I don't know how any rational decision on a go or no go is possible, at least for fish. The potential benefits are conjecture (probably all they could do under the contract). Also the potential benefits are accrued ONLY if all the water remains in the channel. The main concerns over flow in the mainstem Wenatchee (to my knowledge) are below Dryden so for there to be any real benefits the flows need to be maintained to the mouth of the river. Sorry I can't give you anything more substantive now. As I said, I plan to attend the open house and presentation on Wednesday.

Kenneth D.MacDonald, Forest Fish Biologist
Okanogan-Wenatchee National Forest
phone: (509) 662-4361 email: kmacdonald@fs.fed.us

Comments on *Preliminary Draft* of **Lake Wenatchee Water Storage Feasibility Study**

Issued: June 4, 2003

Commenters:
Matt Karrer: Leavenworth and Lake Wenatchee District Hydrologist, US Forest Service Phone: 509-548-6977 x201
Cameron Thomas, Leavenworth and Lake Wenatchee District Fish Biologist, US Forest Service. Phone: 509-548-6977 x232

600 Sherbourne Avenue, Leavenworth, WA 98826

General Comments: We assume the great majority of the purpose of this project is to help sustain listed salmonid fisheries in the Wenatchee Watershed. Under this assumption, we are uncomfortable with the lack of appropriate supportive peer-reviewed literature presented in this draft. We are also uncomfortable with some of the summaries made from material presented in this draft Specifically:

Page 3-20,23: Historic instream flows were set by Washington department of ecology in 1983. These flow levels are currently being reviewed and may be altered. On page 3-23, a distinction should be made that low flows occur in the lower Wenatchee.

Page 3-22: The last paragraph implies that the maximum water height will be exceeded. What contribution will the dam have?

Page 3-26 We would like to see this table and discussion highlighted in the conclusion in final study. Specifically, if the dam will not make up low flows on many low flow years, we would like to see a discussion that describes the potential benefits gained versus biological drawbacks.

Page 3-28 How would early operation alter flushing flows, and resultant physical and biological processes? Early operation could lead to loss of some bankfull flow events, which dominate channel maintenance over time.

Page 3-31 Alternatives are premature until IFIM's are completed by Watershed Planning committee

Page 3-47, 48 Data seems to suggest the dam would only provide benefit in driest years. Salmon often have die-offs under natural conditions in dry years. We would like to see literature citations/comparison of natural watersheds to managed watersheds in dry years, regarding salmonid response to low flow thru a generation of their life cycle.

Page 3-68 We would like a best guess displayed on operating costs, the assumptions underlying the cost estimate produced, and an idea who would bear the cost.

Page 6-3 Some of the last coho observations were made in the Chiwauwa drainage in the late 1960's.

Page 6-16 The three probable causes listed are suppositions that are not clearly proven. Much of the Wenatchee from Lake Wenatchee Downstream occurs in its natural channel, and is naturally constricted.

Recent temperature measurements taken at summer low flow identified water temperature leaving Lake Wenatchee at 16 degrees centigrade, and temperatures rose to 18 degrees in the lower river before dropping slightly in near the mouth from Columbia river influence. How much of the 2 degree difference can be proven to come from the suppositions for high temperatures, and how will water storage lower that temperature?

Page 6-22 regarding "6.2.1 Adult Migration and Holding", this is general information regarding fish passage. Is there a specific citation indicating that low flows in July have created a migration barrier to adults in the Wenatchee, other than the dam at Tumwater canyon (which has been mitigated by placing boards on the structure to direct fish to the ladder)?

Page 6-26 The statement "operation of the dam will not affect flood and peak flows" is not supportable. The number of bankfull flows that occur in a typical river over 1.5 to 2 years is six-**some of these flows will be lost thru dam operation.**

Page 6-27 Same as 6-26

Page 6-30 Lake Wenatchee has a small littoral zone and relatively small wetland area. We would like to see a more indepth analysis of potential biological costs to this community.

Page 6-32 We would like to see a discussion of Lake Chelan/Stehekin Flats to contrast what has occurred in similar terrain in this bioregion.

Page 6-35 We would like to see potential temperature changes modeled

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From: Rgo021648@aol.com
Sent: Monday, June 23, 2003 9:17 AM
To: Lisa de Vera
Subject: Lake Wenatchee Water Storage Feasibility Study
from - Mike and Rita Ogdon 17739 North Shore

when the dam is in place and there is a MAJOR water flow out of the high country how fast will you be able to get the extra water out of the lake so there will not be major water damage to land and property?

Even with the water level at the 1870.3 ft. the wetland area will have water in it for a long period of time than it is now causing the mosquito breeding time to be extended for the whole year instead of a few months. Since Leavenworth already has problems with them and we need to be aware of the West Nile virus how do you plan to get rid of them?

From: Rick Szeliski
Sent: Tuesday, June 17, 2003 9:32 AM
To: Lisa de Vera
Subject: Public Comment on Lake Wenatchee Storage Feasibility Study

Dear Ms. deVera and authors of the Feasibility Study:

I am writing to most strongly object to the statements and conclusions presented in the SocioEconomic Impact section of your study (and summarized in the presentation slides and Summary and Conclusions section). This part of the report contains numerous factual errors, omissions, mis-representations, and appears to have been written by partisan interests bent on ignoring the true impact of water storage on the lakefront residents of Lake Wenatchee. I demand that it be re-written to more accurately reflect the true socioeconomic impact that the proposed water storage would actually have.

Let me first give you some background on how I came to be a lakefront property owner. My family of four had been looking to rent or purchase lakefront property for a number of years. We had visited many lakes near Seattle and in the Cascades region, and fell in love with Lake Wenatchee because of its beauty and the unusual quality of the beaches that are there during the summer.

Not wishing to rush our decision, we visited the lake a few times and then rented properties for a few weeks in the summers. In conversations with Steve Craig and other neighbors, and through our own observations, we were keenly aware of the fact that the water levels on the lake fluctuate a large amount over the course of each year. The basic fact about Lake Wenatchee that is pretty much ignored in the whole report is this.

*** Most properties on the lake are not usable for summer recreation activities except during the months of July and August when the lake level drops to a sufficiently low level. ***

This is due to a variety of reasons, the greatest of which is that the beaches that fringe most of the lake do not become usable until the water levels drop to near their summertime lows. Let me use our property as an example.

Because of the large fluctuations in water levels and the very high wind and wave action present throughout most of the non-summer season, our property has a stone retaining wall where it fronts the lake. During the high water season, the usable land ends there, with the water crashing against the wall. All we can do is to sit on our property and gaze at the lake.

During the late summer, however, the water starts to recede, and we can finally start using our beach. The kids play in the sand and run around in the water. We start to swim. We beach our rowboat, kayak and windsurfer, and sit on the warming sand enjoy the sunny summertime weather.

The water storage proposal threatens to unilaterally take away the main feature of our property that led us to purchase it: a beautiful beach that we can use in the summertime. This fact is totally ignored in the report. I really can't comprehend how such a huge omission and mis-representation can have happened, unless it was a deliberate attempt to bias the whole report towards a desired conclusion.

If the report writers believe that my own property is an unusual example, they haven't carefully studied the lake during their visits. A large number of the properties have retaining walls or bulkheads (built of stone or concrete) below which lie beaches that get exposed in the summertime. The remaining properties (including the more natural beaches occuring along the YMCA camp, camp Zanika, and various state properites) have sloping beaches that are extremely short and rocky (and mostly unusable) during the high water season. The photographs included in the presentation slides clearly show the same thing: at the proposed new elevation, most of the beaches are gone, with the water lapping up against vegetation such as trees and in some cases inundating fixed structures such as docks.

Which brings me to the second major impact that maintaining a higher water level would have: the inundation of fixed structures such as docks that surround the lake. Let me use my neighbor's dock as an example. This dock consists of two large concrete blocks built during the time of the early lake development. During most of the year, the blocks are below water level, and hence unusable. Only during the latter part of July and August does the water finally recede enough for them to be used to safely get in and out of watercraft.

This is not some oversight by the people who built the dock. Everyone on the lake is keenly aware of the yearly water fluctuation, and has designed their fixed water structures to be usable during the months of July and August when most people take their summer vacations. I don't understand how any of this information could have failed to appear in your report, as even a casual conversation with any lakefront property owner or user would reveal these facts.

Furthermore, I noticed in the minutes from the April 30th meeting that "There was also expert opinion offered that the quantified value of $1,000 per front foot for having secondary shorelands as part of owning property". I don't see any reference to this fact in the report that was subsequently written. Instead, I see in the presentation statements like "Higher water elevation unlikely to decrease property values". What's going on here? How can the report writers make such statements when they are directly refuted by expert evidence?

In our own case, I know that the loss of the "secondary shorelands" (which we refer to as "our beach") would take away the main reason we bought the property in the first place, and render the property basically worthless in terms of summer recreation. I actually think that the $1000 per front foot offered offered by the "expert opinion" may be too low, given that the main attraction of Lake Wenatchee to many people is precicely the condition of the beaches during the summer months.

I can't find at the moment in the report the linear footage of the lake and the corresponding linear footage of privately held land. (I thought I saw a figure of 70,000, but I can't find it right now.) Assuming an average lot size of 100 linear feet (which is obviously low for the large land-holders such as the camps) and roughly 300 residential parcels, this gives a shoreline length of 30,000 linear feet. Mutiplied by the (what I believe to be low) $1,000 per linear foot loss in property value, this brings the amount of compensation due to property owner to over $30 million dollars, which dwarfs the estimated cost of dam construction. This fact needs to be brought out clearly in the report.

Let me now point out some of the more eggregious errors in the report (and reflected in the presentation and summary).

page 5-7: "... elevations that remain stable result in property values that are higher than fluctuating lake elevations..." This is obviously a totally irrelevant fact. Lake Wenatchee was developed by people who where keenly aware of its fluctuating nature. Putting this statement in is akin to proposing that the residents of Aspen artificially heat their wintertime temperatures to above freezing because "... temperatures that are warmer result in property values that are higher than fluctuating temperatures..."

The paragraph following that statement is just as irrelevant, and should be stricken. The fact is, we are talking about a lake with a long history of (rational) development, not some abstract comparison between two lakes that have evolved separately. Unless the government is proposing to re-develop every parcel of land adjoining the lake, you cannot include "facts" like this in the study because they are totally mis-leading.

page 5-7: The statements about lot values being more dependant on frontage width rather than lot size precisely bolsters the argument that what matters most is the quality of the shoreline. People on the lake don't buy "frontage width" for bragging rights or because it increases the view. They buy it because of usable recreational opportunities, which only materialize once the beaches and fixed water structures become usable.

page 5-15: "...an elevation of 1872.4 would result in a loss of beach and shallow water shoreline on much of the lake. There would also likely be shoreline erosion and vegetation mortality associated with the higher lake level." This is precicely the main argument I have been making.

How can these statements be followed by "These changes could have a dampening effect on the rate at which shoreline properties are increasing in value however it is unlikey that the higher water elevations, as a single factor, would be attributable to a decrease in property values"? Where do the authors pull such statement out of? There is absolutely no evidence to support this (malformed) sentence. Instead, it should be replaced by: "These changes would likely have a dramatic effect on the property values, as most of the value in lakefront property is associated with the quality of the shoreline. Expert opinion has pegged this drop in values at $1,000 per linear foot, resulting in an estimated total loss in property value of ... amount." Furthermore, the sentence "Over time, substrate in the higher shoreline will stabilize and become devoid of vegetation" must be stricken. Of course, over decades or centuries, such effects will occur, but what landowner would be content with such prospects? ("That's o.k., don't use your land for a few decades, then everything will be alright, we think, trust us...")

page 5-16: "While there is no information regarding the discriminating factors potential property buyers use when considering the purchase of shoreline property on the lake, it is unlikely that potential buyers have any knowledge of lake hydrographs or the appearance of the lake at OHW as a decision factor for purchase." This is completely inaccurate, and I don't understand how the authors can make such statements. Have they not bothered to talk to any lakefront residents? Did they deliberately ignore public comments and statement made by lake owners' representatives during meetings?

The most discussed topic around the lake is the water levels and when they will drop low enough for certain activities to be doable. The realtors at the lake are always very careful to point out where the water levels will be during at different times of the year, and how this will affect the shoreline. I really can't believe there are any lakefront property owners who were stupid enough to purchase and/or develop their properties without being aware of lake level fluctuations. Instead, a more accurate sentence might read: "Potential property buyers have historically been keenly aware of the fluctuation in lake water levels and the appearance of the lake at favious times as a decision factor for purchase. Any change in potential level fluctuations, and especially the lake levels during the summer months, would have an immediate and dramatic effect on the attractiveness of lakefront property to potential buyers, with a concomitant dramatic drop in property valuations."

The last sentence states: "Although not part of this study, a well-framed survey of potential property buyers arond the lake would provide insight as to the importance of such factors." Such as survey MUST be part of THIS study. Otherwise, any statements about socioeconomic impacts are just wishful thinking on the part of the authors.

Let me close by summarising my main points. Changing the level of the lake during the summer months would have an immediate and dramatic impact on the usability and attractiveness of all lakefront properties on the lake. Most beaches would become unusable (remain flooded), as would a large number of fixed structures such as docks. This would have an immediate and dramatic negative impact on proprety values, and would turn Lake Wenatchee from one of the most beautful and attractive recreational lakes in the State to yet another stagnant reservoir that unfortunately seem to abound far too much in our beautiful territory. I demand that the report be re-written to more accurately reflect these realities, so that a fair and balanced decision can be made about the advisability of water storage in Lake Wenatchee.
Yours truly,

Richard Szeliski and Lyn McCoy
16559 N. Shore Drive
Leavenworth, WA

From: WHTRVRRD@aol.com
Sent: Thursday, June 12, 2003 12:27 AM
To: Lisa de Vera
Subject: Comment on the Lake Wenatchee Water Storage Feasibility Study

Lisa,
The attachment is the only part of the MWH report I take issue with.
Following are my comments.

1) First and foremost we must remember this is only the final report of a FEASIBILITY STUDY.

2) Finally, this study provides us, the citizens of the Wenatchee River Valley, with the basic information to answer the question, "Do we want to look further at damming Lake Wenatchee?"

3) Over all I see this study as well put together and about what I would expect for the dollars involved, the time available, and the magnitude of the idea.

Paul K. Gray

From: Robert Friele [rfriele@attbi.com]
Sent: Wednesday, June 04, 2003 11:14 AM
To: Lisa de Vera
Subject: Lake Wenatchee Water Storage Feasibility Study Open House
Dear Lisa deVera,

I'm one of the out-of-town landowners around Lake Wenatchee and wanted to express my disappointment that the date and time for this very important Open House report presentation practically guarantees that people like myself are excluded. Even though I live in the Seattle area it still takes about 2 1/2 hours to get to Leavenworth from home, so I would have to take almost a full day off from work to participate, as well as the probable expense to have a babysitter to watch my kids in the evening. And my wife especially could not participate since she is a physician and can't just take off for a day whenever she wants and leave her patients in the lurch. Weekends are about the only reasonably feasible time for us, and I know there are many landowners with similar circumstances.

Obviously, I have a very high stake in the outcome of this feasibility study and although I am reading the materials provided on your website it in no way substitutes for the personal interaction that an event like this Open House provides. "Actions speak louder than words" is a favorite saying of one of my business partners and I have found it be very true. You realize this (consciously or not) just from the very fact of having these public meetings. Please select dates and times for future meetings that allow EVERYBODY to participate, without creating significant hardship to a large percentage of people that will be permanently affected by the outcome of this study and the future ramifications it will provide.
Sincerely,

Robert Friele
Lake Wenatchee landowner
206-459-6665
rfriele@attbi.com

MR. MIKE KAPUTA

Director, Department of Natural Resources
Chelan County
411 Wenatchee Street
Wenatchee, WA 98801
Fax: 509.667.6475

16 June 2003

Dear Mike:
As a landowner on Lake Wenatchee, my wife Alexandra and I are very concerned in regards to the construction of a dam facility on this beautiful (natural) lake. At a time when concerned citizens and governments are routinely searching out ways to remove dams on watersheds, we find it particularly distressful that this project has received any attention at all.

In terms of endangered/ threatened species this lake supports a population of Bull Trout, and seasonal populations of Spring Chinook and Steelhead. It is critical that the existing balance between the seasonal shoreline (summer pool level) be kept in a natural, unaltered state. The impact to natural food supplies coming from nymphs and other aquatic insects could be significantly impacted if the shoreline is submerged during the late spring summer and early autumn months.

The impact to property values has not been reasonably defined as yet in terms of any published documentation. The affect of the wind and continuous high pool levels during the summer months will surely cause bank erosion. Clearly this will have impact of property values. In addition, the loss of this natural exposed rocky shoreline during the summer changes the appeal of this delicate area. It would disallow any type of foot travel along the shoreline. Walking along the beach during the day (and at night) is deeply cherished by our family. There is a loss in a safety factor as well when the shoreline is taken away and property owner's yards go directly into the lake with no buffer.

In closing, I feel it is the fiduciary responsibility of the County to keep Lake Wenatchee in its existing natural state and curtail this dam construction project.

Sincerely,

Steven Taber
17640 North Shore Drive
Leavenworth, WA 98826
509.763.0370
Steve@TheTabers.net

Comments on the
Lake Wenatchee Water Storage Feasibility Study, June 2003, Final Report.

by

Thomas H. Kahler, Fisheries Biologist, PO Box 3291, Wenatchee, WA, 98807

Submitted July 30, 2003

The report seems to be written from the perspective that there would theoretically be greater biological benefit from the storage of more water in Lake Wenatchee; an assumption that focuses on potential biological benefits in the river downstream of the lake in the form of instream flow, rather than on the potential impacts to the lake ecosystem. However, there is insufficient investigation of or cautions in the face of data gaps regarding the importance of the lake as rearing habitat for juvenile sockeye, spring chinook, (coho—in the future, perhaps), and multiple life-history phases of bull trout and their prey, to warrant such an assumption. Considering the modest increases in flow that would result from the various storage alternatives, perhaps we should focus more carefully on the potential impacts to the lake ecosystem.

Little attention was paid to the inevitable loss of shoreline vegetation (other than the wetlands) that will occur to some degree under all of the proposed alternative storage scenarios, although there are compelling examples from other systems of such loss (Lorang et al. 1993). Please contact Dr. Jack Stanford or Dr. Mark Lorang at the University of Montana (Flathead Lake Biological Station) for information regarding this inevitability. The loss of shoreline vegetation results from the inundation of beaches during the growing season. Under an unmodified hydrograph, erosion and sediment transport create beaches at the peak of the hydrograph, and those beaches are subsequently colonized by early successional vegetation (e.g., willows, cottonwoods) as the water level subsides. Prolonging the high water through the growing season precludes the establishment of such vegetation, and results in the loss of the existing vegetation.

Loss of shoreline vegetation could have a variety of biological and physical consequences. For example, overhanging vegetation and small woody debris, which provide critical refuge habitat for juvenile salmonids and other small-bodied fish, would be reduced, as would the input of detritus from that vegetation. In other oligotrophic systems, researchers have found that detritus from shoreline vegetation constitutes a significant component of the nutrients in the littoral zone (France 1995; France and Peters 1995; France et al. 1996). To date, no one has investigated the contribution of detritus from shoreline vegetation to the whole-lake or benthic productivity of oligotrophic Lake Wenatchee. Additionally, as stated above, investigations into the habitat use and behavior of juvenile salmonids, their prey, and their predators in Lake Wenatchee, and specifically, in the nearshore, have not been completed. Therefore, we are not equipped to predict the consequences of the loss of detritus and complex habitat features on juvenile salmonids. Finally, loss of shoreline vegetation will result in changes in the rates and patterns of shoreline erosion and sediment transport.

Changes in the characteristics of shoreline vegetation were not factored into the analysis of wave energy. Indeed, assumptions regarding the opinion in the report that "…very little additional erosion would occur if the lake were to be maintained at El. 1870.3…" were not supported or clearly defined. While an increase in wave energy resulting from the two alternatives that were analyzed was noted, the analysis did not consider what would happen to the shoreline under prolonged exposure to wave forces—that is the real question. Under any of the proposed storage alternatives, the shoreline of Lake Wenatchee would be

subjected to wave action at high water (relative to the unmodified state) over an artificially prolonged period. A review of the available literature from such sources as the *Journal of Coastal Research*, *Ocean and Coastal Management*, and *Coastal Management* should provide ample empirical evidence that such a scenario would result in substantial erosion, and the catch-22 situation of the accompanying vegetation loss would exacerbate that erosion. Again, see Lorang et al. (1993).

Errata:

Stranding of redds in the Wenatchee River seems an inevitable consequence of the proposed storage alternatives. Please provide additional evidence, in the form of analysis of known spawning locations and water levels, for why that would not occur or how that could be minimized. On a related note, the "pulsing" alternative introduces additional opportunities for stranding, as noted in the report. The importance of habitat persistence for juvenile fish (Freeman et al. 2001) should be investigated, and the assumption that fish can leave areas of potential stranding if given enough time (ramping) is presumptuous.

It appears that the gravel-sand transition could potentially move upstream in the White and Little Wenatchee Rivers. Were any attempts made to quantify how far upstream would the depositional zone move?

Have any measurements been made of the depth of the hyporheic zone at the proposed dam location?

Can it be demonstrated that the proposed ladder could accommodate the upstream migration of juvenile salmonids (all species)?

References:

France, R. L. 1995. Macroinvertebrate standing crop in littoral regions of allochthonous detritus accumulation: Implication for forest management. Biol. Conserv. 71:35-39.

France, R. L., and R. H. Peters. 1995. Predictive model of the effects on lake metabolism of decreased airborne litterfall through riparian deforestation. Conservation-Biology 9:1578-1586.

France R., H. Culbert, and R. Peters. 1996. Decreased carbon and nutrient input to boreal lakes from particulate organic matter following riparian clear-cutting. Environmental Management 20:579-583.

Freeman, M. C., Z. H. Bowen, and E. R. Irwin, 2001, Flow and habitat effects on juvenile fish abundance in natural and altered flow regimes: Ecological Applications, v. 11, p. 179-190.

Lorang, M. S., J. A. Stanford, F. R. Hauer, and J. H. Jourdonnais. 1993. Dissipative and reflective beaches in a large lake and the physical effects of lake level regulation. Ocean and Coastal Management 19: 263-287.

From: wallace gibbons [wallacegibbons@mac.com]
Sent: Friday, July 25, 2003 10:00 PM
To: Lisa de Vera
Subject: Lake Wenatchee Water Storage

Dear Lisa, Please add my name to the list of individuals that oppose the proposed dam at Lake Wenatchee. Disrupting one of the last natural ecosystems in the lower 48 makes no sense. A dam will increase water temperatures, flood wetlands, ruin lake shore vegetation, decrease property values and negatively impact fish. I would like to see the science that supports the logic that a dam can improve fish survival. Currently, many dams are implicated in the demise of fish species all over the world. Please put an end to this project as soon as possible and save the tax payers some money.

Wally Gibbons

From: LaPatra, Bill
Sent: Friday, August 01, 2003 8:21 AM
To: Lisa de Vera
Subject: FW: Lake Wenatchee Water Storage Study
Dear Feasibility Study Team,
We are owners of land and a cabin on the south shore of Lake Wenatchee and would like to share some comments and concerns regarding the Water Storage Study.

We are adamantly against the five proposed alternatives being considered for water storage. Our primary use of the cabin and beach is during the summer, the same months you have proposed to eliminate our beach with the higher water level.

Our primary objection to the proposed dam is the destruction of the beaches around Lake Wenatchee and the environmental impact to the lake . The primary reason for our use of our cabin is enjoyment of the lake. The beach is our interface with the lake and is truly critical for that enjoyment. Our family activities are centered around the beach and it's edge on the lake. My family and other users of the house are among those residents who place a very high value on " beach accessibility during the summer months." Paragraph 3 of part 5.1.1.2.2 indicates that beach accessibility is a large part of the perceived value of lakefront properties. We would be very bitter over the loss of our beach and hurt by the subsequent loss of property value.

We have made a substantial investment in our place and the result of the dam would severely hurt the balance of beach frontage and net result in a loss of value to our property. We see the negative environmental impacts to the shore edge and ecosystem of the lake being long term and unacceptable. It will take decades for the lake to recover from any of your dam options. When we purchased our weekend house, we did so with the expectation that we would have a beach. Because it was built in the 1950 's, our house is near the water and has a basement that is at a low elevation. Extreme high water has entered the structure in the past. Clearly, increased water elevations put us at additional risk for structural damage. The upland portions of our land are occupied with ingress/egress easements and steep slopes. The existing house occupies the only

place on the parcel that is buildable. Inaddition we have an easement access at the existing beach level to cross our neighbors property when we need to deliver heavy cargo like construction materials, kitchen equipment and other neccessary items. The raise in water level will no longer allow use to use that easement, thus resulting in a loss of access to our cabin. There have got to be better ways to manage water in our state. I dispute the theory in your report regarding the need for increased water usage, as we see the decrease of agricultural land being sold and redeveloped. Ag. land is historically a much bigger user of water than residential uses. There are better ways to manage peak water needs than adversely affecting the quality and character of one of the few alpine lakes in our state where people own property. Zoning limitations may be the solution that must put in place to preserve the pristine beauty and natural flow of Lake Wenatchee. Do not let the downstream geed of developers upset the rare beauty and balance of this upstream lake.

Lake Wenatchee is unique in the state for it 's recreational quality and accessibility. I see the water storage scheme as very damaging, and urge you to abandon it.
Thanks for letting us comment.
Bill, Molly, Madeline, Clara and Tessa LaPatra
16000 Cedar Brae

From: Bruce Jacobsen
Sent: Monday, July 21, 2003 1:22 PM
To: Lisa de Vera
Subject: RE: Lake Wenatchee Water Storage Feasibility Study-Final Comments

The dam makes no sense. Studying this project further makes no sense.

A. The endangered species issues are unstudied (why?) and preclude this being a viable candidate. In a lake where building a dock is highly problematic, a dam makes no sense.

B. The economic costs were understudied, underestimated. The lost of value to the current home owners; the consequent lost of tax dollars; the cost of buying land rights; the diminishment of recreational value and hence dollars -- are huge costs.

The simple logic of: we're going to diminish the values of houses that already exist, so we can increase the value of houses yet to be built, or build more of them -- escapes me.

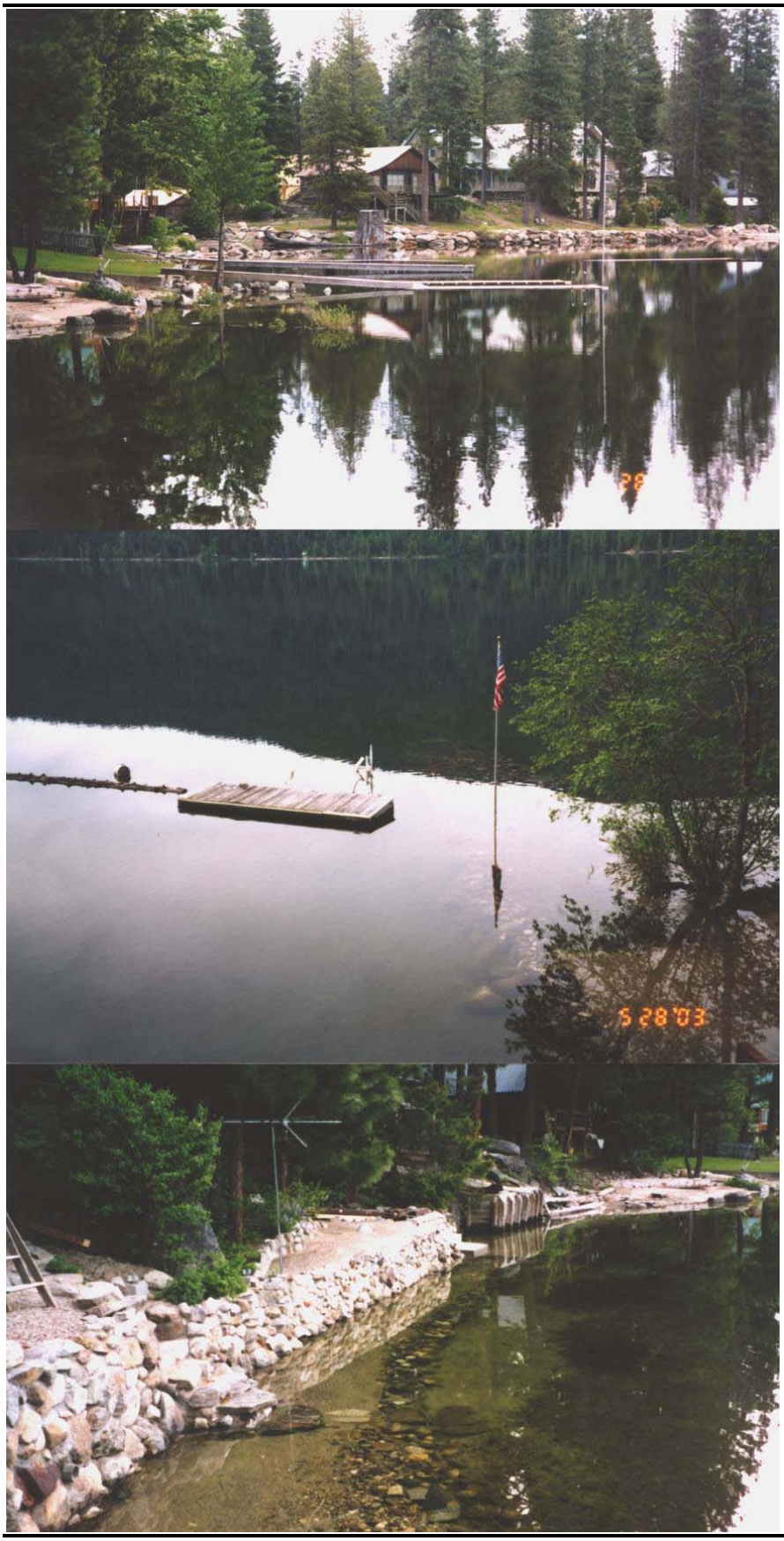
The supply of water may be a limiting factor to development. Why not just turn off the water on some existing homes so you can build more, or tell current homeowners they can use only 1/2 their current water?

Sent: Sunday, June 29, 2003 5:18 PM
To: Lisa de Vera
Subject: (no subject)

Subj: **Dam Project**
Date: 6/27/03
To: lisa.devera.@co.chelan.wa.us

I am writing this letter in response to the dam project, and the flooding of Lake Wenatchee. We live on the North Shore, and I am sending pictures of our property, as well as surrounding docks, that will be like this all summer long, with the installation of a dam on the Wenatchee River. As you can see in the photos, we would have the loss of a beach for the entire season. Also the boat hoist would be useless, and with the winds we get on the lake, this is the only way to keep your boat safe. I am totally against this project. In your report you state that the wind comes from the North, and North West. I have been up here for 28 years and the prevailing winds, 90% of the time, come from the West. In your photos down at the meeting, why don't you show the loss of property, (photos) of property that has no beach with the high water. What would you want a boat launch below the dam for? Just to accommodate the rafters that float the river? Another $171,000 dollars spent for what? We have (as seen in the photos) a bulkhead to protect the loss of property, and with the high water, we are constantly looking for logs to keep away from the bulkhead, we lost half of this, one year because of high water and logs coming in and destroying the bulkhead. You will note in the photos that the first and third docks would be underwater, and another not in the photo would be lost as well. The fish have been doing fine for 100s of years, and I don't see that the State needs to spend well over 5 million, (just a starting point) to supply them this minimal amount of water. With news all the time in the paper and the TV, they are taking out dams, Nationally, and here you want to install a dam. Something doesn't add up right here.

Darold H Bieber


5 28 '03

From: Tom & Marilyn Fleming
To: Lisa deVera
Sent: Tuesday, July 8, 2003 9:06 PM
Subject: Lake Wenatchee Dam

Comments. I am a land owner on north shore Lake Wenatchee. I am against water storage dam for following reasons;
1. This is one of the few undammed glacier fed lakes. Putting in a dam would change the tourist appeal of the area. the sense of enjoyment of this natural area has not been taken into account.
2. Raising the level for several months a year would change vegetation around lake and cause a "bath tub like" ring at edges thus changing aesthetics.
3. There may be unintended and unexpected input on environment including fish habitat e.g.. raise in water temperature or other changes in biosphere.
4. There may be flooding of foundations or septic systems or other unanticipated changes.
5. The cost does not include purchase of boat houses, docks or other fixed structures which would be flooded.
6. My land plus many others will lose beaches during flooding times causing loss of enjoyment of lakeside areas.
7. State park plus other properties would lose valuable beaches and boat launches.
8. The need for this water has not been demonstrated. If there is a need for agriculture has the possibility of a pipeline from the Columbia been investigated?
9. Ruining the habitat and surroundings of the lake for a small increase in useful use of water is not justified.
10. The increased flow to the Wenatchee river for 2-3 months does not warrant use of dam and elevating the level of the lake for several months.
11. Use of the dam opens up the possibility of drawing down the Lake in the future if water needs increase.
12. Recreational use of Lake will be dramatically changed
13. Cost of dam does not include maintenance or running of dam; also does not include possibility of damage to dam. Also there is no entity that has agreed to run dam.
14 Cost does not justify building dam; also no source of funds or way to pay back has been identified.
15. Economic loss to land holders is impossible to determine ahead of time. Loss of value to landowners is not taken into account.
16. Land erosion around edge of lake could cause irreparable damage.
17. Benefit to fish and other aquatic habitat can be estimated but not known for sure.
18. Many dams have caused damage to the environment and removal is being recommended by many. Another dam is not needed.
19. Finally the need for this additional stored water for 2- 3 months a year has not been demonstrated.

Therefore I recommend that this idea be dropped. The Lake Wenatchee Water Storage Feasibility Study shows this to be a bad idea and not worth pursuing. There are many unanswered questions including economic impact, whether the dam is needed, and irreparable damage to lake environment. Lets stop this consideration of the dam before any more money is spent on a bad plan for a dam. Lets not put in a dam that might need to be removed in 10 - 20 years due to damage to the environment. Please inform our legislators that this has been investigated as mandated by legislature and found not to be justified.

From: JDBraunSD@aol.com
Sent: Monday, July 21, 2003 8:03 PM
To: Lisa de Vera
Subject: Re: Lake Wenatchee Water Storage Feasibility Study-Final Comments
To Whom It May Concern: I feel that this study was a waste of taxpayers' money. I attended the first meetings at Cascade School and followed up on other meetings. When I went to the last meeting recently at Cascade School we were put into small groups just as at the very first meeting. We still asked questions and had NO answers. This study is a spinning wheels situation. Joan Braun, Cashmere

July 31, 2003

Mike Kaputa
Chelan County Watershed Program
411 Washington Street
Wenatchee, WA 98801

Subject: Comments regarding June 2003 report
Lake Wenatchee Water Storage Feasibility Study

Dear Mike,

This letter summarizes my comments, for inclusion in the final report as public comments. As you know, I was an active participant in the study as a member of the Project Team that you assembled and managed. I appreciated the opportunity to participate and congratulate you on completing the study under a tight schedule.

By way of background for my comments, I own a cabin on the south shore of Lake Wenatchee. I am a registered professional engineer, practicing geotechnical engineering. Some of the local projects I provided professional geotechnical engineering for include the Kahler Glen EIS, the Highway 2 Wenatchee River Bridge in Leavenworth, and landslide repairs on Highway 2 for WSDOT. I purchased my property on Lake Wenatchee in 1991, and repaired foundation damage that had occurred during the fall 1990 storm. I have directly observed the effects of several major floods on the lake, as well as shoreline tree falls, slides, and erosion caused by typical wave and storm erosion.

My comments are:

1. **Due to the increased shoreline erosion and damage to existing homes resultant from storage at elevation 1872 feet or higher, alternatives 1, 2 and 3 are not feasible.** The study demonstrates that storage above elevation 1872 will significantly increase erosion by wind blown waves. The probable extent of damage was not determined by the consultants. I believe that with even a cursory examination of the south shore, it should have been obvious to the consultants that numerous houses are located on steep slopes that terminate at approximately elevation 1872. These houses will undoubtedly be at

increased risk of damage if storage alternatives 1, 2 and 3 are pursued. Other improvements such as STEP sewer tanks, bulkheads, docks and access roads will also be damaged. While the report implies concern, I believe that the report conclusions are off base in this regard. These alternatives can not possibly be considered feasible when the probable widespread damage is considered.

2. **Storage to elevation 1872 feet or higher results in significant changes to the naturally occurring environment. Because such changes are not consistent with public land use policy and impair the natural environment of Lake Wenatchee, Alternatives 1, 2 and 3 are not feasible.** The report describes probable killing of shoreline trees, alteration of the wetlands at the head of the lake, and shoreline erosion. The conclusions of the report leave open the possibility of storage above elevation 1872 feet. The environmental impacts caused by storage to this level are severe and render these alternatives not feasible.

3. **The increased river flow benefits of the planned storage alternatives 4 and 5 are negligible in comparison the impacts and costs.** Since alternatives 1, 2 and 3 are clearly not feasible or prudent, the benefits of alternates 4 and 5 should have been evaluated in clearer terms. The increase in flow to the Wenatchee River provided by these two alternatives is negligible in comparison to the total water needs. The consultants provided estimates of project cost and impact costs that might look attractive to the County or Legislature in terms of dollars per acre foot of storage, but the impact costs are understated and the benefits in terms of river flow are negligible. The benefits to fish are not significant, and the project may actually result in a net impact on fish populations.

4. **The cost to make property owners whole and compensate for reduced property values, reduced recreational use of the lake, and impact to private property is understated.** These costs are better understood by others, but I can testify to my own use of my property and my observations of my neighbors. Recreational use of the lakefront only occurs to a significant degree during warm weather and low water, which occurs from early July through Labor Day. Many properties are only used for water related recreation. The storage project would curtail or in some cases eliminate these recreational uses during this period. The study looked at compensation for second class shorelands, but neglected this much higher component of property value impact. Compensation for the impacts to these property owners should entail the full value of the property and improvements.

5. **The impacts to public lands on the lake shore are significant, and will not allow agencies to support this project.** The State Park will be impacted by loss of beach, increased erosion, and loss of the raft launching ramp. The Forest Service owns and leases out waterfront homes. Non profit groups such as YMCA and Campfire will be impacted. The opposition to this project will not consist only of private property owners.

6. **The public is not behind this project, and never will be.** Despite plenty of meetings open to the public, the public participation at the meetings was usually small. When large public turnout did occur, the public was against this project. The key concept that will

undoubtedly result in widespread opposition to this project is this: Lake Wenatchee is the major link in a free-flowing river system. The public will never support damming Lake Wenatchee because it is relatively untouched by man-made intrusions. The lawsuits that assuredly will result from pursuit of this project will be a drain on the County budget, which would be a waste for a project that can never overcome widespread public opposition.

Thanks again for allowing me to participate in this study. I hope that the optimistic conclusions of the report do not cause the Legislature to allow further public expenditures on this project. I believe that public opposition will ultimately kill the project, because the impacts of the project do not justify the minimal benefits that it may provide.

Sincerely,

John Zipper
9111 Cascade Drive
Edmonds, WA 9802

From: MBaker1958@aol.com
Sent: Wednesday, July 30, 2003 11:51 PM
To: Lisa de Vera
Subject: Re: Lake Wenatchee Water Storage Feasibility Study-Final Comments

Dear Mrs. DeVera,

I am a third generation property owner on Lake Wenatchee. My family has been visiting this lake since the late 1890s-- from my grandparents to my grandchildren. My family is well acquainted with the high and low water levels, the seasonal fluctuation of the shoreline and its vegetation, the changes that occur naturally in the clarity and temperature of the water, the bountiful sockeye salmon runs in the late summer and fall, the erosion that is naturally caused by the great winds that blow on this lake particularly in the summer months, and the natural beauty of the shoreline and beaches that have remained essentially the same for the past century. We are greatly concerned about the results that a dam on this lake would have on all the above.

1. When the lake level is raised to high water level for several months, what would be the result of high velocity winds (often 25 mph) and wave action on this "new" shore line that is several feet above the natural rocky and sandy shore? Raised water line would greatly narrow all land owners' property. What would be the result of wind, water and wave action on their property?

2. The lake's high water in the past has always greatly multiplied the mosquito population. What would many months of high water level cause? The upper end of the lake is mostly swampy land that would be doubled in size by high water.

3. High water always brings much increased drift wood, snags, roots, and logs into the lake. What navigational problems and recreation hazards would this cause?

4. What would several months high water do to the clarity and purity of the water in the lake. Over 50% of the property owners around the lake take their water from the lake.

5. Who can fore see and safely change or interrupt nature's delicate ecosystem that now exists around Lake Wenatchee? The West end of the lake is a haven for hundreds to thousands of animals. What would be the long term results to this ecosystem that has survived so well for thousands of years?

6. With Washington State having such a large deficit, how can one justify spending the money for such a dam? Who is going to pay for it?

6. What land developers are behind this proposal and why?

7. How are the costs of compensation for lost property, beach, docks, etc., going to be met?

My husband and I have attended at least three of the public meetings and have been informed and updated on the study for this Dam Proposal by the 3 property owner representatives on the Study committee. We have yet to hear and understand compelling needs for this dam that warrant the changing of this pristine beauty of Lake Wenatchee for ever. We resoundingly support the arguments posed by so many others who also oppose the Dam project. We have been privy to property owners concerns and opinions all around the lake and heartily agree with the arguments used by Ray Aspiri, Steve Craig, Al Hillel, and Sylishki to name a few.

My husband and I were impressed with the last public meeting at Cascade H. S. in Leavenworth and the presentation that was made there. We felt that the study committee and leaders had fulfilled their duties. A great many of the lake's property owners turned out for this meeting to voice their opinions and ask questions. It was most apparent that the consensus was against the construction of this Dam. We think that it is important for us to complete this process by further voicing our dissension in this email.

Marilyn and Tom Baker

From: ROBERT.WEISEL@usbank.com

Sent: Wednesday, June 18, 2003 5:25 PM

To: Lisa de Vera

Subject: Lake Wenatchee Water Storage Feasibility Study

As a homeowner on Lake Wenatchee, I have the following issues with the Lake Wenatchee Water Storage Feasibility Study dated June 4, 2003:

1. If I have understood the presentation, the two primary benefits of the dam are related to the improvement of irrigation capacity and water for the future growth in the Leavenworth area. An increased in the irrigation requirement of the area will not occur because of crop stability and more efficient watering system. The 20 year projected growth in the Leavenworth area is extremely difficult to predict and does not support a project of this impact at this time

2. In the slide entitled "Summary of Socioeconomic Impacts" the comment is made that "Higher water elevation unlikely to decrease property values". This is inaccurate. On our property, the increase water level will cover our beach, result in our dock becoming extremely difficult to use , and will probably render our pileings inoperable.

3. The negative impact on the salmon and the lake wetland is inexcusable given the weak justiification for the dam.

While threats are a poor argument, you can be assured that we will not be reluctant to seek legal counsel to insure that our rights are not violated. I suspect that we will not be alone in that fight.

Finally, A large percentage of the homes on the lake are second homes. It is somewhat questionable, why this meeting is being held on a weekday. To receive a true representitive response, it should have been held on a day that would allow access to more people from the Western part of the state.

Thank you for considering these issues. I hope to be able to attend the meeting and present these thoughts in person.

Robert and Christine Weisel

From: T. William Booth
Sent: Thursday, July 31, 2003 12:17 PM
To: Lisa de Vera
Cc: thsbrucker@earthlink.com
Subject: LakeWenatcheeStorageFeasibilityStudy
Lake Wenatchee Water Storage Feasibility Study
Comments by Beatrice C. and T. William Booth
5521 17th Ave. N.E. Seattle, WA, 98105 and
16925 Fir Drive, Leavenworth, WA (above Lk. Wenatchee)
July 31, 2003

1. The environmental effects are underestimated and incompletely studied. They concern only fish and plant species. The natural system is more complex than just those forms. With respect to the "extensive complex of wetlands" at the western end of the lake: as the current sedges and rushes hypothetically move upslope they move to sloping land encompassing less area at some given elevation than the large flat area of the current wetlands. The spikerush and bur-weed hypothetically replacing them would occupy this larger flat area. The original wetland with its multitude of bacterial, protist, algal, invertebrate, vertebrate, and higher plant species would then be greatly diminished in area and number of individuals, and another complex of species would fill the larger flat area. How would this change affect the entire system including the source of food for the salmon and other fish? We cannot just write off major man-induced changes in an ecosystem as a simple exchange of plant species.

The effect of the reservoir is on birds and other non-fish vertebrates is not considered, although these are important components of any living system.

2. Why install a ten foot dam when at most you are considering raising the water level five feet.? This invites worse manipulation of the natural system in the future.

3. We are concerned about the small benefits of this project (a small amount of water, really), compared with the high cost, especially those of purchasing the easements for inundation of second class shorelands and perhaps flooding easements.

4. We are also concerned about losing the natural beauty of the outlet of Lake Wenatchee. Not only would the dam intrude, but the replacement launch facility as well

would eliminate some of the natural setting along the river that is so precious to campers and day-users.

5. In conclusion, we are sure it is feasible to build the dam under consideration, but at what cost to a gorgeous, natural place, where campers vie with each other to camp along the river? At what cost to a natural migration of fish, and an intact ecosystem? Perhaps the last, large headwater lake in the Washington without a dam! Why not save it as a State Treasure?

From: Griffvicki@aol.com

Sent: Monday, July 21, 2003 3:37 PM

To: Lisa de Vera

Subject: Public Comments: Dam Proposal, Lake Wenatchee

A "RUBBER DAM" OR A "SAFE DAM" AT LAKE WENATCHEE?

Rubber is cheaper than concrete and steel, but what about Dam Safety? Imagine the flood damage and possible loss of life resulting from an 8 or 10 foot wall of water rushing from a failed rubber dam at Lake Wenatchee.

Why are you even proposing something like a "rubber" dam? The answer is simple: Cost! When you are proposing a dam that has few benefits and causes plenty of adverse impacts to an existing natural lake and environment, you better keep the costs cheap, cheap, and cheap. Rubber is cheaper than concrete and steel, cheaper than doing it right, cheaper than doing it SAFELY. After all, a concrete gravity dam grounded on bedrock would be safe but it would be much more costly. Ditto for a heavy rock fill dam (with an adequate concrete cut-off trench underneath and a concrete spillway that could safely pass say a 500-year flood). Costly. But safe. Rubber bladders and wooden weirs have their place. A reasonable use of a rubber dam or a weir would be for an irrigation diversion from a stream. If it did fail, it would only release a small quantity of dammed water. Flood damage would be little, if any. Human lives would not be endangered. However, if a dam at Lake Wenatchee failed, it would dump an 8 or 10 foot wall of water from a six-mile long reservoir. Look out below!

This from an engineer who has directed multi-purpose dam and reservoir planning for one of the "major Federal water resource agencies" mentioned in the County's dam study. Did we ever seriously consider – or have I even seen - a "rubber dam" for a use such as proposed for Lake Wenatchee? No, never.

My recommendation: do it right, do it safely, or don't do it at all!

M. Joel Griffith 16609 North Shore Drive Leavenworth, WA 98826

From: William Ballantine [williamballantine@msn.com]
Sent: Wednesday, July 23, 2003 2:04 PM
To: Lisa de Vera

Hats off to Steve Craig, Ray Aspiri and the many others who have taken time out of their lives on this project.
I have a cabin on Lake Wenatchee and would lose almost all of my waterfront if the dam goes through. I vote, NO!

While I think a dam has its uses letting the water rise as high as I have been told it would is not one of them. Sorry I am playing catch up this latte in the game.

Bill Ballantine

United States Department of Agriculture **Forest Service**
Okanogan and Wenatchee National Forests
Lake Wenatchee & Leavenworth Ranger Districts
22976 HWY 207
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(509) 763-3103
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File Code: 2540
Date: August 01, 2003

Mike Kaputa
Chelan County Natural Resource Program
411 Washington Street
Wenatchee, WA 98801

Dear Mike:

Thank you the opportunity to comment on the Lake Wenatchee Water Feasibility Study, and the progress of investigations to date. I had my staff review the Preliminary Draft dated June 4, 2003, and those comments were electronically sent and received by Chelan County. I would like to express some of my general concerns in this letter, based upon my understanding of the legal aspects of this project, and our review of the study as it relates to the ecology of the lake.

I sent you and earlier letter that outlined our legal concerns regarding the ownership of the bed of the river and Lake Wenatchee. So far, there is insufficient evidence that the State of Washington has followed the proper process for claiming ownership. Therefore, our position is that ownership of the bed still lies with the federal estate. As such, additional federal laws and requirements could apply to this proposed project.

Also, it should be noted that the Forest Service's 1990 Land and Resource Management Plan recommended this section of the Wenatchee River for inclusion into the Wild and Scenic River System as a "Recreation" river. A dam would be an unacceptable structure according to the criteria, since it must be "free flowing." The Forest Service is directed to protect the essential values of the river until Congress has had an opportunity to act.

Regarding federally listed fish and the hydrologic effects of the proposed dam, I am concerned that the initial report does not go into great enough detail regarding the alteration of temperatures, potential to affect flow, wetland alteration and resultant effects on the fish community. Specifically, I would like to see temperature changes modeled to better describe how impounding water will cool or maintain outflow temperatures. I am not convinced that stream temperatures downstream of the structure will be maintained or cooled. Often, it has been presented that this dam is being proposed in large part to benefit listed fish. I believe the dam is actually proposed to ensure that water rights will remain viable downstream. If this is in fact the case, this should be addressed in future iterations of this study in a more straight forward manner. Benefits for water users versus possible ecological harm to listed fish species should be disclosed.

I am also concerned about the affects of the proposed dam on the wetland ecosystem. The wetlands that exist at the confluence of the Little Wenatchee River, White River, and Lake Wenatchee are recognized "forested wetlands" within the Intermountain West, due to the relative scarcity of this type of habitat within the Columbia Basin system. The Lake Wenatchee wetlands provide nesting for the bald eagle (federally listed as Threatened), common loons (Sensitive species) and harlequin ducks (Federal Species of Concern). In addition, these wetlands are found to be important both for nesting, and refugia during migratory periods for waterfowl and neotropical migratory birds. In Lake Wenatchee proper, there is

potential loss of the lake substrate which provides continuity for the fresh water Western Pearl Mussel (*Margaritifera falcata)* and possibly the California Floater Mussel *(Anodonta californiensis)* a Federal Species of Concern. The study should address the regulatory feasibility of altering the habitat of federally listed species.

The shorelines of Lake Wenatchee and Wenatchee River provide riparian roosting/foraging habitat for several species of wildlife including osprey, bald eagle, great blue heron, songbirds, and aquatic mammals. Human developments currently alter and encroach upon the Lake Wenatchee shoreline. I would like to see the cumulative effects to the wetlands and shoreline better described in future iterations of this study.

I would like to point out that the Lake Wenatchee and Leavenworth Ranger Districts are actively working with several partnerships on restoration projects to improve wetlands and the riparian to benefit wildlife and fish in the Lake Wenatchee basin. The proposed dam would negate these projects.

Finally, I would like to mention that as this proposed dam is being studied, a watershed planning exercise is also underway in the Wenatchee Watershed. A part of this study is looking at instream flows. At the very least, I would ask that you postpone any decision to move forward with this proposal until that study is complete and decisions have been made on strategies for addressing instream flows and water quantity.

Thanks again for the opportunity to comment.

Sincerely,

for GLENN M. HOFFMAN
District Ranger

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Central Washington Field Office
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July 31, 2003

Mike Kaputa
Coordinator, Chelan County Natural Resources Program
411 Washington Street
Wenatchee, Washington 98801

FWS Reference: 1-9-2003-TA-W0335
HUC: 17-02-00-11

Dear Mr. Kaputa, Mike

Thank you for the opportunity to provide comments on the draft Lake Wenatchee Water Storage Feasibility Study. Thank you as well for all the hard work that went into preparing this draft. Your Program has done an outstanding job of coordinating the process for completing this study, especially in regards to providing opportunities for public and agency involvement. The topic of this feasibility study is contentious, and you and your staff did an excellent job of creating and maintaining a constructive and civil atmosphere in which this study could be completed.

Although the FWS participated on the Project Team for this feasibility study, this involvement should not be construed as support for project implementation. The FWS believes that good feasibility studies are essential to making good decisions. All members of the Project Team worked hard to improve the quality of the feasibility study, and the FWS in particular sought to improve the study's evaluation of project impacts to fish and wildlife resources. The FWS feels that the study successfully demonstrates that the proposed benefits of water storage in Lake Wenatchee do not outweigh the project's negative impacts, especially adverse environmental impacts to wetlands and bull trout (*Salvelinus confluentus*), listed as "threatened" under the Endangered Species Act of 1973 (16 USC 1531, et. seq.) as amended. The study also indicates that alternative approaches to water management show strong potential to address conflicting water demands in the Wenatchee Basin, without imposing a similar level of adverse environmental impacts.

General Comments:

1. This feasibility study was conducted at an awkward time. Concern about conflicts among competing water needs in the Wenatchee Basin was a primary motivation for initiation in 1999 of the Wenatchee Watershed Planning Process. As you know, this planning process is designed to use an inclusive process to thoroughly evaluate water quantity, water quality, instream flows, and habitat issues in the watershed, and to develop a plan for managing those aspects of water resources. The products of this planning process would have been useful inputs into the Lake Wenatchee Storage feasibility study. The time line of the feasibility study, however, ran ahead of completion of Watershed Planning. Consequently, the storage feasibility study was compelled to do a cursory evaluation of topics that Watershed Planning will explore in much greater depth and detail. Specifically, while Watershed Planning is in the process of re-evaluating minimum instream flows set by chapter 173-545 of the Washington Administrative Code, the feasibility study used these minimum flows to identify instream flow as the largest potential water need to be served by the dam. The outcome of Watershed Planning could potentially make substantial changes in the size of this need, and therefore the feasibility of the proposed dam. Completing this feasibility study ahead of Watershed Planning casts doubt over the findings of the feasibility study because its foundational premises are subject to substantive change in the near future.

2. Early in the process of developing this feasibility study the FWS commented that the operations of a proposed dam will largely determine the ongoing environmental effects of the dam. The authors of the feasibility study did an excellent job of attempting to address this concern by crafting a group of potential operational scenarios for consideration. The tradeoff, however, is that development of these scenarios left insufficient time and resources to adequately address environmental impacts.

   During the project team meeting on April 30, 2003, the consultant team mentioned that about equal resources had been devoted to each of the report segments. Although equitable, this allocation does not adequately consider the relative complexity, difficulty, and volume of information resources that need to brought to bear to adequately address each of the report's primary topics. Development of the hydrological model and alternative operating scenarios is a math exercise of limited complexity that can be accomplished with limited relevant information that is readily acquired. Evaluation of environmental effects, in contrast, involves both quantitative assessments of effects as well as application of qualitative professional judgments about complex interactions among organisms and the physical environment, and relevant information is both voluminous and often accessible only through direct contact with biologist and other professionals who conducted specific studies.

   Equitable allocation of time among topics did not allow the consultants writing the report to develop the sort of detailed familiarity with the watershed necessary to adequately assess the project's environmental effects. Review of the existing large

volume of watershed-specific information is necessary to sharpen professional judgments about how the project being studied could affect the structure and function of the watershed. In the absence of extensive professional experience in the basin, detailed familiarity with the particular aspects of the Wenatchee Basin can be gained only through careful study of the large body of information that has been collected on the Wenatchee Basin through the years. This background takes considerable effort to compile and months to review.

Many sources of information relevant to assessment of environmental impacts were not cited and presumably were not consulted or reviewed. For example, extensive information contained in watershed assessments produced by the U.S. Forest Service was not cited. The Habitat Limiting Factors report by Andonaegui (2001) is a tremendous resource, but the feasibility study's reliance on this single resource is excessive and suggests a lack of familiarity with alternative primary sources of information.

Lack of detailed specificity is apparent throughout the Environmental Impact section of the report. Many of the central issues regarding impacts to bull trout are mentioned under the heading of "Potential Additional Studies" and are not described in any substantive way in the draft study. The FWS believes that it is not appropriate to reach conclusions about the environmental impacts of a proposed project when many of its primary mechanisms of impact to listed species have not been adequately addressed.

The report focuses unduly on the putative benefits of the project for aquatic species, particularly benefits to anadromous fish species, while not adequately disclosing adverse effects to other species and their habitats. One premise of the report is that increased seasonal instream flows will provide a benefit to salmonids. However, the FWS is not aware of any entity involved in management of fish and their habitats or recovery of listed salmonid species that supports the proposed project. Low summer flows are a natural occurrence in the watershed, and the degree to which this factor limits salmonid production in the watershed is unclear. Likewise, the level of potential benefit that could be obtained is speculative. Finally, summer Chinook is the anadromous fish run most likely to experience any beneficial effect from the studied project, and this run is not currently listed, while bull trout will experience only negative impacts, and this species is listed as threatened.

In the Environmental Impacts section, spring Chinook (listed as "endangered") and summer Chinook salmon (unlisted) usually are not differentiated. During the period from late August through October when flows are proposed to be augmented, spring Chinook salmon are already in tributary streams and would not benefit from the increased flows. Summer Chinook salmon are holding and spawning in the mainstem Wenatchee River during the augmentation period. The amount of benefit to summer Chinook to be expected from augmented flows is unlikely to be substantial, and is also unlikely to improve the abundance of this stock which is already classified as "Healthy"

by the Washington Department of Fish and Wildlife (WDFW 1993). Benefits are unlikely to be substantial because more than 60 to 70 percent of the summer Chinook salmon are estimated to spawn upstream of Icicle Creek. Instream flow above Icicle Creek is reduced by only a small amount due to water diversions, so most summer Chinook already experience a relatively natural flow regime on their spawning areas.

In some instances, the study mistakenly infers benefits of increased flow for anadromous salmon. For example, Section 6.3.2.1.1 includes the statement that, "Adult spring chinook return to the Columbia River from the ocean in late March to early April and then enter the Wenatchee River from May to June. Low summer stream flows through the Tumwater Canyon may delay entry into the Wenatchee River (WDFW 1994)." This is incorrect. High summer stream flows through Tumwater Canyon delay movement of spring Chinook salmon up the Wenatchee River. This is a natural occurrence that would not be affected by dam operation scenarios presented in the study.

Upstream migration of sockeye salmon can also be delayed in Tumwater Canyon. Sockeye reaching Tumwater Dam during mid-July through early August in some years are delayed because the fish have difficulty locating the dam's ladder. This delay is exacerbated at lower flows because flow patterns do not attract fish to the ladder. All alternatives in the feasibility study, except alternative 3, would decrease flows in the river during the sockeye salmon migration, which may result in further delay of sockeye salmon at Tumwater Dam. This potential negative effect is not mentioned in the report. Most sockeye are in tributaries when flows would be augmented, and would not benefit from flow augmentation.

The general topic of migration delay at dam structures is not discussed in the feasibility study. Even in the presence of a ladder that fish have the physical ability to ascend, there can be significant impacts if fish are delayed below the structure because of avoidance of the structure or difficulty finding the ladder. Recent studies of swimming performance of bull trout and telemetry studies of bull trout in the Wenatchee River and in the mainstem Columbia River all suggest that this species may be prone to behavioral reluctance to pass through ladders and avoidance of new structures.

Bull trout migrations would be adversely affected by the dam. The primary spawning area for these fish is in the Chiwawa River watershed which is almost 6 miles downstream from Lake Wenatchee. Adults moving to their spawning areas would need to migrate downstream over the dam. Post-spawning surviving adults migrate back upstream to Lake Wenatchee and would need to migrate past the dam. This would occur when the fish have already expended significant energy spawning. Avoidance of the structure and delay of migration would negatively impact the bull trout population. Juvenile bull trout at age 3 or 4 migrate from the Chiwawa River to Lake Wenatchee. Portions of the population migrate when the dam would be in operation and could be affected by avoidance of the structure, difficulty finding the ladder, difficulty ascending

the ladder, all resulting in delay of migration. Delay of migration can result in failure to spawn, reduced spawning success, and reduced survival of juveniles.

Likewise, the topic of increased predation on juvenile fish due to predators aggregating near the structure and taking individuals disoriented by falling over the dam or passing through the ladder was not addressed.

The putative beneficial effects of the dam would occur during low-flow water years (about 25 percent of all years). The negative effects of the proposed dam would occur every year.

- Because of the timing of bull trout movements and patterns of habitat use in the Wenatchee basin, bull trout would not benefit from proposed flow augmentation. They would, however, suffer from the adverse impacts of needing to traverse the dam in both upstream and downstream directions as both juveniles and spawning adults. They would also encounter ongoing adverse habitat effects from the dam, especially due to reductions in woody debris transport and declines in wetland quality. Telemetry studies indicate that adult bull trout spend extended periods during the winter at or near the dam location.

- Some readily apparent conclusions that could be drawn from the information gathered are not presented, particularly conclusions that are not supportive of dam construction. The following example is typical. The Water Needs chapter estimates that future water needs for the next 20 years are expected to increase instantaneous demand by about 7.5 cfs. Efficiency improvements in existing delivery systems are estimated to have the potential to increase instream flow by 14 to 20 cfs. The total cost of these delivery efficiency improvements is estimated to be about $2 million. A reasonable conclusion to reach from these facts is that delivery efficiency improvements in existing infrastructure can provide more than 2 times expected water needs at about one third of the direct costs of dam installation. And these efficiency improvements are unlikely to have the level of environmental impact associated with new dam construction and operation.

- Currently, the report covers compliance with Tribal Nation Rights only in the Legal Feasibility chapter, with a summary of environmental effects. This issue also has socioeconomic components and perhaps this issue should be included in the Socioeconomic chapter and excerpted in Chapter 4 as well.

- A composite list of additional study needs is presented in Chapter 4. This is an awkward place for this list, and the FWS suggests that lists of "additional study needs" should be featured in each chapter, with a composite list prominently displayed in the "summary and conclusions" chapter. Lists of study needs for all topic areas are appropriate and should be more fully developed to highlight major uncertainties that could not be

adequately addressed in the present feasibility study. The current list of additional study needs is not adequately thorough, especially for chapters 2, 3, 5, and 6.

8. Following from number 7, the study's approach to conclusions could be improved by being more explicit about remaining critical information needs. The FWS feels that it is somewhat misleading to conclude that the 1870.3 option is "feasible and cost-effective" given the existing gaps in analysis, particularly of environmental impacts. The FWS feels it would be more appropriate to state that among the options considered, only the 1870.3 option may be feasible pending further study to address critical additional information needs, and list these information needs. Perhaps also list the most substantive obstacles to implementation of any of the alternatives, such as the WRD's need to re-apply for a permit to impound water in Lake Wenatchee, the need to purchase overflow easements, and substantial environmental impact mitigation needs.

Specific Comments

1. Section 2.1 – perhaps include in the introductory paragraph an explicit statement that the "high" projection for population growth was used to develop projections of water needs, and this choice corresponds with other Chelan County planning processes.
2. Instream Flow Needs. More detail about the background of IRPP flows, especially the relationship between these flows and the ongoing Watershed Planning Process, would be very helpful for putting these flows in context.
3. 3.4.3.6 Fish Ladder. Are notches or slots feasible alternatives to fish passage at a bladder dam? This section discusses only ladders, leading to this question about other options. Effectiveness of these structures for passing all life stages of bull trout and other species in both directions throughout the operating season is an important consideration that should be briefly mentioned here.
4. 4.3 Regulatory Authority. The suggestion that the U.S. Bureau of Reclamation could be an owner/operator of the storage dam, and could use construction and operation of this dam to fulfill responsibilities for salmon restoration under the Federal Columbia River System Biological Opinion issued by NOAA Fisheries, has no merit. Benefits from this project are questionable and adverse effects to listed species are substantial. Furthermore, on May 7, 2003, Judge J. A. Redden (District of Oregon) issued a decision that the Federal Columbia River System Biological Opinion was arbitrary and capricious and remanded the Opinion to NOAA Fisheries for clarification of outstanding issues. The structure of this biological opinion and the Bureau's responsibilities may change appreciably as a result of this remand.
5. Table 4.4-1. Many of the timeframes in this table seem very optimistic. For example, the timeframe of 6 to 12 months to complete section 7 consultation on a project such as this with extensive effects to listed species is very optimistic.
6. Section 5.2.2. Treatment of recreation effects, especially valuation of factors such as the sockeye fishery in Lake Wenatchee, seems to lack specificity.

7. Environmental Impact. The description of potential project impacts has several important gaps.
    a. Construction impacts – Chapter 3 presents a proposed construction timeline and approach and this could have been used to provide a first rough approximation of construction effects. These effects will be substantial for bull trout and freshwater mussels in particular.
    b. Effects on bald eagle – another listed species that could be directly affected and should be addressed, at least briefly.
    c. Effects of the sheet pile anchoring the dam on hyporheic and shallow groundwater flow and resultant effects on instream water quality and quantity and effects on habitat quality, including invertebrate production. This subsurface "dam" would operate year-round.
    d. Woody debris recruitment – will operation of the dam and ladder result in the need to cut up large woody debris and transport it away from the dam site?
    e. Effects on water temperature. Should discuss the potential for stored water to accumulate heat and contribute to increases in instream water temperatures.
    f. Wetlands and shoreline vegetation effects – consequences for migratory birds and other terrestrial species (especially listed species) that could be adversely affected should be described.
    g. Table 6.4-2 to 6.4-6. Perhaps create a summary table that provides a more readily interpreted "box score." Add to the legend some explanation of the meaning of using a forward slash to separate ratings.

If you have any questions about these comments, please contact Karl Halupka at 509.665.3508, extension 11, or by e-mail at Karl_Halupka@fws.gov.

Sincerely,

Mark D. Mills

Supervisor

cc: FWS, Leavenworth (Barbara Kelly-Ringel)
NOAA Fisheries, Ellensburg (Justin Yeager)

30 July, 2003

Chelan County Natural Resources Program,
Attn: Lisa deVera,
411 Washington Street,
Wenatchee, WA 98801

Dear Ms. deVera,

Reference is made to the Lake Wenatchee Water Storage Feasibility Study Final Report.

As an interested citizen who attended almost all of the meetings on this subject, my comments below are forwarded for inclusion in Chapter 9 of the Lake Wenatchee Water Storage Feasibility Study Final Report.

Lake Wenatchee is one of the last large natural lakes in the state of Washington. We should not change that status. In other words do not mess with mother nature.

I do not doubt that our needs for water will increase in the coming years due to increased population growth, shrinking water supplies due to wasteful over use and global warming. No one has determined what savings could be achieved by detailed conservation measures. The Irrigation companies in the valley in many cases do not have complete records. Metering is almost non existent and old systems leak. Granted leaking systems return water to the ground but it is indicative of an inefficient system. Before any dam is built at Lake Wenatchee, A complete and detailed study of all available conservation measures in the entire Wenatchee River Drainage must be conducted. This should also include any areas outside of the Wenatchee River Drainage which are serviced by irrigation companies or others using Wenatchee River Water.

A complete study of alternate sources of water in the Wenatchee Drainage must also be undertaken. Eventually the policy of watering non agriculture properties such as lawns and yards will have to be examined with a view of changing the water laws of the state and perhaps the country. Drinking water and efficient agricultural irrigation must be the top priority with fish recovery a close second.

The Technical Feasibility portion of the study was fairly detailed based on sketchy existing data. I recommend that programs be initiated to develop a complete data base for the Wenatchee River Drainage before trying to further study the idea of building a dam at Lake Wenatchee.

A possible conflict of interest concerning the legal firm providing the legal portion of the study surfaced early in the study and in my mind was never satisfactorily resolved. The same firm also represented the Wenatchee Reclamation District which could be a major beneficiary of a dam at Lake Wenatchee. An example of an unanswered legal

question was the U.S. Forest Service Representative assertion that the Federal Government owns the river bottom while the studies legal representatives claimed that the ownership was vested in the State of Washington. A truly impartial legal representative will need to resolve all legal issues.

The Socioeconomic Impacts were based, in my view, on a shallow and sketchy review based in part on lack of funds and time. The article that appeared in the 3 July, 2003 edition of the Wenatchee World Newspaper's Opinion Page titled "Lake Wenatchee deserves a better study" expands on this point and others. This article, authored by three members of the study board, covers flaws of the study in greater detail. I concur with their statements.

The Environmental Impact portion of the study appeared to be the weakest segment and was a broad brush of the environmental situation in the upper valley. I will leave it to those who are versed in the appropriate sciences to provide the details but as was pointed out at one of the last study board meetings, Bull Trout, a species listed as threatened, feed part of the year at the very site the study selected as the site of a future dam. I have the perception that environmental implications were largely ignored in this study.

In conclusion, it is feasible to build any dam of any size at any place in this day and age. The real question, not answered by this study, is should it be built at all. I do not think that this project should be taken any further. I recommend that the entire idea of building a dam at Lake Wenatchee be dropped.

Sincerely,

David M. Klinger
P.O. Box 537,
Leavenworth, WA 98826

1 Enclosure: Wenatchee World Article, "Lake Wenatchee Deserves a better study".

STATE OF WASHINGTON
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7150 Cleanwater Lane • P.O. Box 42650 • Olympia, Washington 98504-2650 • (360) 902-8500
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July 28, 2003

Ms. Lisa de Vera
Project Coordinator
Chelan County Natural Resource Program
411 Washington Street
Wenatchee, WA 98801

RE: comment s on the Lake Wenatchee Water Storage Feasibility Study

Dear Ms. de Vera:

The document has been reviewed by State Parks' staff at Lake Wenatchee State Park, and in our regional and headquarters offices, and we have these comments to submit.

The study by the consultant, MWH, is commendable in its systematic approach to the assignment; the scoping resulted in five rational broad study areas. The report is well-organized and well-written. It brings together in one document a substantial amount of information, and identifies many areas where much more comprehensive data and critical analyses are yet needed. It is successful in clarifying many issues and acknowledges that some conclusions are inevitably tenuous, even premature.

Herewith more detailed comments:

Technical Feasibility

- Shoreline erosion: Further study is required to determine potential shoreline erosion at both storage elevations. Though in the Summary, MWH suggests that little or no increase in erosion would occur with water stored at OHW, their assessment "only calculates the potential wave energy and does not correlate that energy to a change in shoreline, dock or bulkhead erosion. Additional information on the erosion resistance for each would be required to make that assessment." [p. 3-52].
- Public safety: MWH acknowledges that the 10' x 200' bladder dam would be an "attractive nuisance" and, that given its proximity to the North and South park areas, would be highly accessible to the public. Chain link fencing, warning signs and floating barriers would be used to minimize vandalism and safety concerns. Park management is concerned that due to their proximity, the bulk of security and law enforcement activity will fall to rangers. This deserves and requires

further consideration. There seems to be little analysis provided in regards to such dam safety potential issues as catastrophic failure from natural events or terrorism. While the proposed structure is no Grand Coulee, risks commensurate with its scale should still be considered. The study fails to adequately assess the potential impact on safety of recreationists participating in water sports. No information is given related to standards for safety upstream of the dam. Is the current boat launch at Lake Wenatchee even usable, when dam safety standards are applied?

- River access: Loss of upper river access for recreationists resulted in a suggestion that an alternate boat launch, restroom and parking area be built below the dam, within the state park, on the south shore. We question the practicality of this suggestion, given the steep gradient at that location. An estimate for construction is provided ($165,000), but no estimates of the costs of operation, maintenance, and fee collection to be incurred by State Parks were given. Additionally, alternate locations for State Parks' burnpile and stockyards would be needed.
- Swim beach: Designated swim beach float cables and anchors would have to be replaced or rebuilt. These presently are of the appropriate length to be adjusted within average water elevations during summer months and they cannot be used during seasonal high water.
- Boat ramp: Storage at OHW will have minimal effect on our existing boat ramp structure, though there may be significant additional erosion based on our observations during "natural" OHW. Storage at 1872.4 or above will require replacement of the ramp.

Legal Feasibility

- 20,380 feet of shoreline (out of 70,000 feet total around Lake Wenatchee) have second-class shorelines which were sold or deeded to property owners prior to 1942. All deeds issued after 1942 were written subject to an easement for the right to overflow by the Wenatchee Reclamation District. State Parks owns 9,430 feet of such second-class shoreline not subject to such overflow right easement. As the study notes, water storage to or above OHW would require the purchase or lease of easements from State Parks for shoreline inundated. Purchase of easements and/or mitigation for actual construction activities, as well as for long-term use of property, is mentioned but the economic costs need to be assessed and projected. State Parks might not be a willing seller of such an easement if adverse impacts to the public's beaches, shorelines and vegetation communities couldn't be mitigated to our satisfaction. Legal feasibility is inextricably intertwined with socioeconomic feasibility.

Socioeconomic Impacts

- Loss of beach/shoreline: Water storage at OHW or above would result in loss of nearly all open upstream river and lakeshores, except for the main South beach and a small rocky beach in the North. July through September, the water recedes, exposing open grassy beaches which are a key attraction for our visitors who want an alternate to the crowded and noisy swim beach. These are the only option for our campers in the North. At OHW, the majority of our shorelines will have

water up to and within the "shrub line". This would cause a very significant loss of public access to water and shore-based recreation (fishing, hiking, sunbathing, picnicking, etc.). We strongly disagree with the MWH conclusion that there would be little or no impact to shore fishing for this reason [p. 5-20, 5.2.2.2.1]. In addition, a developed trail along the North shore of the river would be lost. Inadequate information was collected by the study to make a determination on the impact of recreation and the corresponding impact on the local economy. At the 1870.3 foot level, water will be in the riparian vegetation along much of the shore, during peak recreation periods. Without a usable beach, the public will either not come (resulting in an economic loss of approximately $9.80/visitor/day to the local economy (Dean Runyan Associates 2002)), or they will destroy the riparian vegetation in order to create a usable beach (resulting in environmental impacts). These issues, too, require further study and detailed analyses. To local residents, the loss of recreational beaches is a loss of quality of life in a county that is economically struggling. To the state's residents, it diminishes the recreational value of one of its significant state parks. The loss of recreational value can have secondary and tertiary effects—reducing revenue from camping and day-use fees, making this park ore of a burden on the tax-supported portion of the agency's budget.

Swim beach: There would be a significant loss of developed swim beach at both storage elevations.

Submerged hazards: MWH states "Beneficial impacts of the higher water elevation will include greater ease in launching boats at the boat ramps and the reduced risk of damage to boats and motors caused by shallow-water conditions around the lake that now occur late in the summer." [p. 5-20, 5.2.2.1.2]. This is referring to storage at OHW. There are many submerged hazards around the shore of the lake, but particularly in and around the main channel from the park boat ramp to the open lake. These hazards exist at all elevations we experience—regardless of the level of the lake, there always exist hazards just below the surface. For example, a boulder exposed during low, late summer conditions is arguable *less* a hazard than the same boulder, just submerged during OHW. Furthermore, the location of the dam just downstream from the boat ramp presents a hazard in the event a boat motor stalls.

Upper river access: Floating the upper Wenatchee River in rafts, tubes, canoes, and kayaks, etc. from the state park to Plain and/or Tumwater Canyon is a very popular recreational activity during the summer. Hundreds, possibly thousands, of people engage in these activities, either privately or as customers of several local commercial outfitters. The state park boat launch is the only significant developed public access to the entire upper Wenatchee River. Placement of a dam just downstream of the park boat launch will end reasonable public access to the river for floating these many miles of river. MHW suggests construction of a second, alternate launch facility just downstream of the dam on the South shore [see comment above, Technical Feasibility]. The Wenatchee remains a named candidate for State Scenic River status and this value should be acknowledged and weighed in the cost/benefit calculus, too.

- Archaeological: As one of the state's principal stewards of archaeological and other cultural resources, we are especially concerned about potential impacts to known and unknown archaeological sites around the headwaters of the Wenatchee River. To its credit, MWH acknowledges potential harm to these resources, both from higher water levels and from actual construction, and notes that further study is needed.

Environmental Impacts

While a number of ecological and fisheries-related issues are both very real and of strong concern to State Parks and its stewardship, education and interpretation missions, we confidently defer to colleagues in WDOE and WDFW to assure those are fully addressed. A number of aesthetic impacts are of special concern to us, and were not adequately addressed by the consultant, if at all.

- Dam and facilities: Currently there is a very high scenic and aesthetic value along the Wenatchee River at the proposed location of the dam—a natural mountain lake and free-flowing river surrounded by a forested state park. It is difficult to evaluate the harm done to the experience of the visitor with the placement of a concrete and rubber dam, numerous buoys, floating barriers, and WARNING—DANGER signs in the river, as well as on-shore fish ladders, roads, a concrete equipment vault and store yard, all surrounded by chain link fencing. MWH states "From the upstream side, the viewing corridors from the state parks would not see the bladder when inflated." [p. 3-64, 3.5.3.5 "Rubber Dam Structure Aesthetics"]. This ignores the visual impact of the floating barriers, warning buoys and warning signs.
- Trees and vegetation: Submerging natural perennial shoreline vegetation for months, rather than days or weeks, would kill these varied flowers, grasses and shrubs. It is possible that numerous trees would die as well, particularly at the higher storage level, as their roots would be submerged for extended periods. MWH acknowledges this only as a side note to potential cultural resource impacts, but fails to mention the broader implication of shoreline tree mortality. "Prolonged flooding would result in mortality and/or reduced vigor of shoreline vegetation and roots." [p. 5-27, 5.2.4.1]. As the lake level drops due to water releases in the late summer and fall, a broad band of shoreline will be exposed which would no longer support significant vegetation (possibly allowing spread of noxious weeds). This grey band ("Bathtub Ring") would be visible all around the lake and river. These impacts could be quite pronounced on Emerald Island, given that its maximum elevation appears to be only slightly higher than the proposed elevations. Holding water at the higher proposed levels will drastically impact the ecology of the wetlands in the deltas of the White and Little Wenatchee Rivers. More study is needed to assess what these impacts will be, short and especially long-term.
- Trails: We disagree with MWH's conclusion that there would be "only a minor impact to local traffic and recreational activities" as a result of the structures, facilities, and the daily to weekly maintenance activities [p. 3-64, 3.5.3.4]. The dam and its associated storage structures, air compressors, generators, fish ladder, fencing, warning signs, etc., would be placed where they would intersect a

Salmon Interpretive trail, groomed cross-country ski trails (North and South), and a Winter Snowshoe Wildlife Interpretive trail. To what extent would our users' experience and expectations be affected by all of this? Access to the dam site would not be possible during the winter months without damaging or destroying groomed ski trails and/or the sled hill.

In summary, as a feasibility study this report appears adequate to conclude that the project is not feasible at the 1872.4 foot level. The report is sufficient to demonstrate that at the 1870.3 foot level, a much more thorough environmental assessment is needed to determine if the project is ecologically and economically feasible.

I would also caution that the study report should avoid use of conclusive language about whether certain impacts on the environment may or may not be "significant". Declarations of whether a project's effects on the environment are significant or not, etc., is properly a function and legal responsibility of NEPA/SEPA officials. The MHW conclusion that maintaining water levels at the 1870.3 level appears feasible and "cost-effective" seems premature, too, given the acknowledgement that mitigation, easements, and "other" socio-economic costs are not included. Such costs may be prohibitive, if fully acknowledged and measured.

Thank you for the opportunity to comment on this study.

Sincerely,

William C. Jolly
Environmental Program Manager

Cc Jim Harris, Eastern Region Manager
Rick Halstead, Lake Wenatchee State Park
Mark Schulz, Environmental Specialist
Deb Petersen, Environmental Specialist

P.S.: The comments submitted to you by Mr. Al Hillel on July 22, 2003 seem to us to be quite meritorious, and worthy of your consideration, as well.

O:\Environmental\STAFF\JOLLY\Lake Wenatchee Water Storage comments July 28.doc

Lisa de Vera
Project Coordinator
Chelan County Natural Resource Program
411 Washington Street
Wenatchee, WA 98801

RE: LAKE WENATCHEE WATER STORAGE FEASIBILITY STUDY-FINAL COMMENTS

The Lake Wenatchee Water Storage Feasibility Study has probably only just started! While we would like for this to have been the first and last phase, more money will need to be spent on this study so that the right and responsible conclusions are reached.

COMMENTS ON ALTERNATIVES 1 & 2& 3:
We are absolutely against any storage plan that holds the lake level at 1872.4 ft. The negative socioeconomic impacts and the negative environmental impacts resulting from these three operating alternatives will be beyond anyone's imagination. The legal fuss against these plans from the area property owners will be even more surprising.

COMMENTS ON ALTERNATIVES 4 & 5:
We are against any storage plan that holds the lake level at 1870.3. We are not as extremely opposed to these alternatives as we are to 1 & 2 & 3.

We need to be convinced that the rubber dam and other structures will not add additional flow restrictions to the narrowest part of the river which will be problematic during our winter flooding periods. This is of more concern to us than the other multitude of problems we can think of.

We need assurance that no plans can ever be implemented to increase the water storage level at a future date.

We need to see some plans that will correct the out-flow area around the Wenatchee River Bridge. The highway acts as a dike and creates problems in the winter flooding periods. The need for altering and changing the roadbed at this point is imperative.

GENERAL COMMENTS:
Again, we must state that we will be committed to oppose alternatives 1 & 2 & 3. We don't want to be unreasonable about alternatives 4 & 5 because we can see the need for additional water storage. We just really don't think that Lake Wenatchee needs to be disturbed by this project. We are hoping that further studies will find alternative sites for water storage in other areas.

Dave and Sally Kane, Lake Wenatchee Property Owners
115 Kane Lane
Orondo, WA 98801

Sally J. Kane David P. Kane

July 28, 2003

Lisa de Vera
411 Washington Street
Wenatchee, WA 98801

Ref: Lake Wenatchee Water Storage Study Preliminary Draft

Dear Ms. de Vera:

My wife and I have owned property on the shoth shore of Lake Wenatchee for 40 years. We have two lake front lots, and own the 2nd Class shorelands in front. It includes about 50 feet of (Mostly) sandy beach, a dock, a home, and a boat house. We use the proprty as a summer second home. We, our children and grandcheldren have played on the beach, swum and boated in the water. The beach and dock are key to our use and enjoyment of the property.

1. Water Levels

Under Alternative 4 or 5 of the study, I understand water levels would be held at ordinary High Water, or 1870.3 feet. This would inundate most if not all of our beach. The access to our dock is across the beach and over a rough rock causeway to a concrete structure anchoring the end of a 30-foot gangway. Both beach and causeway would be underwater, as they were during last month's high water.

Under Alternatives 1, 2, or 3, the beach would be completely flooded, and there would probably be some water inside the boat house, as well as around the foundation blocks of our sundeck. Although the water's edge would probably not reach to lower foundation posts of our house, wetting and loosening of soil arough them would likely occur.

2. Timing

All of the improvements on our property were built for, and have lived with, the normal level fluctuations of the lake. In our experience, high water typically occurs in June, and lasts at most 2 or 3 weeks. During this time we get visiting logs of all sizes, which sometimes act as battering rams when wind and waves are high. The logs don't always go away, but the battering stops as the water level recedes.

As I mentioned, for many reasons ours is a summer place . Its use is centered around water based activities of which there is little around the lake from November until the snow is gone (Mid-April to early May on the South Shore). All of the Alternatives would keep the lake level high during "prime time", namely July and August. Depending on the rate of release, this could extend well into September. Add in the time of natural high water in June, and the whole summer becomes "high water time".

3. Damage to Other Properties

Many of the older cabins and houses on the South Shore were built at lower elevations than ours. Some of these have been raised to prevent interior flooding, but the foundations remain exposed to high water and especially logs. Our next-door neighbor to the east is a prime example.

Page 2.
July 28 2003
Lisa de Vera

4. Fish

The fish populations of Lake Wenatchee, its tributaries and the Wenatchee River have had thousands of years to adapt to varying lake levels and rates of flow.

5. Economics

Using the effect of the proposed project on the rate of rise of real estate prices as the primary measure of impact on private property owners, is offensive to me. My wife and I have no interest whatever in selling and intend that our Lake Wenatchee property stay in the family after we are gone. In the meantime, we are opposed to any project that will deprive us (and them) of the main sources of our enjoyment of it. True, we could build a bigger, longer causeway or an additional gangway at considerable trouble and expense, if we could get the permits. We could also protect our foundations with a bulkhead. However, there is no way we could dis-inundate the beach.

Yours very truly,

Orlien N. Becker

Orlien N. Becker
16120 65th Avenue S.E.
Snohomish, WA 98296-8722

Lake Address
15780 Cedar Brae Drive

Public Comments on proposed Dam at Lake Wenatchee
c/o Lisa deVera, Chelan Co.
411 Washington Street
Wenatchee, WA 98801

Damming Lake Wenatchee for irrigation water storage was originally proposed in 1930. My, how things have changed since then! My pioneer father bought property on Lake Wenatchee in the 1930's. There were only a few summer cabins on the lake in those days. Almost a century later now, there is a lot of high cost development all around the lake. And irrigated orchards (like the one on Pioneer Avenue in Cashmere where I grew up) continue to be ripped up and paved over for suburbs.

The original 1930's dam permit has lapsed. The County's current study originally suggested irrigation water was the main purpose of this dam. Now their own study indicates that there is no increasing demand for irrigation water. But are they willing to stop spending hundreds of thousands of dollars of taxpayer money on more studies of something that no one I know wants or needs? No, they want to continue studying and spending taxpayer money.

The County's own study not only indicates no need for more irrigation water, it admits that a Lake Wenatchee dam would have many adverse impacts. However, they made no attempt to put a dollar value on these losses (summer flooding of beaches, increased wave erosion and water turbidity, decreased property values, reduced public recreation and impacts on three endangered fish runs.

This study was funded by a Washington State Legislature grant. Please State legislators; don't waste our precious tax money on further studies of something that doesn't even pass the "straight face" test!

Charlotte Griffith

Charlotte Griffith
601 Lowe Street
Wenatchee, WA 98801

United States Department of Agriculture **Forest Service**
Okanogan and Wenatchee National Forests
Lake Wenatchee & Leavenworth Ranger Districts
600 Sherbourne
Leavenworth, WA 98826
(509) 548-6977
Fax (509) 548-5817

File Code: 5500
Date: June 13, 2003

Mr. Mike Kaputa
Director for Chelan County Resources
411 Washington Street
Wenatchee, WA 98801

Dear Mike,

This letter states the Forest Service's position concerning the current ownership of the bed of Lake Wenatchee.

As you know, I raised this question quite some time ago. Since then, we have had discussions with Mr. Steve Ivey, Aquatic Land Surveyor, Land Survey Unit, Engineering Division, Washington Department of Natural Resources and follow up discussions with our Office of General Counsel.

Mr. Ivey's note to the Wenatchee National Forest stated that there was no doubt that the bed of Lake Wenatchee belonged to the State of Washington. However, we have been advised by our attorney that this is not correct.

They advised that only the Federal Court can determine if a body of water is navigable for purposes of application of the various tenets regarding ownership of the beds of those bodies of water, unless Congress has passed legislation declaring navigability. We find no evidence that Lake Wenatchee has gone through this determination. This issue could be addressed in a State Court but only if the United States specifically waives sovereign immunity.

In closing, we are advised to continue our position that the bed of Lake Wenatchee and the Wenatchee River, inside the National Forest Boundary, are National Forest System Land until they have been determined to be navigable by a federal court.

If you need additional information about this project please feel free to contact me.

Sincerely,

GLENN M. HOFFMAN
District Ranger

Washington Growers Clearing House Association
1505 North Miller Street, Suite 260
PO Box 2207
Wenatchee Washington 98807
Phone: 509-662-6181; Fax: 509-664-6670

June 23, 2003

Lisa de Vera
411 Washington Street
Wenatchee, Washington 98801

Subject: Lake Wenatchee Water Storage Feasibility Study

Dear Ms. De Vera,

The Washington Growers Clearing House Association is a grass roots tree fruit grower association with approximately 2,400 Washington tree fruit grower members. Approximately 870 of those members reside in or have orchard in Chelan County.

As a member of the Lake Wenatchee Water Storage Feasibility Study Project Team, I would like to thank the staff of the Chelan County Natural Resources Program, the facilitator (Nancy Smith) and the Bob Montgomery Group for their excellent work on this feasibility study.

From the start of the study, it was very clear that the time and money available for this study was limited and that not all the various issues brought up during various discussions could be studied thoroughly. The project team developed a scope of work and agreed that part of the study was to include references to areas where additional study would be needed, if such a project were ever proposed. I believe that the study has accomplished the goals outlined by the Project Team. The incredible amount of data generated and collected for this report will be very valuable during current and future watershed planning discussions.

As a tree fruit representative I would like to add to and clarify certain tree fruit related elements in the report. First the tree fruit industry in the Wenatchee Watershed is a relatively mature industry; acreage is not expected to increase in any significant amount and is more likely to decline slightly, over the years. Despite the fact that the Wenatchee Watershed has some of the best fruit producing climate and soil conditions in the world, the state regulatory environment, and the distance to the market puts Washington tree fruit producers at a competitive disadvantage to domestic and subsidized foreign competitors. In addition to the economic challenges, urban encroachment will also contribute to a gradual reduction in orchard acreage. To what extent or how fast any potential tree fruit acreage reduction will occur is unknown.

The tree fruit production areas of Washington State are located in desert regions. Without adequate irrigation water, tree fruit growers cannot produce a top quality, economically viable tree fruit crop. Insufficient irrigation can negatively impact fruit size and quality, reduce yields, and in the worst-case scenario kill or severely injure the tree. Over irrigation can interfere with the natural nutrition of the tree, negatively impacting fruit size and quality, cause tree rot, mildew, and kill the tree, etc. Many tree fruit growers monitor soil moisture levels to schedule irrigation timing and amounts for maximum benefit and minimal use. Growers have a definite economic incentive to irrigate properly.

Lake Wenatchee Water Storage Feasibility Study
Page 2 of 2

As new cost effective irrigation technologies become available tree fruit growers have implemented those tools with the help of the Natural Resources Conservation Service (NRCS), Washington Tree Fruit Research Commission and the WSU Cooperative Extension Service, etc.

Over the years the tree fruit grower funded Washington Tree Fruit Research Commission has funded research to aid growers in the more efficient use of water. At present the Research Commission with the aid of WSU Cooperative Extension is conducting a deficit and partial root zone-drying irrigation project in the Wenatchee Watershed etc., to determine the impacts of varying amounts and timing of water use. Experiments are being conducted on the effects of withholding water at certain growing stages of the tree before replenishing the soil moisture, thereby reducing overall water use.

WSU Cooperative Extension aids growers in implementing new research findings and technologies at the orchard level. Such efforts will continue to aid growers in understanding state of the art water management techniques and increase the efficient use of irrigation water.

NRCS has a federally funded Environmental Quality Incentive Program (EQIP), which is designed to aid agricultural producers technically and financially in their efforts to manage irrigation, soil nutrients and pests in an environmentally sound manner. Unfortunately, the tree fruit grower applications are not recognized as a funding priority, all of the Chelan County applications (about 90) were turned down this last funding cycle.

Most tree fruit growers in the Wenatchee Watershed receive their irrigation water via irrigation district canal systems. Each of those districts has maintenance and operation programs to ensure that water is delivered as efficiently and cost effectively as possible. All irrigation district systems have approved fish screens and most are gravity feed. A high percentage of the irrigation canals are lined and that percentage continues to grow yearly. Repairing and relining of the irrigation canal lining is a continuous yearly project. Each year, each irrigation system monitors the amount of water diverted and reports the amount diverted to the Washington State Department of Ecology. Each irrigation system has methods in place to ensure that they do not divert more water than their district (or collective users) is authorized by their state approved water right. Canals are patrolled regularly to ensure that the system is operating properly.

The Washington State tree fruit industry has and will continue to demonstrate a strong commitment to the cost effective efficient use of irrigation water.

It appears that if the Wenatchee Watershed population growth estimated in this study does in fact occur and recognizing it is very difficult to restrict population growth, the watershed will, in the very near future, have a serious water problem. Being pro-active in identifying water conservation measures, additions and improvements to current water management practices (including various types of water storage) plus securing funding for implementation is critical to the protection of the quality of life, the environment and the economic viability of the watershed.

Thank you.

Sincerely,

Kirk B. Mayer, Manager

June 18, 2003

TALL TIMBER
HOMEOWNER ASSOC.

Lisa DeVera
Chelan County
Natural Resource Program
411 Washington Street
Wenatchee, WA 98801

RE: Lake Wenatchee
Water Storage Study
Prelim Draft

We represent the Tall Timber property owners which is a 50 lot sub division located up the White River Road, and have the following concerns.

1. The introduction states that they will study down river effects. What about upriver effects on the White and Little Wenatchee rivers?

2. Page 2-15 states there is no irrigated land up the White River. This is not true. Our water right has irrigation rights.

3. Page 6-2 states there is a resort and golf course on the White River, this is totally false.

PLEASE KEEP US ON YOUR MAILING LIST.

Sincerely,

Steven S. May Corporate Secretary
Tall Timber Homeowners Assoc.
9 Skagit Key
Bellevue, WA 98006

COMMENTS

Lake Wenatchee Water Storage Feasibility Study

The County encourages continued public comment on the study and the final draft report. Public comment will continue to be accepted in written form, either by letter or e-mail, until July 31, 2003, and will be incorporated into the final report as a "Public Comment" chapter. All project information including the final draft report can be found by visiting our website at www.co.chelan.wa.us/nr/nr5.htm If you would like a CD version or paper copy of the report, please call Lisa deVera at (509) 667-6533 Due to the length of the report and budget constraints, paper copy requests can only be accommodated on a case-by-case basis. All public comment should be directed to:

Lisa deVera
lisa.devera@co.chelan.wa.us
411 Washington Street
Wenatchee, WA, 98801
Fax: (509) 667-6527
Electronic submissions are encouraged

This study has been a waste of tax payers money!!! It is not realistic financially in any way, shape or form.

General Comment:

Lots of excellent work has been done on this project, but if the objective of this proposal is to protect the fisheries from low flow, it should be based on some indication that long-term historic flow is diminishing (due to global warming or whatever). You present no evidence of such a trend, so let's just let mother nature continue to take care of our fisheries.

If the objective is to provide more water for human use during low flow, the cheaper more logical method if matching human needs and flow would be to limit development to the water available.

I'm sorry Senator Parllette enabled my tax dollars to be spent on this hare brained scheme.

Sally Soest, Plain

COMMENTS

Lake Wenatchee Water Storage Feasibility Study

The County encourages continued public comment on the study and the final draft report. Public comment will continue to be accepted in written form, either by letter or e-mail, until July 31, 2003, and will be incorporated into the final report as a "Public Comment" chapter. All project information including the final draft report can be found by visiting our website at www.co.chelan.wa.us/nr/nr5.htm If you would like a CD version or paper copy of the report, please call Lisa deVera at (509) 667-6533 Due to the length of the report and budget constraints, paper copy requests can only be accommodated on a case-by-case basis. All public comment should be directed to:

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