



**Glendale Water Supply Improvement Project
Monday, September 27th, 2004
Beginning at 1:00pm and Commencing at 5:00pm**

**Truckee Meadows Water Authority, Tahoe Room
1155 Corporate Blvd., Reno, NV**

Welcome

Mike Wilkin
Jay Kidder
Elisa Maser
Shawn Gooch
Debbie Shosteck
Darrin Price
Greg Vorreyer
Becky Stock
Brad Hall
Dean Diederich
Rose Strickland
Dennis Ghiglieri
Paul Urban
Christine Kerick
David Potter
Kim Tisdale
Glen Daily
Sue Oldham
Shawn Gooch
Michael Cameron
Dick Nachtsheim
Niki Linn

New Business

Ron stated his preference for meetings is Tuesday because of the room availability, and would prefer a formalized date during working hours.

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He met with a representative from the Corps to discuss the WRDA Program, which could possibly be a funding source for the Glendale project. Program 595 administered by the Corp of Engineers provides funding for primarily rural areas and water projects in general, and could potentially provide a maximum of 75% of the funding if the criteria are met. It would require an Environmental Assessment and Congressional authorization.

Elisa Maser mentioned the proposed meeting schedule for 2005. Mike Wilkin added that after the Working Group Meetings, the Public Meeting would be returned to, at which point the meeting schedule could be discussed.

Flooding and Localized Impacts of Diversions; Location Analysis; Consolidation with Pioneer Diversion; Sediment Transport, Brad Hall, Northwest Hydraulic Consultants

Brad Hall presented a brief background of his history with the Truckee River, including NHC water resources firm, hydrology, river engineering, sedimentation, geomorphology, hydraulic design, etc., all related to the project. NHC has been in operation since 1972, and is now composed of 100 people total. Sedimentation engineering is his specialty, including computer modeling. He has had a decade of experience working with the Truckee River. NHC performed a background geomorphic study and an alternatives study of the flood profiles looking at existing weir and some combinations of whether or not the weir was removed. A report has been posted on the web, and feedback is welcomed.

Brad presented a synopsis of the web report. He stated they were looking at the location analysis and hydraulic conditions for the existing weir and how it affects flood profiles, as well as some background geomorphic sedimentation analysis based on the work completed by Brad and others at the Corps of Engineers in the early nineties. The current facility is leaky; therefore during low flow conditions it is hard for TMWA to capture their water right for the public diversion at that location. The primary purpose of this project is to make a more reliable diversion during extreme low flow conditions.

Please see attached power point presentation.

Discussion, Working Group

Elisa opened discussion. Dennis questioned if the diversion was moved 2,100 feet upstream, would it have to be moved even further upstream to lower the gradient. Brad replied that significant grading would be required. Dennis stated that for a river that does not require hardening, you would have to move the weir further upstream, to which Brad agreed. Dennis asked if there is a point at which scouring effect would be limited.

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Brad replied he did not think there has been filling of the banks, and channel-controlled hydraulics, not the riverbed invert, that affects the flooding profile. Dean mentioned that they have only looked at flood issues, not habitat including side bank habitat. Therefore, he is concerned with moving further upstream and the affects that would incur.

Brad explained that the existing weir is porous and does not capture water, as it should. Rose stated Pioneer Ditch is another major diversion, and expresses concerns towards it elimination. Brad stated that what is done upstream hydraulically does not affect downstream flood conditions. Rose questioned whether Pioneer Ditch diversion should be designed at same time as Glendale Diversion is being modified so there will not be arising issues.

Ron stated he has examined issue and while it could be done it would be very costly. From a water rights standpoint it would not be beneficial for TMWA. For that to happen there would have to be an agreement not to affect TMWA or the Pioneer Ditch Company's water rights. Mike stated the estimated cost would be \$1.5 to 3 million. Debbie stated that TMWA was looking at funding for a better fish passage, and similar issues at Pioneer Ditch. Sue stated that Senator Reid's office has asked for funding. Water rights cannot legally be moved from Pioneer Ditch unless all water right holders agreed. While she does not think it possible as far as organizing applications and logistics, she stated that funding is very possible. Mike stated that Pioneer and Glendale don't affect each other and work independently, to which Rose had expressed disbelief. Brad stated that the modeling has not been done. Paul stated that unless the height of Pioneer is increased, he does not think it would affect how water flows over the Glendale diversion.

Glenn stated that when referring to the existing weir it is important to recognize that the diversion was never engineered beyond requiring head height, and rock and concrete have piled up, with which Ron agreed.

Elisa stated that other flooding issues could be emailed to her for the next meeting. She also offered to bring copies of documents on web. Paul stated that the Corps has completed all existing condition runs and is now adding alternatives. They could potentially be completed.

TMWA River Operations, John Erwin, Water Resources Manager

Ron mentioned that John Erwin probably has the most knowledge regarding the Truckee River system and how it operates. Mr. Erwin talked about normal and drought conditions. He stated that from April 1 to Sept. 30, 500 cfs has to cross a certain point on its way to Reno. In an average year, use is .5 acre-foot of Tahoe water, and 500,000 af will pass that point. The May 1st snow-pack was down 50%, and much was turned in

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to evaporation instead of run-off. Currently Tahoe is depleted, it is at the rim, and Boca is depleted as well. Currently there is 5,000 af of storage in Boca moved from Donner Lake, and 0 storage in Tahoe. Part of the water is fish credit water that is sitting in Boca, as well as the 105,000 in Stampede. There is 5,000 af in Prosser. At Farad today was 161 cfs, 96 cfs after the fish credit of natural flow. At the Mogul Gage there is 97 cfs, and at the Reno gage 119 cfs, which shows up at the Glendale Diversion. Demands are currently around 90 MGD, and approximately 50 MGD are pulled from the ground with balance coming from surface water. Ideally the groundwater will be maximized and the POSW is saved for last. Drought supplies are normally only needed for July through September. We have sufficient supplies throughout the summer. If it is a bad winter, it will probably be the same next year. Approximately 22,000 af of groundwater is extracted in a drought year. Not that much groundwater is used; therefore it can be drawn from continually. It could be done for another 4 or 5 years because of snowfall.

Mr. Erwin reported he has reviewed the water availability and demand during normal and drought years. He has done examinations on extreme drought years, with 1987-94 as the worst drought on record. One more year has been added to the drought standard. It's a balancing act to provide water for the community.

Mr. Erwin stated that today there is no diversion to Glendale; it is turned off. In August it would be running, and as much water would be diverted as water rights would allow. Chalk Bluff is currently running about 45-50 MGD, which will probably continue into November. During a period that only TMWA water is in river, it is very important to capture it wherever possible because the system demands it. In 1992, there was 28 cfs in the river at Glendale, which was lowest on record. During a critically dry year, only POSW water is present in the river, and this is TMWA's last source of water; therefore, all needs to be captured. TMWA is seeing upwards of 17-20% for conservation, with a requirement of 10%. Kim questioned if TMWA has looked at stiffer fines for water wasters, to which Mr. Erwin stated that less than 1% savings was documented through stiffer fines in Denver.

Mr. Erwin stated that under the TROA regime other parties have been able to acquire water rights and/or storage rights upstream in order to release their water during critical years (i.e. Reno or Sparks could release stored water). Sue stated that there is a large block of fish water stored upstream in the winter. TMWA could turn over water to fisheries during wet years. More water could be released under TROA than is currently released.

Greg questioned the evaporation rate of water stored upstream. Mr. Erwin stated that Tahoe could lose 1 – 1 ½ feet per year (180,000 af) due to evaporation. Independence does not evaporate as quickly as the rest, and Donner is the next slowest evaporating due to the shadow the mountains provide. Sue stated that the TRPA asked why the lake is so low, the response to which was Mother Nature takes a lot of water. Water right

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ownership when evaporation is considered is measured at the California/Nevada state line.

Discussion, Working Group

Elisa opened discussion on the Truckee River operations and water treatment plants. Rose asked what happens at Glendale during a flood. Ron replied the treatment plant would be shut down because of turbidities. High turbidity water can be treated, but would load the wastewater treatment plant with solids, which they do not want.

Mike stated that storm drains are gravity fed discharges. They would need to be gone over or under if you went 2,100 ft. upstream. Rose expressed concerns about the water quality benefits further upstream, and the reliability of beneficial flow. Mike stated they looked at storm events and the turbidity impact.

Greg asked is there any natural diversion along the river or is it all man-made. Paul stated that Pyramid Lake is probably the only natural one, other than groundwater. Greg asked how the new facility can be more reliable than the existing one. Mike explained the basic concept that currently water flows through the boulders rather than over it.

Mike stated that they have talked about locations and hydraulics, and environmental impacts. He questioned what would be discussed next and added that a location would need to be decided.

Ron stated that TMWA wants the project to be linked with the Flood Control project, which is why we are working with the same model as Paul (on the Flood project). Brad stated that the key is the alternatives being examined. Rose believed results of flood studies were needed to bring back to the Community Coalition. Paul and Shawn thought the existing weirs and diversions were in the model for the Flood Project. The recreational and aesthetic issues need to be considered.

Elisa asked when moving forward is it necessary to evaluate all the other locations. David stated his office has discussed consolidating the diversion with Pioneer Ditch. Sue stated that nobody here owns Pioneer dam; permission would be required from the dam and water right owners in order to do anything with it. Dean stated that consideration should include bringing Pioneer to Glendale, and bringing Glendale to Pioneer.

Elisa stated that TMWA's process is to examine a variety of options. Ron offered to provide information to David in future meetings. Ron stated that he would like to reach some type of consensus on location regarding the hydraulic and flood issues. He asked if there were other locations that should be considered. Dennis stated that further

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upstream there is a significant impact on shear stress. Brad mentioned the dewatering aspect. The need to present information to Community Coalition was reiterated.

Dean stated that moving upstream would achieve narrowing (deepening), but the habitat would shrink. It would require significant amounts of armoring, or would start undercutting. Rose stated that this is the opposite of what is desired. TMWA needs a diversion to get water to the wastewater treatment plant and they need to choose a location. There is no difference in the affects of location during high flow events, only in low flows.

Summary of Decision and Next steps

Elisa stated that she did not expect consensus today. Information needs to be acquired regarding costs. Shawn stated he has heard Brad's presentation a few times and it is the same every time. The science has not changed; what have changed are how the information is presented and the format of the meeting. He stated this is the same information and same results as provided to the Community Coalition previously, and he does not think it needs to be subjected to a consensus of the Community Coalition, although he thinks it would be acceptable to them.

Elisa asked if the Community Coalition working group would have other alternatives to examine, because consensus was not reached here. Paul agreed it would be good for the flood working group to hear some of this information. Ron stated that this is not a flood control project, but a water supply project. Elisa stated that she will provide information to the flood working group, but will not wait for consensus from them.

Elisa stated that we are not ready to choose a location. Greg stated that the cost and proposed source of funding are still issues. Ron stated that TMWA would be examining those issues. Community benefits could go after federal funding. Mike stated that whether it is federal, rate payer, or TMWA funding, all the funding essentially comes from taxpayers. Elisa stated that cost alternatives will be included at the end, and that the next few meetings could provide an order of the magnitude of costs.

The next meeting is Tuesday, October 19th from 1:00 to 5:00. Email information was offered to members. The technical memo and notes will be posted as soon as they are available.

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