



**Glendale Water Supply Improvement Project  
Tuesday, October 19<sup>th</sup>, 2004 at 1:00 – 5:00 PM**

**Truckee meadows Water Authority, Tahoe Room, 115 Corporate  
Blvd., Reno**

**Attendees:**

Erik Ringelberg, PLPT  
Christine Kirick, Kennedy/Jenks  
Glen Daily, City of Reno  
Jay Kidder, Chinook Engineering  
Debbie Shosteck, TMWA  
Ron Penrose, TMWA  
Marjorie Caishy, NHC  
Brad Hall, NHC  
Gary Scoppettoni, USGS  
Kim Tisdale, NDOW  
David Potter, USFWS  
Elisa Maser, MIG  
Dean Diederich, JBR  
John Enloe, ECO:LOGIC  
Mark Foree, TMWA  
Marlene Olsen, O & A  
Shawn Gooch, City of Sparks  
Mike Wilkin, ECO:LOGIC  
Michael Cameron, TNC  
Lisa Heki, USFW  
Holly Wilson, ECO:LOGIC

**Welcome**

Elisa Maser, MIG Facilitator, welcomed the group. The meeting commenced at 1:00 p.m.

*Working Group Meeting Notes – 10/19/04*

Project Manager: Ron Penrose  
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## **New Business**

*Ron Penrose, TMWA Project Manager*

Ron stated that it is premature to discuss cost due to the undecided location and structure. He again mentioned that he will seek funding through the Corps of Engineers, Section 595 Program, as well as requesting outside funding from other sources. He sent a letter to the Corps, which was handed out, for WRDA Section 595 Request.

## **Fish Passage and Screening**

*Jay Kidder, Chinook Engineering*

Fish Passage

Please see Power Point Presentation and Corresponding Memo

Examples were placed around the room regarding slopes that Jay discussed in his presentation.

## **Discussion, Working Group**

Michael Cameron asked if a potential consensus could be reached with regards to a target species. Elisa replied that while a consensus may not be reached, it would be discussed today.

The discussion focused on Salmonids, which Kim Tisdale stated she would like to be part of the target species for design. Preferably species that spawns in spring (LCT) and fall (Mt. White Fish) would be selected.

They discussed the need for a variety of habitat where all passage depends on slope. If an area of the river is selected that requires a seal, there will more maintenance involved, and therefore, more cost. Jay suggestion in his presentation was the roughened channel, which mimics the natural riverbed and all fish find passage. Gary Scopettoni would to see all native species pass, to which Erik Ringelberg later concurred.

Michael questioned if it passing the weakest swimmer is impractical is demonstrated, how do you limit design? The balance is between the

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smoothness and roughness of the channel. Brad Hall questioned at what flow, with the flow determining the velocity:

- Near bed
- Mid-water
- Surface

It is the middle flows that will be designed towards. David Potter stated that he thought the existing structure is leaking, and asked if the new structure would have the same problem and not meet reliability criteria. Jay stated that it at a higher elevation it somewhat would, however below that it would not leak and that elevation would drive the water system.

It was asked what challenges the fixed structure would entail. Mike Wilkin stated that there were certain control points in the Truckee River that require elevation move water to the plant. Ron Penrose asked for the natural variation in gradation of the Truckee from Glendale to Pyramid. He asked, as far as design is concerned, would the design be to the natural slope, the highest, or the steepest. Gary stated that it is pretty much a canal, so it steepens. Ron asked why you would design beyond the highest natural reaches. Jay asked the lowest would then be designed towards. Ron stated he was simply trying to determine design criteria, and what would be the most reasonable. Riffle slopes where mentioned as something to potentially design towards as well.

It was discussed whether to look at slopes where weaker swimmers are found, as the fish ladder usually precludes the weakest swimmer. Kim Tisdale stated if the design is for salmonid passage that potentially others will find their way during low flows. Therefore, if the design is for all natives, non-natives, including the Cui ui will pass. However, there is no way to be certain.

Erik stated that fish passage should be native, but that the argument is longitudinal. He stated that if passage is a design constraint, can yearly averages be estimated. For example, can a 10 year hydrograph be compiled that would estimate how many years will fish passage will be accomplished based on how many years fish have passed under historic flows, and how this would match the fish design criteria. He stated that under the adoption of TROA, flows would b increased in spring but decreased in fall. Jay stated that it is difficult to give anything but a hypothetical statistic.

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Lisa Heki stated that agreed upon natural characteristics should be designed towards. Michael Cameron asked about the two designs that were looked at in detail. Elisa stated that there were many concepts, but not designs. Michael Cameron asked if all of the alternatives included the roughened channel. Mike W. stated that every design alternative that has been carried forward has always been a roughened channel with natural bed materials. He stated that there are designs that are worked on by eth design team, and the reason it has not been designed is that the design criteria changes every time the group meets for discussion. The goals that stand now are to design towards an efficient enough elevation to be able to provide water to TMWA.

Michael Cameron stated that with the considerations of different species and different times of year with regards to spawning that they will get into an infinite list of permutations. He stated that as opposed to target species, why not compile a short list of slopes and then decide how fish will fair from the list. The response to which was that information would be highly speculative, some science would be involved in that alternative, however it would mostly remain conjecture. In order to narrow it down, a manageable array of alternatives is needed, costs need to be shown, as well as how the native fish will fare.

Ron suggested showing the group what the design team has looked at so far, and Jay demonstrated the two options. Mike W. stated that the design team is trying finding a balance between what is found in the Truckee, and keeping the Truckee's hydraulic connectivity. He stated that some fish will avoid turbulence, and the plan is morphing as they are trying to keep the river hydraulically connected. Lisa Heki stated that Cui ui, will not necessarily avoid turbulence.

Gary asked if they have the intention of inverting and making the side channel a way to get water. Jay stated that it has been looked at, and 2 to 3 feet of head was gained at the most. Kim expressed concerns that much more of the river is being de-watered.

Mike suggested keeping the control points instead of moving them, and having it slope off. It was asked why a milder slope cannot be achieved downstream. Brad stated that because of the flood profile and the existence of a bridge downstream, it would not be a good thing. Mike W. stated that at 20,000 cfs the

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water barely went back under the bridge. Gary stated that considering a greater slope might enhance habitat, and provide more spawning space.

### **Boat Passage, Brad Hall and Margie Caishy, Northwest Hydraulic Consultants**

Public Safety and Recreational Boater Passage

Please see Power Point Presentation and Corresponding Memo

### **Discussion, Working Group**

Mike W. asked how friction factors and interstitial velocities were predicted of the roughened channel. Marjorie stated that RAS will do fringe velocities, but not necessarily bottom velocities. Fringe velocities can be predicted.

Elisa stated that the next meeting will take place November 9<sup>th</sup>, 2004, at 1:00pm. The meeting will take place in the Tahoe room of the Truckee Meadows Water Authority. The topic will be aesthetics, appearance and type of vicinity accessed during construction.

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