



**Glendale Water Supply Improvement Project
Tuesday, November 9, 2004 1:00 – 5:00 PM
Working Group Meeting**

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

Attendees:

Elisa Maser
Mike Wilkin
Ron Penrose
Jay Kidder
Brad Hall
Mahmood Azad
Marlene Olsen
Lisa Heki
Rose Strickland
Dennis Ghiglien
Andy Hummel
Dick Sparks
David Potter
Dean Diederich
Debbie Shosteck
Kim Tisdale
Paul Urban
Michael Cameron
Erik Ringelberg
Sue Oldham
Dick Nachtsheim
Holly Wilson

Welcome

Elisa Maser welcomed the working group. The meeting commenced at 1:00 PM.

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New Business, Ron Penrose, Project Manager

Ron stated that he had petitioned the Corps of Engineers for funding in writing on October 22, 2004. The program provides water funding that generally applies to rural areas, but Ron stated that the Glendale project could be eligible to receive funding. If the Corps reviews and considers a water project to be worthwhile, they will provide reimbursable funding for up to 75% of the design and infrastructure costs of the project.

The TMWA Board of Directors has approved a funding mechanism called the Truckee River Fund, which is under the umbrella of the Community Foundation Non-Profit Organization, the purpose of which is to find projects that will enhance the Truckee River from a water quality, watershed, and water resource standpoint. The fund was recently initiated, and there is an advisory committee that is comprised of three non-elected representatives from each political entity in the community. Three are from the City of Reno, three are from Sparks, and three are from Washoe County. The committee will advise the TMWA Board on different projects, and the recommendations would either be approved by the Board or disapproved. Ultimately the project would go before the Community Foundation for approval. This will be a new mechanism for handling some of the special needs of the river, and the TMWA Board has asked Ron to help facilitate as a member outside the advisory committee. The first meeting will be on December 9th; however this is outside the scope of the Glendale Project and presented as an informational item for the group.

TMWA has initially dedicated \$340,000 to the Glendale Project. TMWA is looking for matching contributors. Ron also mentioned that they had been waiting for the elections to conclude in order to meet with Senators Ensign and Reid to discuss federal funding and what might be possible for this particular project.

Continuation of 10/19/04 Discussion on Fish Passage Design, ECO:LOGIC Engineering

Mike Wilkin stated it was important to discuss where they were in the process. The discussion thus far has included flood and morphology, kayak/boater passage, and fish passage. What have been agreed upon thus far by the group are reduced flood elevations, provisions of sediment transport, fish screening,

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A logo consisting of a blue water drop at the bottom, with two curved arrows (one green, one yellow) forming a circle around it. The text "Working for our Community" is written in the center of the circle.



and the construction of a roughened channel that would mimic the natural river bed (since much of the river as it exists in an unnatural construction, the term “Natural” is used to describe the current conditions through which fish find passage). The items that remain open for discussion are site selection, screen location, the combination of fish and boater passage, as well as velocity and slope. Scheduled future meeting topics are aesthetics and appearance, construction, and restoration.

Paul Urban stated that they have always been aware that the diversion would require change, or that something would happen there in the form of improvements. Ron Penrose stated much of the analysis has been done on alternative upstream locations, the Corps’ model has been taken into account, and the results of the modeling to date indicate that with improvements there will be localized reduction in the flood profile within the proximity of the Glendale Bridge. Brad Hall stated the reduction in the flood stage is posted with the previous meeting from which it was discussed. Elisa stated additional open items were water surface, elevation, and flood wall reduction. Mike Wilkin stated that boater passage can be accomplished, that it is TMWA’s responsibility to provide this passage safely, and the concepts being used are based on the latest studies that have been done with particular attention to the issue of safety. Ron Penrose stated that the safety denominator is an inner tube, the most elementary type of boating.

Mike Wilkin continued that the roughened channel was well received, and he would like to move to discuss velocity analysis. Michael Cameron stated that he would like to satisfy all fish species needs, and not simply pick a target species for passage. He also asked if all that was being considered were velocities. Mike Wilkin stated that part of discussion was also about flows, as well as spring and fall spawners. Jay stated that the design team would also be introducing depth and velocities. Lisa Heki asked if the natural gradient in the system was incorporated. Ron stated that yes it had been, and the downstream gradient and roughness would be part of the current meeting’s discussion, the goal being to mimic the river and its natural processes. Mike Wilkin stated that a singular structure with a natural thalweg could be used to combine fish and boater passage.

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Evaluating Velocities for Fish Passage, Northwest Hydraulic Consultants

Brad Hall stated that the discussion is beyond velocities, and includes physical characteristics. Please see the **nhc** Power Point Presentation.

Mahmood Azad asked what volume of rock would be added to river. The potential water temperature increase due to the addition of rock to the river is a critical issue for City of Reno and Sparks. Mahmood explained that during low flows the solar incidence of a river that runs east to west is high. The rock is no more than a solar collector; the top will heat up and the bottom will stay cool leaving the solar energy to be absorbed by the water. The issue is a question of the City's beneficial use standard.

Debbie Shosteck made the point that the older diversion would be removed, which is composed of a lot of rock. Therefore, the addition of rock as part of the new diversion should be similar in volume to that of the removed structure. Mahmood stated that it should be a modeling concern; however he doubts it is a fatal flaw.

Velocity Analysis Use in Fish Passage Design, Chinook Engineering

Jay Kidder discussed the nine native species that fish passage is being designed towards. He stated if the velocity does not work the opportunity for the fish will not present itself. Please see the Chinook Engineering Power Point Presentation.

The questions Jay posed were:

- How are the fish going to negotiate the geometry, or hydraulics, that design creates?
- Is there proper velocity for fish migration or movement?
- Is there sufficient depth for fish in the channel?
- Will submerged jets (interstitial spaces between rocks) be possible with a roughened channel?

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Jay stated that it is necessary to verify that the velocities have been calculated to fit the criteria of the fish. Although a fringe is associated, given flows will require a continual passage or channel.

Brad Hall stated that the rule of thumb for fish passage is the dimensional height of the fish plus 25% of the determined dimensional height. This is considered the minimal depth necessary for minimal fish passage. If the design team has not created velocities, depth drops, and pathways for every species the geometry needs to be changed.

Discussion, Working Group

Fish Passage will be continued into the next meeting.

Amendments can be made to previous Working Group Meeting Notes, please feel free to email or call Mike Wilkin with any questions or corrections that you may have regarding the posting of meeting notes.

Michael Cameron asked if the progression of decline in the last 50 years and how historically the river has changed had been addressed. He asked if what fish have historically been present in abundance had been researched, and stated that this information would increase confidence in the project. As a starting point for presentation, he suggested making an effort to look at the original state of the river compared to simply attempting to maintain how the river is today. He asserted that if there were a historical reference point available it would improve the product if there were a historical goal. Put into a historical context, the community would have a basis for contextualizing the project.

Sue Oldham made the point that if you made an attempt to return all original species how that would affect the current populations of non-native fish? Would they be lost? Jay questioned if Michael was asking to refine the nine species. Michael stated no, that the information would be a beginning point from a restoration perspective and it would be the right path from which to begin. Kim Tisdale stated that there is no fisheries data prior to the destruction of the natural river, and there is no data prior to the management of wildlife in the river. Jay stated that perhaps anecdotally a history could be compiled regarding the nine species present that passage is being designed towards. Kim stated that if the structure is passable by all nine species the fish will naturally react. Michael

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Cameron stated that if the foundation of the story is the fish population, the lot of the fish can only improve.

Lisa Heki stated that she realized the dialogue was frustrating, however it needs to be considered. How can we work together to make the first step something that can be built on for later projects in terms of river restoration?

Dean Diederich stated that in reality there is a breaking point, and recognizing that the original state of the river cannot be returned to it is regulatory agencies or a broader community of interests to what must be appealed. He questioned what they would want it the river to look like. He stated that the habit can only be created within the bank of context, and no one is defining habitat, which will define the fish and how they interact. It is difficult to determine a "right path" as no one knows what that is, because there are no habitat goals in this upper stretch of the river, and therefore from a design perspective all you can continue to do is design with the goal that fish can pass. Lisa asked what realistically could be achieved in this stretch of the river. Ron stated that there are more numbers to look at, including slope.

The next meeting will address aesthetics, restoration efforts and construction methods, re-vegetation, and the continued discussion of fish passage. Particularly David potter would like to talk more about fish screening and passage. Jay stated that he would discuss screen design and velocity patterns in the pool with an on channel screen. Lisa Heki would like to discuss restoration.

The meeting adjourned at 4:15 PM.

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