



TRI SAGE CONSULTING
Monthly Report
Carson Truckee Water Conservancy District

August 30, 2019

MONTHLY ACTIVITIES- July & August 2019

- 1) Attended meeting with Washoe County Planners/Community Services team in late July to introduce them to CTWCD and discuss District maintenance objectives and 408 Permit requirements.
- 2) NDOT Spaghetti Bowl Improvements- Follow up with USACE regarding final SHPO MOA, need for a hydraulic review call, and draft of permit conditions; multiple calls, emails, voicemails pushing for review confirmation. Draft permit for USACE review.
- 3) Conduct semi-annual river inspection as required under Martis Agreement; draft USACE report, finalize and submit.
- 4) Inspect debris on Arlington Bridge pier based on calls to City of Reno, consult with Superintendent, and arrange to have contractor remove debris. Notify City of Reno of completion.
- 5) Discuss expected river flow levels with Water Master and update Reno Stoker Project Contractor and TMWA Glendale engineer on expected flow levels; inspect projects in progress.
- 6) Work with upcoming project applicants regarding flow model requirements including RTC Mixed-Use Path and County River Bend Trail; discuss ongoing plans for fish passage with USFWS.
- 7) Develop updates to flow model for County River Bend Trail; evaluate flow model for NV Energy Powerline crossing near Kietzke/I-580 bridges to find no permit required for this project.
- 8) Meet with model engineer to discuss levels of flow modeling, cross section frequency and structures critical to the flow model completion upstream of McCarran; develop proposed project outline, cost estimate and schedule. **Preferred Model Update estimated at \$69,000.**
- 9) Meet with One Truckee River regarding their purpose and partners and possible role for District.

UPCOMING ACTIVITIES

- 1) Develop list of debris to be removed in fall debris removal project; work to on-board contractors to complete the removal work identified. Monitor and Report on work in waterways.
- 2) Follow-up with RSIC regarding Right of Entry Agreement for Fall debris removal work.

- 3) Continue working with project proponents for encroachment permit applications for NDOT Spaghetti Bowl Project, RTC Mixed Use Path, Washoe County River Bend Trail, USFWS fish passage projects, Arlington Bridge replacement review and other projects within the 14,000cfs flow channel.
- 4) Schedule informational meetings with potential entities with river crossings to inform them of CTWCD maintenance activities/capabilities and 408 Encroachment Permit requirements for projects along and across the river. Communicate changes to the 408 Permit process with likely applicants including the City, and utilities; update on Categorical Permission review and differences.
- 5) Draft and mail letters to homeowners along Idlewild Drive notifying them of encroachment requirements and limitations.
- 6) Discuss 2-D Model updates with TRFMA and opportunity for CTWCD to use this model update; when completed model will be made available to CTWCD by TRFMA.
- 7) Work with the City of Reno to pursue a permanent encroachment permit for the West Street Plaza and any associated projects.
- 8) Continue to evaluate and discuss temporary flood control measures including flow limitations, cost, storage, installation requirements and options for West Street Plaza and Booth-Riverside Drive areas.
- 9) Run 14,000cfs steady state HEC-RAS flow model to establish water surface elevations along key river locations to evaluate issues; complete sections upstream and downstream of downtown.
- 10) Continued coordination with City of Reno for 1) Flood Response evaluation and incorporation of Interim Risk Reduction Measures into their Flood Response Plan, and 2) Flap-gate Installation needs assessment and installation project.
- 11) Finalize the Equipment Access/Entry Point Documentation and Mapping for the District Jurisdiction;

SUMMARY REPORT

An informational meeting was held on July 25th with teams from Washoe County planning and public works to make a presentation regarding the origin and current functions of the District including a focus on our debris and deposit maintenance of the channel as well as our responsibility to prevent encroachments in the 14,000cfs flow channel. The group was informed about the process and need for 408 Encroachment Permitting, authorized by the USACE, and the timeline for obtaining such permit. Tri Sage and Superintendent Penrose attended this discussion and there were many good questions including questions regarding an upcoming County trail project in Verdi and the need for that project to have a 408 Permit. County planners needed information on the 14,000cfs flow channel expedited due to a pending land exchange and the need to know whether a 408 Permit would be needed for the project. The County has a grant to build the trail that must be spent prior to the expected timeline for obtaining a 408 Permit. The flow model in this area was completed to provide the county information as to where the path could be located without need for a 408 Permit; this information was critical to the area of the land exchange and for the County to design the final project to be outside the 14,000cfs flow channel.

As a result of this meeting, Tri Sage was approached by One Truckee River regarding the flow modeling for projects and such; this partnership non-profit has inquired as to whether the District would be willing interested to serve on the Partnership Council. This item has been added to the Board agenda for Discussion.

Tri Sage has followed up on several Spaghetti Bowl Xpress Project items that came from the June meeting with the USACE in Sacramento and pressed the USACE for finalizing the review of this application. All outstanding NEPA items including the Tribal consultation documentation and the SHPO MOA were completed and copies sent to the USACE. Although there were not believed to be any outstanding hydraulic review issues to address; the USACE hydraulic group had yet to sign off on the project so the project could be routed for internal review. After numerous emails, calls and meetings scheduled, the hydraulic team finally signed off on the project. The USACE has provided the expected Permit language for this permit which is being processed under the newly adopted Categorical Permission. The project has been routed internally for approvals and the use of the Categorical Permission allows for a somewhat lessened review at the USACE office and authorization of the permit by lesser ranking officials in the USACE which is the benefit of this approach to the applicant.

The Semi-Annual River inspection, required by the Martis Creek Lake Agreement, was completed in three partial days during July. River flows were still a bit elevated at 458cfs to 496cfs but at flows were at the lowest expected levels. There were no new issues identified during this inspection and the river was generally in good shape. Many pieces of debris were identified that will need to be removed prior to the flood season which begins in November. Several pieces of debris are blocking the channel including a large tree down across the side-channel upstream of Kietzke Bridge which should be removed soon as possible. The methodology for recruiting a contractor to support this work will be discussed at the Board meeting for direction from the Board.

The City received calls about tree debris that was wrapped on the Arlington Bridge pier once the flows reduced; this debris was puncturing rafts and inner-tubes and was a hazard to river users. Superintendent Penrose and Tri Sage inspected this debris and determined this should be removed expeditiously in order to provide safe boating for river users and to support the City of Reno need to have this debris removed prior to the normal debris removal project; this debris would have been removed by the District later in the fall. NV ENV was able to respond and remove the debris for the District in a few days as authorized by the Superintendent.

Tri Sage and Superintendent Penrose met with the flow modeling engineer from Dyer to discuss the level and needs for the flow model upstream of the McCarran bridge where no flow model currently exists or the models are inaccurate/outdated. There are many options for building a flow model in this reach, which include everything from wide interval cross-sections with no structures to narrow interval cross-sections with every structure included in the model. The latter would require detailed surveying of many structures. The preferred and recommended model for the Board to fund the development of

would be a model which includes wider cross section intervals on straight/similar sections with closer cross-section spacing on corners and curves; the preferred and recommended model includes 15 structures that we identified as High/Medium impact to the model. The Structures recommended for inclusion also include major structures which are expected to be in the location of upcoming projects or structures that would impact the flow model substantially in the vicinity of future projects. These locations/structures are expected to require adequate flow modeling to evaluate the projects by the District and will require the District to provide applicants the base flow model for their project applications. Thus, it is recommended that bridges which are slated for replacement by NDOT and dams that are slotted for fish passage projects should all be included in the base model update at the time of development rather than updating the model to include these structure at a later date (at some point the updated model will be needed). The estimate for this preferred base model update is \$69,000. If the model is built in smaller sections with breaks in the work, there is an expected \$3000 additional charge to integrate separate model sections versus building the model efficiently from end to end. The model is expected to take 6 months to develop. Superintendent Penrose and Tri Sage both recommend building the model to this middle level upfront (including 15 key structures) rather than building a lesser base model at this time and then having to upgrade sections as projects come in requesting the flow model or Water Surface elevations for the 14,000cfs flow channel. Although the lowest possible model with widely spread cross-sections and no structures would cost an estimated \$30,000, each time a basic model such as this would need to be revised and updated for a specific project area, these updates could cost \$5000- \$7500 plus dollars and would be inefficient to model; ultimately this lesser approach would likely cost the District more dollars in the long run.

The City of Reno Stoker Storm Drain Outfall Permit 16-03 is under construction and nearly complete; this project has fared well in spite of the higher than normal flows as the contractor was able to build the project behind a buffer of bank material and then open the bank to complete the outfall. TMWA has started repairs of the Glendale Diversion as a maintenance to an existing permitted structure; Permit 18-03.

Tri Sage is waiting to hear back from RSIC regarding our request to renew the expired Right of Entry Agreement. As of May, the RSIC was going to review the request and determine if they prefer to extend the existing Entry Agreement by way of an amendment or whether they prefer to take a new agreement to Council for approval. Either approach works for the District so we have provided a draft of a new agreement and if the RSIC prefers an amendment to the existing dates, we can have counsel draft an amendment to that end. Tri Sage will check back with RSIC during September. This agreement will be needed if the District is going to remove a few downed trees which were identified along these RSIC properties

The City of Reno has initiated Phase I of the Flap-Gate installation project as this project has been awarded. This project will generally install inline check valves at penetrations into the flow channel along the Truckee River walls downtown with installations beginning in fall 2019. This project was

initiated to address the USACE inspection issue; this project was delayed due to high flows and funding needs to deal with the 2017 Flood projects. Tri Sage will monitor and document this work so that it can be reported to the USACE.

The section that pertained to the USACE April 2013 Inspection report has been eliminated from this report; and it is recommend the District continue to pursue improvements and correction of items noted in that last inspection report. The District has addressed or is currently addressing those items through its work.