

NORTHERN NEVADA WATER PLANNING COMMISSION AGENDA

Wednesday, November 2, 2011
1:30 p.m.

Washoe County Commission Chambers
1001 East Ninth Street
Reno, Nevada

Notes:

1. Items on this agenda on which action may be taken are followed by the term "for possible action". Non-action items are followed by an asterisk (*).
2. Public comment is limited to three minutes per speaker and is allowed during the public comment periods, and before action is taken on any action item. Comments are to be directed to the Commission as a whole. Persons may not allocate unused time to other speakers. The public may sign-up to speak during the public comment period or on a specific agenda item by completing a "Request to Speak" card and submitting it to the clerk.
3. Items on this agenda may be taken out of order, combined with other agenda items for consideration, removed from the agenda, or delayed for discussion at any time. Arrive at the meeting at the posted time to hear item(s) of interest.
4. In accordance with NRS 241.020, this agenda closes three working days prior to the meeting. We are pleased to make reasonable accommodations for persons who are disabled and wish to attend meetings. If you require special arrangements for the meeting, please call 954-5665 no later than 24 hours prior to the meeting.
5. In accordance with NRS 241.020, this agenda has been posted at the following locations: Reno City Hall (1 East First Street), Sparks City Hall (431 Prater Way), Sparks Justice Court (630 Greenbrae Dr), Sun Valley GID (5000 Sun Valley Blvd.), TMWA (1355 Capital Blvd.), Washoe County Administration Building (1001 E. 9th Street), Washoe County Clerk's Office (Court and Virginia Streets), Washoe County Central Library (301 South Center St.), Washoe County Department of Water Resources (4930 Energy Way), Galena Market (19990 Thomas Creek Rd.), Galena High School (3600 Butch Cassidy Way), South Valleys Library (15650A Wedge Parkway), and the NNWPC website: <http://www.nnwpc.us>

1. Roll Call and determination of presence of a quorum. *
2. Public Comments. * (Three-minute time limit per person.)
3. Approval of agenda. **(for possible action)**
4. Approval of the minutes from the October 5, 2011, meeting. **(for possible action)**
5. Report on water quality modeling tools being used for and status of the third party review process for the TMDL (total maximum daily load) for nutrients allowed by regulation for the Truckee River, Laura Weintraub, LimnoTech, and Terri Svetich, City of Reno. *
6. Review and possible approval of a scope of work for a groundwater management study to identify strategies and potential funding mechanisms to address regional groundwater quality and quantity issues, including nitrate concentrations related to septic tanks, Chris Wessel and Jim Smitherman. **(for possible action)**

7. Update on the Truckee Meadows Regional Planning Agency's Regional Data Development project, and possible direction to staff, Jim Smitherman. **(for possible action)**
8. Program Manager's Report, Jim Smitherman. *
 - a. Status Report of Projects and Work Plan Supported by the Regional Water Management Fund
 - b. Financial Report on the Regional Water Management Fund
 - c. Informational report from the Northern Nevada Water Planning Commission representative on the Truckee Meadows Water Authority Standing Advisory Committee ("TMWA SAC")
9. Discussion regarding agenda items for the December 7, 2011, Northern Nevada Water Planning Commission meeting, and other future meetings, and possible direction to staff, Jim Smitherman. **(for possible action)**
10. Commission comments. *
11. Staff comments. *
12. Public Comments. * (Three-minute time limit per person.)
13. Adjournment.

*Indicates a non-action item

**NORTHERN NEVADA WATER PLANNING COMMISSION
MINUTES**

Wednesday, October 5, 2011

The regular meeting of the Northern Nevada Water Planning Commission (“NNWPC”) was held on Wednesday, October 5, 2011 in the Washoe County Commission Chambers, 1001 East Ninth Street, Reno, Nevada.

- 1. Roll Call and determination of presence of a quorum** – Chairman Ball called the meeting to order at 1:33 p.m. There was a quorum present.

Voting Members Present:

George W. Ball, Jr., Chairman
Neil Krutz, Vice Chairman
Michael DeMartini
Rosemary Menard
Darrin Price
Jerry Schumacher
Stan Shumaker

Voting Members Absent:

John Erwin
John Flansberg
Mickey Hazelwood
John Jackson

Non-Voting Members Present:

Non-Voting Members Absent:

John Bird
Mark Clarkson
Harry Fahnestock
Kelvin Hickenbottom
My-Linh Nguyen

Staff Members Present:

Jim Smitherman
Chris Wessel
June Davis
John Rhodes, Legal Counsel

2. Public Comments.

Chairman Ball called for public comments and hearing none, closed the public comment period.

3. Approval of the agenda

Commissioner Price made a motion to approve the October 5 meeting agenda as posted. Commissioner Menard seconded the motion, which carried unanimously.

4. Approval of minutes from the September 7, 2011 meeting.

Commissioner Price made a motion to approve the minutes as submitted. Commissioner Krutz seconded the motion, which carried unanimously.

5. Report on pilot test of advanced oxidation processes for treatment of effluent at the Reno-Stead Water Reclamation Facility, and the Indirect Potable Reuse workshop held on August 10, 2011, and possible direction to staff, Michael Drinkwater, City of Reno.

Chairman Ball invited Michael Drinkwater to present this item. Mr. Drinkwater thanked the NNWPC

for inviting him. He stated that the NNWPC approved \$23,000 to fund a workshop at which Stantec Consulting presented the results of the 2008-2010 Advanced Oxidation Pilot Test to the Nevada Division of Environmental Protection (NDE) and other stakeholders. He stated that the workshop was well attended. He explained that in the North Valleys, the City of Reno is discharge limited in terms of wastewater, which was the driver behind the pilot test.

Mr. Drinkwater referred to a PowerPoint presentation (available on file) with the following highlights:

- Indirect potable reuse (IPR) – the intent is to treat the wastewater to a high level and then inject it back into the ground and allow it to move through the soil where in the future it could be extracted and used as potable water
- Treatment options for IPR include:
 - Reverse Osmosis (RO), which is used in Orange County, California – RO does not treat contaminants; it concentrates them in a brine stream that must be disposed of, which is not possible in the North Valleys
 - Ozone-Biologically Active Carbon Filtration (O3-BAC) – This method was selected for the pilot test for the North Valleys because it actually treats the contaminants
 - Soil-Aquifer Treatment (SAT), which was not conducive in the North Valleys due to the soil
- Pilot testing was performed within 490 different parameters on three main sampling events at the Reno-Stead Water Reclamation Facility (RSWRF)
 - A summary of the results was presented. Mr. Drinkwater stated that the final report would be available on October 7. He explained some of the results of the treatment of the constituents, which showed positive results.

Commissioner Menard asked where the samples were taken. Mr. Drinkwater stated they were taken from the side stream from the secondary clarifier.

Mr. Drinkwater reported that qualitatively most of the detected contaminants were below detection limits after undergoing the O3-BAC treatment.

- Bromate, which is a non-carcinogen, spiked in the summertime, which was mitigated with peroxide and seasonal ammonia.
- Some contaminants were created in the ozone reaction but were removed by the end of the BAC process.
- Total organic carbon (TOC) would be a next step to address – Dr. Doug Drury, Southern Nevada Water Authority (SNWA) expressed concern over the TOC once the water goes into the aquifer and environment. He stated that it was outside the scope of this project; however, it needs to be addressed.
- Ultraviolet (UV) transmittance was above the 90% level in the case that a final polishing disinfection step was required.
- The BAC process was as equally effective as the RO process used in Orange County.
 - BAC does not remove total dissolved solids (TDS) – RO does; however, it is not an issue at RSWRF based on discharge limits
 - Effluent corrosivity was unchanged with BAC – RO scours a large number of the ions out of the water, which results in a highly aggressive water to be returned to the environment. RO has a higher probability of leaching subsurface soil constituents, such as arsenic.
- The BAC process had almost 100% removal of flame retardant, which was equal to or better than the RO process.

- TOC is a concern and states around the country that are investigating the BAC process are implementing or looking to implement rules to address the TOC in the effluent. He stated that some states have already implemented regulations.
- Sustainability and energy consumption
- Mr. Drinkwater summarized that the BAC process can remove constituents to the same level as RO without the brine stream at a lower energy cost, which was the intent.
- Further research is needed on the outcome of water that has been injected into the soil (which is based on regulatory changes).
 - The TOC impacts on receiving aquifer water quality need to be evaluated.

Mr. Drinkwater reported that NDEP had substantial representation at the workshop. No specificity was provided on moving forward although representatives seemed suitably impressed with the process and roughly acknowledged that the process is equivalent to RO. Mr. Drinkwater stated that the recommendation to NDEP was not to “marry” into the project but to allow the situation in the North Valleys. He added that the intention of Water Pollution Control is unknown as to the speed they wish to go.

Mr. Drinkwater stated that based on the slowed economic conditions, RSWRF and the City of Reno have some breathing room, which was not the case a few years ago for the North Valleys.

Commissioner Menard referred to TOC and asked if the issue is that TOC is a precursor in the formation of disinfection byproducts. Mr. Drinkwater stated that it is a driver but another reason might be that TOC is used to feed the microbes on the biological carbon so if it is subsequently injected into the aquifer, it is unknown what life it will support that is not currently supported. Commissioner Menard stated that the TOC comes with the influent water and asked if there is a different signature between the amount of TOC in surface water versus ground water. Mr. Drinkwater stated there is a difference. He added that by injecting the water underground, the conditions would change and the question is, what would result.

Commissioner Menard asked if the situation would be different if Fish Springs water were used as a source water to RSWRF. Mr. Drinkwater stated that perhaps it would although he believes we are talking about anthropogenic TOC (i.e. pharmaceuticals).

Chairman Ball stated he had a speaker request card from John Enloe and invited him to speak. Mr. Enloe, Stantec Consulting, commended the City of Reno and the leadership role they played throughout the project. He stated that the results from the investigation are going nationwide and beyond. He added that the process is different from RO but he thinks the findings have caught the attention of the industry. He stated that the WateReuse Federation and others are seriously considering the process.

Mr. Enloe stated that Stantec is part of a project in Southern Nevada (teamed with Carollo Engineers) for the Searchlight Water Resource Center. He explained that the project was to involve an evaluation of treatment technologies, including BAC, and the development of a larger-scale pilot program (~100 gallons per minute) that would actually treat the water and inject it into the groundwater table and recover it. He stated it would have been the “next step” to this process; however, two weeks ago the Center stopped work on the effort primarily because there are not enough drivers pushing the project at this time.

Mr. Enloe stated that the project was postponed indefinitely, so at this point, no one is working on the next step. He reiterated Mr. Drinkwater’s comment that the NDEP process would take years to not only allow for groundwater injection and recovery but possibly at some point to go to the concept of IPR. He reiterated that it would take years to get to an implementation stage and someone needs to continue the effort. He added that the City of Reno invested millions of dollars to get the evaluation to this point. He

stated that it would be a shame to see the report sit on a shelf and not be carried forward when ten years from now (or hopefully sooner) the economy turns around and there is a need resulting in a “mad scramble”.

Mr. Enloe explained that he is aware that most of the entities are short on funding; however, another possibility would be the Bureau of Reclamation (BOR) grants. He encouraged the NNWPC and the municipalities to continue the effort over the next few years because it will be required for water resources in the region at some point.

Commissioner DeMartini referred to Mr. Drinkwater’s report that TDS coming into the plant is currently at 395 and asked if that is expected to change based on importation of water and possibly be too high to warrant BAC treatment. Mr. Drinkwater stated possibly although he is unaware of the chemistry of the Fish Springs water, which would be the likely candidate if source water were to change. He added that if that were the case, an additional treatment step would be needed, which could include side streaming water into a smaller scale RO plant (specifically designed to remove solids). Commissioner DeMartini stated perhaps Mr. Enloe has information on the Fish Springs water. Mr. Enloe stated that the TDS of the Fish Springs water is approximately 180 to 200 milligrams per liter (mg/L), compared to about 100 for Truckee Meadows Water Authority (TMWA). He added that the drinking water standard for Nevada is 1,000 mg/L.

Commissioner DeMartini asked if there would be an increase in contaminants in the sludge. Mr. Drinkwater stated there would not be an increase because under the BAC process, the contaminants are actually degraded during the ozonation process and then used for energy.

Chairman Ball referred to the “contaminants of emerging concern” and asked for clarification that it references pharmaceuticals and personal care products. Mr. Drinkwater stated it does and added that they are also referred to as micro-constituents, micro-contaminants or emerging contaminants.

Chairman Ball mentioned Mr. Enloe’s comment related to continuation of the project and asked if someone, such as the pharmaceutical industry, might participate in funding. He stated he would think they would have a vested interest in participating in development of a process that shows the feasibility of addressing the products being discharged into the wastewater stream of the nation. Mr. Drinkwater said yes, and reiterated that some states have similarly functioning projects. He added that Cliff Lawson, NDEP, and he spoke about the issue and stated that some rural counties have expressed interest.

Mr. Drinkwater explained that the intent of the pilot test was to see what could physically be done. He stated that the next step would be for NDEP to dictate what has to be done. He reiterated that a driver is needed to force the other half of the project. He agreed with Mr. Enloe’s comment that although growth in the North Valleys has flattened, the project is not something that can be built and implemented in 18 months. He added that we need to be in front of the growth when it picks up. He stated that there is also a public relations component associated with the project related to what the possibilities and hopes are, as well as an opportunity for the public to voice concerns.

Chairman Ball stated that he assumed the WateReuse Federation would be a driving force behind the movement to improve water quality based on the emerging contaminants. Mr. Drinkwater stated that they are one of the lead organizations with the intent to expand the ability to treat and reuse wastewater. He added that treating wastewater to the level of potable water would be the best reuse.

Jim Smitherman asked when the final report is expected. Mr. Drinkwater stated that the final report would be available on October 7. Mr. Smitherman agreed to post the report on the NNWPC website, along with the PowerPoint presentation from Stantec that was presented at the workshop.

Chairman Ball thanked Mr. Drinkwater and Mr. Enloe and commended them on the work done.

6. Discussion and possible recommendation to the Western Regional Water Commission ("WRWC") to approve a Second Amendment to the Agreement for Legal Services for the WRWC and the NNWPC, to extend the term of the Agreement and provide for an additional reduction in attorney compensation, Jim Smitherman, NNWPC Water Resources Program Manager, and John Rhodes, Legal Counsel.

Chairman Ball invited Mr. Smitherman to present this item. Mr. Smitherman stated that the intent of this item is to receive approval to recommend approval of Mr. Rhodes' amendment by the WRWC. He added that his recommendation is for a three-year amendment, which could be terminated earlier by either party if desired. He stated that the amendment includes a 10% reduction in compensation that was proposed by Mr. Rhodes. He summarized that other than the cost savings, the contract is the same.

Mr. Rhodes stated that he has enjoyed representing the NNWPC and WRWC for the last three years and the Regional Water Planning Commission prior to that. He added that he believes he has been available, accessible and responsive during that time.

Commissioner Menard made a motion to recommend to the WRWC that the WRWC approve the Second Amendment to the Agreement for Legal Services, for the WRWC and the NNWPC, with Rhodes Law Offices, Ltd. Commissioner Price seconded the motion. Chairman Ball stated he has been part of the water planning commission since 1995 and Mr. Rhodes has provided legal services for most of those years with no issues related to Mr. Rhodes' performance or capabilities.

Chairman Ball called for a vote on the motion, which carried unanimously. Members thanked Mr. Rhodes for his service.

7. Update on the Truckee Meadows Regional Planning Agency's Regional Data Development project, and possible direction to staff, Jim Smitherman.

Chairman Ball referred to the staff report and the comment that "...as much as 60 percent of the WRWC Program Manager's time in Fiscal Years 2011-2012 and 2012-2013" and asked Mr. Smitherman if that places a burden on him or staff. He asked Mr. Smitherman to address the issue in his presentation.

Commissioner Menard stated that the allocation of Mr. Smitherman's time was part of the last approved budget. She clarified that the recommendation was based on the recognition that the Regional Water Plan update was almost finished with the next update due in five years. She stated that the work being done by Mr. Smitherman will create tools that will be helpful in the next Plan update. She explained that Mr. Smitherman's work is in relation to scenario planning, i.e. examining the consequences of growth in different areas in terms of financial costs and other issues. She summarized that she believes the work Mr. Smitherman is performing for Truckee Meadows Regional Planning Agency (TMRPA) is linked with the work he does for the WRWC and NNWPC.

Chairman Ball thanked Commissioner Menard for her comments and added that it does alleviate his concerns over the time allocation.

Mr. Smitherman agreed with Ms. Menard's comments and explained that he is closer to spending 40% (two days per week) of his time on TMRPA work as opposed to 60%. He added that the intensity might change during some periods but it is working well.

Mr. Smitherman reported that he continues to work with the utilities to refine the development suitability factors to be input into the model. He added that he has worked with County engineers on South Truckee

Meadows and the North Valleys. He stated that in addition to examining the proximity of parcels to the existing infrastructure, they are also considering the capacity of the infrastructure. He added that resource availability would be a model parameter, including availability of water rights and disposal capacity. He stated that one of the more difficult parameters to quantify is “owner intent”; i.e. some developers do not plan to develop for a long time or those that are intended to move forward quickly.

Mr. Smitherman reported that he also worked on a housing and urban development (HUD) Sustainable Communities grant application. He stated that the application packet was being finalized today with the submittal deadline being October 6. He explained that the grant is for \$1.9 million. He added that TMRPA submitted an application the previous year but was turned down, although this year they are more hopeful. He explained that a consortium of local staff representatives assisted in the process. He stated that he would take the lead for the consortium if the grant is received.

Commissioner Price asked what the grant match would be. Mr. Smitherman stated that the contract approved by the WRWC would provide some of the non-federal match and he did not believe that his in-kind staff time would be required. He added that he believes the non-federal match is 20%, which would be met with TMRPA and WRWC funding, as well as Regional Transportation Commission (RTC). Commissioner Price asked if RTC has committed to funding and if the funding is in actual money. Mr. Smitherman stated he would ask TMRPA and report back at the next meeting.

Commissioner Price asked whom the peer review team includes. Mr. Smitherman stated that it includes Winston and Associates (Boulder, CO) and ECON Northwest (Portland, OR). He added that each brings something different to the table. He explained that Winston and Associates provides a broad-based application of models similar to the one being developed and ECON Northwest is more focused on the economic side of the model.

Commissioner Price mentioned the comment that the model runs were to be conducted in October and asked if that deadline is still on track. Mr. Smitherman clarified that model runs would be conducted October through December with a deadline of the end of the year. Commissioner Price asked about the timelines for the tasks upon which Mr. Smitherman is currently working. Mr. Smitherman offered the following timelines:

- Assist in development of the population and employment model – a workshop is scheduled for the following week.
- Help TMRPA staff to understand the linkages between future land development and planning for water and wastewater infrastructure – ongoing
- HUD grant application – submittal due October 6

Mr. Smitherman stated that work would continue. Commissioner Price stated that the NNWPC recommended to the WRWC approval of partnering with TMRPA and stated he thought that TMRPA had four employees at the time and asked how many they have currently. Mr. Smitherman stated that Peter Gower would be leaving at the end of the month. He reviewed the current staff positions and stated that TMRPA would continue to provide the leadership role and his role would be specific to the elements listed in the scope of work.

Chairman Ball asked if the \$1.9 million grant is secured, what the matching funding requirement would be. Mr. Smitherman reiterated that he believed it was 20%. Chairman Ball asked if the grant is received would the funding from the WRWC be decreased. Mr. Smitherman stated it would not; the money was allocated to match the grant.

8. Update on WRWC and NNWPC website features, and possible direction to staff, Chris Wessel, NNWPC Water Management Planner

Chairman Ball invited Chris Wessel to present this item. Mr. Wessel reported that the website address is www.nnwpc.us. He accessed the website for members to view. He showed some of the features, including a link to Washoe County Television (WCTV) Live, which shows live coverage of meetings. He referred to features including:

- Meeting agendas, minutes, packet items and anything distributed at the meeting – He showed how to access items that are hyperlinked to the agenda
 - Any item with a plus (+) sign can be clicked on in order to access more information.
- Documents in the Document Library, which are searchable by text, hydrobasin, topic, date, author, etc.
 - The updated Regional Water Management Plan is now available, including all figures and appendices.
 - All WRWC funded studies and reports will be available on the website.
 - Currently there are approximately 400 to 500 documents available.
- Links to Planning, Water Purveyors, Wastewater and Reclaimed Water Providers, Truckee River, Related Water Agencies, and WRWC and NNWPC Sponsored or Supported Programs

Mr. Wessel invited questions or comments from commissioners.

Commissioner Price commended Mr. Wessel on the website and stated that the search capability in the Documents Library is fantastic. He asked if further funding would be necessary for the website. Mr. Wessel stated that the majority of the cost has been spent; however, there would be maintenance and technical services required to administer the website. He reported that the search engine was provided by Knowledge Tree, which is an open source database. He added that the University uses the program and provided assistance with the website.

Mr. Smitherman thanked Mr. Wessel and June Davis for their work on the website and keeping it up to date.

Mr. Rhodes referred to the WCTV Live feature and asked if past NNWPC meetings are available via streaming video or archived videos. Mr. Wessel stated that live streaming is available; however the archive function is not available at this time because the current contract does not include that component. He added that City of Sparks does provide that archive feature so the past WRWC meetings are available. Mr. Rhodes stated he finds the archive feature useful. Mr. Wessel agreed and added that it could be considered in the future. Chairman Ball suggested that Mr. Wessel explore the possibility and report back.

Chairman Ball thanked Mr. Wessel and commended him for his work on the website.

9. Program Manager's Report

- a. Status report of projects and Work Plan supported by the Regional Water Management Fund**
- b. Financial report on the Regional Water Management Fund**
- c. Informational report from the NNWPC representative on the Truckee Meadows Water Authority Standing Advisory Committee ("TMWA SAC")**

Mr. Smitherman reported that the items included in the agenda packet are provided as informational items. He addressed Commissioner Price's previous comment regarding consolidation efforts and stated that TMWA and Department of Water Resources (DWR) have completed their five year financial projections and submitted them to a third party reviewer. He stated that results of the review should be available in a month or two, at which time a better timeline can be estimated.

Commissioner Price referred to the “Status Report of Projects and Work Plan Supported by the Regional Water Management Fund (RWMF)”, line items 11 and 12 in the amounts of \$550,000 and \$300,000, both of which are noted with “Not Applicable (N/A)” in the column “Approved by Water Planning Commission” and asked why. Mr. Smitherman stated that the amounts were recommended as part of the WRWC budget. Commissioner Price stated that he remembers the WRWC voting on the issue of reimbursing both utilities for their consolidation efforts. Mr. Smitherman stated that the N/A is based on the funding not coming before the NNWPC as individual items but rather being approved as part of the budget. Commissioner Price stated that was not his recollection; he remembered it being a specific agenda item and asked Mr. Smitherman to check into the issue.

Commissioner Price explained that his concern is that consolidation efforts could drag on for a few more years and “we are already at a million dollars”. He stated that he is not even aware of what the funding covered, i.e. staff or consultants. Mr. Smitherman explained that the funding covered staff time and consultants. He added that if invoice amounts exceed \$25,000, they require approval by the WRWC; however, to date they have not met that threshold. He explained that the invoices received from TMWA and DWR exceed \$1 million. Commissioner Price stated that his concern is that more than \$1 million has been spent but the NNWPC has not seen an invoice. Mr. Smitherman explained that funding from the RWMF would not exceed the budget amounts and added that TMWA and DWR are expending their own funds as well.

Commissioner Price asked Commissioner Menard if changes would occur regarding consolidation based on DWR “going away”. Commissioner Menard stated it would not change anything. She added that a policy initiative by the County to consolidate the two organizations would not change because DWR would continue to have its own funding source (the enterprise fund) regardless of departmental consolidation. She added that Building and Safety is also an enterprise fund, as is part of Public Works. She stated that the consolidated departments would still have separate funding sources but would operate under one umbrella.

Chairman Ball thanked Commissioner Price for his comments and stated that he had the same questions about the amount spent. He requested a breakdown of the expenditures by staff hours, consultants or other expenses. Mr. Smitherman offered to provide a summary.

Chairman Ball stated he did not know if it was appropriate for discussion under this item but requested information on the County’s departmental consolidation and how it would relate to the utilities consolidating. Commissioner Menard offered to provide information under Commission Comments.

Commissioner Price asked Mr. Wessel if he expects further spending for the website. Mr. Wessel stated that he thinks funds remain from the budgeted \$10,000. He added that the initial costs were larger than anticipated based on the need to purchase new servers even though the County got a good deal.

Commissioner Price asked Commissioner Menard if she attended the TMWA SAC meeting, which she did not. She stated that she was aware that TMWA was requesting a rate increase and suggested referencing the TMWA website for more information.

10. Discussion regarding agenda items for the November 2, 2011, NNWPC meeting, and other future meetings, and possible direction to staff, Jim Smitherman.

Mr. Smitherman reported that items for the October NNWPC meeting include:

- Update from Nevada Landscape Association on the Certified Landscape Technician program and request for additional funding
- Status update on Truckee Meadows Water Authority (TMWA)’s Water Usage Program –

possibly in November or December

- Report on the Regional Transportation Commission (RTC)'s SouthEast Connector Project – to be presented by Garth Oksol, RTC Project Manager
- Review and possible approval of a scope of work for Septic Tanks and Groundwater Quality in an amount not to exceed \$25,000
- Program Manager's Report

11. Commission Comments.

Commissioner Menard referred to recent media reports and explained that five County departments (Public Works, Parks & Open Space, Building & Safety, Community Development and Water Resources) would be merging into one department. She added that she was selected to head the combined departments, which will be named the Neighborhood Services Agency (NSA). She reiterated that she does not see any impact on the consolidation of TMWA and DWR. She stated that the estimated stand up date is April 2012. She added that currently approximately 365 employees would be affected; however, after voluntary separations, the number would be closer to 320.

Commissioner Menard stated that based on her new role and duties, she would designate John Buzzone to replace her on the NNWPC.

12. Staff Comments.

None

13. Public Comments.

Chairman Ball called for public comments and hearing none, closed the public comment period.

14. Adjournment.

With no further business, the meeting was adjourned at 2:57 p.m.

Respectfully submitted by,

Niki Linn, Recording Secretary

Approved by Commission in session on _____ 2011.

George W. Ball, Jr., Chairman

Northern Nevada Water Planning Commission

STAFF REPORT

DATE: October 26, 2011

TO: Chairman and Members, Northern Nevada Water Planning Commission

FROM: E. Terri Svetich, P.E., Engineering Manager, City of Reno

SUBJECT: Report on water quality modeling tools being used for and status of the third party review process for water quality standards and TMDLs (total maximum daily loads) for nutrients on the Truckee River, Laura Weintraub, LimnoTech, and Terri Svetich, City of Reno.

SUMMARY

The City of Reno, City of Sparks, Washoe County, and Truckee Meadows Water Authority (TMWA) are leading a formal review of the current Nevada water quality standards (WQS) for nutrients (nitrogen and phosphorus) in the Truckee River. As part of the State's WQS Triennial Review process, Nevada Division of Environmental Protection (NDEP) and the United States Environmental Protection Agency (USEPA) have agreed to consider any third-party proposed revisions to the water quality standards in an effort to ensure that any future TMDL reviews are based on the most appropriate, site-specific water quality standards. To support the WQS and TMDL reviews, two water quality modeling tools: Watershed Analysis Risk Management Framework (WARMF); and Truckee River Hydrological Simulation Program Fortran (TRHSPF) were developed to simulate watershed processes, stream hydrology and river water quality. These tools are being applied in a linked approach, along with an external flow management model. The models provide a valuable mechanism for simulating the complex relationship of how various levels of nutrient concentrations, in combination with other factors such as temperature, light, and streamflow, could potentially lead to excessive growth of algae and ultimately a situation of depleted dissolved oxygen in the Truckee River. The use of the models will help ensure that any proposed nutrient water quality standards reflect the site-specific response of the Truckee River to nutrient loads and provide enough protection while not being overly restrictive.

Model calibration and confirmation was previously conducted for both models and focused on time periods up through 2002 (TRHSPF) and 2004 (WARMF). A recent effort was undertaken to conduct an additional model confirmation exercise to extend the simulations of both models through 2008. The model update process included an extension of databases to include more recent data such as land use / land cover, climate, point source discharge, diversions, observed streamflow, and observed water quality. Simulation results indicate that both models satisfactorily predict hydrology and water quality for the more recent time period. Both models are ready for use to support the thirdparty WQS and TMDL review efforts.

BACKGROUND

The Clean Water Act (CWA) sets forth regulatory requirements for waterways that have impairments and do not support the designated beneficial uses due to loading from one or more pollutants (e.g., nutrients, temperature, sediment). Ideally, TMDLs are developed to correct the impairment and restore the water quality. TMDLs were established on the Truckee River in 1994 for Total Dissolved Solids, Total Nitrogen and Total Phosphorus.

Since the 1994 TMDL was approved, new data have been collected, new modeling tools have been developed and operation of the Truckee River has changed. It is believed that there is benefit in reviewing and potentially revising the water quality standards and TMDL for nutrients to make a stronger scientific linkage between the TMDL, water quality standards, and National Pollutant Discharge Elimination System (NPDES). It is anticipated this will provide more flexibility for the region to implementing effective long-term planning of water and wastewater infrastructure. The outcome of the TMDL review process has implications for regulating, permitting and monitoring the discharges to the Truckee River.

The consulting firm LimnoTech has developed computer simulation models for the Truckee River that have been calibrated and verified. The models provide a comprehensive look at the complex relationships between nutrients, river conditions and water quality standards. LimnoTech's support is critical to this third party TMDL review process.

FISCAL IMPACT

In July 2009, the WRWC funded an amended consultant agreement with LimnoTech in the amount of \$400,000. This agreement is being managed through the City of Reno. It is anticipated the current funding is sufficient until early 2012 but an additional \$150,000 will be needed to perpetuate LimnoTech's support into the spring and summer of 2012.

RECOMMENDATION

Staff recommends the commission accept the report regarding the third party review process for WQS and TMDL for nutrients, and associated water quality modeling tools.

Northern Nevada Water Planning Commission

STAFF REPORT

DATE: October 26, 2011

TO: Chairman and Members, Northern Nevada Water Planning Commission

FROM: Chris Wessel, Water Management Planner
Jim Smitherman, Water Resources Program Manager

SUBJECT: Review and possible approval of a scope of work for a groundwater management study to identify strategies and potential funding mechanisms to address regional groundwater quality and quantity issues, including nitrate concentrations related to septic tanks.

SUMMARY

Evidence from studies supported by the Water Management Fund indicates a link between local high-density septic system developments and areas of groundwater nitrate contamination. While areas known to be impacted have been identified and further study of other areas may be warranted, strategic and technological alternatives to mitigate/manage these areas are limited. At present, Spanish Springs is the only area in which mitigation through an initial phase of septic-to-sewer conversion is occurring. Current economic conditions, and lack of federal grant funding, are jeopardizing the cost effectiveness of future phases of the mitigation plan as well as the potential for implementation in other areas.

Staff has developed a scope of work to include in a *Request for Qualifications* to provide consulting services to conduct a literature search for methods on how to manage/mitigate water quality issues associated with high-density septic system developments within existing communities. The desired deliverables include a compilation of technologies and strategic approaches that are suited to local conditions and an analysis of alternatives relative to certain local developments with high densities of septic systems.

BACKGROUND

The Truckee Meadows Water Authority (TMWA) provides water service to almost 90,000 water customers within the Truckee Meadows Service Area (TMSA), and the Washoe County Department of Water Resources (WCDWR) provides water service to approximately 22,000 additional residential customers. The majority of the WCDWR demand and approximately 15% of TMWA demand is met with groundwater. Studies conducted by WCDWR have concluded that groundwater quality in certain locations is threatened by nitrate contamination from both natural and anthropogenic sources. The studies also indicated that water quality degradation is a result of septic tank effluent, occurring predominantly in areas with high septic tank densities. There are approximately 18,300 septic tanks in Washoe County and at least fifteen areas that may have densities high enough to threaten potable groundwater supplies. In addition to high densities, contributing factors include shallow depths to groundwater, permeable soil conditions, and proximity to sensitive receptors. These conditions are present in Spanish Springs Valley, Washoe Valley, and Lemmon Valley, and have been shown to impact water quality.

In Spanish Springs Valley, fifteen years of groundwater quality monitoring has shown increasing levels of nitrate contamination in municipal wells. Almost 2,000 septic systems are located within a four square-mile area, with almost half of these systems within 2,000 feet of one or more municipal water supply wells. Two of six municipal wells in the highly developed portion of Spanish Springs Valley have nitrate-nitrogen concentrations at or approaching the maximum contaminant level (MCL) of 10 ppm nitrate-nitrogen. A 1999 U.S. Geological Survey (USGS) study suggested that increasing nitrate levels may be linked to local septic systems. A recent study by WCDWR (Kropf, 2007) and the USGS found that nitrate-nitrogen concentrations of 44 ppm from septic effluent in the densely populated portion of Spanish Springs Valley account for approximately 30 tons of nitrogen entering the groundwater system every year. An on-going study by the WCDWR shows nitrate concentrations increasing to over 57 ppm in the shallow aquifer.

Kropf (2007) concluded with a prioritized list of areas that require further investigation, based on knowledge gained from areas known to be impacted. As expected, the most well documented and most highly-contaminated areas were found to have the highest ranking.

The attached figure shows areas of concern and the color-coded raking indicates areas that require additional information to help understand the full impact of high densities of septic systems on sensitive receptors. Based on the information collected and analyzed in the report, there is sufficient data in the areas coded green to consider recommendations for management actions. There is insufficient information, however, to propose actions with respect to the areas coded in yellow. Areas coded in blue are suspected to be of low risk to receptors and are of low priority.

In light of these conclusions, staff recommends that the NNWPC and the WRWC seek to investigate strategic approaches, technologies, funding mechanisms and life cycle costs of measures being implemented or proposed elsewhere in the country to support future local decision-making concerning septic system densities and management recommendations.

DISCUSSION

The proposed project involves research to identify and summarize various ways in which communities elsewhere in the United States have developed management or mitigation solutions to septic system pollution of groundwater. At present, the only solution employed locally to solve septic system groundwater contamination problems has been conversion of septic systems to sanitary sewer, which, while effective, is extremely costly. Other ideas, which have been considered locally or elsewhere, include:

- Septic system management program (fee-based septic system maintenance program)
- De-nitrifying septic systems
- Small flow systems
- Leachate collection system and connection to water reclamation facility
- Leachate collection system and connection to local package plant
- Composting toilets

The intent of this scope of work is to identify successful approaches and methods employed in other communities, using these or other technologies that would be best suited to manage septic system contamination issues locally. The scope of work for this project involves the following:

1. Literature search to identify the following:
 - a. Technologies
 - b. Practices
 - c. Management techniques
 - d. Regulatory frameworks
 - e. Funding and financing strategies, including:
 - i Life cycle cost analysis of technology, practice, etc.
 - ii Financing alternatives such as assessment districts, development fees, grants and loans

2. Evaluate impacts of alternatives to:
 - a. Existing services (e.g., Water Reclamation Facilities, interceptor capacity)
 - b. Septic owners
 - c. Development community
 - d. Community at large
 - e. Regulatory agencies, codes and regulations; including legal aspects of mitigating grandfathered parcels “entitled” to septic, such as by conservation easement; Truckee Meadows Regional Plan and TMSA
 - f. Existing Law: Is new legal authority necessary?

Analyses and evaluations should be focused on technologies, practices, techniques, etc. that are applicable to local conditions. Those that are not applicable should be screened out as early as possible in the identification process.

Deliverables for this project will be in the form of a written report. The report will include the following elements:

- A description of technologies with references
- Impacts to property owners, community, municipal services and others identified in 2.b, above
- Financing options
- Case studies
- Life Cycle Cost Analysis of alternatives
- Recommendations for alternatives best suited to specific local areas to be identified by the NNWPC.

FISCAL IMPACT

The fiscal year 2011/2012 budget includes \$20,000 for septic system studies. Staff will convene a small selection team to review qualifications, select a firm and negotiate a scope of work and costs. In the event that the team is unable to negotiate the desired deliverables within the current budget, staff will elect to either reduce the deliverables for the project or recommend to the

WRWC an increase in budget in order to obtain the desired deliverables and report the outcome to the NNWPC.

RECOMMENDATION

Staff recommends that the NNWPC approve the scope of work and authorize staff to convene a selection team, negotiate with a qualified consultant, and develop a contract for the stated deliverables. In the event that the selection team, during its negotiations, finds that the desired deliverables will require additional funding, authorize staff to make a recommendation to the WRWC for appropriate funding.

CW:jd

Northern Nevada Water Planning Commission

STAFF REPORT

DATE: October 26, 2011

TO: Chairman and Members, Northern Nevada Water Planning Commission

FROM: Jim Smitherman, Water Resources Program Manager

SUBJECT: Update on the Truckee Meadows Regional Planning Agency ("TMRPA")
Regional Data Development Project, and possible direction to staff

SUMMARY

Work completed since the last staff report included meeting with TMWA staff and Washoe County Department of Water Resources staff to review preliminary model results and identify parcels likely to develop in the near future in the Truckee Meadows Service Area, based on facility and resource constraints, developer intent and general professional judgment.

TMRPA completed the application packet for a Sustainable Communities Regional Planning Grant and submitted it to the U.S. Department of Urban Development ("HUD") before the October 6, 2011 deadline. Based on the application process last year, TMRPA anticipates a response from HUD by the end of December 2011. All three Nevada regional planning agencies submitted grant applications this year, (Southern Nevada, Tahoe and Truckee Meadows); however, they are in different population categories and not competing for the same funds. The Sustainable Communities Initiative is a HUD partnership with the U.S. Department of Transportation and the U.S. Environmental Protection Agency. Staff has committed to participation on the 2011 HUD Sustainable Communities Planning Grant Regional Consortium. Should TMRPA be awarded a grant, it will provide additional funding for the Regional Data Development Project and Water Management Funds will help to meet the non-federal match requirement.

BACKGROUND

In March 2011, the Western Regional Water Commission ("WRWC") approved and entered into an Interlocal Agreement ("ILA") with the Regional Planning Governing Board to provide partial funding for the Regional Data Development and Analytical Program, a TMRPA project involving multiple phases and stakeholders. The ILA provides for funding and in-kind services, including specified use of the WRWC Program Manager's time in Fiscal Years 2011-2012 and 2012-2013.

The data base and scenario planning and modeling tools to be developed by the project will, with the addition of appropriate supplemental elements related to water, facilitate the effective coordination of land use and water resource planning, and assist in the planning and administration required by the Western Regional Water Commission Act, and the implementation of the Comprehensive Regional Water Management Plan.

In July 2011, per the ILA, WRWC staff started working approximately 16 hours a week at the TMRPA offices. The scope of work for the current quarter includes the following tasks.

- Assist TMRPA staff and peer review team in the development of the population and employment model, specifically with water-related elements
- Help TMRPA staff to understand the linkages between future land use development and planning for water and wastewater infrastructure
- Assist with Housing and Urban Development (“HUD”) grant application

Activities to date include two workshops with TMRPA staff, peer review team and local government planners and model users. Staff also coordinated a workshop with water and wastewater utility technical staff to explore possible refinement of the existing water-related model input factor.

The short term goal concerning water-related factors is to improve on the existing “proximity to water infrastructure” factor for use in the initial model runs to be conducted in October. It appears that a parcel’s proximity to water and/or sewer infrastructure should function adequately for initial model runs provided utility technical staff review infrastructure maps and identify specific infrastructure or areas that should be weighted differently because of capacity constraints. Over the long term, more work will be necessary to better define capacity constraints and develop efficient methods to incorporate capacity constraints into the model input factors.

In addition, staff is working with TMRPA staff and Stantec to explore the incorporation of the Regional Water Balance model, developed by ECO:LOGIC for the Regional Water Plan. The five planning areas identified in the Water Balance model may help to define service areas having infrastructure or resource constraints that can be weighted and used to further develop the model input factors.

RECOMMENDATION

Staff recommends that the NNWPC accept this report on the TMRPA project and provide direction as appropriate.

JS:jd

Northern Nevada Water Planning Commission

STAFF REPORT

DATE: October 26, 2011
TO: Chairman and Members, Northern Nevada Water Planning Commission
FROM: Jim Smitherman, Water Resources Program Manager
SUBJECT: Program Manager's Report

Attached are updated reports for items a) and b) for your review; a verbal report will be given at the meeting updating item c).

- a) Status Report of Projects and Work Plan supported by the Regional Water Management Fund
- b) Financial Report on the Regional Water Management Fund
- c) Informational report from the NNWPC representative on the Truckee Meadows Water Authority Standing Advisory Committee ("TMWA SAC")

**Status Report of Projects and Work Plan
Supported by the Regional Water Management Fund**

	Approved	Project Name	Contractor/Provider	Amount	Balance Remaining	Percent Complete	Target Completion Date	Notes
1	7/10/09	Amendment to TMDL Phase I	City of Reno (LimnoTech)	400,000	203,610	49%	ILA 7/31/12 PO 12/31/12	Work is in progress Amended to 7/31/12
2	3/13/09	TMDL Legal Services	Somach Simmons & Dunn	50,000	4,863	90%	6/30/12	Work is in progress & will continue with Amendment for \$50,000 (see next row)
3	5/20/10	Amendment to TMDL Legal Services	Somach Simmons & Dunn	50,000	50,000	0%	Amended to 6/30/12	work in progress
4	9/10/10	Cloud Seeding Program Winter 2010	(DRI) Desert Research Institute	100,000	20,000	80%	ILA 12/31/11 PO 3/31/12	Work is in progress
5	12/2/09	Certified Landscape Technician Program	Nevada Landscape Association (NLA)	25,000	6,730	73%	Agmt & PO 12/30/11	Work is in progress (2010 and 2011)
6	2/2/11	Washoe Evapotranspiration (ET) Project Maintenance	DRI (Desert Research Institute)	10,000	10,000	0%	6/30/13	FY 2012 - \$4,000 FY 2013 - \$6,000
7	6/10/11	Regional Storm Water Quality Management Program	City of Reno	262,500	207,537	21%	6/30/12	Work is in progress
8	6/1/11	Advanced Oxidation Pilot Test - Stead	City of Reno (Stantec)	23,000	10,973	52%	6/30/12	Work is in progress
9	6/1/11	Website support Fiscal Year 2011-12	Washoe County Technology Services	10,000	10,000	0%	6/30/12	ILA in approval process
10	6/1/11	G3 Productions NNWPC FY 10-11	G3 Productions	5,000	2,220	56%	6/30/12	Work is in progress
11	6/10/11	First Amendment to Reimburse TMWA and DWR for consolidation efforts	DWR, TMWA	300,000	300,000	0%	7/30/12	Work is in progress
12	2/11/11	Regional Data Development	Truckee Meadows Regional Planning Agency	486,000	386,987	20%	6/30/13	Work is in progress
13	2/11/11	Financial Audit of Fiscal Year ending 2011	Schettler, Macy & Silva	8,000	1,500	81%	12/31/11	Work in progress
14	6/1/11	Envision Video Televising WRWC	Envision Video	2,300	1,150	50%	6/30/12	Work in progress

Financial Report on the Water Management Fund

11-02-11: NNWPC Agenda Item 8b

Run Date: 10/27/11

Fund 766

Report: 400/ ZF15

Period 1 thru 4 - 2012 Fiscal Year

Accounts	Plan Budget	Actual (Revenue & Expenses)	PO Commit (Remaining PO Balance)	Actual + PO	Available (Budget Minus Actual + PO)	Avail%	PreCommit (PO's Requested)	Available (Budget Minus PO Requisitions)	Avail%
481000 Interest-Pooled Inv.	31,380.00-	21,658.78-		21,658.78-	9,721.22-	31-		9,721.22-	31-
482100 RGL Pooled Inv.		443.32		443.32	443.32-			443.32-	
482200 URGL Pooled Inv.		28,468.70-		28,468.70-	28,468.70			28,468.70	
491060 Water Surcharge 1.5%	1,284,980.00-	244,968.60-		244,968.60-	1,040,011.40-	81-		1,040,011.40-	81-
** REVENUE	1,316,360.00-	294,652.76-		294,652.76-	1,021,707.24-	78-		1,021,707.24-	78-
710100 Professional Services	1,384,500.00	218,192.13	847,742.09	1,065,934.22	318,565.78	23		318,565.78	23
710110 Contracted/Temp Svcs	334,532.00	65,919.29		65,919.29	268,612.71	80		268,612.71	80
710120 Legal Fees	144,000.00	34,920.00	17,400.00	52,320.00	91,680.00	64		91,680.00	64
710139 Fin Consult Services	23,000.00	6,500.00	1,500.00	8,000.00	15,000.00	65		15,000.00	65
710149 Invest Pool Alloc Ex		957.38		957.38	957.38-			957.38-	
710155 Lobbying Services	600.00				600.00	100		600.00	100
710200 Service Contract	50,000.00	2,642.50	18,603.50	21,246.00	28,754.00	58		28,754.00	58
710400 Pmts to O Agencies	1,700,000.00				1,700,000.00	100		1,700,000.00	100
710509 Seminars and Meetings	3,000.00				3,000.00	100		3,000.00	100
710511 Support Service - Reim		918.66		918.66	918.66-			918.66-	
710512 Auto Expense	2,400.00				2,400.00	100		2,400.00	100
710546 Advertising	10,000.00				10,000.00	100		10,000.00	100
710585 Undesignated Budget	10,000.00				10,000.00	100		10,000.00	100
710594 Insurance Premium		158.00		158.00	158.00-			158.00-	
711210 Travel	7,000.00				7,000.00	100		7,000.00	100
** EXPENDITURES	3,669,032.00	330,207.96	885,245.59	1,215,453.55	2,453,578.45	67		2,453,578.45	67
*** Total	2,352,672.00	35,555.20	885,245.59	920,800.79	1,431,871.21	61		1,431,871.21	61