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STAFF REPORT

BOARD MEETING DATE: February 22, 2011

DATE: February 7, 2011

TO: Board of County Commissioners

FROM: Rosemary Menard, Director, Department of Water Resources
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SUBJECT: **1. Review, discussion, and possible direction to staff on the proposed domestic well mitigation plan for Upper Mt. Rose and Galena Fan Areas; and**

2. Presentation and acknowledge receipt of the Quarterly Report on Activities of the Washoe County Water and Sanitary Sewer Financial Assistance Program, Ordinance No. 1449 ("Financial Assistance Program"). (All Commission Districts)

SUMMARY

Over the last decade Washoe County's Department of Water Resources (DWR) has worked to address a range of groundwater management issues, especially those related to concerns raised by domestic well owners on the impacts of municipal pumping on groundwater levels and domestic well failures. Recent DWR efforts have been focused on developing a plan to address groundwater management and domestic well mitigation issues for properties in Southwest Reno (Galena and Mt. Rose fan areas from ArrowCreek on the north to St. James on the south).

DWR staff has been asked to bring an agenda item to the Board of County Commissioners (Board) to provide a comprehensive review of its groundwater management efforts.

Specifically, this staff report covers issues related to:

1. DWR's history and involvement in groundwater management and domestic well mitigation in its service areas;
2. The implementation of the Washoe County Water and Sanitary Sewer Financial Assistance Program (AB 54 Loan Program), including providing a status update of the program through December 31, 2010 and possible strategies to address the needs of loan applicants who have been denied loans based on not meeting established eligibility criteria (covered in a separate agenda item);
3. The status of the Well Mitigation Hearing Board; and
4. Possible mitigation strategies for residents with domestic wells in the Galena and Mt. Rose fan areas of Southwest Reno that have been or in the future could be impacted by municipal pumping.

Attachment 1 to this staff report is a comprehensive report entitled "Status Report on Groundwater Management and Domestic Well Mitigation Issues," dated February 22, 2011. This report covers DWR's efforts with respect to groundwater management in its

Spanish Springs, East Lemmon Valley and South Truckee Meadows service areas and includes discussion of domestic well issues where applicable. The report also discusses the work and status of the Well Mitigation Hearing Board and provides a discussion and status of the Water and Sanitary Sewer Financial Assistance Program. Several documents are provided as appendices the report to provide additional information. Included are:

- Appendix A Spanish Springs Groundwater Management Plan, November 2007;
- Appendix B Mt. Rose Groundwater Management Plan, February 2011;
- Appendix C Summary of Domestic Well Mitigation Determinations from November 2004 through December 2008;
- Appendix D Water and Sanitary Sewer Financial Assistance Program Ordinance No. 1449, July 2010;
- Appendix E Water and Sanitary Sewer Financial Assistance Program Policies and Procedures, July 2010; and
- Appendix F Status Report on Activities of the Water and Sanitary Sewer Financial Assistance Program for the period ended December 31, 2010.

DWR staff specifically requests that the Board provide direction on the following item:

The proposed approach to providing mitigation for the impacts of municipal pumping to domestic wells in the Southwest Truckee Meadows, which may involve preparing and presenting amendments to the Water Rate Ordinance No. 1411 for the Board's consideration.

Strategic Objective supported by this item: Sustainable Resources

BCC Annual Goal supported by this item: Expand formal and informal partnerships among governmental and non-governmental entities that improve service and/or increase efficiency or reduce cost. The Department of Water Resources (DWR) will manage and protect regional water resources in a sustainable, cost-effective manner.

PREVIOUS ACTION

On July 27, 2010, the Board adopted Ordinance No. 1449 which amended Chapter 40 of the Washoe County Code by adding provisions governing the administration of the "Water and Sanitary Sewer Financial Assistance Program."

On July 27, 2010, the Board adopted formal policies and procedures related to implementing the "Water and Sanitary Sewer Financial Assistance Program."

On July 13, 2010, the Board heard the introduction and first reading of Ordinance 1449.

During the 2009 Nevada legislative session, the Board actively supported adoption of AB54 and directed staff to work toward its passage.

In the summer of 2008, the Board included in its 2009 Legislative Agenda a request for legislation to give the County authority to create a financing program to assist property owners in connecting to its community water and sewer systems. Pursuant to this action, a bill draft was developed that ultimately became Assembly Bill 54 (AB54).

On November 13, 2007, the Board heard a presentation and accepted a report on the Spanish Springs Valley Water System.

November 23, 2004, Board established an effective date of October 23, 2001 for the Well Mitigation Hearing Board.

On September 14, 2004, the Board appointed five members to the Washoe County Well Mitigation Hearing Board to review requests for mitigation from domestic well owners who believe they have been adversely impacted by municipal well pumping.

On April 27, 2004, the Board approved the Groundwater Resources Data Center and Well Mitigation Program Implementation Plan, with funding not to exceed \$107,000 from the Regional Water Management Fund and funding not to exceed \$107,000 from the Water Resources Department.

On August 26, 2003, the Board approved the Groundwater Task Force final report and the Regional Water Planning Commission's recommendations to create a Groundwater Resources Data Center and Well Mitigation Program.

On November 27, 2001, the Board directed the Regional Water Planning Commission to form a task force to address issues related to groundwater development in the region and to make policy recommendations to be forwarded to the Board of County Commissioners through the RWPC for inclusion in the Regional Water Management Plan.

BACKGROUND

Attachment 1, Status Report on Groundwater Management and Domestic Well Mitigation Issues, provides substantial background on DWR's involvement with and efforts towards the responsible and sustainable management of groundwater resources in southern Washoe County over the last three decades. This report covers DWR's efforts with respect to groundwater management in its Spanish Springs, East Lemmon Valley and South Truckee Meadows service areas and includes discussion of domestic well issues where applicable. The report also discusses the work of the Well Mitigation Hearing Board. There are several appendices (as listed in the summary section of this staff report) which provide additional information.

Domestic Well Mitigation Proposals for Southwest Truckee Meadows Service Area

Both the Status Report and the Mt. Rose Groundwater Management Plan (see Attachment 1 and Appendix B) acknowledges that municipal pumping has had an impact on domestic wells on the Mt. Rose-Galena Fan. The goal of Mt. Rose Groundwater Management Plan is to provide for the sustainable management of municipal wells in groundwater basins where property owners have the opportunity to obtain loans to support converting from a domestic well or septic system to community water or sewer system through the County's Water and Sewer Financial Assistance program.

Among other management strategies, the Mt. Rose Groundwater Management Plan establishes that groundwater use by municipal water systems on the Mt. Rose-Galena Fan should be limited to a maximum of 5660 acre feet. Current municipal production serving DWR and South Truckee Meadows General Improvement District (STMGID) customers is 3660 acre feet, so the additional 2000 acre feet of municipal supply could be anticipated to be developed in the future to support build out of communities such as Montreux, the

Estates at Mt. Rose, etc. Most of the remaining water rights on the Upper Mt. Rose-Galena Fan have been acquired by developments such as Montreux, the Estates at Mt. Rose and Callamont to support build-out of these developments, which means that only limited water rights are available for any other purpose. Beyond this planned development, DWR recommends that any new development in this area bring alternate resources, such as surface water, to support new construction.

In looking at the longer term and developing groundwater management and mitigation strategies for the upper Mt. Rose-Galena fan areas, DWR staff looked at strategies to address a number of specific conditions, including domestic well conversions, new development of individual, undeveloped parcels interspersed in existing areas with community water service, and how to address domestic wells where municipal pumping has had an impact but providing municipal water is prohibitively expensive due to the long distances between and low density of development.

Proposed Approach to Domestic Well Mitigation and Proposed Schedules of Fees and Charges for the Mt. Rose-Galena Fan Areas

DWR staff has divided the proposed approach to domestic well mitigation into two parts:

- a. Those involving domestic well conversions to the community water system, and
- b. Those involving domestic well deepening.

Domestic Well Conversions to the Community Water System

The policy objectives of the proposed approach to mitigating the impacts of municipal pumping on domestic wells in the Mt. Rose area is to establish an approach that provides affected parties with certainty, ensures that parties with similar circumstances are treated equably, and that the Utility’s response to requests for mitigation is timely. The systematic approach presented here is designed to achieve these outcomes. Implementation of any change will require modifications to existing ordinance and policy direction.

Table 1 shows current connection fees for residents of the Galena Terrace Estates and Mountain Meadows Subdivision (also known as Callahan Ranch) needing to convert from a domestic well to the community system. These fees are based on current policy and ordinance.

**Table 1
 Current Fee Structure – Callahan Ranch (Typical Residential Connection)¹**

Connection Privilege Fee (typical 3/4” connection)	\$4,200.00
Water Treatment Plant Fee	\$7,182.00
Main Extension Fee (\$10/front foot, by current policy) ²	\$1,500.00
Meter Pit Installation	\$1,500.00
Total	\$14,382.00

Notes:

- 1) Connection fee varies based on specific size of the requested connection.
- 2) Assumes 150-foot wide lot.

Under the current policy, when faced with converting from a domestic well to the community water system, a property owner must add \$4,000 to \$6,000 in on-site costs to cover extending the water line from the meter to the residence, to adjust household plumbing to accept water from the new source and to cover the cost of abandoning the domestic well. When on-site costs are added to the \$14,382 connection fee, this brings the total to \$18,000 to \$20,000. Many property owners find it particularly difficult to deal with this up-front, out of pocket cost, especially in these economic times. DWR staff recognizes the difficulty of this situation and has systematically worked through the issues to develop the alternate proposals presented below for the Board’s consideration.

The proposed Mt Rose Area Schedule of Fees and Charges (see Table 2) would apply to only those properties identified on the Schedule of Charges and Fees Map (see Figure 13).

Table 2 is a proposal for revised fees and charges for properties currently being served by a domestic well that must convert to the community water system due to having community water service available to their property. The proposed domestic well mitigation for Callahan Ranch property owners is 100% of the fully allocated cost of the water lines of \$7849.39, or 57% of the total water facility cost, but not including on-site cost.

Table 2
Proposed Mt Rose Area Schedule of Fees and Charges
Domestic Well Conversion (Callahan Ranch Example)

Connection Privilege Fee (3/4” connection) ¹	\$4,200.00
Main Extension Fee (actual cost) ²	\$7,849.39
Meter	\$150.00
FlexNet Fee (automated meter reading device)	\$150.00
Meter Set Fee	\$100.00
Subtotal	\$12,449.39
Domestic Well Mitigation Connection Credit ³	(\$7,849.39)
Total	\$4,600.00

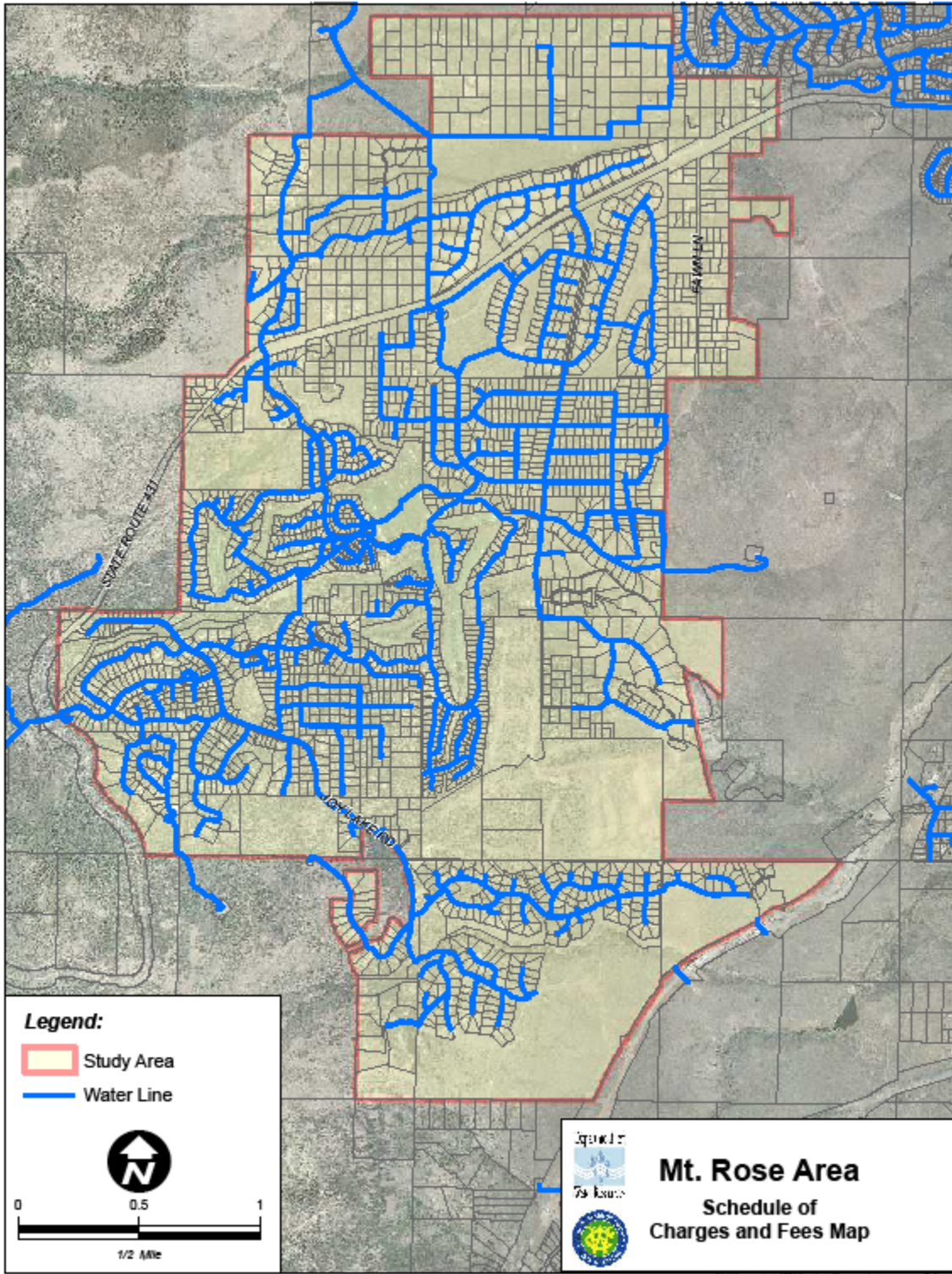
Notes:

1) Connection Privilege Fee varies by connection size per Ordinance at time of payment.

2) Main Extension Fee consists of construction costs for Callahan Ranch water main extension Program (\$1,781,811.89) divided by the number of potential residential services (227). Main extension fee may be different for other areas.

3) Domestic Well Mitigation Connection Credit is mitigation for unreasonable municipal well impact upon domestic wells. Property owners within Special Assessment District 5 who have completed payment of their assessment and are converting from a domestic well to the community system will receive a Domestic Well Mitigation Connection Credit equal to the assessed amount for water infrastructure.

Figure 1
Southwest Truckee Meadows Proposed Schedule of Charges and Fees Map



The analytical and policy basis for the proposal presented in Table 2 is as follows:

- Increases in municipal pumping to support new development have resulted in drawdown to the water table in the Upper Mt. Rose-Galena Fan area that has produced negative impacts to domestic wells.
- Those parties benefitting from the operation of municipal wells, i.e., the customers of DWR and STMGID in the area, should be responsible for the cost of mitigating the impacts of municipal pumping.
- The extension of water lines into the Callahan Ranch area, for example, provided a mechanism for municipal water providers to address the unreasonable impacts to properties with domestic wells by connecting Callahan Ranch properties to the municipal system and the cost of this project is properly allocated to municipal water customers.
- Property owners converting from domestic wells to the municipal system should pay the General Connection Privilege Fee of \$4,200 because these funds are used to pay for distribution and fire storage, and water transmission and disinfection facilities that are also a part of any community water system.

To apply this approach, if adopted by the Board, DWR would revisit each domestic well conversion in the Mt. Rose area defined by the Schedule of Charges and Fees Map and adjust the fees charged to comply with this proposal. Property owners who over-paid when they connected would receive a refund to bring their costs for water system facilities into line with this proposal. The basic approach here would be applied to other areas outside of Callahan Ranch where the availability of a water line would require conversion of a domestic well to the municipal system.

The mitigation proposal for properties converting from domestic wells to the municipal system does *not* contemplate providing mitigation for the on-site costs associated with a domestic well conversion which, as described earlier, can range from \$4,000 to \$6,000 per property. The analytical and policy basis for this proposal is as follows:

- Many domestic wells in the area being covered by this discussion were constructed with a relatively shallow penetration of the aquifer. As shown in Figure 9, the level of the water table in the Callahan Ranch area is closely tied to annual precipitation, meaning some part of the drawdown of the water table is not attributable to the operation of municipal pumping; and
- The age, condition and other characteristics of original construction of individual domestic wells play some role in well failures, which is not directly associated with municipal pumping.

In order to facilitate connections for property owners facing both public right-of-way facility costs and on-site costs, the County has established the Water and Sanitary Sewer Financial Assistance Program, which provides for financing both public right-of-way and on-site costs.

Domestic Well Mitigation Where Community Water Service Is Not Available

Extending community water service to some areas on the Mt. Rose-Galena Fan is prohibitively expensive due to the long distances that would need to be covered by water

lines and the low density of development. The mitigation being proposed for the Callahan Ranch area where municipal water users, as beneficiaries of municipal pumping, cover the cost of water line extensions is not warranted in these situations because there are more cost effective ways to ensure that properties with domestic wells continue to have water, even with a declining water table.

DWR estimates that approximately 150 Upper Mt. Rose-Galena Fan properties in areas where service is not available could be affected in the next 10 to 20 years by a declining water table. Staff proposes that in these situations mitigation be in the form of paying for a specified amount of well deepening. Current estimates indicate that 100 feet of additional depth would allow a typical well to penetrate the aquifer to a depth that would ensure water would be available to that well when the 5660 acre feet of demand on the system is reached. At today's well drilling costs, 100 feet of deepening is estimated to cost \$5,000. The proposed mitigation would be limited to well deepening and is not proposed to cover any mechanical or electrical costs that might be required.

The proposed mitigation strategies and fees and charges presented here were developed as an integrated and systematic approach to a complex and long-standing problem. DWR hosted a community meeting on February 15th to present these proposals to property owners in the affected area and will summarize the community's input at its presentation to the Board on February 22nd.

New Development of Individual, Interspersed Undeveloped Parcels

Build-out on the Mt. Rose-Galena Fan area is not complete and there are undeveloped parcels in areas served by water lines that would need to be treated as new development, with appropriate fees and charges being applied to cover the cost of providing service. For the most part, the individual, undeveloped parcels covered by this proposed schedule of fees and charges are interspersed in developed areas such as Callahan Ranch. This proposal would not cover properties typically being handled through DWR's development review process (e.g., additional undeveloped parcels in areas such as Montreux, or the Estates at Mt. Rose) where new infrastructure (water lines, storage, etc.) is required and either constructed by DWR or built and dedicated to the County by the developer. Table 3 is the proposed approach to assessing fees and charges to those individual parcels that would be considered new development as delineated in this discussion.

Table 3
Proposed Mt Rose Area Schedule of Fees and Charges
New Development of Interspersed, Individual Parcels

	No Meter Pit Installed	Meter Pit Installed Without Meter	Meter Pit Installed With Meter & FlexNet
Connection Privilege Fee (3/4" connection) ¹	\$4,200.00	\$4,200.00	\$4,200.00
Meter Pit Installation ¹	\$1,500.00	\$0.00	\$0.00
Main Extension Fee ²	At Cost	At Cost	At Cost
Meter	\$0.00	\$150.00	\$0.00
FlexNet Fee (automated meter reading device)	\$150.00	\$150.00	\$0.00
Meter Set Fee	\$0.00	\$100.00	\$0.00
Total	\$5,850.00	\$4,600.00	\$4,200.00
Plus Applicable Main Extension Fee	At Cost	At Cost	At Cost

Notes:

1) Connection Privilege Fee varies by the size of the connection, and both the Connection Privilege Fee and the Meter Pit Installation fee are subject to the fees and charges provisions of the Water Rate Ordinance in effect at time of payment.

2) Main extension fee may apply if an over-sizing or developer agreement exists or if a main extension is provided to serve property.

FISCAL IMPACT

Total fiscal impact of the well deepening program and reimbursements to homeowners who have paid amounts in excess of the proposed fees are not yet known. A rough estimate for the well deepening program is \$1 million over a 10 to 20 year period, and reimbursement amounts to homeowners who have paid more than the fees proposed in this staff report are estimated to be approximately \$125,000.

Expected budget and funding sources are as follows:

Refunds to homeowners who paid connection fees paid during the current fiscal year would be provided by charging to cost center 668100 (STM Water Construction), account number 511000 (Water Hookup Fees). Refunds for connection fees paid in a prior period would be charged to cost center 668100 (STM Water Construction), account number 793100 (Non-operating Payments to Others).

Mitigation expenses for the well deepening program would be funded in cost center 664100 (Water Operations), account number 710525 (Well Mitigation Expense).

Implementation of any direction from the Board will require further Board action and staff reports prepared for these Board items will include detailed fiscal impacts and funding mechanisms of the recommended actions.

RECOMMENDATION

It is recommended that the Board of County Commissioners: 1) Review, discuss and provide possible direction to staff on the proposed domestic well mitigation plan for Upper Mt. Rose and Galena Fan Areas; and 2) Acknowledge receipt of the Quarterly Report on Activities of the Washoe County Water and Sanitary Sewer Financial Assistance Program, Ordinance No. 1449.

POSSIBLE MOTION

Should the Board wish to implement the staff recommendation, a possible motion would be: “Move to provide direction to staff on the proposed domestic well mitigation plan for Upper Mt. Rose and Galena Fan Areas; and 2) Acknowledge receipt of the Quarterly Report on Activities of the Washoe County Water and Sanitary Sewer Financial Assistance Program, Ordinance No. 1449.”