Amendment

to the

Comprehensive Regional Water Management Plan

WESTERN REGIONAL WATER COMMISSION

January 9, 2009

AMENDMENT TO THE COMPREHENSIVE REGIONAL WATER MANAGEMENT PLAN

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Purpose

This Amendment is intended to provide a current foundation for the development of the comprehensive plan required by Chapter 531 Statutes of Nevada, 2007, the Western Regional Water Commission Act. Once adopted, this Amendment, along with the 2004 – 2025 Regional Water Plan as amended will serve as the comprehensive plan in effect until the Western Regional Water Commission adopts its plan on or before January 1, 2011.

Background

NRS 540A required that the Regional Water Planning Commission (RWPC) review the Washoe County Comprehensive Regional Water Plan (Regional Water Plan) every three years and prepare an amendment if one is deemed necessary. This 2008 Amendment was prepared as a result of the RWPC's review of the **2004 – 2025 Regional Water Plan**, adopted in January 2005 and amended in **January 2006**. The 2008 Amendment includes pertinent information and documents that have been completed since 2006. This amendment is not a comprehensive re-write of the entire plan, therefore the 2004 – 2025 Regional Water Plan as amended remains a necessary reference document.

Contents

This Amendment includes the following documents, which are either attached or incorporated by reference. Items 1, 2 and 3, below, are facility plans prepared by Reno, Sparks, Washoe County and Sun Valley General Improvement District, which are incorporated by reference. Section 1 of this document is a brief comprehensive summary that integrates these facility plans. Section 2 briefly describes items 4 through 9, below, which are either attached or incorporated by reference.

1. **City of Reno and Washoe County TMSA/FSA Water Wastewater and Flood Management Facility Plan**, **(Volume 1) (Volume 2)** November 2007, prepared for the City of Reno, Washoe County and the Regional Water Planning Commission by ECO:LOGIC Engineering, incorporated by reference.
2. **City of Sparks TMSA/FSA Conceptual Facility Master Plan, January 2008**, prepared for the City of Sparks and the Regional Water Planning Commission by Stantec Consulting, incorporated by reference.
3. **Sun Valley General Improvement District Water System Master Plan Update, September 2007**; **Water System Master Plan Update, July 2003**; **Wastewater System Master Plan, April 2004**; and **Sun Valley West Basin Water System Improvements, November 2004**, each prepared for Sun Valley GID by Shaw Engineering, incorporated by reference.

4. **Revised "Policy 4.1.a. Facility Plans and Infrastructure Studies – Conformance with Regional Water Plan**", see Attachment A.
5. **Water Baseline Table for Selected Basins**, see Attachment B.
6. **Revised Water Conservation Chapter**, see Attachment C.
7. **Truckee River Flood Project Update including "TRACTION" Projects**, see Attachment D.
8. **Washoe County 208 Water Quality Management Plan, October 2007**, prepared for the Truckee Meadows Regional Planning Agency by Farr West Engineering and MWH, incorporated by reference.
9. **Reclaimed Water Programs**, see Attachment E.

Forward

Sustainable Water Resources and Growth

Truckee Meadows residents consistently rate water planning among the most important services provided by regional government. To address the questions most frequently asked by the media and the general public, city, county and regional planners have developed the following responses.

How fast is the Truckee Meadows growing?
According to the Nevada State Demographer's Office, Washoe County's 2007 population was approximately 420,000 people. Our average annual growth over the past 20 years has been around 9,000 people per year, or an average of 2.8% per year. The most recent population forecast adopted by the Regional Planning Governing Board is approximately 620,000 people by the year 2030. That number is in step with the region's average growth rate in the past and is currently being utilized to determine how our area should grow over the next several decades.

Where does our current water supply come from?
Eighty-five percent of the current water supply in the Truckee Meadows comes from California via the Truckee River. The remaining 15 percent is supplied through ground water wells. Soon, the privately financed Vidler Water Company Fish Springs Ranch project will import up to 8,000 additional acre-feet of water annually from northern Washoe County to the North Valleys area. That is enough water to support up to 16,000 homes or more with expanded reclaimed water use for outdoor irrigation.

Can growth outpace our water supply?
No for two reasons:

1. Actual growth cannot outpace water supply because new development approvals, including building permits and subdivision maps, are required by law to be accompanied by proof of valid and adequate water rights. Local water purveyors, such as Washoe County Department of Water Resources or Truckee Meadows Water Authority, cannot deliver more water than is allowed by water rights and drought reserves – for any purpose, including growth. The goal of these water purveyors is to manage our existing water supplies to ensure that this precious resource is available to meet current demand and to plan for future water supplies to provide the same assurance to future users.

2. Water rights for the Truckee River and surrounding creeks were fixed with the Orr Ditch Decree in 1944 and cannot change, only ownership of those water rights can change.

Where does water come from for new development and who pays for it?
New developments must acquire water rights from a willing seller. Anytime someone wants to build a house, subdivision, or a business, they must bring existing water rights to their water purveyor. In most cases, agricultural irrigation rights are purchased by developers and converted to municipal use for new projects.

There cannot be an increase in the amount of water taken from the river. The only thing that changes is how the water is used.

The development community pays for infrastructure and water rights related to new growth when they build a project.

Will the Truckee River provide enough water during a drought if there is more growth?
In a normal year, the Truckee Meadows uses only about 3% of the water in the river, and uses only about 8% in a drought year. The Truckee Meadows Water Authority (TMWA) has planned for our driest years by storing water supplies in our upstream reservoirs in California and in underground aquifers. The amount stored at any time is enough to supply the community with water for one year longer than the longest drought on record or, nine years. When needed, TMWA releases the drought supplies from Donner, Independence, and Stampede Lakes into the Truckee River. This water flows to the Truckee Meadows, where it is used to serve residents and sustain wildlife and aquatic habitat. Underground water can also be utilized.

What about our ground water resource and how does growth affect private wells?
During the last fifteen years, the local water purveyors have been assessing the quantity and quality of our ground water resources throughout southern Washoe County. As a result, the placement of municipal wells is being limited by resource availability and the locations that have the least impact on private wells. When conflicts do arise, the Well Mitigation Hearing Board (WMHB) meets with private well owners and water purveyors to determine responsibility and make recommendations regarding what mitigation actions should be taken to correct any problems.

TMWA also conducts a recharge program during the winter. The Aquifer Storage and Recovery (ASR) program pumps treated surface water into existing wells to both enhance and replenish our water resource in the Truckee Meadows and improve the water quality at well sites. Last winter, more than three million gallons per day were injected into ten different well sites across our region. The process occurs in healthy water years, during months when the demand for water is low. In the winter, water use drops to one fourth of the average summer usage. The stored water can then be accessed during drought periods, if necessary. Since TMWA began recharging local aquifers in 1993, ASR has successfully banked nearly six billion gallons of water.

Key Findings

Infrastructure improvements envisioned to provide for the region's water-related needs to the year 2030 are presented in two primary documents: The City of Reno and Washoe County TMSA/FSA Water, Wastewater and Flood Management Facility Plan (2007), and the City of Sparks Conceptual Facility Master Plan (2008). These plans were developed to provide for regional concurrency with respect to water-related facilities. For the purposes of this document, the term "TMSA Facility Plan" will refer to these two plans collectively.

The Washoe County Consensus Forecast 2008-2030 (May 2008) projects a total 2030 TMSA population of 620,323 people. The calculated equivalent 2030 population from the TMSA Facility Plan is approximately 9% higher. The calculated equivalent population is derived from the sum of all traffic analysis zone (TAZ) forecasts and is used to plan for major infrastructure with a service life of 50 years or more, which will be expected to provide service well beyond the 2030 planning horizon. It is assumed that

the Consensus Forecast population of 620,323 with a +/- 10% range of uncertainty, and the TMSA Facility Plan calculated equivalent population that falls within that range are mutually consistent.

The projected available on-site and imported water resources for the various TMSA planning areas that may be used to satisfy new demand range from 60,800 to 64,000 AFA (54.3 to 57.1 MGD).

Based on the Consensus Forecast, the projected 2030 increase in water demand is approximately 65,100 AFA (58.1 MGD). The TMSA Facility Plan total estimate for water infrastructure is 84,800 AFA (75.7 MGD) because of the conservative assumptions used at the TAZ level for sizing major infrastructure.

In the future, expanded use of high quality reclaimed water for irrigation purposes and/or aquifer recharge could provide additional means of beneficially utilizing reclaimed water, while at the same time extending the region's limited water supplies. This could more than adequately address the difference between the 60,800 to 64,000 AFA (54.3 to 57.1 MGD) of projected available on-site and imported water resources identified in the TMSA Facility Plan and the 65,100 AFA (58.1 MGD) of new demand based on the Consensus Forecast.

The TMSA Facility Plan total estimate for infrastructure to provide wastewater treatment capacity is 55.6 MGD (62,250 AFA), based on the modified TAZ model assumptions.

The total estimated cost for all facilities is approximately $3.4 billion (in current dollars), with $897 million for water, $1.4 billion for wastewater and reclaimed water, and $1.1 billion for flood management.

Based on a projected increase of 89,900 dwelling units, the water cost per dwelling unit is $10,000, and the wastewater/reclaimed water cost is $15,000.

Assuming TMSA flood management costs and the Truckee River Flood Project costs are allocated evenly to existing and future customers, the flood management cost per dwelling unit is $3,700.

SECTION 1

Facility Plans

Infrastructure improvements envisioned to provide for the region's water-related needs to the year 2030 are presented in two primary documents: The City of Reno and Washoe County TMSA/FSA Water, Wastewater and Flood Management Facility Plan (2007), and the City of Sparks Conceptual Facility Master Plan (2008). These plans were developed to provide for regional concurrency with respect to water-related facilities. For the purposes of this document, the term "TMSA Facility Plan" will refer to these two plans collectively. The TMSA Facility Plan consists of several components, including projected improvements for water, wastewater and flood control infrastructure improvements. The TMSA Facility Plan divides the Truckee Meadows Service Area (TMSA) into planning areas, including Spring Mountain, Sage, Warm Springs, Cold Springs, Stead and Lemmon Valley, Spanish Springs, Sun Valley, Sparks Priority Areas 1 – 4, Truckee Meadows, and South Truckee Meadows. Each planning area represents a portion of the overall TMSA and may exist completely within one jurisdiction, Reno, Sparks or Washoe County, or include land within more than one jurisdiction. Reconnaissance-level facility planning for Future Service Areas (FSA) has also been completed for Reno, Sparks and Washoe County, however that information is not included in this document.

The Sun Valley General Improvement District (SVGID) completed three detailed master plan updates that have been incorporated into the TMSA Facility Plan, including: Water System Master Plan Update, July 2003, Wastewater System Master Plan, April 2004 and Sun Valley West Basin Water System Improvements, November 2004. Sun Valley's master plan updates are comprehensive documents; therefore, little additional detailed planning was necessary for the TMSA Facility Plan covering SVGID's service territory.

The facility recommendations in the TMSA Facility Plan provide the foundation for subsequent detailed planning and design. To ensure concurrency is achieved, preparation of updated facility plans will be necessary based on current information and specific development needs as they become known. With this additional information, the level of detail of the facility plans will increase over time based on site specific conditions. Ultimately, the City of Reno, the City of Sparks, Washoe County and the water, wastewater and flood control service providers having jurisdiction will be the final authorities regarding necessary infrastructure improvements.

It is anticipated that the future detailed plans and designs of the facilities that are identified conceptually in the TMSA Facility Plan will substantially conform to that Plan. However, it is reasonable to foresee recommended changes to the TMSA Facility Plan as more detailed information is developed. For instance, prior to a new water transmission main being constructed, the water purveyor having jurisdiction will perform a current assessment of the local conditions and determine the appropriate capacity of the facility at that time. To service the planned development, the transmission main will still be required; however, the sizing and alignment may differ from that presented in the

TMSA Facility Plan. When considering whether a refinement of the recommended facilities conforms with the TMSA Facility Plan and ultimately the Regional Water Plan and Truckee Meadows Regional Plan, the basic question to be answered is: "Does the design intent of the proposed facility (capacity, service function, construction phasing of major improvements, general location, design criteria, significant impact to other water related issues, etc.) substantially conform with the Regional Water Plan and the intent of the applicable water, wastewater and flood control facility plans presented in the TMSA Facility Plan?"

The Regional Water Plan includes Policy 4.1.a: Facility Plans and Infrastructure Studies, that will be used to determine whether a proposed revision to the TMSA Facility Plan is of such a kind or size that affects the working of the Regional Water Plan, and is in conformance with the Regional Water Plan. The Water Planning Commission will ultimately determine whether a proposed revision to the TMSA Facility Plan requires a review for conformance with the Regional Water Plan. Any changes to the TMSA Facility Plans will require a conformance determination by the Truckee Meadows Regional Planning Commission.

Population Forecasts and Dwelling Unit Projections

The TMSA Facility Plan was prepared in 2007 using the only spatially distributed growth forecast model available at the time, the Regional Transportation Commission's (RTC) Traffic Analysis Zone (TAZ) model. The TAZ model forecasts dwelling unit growth using adopted City and County land uses. For the purpose of facility planning, sizing major infrastructure such as water transmission mains or sewer interceptors, several conservative planning assumptions have been made. These assumptions modify the TAZ data and are based on more detailed planned land use information from the UNR Small Business Development Center and developer forecasts. Additionally, growth beyond that projected in the TAZ model was assumed for the Transit Oriented Development (TOD) corridors and Regional Centers. These facility planning assumptions are conservative in that they result in more projected dwelling units than the TAZ model, and therefore more planned demand for water and wastewater services. This conservative methodology is appropriate when planning for major infrastructure with a life expectancy of 50 years or more, which will provide service well beyond the 2030 planning horizon.

The number of dwelling units projected by the modified TAZ model can be converted to an equivalent population by multiplying the planning-level dwelling units by an estimated occupancy factor provided by each jurisdiction (2.19 people for Reno and Washoe County and 2.5 people for Sparks), as shown in Table 1. The Washoe County Consensus Forecast 2008-2030 was approved in May 2008, following the completion of the TMSA Facility Plan. The Consensus Forecast is based on long-term forecasts from five sources: Global Insight, a national forecasting firm; NPA Data Services, a national forecasting firm; Woods and Poole, a national forecasting firm; Truckee Meadows Water Authority's Population and Employment Econometric Model; and the 2006 State Demographer's Forecast. The Consensus Forecast projects a total 2030 TMSA population of 620,323 people. The calculated equivalent population based on the modified TAZ model dwelling units used for the TMSA Facility Plan is approximately 9%

higher than the Consensus Forecast. The equivalent population should not be expected to be the same as the population forecast range proposed by the Annexation Settlement Agreement or the Consensus Forecast due to differences in methodologies and the intended use of the data.

For major water and wastewater infrastructure planning, a 9% difference in projected population between the TMSA Facility Plan and the Consensus Forecast is reasonable for a 20 plus year forecast and for this general level of facility planning.

All population forecasting models share a characteristic of increasing forecast uncertainty over time. The farther into the future that a forecast is made the greater the range of uncertainty. While the first few years of a forecast are likely to have very small ranges, those ranges will increase with each year forecasted. It would not be uncommon for a population forecast to have a very small range, less than 1% in the first few years, but that range will quickly increase as the length of the forecast increases. It would not be unreasonable for a 20 year forecasting model to have a range of more than +/- 10% in year 20. To compensate for the uncertainty, population forecast models require frequent updates as new data become available.

Assuming a 10% range of uncertainty for the Consensus Forecast results in a population range of +/- 62,000 persons. It is therefore assumed that the Consensus Forecast population of 620,323 +/- 10% and the total TMSA Facility Plan calculated equivalent population that falls within that range are mutually consistent.

Table 1 – 2030 Total TMSA Population

	2030 Facility Plan Total Dwelling Units	Assumed People per Dwelling Unit	Calculated 2030 TMSA Facility Plan Population	Consensus Forecast 2030 Total Jurisdiction Population (a)	Population Difference (TMSA-Consensus)
Reno					
Spring Mountain	12,000 (b)				
Sage	2,500 (b)				
Cold Springs	7,538 (b)				
Stead	12,728 (b)				
Truckee Meadows	125,050 (b)				
South Truckee Meadows	23,886 (b)				
Reno Subtotal	183,702	2.19	402,307	339,543	62,764
Sparks					
Priority Areas 1-4		2.5	151,112 (c)	133,340	17,772
Washoe County					
Warm Springs	1,262 (b)				
Cold Springs	4,782 (b)				
Stead	13,362 (b)				
Sun Valley	9,486 (b)				
Spanish Springs	9,005 (b)				
Truckee Meadows	6,835 (b)				
South Truckee Meadows	13,799 (b)				
Washoe County Subtotal	58,531	2.19	128,183	147,440	-19,257
Total			681,602	620,323	61,279

(a) Data from Washoe County Consensus Forecast Final 2008-2030, May 2008.

(b) Data from City of Reno and Washoe County TMSA/FSA Water, Wastewater, and Flood Management Facility Plan, November 2007.

(c) Data from City of Sparks TMSA/FSA Conceptual Facility Master Plan, January 2008, accepted by the Regional Water Planning Commission for inclusion in the Regional Water Management Plan. The adopted Sparks population plan includes a 2030 population of 133,600. The Sparks TMSA/FSA Conceptual Facility Master Plan may be revised in the future to reflect the adopted population plan number.

Available Water Resources and Water Demand Projections

The projected available on-site and imported water resources for the various TMSA planning areas range from 60,800 to 64,000 AFA (54.3 to 57.1 MGD), as shown in Table 2. These water resources include utilization of the Truckee River in accordance with TROA, development of local groundwater and surface water resources, and several approved and pending water importation projects. The projected 2030 water facility increase from the TMSA Facility Plan is 84,800 AFA (75.7 MGD), based on the modified TAZ model. The actual 2030 water demands will likely be lower than the TMSA Facility Plan projections because of the conservative modified TAZ model assumptions used in

the Facility Plan for sizing major infrastructure. Based on the approved 2030 Consensus Forecast population estimate, which is about 9% less then the calculated equivalent population from the TMSA Facility Plans, the projected 2030 increase in water demand is approximately 65,100 AFA (58.1 MGD). The available water resources and the projected water demand based on the Consensus Forecast are essentially equal. This supports the finding from the Truckee Meadows Regional Plan that the region has identified available water resources sufficient to serve planned development through the 2030 time frame.

Expanded uses of reclaimed water could also play a significant role in helping to meet future water resource requirements. With regional coordination and cooperation, the uses for reclaimed water could possibly be expanded to include uses such as new residential landscape irrigation and groundwater recharge. The Nevada Division of Environmental Protection does not currently permit the use of reclaimed water at residential homes and is not considering a change in this position at this time. However, the future use of high quality reclaimed water for these purposes could provide an additional means of beneficially utilizing reclaimed water, while at the same time extending the region's limited water supplies.

Table 2 – TMSA Facility Plan 2030 Water Resources and Demands (a)

Area	Available Supply in AFA (MGD)	New Water Demand in AFA (MGD)	Water Facility Sizing Estimates in AFA (MGD)
On-Site Water Resources Available for New Demand (b,c)			
Spring Mountain	1,700-2,200 (1.5-2.0)		4,870 (4.4)
Sage	760-1,460 (0.7-1.3)		860 (0.8)
Warm Springs	2,360 (2.1)		1,500 (1.3)
Stead, Lemmon Valley and Cold Springs	1,910 (1.7)		18,480 (16.5)
Truckee Meadows TMSA (d)	22,360 (20.0)		17,020 (15.2)
Sun Valley TMSA (d)			2,610 (2.3)
Spanish Springs TMSA (d)			3,360 (3.0)
Sparks TMSA, Priority Areas 1-4 (d)			23,920 (21.4)
South Truckee Meadows TMSA (d)	8,380 (7.5)		12,140 (10.8)
Imported Water Supplies Available for New Demand (b)			
Fish Springs and Intermountain (e)	10,000 (8.9)		
Red Rock (e)	1,300 (1.2)		
Lower Smoke Creek (e)	12,000-14,000 (10.7-12.5)		
Total Supply	60,770-63,970 (54.3-57.1)		
Total Demand (f)		65,100 (58.1)	

(a) Reclaimed water is not included as part of the supply.

(b) Data from City of Reno and Washoe County TMSA/FSA Water, Wastewater, and Flood Management Facility Plan, November 2007.

(c) Data from City of Sparks TMSA/FSA Conceptual Facility Master Plan, January 2008.

(d) Potentially available water resources to be shared between Truckee Meadows, Stead, Sun Valley, Spanish Springs, Sparks and South Truckee Meadows. Based on current policies, water resources are not reserved or allocated to one planning area versus another.

(e) Potentially available water resources to be shared between Stead, Lemmon Valley, Cold Springs and Spring Mountain TMSA. Based on current policies, water resources are not reserved or allocated to one planning area versus another.

(f) Based on the approved 2030 Consensus Forecast population estimate.

Wastewater Flow and Treatment Projections

The total projected increase in wastewater treatment capacity for the TMSA planning areas is 55.6 MGD (62,250 AFA), based on the modified TAZ model assumptions. This compares to the projected 2030 water facility increase of 75.7 MGD (84,760 AFA). As a general rule, a little less than half of our community's average annual municipal and industrial (M&I) water demand ends up as wastewater. Using this general guideline to compare wastewater treatment capacity and water demand projections, wastewater treatment capacity should be planned for at least half of the water demands. Table 3

shows that the TMSA Facility Plan 2030 wastewater facility projections are conservative, largely because a mid-range per capita wastewater flow factor was used in the calculation. As a result, wastewater facility capacity increases are likely overstated. This is apparent as the ratio of projected wastewater flow to water demand is higher than the 50% guideline.

Conservative wastewater flow projections are appropriate for this general level of facility planning and do not translate to the construction of unnecessary facilities. In the future, facility plans developed by the service providers for specific wastewater infrastructure will include far more detailed and current information which will result in designs that are refined to meet the capacity needs at the time the services are necessary.

Table 3 - TMSA Facility Plan 2030 Water Demand and Wastewater Flow Comparison

Service Area	Water Facility Sizing Estimates in MGD (AFA)	Wastewater Facility Capacity Increase Estimates in MGD (AFA)	Wastewater Facility Increase/ Water Facility Increase (MGD/MGD)
Combined Future Spring Mountain WRFs (a,b)	4.4 (4,900)	3.5 (3,900)	0.80
Future Sage WRF (a,b)	0.8 (900)	0.66 (750)	0.83
Future Warm Springs WWTP (a,c)	1.3 (1,450)	0.4 (450)	0.30
Reno Stead WRF, Lemmon Valley WWTP and Cold Springs WRF (a,b)	16.5 (18,500)	10.12 (11,350)	0.61
Truckee Meadows WRF (a,b,d)	41.9 (46,900)	32.7 (36,600)	0.78
South Truckee Meadows WRF (a,b)	10.8 (12,100)	8.2 (9,200)	0.76

(a) Data from City of Reno and Washoe County TMSA/FSA Water, Wastewater, and Flood Management Facility Plan, November 2007.

(b) Wastewater flow projections are conservative because a mid-range wastewater flow factor is used. The TMWA Rule 7 water demand projections are representative of actual demands. Therefore, the percentage of wastewater flow compared to the total water demand is more than the "typical" fifty percent reported in previous planning studies.

(c) Because the County water demand projections are conservatively high, the percentage of wastewater flow compared to the total water demand is less than the "typical" fifty percent reported in previous planning studies.

(d) Data from City of Sparks TMSA/FSA Conceptual Facility Master Plan, January 2008.

Cost Estimates

A summary of the projected TMSA Facility Plan water, wastewater and flood management facility costs is presented in Table 4. The total estimated cost for all facilities is approximately $3.4 billion (in current dollars), with $897 million for water, $1.4 billion for wastewater and reclaimed water, and $1.1 billion for flood management.

Table 4 - TMSA Facility Plan Water, Wastewater and Stormwater Facility Costs (a)

Water ($M) (b,c)	Wastewater Collection and Treatment ($M) (b,c)	Local Wastewater Disposal/ Reclaimed Water ($M) (b,c)	Regional Reclaimed Water ($M) (d)	Local Flood Management ($M) (b,c)	Truckee River Flood Project ($M) (e)	Total ($M)
$897.0	$1,157.1	$131.0	$104.9	$319.9	$800.0	$3,409.9

(a) 20 Cities ENRCCI (Engineering News-Record Construction Cost Index) = 7,942 May 2007.

(b) Data from City of Reno and Washoe County TMSA/FSA Water, Wastewater, and Flood Management Facility Plan, November 2007.

(c) Data from City of Sparks TMSA/FSA Conceptual Facility Master Plan, January 2008.

(d) Regional reclaimed water costs from Amendment to the Washoe County Comprehensive Regional Water Management Plan Attachment E. Reclaimed Water Programs. Interconnection of Reno Stead WRF to Cold Springs WRF was not included as it is already accounted for in the City of Reno and Washoe County TMSA/FSA Water, Wastewater, and Flood Management Facility Plan, November 2007.

(e) Preliminary total project cost estimate, the local share is expected to be approximately one-half of the total project cost, data from Truckee River Flood Project.

The water, wastewater and reclaimed water costs are based on the facilities required to serve new growth. These cost estimates do not address repairs or replacements to existing facilities that would be attributable to existing customers. It should be noted that several significant cost components are not included, because insufficient information is available to estimate these costs at this time. The water cost does not include the cost of implementation of future water importation projects, some improvements to the TMWA system, and water rights. The wastewater and reclaimed water costs do not include long term reclaimed water and effluent management requirements, beyond what has been identified in the Reclaimed Water Programs report (Attachment E). Based on a projected 2007-2030 dwelling unit increase of 89,900 dwelling units, the water cost per dwelling unit is $10,000, and the wastewater/reclaimed water cost is $15,000.

The TMSA flood management costs and the Truckee River Flood Project costs are attributable to both new growth and existing residents for remediating existing system deficiencies. However, this component of the TMSA Facility Plan and the Truckee River Flood Project does not differentiate the costs between existing or future customers. Assuming the costs are allocated evenly to existing and future customers the flood management cost per dwelling unit is $3,700.

SECTION 2

Policy 4.1.a. Facility Plans and Infrastructure Studies – Conformance with Regional Water Plan

A revised Policy 4.1.a replaces existing Policies 4.1.a and 4.1.f in the 2004 – 2025 Regional Water Plan. The revisions consolidate two policies on the same subject into one and add clarity to the Water Planning Commission's facility conformance review process.

Water Baseline Table for Selected Basins

The Water Baseline Table summarizes information on water rights, yield, municipal, industrial and domestic commitments for developed (and developing) basins in the region. The table also indicates where water resources may be available for conversion to municipal-industrial uses and where existing commitments may exceed resource availability. The table is intended to supplement the Water Resources Baseline shown in Appendix D of the 2004 – 2025 Regional Water Plan.

Revised Water Conservation Chapter

The revised Water Conservation chapter replaces "Chapter 8 Water Conservation" of the 2004 – 2025 Regional Water Plan. Revisions include updated and new descriptions of RWPC and water purveyor water conservation programs, projects and activities, and recommendations for ongoing and future possible activities.

Truckee River Flood Project Update including "TRACTION" Projects

A summary of recent progress by the Truckee River Flood Project is included to supplement Section 4.7.1 "Truckee River Flood Management Project" of the 2004 – 2025 Regional Water Plan. Progress includes the creation of the Flood Project Coordinating Committee and early-start projects such as early land acquisition and "TRACTION" projects.

Washoe County 208 Water Quality Management Plan

The current version of the Washoe County 208 Water Quality Management Plan was developed by the Truckee Meadows Regional Planning Agency, adopted by the Regional Planning Governing Board in May 2007, certified by the Nevada Division of Environmental Protection in October 2007 and approved by the U.S. Environmental Protection Agency, Region 9 also in October 2007. The 208 Plan complies with the requirements of the federal Clean Water Act and Nevada Revised Statutes.

Reclaimed Water Programs

Reclaimed water provides both local and regional benefits. Reclaimed water is presently supplied to numerous customers throughout Reno, Sparks and Washoe County from the Truckee Meadows, Reno Stead and South Truckee Meadows Water Reclamation Facilities. As the region grows according to its land use plans, reclaimed water use allows growth to be accommodated while remaining within discharge permit limits. The reuse and disposal of reclaimed water from the various water reclamation facilities may eventually be constrained by a number of factors if they continue to be operated as

independent systems. With regional coordination and cooperation, the possible uses for reclaimed water could be expanded to include uses such as residential landscape irrigation and groundwater recharge, thereby extending the region's limited water supplies.

Much work is needed to quantify the potential benefits of a regionally integrated reclaimed water system. A thorough planning and facility study of regionally integrated reclaimed water systems and management strategies has the potential to develop economic and environmentally prudent alternatives. To quantify the potential benefits of a regionally integrated reclaimed water system, policy, regulatory, technical and financial considerations should be fully investigated at the community level. Close work and cooperation with the Nevada Division of Environmental Protection, the Washoe County District Health Department and the local water purveyors will also be required to ensure that expanded uses of reclaimed water are protective of public health and the environment.