

# Northern Nevada Water Planning Commission

## STAFF REPORT

**DATE:** April 28, 2016  
**TO:** Chairman and Members, Northern Nevada Water Planning Commission (“NNWPC”)  
**FROM:** Jim Smitherman, NNWPC Water Resources Program Manager  
**SUBJECT:** Presentation of comments received and proposed revisions to the “Planning Policies and Criteria” chapter for the 2016 Regional Water Management Plan (“RWMP”) update; discussion and possible direction to staff.

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### SUMMARY

Since the NNWPC last reviewed proposed revisions to this chapter, staff has received no significant comments. Minor revisions include correction of cross references and rearranging text within sections to improve readability. All revisions approved by the NNWPC at prior meetings are shown as normal text.

### RECOMMENDATION

Staff recommends that the NNWPC accept the report on review comments and proposed revisions to the “Planning Policies and Criteria” chapter for the 2016 RWMP update, and provide direction to staff as appropriate concerning future reviews of this chapter as part of the development of the 2016 RWMP update.

JS:jd

Attachment: Chapter 1

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## Chapter 1 - Regional Water Planning Policies and Criteria

### Background

Chapter 531, Statutes of Nevada 2007, the Western Regional Water Commission Act (the “Act”) includes among the required contents of the *Regional Water Plan*, appropriate goals and policies to deal with current and future problems affecting the Planning Area as a whole with respect to the subjects of the Plan. This Plan identifies the Planning Area’s needs for water, wastewater, flood control and drainage capabilities over a 20-year timeframe, the constraints on meeting those needs and background information on these subjects. To adequately evaluate alternatives for meeting the Planning Area’s needs and to evaluate future projects for conformance with this Plan, the following goals, policies and criteria shall apply for supply of municipal and industrial water, sanitary sewerage, treatment of sewage, drainage of storm waters, and control of floods. These policies should also guide the evaluation of future projects, and identify possible changes necessary to implement the *Regional Water Plan*.

The following policies and criteria are organized according to the subjects of the Plan as stated by the four goals shown below. Each policy correlates with one of eight specific objectives arranged under the goals.

- Goal 1: Plan for the development of sustainable water supplies
  - Objective 1.1 Promote efficient use of resources
  - Objective 1.2 Provide for a sustainable water supply and an acceptable level of service to the community
  - Objective 1.3 Implement measures to protect and enhance water quality for a sustainable water supply
- Goal 2: Plan for regional wastewater treatment and disposal requirements
  - Objective 2.1 Promote efficient use of resources
  - Objective 2.2 Manage wastewater for protection and enhancement of water quality
- Goal 3: Plan for the protection of human health, property, water quality, and the environment through regional flood plain and storm water management
  - Objective 3.1 Effective and integrated watershed management
- Goal 4: Support the implementation of the Truckee Meadows Regional Plan
  - Objective 4.1 Coordinated infrastructure planning
  - Objective 4.2 Clarification of the Role of the Western Regional Water Commission (“WRWC”) and the Northern Nevada Water Planning Commission (“NNWPC”)

### Policies and Criteria

#### Goal 1: Plan for the Development of Sustainable Water Supplies

##### Objective 1.1 Promote Efficient Use of Resources

##### ***Policy 1.1.a: Geographic Use of Truckee River Water***

*Use of Truckee River water rights in additional hydrographic basins shall conform to the Regional Water Plan if such uses are an efficient use of water resources; meet or satisfy all regulatory requirements and operating agreements; maintain or improve water quality for*

*downstream users and maintain a healthy river environment, recreational opportunities, and economic development.*

**Criteria to implement policy:** Local governments and water purveyors shall apply the following criteria to identify approved areas for the use of Truckee River resources:

- In reviewing requests for use of Truckee River water, TMWA and local government agencies shall determine that export of the Truckee River water resource to additional areas does not impair the ability to meet the demands associated with fulfilling the reasonable development potential of properties identified under Regional Plan Policies 1.2.1 and 1.2.2, as calculated in the Water Resource Baseline (see Table 2-1) and demand projections in this Plan.
- To the extent possible and practicable, use of Truckee River water will coincide with the Truckee Meadows Service Area (“TMSA”) boundary, as it may be amended.
- Local governments and TMWA have determined that the resource costs are acceptable.
- Expanded use is consistent with water quality, wastewater disposal, environmental and flood control policies or regulations.

**Discussion:** The hydrographic basins where Truckee River water has historically been diverted for agriculture pursuant to the Orr Ditch Decree include: Truckee Meadows hydrographic basin 87, Spanish Springs basin 85, Truckee Canyon segment basin 91, and Tracy segment basin 83. In addition, areas where Truckee River water has been delivered for municipal and industrial use include Sun Valley basin 86 and Lemmon Valley basin 92.

It is in the best interest of the community to optimize the use of Truckee River water resources, both within and by export of water from the Truckee River. Use of limited Truckee River water supplies within the Planning Area is recognized as an ongoing and necessary practice that provides water supplies to areas that independently do not have sufficient water resources to accommodate existing and planned uses.

***Policy 1.1.b: Water Demand Side Management***

*Water demand management measures that promote smart and efficient use of the Planning Area’s water resources will be implemented for the benefit of the community. Additionally, the community will be expected to reduce water use during low precipitation years when upstream reserves are needed to release water prior to September 1.*

**Criteria to implement policy:** Local governments and water purveyors shall enforce existing ordinances, comply with state law and work towards implementation of Base Case demand-side management programs (“DMPs”).

**Discussion:** In many communities, demand-side management is viewed as an alternative to developing new water resources. However, due to existing agreements concerning the Truckee River, most DMP measures in the Truckee Meadows do not result in new water resources for future use. Notwithstanding the limitations on water resource benefits resulting from DMPs, valuable benefits can be realized, including:

- stretching drought or emergency water supplies
- delaying construction of new water and wastewater treatment facilities

- reducing cost of water system operations
- reducing energy costs
- enhancing instream water quality
- improving environmental conditions
- enhancing access to water supply projects, including the Negotiated Settlement

Measures that may be used to achieve the region's demand-side management goals include, but are not limited to, the following:

- water meters
- enforcement of existing ordinances
- water saving indoor fixtures
- individual evapotranspiration irrigation controller system requirement
- minimum of 65 percent efficient irrigation for residential and commercial landscapes
- seasonal changes in irrigation timing
- functional turf areas
- proper soil preparation
- pressure reducing devices
- individual customer water budgets
- increasing block-tier pricing
- water audits
- landscape irrigation using reclaimed water

NRS 540.131 through NRS 540.151 requires all purveyors of water for municipal, industrial, or domestic purposes, with the exception of certain smaller purveyors, to submit water conservation plans with the Department of Conservation and Natural Resources for review and approval for compliance. 2005 Amendments to NRS 540.131 require conservation plans to be updated every five years.

The state has also imposed minimum standards for plumbing fixtures in new construction and expansions in residential, industrial, commercial and public buildings, mobile homes, and manufactured homes and buildings. These standards include maximum acceptable water use by toilets, urinals, and showers; ban timing devices that cause fixtures to flush periodically, irrespective of demand; limit the flow rate of faucets in kitchens and lavatories; and prohibit multiple faucets activated from a single point.

***Policy 1.1.c: Reduction in the use of Truckee River Water resulting from DMPs***

*Truckee River water saved as a result of DMPs shall be managed consistent with agreements among local entities and parties of interest to the Truckee River.*

**Discussion:** During drought conditions, low river flows occur between the Glendale Water Treatment Plant and the Steamboat Creek confluence. During extreme drought periods flow is sometimes reduced to zero. The above policy is designed to generate a source of water that can be managed in the best possible way, depending on drought conditions, to achieve instream flows and habitat enhancement to the greatest degree possible. Storage of conserved

water in upstream reservoirs will have requirements pursuant to *Truckee River Operating Agreement* (“TROA”) operations that provide drought protection and fish credit water. Water stored under TROA operations can be released for fish purposes thereby providing undiverted flow to the benefit of Pyramid Lake as well as Truckee River habitat. Implementation of the Water Quality Agreement and TROA are expected to enhance flows during critical low-flow periods.

**Policy 1.1.d: Evaluation of the Unexercised Portion of Committed Water Supplies**

*The feasibility of alternative uses and management of the unexercised portion of committed water supplies shall be evaluated. This appropriated but unused water could possibly be dedicated to a variety of beneficial uses.*

**Discussion:** Conversion of agricultural water rights to municipal and industrial uses and the various conversion ratios accepted (e.g. 1.12 acre-feet (“af”) for one single-family home) have committed water resources that are not currently being used due to a variety of reasons, including water use reductions. This appropriated but unused water could possibly be dedicated to a variety of uses such as in-stream water quality, environmental, upstream storage, a reduced water right dedication policy or it could be added to existing water supply. Any one of these options has political or institutional barriers and could be hydrographic basin specific.

**Objective 1.2 Provide for a Sustainable Water Supply and an Acceptable Level of Service to the Community**

**Policy 1.2.a: Conjunctive Management of Surface Water and Groundwater Supplies to Withstand a 9-year Drought Cycle**

*For planning purposes, the conjunctive management of TROA-reliant surface and ground water supplies for municipal and industrial use in the greater Truckee Meadows area shall be designed to withstand the worst drought cycle of record, that being the drought of 1987-1994, plus one dry year (1987) added to the cycle.*

**Discussion:** The TMWA 2035 WRP found that the region is in its fourth consecutive, low-precipitation year. The meteorologic drought, begun in 2012, created hydrologic drought impacts in 2014 and 2015 which required TMWA to release some of its upstream drought reserves for the first time since 1992. As defined in TROA, the region has been in a Drought Situation (i.e., the level of Lake Tahoe is projected to be below elevation 6223.5 feet on November 15 of a given year) since 2014. Unfortunately, it cannot be known with certainty the duration of the current drought. In addition, analysis has shown that under TROA operations water supplies and drought reserves accumulate to TMWA’s benefit under the 1987 to 1994 drought hydrology.

The TMWA 2035 WRP reports that analyses of California blue oak tree-ring data concluded that drought periods of 8-, 9- or 10-years are rare occurrences with frequencies of 1 in 230 years, 1 in 375 years, and 1 in 650 years, respectively. While there has not been any new tree ring data collected since the 2003 study, a preliminary dendrochronological reconstruction of water-year streamflow was performed using as predictors the western U.S. tree-ring chronologies available from the public-domain International Tree-Ring Data Bank (“ITRDB”) dataset and stream flows from the Carson River. The Carson River does not have reservoirs compared to the Truckee River and is therefore a more natural flowing river providing better correlation with select tree-ring cores. This reconstruction of the Carson River extended from 1500 to 2001, a period five times longer than the instrumental record. The reconstruction of the Carson River had 211 wet

and dry spells with an average duration of 2.4 years, with the longest episodes being a 9-year wet period (1978 to 1986), and two 8-year droughts in 1841-1848 and 1924-1931. These three episodes were also the strongest found in the 502 year history in the reconstruction dataset.

To test the robustness of the region's water supply, in particular the back-up water supply, TMWA developed a hypothetical, 9-year worse-than-worst-case hydrologic scenario and processed it through the RiverWare operations model. Starting with actual 2012 to 2015 hydrology for the first four years, 5 years of 2015 hydrology were added on to complete the dataset for years 2016-2020. This hydrology was simulated under both TROA and non-TROA operating conditions. The 9-year simulation used for this analysis is over two times more severe than the drought of record (1987-1994) plus the additional dry year (1987) currently used for planning purposes. The simulation used projected 2015 demands of 70,000 AF.

Without TROA, upstream-drought reserves would run out in year seven of the modeled worse-than-worst-case drought; in other words, reserves are exhausted if 2015 hydrology is repeated three more years after actual 2015 hydrology. However with TROA, the results show that at current demands the region can withstand a hypothetical drought more than 2 times as severe as the drought of record and by the end of the 9-year simulation, TMWA would not only be able to meet demand at current levels, but actually continue to build up and accumulate additional drought storage. By the summer of 2020, the model predicts more than 46,000 AF of additional drought reserves would be available for use; reserve water supplies that would not be there if not for TROA. Supplies would be more than sufficient to meet summer water demand throughout the hypothetical hydrology.

To further stress-test TMWA's upstream drought reserves under TROA operations to the next level, two additional hydrologic scenarios or simulations were performed to test the robustness of the region's back-up water supply. Two twenty (20) year hypothetical worse-than-worse-case scenarios were used. The first 20-year simulation ("Repeat1987") was a repeat of the 1987-1994 drought of record plus the 1988 hydrology, starting at the same initial point as the first scenario (the 9-year simulation referenced above). That starting point was October 1, 2016 (start of Water Year) after the four driest back to back years in recorded history (115 years record keeping). The second scenario ("Repeat2015") repeated actual 2015 hydrological conditions for an additional 20 years starting from October 1, 2016. Both model runs used forecasted customer demands and assumed increases to groundwater pumping capacity of 15 MGD over the 20-year planning horizon.

The results of the Repeat1987 model using RiverWare validate the work that was done for the TROA EIS using TROM. The 1987-1994 Drought is considered to be the drought-of-record is the standard for TROA and TMWA planning. It was the worst drought this region has experienced. The results of the model run suggest that not only can this region withstand a repeat of the 1987-1994 drought over the course of the next 20 years under TROA, but that combined upstream drought reserves would continue to grow and reach over 70,000 acre-feet. During the 20-year run more or less reserves were used to meet demand depending on the available river flows. Figure 3-10 shows TMWA's cumulative combined upstream storage over the 20 year simulation period.

The results show very clearly that under TROA the region's water supply is extremely resilient. When drought reserves are needed to supplement natural river flows during the peak summer demand months, storage is used during that period, but is quickly refilled over the course of the next winter and spring. By the time reserves may be for the following summer's demands, upstream reserves have been refilled and upstream reserves are in most years identical to the previous year's reserves, or in some cases, many times better.

Despite a repeat of 2015 hydrological conditions for 20 years following the four (4) driest years in

recorded history (a statistically impossible scenario), TMWA's upstream reserves in the Repeat2015 scenario are not only sufficient, but actually increase throughout the planning horizon. The results once again illustrate the importance of the Truckee River Operating Agreement to this community. TMWA 2035 WRP, Figure 3-11 shows TMWA's projected cumulative reserves over the simulation period.

The 2035 WRP therefore recommends that TMWA continue to monitor its ability to meet current and future demands through the 1987 to 1994 drought period, the worst drought period of record, and based on factors such as demand growth, conservation improvements, hydrologic cycles, climate changes, etc., update its Board when future conditions change that require changes to the planning criteria or supply operation.

### **Policy 1.2.b: Water Resource Investigations**

*Where a water supply deficiency exists or a potential water supply deficiency may occur as a result of master plan, zoning or land use changes or changes to the Truckee Meadows Service Area boundary, or there is a need for additional water resources to meet other regional objectives, the NNWPC may investigate alternatives to meet the potential water requirement.*

**Criteria to implement policy:** The NNWPC may initiate water resource investigations when any of the following criteria are met:

- The investigation has been identified as a required element of the NNWPC's regular updates to the *Regional Water Plan*, per the Act.
- When the Western Regional Water Commission finds that the Washoe County Consensus Population Forecast ("Consensus Forecast") is greater than the estimated population that can be supported by the sustainable water resources.
- When there is an identified need for additional water resources not associated with land use changes (examples: water for return flow requirements, *Water Quality Settlement Agreement* requirements, effluent reuse, domestic well conversion or augmentation).

**Discussion:** A method of accounting for potential water requirements and available water resources has been developed in the form of the Water Resources Baseline and water demand projections based on the Consensus Forecast. It may take up to ten years to implement a new water resource option from the time a need for additional resources has been identified to the commencement of delivery of that resource. The NNWPC will use the Water Resources Baseline and water demand projections as tools to identify the need to investigate additional water resource options.

### **Policy 1.2.c: Emergency Water Supply Standard**

*Water service providers using Truckee River water rights supplemented with other water resources shall design and manage their supplies to meet all indoor water uses, and withstand a short-term contamination event (1-2 days) with no interruption in service, and a seven-day event through the use of mandatory conservation.*

**Discussion:**

The purpose of this standard is to provide emergency water to the community during a potential contamination event that could render Truckee River water untreatable for an extended period. The minimum seven-day supply is intended to allow the contaminant to flush by the treatment plant intakes, and to provide sufficient response time to plan, implement and communicate

temporary treatment or other extraordinary measures to restore the water supply to the community. Depending on the severity of the emergency, water supplies would be managed to provide basic community needs while assuming that mandatory water conservation is implemented. This policy acknowledges emergency management plans required by state statute.

While there is a risk to surface water reliability from turbidity and toxic spill events, research conducted in 1996 and again in 2007 by UNR on behalf of TMWA has shown no recorded river contamination event from rail or highway transportation. The recent study also suggests that the area of highest risk is downstream of TMWA's treatment facilities in the City of Sparks where there is a rail yard and a large number of warehouses and shipping companies that load/unload trucks and rail cars. TMWA's Source Water Protection Program (including its Wellhead Protection Plan ("WHPP")) is designed to preserve and enhance available water supplies and to address known and potential threats to water quality. TMWA has sufficient well capacity and distribution system storage to meet reduced customer demands during a water quality emergency, and has emergency plans in place in the event of extended off-river emergencies. With the merger of WCDWR and STMGID water systems into TMWA, system integration improvements will be implemented that are beneficial in terms of increasing the supply and/or quality of water supplies at minimum economic costs to ensure the delivery of water through the 20-year planning horizon and beyond.

The 2035 WRP therefore recommends that TMWA continue to: (1) implement its source water protection strategies in cooperation with local entities; (2) maintain, as a minimum, the ability to meet daily indoor water use with its wells; and (3), for river outages lasting up to 7 days during the summer, maintain the ability to meet average daily water demands using its wells, treated water storage, and enhanced conservation measures.

While a toxic spill into the Truckee River is clearly a concern, such an event would be extremely rare, and in fact has never occurred. However, depending on the time of year, TMWA is able to operate without the river for a period of hours to days using system distribution storage and production wells. A detailed plan cannot be developed for a major emergency on the Truckee River that would anticipate all possible combinations of circumstances requiring emergency actions. Variables include location, size, and type of spill; time of year; levels of reservoirs and streams; customer demands; and other factors. The supply of water available from TMWA's production wells enables TMWA to meet demands for average indoor water use throughout the year. The merger and integration of WCDWR and STMGID water systems into TMWA has resulted in additional interconnections with adjacent water systems. These water systems, located within South Truckee Meadows, Hidden Valley, Spanish Springs and Lemmon Valley, rely on groundwater wells and provide an increased source of off-river supply during an extreme event and/or extended river outage. The merger and integration of the WCDWR water systems also brings additional off-river resources and facilities to TMWA, including Thomas, Whites and Galena Creek water resources, the Longley Lane groundwater treatment plant, and the North Valleys Importation Project ("NVIP"). In addition to relying on its wells, other steps to reduce water use during an extreme event and/or extended river outage are specified in the 2035 WRP.

Though it cannot be predicted when a river interruption event will occur or what the nature of an event will be, TMWA plans for and practices scenarios to manage through emergency events. The more extraordinary measures that can be engaged are believed to only apply in an extreme, worse-than-historic event that would occur in the peak of summertime irrigation with contamination occurring between Boca and the diversion point of the Steamboat Ditch. Most combinations of scenarios as to time, place, and nature of the event are manageable with existing production facilities and management options without taking drastic measures. It must

be emphasized that these are broad guidelines only. They are not intended as a definitive instruction list as to the response which should be taken in any given emergency situation. An event, if it occurs, must be evaluated on its specific conditions, and a response plan devised accordingly.

**Policy 1.2.d: Protection and Enhancement of Groundwater Recharge**

*Natural recharge areas shall be defined and protected for aquifer recharge. Applicants for proposed projects and proposed land use changes in areas with good recharge potential shall be encouraged to include project features or adequate land for passive recharge.*

**Criteria to implement policy:**

Natural recharge in drainage ways:

- Local governments enforce existing ordinances referenced below. Local governments will protect the natural recharge and flood protection functions of the drainage ways shown on United States Geological Survey (“USGS”) 7.5 Minute Quad maps.

Undeveloped areas with recharge potential:

- Local governments perform a review of lands within proposed project or proposed land use change area and rank suitability for passive recharge based on site evaluation criteria: see *Southern Washoe County Groundwater Recharge Analysis* (Kennedy/Jenks, January 2001). Sites with a Hydrology/Geology matrix score of 2.2 or higher are considered to be sites with “good recharge potential”. Figure 2-7 shows areas of good recharge potential compiled from data presented in the report referenced above.
  - If a site is determined to have “good recharge potential”, local governments shall, to the extent practicable, work with the project developer or land use change proponent to explore development features or configurations that maximize recharge while meeting other obligations regarding storm water quality and flood control needs.
  - Passive recharge elements shall be designed such that they are consistent with water quality, environmental, storm water and flood control policies or regulations.

**Discussion:**

**Incidental recharge in drainage ways:**

When combined, the requirements of the City of Reno Major Drainage Ways Ordinance and the Washoe County Development Code Article 418 “Significant Hydrologic Resources” provide for the protection of groundwater recharge in most natural drainage ways. There are additional drainage ways not identified in the two ordinances that are shown on USGS 7.5 Minute Quad maps as blue solid or dot-dash lines that represent perennial and ephemeral drainage ways. The intent of this policy is to protect the natural recharge and flood protection functions of these additional drainage ways.

**Incidental recharge through unlined irrigation ditches:**

Irrigation ditches provide invaluable benefits to the public, including conveyance of storm water and incidental ground water recharge.

**Areas with recharge potential:**

The NNWPC strongly encourages incorporation of passive groundwater recharge and/or storm water infiltration project components (such as infiltration basins or swales, porous paving, open space, meandering stream channels, or other low impact development [“LID”] practices) when proposed projects or land use changes are considered on sites that have good recharge potential and the water to be recharged will not degrade groundwater quality.

**Policy 1.2.e: New Water Resources / Importation**

*New water resources, including imported water or potable reuse supply, may be developed provided they further the goals of the Regional Plan and the Regional Water Plan.*

**Criteria to implement policy:** Development of new water resources, including an importation water supply, may be pursued if the following criteria are met:

- The water is to be used within the Truckee Meadows Service Area (“TMSA”) boundary, as may be amended from time to time.
- There is a need for additional water resources to help meet the demands associated with fulfilling the reasonable development potential of properties identified under Regional Plan Policies 1.2.1 and 1.2.2, subject to a comparison between the Consensus Forecast and the estimated population that can be supported by the sustainable water resources.
- Local governments or water purveyors have determined that the new water resource or importation of water is economically feasible and consistent with water quality, wastewater disposal, environmental and flood control policies or regulations.

**Discussion:** Water importation provides water supplies to areas that independently do not have sufficient water resources to accommodate existing and planned uses. Water importation is a component of the existing water supply for the region. This policy acknowledges that the State Engineer considers additional criteria for water importation according to NRS 533.370(4).

**Policy 1.2.f: Water Resources and Land Use**

*Land use designations or zoning designations do not guarantee an allocation of future water resources. This applies to both surface water and groundwater, including groundwater for domestic wells. While a potential water supply deficiency may exist based on approved land uses, water supply commitments may only be approved pursuant to Policy 1.2.g.*

**Criteria to implement policy:** Local governments shall consider the following criteria in reviewing proposed projects or in reviewing changes to land use or proposing changes to the Truckee Meadows Service Area:

- The potential resource requirement;
- The availability of uncommitted water resources in the hydrographic basin, as identified in the Water Resource Baseline;
- Whether a potential water supply deficiency is created and its timing, magnitude and regional water resource impacts;
- Whether the Consensus Forecast is less than or greater than the estimated population that can be supported by the sustainable water resources;
- Existing water resource investigations that have been performed in accordance with Policy 1.2.b; or

- Timing and availability of potential new water resources developed in accordance with Policy 1.2.e and/or potential mitigation measures.

**Discussion:** Water resource options will be identified to help meet the potential water resource requirements associated with fulfilling the reasonable development potential of properties identified under Regional Plan Policies 1.2.1 and 1.2.2, as presented in the preliminary 2003 Water Resource Baseline and subsequent Water Resource Budgets. The NNWPC recognizes that proposed projects, master plan, zoning or land use changes may create a situation where there are insufficient water resources identified to supply the build-out of all approved land uses within the TMSA.

**Policy 1.2.g: Water Resource Commitments**

*Issuance of new commitments against a water resource or combination of resources shall be made in conformance with existing State Engineer permits, certificates or orders; water purveyor rules or policies; and/or local government policies. The local governments, water purveyors, and State Engineer will seek to achieve a balance between commitments and the sustainable yield of the resources in the region.*

**Criteria to implement policy:** The following criteria will be applied:

- The Water Resource Baseline (Table 2-1) will be used by local governments and water purveyors as the basis for evaluating the availability of resources to serve proposed commitments. Not all basins within the Baseline have an estimate of the sustainable yield. In such cases where sustainable yield information is lacking, the local government or water purveyor shall use the best available information and may require or conduct additional studies, as it may deem necessary to make a decision.
- In areas where the approval of commitments through the parcel map, division of land into large parcel map or subdivision process would tend to create or exacerbate a deficit in the Water Resource Baseline balance between sustainable yield and commitments, the local governments and water purveyors will limit such approvals or take affirmative actions to mitigate the deficits through mechanisms such as artificial recharge and recovery of groundwater, conjunctive use of available resources, or the use of alternative water resources.
- Developments to be served by TMWA shall be required to satisfy the water resource dedication requirement of TMWA. Developments not served by TMWA shall be required to meet the conditions of Washoe County Development Code, Section 110.422 (“Article 422”).
- In specific basins, resources have been regulated by the State Engineer (such as in the Lemmon Valley hydrographic basin) or by water purveyors through the development of a management plan or discount factor that has been approved by the State Engineer, NNWPC, or local government (such as the County-approved discount factor in the Warm Springs Valley hydrographic basin). Such management plans may include short-term reliance upon the use of groundwater in excess of the sustainable yield, provided that such use is temporary and part of an overall management plan to bring the basin back into a condition of sustainability. In addition, certain orders have been issued by the State Engineer on specific resources (such as certain rights in the Cold Springs Valley hydrographic basin) detailing and regulating the amount of the resource available for municipal use while protecting the basin of origin. These resources shall be considered available sustainable yield and shall be managed in a manner consistent with such State

Engineer order or regulation or an approved management plan or discount factor as described herein.

**Discussion:** While a potential water supply deficit may exist as described in Policy 1.2.f, it represents a hypothetical (or potential future) demand on water resources that might occur if the land is ultimately subdivided or developed in a manner that fully implements the land use plan. A commitment represents an obligation of a water purveyor to provide water to an approved project and therefore should be allowed up to the sustainable yield of the available resources or combination of resources. Properties with existing domestic wells and properties entitled to construct domestic wells constitute a form of commitment of water resources made by a local government when the parcels or lots are created; however, there is no guarantee that well drilling will be successful. Maintaining a balance between commitments and the sustainable yield of the resources in the region is of great importance in the implementation of this Plan. In areas where existing commitments exceed the sustainable yield, the market place will play a significant role in the reallocation of the existing water resource commitments.

**Policy 1.2.h: New Water Purveyors**

*The development of new water delivery facilities outside of any hydrographic basin containing TMWA owned and operated water delivery facilities shall be subject to successful creation of a public utility under Public Utility Commission of Nevada (PUCN) jurisdiction.*

**Criteria to implement policy:** Washoe County is not a public water purveyor, nor does the County own or operate any community water systems as defined in NRS 445A. It will be the responsibility of the development owner or property owner to comply with the requirements of TMWA, where applicable, or the PUC for privately owned public water systems, regarding any plans for the creation of community water systems within the unincorporated portion of Washoe County covered by Article 422. By allowing development which includes community water systems, Washoe County assumes no risk or obligation for future operation or maintenance of any potable water delivery system.

Water systems shall be operated and maintained, in accordance with applicable regulatory requirements and standards, any facilities for water treatment, supply, storage, transmission and distribution, and appurtenances such as wells, pipelines, pumps and storage tanks located within or outside the property boundary or subdivision which are necessary to ensure an adequate water supply to a development, which have not otherwise been dedicated to and accepted by a water purveyor. This section also applies to facilities that will be constructed to serve one single-family dwelling on an existing parcel of land approved with an individual domestic well as its source of water supply.

**Objective 1.3 Implement Measures to Protect and Enhance Water Quality for a Sustainable Water Supply**

**Policy 1.3.a: Treated Water Supplies to Meet Safe Drinking Water Act Requirements**

*All drinking water supplies provided by public water systems shall meet or exceed the requirements of the Safe Drinking Water Act.*

**Discussion:** The region depends on both surface water and groundwater for its municipal drinking water supplies. Compliance with the Federal Safe Drinking Water Act will ensure a

healthful water supply for the regional population.

**Policy 1.3.b: Wellhead Protection**

*To protect public health and to ensure the availability of safe drinking water, the Washoe County District Health Department (for domestic wells) or local governments with input from TMWA shall review any proposed project that may cause possible groundwater contaminating activities. TMWA is encouraged to maintain its wellhead protection program and continue to coordinate with local government review processes for new business or development.*

**Criteria to implement policy:** Local governments shall solicit comments from the water purveyor and/or the Washoe County District Health Department (“WCDHD”) and consider such comments prior to taking action on a proposed project if there is the potential that a proposed project could result in development with possible contaminating activities within a Wellhead Protection Area.

A list of possible contaminating activities includes, but is not limited to:

- Septic tanks
- Solid waste transfer or storage facilities
- Tank farms
- Service stations
- Laundries and dry cleaning plants
- Auto repair services
- Batch plants
- Storage yards
- Electronic circuit manufacture or assembly plants
- Chemical storage, processing or manufacturing plants
- Industrial liquid waste storage areas
- Paint products manufacturing
- Printing and publishing establishments
- Wood preserving
- Plating plants
- Livestock yards
- Storm water infiltration systems

**Discussion:** A number of potential contaminating activities have been identified as risks for groundwater contamination. Wellhead protection programs are being implemented nationwide to provide assurance that inadvertent discharge of pollutants into the groundwater supply will not occur, since groundwater cleanup is often prohibitively expensive. In considering comments from the WCHD or TMWA, local governments may choose to apply conditions to the approval of a proposed project in order to reduce the risk of possible groundwater contamination.

Groundwater protection has received significant emphasis at TMWA with the 2015 WRP update and integration of the previously-endorsed TMWA WHPP and the former WCDWR and STMGID WHPPs into one unified groundwater protection plan. TMWA’s 2015 WHPP incorporates USEPA and NDEP suggested elements resulting in a comprehensive action plan to protect aquifers and

TMWA's production wells from further sources of contamination. TMWA's recently completed 2015 WHPP is available for review in Appendix 2-8 of the 2015 WRP and will be submitted to the State for endorsement.

**Policy 1.3.c: Groundwater Resource Development and Water Quality**

*Existing and proposed municipal and industrial well sitings must be evaluated for their influence on the potential for contaminated groundwater migration to areas of potable groundwater. Also, development of groundwater resources shall not result in deterioration of groundwater quality through migration of contaminants.*

**Criteria to implement policy:** Long-term monitoring of groundwater quality by water service providers and participating domestic well owners shall be performed to identify potential deterioration in groundwater quality.

**Discussion:** The region's groundwater supplies are limited in part due to the influence of geothermal areas, most notably the Moana Hot Springs and Steamboat Springs systems. Smaller geothermal systems also exist in Spanish Springs Valley, Washoe Valley near New Washoe City, and Warm Springs Valley. While these areas are fairly well known, it must be understood that large centers of municipal pumping peripheral to geothermal areas can induce geothermal water migration toward the production wells. Consequently, consideration must be given to the prevention of geothermal water migration as a result of well placement or groundwater pumping.

Similar to the above discussion on the influence of geothermal systems, the region's groundwater supplies are also limited because of the presence of other naturally-occurring and man-caused contamination. Occurrences of nitrates, perchloroethylene ("PCE"), arsenic and total dissolved solids ("TDS") are documented in one or more locations within the region. Municipal groundwater providers and other entities as required by law must take measures to prevent further contamination of potable groundwater supplies.

**Policy 1.3.d: Corrective Action for Remediation of Groundwater**

*The corrective action taken for remediation of groundwater contamination is typically driven by public health and environmental concerns, and applicable local, state and federal regulations. Realizing this, the affected community shall consider the cost and level of cleanup for groundwater remediation.*

**Discussion:** Groundwater contamination by solvents and fuels from various sources occurs beneath the central Truckee Meadows, Sparks Tank Farm and near the Stead Airport. Currently, these sites are in various stages of study and corrective action. Until these areas of contamination have been "corrected", nearby groundwater production may be limited. Various levels of corrective action are available depending on several factors including whether contamination is a result of historic disposal practices or recent releases and whether a responsible party has been identified. Public health concerns, as included in various state and federal environmental laws and regulations, may require or constrain certain corrective action alternatives. The affected community, in evaluating alternatives for remedial action, will participate in the development of a plan for the level of cleanup, assignment of benefit and cost recovery of corrective action.

## **Goal 2: Plan for Regional Wastewater Treatment and Disposal Requirements**

### **Objective 2.1 Promote Efficient Use of Resources**

#### ***Policy 2.1.a: Effluent Reuse - Efficient Use of Water Resources and Water Rights***

*The use of reclaimed water for irrigation, recharge or other permitted uses should be pursued where such use is an efficient use of water resources and water rights.*

**Criteria to implement policy:** Local governments, reclaimed water providers, or water purveyors shall apply the following criteria to identify approved uses or areas for reclaimed water:

- Where it is an efficient use of water resources and water rights; local governments, reclaimed water providers, or water purveyors may require the use of reclaimed water, including the necessary facility improvements.
- The use of reclaimed water will be included in the Regional Water Balance as both a supply and as a satisfied demand. To the extent that there may be requirements for make-up water associated with certain uses of reclaimed water, those shall also be included in the Regional Water Balance.
- Where such effluent reuse is consistent with water quality, wastewater disposal, public health, vector, environmental and flood control permits, policies or regulations.

**Discussion:** It is in the best interest of the community to optimize the use of available water resources, including treated wastewater effluent. Effluent reuse is a treated wastewater effluent disposal practice that provides multiple benefits to the region, including nutrient and TDS discharge permit compliance for the Truckee Meadows Water Reclamation Facility (“TMWRF”), drought benefits to the receiving user, water quality benefits to the Truckee River, and wetland habitat. It is the only present disposal option for the South Truckee Meadows Water Reclamation Facility (“STMWRF”). The expanded use of reclaimed water may also extend potable water supplies by augmenting groundwater recharge, replacing existing water resources that could otherwise be used for municipal and industrial purposes, or by providing new, non-potable water supplies to existing and/or developing areas. Reclaimed water will be included in the Regional Water Plan as a water resource and its use will be further evaluated over time.

#### ***Policy 2.1.b: Reduction of Non-Point Source Pollution for TMWRF Pollutant Credit***

*Options for centralized wastewater treatment with surface water discharge shall include alternatives for reducing non-point source pollution, which may be more environmentally sensitive, and where appropriate should be pursued as pollutant credits for TMWRF.*

**Discussion:** Various options exist for wastewater treatment and disposal of treated effluent, including location of treatment facilities and disposal by way of river discharge, reclaimed water use, land application and infiltration. Chapters 3 and 4 discuss this complex subject in greater detail.

Discharge of treated wastewater effluent to the Truckee River is constrained by permit limitations and total maximum daily loads (“TMDLs”) for TDS, nitrogen and phosphorus. Water quality trading is a relatively recent option being evaluated and implemented around the country by

communities facing the high cost of building treatment facilities to meet water quality standards. Water quality trading between a point source, such as TMWRF, and non-point sources, allows for a community to invest in measures to reduce non-point source pollution and receive credit toward its point source discharge rather than constructing additional wastewater unit processes to comply with water quality standards. This approach promotes economical and efficient water quality improvements. Water quality trading opportunities may include agricultural return flow reduction, best management practices, storm water treatment, livestock management, conversion of septic systems to sanitary sewer, and river restoration.

It is acknowledged that in addition to TMWRF investments, parties other than the owners of TMWRF may expend considerable resources on capital improvements that will reduce non-point source pollution and should provide water quality trading credits that may benefit TMWRF.

## **Objective 2.2      Manage Wastewater for Protection and Enhancement of Water Quality**

### ***Policy 2.2.a:    Septic Tank Density and Groundwater Pollution***

*Future development using septic systems should not be allowed in densities that would risk groundwater or surface water quality degradation such that applicable water quality standards are threatened. When adverse surface water or groundwater impacts occur as a result of existing or proposed increases to the concentration of septic systems in an area, alternative sewage disposal, groundwater treatment, or other mitigation measures must be implemented based on cost, longevity of the solution, and existence of a credible entity to be responsible for the continuing performance of the selected system.*

**Discussion:** In areas where there is little recharge, effluent from septic systems can recycle through the groundwater system, increasing pollutants to unacceptable levels. Individual septic systems are generally used in areas where centralized wastewater treatment is not provided. Areas with septic-caused groundwater pollution include portions of Warm Springs Valley, Washoe Valley, Golden Valley, Lemmon Valley, Cold Springs Valley, and Spanish Springs Valley. In 2000, Nevada Division of Environmental Protection (“NDEP”) issued a directive to Washoe County to plan for sewerage existing lots with septic systems in the Spanish Springs area due to elevated nitrate concentrations detected in public drinking water wells. In 2001, the Washoe County District Board of Health approved a regulation that limits the minimum lot or parcel size to five acres for new subdivisions, and second and subsequent parcel maps proposing to use septic systems. The regulation allows for exceptions, but indicates that approvals will not be granted if the density of septic tanks will exceed the standard established by NDEP. This policy is intended to complement, and not conflict with, Truckee Meadows Regional Plan Policy 3.1.3 regarding requirements for the use of on-site sewage disposal systems.

## **Goal 3: Plan for the Protection of Human Health, Property, Water Quality and the Environment through Regional Flood Plain and Storm Water Management**

### **Objective 3.1      Effective and Integrated Watershed Management**

#### ***Policy 3.1.a:    Regional Flood Plain Management Plan for the Truckee River***

*The NNWPC will review the regional Flood Plain Management Plan for the Truckee River watershed, and forward its recommendations to local governments.*

**Criteria to implement policy:** Until such time that a regional Flood Plain Management Plan for the Truckee River watershed is adopted and implemented by local governments, proposed

projects and proposed land use changes will follow the Criteria for Policy Implementation in Policy 3.1.b.

**Discussion:** The Truckee River Flood Project (“Flood Project”) was designed based on the assumption that future conditions in the region would not cause a net loss of flood plain storage volumes and would not cause an adverse change to the water surface elevation in the Flood Project’s hydrology. The Army Corps of Engineers (“ACOE”) will require that the local sponsors agree to maintain the protection level provided by the Flood Project. This protection level will be maintained by implementation of a Flood Plain Management Plan that will address future buildout of the watershed.

The Flood Project and local governments are pursuing flood damage reduction planning efforts that will work together to: 1) protect the flood damage reduction benefits that will be provided by the Flood Project, and 2) plan for full development of the urbanizing watersheds in southern Washoe County to maintain the protection level planned for the Flood Project.

Areas outside of the Truckee River watershed will be covered by Policy 3.1.c, local government development codes, ordinances, master plans and other documents concerning flood plain management.

**Policy 3.1.b: Flood Plain Storage Within the Truckee River Watershed**

*Until such time as Reno, Sparks, and Washoe County adopt and begin to implement a Flood Plain Management Plan for the Truckee River, the local flood management staff<sup>4</sup>, using the best technical information available and applicable local ordinances, will work with a proposed project applicant or a proposed land use change applicant to determine the appropriate level of analysis required in order to evaluate and mitigate the impacts experienced during the 1997 flood.*

**Criteria to implement policy:** The local flood management staff shall evaluate impacts using qualitative or quantitative analysis and the evaluation may be uncomplicated and brief. If a more in-depth analysis is appropriate, the following approach and criteria shall be used unless otherwise required by local codes or ordinances.

- Current development codes require that a project not increase the 100-year peak flow at the boundary of the property. If the project can also demonstrate no adverse impact to the upstream, downstream and surrounding properties, the analysis is complete.
- If there is any increase to the 100-year runoff volume at the boundary of the property, the project may demonstrate either:
  - The increase in volume of runoff will have no adverse impact to downstream properties and no adverse impact<sup>5</sup> to hydrologically connected properties, or
  - The increase in volume of runoff will be mitigated in a regional project without adverse impact to hydrologically connected and downstream properties. (Until a storage mitigation plan is in place with respect to this paragraph, flood plain storage mitigation will be required as per existing codes and ordinances.)
- Impacts of a proposed project will be evaluated by comparing conditions, using the flood project design criteria, before project construction and simulated conditions after construction.
- Impacts of a proposed land use change will be evaluated by comparing conditions, using the flood project design criteria, before the land use change and simulated conditions after the change (assuming full utilization of the proposed land use).

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<sup>4</sup> Each local government has assigned one or more staff members the responsibility of designing and reviewing flood management projects. These staff members are also responsible for reviewing certain proposed projects to address concerns of drainage and flooding.

<sup>5</sup> See Glossary for definition of “no adverse impact”.

- Impacts to drainageways and hydrologically sensitive areas as defined by local governments must be included in the evaluation.

The watershed is divided into four zones with different project size thresholds for the purposes of review (See Figure 5-2):

- Zone 1: Critical flood pool – all proposed land use changes and proposed projects will be reviewed for their impact on hydrologically connected and downstream properties
- Zone 2: Existing flood pool that will be removed from the flood pool through construction of the Truckee River Flood Project – proposed land use changes and proposed projects will be reviewed
- Zone 3: Adjacent sheet flow areas not part of the flood pool – proposed land use changes and proposed projects will be reviewed
- Zone 4: Remainder of the Truckee River Watershed – proposed land use changes and proposed projects will be reviewed

Currently all projects being reviewed are approximately five acres or greater in size. The five acre minimum size limitation is expected to be reviewed by the local jurisdictions in the future.

***Policy 3.1.c: Flood Plain Storage Outside of the Truckee River Watershed***

*As appropriate, the local flood management staff will work with proposed project applicants or proposed land use applicants to identify the best approach to mitigate the impacts of changes to 100-year flood peaks and flood plain storage volume that are a result of proposed land use changes or proposed projects.*

**Criteria to implement policy:** The local flood management staff shall evaluate impacts using qualitative or quantitative analysis according to applicable local codes and ordinances. A more in-depth analysis will be required when significant impacts must be mitigated. Local flood management staff will develop guidelines for evaluation and mitigation of impacts in specific closed basins. In multi-jurisdictional basins such guidelines will be developed with the concurrence of all responsible agencies.

***Policy 3.1.d: Truckee River Restoration***

*In review of proposed projects and proposed land use changes within the areas identified for restoration, the local governments shall make findings supporting the implementation of potential restoration projects as identified in the Lower Truckee River Restoration Plan and the TRFMA-approved Local Rate Plan.*

**Discussion:** There is a regional collaborative effort to restore the lower Truckee River below Vista. The three local governments and the Pyramid Lake Paiute Tribe (“PLPT”) have signed a Memorandum of Understanding (“MOU”) supporting the multiple goals to be achieved through river restoration.

The MOU generally describes the benefits, goals and management principles that the major stakeholders agree are necessary to develop a comprehensive program to restore the lower Truckee River. The lower river, running from the Truckee Meadows metropolitan area to Pyramid Lake, is a vital natural resource that serves multiple public and private purposes. An unprecedented opportunity exists for interagency collaboration to achieve multiple public goals. The lower river falls under the jurisdiction of multiple local, state, and federal agencies and units of government, and involves multiple private landowners. To successfully take advantage of this opportunity, public agencies and private landowners need to cooperate and coordinate their river restoration activities. This statement of public benefits, goals, and management principles agreed upon by key lower river stakeholders, represents a common understanding and foundation from which more detailed work programs may be pursued with a high likelihood of success.

#### Public Benefits

- Water quality and related wastewater treatment capacity of the region, which is fundamental to economic growth
- Accommodation of increased flood flows
- Parks, open space, fishing, canoeing and activities that are fundamental to the region's quality of life
- Habitat and wildlife benefits for fish, birds, mammals and plant communities that are part and parcel of our region's natural heritage

#### Public Goals

- Cost-effective wastewater treatment via a natural process
- A stable and energy-dissipating channel, achieved through re-establishment of river meanders and reconnection of river to flood plain, to accommodate increased flood flows
- Enhancement of parks system, preservation of open space, enhancement of public recreation opportunities that are high quality, easy to access and ample in number
- Preservation and restoration of aquatic and terrestrial habitat in the river corridor

#### **Policy 3.1.e: Watershed Protection**

*Watershed protection programs shall be implemented for the Truckee River, its tributaries, and other perennial streams in the region.*

**Discussion:** Surface water and groundwater quality can be affected by a variety of pollutant sources, such as urban and agricultural activities, erosion, septic systems and other forms of pollution, such as hydrologic modification and excess temperature, in watershed drainages. Programs are being developed that identify existing and potential sources of pollutants, propose alternatives to the control of these pollutants, and make recommendations for the management of these watersheds. These programs are prudent investments toward water quality concerns for the regional community.

#### **Policy 3.1.f: Adoption of Storm Water Quality Programs**

*A storm water quality program shall be implemented region-wide, including the continuation and/or enhancement of existing programs in Reno/Sparks/Washoe County, such as the Truckee Meadows Regional Storm Water Quality Management Program, to address not only*

*urban runoff but also other non-point sources.*

**Criteria to implement policy:** Local government management strategies should ensure that:

- Activities comply with the terms of the storm water National Pollutant Discharge Elimination System (“NPDES”) permits.
- Ordinances are enforced with respect to erosion control and runoff.

**Discussion:** A uniform or regional storm water quality framework is beneficial from the standpoint of implementation and compliance by the regulated community. It is recognized that each of the entities has unique conditions and/or ordinances that may conflict with the adoption of a uniform program. However, to the extent that each entity is able, the goal is to adopt consistent storm water quality programs.

***Policy 3.1.g: Management Strategies for Slopes Greater than 15 Percent***

*Local government management strategies for hillsides with natural slopes greater than 15 percent and less than 30 percent shall be submitted to the NNWPC for review, comment, and recommendations prior to incorporation into local government master plans.*

**Criteria to implement policy:** Local government management strategies should ensure that:

- Activities comply with the terms of the storm water NPDES permits.
- Development on such slopes incorporates on-site and/or off-site mitigation measures for impacts to stream zone habitat and water quality.
- Local code and ordinances are enforced with respect to erosion control and runoff.
- An analysis is performed to identify flood and erosion hazard areas and potential mitigation measures.
- Natural recharge areas are identified and protected.
- Local governments and entities with responsibility for the provision of utilities such as water, wastewater, and flood control services identify the costs of infrastructure, operations, and maintenance associated with development in these areas, and said costs are economically feasible.

**Discussion:** Regional Plan Policy 2.2.1 requires local governments to develop management strategies for areas with slopes greater than 15 percent but less than 30 percent within one year of adoption of the Regional Plan. Proposals for watershed changes in areas with slopes greater than 15 percent are of concern as they relate to areas under the jurisdiction of the NNWPC. Therefore, the management strategies that are developed as a requirement of Regional Plan Policy 2.2.1 shall be submitted to the NNWPC for review, comment and recommendation. NNWPC staff shall limit the review of management strategies to the above criteria and provide comments and/or recommendations to the submitting entity.

***Policy 3.1.h: Adoption of Storm Water Drainage Guidelines***

*Regional guidelines for storm water hydrologic criteria and drainage design shall be pursued to address, to the extent practicable, inconsistencies between local governments' existing criteria and design standards.*

**Discussion:** Consistent hydrologic criteria and drainage design guidelines for storm water facilities are beneficial to the community, especially at jurisdictional boundaries where storm drainage systems join. Reno, Sparks and Washoe County jointly conducted a detailed review and revision of the 1996 draft *Hydrologic Criteria and Drainage Design Manual* and released it in April 2009 as the *Truckee Meadows Regional Drainage Manual* (“TMRDM”). It is recognized, however, that each of the entities has unique conditions and/or ordinances that may be inconsistent with the adoption of regional hydrologic criteria and drainage designs and those inconsistencies have been identified in the 2009 TMRDM. It is also recognized that (to the extent each entity is able) the goal of adopting and maintaining a manual containing regionally consistent storm water hydrologic criteria and drainage design guidelines should be pursued.

**Policy 3.1.i: Flood Plain Management / Flood Control Projects Subject to NNWPC Review**

*Facility plans and infrastructure studies for flood control projects developed by local governments will be reviewed by the NNWPC according to Policy 4.1.a to ensure coordination of local projects with regional water management objectives, including but not limited to, regionally coordinated flood damage reduction, preservation or enhancement of recharge, preservation of natural drainage ways, preservation of riparian habitat, protection or enhancement of surface and groundwater quality.*

**Goal 4: Support the Implementation of the Truckee Meadows Regional Plan**

**Objective 4.1 Coordinated Infrastructure Planning**

**Policy 4.1.a: Facility Plans – Conformance with Regional Water Plan**

*Pursuant to Section 51 of the Act, facilities of a kind or size that affect the working of the Regional Water Plan as distinct from providing normal service to customers, including water supply and storage, wastewater collection and treatment, storm water, and flood control, shall be reviewed by the NNWPC for conformance with the Regional Water Plan, and recommendation to the WRWC.*

**Criteria to implement policy:**

1. Western Regional Water Commission ("WRWC") / Northern Nevada Water Planning Commission ("NNWPC") Staff will review local and regional development applications on a regular basis to identify proposals to construct a facility that may affect the working of the Comprehensive Regional Water Management Plan (the "Plan"), and make a determination as to whether the facility in issue is included in the Plan, or proposed for construction in order to meet an emergency as defined in the Plan. If so, no conformance review is required, and Staff shall so notify the NNWPC at its next meeting.
2. If the facility is not included in the Plan, or is not proposed to meet an emergency, Staff will request the applicant to submit the proposal for review, conduct an analysis, and make an initial determination as to whether the facility may be of such a kind or size as to affect the working of the Plan as distinct from providing normal service to customers. Examples of facilities that may affect the working of the Plan include, but are not limited to:
  - a. Facility increasing existing capacity by more than 625 acre feet of water supply per year or sewage processing of 187,500 gallons per day
  - b. New resource, e.g. importation, creeks, poor quality groundwater
  - c. New or expanded water reclamation facility
  - d. New sewer interceptor greater than 30 inches diameter
  - e. New reclaimed water transmission main greater than 24 inches diameter
  - f. New water transmission main greater than 30 inches diameter

- g. Regional water storage facility
- h. Flood control facility
- i. Hydrologic or hydraulic modification of stream or river
- j. New or expanded water treatment facility
- k. Facility having impact on the potential consolidation of public purveyors

3. If the facility, in Staff's analysis, is not of such a kind or size as to affect the working of the Plan as distinct from providing normal service to customers, Staff will prepare a recommendation to the NNWPC for review and a decision as to whether a conformance review by the NNWPC is required.

4. If the facility, in Staff's analysis, may be of such a kind or size as to affect the working of the Plan as distinct from providing normal service to customers, Staff will prepare an analysis/report and set a meeting date for conformance review by the NNWPC.

**Discussion:** The NNWPC and local governments provide ongoing planning for the community's water, wastewater, storm water and flood control needs. Identification and review of potential impacts to existing or planned infrastructure, and needs for new or improved facilities, should provide for integrated planning and management of the region's water resources and cost-effective infrastructure development and improvements.

Facilities are designed and constructed by water purveyors, wastewater treatment providers, and local governments as part of their respective Capital Improvement Programs ("CIPs"). CIPs are updated annually, at a minimum. When entities update and approve their CIPs to the extent that they affect the working of the *Regional Water Plan*, the NNWPC shall review them and recommend that pertinent facilities be found in conformance with the *Regional Water Plan* pursuant to the Act and this policy. Any facility plan that is funded in whole or in part by the Regional Water Management Fund is subject to conformance review.

As the NNWPC, local governments, wastewater treatment providers, and water purveyors update their respective facility plans, they analyze alternatives for financing and funding proposed facilities, sources of water or other requirements, and the effects of the funding alternatives on other facilities included in the *Regional Water Plan*. These plans are then presented to the NNWPC for either conformance review or informational purposes, as appropriate according to the Act, this policy, and NNWPC Administrative Policies and Procedures. Presentation of these plans to the NNWPC provides Commissioners with the opportunity to raise questions regarding linkages and comprehensive regional planning for water resources, with the result that overall resource issues can be addressed or additional work can be undertaken, as needed. Source plans and other source documents that are referenced in the *Regional Water Plan* are contained at the end of various chapters, and again at Appendix C. These source plans and documents are included in the *Regional Water Plan*, and do not require further conformance review except to the extent that they are amended, or otherwise revised, so as to affect the workings of the *Regional Water Plan*. These plans also contain detailed alternatives for financing and funding the respective facilities or sources and should be consulted for such detail.

The Act excludes certain facility plans from conformance review, including plans for facilities intended to be constructed in order to meet an emergency, those included in the adopted *Regional Water Plan*, and those intended to provide normal service to customers. A facility included in the *Regional Water Plan* is considered to be in conformance and a review is not necessary. Review criteria are applied to determine whether a facility not included in the *Regional Water Plan* is of such a kind or size that would affect the working of the Plan, which

would require a conformance review, as distinct from facilities providing normal service to customers, which would not.

The NNWPC recognizes that all facilities required to implement the *Regional Water Plan* may not be included in the Plan. Consequently, the NNWPC will review, as appropriate, such facilities that are of such a kind or size as to affect the working of the *Regional Water Plan*.

**Policy 4.1.b: Timing and Sizing of Facilities**

*To the extent allowed by state statutes, codes and local ordinances, planning for facilities (defined in the Act) shall be based on existing data and forecasts of future trends, including conservation, to ensure that facilities will be built pursuant to local entities' CIPs with sufficient lead-time to ensure public demands are met.*

**Discussion:** In order to provide cost-efficient infrastructure, it is important that facilities be constructed at the appropriate time and at the appropriate size to meet regional needs. A balance must be struck between allowing sufficient lead time to construct facilities for projected demands, allowing time for conservation efforts to be realized, and minimizing customer costs from too-soon or too-large facility construction. The NNWPC shall take the lead in avoiding rigid rules for sizing and/or timing of facilities in order to allow case-by-case optimization to occur.

**Policy 4.1.c: NNWPC Programs and Policies to Reinforce Goals of the Regional Plan**

*All the policies and criteria for facility plan review adopted by the NNWPC shall be consistent with and carry out the provisions of the Regional Plan.*

**Discussion:** The Regional Plan sets the long-term vision of the Truckee Meadows region in relation to regional form and pattern, natural resource management, and public services and facilities through a variety of goals and policies with which the *Regional Water Plan* must promote and not conflict. Generally, the goals and policies of the Regional Plan aim to limit the spread of the urban footprint while directing increasing amounts of development towards the traditional urban cores of the region in order to facilitate efficient service provision and reduce infrastructure costs. Additionally, for planning efforts in the region, the goals and policies of the Regional Plan set forth that the Consensus Forecast be utilized to ensure entities across the area use consistent population estimates.

**Policy 4.1.d: Inclusion of Non-Economic Criteria in Evaluation of Alternatives**

*Non-economic criteria including, but not limited to, environmental impact, public impact, and archeological impact will be evaluated during the program or project alternative selection process.*

**Discussion:** The primary purpose of developing fiscal and economic standards is to equally evaluate program and facility alternatives. It is also recognized, however, that cost-based evaluation is not the only important criterion to apply to projects.

**Policy 4.1.e: Economic Decision-Making Criteria**

*NNWPC recommendations regarding economic decisions shall be to the extent possible based on minimizing the costs to the entire community for providing adequate services as defined by the policies and criteria of this Plan.*

**Policy 4.1.f: Examination of Long-Term Impact on Availability of Water Resources**

*In considering water, wastewater, and flood control projects or management options, the long-term impact on the availability of water resources shall be examined.*

**Discussion:** Water resources within the Truckee River drainage area are finite. Since the river is a closed system, terminating in a desert lake with no outlet, all water uses must be accommodated within the total quantity available. Since water, wastewater, and flood control options may impact the total quantity and quality of water available, actions proposed by entities in the Planning Area affected by this Plan should be reviewed for their potential impacts on the ultimate limit of the resource.

**Objective 4.2 Clarification of the Role of the WRWC and the NNWPC**

In 1995, Washoe County, Reno and Sparks developed legislation to address regional water issues. This legislation, Nevada Revised Statute (“NRS”) 540A, provided the basis and direction for the Regional Water Planning Commission (“RWPC”) and the *Washoe County Comprehensive Regional Water Management Plan (“Regional Water Plan”)*.

The RWPC developed, approved and recommended the *1995–2015 Regional Water Plan* to the Washoe County Board of Commissioners (“BCC”), which adopted the Plan in January 1997. The RWPC prepared the *2004–2025 Regional Water Plan* as a result of the required five-year review, which was adopted in January 2005 and amended in 2006 and 2009.

In June 2007, the Legislature approved Senate Bill 487, a special Act, authorizing the creation of the Western Regional Water Commission (“WRWC”) and the Northern Nevada Water Planning Commission (“NNWPC”). The Act repealed the sections of NRS 540A dealing with the RWPC, but provided that “the provisions of the comprehensive plan developed and revised pursuant to the former provisions of NRS 540A.130 before April 1, 2008, remain in effect” until the WRWC adopts the initial comprehensive plan required by the Act, on or before January 1, 2011.

**Policy 4.2.a: Role of NNWPC in Water Related Issues**

*The NNWPC shall address a water-related matter, consistent with its responsibilities as described in the Act.*

**Discussion:** The purposes and role of the NNWPC are described in certain sections of the Act, as follows:

**Sec. 41.** 1. *The Water Planning Commission shall develop, and as necessary recommend revisions to, a Comprehensive Plan for the planning area covering the supply of municipal and industrial water, quality of water, sanitary sewerage, treatment of sewage, drainage of storm waters and control of floods. The initial Comprehensive Plan must be developed on or before January 1, 2011. The provisions of the comprehensive plan developed and revised pursuant to the former provisions of NRS 540A.130 before April 1, 2008, remain in effect until the Board adopts the initial Comprehensive Plan.*

**Sec. 44.** *In developing the Comprehensive Plan, the Water Planning Commission shall:*

1. *Receive and consider information from public purveyors, public utilities and other entities supplying municipal and industrial water within the planning area;*
2. *Receive and consider information from entities providing sanitary sewerage, treatment of sewage, drainage of storm water and control of floods within the planning area;*
3. *Receive and consider information from entities concerned with water quality within the planning area;*

4. Review and consider any plan or recommendation of the State Engineer concerning the development, conservation and use of water resources, existing water conservation plans, the regional plan and any master plan that has been adopted pursuant to the provisions of chapter 278 of NRS and any similar plan of a local government which applies to any area in the planning area, and may seek and consider the advice of each local planning commission and any other affected entity;
5. Coordinate and make consistent the elements of the Comprehensive Plan set forth in section 42 of this Act;
6. Consider existing applicable laws;
7. Recognize and coordinate the needs of the incorporated areas of the planning area with the needs of the unincorporated areas of the planning area; and
8. Receive and consider information from other interested persons.

**Sec. 45.** 1. Before submitting the Comprehensive Plan to the Board, the Water Planning Commission shall hold at least one public hearing on the Comprehensive Plan within the planning area.

2. Before acting on a proposed amendment to the adopted Comprehensive Plan, the Water Planning Commission shall hold at least one public hearing on the proposed amendment at a location in the planning area relevant to the proposed amendment.

3. Notice of the time and place of each hearing must be given by publication in a newspaper of general circulation in the planning area at least 10 days before the day of the hearing. If there is more than one newspaper of general circulation in the planning area, notice must be given by publication in at least two such newspapers.

4. The decision to submit the proposed Comprehensive Plan or any amendment to the adopted Comprehensive Plan to the Board must be made by resolution of the Commission carried by the affirmative votes of a majority of the total voting members of the Water Planning Commission. The resolution must refer expressly to the text, maps and descriptive or other matter intended by the Water Planning Commission to constitute the Comprehensive Plan or an amendment thereto.

**Sec. 46.** 1. An attested copy of the proposed Comprehensive Plan or an amendment thereto must be submitted by the Water Planning Commission to the Board.

**Sec. 51.** 1. Except as otherwise provided in subsection 2, on and after the date the initial Comprehensive Plan is finally approved, no facility intended to provide a service relating to a subject of the Comprehensive Plan within the planning area may be constructed, if the facility is of such a kind or size as to affect the working of the Comprehensive Plan as distinct from providing normal service to customers, unless it is included in the Comprehensive Plan or has been reviewed and approved as provided in subsection 3.

2. The Comprehensive Plan may allow for the construction of facilities not included within the Comprehensive Plan in order to meet an emergency as defined in the Comprehensive Plan.

3. A proposal to construct a facility described in subsection 1 within the planning area must be submitted to the Water Planning Commission for review and recommendation to the Board concerning the conformance of the proposal with the Comprehensive Plan. The review must include an evaluation of stranded costs, the need for the facility within the planning area and the impact that construction of the facility will have on any potential consolidation of public purveyors. If the Water Planning Commission fails to make such a recommendation within 30 days after the proposal is submitted to it, the Water Planning Commission shall be deemed to have made a recommendation that the proposal conforms to the Comprehensive Plan. The Board shall consider the recommendation of the Water Planning Commission and approve or disapprove the proposal as conforming to the Comprehensive Plan. Any disapproval must be accompanied by recommended actions to be taken to make the proposal conform to the Comprehensive Plan. The Water Planning Commission and the Board shall limit their review to the substance and content of the Comprehensive Plan and shall not consider the merits or deficiencies of a proposal in a manner other than is necessary to enable them to make a determination concerning conformance with the Comprehensive Plan.

4. The Board shall provide, by resolution after holding a hearing, for the Water Planning Commission or its staff to make final decisions concerning the conformance of classes of proposed facilities to the Comprehensive Plan. A resolution adopted pursuant to this section must provide an opportunity for the

*applicant or a protestant to appeal from a decision of the Water Planning Commission or its staff to the Board.*

The purpose and role of the NNWPC is to develop, and as necessary recommend to the WRWC, revisions to the *Regional Water Plan* covering the supply of municipal and industrial water, quality of water, sanitary sewerage, treatment of sewage, drainage of storm waters and control of floods. In addition, the NNWPC reviews proposals to construct certain facilities, as described in Policy 4.1.a, for recommendation to the WRWC concerning the conformance of the proposal with the *Regional Water Plan*.

Beyond the purpose and role described above, there are many issues surrounding water, wastewater, and flood control that are local in nature and may not require involvement by the NNWPC. A balance must be struck as to the NNWPC providing cohesive leadership on all water-related issues in the Planning Area without addressing every small item that could divert its energies from the larger regional issues. This policy shall provide guidance as to when it is appropriate for the NNWPC to become involved in the resolution of a water-related issue.

***Policy 4.2.b: Role of WRWC in Water Related Issues***

*The WRWC shall address a water-related matter, consistent with its purposes, powers and responsibilities as described in the Act.*

**Discussion:** The purposes and role of the WRWC are described in certain sections of the Act, as follows:

**Sec. 4.2.** *It is hereby declared as a matter of legislative determination that:*

*(a) The organization of the Western Regional Water Commission having the purposes, powers, rights, privileges and immunities provided in this Act will serve a public use and will promote the general welfare by facilitating unified and cooperative efforts to secure and develop additional water supplies, maintain and cooperatively establish policies for managing existing water resources and water supplies, provide for integrated regional water resources and management of water supplies, provide for integration of efforts to manage storm water, provide for protection of watersheds and provide for regional conservation efforts, subject to and in accordance with the Truckee River Operating Agreement.*

*(b) The planning for the acquisition, development, management and conservation of regional water supplies and any associated facilities by the Regional Water Commission is for a public and governmental purpose and a matter of public necessity.*

*(c) The geographical boundaries of the Regional Water Commission are within the area described in section 22 of this Act.*

*(d) The Regional Water Commission shall, in carrying out the provisions of this Act:*

*(1) Make full use of any available resources for sustainability, economic viability and maintenance of environmental values;*

*(2) Communicate the decisions and policies of the Regional Water Commission in an effective manner;*

*(3) Provide for a centralized system of decision making;*

*(4) Facilitate the effective coordination of land use and resource planning;*

*(5) Facilitate the effective and efficient planning, management and operation of facilities; and*

*(6) Plan for the effective stewardship of water resources, including, without limitation, ensuring the quantity and quality of surface water and groundwater and the control point and nonpoint sources of pollution.*

*(e) For the accomplishment of the purposes stated in this subsection, the provisions of this Act shall be broadly construed.*

**Sec. 30.** *The Regional Water Commission may do all things necessary to accomplish the purposes of this Act. The Regional Water Commission has perpetual succession and, except as otherwise provided in sections 33 of this Act, has the following powers to:*

1. *Sue and be sued.*
2. *Enter into agreements with Washoe County, the Cities of Reno and Sparks, and any public purveyor.*
3. *Prepare, adopt, update and oversee the implementation of the Comprehensive Plan pursuant to sections 34 to 52, inclusive, of this Act.*
4. *Plan for the implementation of a mechanism for:*
  - (a) *Scheduling the delivery of water supplies held by public purveyors to maximize the yield of regional water supplies and facilitate the cooperative administration of regional water conveyance and treatment facilities for the benefit of the public purveyors.*
  - (b) *Maximizing conjunctive use by the public purveyors. As used in this paragraph, “conjunctive use” means the combined use of surface water and groundwater systems to optimize resource use.*
5. *Prepare, adopt and update a water conservation plan for the use of municipal, industrial and domestic water supplies within the planning area, and make recommendations for water conservation agreements among water purveyors and local governmental entities.*
6. *Study and recommend to the Board of County Commissioners of Washoe County, the City Council of the City of Reno and the City Council of the City of Sparks ordinances for the implementation of a water conservation plan adopted pursuant to subsection 5 and the Comprehensive Plan.*
7. *Contract with public purveyors or any other public entity for the provision of services to or by the Regional Water Commission and, in the performance of its functions, use the officers, agents, employees, services, facilities, records and equipment of any public purveyor, Washoe County, the City of Reno or the City of Sparks, with the consent of the respective public purveyor or governmental entity, and subject to such terms and conditions as may be agreed upon.*
8. *Employ or contract with such persons as it deems necessary and hire and retain officers, agents and employees, including fiscal advisers, engineers, attorneys or other professional or specialized personnel.*
9. *Seek, apply for and otherwise solicit and receive from any source, public or private, such contributions, gifts, grants, devises and bequests of money and personal property, or any combination thereof, as the Regional Water Commission determines is necessary or convenient for the exercise of any of its powers.*
10. *Participate with relevant agencies of the United States, the State of Nevada and other entities on issues concerning the supply of water.*
11. *Adopt such rules and regulations for the conduct of the affairs of the Regional Water Commission or of the Board as the Board may deem necessary or desirable.*
12. *Perform such other functions conferred on the Regional Water Commission by the provisions of this Act.*

**Sec. 31.** *The Board may develop a plan for the establishment of service territories within the planning area in which the public purveyors and all systems for the supply of water which are controlled or operated by the public purveyors may, on and after April 1, 2008, provide new retail or wholesale water services to new customers. A plan developed pursuant to this section does not apply to any public purveyor unless each public purveyor agrees to the provisions of the plan. The provisions of this section do not affect the ability of public purveyors to continue to provide retail and wholesale water services to customers who received that type of service before April 1, 2008, or pursuant to agreements for water service existing before April 1, 2008. In developing the plan, the Board shall:*

1. *Seek to ensure the coordination of the delivery of water at the lowest reasonable cost, considering all the facilities, improvement and operations required to provide that water as measured by the net present value of those facilities, improvements and operations existing at the time of the determination, generally using current dollars;*
2. *Seek to ensure that existing or future customers are not affected inequitably;*
3. *Seek to provide for the most effective management, development and integration of systems for the efficient use of water supplies and associated facilities; and*
4. *Consider:*
  - (a) *Any specific planning conducted by public purveyors before April 1, 2008, for existing or new customers;*

*(b) The topography of the service territories and the readiness and ability of public purveyors to serve customers with existing facilities;*

*(c) Any policies for land use that affect the service territories; and*

*(d) The rate of growth within the service territories projected over a reasonable period.*

**Sec. 32.** *The Board has and may exercise all rights and powers necessary or incidental to or implied from the specific powers granted in this Act. Such specific powers are not a limitation upon any power necessary or appropriate to carry out the purposes and intent of this Act.*

**Sec. 33.** *Notwithstanding the provisions of this Act, the Truckee Meadows Water Authority or its successor is and shall remain the entity with the sole and exclusive power and authority to negotiate and execute and to implement its obligations under that Agreement, as the successor in interest to Sierra Pacific Power Company. All water supplies provided or available to the Truckee Meadows Water Authority or its successor pursuant to the Truckee River Operating Agreement must be considered as acquired before April 1, 2008, and must be managed, scheduled and operated in accordance with that Agreement. Nothing in this Act alters the rights and obligations of the Water Quality Settlement Agreement, and all water supplies must be managed, scheduled and operated in accordance with the Water Quality Settlement Agreement.*

**Sec. 34.** *The Board may, upon the recommendation of the Water Planning Commission:*

*1. Adopt and revise the Comprehensive Plan;*

*2. Make recommendations concerning methods for conserving existing water supplies which are consistent with any other plans required by law;*

*3. Make recommendations concerning methods of collecting and treating sewage to protect and conserve water supplies;*

*4. Provide information to members of the public regarding present and potential uses of water; and*

*5. Make recommendations concerning the management and use of water within the planning area to:*

*(a) The governing body and the Planning Commission of Washoe County and the Cities of Reno and Sparks;*

*(b) The Governing Board for Regional Planning and the Regional Planning Commission established in Washoe County pursuant to NRS 278.0264 and 278.0262, respectively;*

*(c) The State Engineer;*

*(d) The Federal Government; and*

*(e) Such other entities as the Board deems appropriate.*

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