Report on 2035 Regional Water Balance Model projections of water supply and demand, wastewater flow and treatment capacity, water reclamation and effluent disposal capacity

Washoe County Planning Commission March 7, 2017

WESTERN REGIONAL WATER COMMISSION

Regional Water Plan Outline

Plan chapters developed to address WRWC Act required elements

Executive Summary

Introduction

- 1. Water Planning Policies and Criteria
- 2. Water Resources
- 3. Water Purveyors and other Water Providers
- 4. Wastewater and Watershed-Based Water Quality Planning
- 5. Flood Management and Storm Water Drainage
- 6. Population Forecast and Projections of Water Demand, Peak Day Requirements and Wastewater Flow
- 7. Water Conservation Plan Efficient Use of Water
- 8. Cost and Financing
- 9. Issues and Action Plan

Appendices



Regional Water Plan

- The 2016 Washoe County Consensus Forecast projects a 2036 population of 548,159;
- The RWMP includes an estimate of potentially available, sustainable water resources of approximately 183,250 acre feet per year;
- The water demand estimate to serve a population of 548,159 is approximately 116,000 acre feet per year



Undetermined RIB 1,340 Septic Conversion Supply 1.317 310 Potential Undetermined Disposal 704 Imported GW 8,000 2,044 CSWRF Cold Springs Wastewater 1.734 Undetermined Domestic Supply Well Recharge 500 Well Conversion Domestic Well Potential Conversion Potential Cold Springs 4.583 Demand (Private) Reno/Stead/Lemmon Valley Demand 11,087 Well 500 Local GW 📥 Swan Lake 2,630 Reno/Stead/ Recharge 0 Lemmon Valley Undetermined Local GW Wastewater Domestic Well Disposal 222 3,800 3.278 Conversion Potential RW System 450 247 Recharge Sky Ranch Demand (Private) 635 Septic Conversion RSWRF/ Pond 336 LVWWTP Sun Valley GID 3,838 1,282 Wastewater Sparks Spanish Sun Valley Springs Demand 25,254 GID Demand 3,263 Sparks/Spanish Septic Conversion Springs Potential 440 Wastewater 12,636 RW System 1,400 Well Recharge Undetermined Disposal 0 2,500 Truckee River Truckee Discharge 34,449 River Meadows Demand 46,290 TMWRF 38,429 119,000 Supply Truckee Meadows Undetermined Supply 0 Wastewater RW System 2,580 Local GW 4,200 24,311 Domestic Well Septic Conversion Conversion Potential Potential 960 1,634 South Truckee Meadows Wastewater 6,879 Huffaker Reservoir 530 STMWRF 7,729 Undetermined Disposal 4.399 Septic Conversion 850 Potential RW System 2,800 South Truckee Meadows Demand 19,759 Local Surface 2,100 Water Undetermined Supply Well Recharge 3,000 Local GW 9,500 Domestic Well Conversion Potential 1,598

2035 Regional Water Balance Map



Potable Water Balance						
Planning Areas		Estimated Total of Demand and Exports (AFA)	Identified Supply Capacity Resource (AFA)	Deficit (-)/Surplus (+) Supply (AFA)		
Cold Springs		4,830	4,830	0		
Reno Stead/ Lemmon Valley		15,417	14,100	-1,317		
Sun Valley GID		3,263	3,263	0		
Sparks/Spanish Springs		28,913	28,913	0		
Central Truckee Meadows		86,824	119,000	32,176		
South Truckee Meadows		19,759	19,759	0		
Wastewater Balance						
Wastewater Service Areas		Estimated Flow (AFA)	Identified Disposal Capacity (AFA)	Additional Disposal Capacity Required (AFA)		
CSWRF		2,044	1,340	704		
RSWRLF/LVWWTP		3,838	3,616	222		
TMWRF (RENO)	TMWRF (SPARKS)	38,429	44,806	0		
STMWRF		7,729	3,330	4,399		

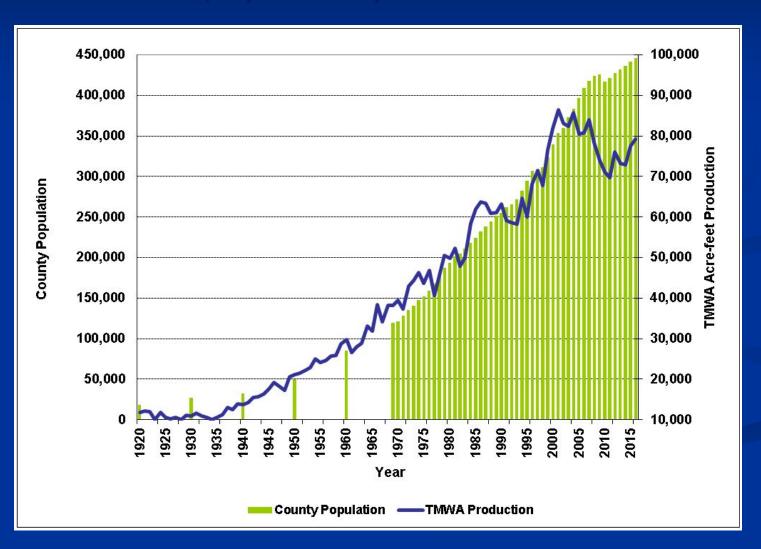
2035 Regional Water Balance Map

Western Regional Water Commission





Washoe County Population Compared to TMWA Water Production

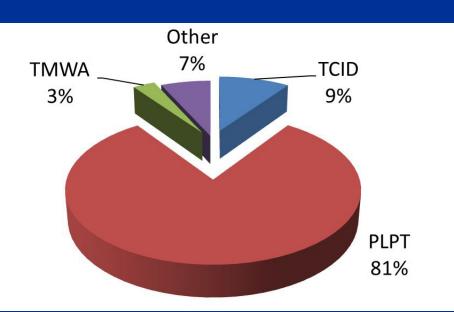




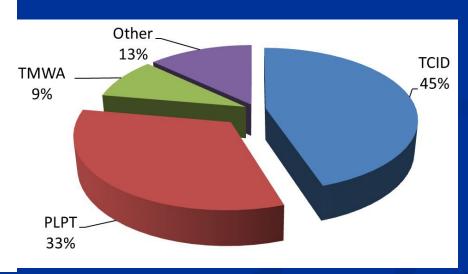


Typical Diversion of the Truckee River

Normal Year

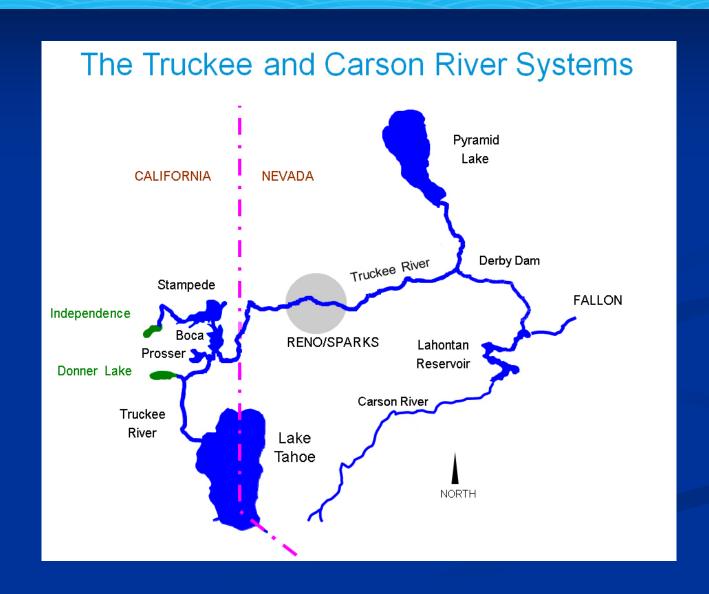


Dry Year



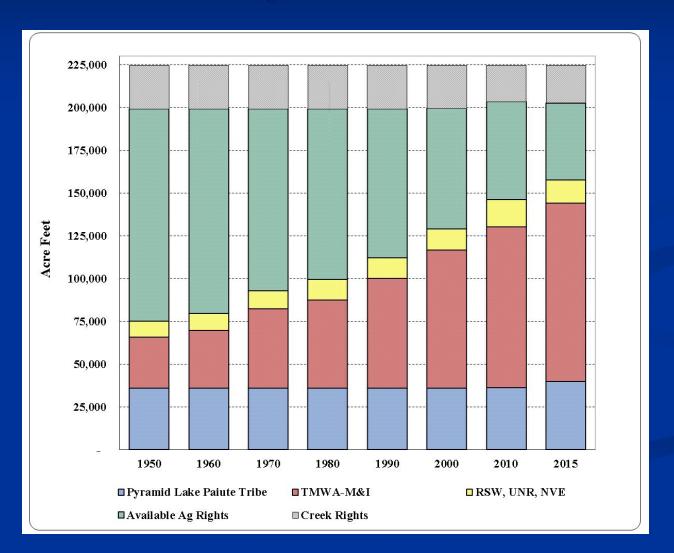


Water Use



Water Use

Water Rights Allocation Over Time



Existing Wastewater Treatment Capacity and Wastewater Flow

Wastewater Treatment Capacity					
Facility	Capacity	Current	Facility Planning		
South Truckee Meadows	4.1 MGD	3.2 MGD	2016 Facility Plan estimate: Treatment expansion needed by 2021-2022		
Lemmon Valley	0.3 MGD	0.21 MGD	Facility Plan Update Ongoing Estimated Completion March 2017 Strategic planning underway		
Reno-Stead	2.0 MGD	1.4 MGD	Strategic planning is underway to divert future growth flows to TMWRF		
Cold Springs	0.7 MGD	0.3 MGD	Facility Plan Update Ongoing Estimated Completion Spring 2017		
Spanish Springs (Collection System)	8,495 Units	4,175 Units	Latest Facility Plan Update Feb. 2016 Buildout with current zoning: Roughly 7,500 Units		
Truckee Meadows Water Reclamation Facility	44 MGD	26.3 MGD	Implementing existing facility plans for rehab and replacement Anticipate future master planning		



Questions?

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