



STAFF REPORT

TO: Mark Foree
FROM: John Erwin, Dir. Natural Resources
DATE: 27 May 2015
SUBJECT: Discussion of Appropriation and Diversion of Water in Nevada for Domestic Wells or Municipal Purposes

INTRODUCTION

In response to inquiry of a TMWA Board member, the following discussion delineates the requirements and/or responsibilities set out in Nevada Revised Statutes (NRS) to which an individual owner of a parcel seeking to drill a well on his/her property for domestic uses or a public purveyor of water seeking to divert water for delivery must adhere in order to divert the waters of the state. The primary chapters of the NRS related to appropriation of water are 533 and 534. Chapter 532 of NRS creates the office of the Nevada State Engineer (NSE) who “shall perform such duties as are or may be prescribed by law and the Director of the State Department of Conservation and Natural Resources (NRS 532.110).”

In addition to that background, the memorandum includes discussion on TMWA’s response to groundwater development by others in and around TMWA’s Retail Service Area - - be it domestic wells, private water systems (e.g., trailer parks or mutual water systems) or public systems regulated by the Public Utilities Commission of Nevada (PUCN).

BACKGROUND – NEVADA STATE WATER LAW

Under the laws of Nevada, all water “whether above or beneath the surface of the ground” belongs to the publicⁱ, and while a person can establish a right to use waters of the State, such rights are defined and constrained by Nevada water law. In general, a right to use water in Nevada is acquired by applying to the Nevada Division of Water Resources for a permit to appropriate waterⁱⁱ and then proving the water has been actually diverted and put to beneficial useⁱⁱⁱ. Generally, a permit to appropriate water will not be granted if all available water has already been appropriated, or if the proposed use will be detrimental to rights of established water users or the public interest.^{iv}

Nevada water law has codified in statute the common law doctrine of “first in time, first in right.” Under this doctrine, a “junior” appropriator’s water rights are subordinate to the rights of “senior” appropriators.^v Generally, this means that the holders of water rights with earlier priority dates are entitled to receive their full water allocations, in order of priority, before any water is allocated to holders of rights with later priority. Water rights are treated as real property and can be severed from land and monetized as a separate property interest.

Nevada law creates an exception from the appropriation process and permit system for domestic wells.^{vi} The owner of a typical domestic well does not acquire a "water right"^{vii} and a protectable interest from unreasonable adverse effect is established for the owner of the domestic well, however, the law does not define what an unreasonable adverse effect is nor does it define what reasonable mitigation would be. Domestic well owners may use available groundwater resources to meet his or her domestic needs so long as the annual water draught from the well does not exceed 2.0 acre feet per year.^{viii} The Nevada Division of Water Resources inventories domestic wells primarily through reporting requirements placed on well drillers.

Nevada water law does grant administrative powers to the NSE to manage the use of water in a basin including, but not limited to, restricting the drilling of domestic wells where water can be provided by a community water system or restricting the amount of water an individual permit holder can pump.^{ix} The NSE, however, has not been granted the statutory authority to grant or award monetary relief to mitigate any injury suffered by domestic well owners whose domestic wells have been unreasonably adversely impacted by municipal pumping.

WELL DEVELOPMENT IN WASHOE COUNTY

Prior to merger of the Washoe County water systems into TMWA, the majority of TMWA's production wells were located in Basin 87 and sufficient distance away from the various pockets of domestic well owners which are located primarily in northwest Lemmon Valley and the southwest Truckee Meadows (Holcomb Lane area). Figure 1 shows the relationship of TMWA's former service area to neighboring domestic wells.

Following the merger, TMWA's service area has grown and is now adjacent to several more pockets of domestic well owners, including northeast Lemmon Valley, Golden Valley, Mt Rose/Galena, and north Spanish Springs. Figure 2 shows the relationship of TMWA's expanded service area to neighboring domestic wells.

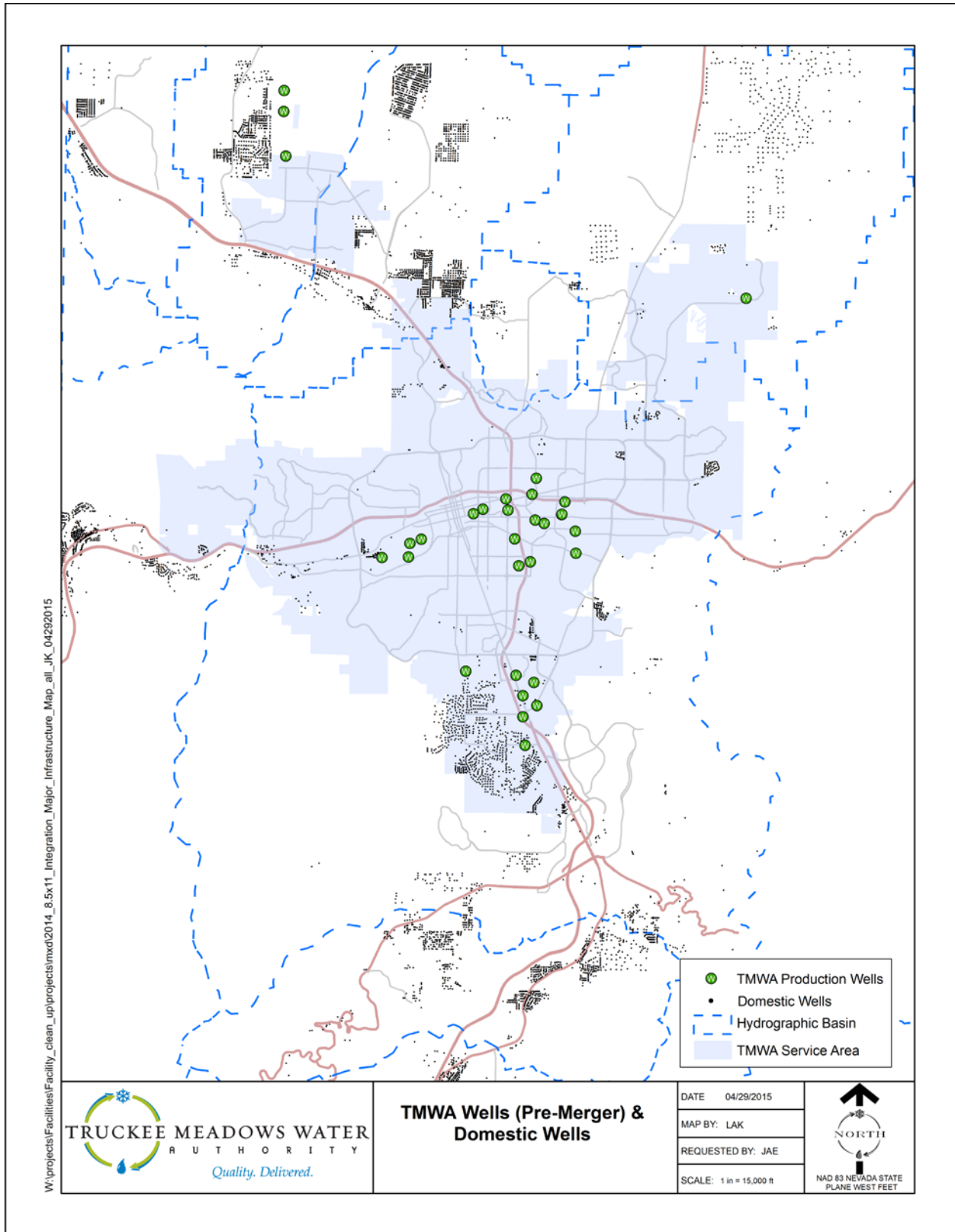


FIGURE 1. TMWA Service Area Pre-Merger

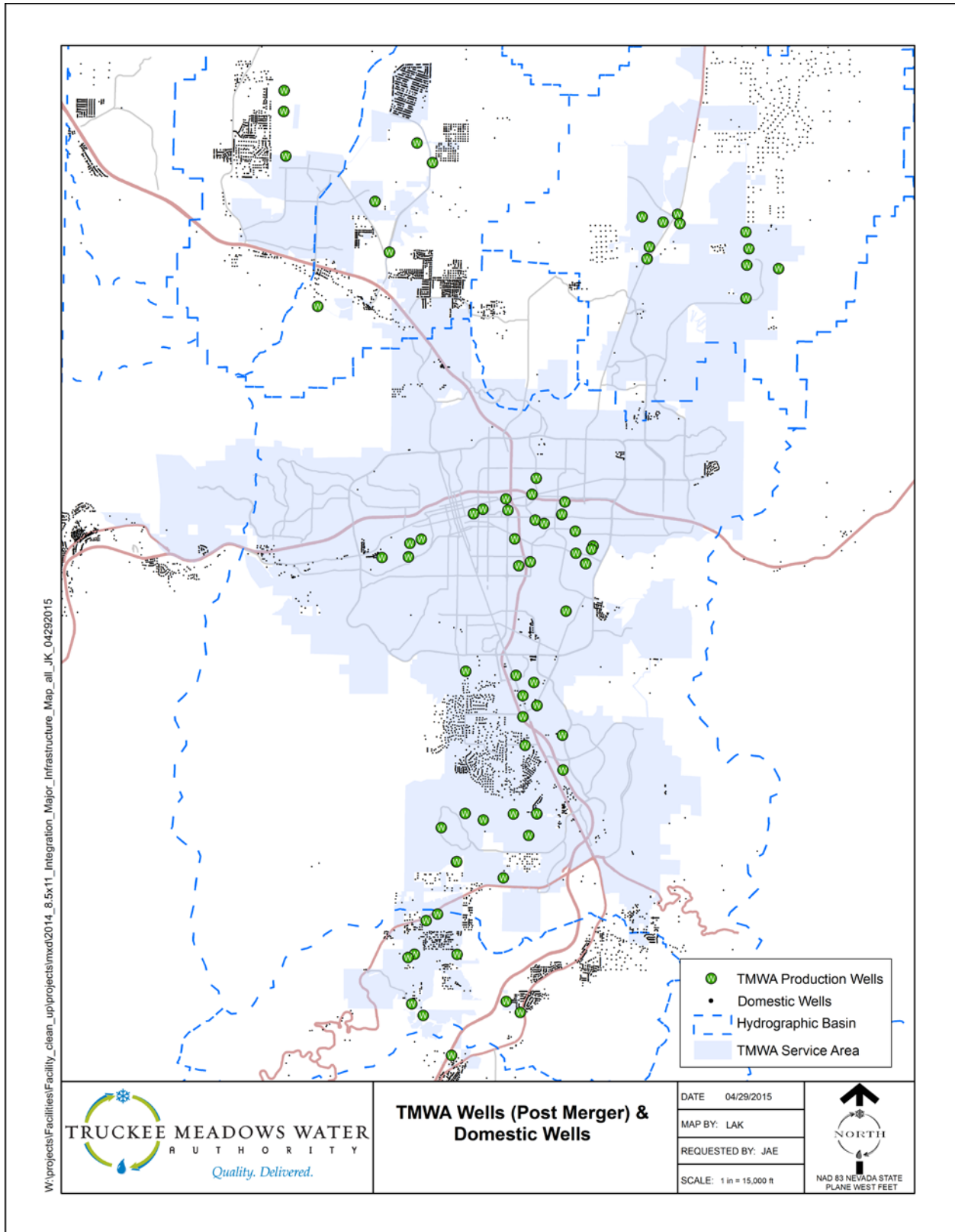


FIGURE 2. TMWA Service Area Post-Merger

The following tables and graph summarize and illustrate the history of the installation of domestic wells over time based on data from the Washoe County Assessor.

TABLE 1. Domestic Wells by Hydrographic Basin by Decade

		1900-1960	1970	1980	1990	2000	2010	2015	
85	Spanish Springs	63	2	16	78	164	86	1	410
87	Truckee Meadows	404	270	295	206	174	113	10	1,472
88	Pleasant Valley	108	125	271	123	108	78	4	817
91	Truckee Canyon	137	16	90	150	77	56	1	527
92A	W Lemmon Valley	71	35	262	114	170	67	6	725
92B	E Lemmon Valley	155	71	699	314	87	42	4	1,372
100	Cold Springs	86	6	28	47	29	20	3	219
		1,024	525	1,661	1,032	809	462	29	5,542

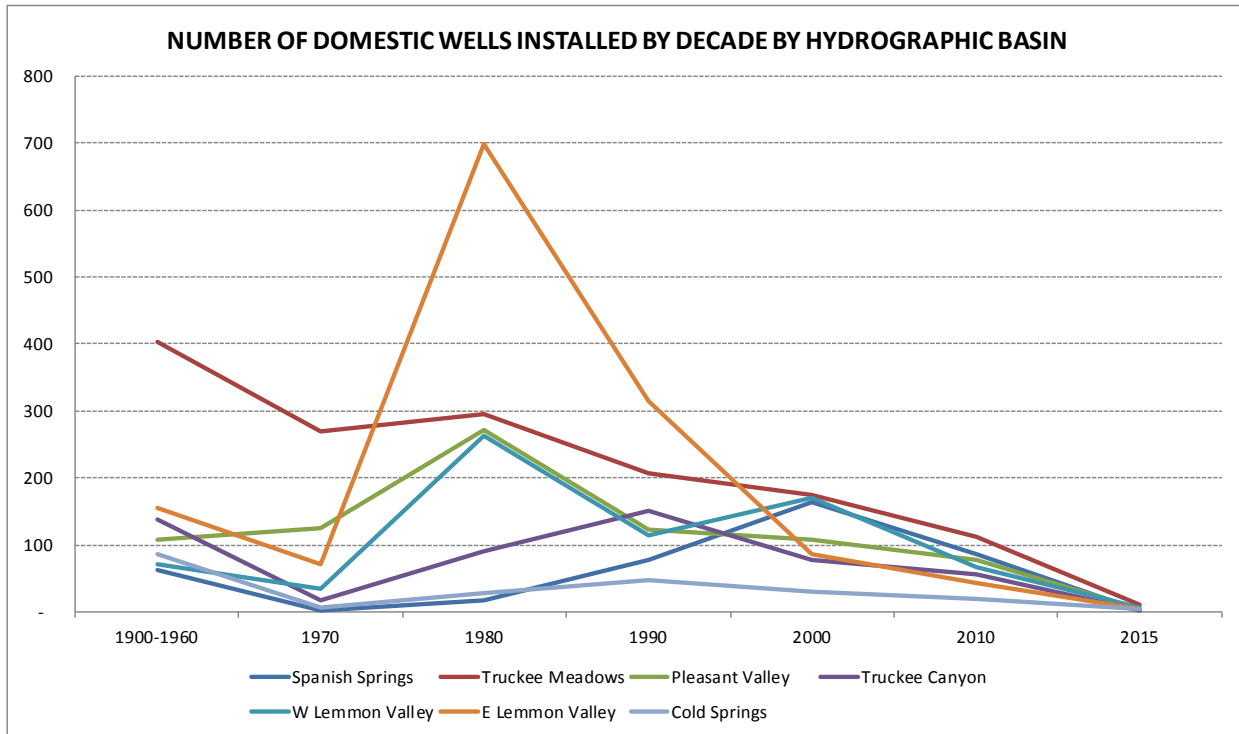
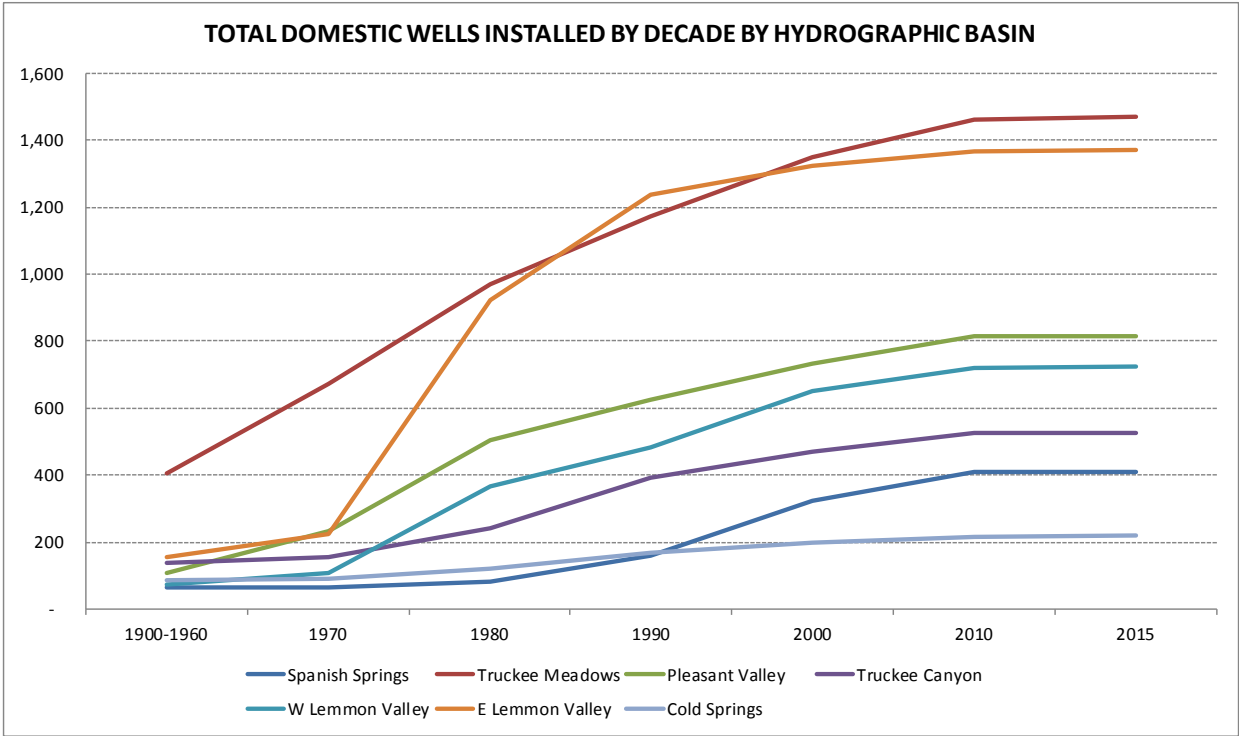


TABLE 2. Cumulative Total of Domestic Wells by Hydrographic Basin by Decade

		1900-1960	1970	1980	1990	2000	2010	2015
85	Spanish Springs	63	65	81	159	323	409	410
87	Truckee Meadows	404	674	969	1,175	1,349	1,462	1,472
88	Pleasant Valley	108	233	504	627	735	813	817
91	Truckee Canyon	137	153	243	393	470	526	527
92A	W Lemmon Valley	71	106	368	482	652	719	725
92B	E Lemmon Valley	155	226	925	1,239	1,326	1,368	1,372
100	Cold Springs	86	92	120	167	196	216	219
								5,542



Likely explanations for this pattern of development of parcels with domestic wells could include, but are not limited to, (1) the number of affordable, developable parcels has diminished since the 1970’s and 1980’s; (2) TMWA’s distribution system has grown extensively since the 1990’s and 2000’s making access to municipal water service more available; and (3) the cost of a domestic well has increased when compared to more available municipal service.

For comparison purposes, the following tables and graph present the number of municipal wells that Sierra Pacific Power Company/TMWA and former Washoe County Department of Water Resources installed over the past 50 years to meet the growing water demands in their respective services areas.

TABLE 3. Municipal Wells by Hydrographic Basin by Decade

		1900-1960	1970	1980	1990	2000	2010	2015	
85	Spanish Springs	-	1	1	5	3	1	-	11
87	Truckee Meadows	4	11	3	14	16	12	-	60
88	Pleasant Valley	-	-	3	4	5	-	-	12
91	Truckee Canyon	-	-	-	-	-	1	-	1
92A	W Lemmon Valley	-	3	-	-	-	1	-	4
92B	E Lemmon Valley	1	3	1	1	2	-	-	8
100	Cold Springs	-	-	-	-	-	-	-	-
		5	18	8	24	26	15	-	96

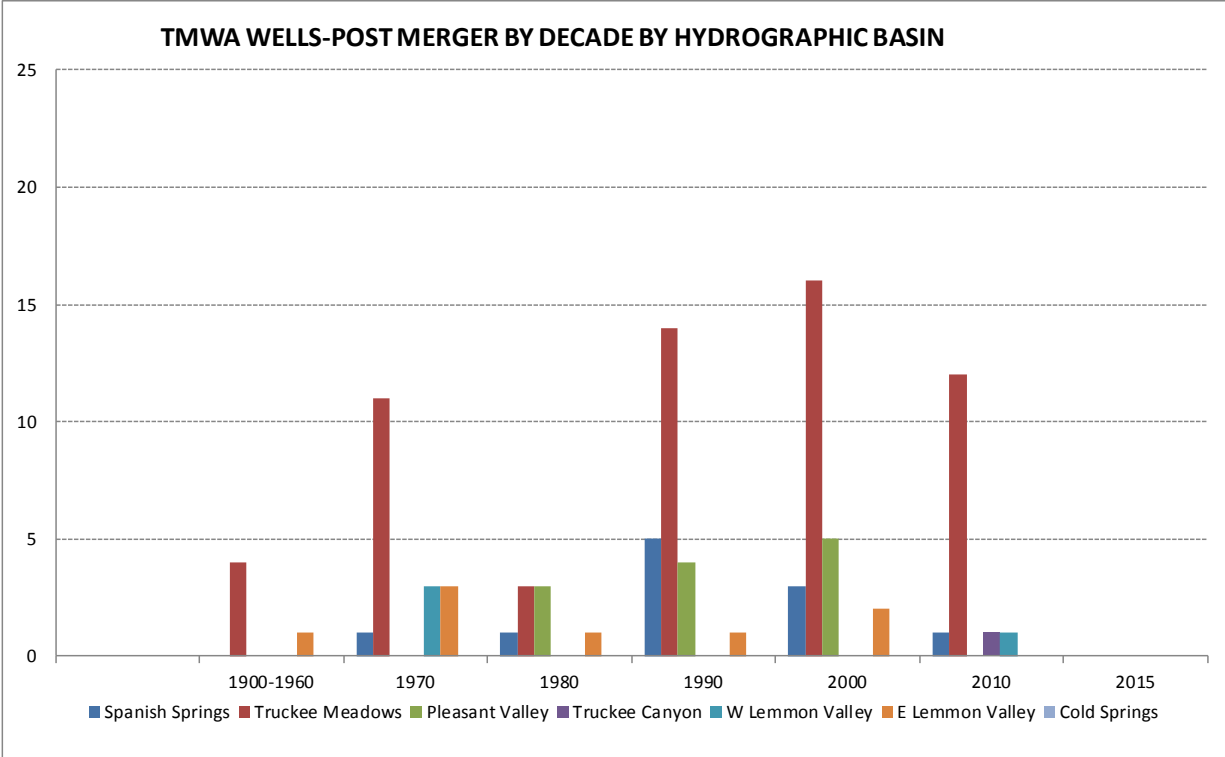
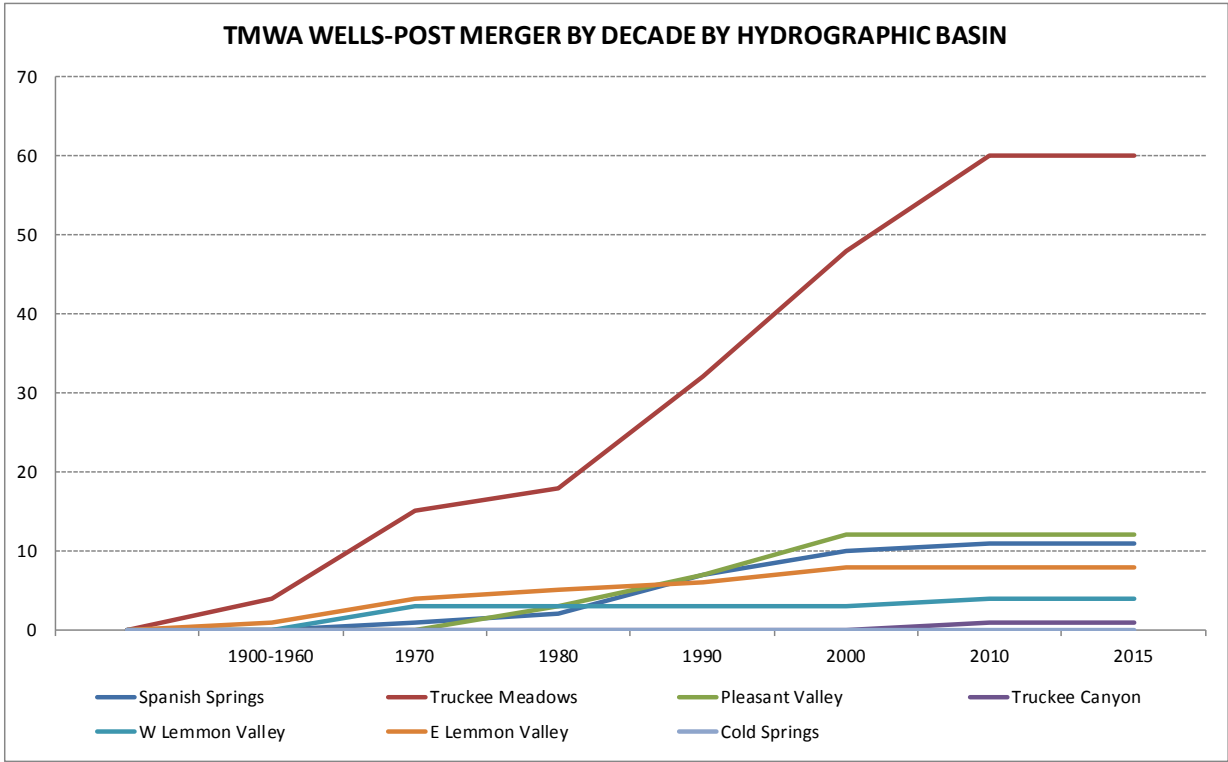


TABLE 4. Cumulative Total of Municipal Wells by Hydrographic Basin by Decade

		1900-1960	1970	1980	1990	2000	2010	2015
85	Spanish Springs	-	1	2	7	10	11	11
87	Truckee Meadows	4	15	18	32	48	60	60
88	Pleasant Valley	-	-	3	7	12	12	12
91	Truckee Canyon	-	-	-	-	-	1	1
92A	W Lemmon Valley	-	3	3	3	3	4	4
92B	E Lemmon Valley	1	4	5	6	8	8	8
100	Cold Springs	-	-	-	-	-	-	-
								96



APPROPRIATION PROCESS

The NSE has broad discretion to develop rules, regulations and orders (NRS 534.120) in order to manage the diversion of water in each of the State’s 232 hydrographic basins. Discretion is also granted the NSE including the ability to waive requirements of NRS depending on NSE assessment of the circumstances within a basin. Generally, water availability in a basin has a limit. Through the years, the most common areas of conflict occurring between diverters arise when use in a basin that has historically been irrigation with some domestic well use begins to convert to more urban use due to changing economics. Though not experienced in the Truckee Meadows, diversion of water for mine dewatering purpose is another significant area of conflict in the eastern part of the state.

Despite NSE directive to manage water resources in Nevada, under Nevada statute a land owner has the right to drill a well on a parcel, provided the NSE may or may not grant the request for a domestic well based on (1) the current resource conditions, groundwater availability, and/or existing priority of extraction permits in a hydrographic basin; (2) the

urgency to get water to a parcel (e.g., a pre-existing domestic well that needs to be re-drilled or deepened has higher probability of obtaining a permit to drill than drilling a new well) and/or (3) the cost to connect to a municipal purveyor which cost is driven principally by the distance from the distribution system. Each request for a domestic well is reviewed by NSE staff before a decision is made to grant the drill permit.

CONNECTION TO MUNICIPAL SYSTEMS

In accordance with the TMWA Cooperative Agreement and TMWA Rules, TMWA provides and makes available retail water service to users within TMWA's retail service area. TMWA's geographic boundaries coincide with the boundaries of the former Regional Water Planning Commission, and essentially include all areas of Washoe County other than Indian reservations and Lake Tahoe. While TMWA's geographic boundary exceeds its retail service area, TMWA may provide water service outside its retail service area pursuant to annexation agreements entered in accordance with Rule 5.

In addition to the NSE review process, cities and counties impose general requirements with respect to connecting into a public water system (such as TMWA) and drilling new domestic wells through development codes and through the subdivision mapping process. See Washoe County Code Sec. 110.422; RMC 18.12.602. Those requirements vary, however, both in substance and detail. As a result of the merger, revisions to the Washoe County development code are being processed to reflect that Washoe County will no longer be a provider of potable water service. Those amendments include provisions requiring developments to be served by TMWA or within hydrographic basins containing a TMWA system to satisfy TMWA water resource and facility requirements.

While TMWA understands the City of Reno and City of Sparks impose requirements on new development to connect into the cities' sewer system, it is not clear whether similar obligations are imposed by the cities on new development to connect into the TMWA water system.

Post-merger conditions for development in the unincorporated areas of Washoe County required a determination whether the development (or individual parcel) can be served by TMWA at some future time. Practically speaking, in areas where TMWA has extensive facilities, developments which are served by or contemplated for future service the TMWA should be required satisfy the water resource dedication requirements of the TMWA and build facilities to TMWA standards. TMWA is presently working with the County to develop these requirements under the County's development code. For those developments outside of hydrographic basins where TMWA presently serves, the development owner or property owner must dedicate water rights to Washoe County reasonably necessary as determined by Washoe County and the NSE acceptance or the developer could petition the Nevada Public Utilities Commission ("PUCN") through an application for a Certificate of Public Conveyance to establish a standalone public utility, develop its own dedication policies, construct facilities, etc.; or create some variant form of a public water system as defined in the NRS¹ which range in description from a general improvement district or a non-profit mutual water company where every property owner has an

¹ See definitions in NRS 445A.235, 445A.808, 445A.828, 445A.829, 445A.829, 704.020.

ownership interest in the mutual company or a fully regulated, for-profit water utility. TMWA would have the ability to protest any such application if it believed the creation of such utility adversely affected TMWA or TMWA's best interests, water resources, integrated water management issues, etc.

SUMMARY

As in Nevada, the water laws of other western states (Utah, Arizona, Idaho, Montana, Colorado and New Mexico) have matured along similar lines. The geography of the west with its lack of rivers and desert climate along with the mining and agricultural history of the state directed the development of water law away from historic riparian doctrine (i.e., a property adjacent to a lake, river, or stream has the right to divert water) toward the common law doctrine of "first in time, first in right." Under this doctrine, a "junior" appropriator's water rights are subordinate to the rights of "senior" appropriators. Nevada law has established the Office of the State Engineer to track, manage, approve, and adjudicate individual claims to divert the waters of the state. Any NSE ruling can be appealed and is subject to court review.

The appropriation process allows an individual or entity to submit applications to appropriate water for a variety of temporary or permanent uses including irrigation, municipal, domestic, storage, recreation, wildlife, or in-stream flow. Each application must set forth the manner of use, place of use and point of diversion. Any application can be protested by any person or entity on a multitude of grounds. This would include applications for a new public utility within or adjacent to TMWA's service area. In those instances, both the NSE and the PUCN would be engaged through their respective application processes that are subject to intervention by any protestant including TMWA. The NSE, and if applicable the PUCN, must sort through the protests to determine the merit of the protest in light of protecting the diversion rights of existing, senior water right holders, protecting/promoting the public benefit through the use of the water, economic viability of the applicant, and ensuring beneficial use of the water.

In the case of domestic wells, the process is less defined although a domestic well does have a protectable interest from adverse impact due to other diverters that protectable interest is subject to NSE determination and judgment. Nevada laws grants discretion to the NSE with respect to determining conditions in which a parcel may or may not drill a domestic well, or if the parcel is better served by a nearby municipal or public water purveyor.

ⁱ NRS 533.025 Water belongs to public. The water of all sources of water supply within the boundaries of the State whether above or beneath the surface of the ground, belongs to the public.

ⁱⁱ NRS 533.030 Appropriation for beneficial use; use for recreational purpose, developed shortage supply or intentionally created surplus declared beneficial; limitations and exceptions.

1. Subject to existing rights, and except as otherwise provided in this section, all water may be appropriated for beneficial use as provided in this chapter and not otherwise.

ⁱⁱⁱ NRS 533.030 Appropriation for beneficial use; use for recreational purpose, developed shortage supply or intentionally created surplus declared beneficial; limitations and exceptions.

1. Subject to existing rights, and except as otherwise provided in this section, all water may be appropriated for beneficial use as provided in this chapter and not otherwise.

^{iv} NRS 533.325 Application to State Engineer for permit. Any person who wishes to appropriate any of the public waters, or to change the place of diversion, manner of use or place of use of water already appropriated, shall, before performing any work in connection with such appropriation, change in place of diversion or change in manner or place of use, apply to the State Engineer for a permit to do so.

NRS 533.370 Approval or rejection of application by State Engineer: Conditions; exceptions; considerations; procedure.

1. Except as otherwise provided in this section and NRS 533.345, 533.371, 533.372 and 533.503, the State Engineer shall approve an application submitted in proper form which contemplates the application of water to beneficial use if:

- (a) The application is accompanied by the prescribed fees;
- (b) The proposed use or change, if within an irrigation district, does not adversely affect the cost of water for other holders of water rights in the district or lessen the efficiency of the district in its delivery or use of water; and
- (c) The applicant provides proof satisfactory to the State Engineer of the applicant's:
 - (1) Intention in good faith to construct any work necessary to apply the water to the intended beneficial use with reasonable diligence; and
 - (2) Financial ability and reasonable expectation actually to construct the work and apply the water to the intended beneficial use with reasonable diligence.

2. Except as otherwise provided in subsection 10 [*applications for environmental permits*], where there is no unappropriated water in the proposed source of supply, or where its proposed use or change conflicts with existing rights or with protectable interests in existing domestic wells as set forth in NRS 533.024, or threatens to prove detrimental to the public interest, the State Engineer shall reject the application and refuse to issue the requested permit. If a previous application for a similar use of water within the same basin has been rejected on those grounds, the new application may be denied without publication.

NRS 534.080 Appropriation of underground water for beneficial use from artesian, definable aquifer or percolating water: Acquisition of rights under chapter 533 of NRS: orders to desist; dates of priority.

1. A legal right to appropriate underground water for beneficial use from an artesian or definable aquifer subsequent to March 22, 1913, or from percolating water, the course and boundaries of which are incapable of determination, subsequent to March 25, 1939, can only be acquired by complying with the provisions of chapter 533 of NRS pertaining to the appropriation of water.

^v NRS 534.080 Appropriation of underground water for beneficial use from artesian, definable aquifer or percolating water: Acquisition of rights under chapter 533 of NRS: orders to desist; dates of priority.

3. Except as otherwise provided in subsection 4 and NRS 534.180, the date of priority of all appropriations of water from an underground source mentioned in this section is the date when application is made in proper form and filed in the Office of the State Engineer pursuant to the provisions of chapter 533 of NRS.

^{vi} NRS 534.013 "Domestic use" and "domestic purposes" defined. "Domestic use" or "domestic purposes" extends to culinary and household purposes directly related to: 1. A single-family dwelling; and 2. An accessory dwelling unit for a single-family dwelling if provided for in an applicable local ordinance, including, without limitation, the watering of a family garden and lawn and the watering of livestock and any other domestic animals or household pets, if the amount of water drawn does not exceed the maximum amount set forth in NRS 534.180 for exemption from the application of this chapter.

NRS 534.080 Appropriation of underground water for beneficial use from artesian, definable aquifer or percolating water: Acquisition of rights under chapter 533 of NRS: orders to desist; dates of priority.

4. The date of priority for the use of underground water from a well for domestic purposes where the draught does not exceed 2 acre-feet per year is the date of completion of the well as: (a) Recorded by the well driller on the log the well driller files with the State Engineer pursuant to NRS 534.170; or (b) Demonstrated through any other documentation or evidence specified by the State Engineer.

^{vii} NRS 533.024 Legislative declaration. The Legislature declares that:

1. It is the policy of this State: (b) To recognize the importance of domestic wells as appurtenances to private homes, to create a protectable interest in such wells and to protect their supply of water from unreasonable adverse effects which are caused by municipal, quasi-municipal or industrial uses and which cannot reasonably be mitigated.

NAC 534.315 Wells for domestic use. (NRS 534.020, 534.110, 534.140, 534.180)

1. Except as otherwise provided in subsection 10, permits to appropriate groundwater are not required for the drilling of wells for domestic use.

^{viii} NRS 534.185 Waiver of certain requirements for domestic wells by State Engineer: exceptions.

1. The State Engineer shall, upon written request and receipt of a written agreement between the affected property owners, waive the requirements of this chapter regarding permits for the use and development of underground water from a well if:

- (a) The well existed on July 1, 1983; (b) It is used solely for domestic purposes by not more than three single-family dwellings; and (c) Each of those dwellings does not draw more than 2 acre-feet of water per year.

2. The State Engineer may require an owner who has been granted such a waiver to apply for a permit if one or more of the dwellings is drawing more than *2 acre-feet of water per year*.
3. This section does not apply to any groundwater basin for which the State Engineer has in effect on July 1, 1983, a procedure of issuing revocable permits.

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NRS 534.120 State Engineer authorized to make rules, regulations and orders when groundwater is being depleted in designated area; preferred uses of water; temporary permits to appropriate water; revocation of temporary permits; restrictions placed on certain wells.

1. Within an area that has been designated by the State Engineer, as provided for in this chapter, where, in the judgment of the State Engineer, the groundwater basin is being depleted, the State Engineer in his or her administrative capacity may make such rules, regulations and orders as are deemed essential for the welfare of the area involved.
2. In the interest of public welfare, the State Engineer is authorized and directed to designate preferred uses of water within the respective areas so designated by the State Engineer and from which the groundwater is being depleted, and in acting on applications to appropriate groundwater, the State Engineer may designate such preferred uses in different categories with respect to the particular areas involved within the following limits:
 - (a) Domestic, municipal, quasi-municipal, industrial, irrigation, mining and stock-watering uses; and
 - (b) Any uses for which a county, city, town, public water district or public water company furnishes the water.
3. Except as otherwise provided in subsection 5, the State Engineer may:
 - (a) Issue temporary permits to appropriate groundwater which can be limited as to time and which may, except as limited by subsection 4, be revoked if and when water can be furnished by an entity such as a water district or a municipality presently engaged in furnishing water to the inhabitants thereof.
 - (b) Deny applications to appropriate groundwater for any use in areas served by such an entity.
 - (c) Limit the depth of domestic wells.
 - (d) Prohibit the drilling of wells for domestic use, as defined in NRS 534.013, in areas where water can be furnished by an entity such as a water district or a municipality presently engaged in furnishing water to the inhabitants thereof.
 - (e) In connection with the approval of a parcel map in which any parcel is proposed to be served by a domestic well, require the dedication to a city or county or a designee of a city or county, or require a relinquishment to the State Engineer, of any right to appropriate water required by the State Engineer to ensure a sufficient supply of water for each of those parcels, unless the dedication of the right to appropriate water is required by a local ordinance.
4. The State Engineer may revoke a temporary permit issued pursuant to subsection 3 for residential use, and require a person to whom groundwater was appropriated pursuant to the permit to obtain water from an entity such as a water district or a municipality engaged in furnishing water to the inhabitants of the designated area, only if:
 - (a) The distance from the property line of any parcel served by a well pursuant to a temporary permit to the pipes and other appurtenances of the proposed source of water to which the property will be connected is not more than 180 feet; and
 - (b) The well providing water pursuant to the temporary permit needs to be redrilled or have repairs made which require the use of a well-drilling rig.
5. The State Engineer may, in an area in which have been issued temporary permits pursuant to subsection 3, limit the depth of a domestic well pursuant to paragraph (c) of subsection 3 or prohibit repairs from being made to a well, and may require the person proposing to deepen or repair the well to obtain water from an entity such as a water district or a municipality engaged in furnishing water to the inhabitants of the designated area, only if:
 - (a) The distance from the property line of any parcel served by the well to the pipes and other appurtenances of the proposed source of water to which the property will be connected is not more than 180 feet; and
 - (b) The deepening or repair of the well would require the use of a well-drilling rig.
6. For good and sufficient reasons, the State Engineer may exempt the provisions of this section with respect to public housing authorities.
7. The provisions of this section do not prohibit the State Engineer from revoking a temporary permit issued pursuant to this section if any parcel served by a well pursuant to the temporary permit is currently obtaining water from an entity such as a water district or a municipality engaged in furnishing water to the inhabitants of the area.