

**Water Committee
SDR 2015-2016-001**

Final Report

Approved 06/30/2016

WATER COMMITTEE

2015-2016-001

Final Report

SUMMARY

Water is a crucial resource of Trinity County. We need it for safe drinking water and normal household uses. It is also important for agricultural uses, crops and domestic animals. It is a source of recreation and associated income from rivers and lakes. It supports fisheries and wildlife. It sustains our forests which are so essential to healthy watersheds. This 2015-2016 Trinity County Grand Jury has looked at practices, policies, and procedures dealing with water and what effects these can have on our future. Trinity County is in a much better situation than most of California, but we cannot afford to get into an untenable situation. While ultimately weather patterns determine how much fresh water comes from the sky, we should do the best we can to preserve and responsibly utilize what is made available to us.

Water is a commodity and has been for a long time. Trinitarians have been slow to accept that notion, partly because we have generally had sufficient water and partly because we have become complacent.

A laissez-faire approach is not effective. We must find the means and the will to study each water source, the present and future demands thereon, and ways and means to insure sustainability in the future.

BACKGROUND

Some of California's most important and reliable water has come from Trinity County. Until a few years ago, Trinity County's supply seemed a given. Not anymore.

Drought has come to the state and to us. Some say the rains that came at the end of 2015 (including snow accumulations in our mountains) mark the end of drought. Most experts argue otherwise; drought is not the anomaly, El Nino is.

Sometimes flooding, too much water too quickly, creates its own problems and is something for which we also need to plan.

The Water Committee found widespread agreement that water issues need attention, but a greater sense of urgency is necessary.

METHODOLOGY

The Grand Jury studied:

- California's new water laws
- Trinity County laws, policies, procedures, and practices
- Issues through studying printed and digital documents
- Several water districts and other Water Providers
- Public media including local newspapers

The Grand Jury interviewed:

- Trinity County officials in key County departments
- Several water districts and other Water Providers
- Experts with insights in economics and hydrology

DISCUSSION

We looked at various major water concerns and issues ranging from drinking water to sustainable practices.

Contracts with the State entered into sixty or more years ago bind the County to allow much of its water to be sent southward to the rest of the state, leaving us with little or no control over that portion of water. Many well owners and riparian owners choose to think of their water use as having no impact on others, although it does. Demands for water, often from questionable agricultural activities, gradually exceed the capacity of the aquifers and streams, until they fail.

Clean Drinking and Household Water

Water supplies in our county take several forms. Roughly half of the households have wells or draft from streams and rivers. The other half obtains water from private or public water suppliers. Generally speaking, these sources have worked well for most of us in the past. A number of households regularly have serious water shortage problems during the usual dry

summer months. It is certainly a distressing situation to turn on the faucet and get either no or bad water.

Providing water is by any definition a municipal activity. Part of the reason is the continuity of a municipal provider. Half of the residents of our county are served by special water districts which fit that broad definition of a "municipality." However, in our county there are some Water Providers that are not-for-profit corporations, most of them small. This is entirely legitimate. But with the drought have come supply problems and treatment responsibilities that have impacted these small private concerns even harder than the special districts.

A number of serious situations present themselves.

1. Water from private wells is not regularly tested unless by the owners. Water from Water Providers is consistently checked and regulated by the State. Water Providers is defined by this Grand Jury as a business or organization that provides a reticulated water supply, irrigation water, reused or recycled water, or a bulk water supply service. Water Providers may be government or private and often operate water storage, purification and supply services. They may also provide sewerage or drainage services.
2. A proliferation of wells has affected the water supply of others. For example, five years ago the County issued 35 well permits while in 2015 the County issued more than 300 (see chart). Drilling a new well requires a permit, and many property owners obtain a permit before commencing. But there appears to be no examination or testing to determine how the drilling will affect others. Whether this is due to custom and practice or lack of regulation is unclear. The County has issued well permits as if it were a matter of right requiring no regulation.
3. Streams that have reliably produced domestic water have dried up early or have been polluted upstream by unregulated agricultural activities. Many of these streams are on State or Federal property and beyond the jurisdiction of the County. But these same streams are part of the watersheds that all Water Providers and users take from. Protecting the purity of our watersheds will require cooperation with Federal, State, and County enforcement officials.
4. A growing business in transporting and selling water from private and public Water Providers has arisen, creating a number of issues:
 - a. Water delivered to otherwise dry properties have enabled large grows of marijuana that was impossible before.
 - b. Water that is transported has no apparent use regulations such as those imposed on users in the district or company boundaries from which the water is obtained.
 - c. At least some of the Water Providers have charters stating that the water provided shall be for use of residents of the area served by the provider. Yet, these Water Providers sell water they know, or should know, is transported outside the boundaries of the provider.
5. The County and the Water Providers are out of sync regarding who should be able to obtain water, transport it, for what purpose, and in what amount. The County has adopted rules limiting or regulating cultivation of marijuana. The Water Providers that sell water without apparent

regulation for transport within and without their service areas enable cultivation of marijuana on properties that otherwise would not sustain agricultural use. The conflict of policies is obvious.

6. All the Water Providers we interviewed appear to be operated by competent managers who are properly credentialed and well intentioned. However, while some of the Water Providers conduct business in ways that are open and transparent, others are more opaque. The latter Water Providers seem not to have embraced obligations arising out of the Brown Act and rules for disclosure and production of public records.

7. Excessive groundwater and stream extraction can cause overdraft, failed wells, deteriorated water quality, environmental damage, and irreversible land subsidence that damages infrastructure and diminishes the capacity of aquifers to store water for the future. Groundwater, as defined by <http://www.groundwater.org/> is the water found underground in the cracks and spaces in soil, sand and rock. It is stored in and moves slowly through geologic formations of soil, sand, and rocks called aquifers.

Recreational and Associated Income

Water in lakes and rivers is a major source of recreation and associated income in Trinity County. The beauty of the county is included in its mountains, forests, streams, and lakes. Hikers and campers are attracted to areas with water.

Trinity River supports fishing, swimming, camping, kayaking, rafting, picnicking, and such for both world-wide visitors and local residents. Visitors buy meals and stay in lodging, providing an important income to the County.

Trinity Lake also is a wonderful recreational area, when there is enough water in it. Trinity Lake was created in the early 1960s. After the dams were constructed, a substantial amount of the water above the dams was diverted to the Central Valley disrupting the natural processes that keep the river healthy. The Trinity River lost much of its ability to support salmon, steelhead and other species that depended upon it. This was partially corrected in a 2000 Record of Decision that authorized restoration flows to the Trinity River. In the summer the Trinity River flows released from the dams are reduced to what are approximately the average flows in summer before the dams were built.

Ruth Lake is the only reservoir on California's Mad River. The dam was built in 1962 primarily for domestic and industrial water supply to Eureka and other communities around Humboldt Bay. The summer resort community of Ruth developed to expand recreational use of the reservoir. There are cabins and campgrounds. Boating and fishing are popular.

Both Ruth and Trinity Dams have hydroelectric plants. The Trinity Public Utilities District produces electrical power from Trinity Dam. Of course, this requires sufficient water to turn the generating turbines. Like with water from the dams, most of the power generated is distributed outside of the County.

Forests, Wildlife, and Fish

Water also supports fisheries and wildlife. For us this provides recreational fishing and hunting and other outdoor recreation as well as commercial ventures. The trees in the forests consume water, but provide income as timber, as well as recreational areas. They support many species of plant and animal life. The forests are the caretakers of our watersheds. Without healthy forests we do not have healthy watersheds.

A watershed, as defined by <http://www.watershedatlas.org/> “carries water *shed* from the land after rain falls and snow melts. Drop by drop, water is channeled into soils, ground waters, creeks, and streams, making its way to larger rivers and eventually the sea. Water is a universal solvent, affected by all that it comes in contact with: the land it traverses, and the soils through which it travels. The important thing about watersheds is: what we do on the land affects water quality for all communities living downstream.”

As water passes through a watershed, it will pick up fertilizer, pesticides, herbicides, and other chemicals. This affects life forms in the area possibly killing fish and wildlife. Worse, dissolved contaminants could enter human water sources, contaminants that may not be “tested for”.

Beside the quality of the water, even the amount of water collected in the watershed is affected by the health of the forest. Studies are being made on whether thinning forests overgrown with thickets of small trees will yield more water for rivers and reservoirs.

Forest fires can produce large amounts of sediment in rivers and lakes. Another big source of sediments is grading for roads or clearing patches of forest. Sediments are carried by, but not dissolved into, the water, creating cloudy or muddy water.

Sustainability and the Future

The Grand Jury has found no evidence that the County has been managing water resources for sustainability; that is, satisfying current needs without compromising the future. We found no significant efforts to map or analyze water resources. We found few regulations protecting riparian exposures from pollution. The County’s well regulations appear very outdated. Particularly when the number of wells drilled in Trinity County has risen from 35 a year to 300 a year during the last five years and the majority of the wells have been drilled in areas where marijuana cultivation is the primary activity. Some regulations that exist are antiquated or not enforced.

Sustainable Water Management

Sustainability is using water and other resources at levels that can be sustained each year without causing an undesirable result. The emphasis is on managing all water resources in Trinity County.

Old Water Laws and their Weaknesses

The history of California is linked to the history of water rights. Whoever controls the water controls the wealth, and therefore it is a history of struggle in the legislature, in the courts, and in the field. The struggle continues each year, seeking balance between exclusive individual rights versus the need to reserve access to water for everyone.

Problems with weak, inconsistent water laws were not new when amid high hopes the legislature passed laws in 2001 to strengthen the California Environmental Quality Act (CEQA). CEQA, enacted in 1970, requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. Among the provisions were requirements that municipalities approving a new development project would evaluate the water supply and forecast that it would be sufficient for 20 years.

The New Water Law and its Potential

In 2014, the State of California amended its Water Code section 10720 et seq. to require sustainable groundwater management and enforcement. There is a question whether this new law affects any part of Trinity County at this time as local aquifers are small. The extent to which the new law imposes any immediate or long term obligations on Trinity County remains to be seen.

Although the new water law is already in place, many of the provisions follow a time line that stretches out for ten years and longer. Sustainable water management becomes more difficult every year that we disregard it.

The legislation passed in 2014 is widely understood to provide the strongest groundwater management law that California has ever had.

The new law:

- adopts a goal that all groundwater use be sustainable
- mandates counties to establish local agencies responsible for sustainable water use
- grants authority to the local agencies to enforce sustainable use
- grants authority to fund the local agencies

The local agencies are called Groundwater Sustainability Agencies (GSA). Each GSA is responsible for a careful analysis of an aquifer and how it is being used, in the form of a groundwater sustainability plan consistent with criteria established in the law. The GSA is responsible for preparing the plan and making it work on a sustainable yield basis. Initially, the mandates apply to the most critical aquifers, those with high and medium priorities for action, assigned by the California Department of Water Resources (DWR). It is unlikely that the new law will resolve all water concerns, or indeed that it will go unchallenged in the courts. But it provides a fresh framework with new powers around which the community can gather cooperatively to obtain more rational, equitable water management results than before. And while the law deals primarily with the management of groundwater resources, it is clearly tied to the management of surface waters as well.

The point of the legislation is to require Water Providers and water users to work together in the quest for sustainability.

Trinity County has a large number of public and private Water Providers, but there has been little or no contact between them and the County. So far as the written record is concerned, there has been little or no work with stakeholders (people with vested interests) throughout the county to identify how their interests pertaining to water can be managed, and by whom.

Trinity County has not been mapped into an aquifer basin by the United States Geological Service (USGS) and affirmed by the DWR. So far, no basin in Trinity County has been singled out by DWR as medium priority basins selected for early attention, for a combination of reasons that include the overlying population, its projected growth, irrigated acreage, reliance on groundwater, and impacts such as overdraft and subsidence.

This mapping is an important step toward sustainability because there still is not enough information to complete a good model. Most well owners don't report basic information such as how much water they pump and what the water depth is. Existing groundwater management plans are voluntary agreements between stakeholders about collecting more such information. In the future, there will be more data. As information improves, water models and management decisions will also improve.

When properly managed, water resources will help protect communities, farms, and the environment against prolonged dry periods and climate change, preserving water supplies for existing and potential beneficial use. Failure to manage water to prevent long-term overdraft infringes on all of our water rights. A water sustainability plan needs to consider all factors that affect the balance of the water system, with collegial management of surface water and groundwater resources. While good data are available for water used by water districts within the county, considerably less is known about water use in areas outside those limits – where most of the individual wells, streams, springs, and most of the county's agriculture are located. Data collection and monitoring will need to be early goals of the new water management bodies.

Cooperating to Get the Most Benefit Out of the New Law

Sharing the water in an underground aquifer or on a stream can work well as long as everyone follows a "good neighbor" policy and cooperates. Some aquifers and streams and watersheds, however, serve many neighbors and it is not always easy to get the needed cooperation. The new sustainability approach would provide a structure for cooperation and a way to accomplish common goals.

Getting Started Now with Water Sustainability Management

Actions should be taken timely, to preserve local control.

Frequent remarks such as “it is a workload issue”, “it requires significant staff”, and “it requires Brown Act adherence” are not valid excuses or reasons for not being proactive.

In fact, there is an important advantage in moving ahead promptly, well ahead of the deadlines. Authority is vested in local agencies in the 2014 law to interpret and apply the mandates as long as mandates are met. In default, the State will take over.

An Idea for Going Forward

Carrying capacity has to do with how many people can be supported indefinitely with the available resources and services. A study of carrying capacity is an opportunity to bring many ideas and people together in search of balance and consensus. In the broadest sense, water is only one important part of that picture. For purposes of water management, carrying capacity includes available resources, population, agricultural uses, and per capita consumption.

The County should conduct a carrying capacity study to consider how an economic part, a social part, and an environmental part come together to make up community. Carrying capacity should be studied broadly across the entire county through an independent team representing resources, disciplines, stakeholders, and other interests.

Some of this may be difficult to accept after years of unregulated water use, but easier to accept than a well or stream or watershed going dry when a property owner is relying on it—or a whole water basin that is no longer available to anyone. Water is essential to life and our enjoyment of life. Groundwater and surface water sustainability management is an essential step in making sure water is available to us and to those who follow us.

FINDINGS

- F1. Recent changes in California water law mandates managing water as a long-term sustainable resource.
- F2. The County needs a cross-discipline study of carrying capacity in Trinity County that projects what population and agricultural activities the water and other resources in Trinity County are capable of supporting.
- F3. Water Providers of all types within Trinity County need to sufficiently educate water users about their responsibilities for sharing water resources, potential limitations on water use, and the advantages of making sure, through sustainability, that water will be available in the future for their own use.
- F4. Most governmental entities in Trinity County — departments, and other agencies — have yet to adopt sustainability provisions in their mission statements, goals, and programs, or to coordinate those efforts with other government entities.
- F5. Trinity County has not participated significantly in preparations for sustainable water management, including failure to regulate grading.
- F6. Residential water is most important. Any agricultural or other use that interferes with residential use must be well and carefully regulated.
- F7. Policies of Water Providers and the County conflict. Transport of water out of District boundaries has opened up agriculture in areas, and to an extent, not anticipated or desired by County policies.
- F8. Some Water Providers are reluctant to provide information and disclosure of public records as required by the Brown Act.
- F9. Water quality tests of drinking water are recognized as an expense. Most Water Provider organizations do only the State required tests. Individual owners do not have such requirements and are likely not to do any tests except at property transfer.
- F10. Water was plentiful during the last century. Water in saturated soil beneath the surface of the earth could be easily pumped for use and its availability fostered urban and agricultural growth. Riparian (land adjacent to rivers or other bodies of water) demands did not overwhelm streams. As demand for water increased, effective management became critical to protecting the future availability and quality of the supply.
- F11. Excessive sediment loads to creeks and the river can negatively impact salmon and steelhead populations. For Trinity County there is concern about Coho and other Salmon or Steelhead of becoming legally endangered, as that can cause serious economic repercussions. Even just one species, such as Coho, on the endangered list would seriously impact any recreational or commercial fishing.
- F12. The Grand Jury has found no evidence that the County has been managing water resources for sustainability; that is, satisfying current needs without compromising the future.
- F13. The County and Water Providers have not met in a meaningful and productive way.

RECOMMENDATIONS

- R1. All Water Providers should examine their minutes, resolutions, bylaws, charters, enabling legislation, and statutes to determine what authority they have, if any, to sell or otherwise provide water to any person or property that is not within the boundaries served by the provider. If these practices do not comply, Water Providers should take immediate steps to change their practices to reflect this Recommendation.
- R2. All Water Providers should meet with County officers and elected officials to examine and resolve the conflicting customs and practices described in this report regarding sale and transportation of bulk water for agricultural purposes.
- R3. The Trinity County Board of Supervisors should immediately review its resolutions, ordinances, and practices, as well as State law, regarding regulating, managing, and permitting wells. If they do not comply, they should take immediate steps to change their practices.
- R4. The Trinity County Board of Supervisors should examine and act on ways to protect its watersheds and aquifers from unauthorized or damaging incursions.
- R5. The Grand Jury recommends that the Trinity County Board of Supervisors and all Water Providers in Trinity County take prompt action to establish goals that include sustainability and recognize water sustainability as a specific goal.
- R6. The Grand Jury recommends that the Trinity County Board of Supervisors and all Water Providers and all stakeholders assign a high priority to and participate in conducting a county-wide study of carrying capacity. The study should also consider additional public and private water storage opportunities.
- R7. The Grand Jury recommends that the Trinity County Board of Supervisors acknowledge the real issues of water sustainability in Trinity County and establish, fund and support a GSA or similar entity and related laws and enforcement.
- R8. All the Water Providers should examine their minutes, resolutions, bylaws, charters, enabling legislation, and statutes regarding open meeting and public records. If they do not comply, they should take immediate steps to change their practices.
- R9. Regular testing of well water quality and quantity should be done. An incentive program would help.
- R10. The Board of Supervisors should promptly adopt a grading ordinance.

REQUEST FOR RESPONSES

Required Responses

Pursuant to Penal Code section 933.05, the Grand Jury requests responses as follows:

Trinity County Board of Supervisors

- Recommendation R2 is supported by Findings F3, F7, F11, and F12
- Recommendation R3 is supported by Findings F6, F9, and F10
- Recommendation R4 is supported by Findings F10 and F11
- Recommendation R5 is supported by Findings F3, F4, F5, F12, and F13
- Recommendation R6 is supported by Findings F2, F3, and F13
- Recommendation R7 is supported by Findings F1, F3, F4, F5, F12, and F13
- Recommendation R10 is supported by Finding F11

The following Water Providers under the Grand Jury purview

Trinity County Waterworks District #1

Weaverville Community Services District

- Recommendation R1 is supported by Finding F7
- Recommendation R2 is supported by Findings F3, F7, F11, and F12
- Recommendation R5 is supported by Findings F3, F4, F5, F12 and F13
- Recommendation R6 is supported by Findings F2, F3, and F13
- Recommendation R8 is supported by Finding F8

Trinity County Planning Department

- Recommendation R2 is supported by Findings F3, F7, F11, and F12
- Recommendation R9 is supported by Findings F3, F6, and F9

Trinity County Environmental Health Director

- Recommendation R4 is supported by Findings F10 and F11
- Recommendation R9 is supported by Findings F3, F6, and F9
- Recommendation R10 is supported by Finding F11

Trinity County Code Enforcement Officer

- Recommendation R2 is supported by Findings F3, F7, F11, and F12
- Recommendation R9 is supported by Findings F3, F6, and F9

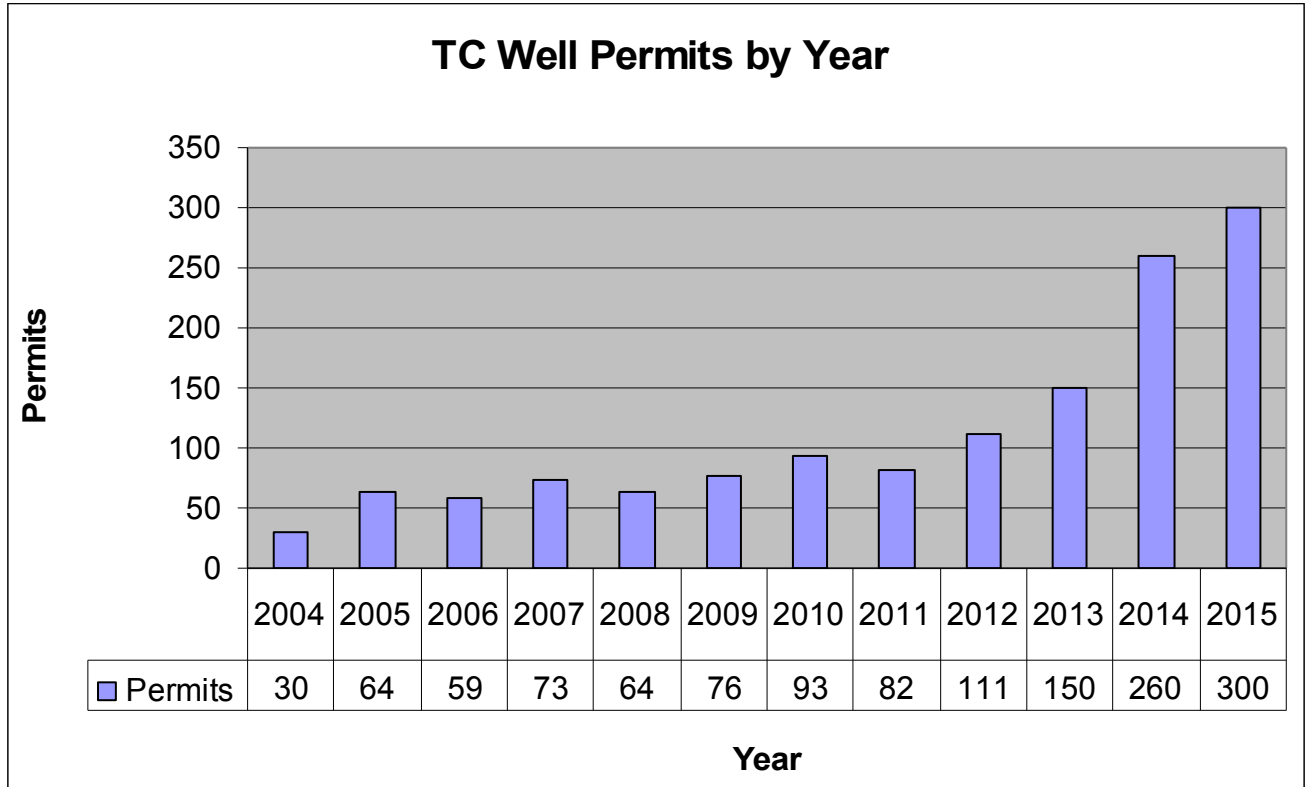
Trinity County Administrative Officer

- Recommendation R2 is supported by Findings F3, F7, F11, and F12
- Recommendation R9 is supported by Findings F3, F6, and F9

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9. Trinity County Resource Conservation District, Trinity County Water Resources Planning Proposal to Supplement the NCIRWMP, March 2015

APPENDIX



Some facts about water

1 Acre-foot is 43,560 cubic feet (meters often read cubic feet).

1 Acre-foot is also 325,851 gallons.

1 MG (Million Gallons) = 133,690 Cubic Feet

Average consumption is about 76 GPCD (gallons per capita daily).

"Outdoors" water usage can greatly exceed this amount in the summer months.

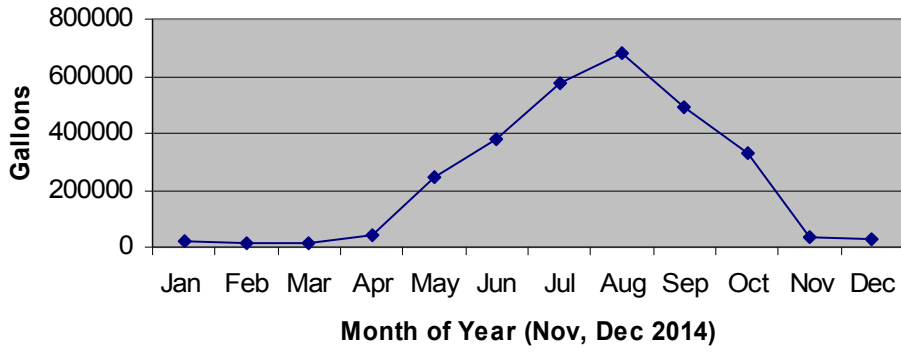
This means 1 Acre-Foot satisfies 11.7 people for a whole year.

A gallon of water weighs about 8.34 pounds.

A one-ton truck could carry 241 gallons

Water trucks with capacity of 2000-5000 gallons weigh 8.34 to 20.8 tons.

WCSD Water Hauler Data 2015



TCWD#1 Trucked / Piped Water Sales

