



## NEVADA DROUGHT FORUM

### SUMMARY: Current and Planned Actions Related to Drought

About Nevada's Drought Forum  
drought.nv.gov

Questions about the Form  
chunt@gov.nv.gov  
1-775-684-5670

Under the [Governor's Executive Order 2015-03](#), issued April 8, 2015, state agencies, municipal water providers and federal agencies are requested to provide a summary of current and planned actions related to drought. This information must be provided to the Nevada Drought Forum by no later than **May 15, 2015**. Please use the following form to submit your agency's information.

#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Apex Generating Station	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
15555 Apex Power Parkway	Las Vegas, NV 89165
<b>CONTACT NAME</b>	<b>TITLE</b>
Jim Colmey	HSE Specialist
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-632-8630	james.colmey@ethosenergygroup.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
This is a commercial business that does not serve customers, only employees.		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the on-site manager regarding the drought and have asked them to observe the policies outlined in the most current version of their Water Conservation Plan. We have asked them to send out emails to all staff who deal with the public water system on site to make the person in charge aware of any leaks within the water system. The on-site manager will notify the Distribution Operator immediately if there are issues that need to be corrected.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Apex Landfill- Republic Services	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
13550 North US HWY 93	Las Vegas, NV 89165
<b>CONTACT NAME</b>	<b>TITLE</b>
Ross Grover	Environmental Manager
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-599-5905	RGrover@republicservices.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This is a commercial business that does not serve customers, only employees.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the site manager regarding the drought and asked them to observe the policies outlined in the most current version of their Water Conservation Plan. We have asked them to send out emails to all staff who deal with the public water system on site to make the person in charge aware of any leaks within the water system so that it can be addressed immediately. The on-site manager will notify the Distribution Operator immediately if there are issues that need to be corrected.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Big 5 Mobile Home Park	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
850 S. Big 5 Rd.	Pahrump, NV 89048
<b>CONTACT NAME</b>	<b>TITLE</b>
LeRoy Daines	Distribution Operator
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-556-8069	utilityservicesllc@gmail.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
A small mobile home park that serves 65 customers.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the on-site manager regarding the drought and have asked them to observe the policies outlined in the most current version of their Water Conservation Plan. We have asked that they put up flyers around the park to notify customers about the drought and options for conserving water. We have asked them to notify the Distribution Operator immediately if they see any leaks within the distribution system or have other issues with their water.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Blue Diamond	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
PO Box 8	Blue Diamond, NV 89004
<b>CONTACT NAME</b>	<b>TITLE</b>
LeRoy Daines	Distribution Operator
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-556-8069	utilityservicesllc@gmail.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Surface Water (Describe sources) Cottonwood Spring	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
A community that serves 85 customers.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the on-site manager about the drought and have asked them to observe the policies outlined in the most current version of their Water Conservation Plan. We have asked that they put up flyers around the community and send flyers in the mail to notify customers about the drought and options for conserving water. We have asked them to notify the Distribution Operator immediately if they see any leaks within the distribution system or have other issues with their water.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Bonnie Springs, Old Nevada	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
1 Gunfighter Lane	Blue Diamond, NV 89004
<b>CONTACT NAME</b>	<b>TITLE</b>
LeRoy Daines	Distribution Operator
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-556-8069	utilityservicesllc@gmail.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
A recreational area and restaurant that provides service to at least 500 customers.		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the on-site manager about the drought and have asked them to observe the policies outlined in the most current version of their Water Conservation Plan. We have asked them to notify the Distribution Operator immediately if they see any leaks within the distribution system or have other issues with their water.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Camp Lady of the Snows	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
3945 W. Reno Ave, Suite I	Las Vegas, NV 89118
<b>CONTACT NAME</b>	<b>TITLE</b>
Stephanie Swain	Property Manager
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-262-9091	Stephanie@RegalLasVegas.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This residential community provides water for 60 people.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Property Manager about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked the Property Manager to send email and/or flyers to all homeowners to also make them aware of water conservation options. We have asked the Property Manager to notify the Distribution Operator immediately if the residents notice any leaks within the distribution system or have other issues with the water.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Carson City Public Works	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
3505 Butti Way	Carson City, NV. 89701
<b>CONTACT NAME</b>	<b>TITLE</b>
Darren Schulz	Public Works Director
<b>CONTACT PHONE</b>	<b>EMAIL</b>
775-283-7391	dschulz@carson.org

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input checked="" type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input checked="" type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Surface Water (Describe sources) Ash Creek, Kings Creek, Marlette Hobart lakes	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
The Consolidated Municipality of Carson City covers approximately 146 square miles and services approximately 17,400 connections.		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
<p>At this time, the drought has not had major impacts to operations, resource availability or planning activities.</p> <p>Operationally, the drought will have a significant impact on surface water availability causing more reliance on groundwater supplies. Ensuring water demand does not exceed production and meeting water quality standards, during summer months will be closely monitored. Pumping adjustment will be made as necessary and mandatory watering restriction would be implemented if conditions warrant it. Baring any major mechanical failures, Carson City does not anticipate implementing mandatory restriction in the near future but has concerns about the impact on supplies in future years if the drought continues.</p> <p>The drought has put an increased demand on resource availability including staff, equipment and available water resources. Increased temporary staffing has been added to implement a water watch program. There are</p>

increased efforts by staff to monitor and ensure standards and customers needs are met.

Planning activities and implemented programs as described in the next section have proven to be very beneficial. Carson City currently working on a regional waterline from Minden, through Douglas County and into Carson City to assist in available water supply. The transmission main is operational and the project is working its way across Carson City to the water treatment facility where it can be distributed throughout the multiple pressure zones. The final phase of this project is expected to be complete in 2017.

#### INSTRUCTIONS FOR FOLLOWING SECTION:

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Water watch program
<b>SUMMARY</b>	Daily patrols that monitoring and regulating water use.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Assigned watering days
<b>SUMMARY</b>	All customers are prescribed assigned watering days based on their odd or even address. No watering on Mondays or between 10:00 am and 6:00 pm.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Groundwater monitoring
<b>SUMMARY</b>	All production and monitoring well water levels are evaluated monthly.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Carson City Utility Action Plan
<b>SUMMARY</b>	Carson City has an approved multi-phase action plan whereby the City Manager is notified when water demand may exceed production capability or storage is at the critical levels. Operating procedures such as adjusting pressure zones, increasing water watch patrols and operating all production facilities are implemented. Watering restriction using a prioritized approach can be







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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
City of Elko	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
1751 College Avenue	Elko, NV 89801
<b>CONTACT NAME</b>	<b>TITLE</b>
Ryan Limberg	Utilities Director
<b>CONTACT PHONE</b>	<b>EMAIL</b>
775-777-7212	rlimberg@ci.elko.nv.us

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input checked="" type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
Approximately 8,000 connections in the City of Elko and surrounding area		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
Drought impacts the City of Elko's water system by reducing water levels in municipal wells and also causes a corresponding decrease in the pumping rate of those wells.

**INSTRUCTIONS FOR FOLLOWING SECTION:**

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	State approved water conservation plan
<b>SUMMARY</b>	Defines multiple measures to reduce consumption and water waste and improve conservation

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Mandatory water restrictions June 15-Sept 15
<b>SUMMARY</b>	Assigned watering days and times

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Additional measures
<b>SUMMARY</b>	After action is taken by council in the event pumping capacity or storage capacity drops below a specified level, citations will be issued

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Termination of water service
<b>SUMMARY</b>	Negligent or wasteful use of water may result in the service being terminated

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

What types of topics/issues would you like the Nevada Drought Forum to address?



**When complete, please return to:**

**William (Bill) Elliott, Division of Emergency Management**  
wellriott@dps.state.nv.us



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
City of Ely	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
501 Mill Street	Ely, Nevada 89301
<b>CONTACT NAME</b>	<b>TITLE</b>
David R. Miller	Project Manager, Basin Engineering
<b>CONTACT PHONE</b>	<b>EMAIL</b>
775-289-9800	dmiller@basineng.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input checked="" type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
Serving the City of Ely and surrounding area within White Pine County. There are 2,413 total customers. 2,219 customers within City limits, and 194 customers just outside of the City limits within the County.		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
There has been a higher water use earlier in the year due to the warmer weather. This has required more water wells to be turned on earlier in the year to keep up with demand.

**INSTRUCTIONS FOR FOLLOWING SECTION:**

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input checked="" type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Water Restrictions
<b>SUMMARY</b>	During high water usage in the summer, water restrictions are set into place. Restrictions are set for watering only during the morning and evening hours between 5 and 10. Watering is only allowed during these times, and only on Odd and Even days with regard to the individuals odd or even address number.

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	

<b>SUMMARY</b>	
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<b>What types of topics/issues would you like the Nevada Drought Forum to address?</b>



**When complete, please return to:**

**William (Bill) Elliott, Division of Emergency Management**  
wellriott@dps.state.nv.us



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Cold Creek Homeowners Association C/O Camco	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
PO Box 12117	Las Vegas, NV 89112
<b>CONTACT NAME</b>	<b>TITLE</b>
Richard Lewsader	Property Manager
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-531-3382	richard.lewsader@camconeveda.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
A community that provides water to 180 homeowners.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the on-site manager about the drought and have asked them to observe the policies outlined in the most current version of their Water Conservation Plan. We have asked them to send emails and flyers to all homeowners telling them about the drought and options available to help conserve water. We have asked them to notify the Distribution Operator immediately if they see any leaks within the distribution system or have other issues with their water.





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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Desert Mirage Homeowners Association	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
PO Box 2568	Pahrump, NV 89041
<b>CONTACT NAME</b>	<b>TITLE</b>
Jeff Horvath	Board Member - President
<b>CONTACT PHONE</b>	<b>EMAIL</b>
775-764-7204	carguy1057@yahoo.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This residential community serves 230 water users.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Board President about the drought and have asked them to observe the policies outlined in the most current version of their Water Conservation Plan. We have asked them to send emails and/or flyers to all homeowners telling them about the drought and options available to help conserve water. We have asked the President to notify the Distribution Operator immediately if they see any leaks within the distribution system or have other issues with their water.

**From:** rushky@charter.net  
**Sent:** Thursday, May 14, 2015 9:03 PM  
**To:** William D. Elliott  
**Cc:** rroman@co.douglas.nv.us  
**Subject:** Drought Forum

Mr. Elliott,

I'm out of the office until Monday, and was unable to recover the form submitted in your email.

Here is a quick summary of the actions taken or to be taken by Douglas County to address the drought conditions:

Our first step was to mail voluntary water conservation requests to all of our water customers. Our utilities staff are also working with the HOAs and landscapers for the larger developments to reduce water usage.

Our next step involved completing a drought assessment of our lake intakes within the Tahoe basin. Staff will be presenting to the Board of County Commissioners an emergency drought contingency plan for the County's Lake systems in the event the Lake level falls below a predetermined level. This plan will consist of mandatory water conservation measures and possible improvements to the lake intake pumping facilities. However, at this time, it is anticipated that the water system demands for the County's CaveRock/Skyland and Zephyr Water Utility District water systems can be met this summer.

A similar assessment will be performed for County's water systems in the Carson Valley. Historical static and dynamic pumping water levels will be evaluated to determine the impact on system capacities as a result of the ongoing drought. The findings and recommendations will then be presented to the Board of County Commissioners. If determined necessary, the County would then enact it's water conservation plan accordingly.

Again, I apologize for the format.

Carl Ruschmeyer, PE  
Public Works Director  
[cruschmeyer@co.douglas.nv.us](mailto:cruschmeyer@co.douglas.nv.us)  
(775) 782-6227



## NEVADA DROUGHT FORUM

### SUMMARY: Current and Planned Actions Related to Drought

About Nevada's Drought Forum  
drought.nv.gov

Questions about the Form  
chunt@gov.nv.gov  
1-775-684-5670

Under the [Governor's Executive Order 2015-03](#), issued April 8, 2015, state agencies, municipal water providers and federal agencies are requested to provide a summary of current and planned actions related to drought. This information must be provided to the Nevada Drought Forum by no later than **May 15, 2015**. Please use the following form to submit your agency's information.

#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Eastland Heights Water Association	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
1937 Catalpa Trail	Las Vegas, NV 89108
<b>CONTACT NAME</b>	<b>TITLE</b>
LeRoy Daines	Distribution Operator
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-556-8069	utilityservicesllc@gmail.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This residential community serves 400 water users.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Board President about the drought and have asked them to observe the policies outlined in the most current version of their Water Conservation Plan. We have asked them to send emails and flyers to all homeowners telling them about the drought and options available to help conserve water. We have asked the President to notify the Distribution Operator immediately if they see any leaks within the distribution system or have other issues with their water.



## NEVADA DROUGHT FORUM

### SUMMARY: Current and Planned Actions Related to Drought

About Nevada's Drought Forum  
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1-775-684-5670

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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Equestrian Estates Co-Op Water Association	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
3945 W. Reno Ave, Suite I	Las Vegas, NV 89118
<b>CONTACT NAME</b>	<b>TITLE</b>
Teri Hilton	Property Manager
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-262-9091	Teri@RegalLasVegas.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This residential community serves 108 water users.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Property Manager about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked them to send emails and flyers to all homeowners telling them about the drought and options available to help conserve water. We have asked the Property Manager to notify the Distribution Operator immediately if the homeowners see any leaks within the distribution system or have other issues with their water.

**Effective June 1, 2015, until further notice**, due to severe drought conditions, Eureka County is implementing **Stage 2 Drought Contingency Plan** for its public water systems including Eureka Town Water, Crescent Valley Town Water, and Devil's Gate GID District 1 & 2.

**What is Stage Two?** When the water system is experiencing drought conditions, the following measures are necessary: Customers should avoid over-watering lawns. Position sprinklers so that no water runs off the lawn areas and into curbs, gutters or roadways. Guidelines for efficient lawn watering are found at:

<http://www.co.eureka.nv.us/public/water%20conserv%20plan%202014.pdf>

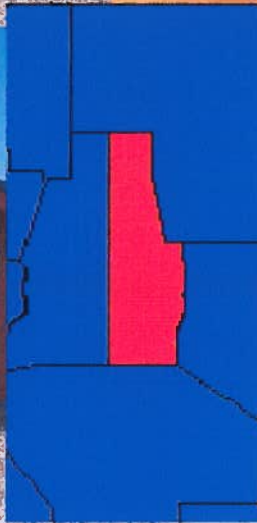
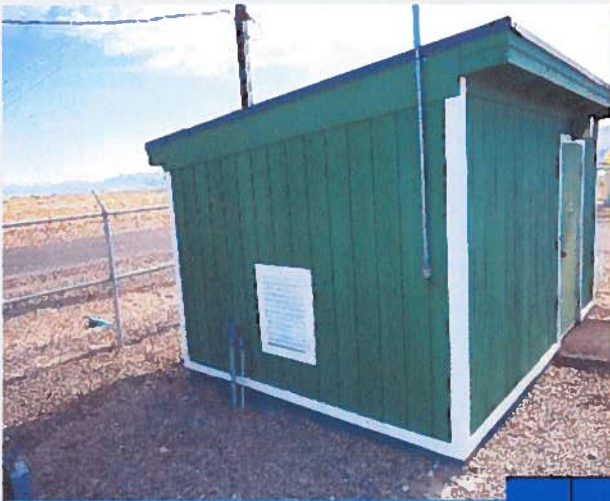
**What is Stage Three? If drought conditions persist, Stage Three measures will be implemented and customers will be notified.** Stage Three measures are necessary when the water systems are experiencing water shortages due to a drought, limitations in water storage, or water transmission equipment failures or malfunctions. Restricted watering will use the following "odd/even" system adapted to meet the unique attributes of the water system. Residential and commercial customers with odd addresses will restrict watering lawns and outside landscaping to Tuesdays and Saturdays. Residential and commercial customers with even addresses will water on Wednesday and Sundays. There will be no landscape watering on Mondays, Thursdays and Fridays. No landscape watering will be permitted between the hours of 11:00 AM and 4:00 PM, or during windy conditions.

**Please contact Public Works for more information at (775) 237-5372.**



## **Eureka County, Nevada**

### **Joint Water Conservation Plan for Town of Eureka Water System Devil's Gate GID District #1 and District #2 Crescent Valley Town Water System**



## **Eureka County**

### **Joint Water Conservation Plan for Town of Eureka Water System Devil's Gate GID District #1 and District # 2 Crescent Valley Town Water System**

#### **Summary**

Eureka County Public Works (ECPW) is dedicated to promoting water conservation through public outreach, customer education and responsible stewardship. ECPW recognizes the benefits of wise water use including:

- Cost savings - Minimizing the amount of water pumped, stored, and distributed reduces operating costs and saves money for ECPW and its customers.
- Wastewater treatment benefits – Reduction of interior water use cuts wastewater loads on sewer treatment facilities and customer septic tanks, resulting in reduced treatment costs and lessened environmental impact
- Environmental benefits – Water removed from an aquifer for human consumption could be conserved for other purposes and future use.
- Water supply limitations – Water conservation can help stretch existing groundwater resources
- Energy savings – Reducing water production will save energy and reduce greenhouse gas emissions
- Regulatory compliance – Nevada Revised Statutes (NRS 540.121 through 540.151) require “suppliers of water” to adopt a water conservation plan
- Customer benefits – Customers who conserve water may enjoy lower water bills and possibly lower wastewater and energy bills

#### **Water systems**

Eureka County Public Works (ECPW) manages and maintains three water systems, the Town of Eureka, Devil's Gate (District #1 and #2), and Crescent Valley. The Town of Eureka system serves 323 customers, both residential and commercial. The Devil's Gate system serves 60 residential and commercial customers in Diamond Valley. Crescent Valley Town Water serves 204 residential and commercial customers.

The Town of Eureka system is gravity fed by a series of storage tanks. The Town's water source currently includes two wells in Diamond Valley and 10 springs south of town. Water supplied by the wells is pumped into three storage tanks with a combined storage capacity of 2,430,600 gallons.

Devil's Gate is a residential area located in Diamond Valley, approximately 8 miles from the Town of Eureka, situated north and south of Highway 50. The gravity-fed water

system consists of two main wells and a 405,300 gallon water storage tank near the junction of U.S. 50 and SR 278. Eureka Town Water serves as the backup for Devil's Gate. The two wells pump into the tank. Supplemental water from the Eureka Town system supplies the Devil's Gate tank when triggered by a low water sensor.

The Town of Crescent Valley is located 135 miles north of the Town of Eureka, 20 miles south of Interstate 80. The Crescent Valley water is supplied from two main wells with back-up generators. The wells pump through an arsenic treatment plant to remove arsenic before filling the three tanks which store a total of 660,000 gallons of water to supply the gravity-fed system.

### **Water Conservation Plan Elements**

Methods of public education (NRS 540.141 1. (a) (1) and (2))

This water conservation plan will be provided to customers of the Eureka County water systems in an effort to increase public awareness of the limited supply of water in this state and the need to conserve water. The information and educational resources contained herein are intended to give system customers the basic tools to evaluate and improve interior and exterior water use practices. Guidance for determining appropriate lawn watering schedules, checking for household leaks, and estimating how much water can be saved by installing water efficient residential plumbing fixtures is provided in the Appendix. In addition ECPW provides customers with water conservation information in their bills, and a periodic information bulletin is inserted into the utility bill to promote effective communication with customers.

ECPW also encourages customers to choose landscape design and planting that promote water conservation, and to redesign existing landscaping to reduce the size of lawn areas and encourage the use of plants that are adapted to arid and semiarid climates.

New construction landscapes and irrigation systems should be designed in accordance with the seven principles of water efficient (xeriscape) landscaping.

- Proper planning and design for local climates
- Soils analysis
- Appropriate plant selection
- Practical turf areas
- Efficient irrigation
- Use of mulches
- Appropriate maintenance



See “The seven principles of xeriscaping” in the Appendix. Information about evapotranspiration rates for Eureka County is included along with a lawn care guide for northern Nevada, and other helpful information related to use of water outdoors.

#### Specific conservation measures (NRS 540.141 (b))

Each water system is metered. The pump meters are read daily in order to monitor excessive water use and take immediate action. By integrating water infrastructure needs into the capital improvement plan, and allocating funds to address the needs, the County strives to maintain and improve the efficiency of transmission which in turn promotes management and conservation of water.

#### Management of water (NRS 540.141 (c))

In an effort to promote water conservation and reduce water waste within these water systems, ECPW has programs in place to identify and reduce system leakage, inaccuracies in water meters and to monitor distribution system pressures. Public Works acts immediately to repair leaks as soon as they are identified. They replace old water mains, service lines as funding is available. Defective meters are replaced immediately. Water operators check each system twice a day, every day, 365 days per year. Defective equipment, when identified, is immediately replaced. Well water levels are measured monthly and monitored continuously via SCADA computer software. Telemetry assists the water operators to monitor tank levels and pump operation, and alerts them to potential water system malfunctions.

The Town of Eureka does not reuse effluent from its wastewater systems. Devil’s Gate GID and Crescent Valley do not have wastewater systems.

#### Drought Contingency Plan (NRS 540.141 (d))

The following contingency plan in the event of drought conditions will help assure the adequate supply of potable water. This plan specifies four stages of water conservation measures to be implemented based on the severity of the need to conserve.

##### Stage One

During normal water system operating conditions, i.e., no drought, customers should observe every day, “common sense” water conservation measures to help keep customer bills low and reduce the burden on the water systems. Each water system has its own ordinance. The three systems require all residential and commercial customers have a water shutoff valve installed between the water meter and the residence or commercial building. This will allow customers to shut off water service when needed to repair leaks or perform other plumbing maintenance. Eureka Public Works should only be called out to shut off water services during emergencies. All customers are encouraged to perform a home

or business water audit and install water saving devices such as low flow showerheads, faucet aerators, toilet tank bags, etc. ECPW will provide information on retrofitting home fixtures to customers on request. Many tips for conserving water and guidelines for performing home water audits are contained in Appendix A.

#### Stage Two

These measures should be implemented when the water system is experiencing drought conditions. Customers should avoid over watering lawns. Sprinklers should be positioned so that no water is running off of the lawn areas and into curbs or gutters. Guidelines for watering lawns, including how to measure water applied and determine how many minutes a week to water during each month of the growing season are contained in Appendix B.

#### Stage Three

These measures will be implemented when the water systems are experiencing water shortages due to a drought, limitations in water storage, or water transmission equipment failures or malfunctions. Restricted watering will use the following “odd/even” system adapted to meet the unique attributes of the water system. Residential and commercial customers with odd addresses will restrict watering lawns and outside landscaping to Tuesdays and Saturdays. Residential and commercial customers with even addresses will water on Wednesdays and Sundays. There will be no landscape watering on Mondays, Thursdays and Fridays. No landscape watering will be permitted between the hours of 11:00 AM and 4:00 PM, or during windy conditions.

#### Stage Four

These watering restrictions will be implemented in the event of emergencies or cataclysmic failure of water system components or equipment. No outside landscape watering will be permitted. Eureka County Public Works shall restrict other water usage as required. In the event of an emergency, it may be necessary to go immediately from Stage 1 to Stage 4.

Plan schedule, review and revision (NRS 540.141 (e) and (f))

Implementation of this Plan is ongoing. ECPW will periodically review the plan and evaluate the effectiveness of the measures contained herein. The plan may be revised to reflect changing needs and conditions of the water systems. A copy of the plan will be available for inspection by members of the public during normal office hours at the ECPW office. A copy of the plan will be provided to new customers at time of application. The Plan will be posted on the Eureka County Public Works website, and will include links to the web-based references cited. Interested persons may submit written views and recommendations on the plan.

#### Estimate of amount of water conserved annually (NRS 540.141 1 (g))

The average residential service in Eureka uses 528 gallons per day during the period from April to October. By implementing conservation measures as described, it is estimated that the average residential customer save 52 gallons per day, or about 10% of current use, by implementing the conservation measures in the Plan.

#### Conservation oriented rate structures analysis (NRS 540.141 2. (a) and (b))

Currently, the rate structure for all three ECPW water systems is the Uniform Block Rate. The unit price for water used (above the amount of gallons included under the base rate) remains the same, regardless of how much water is consumed. This rate structure encourages a reasonable amount of water conservation, since customers pay more for higher consumption. However, if changing conditions warrant, ECPW may evaluate water rate structures that promote water conservation more effectively, such as Increasing Block Rates. With Increasing Block Rates, the unit price for water increases as water consumption increases.

#### Incentives (NRS 540.151 1. (a),(b), and (c))

The water conservation plan of Eureka County Public Works provides incentives to encourage water conservation in its service area, to retrofit existing structures with plumbing fixtures designed to conserve water, and to install water wise landscaping. The bulletin that is provided to customers on a periodic basis contains information and website references to encourage conservation by customers within the service area. The information bulletin also communicates to customers that it is their responsibility to conserve water. The bulletin and website references also contain information on choosing water saving plumbing devices and installing landscaping that uses less water.

#### Implementation

The final Water Conservation Plan was adopted by the respective boards. Please refer to the "Attest" signature page for official adoption documentation and the date of adoption.

## **Appendix**

### **Public Education Materials**

The following information and educational resources are made part of this plan. The titles are listed below, and they are attached and made part of the Appendix. To the extent possible, these resources will be posted or linked on the Eureka County Public Works website.

#### **Overall water conservation**

100 Ways to Conserve Water ([www.wateruseitwisely.com](http://www.wateruseitwisely.com))

#### **Indoor water conservation**

Household Water Saving Tips

Conducting a Household Water Audit

Water Sense Labeled Toilets (EPA)

Water Sense Labeled Bathroom Sink Faucets (EPA)

#### **Outdoor water conservation**

The Seven Principles of Xeriscape

The All Seeing All Knowing Lawn Care Manual (University of Nevada Cooperative Extension)

Notes for customers without sprinkler systems (related to Lawn Care Manual)

Eureka County Lawn Evapotranspiration Rates and Seasonal Distribution

Tips for the Home Gardener for Efficient Water Use

Water Conservation and Washing Vehicles

## RESOLUTION

### TO ADOPT A JOINT WATER CONSERVATION PLAN FOR THE TOWN OF EUREKA WATER SYSTEM, DEVIL'S GATE GID DISTRICT #1 AND DISTRICT #2, AND CRESCENT VALLEY TOWN WATER SYSTEM

WHEREAS, the Board of County Commissioners wish to adopt a joint water conservation plan for the Town of Eureka, Devil's Gate GID District 1 & 2, and the Town of Crescent Valley; and

WHEREAS, Eureka County is dedicated to promoting water conservation through public outreach, customer education and responsible stewardship; and

WHEREAS, the water conservation plan will be provided to customers of Eureka County water systems in an effort to increase public awareness of the limited supply of water in Nevada and the need to conserve water; and

WHEREAS, Eureka County has programs in place to identify and reduce water system leakage, inaccuracies in water meters and to monitor distribution system pressures; and


WHEREAS, Eureka County acts immediately to repair leaks as soon as they are identified and water operators check each system twice a day;

NOW THEREFORE BE IT RESOLVED the Board of Eureka County Commissioners, who are also the Board of Directors of the Devil's Gate GID Board that:

1. The joint water conservation plan for the Town of Eureka, Devil's Gate GID District #1 & 2, and the Crescent Valley Town be adopted.
2. The joint water conservation plan be available and distributed to users in the Town of Eureka, Devil's Gate GID District 1 & 2 and Crescent Valley Town water systems.

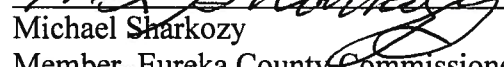
Adopted this 19th day of September, 2014.

  
J.J. Goicoechea  
Chairman, Eureka County Commissioners  
Vice Chair, Devil's Gate GID Board

  
J.P. "Jim" Ithurrealde  
Vice Chair, Eureka County Commissioners  
Chairman, Devil's Gate GID Board

Attest:

  
Jackie Berg, Executive Asst.

  
Michael Sharkey  
Member, Eureka County Commissioners  
Member, Devil's Gate GID Board

# Nevada Division of Water Resources Water Conservation Plan Approval Letter

BRIAN SANDOVAL  
Governor

STATE OF NEVADA



LEO DROZDOFF  
Director

JASON KING, P.E.  
State Engineer

**DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
DIVISION OF WATER RESOURCES**

901 South Stewart Street, Suite 2002  
Carson City, Nevada 89701-6250  
(775) 684-2800 • Fax (775) 684-2811  
(800) 992-0900 (In Nevada Only)  
<http://water.nv.gov>

September 10, 2014

Ron Damele, Public Works Director  
Eureka County Public Works  
701 South Main Street  
Eureka, Nevada 89316

Re: Eureka County, Nevada Joint Water Conservation Plan for Town of Eureka, Devil's Gate GID Districts No. 1 and 2, and Crescent Valley Town Water Systems

Dear Mr. Damele:

Thank you for your submittal of the Eureka County, Nevada Joint Water Conservation Plan for Town of Eureka, Devil's Gate GID Districts No. 1 and 2, and Crescent Valley Town Water Systems. The plan was received by the Water Planning Section of the Nevada Division of Water Resources on August 27, 2014, and has been reviewed for compliance with the applicable statutes. The plan contains the statutory elements required under Nevada Revised Statutes (NRS) chapter 540 and is hereby approved.

The next update to the water conservation plan will be due in 2019 as required by NRS §540.131(4a). If you have any questions, please contact me at (775) 684-2884 or [kadavis@water.nv.gov](mailto:kadavis@water.nv.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Kim A. Davis".

Kim A. Davis, P.E.  
Water Planning Engineer

KAD/sw  
cc: Abigail Johnson, via E-mail

# 100 Ways To Conserve Water

<http://www.wateruseitwisely.com/100-ways-to-convert/index.php>



***There are a number of ways to save water, and they all start with you.***

- **#2**

When washing dishes by hand, don't let the water run while rinsing. Fill one sink with wash water and the other with rinse water.

- **#3**

Some refrigerators, air conditioners and ice-makers are cooled with wasted flows of water. Consider upgrading with air-cooled appliances for significant water savings.

- **#4**

Adjust sprinklers so only your lawn is watered and not the house, sidewalk, or street.

- **#5**

Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.

- **#6**

Choose shrubs and groundcovers instead of turf for hard-to-water areas such as steep slopes and isolated strips.

- **#7**

Install covers on pools and spas and check for leaks around your pumps.

- **#8**

Use the garbage disposal sparingly. Compost vegetable food waste instead and save gallons every time.

- **#9**

Plant in the fall when conditions are cooler and rainfall is more plentiful.



*For cold drinks keep a pitcher of water in the refrigerator instead of running the tap. This way, every drop goes down you and not the drain.*

- **#11**

Monitor your water bill for unusually high use. Your bill and water meter are tools that can help you discover leaks.

- **#12**

Water your lawn and garden in the morning or evening when temperatures are cooler to minimize evaporation.

- **#13**

Wash your fruits and vegetables in a pan of water instead of running water from the tap.

- **#14**

Spreading a layer of organic mulch around plants retains moisture and saves water, time and money.

- **#15**

Use a broom instead of a hose to clean your driveway and sidewalk and save water every time.

- **#16**



If your shower fills a one-gallon bucket in less than 20 seconds, replace the showerhead with a water-efficient model.

- **#17**

Collect the water you use for rinsing fruits and vegetables, then reuse it to water houseplants.

- **#18**

If water runs off your lawn easily, split your watering time into shorter periods to allow for better absorption.

- **#19**

We're more likely to notice leaks indoors, but don't forget to check outdoor faucets, sprinklers and hoses for leaks.

- **#20**

If you have an automatic refilling device, check your pool periodically for leaks.

- **#21**

Check the root zone of your lawn or garden for moisture before watering using a spade or trowel. If it's still moist two inches under the soil surface, you still have enough water.

- **#22**

When buying new appliances, consider those that offer cycle and load size adjustments. They're more water and energy efficient.

- **#23**

Shorten your shower by a minute or two and you'll save up to 150 gallons per month.

- **#24**

Upgrade older toilets with water efficient models.

- **#25**

Adjust your lawn mower to a higher setting. A taller lawn shades roots and holds soil moisture better than if it is closely clipped.

- **#26**

When cleaning out fish tanks, give the nutrient-rich water to your plants.

- **#27**

Use sprinklers for large areas of grass. Water small patches by hand to avoid waste.



*Put food coloring in your toilet tank. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it can save up to 1,000 gallons a month.*

- **#29**

When running a bath, plug the tub before turning the water on, then adjust the temperature as the tub fills up.

- **#30**

Walkways and patios provide space that doesn't ever need to be watered. These useful "rooms" can also add value to your property.

- **#31**

Collect water from your roof to water your garden.

- **#32**

Designate one glass for your drinking water each day or refill a water bottle. This will cut down on the number of glasses to wash.

- **#33**

Rather than following a set watering schedule, check for soil moisture two to three inches below the surface before watering.

- **#34**

Install a rain sensor on your irrigation controller so your system won't run when it's raining.

- **#35**

Don't use running water to thaw food. Defrost food in the refrigerator for water efficiency and food safety.



*Use drip irrigation for shrubs and trees to apply water directly to the roots where it's needed.*

- **#38**

Reduce the amount of lawn in your yard by planting shrubs and ground covers appropriate to your site and region.

- **#39**

When doing laundry, match the water level to the size of the load.

- **#40**

Teach your children to turn off faucets tightly after each use.

- **#41**

Remember to check your sprinkler system valves periodically for leaks and keep the sprinkler heads in good shape.



*Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.*

- **#43**

Soak pots and pans instead of letting the water run while you scrape them clean.

- **#44**

Don't water your lawn on windy days when most of the water blows away or evaporates.

- **#45**

Water your plants deeply but less frequently to encourage deep root growth and drought tolerance.

- **#46**

Know where your master water shut-off valve is located. This could save water and prevent damage to your home.

- **#47**

To decrease water from being wasted on sloping lawns, apply water for five minutes and then repeat two to three times.

- **#48**

Group plants with the same watering needs together to avoid overwatering some while underwatering others.

- **#49**

Use a layer of organic material on the surface of your planting beds to minimize weed growth that competes for water.

- **#50**

Use a minimum amount of organic or slow release fertilizer to promote a healthy and drought tolerant landscape.

- **#51**

Trickling or cascading fountains lose less water to evaporation than those spraying water into the air.

- **#52**

Use a commercial car wash that recycles water.

- **#53**

Avoid recreational water toys that require a constant flow of water.

- **#54**

Turn off the water while brushing your teeth and save 25 gallons a month.

- **#55**

Use a rain gauge, or empty tuna can, to track rainfall on your lawn. Then reduce your watering accordingly.

- **#56**

Encourage your school system and local government to develop and promote water conservation among children and adults.

- **#57**

Learn how to shut off your automatic watering system in case it malfunctions or you get an unexpected rain.

- **#58**

Set a kitchen timer when watering your lawn or garden to remind you when to stop. A running hose can discharge up to 10 gallons a minute.

- **#59**

If your toilet flapper doesn't close after flushing, replace it.

- **#60**

Make sure there are water-saving aerators on all of your faucets.



*Next time you add or replace a flower or shrub, choose a low water use plant for year-round landscape color and save up to 550 gallons each year.*

- **#62**

Install an instant water heater near your kitchen sink so you don't have to run the water while it heats up. This also reduces energy costs.

- **#63**

Use a grease pencil to mark the water level of your pool at the skimmer. Check the mark 24 hours later to see if you have a leak.

- **#64**

If your dishwasher is new, cut back on rinsing. Newer models clean more thoroughly than older ones.

- **#65**

Use a trowel, shovel, or soil probe to examine soil moisture depth. If the top two to three inches of soil are dry it's time to water.

- **#66**

If installing a lawn, select a turf mix or blend that matches your climate and site conditions.

- **#67**

When you save water, you save money on your utility bills too. Saving water is easy for everyone to do.

- **#68**

When the kids want to cool off, use the sprinkler in an area where your lawn needs it the most.

- **#69**

Make sure your swimming pools, fountains, and ponds are equipped with recirculating pumps.

- **#70**

Bathe your young children together.

- **#71**

Consult with your local nursery for information on plant selection and placement for optimum outdoor water savings.

- **#72**

Winterize outdoor spigots when temperatures dip below freezing to prevent pipes from leaking or bursting.

- **#73**

Insulate hot water pipes for more immediate hot water at the faucet and for energy savings.

- **#74**

Wash your car on the lawn, and you'll water your lawn at the same time.



*Drop your tissue in the trash instead of flushing it and save water every time.*

- **#76**

Direct water from rain gutters and HVAC systems toward water-loving plants in the landscape for automatic water savings.

- **#77**

Make suggestions to your employer about ways to save water and money at work.

- **#78**

Support projects that use reclaimed wastewater for irrigation and industrial uses.

- **#79**

Use a hose nozzle or turn off the water while you wash your car. You'll save up to 100 gallons every time.

- **#80**

Share water conservation tips with friends and neighbors.

- **#81**

If your toilet was installed before 1992, reduce the amount of water used for each flush by inserting a displacement device in the tank.

- **#82**

Setting cooling systems and water softeners for a minimum number of refills saves both water and chemicals, plus more on utility bills.

- **#83**

Washing dark clothes in cold water saves both on water and energy while it helps your clothes to keep their colors.

- **#84**

Leave lower branches on trees and shrubs and allow leaf litter to accumulate on the soil. This keeps the soil cooler and reduces evaporation.

- **#85**

Report broken pipes, open hydrants and errant sprinklers to the property owner or your water provider.

- **#86**

Let your lawn go dormant during the summer. Dormant grass only needs to be watered every three weeks or less if it rains.

- **#87**

Plant with finished compost to add water-holding and nutrient-rich organic matter to the soil.

- **#88**



Use sprinklers that deliver big drops of water close to the ground. Smaller water drops and mist often evaporate before they hit the ground.

- **#89**

Listen for dripping faucets and running toilets. Fixing a leak can save 300 gallons a month or more.

- **#90**

Water only when necessary. More plants die from over-watering than from under-watering.

- **#91**

One more way to get eight glasses of water a day is to re-use the water left over from cooked or steamed foods to start a scrumptious and nutritious soup.



*Adjust your watering schedule each month to match seasonal weather conditions and landscape requirements.*

- **#93**

Turn off the water while you wash your hair to save up to 150 gallons a month.

- **#94**

Wash your pets outdoors in an area of your lawn that needs water.

- **#95**

When shopping for a new clothes washer, compare resource savings among Energy Star models. Some of these can save up to 20 gallons per load, and energy too.

- **#96**

Apply water only as fast as the soil can absorb it.

- **#97**

Aerate your lawn at least once a year so water can reach the roots rather than run off the surface.

- **#98**

When washing dishes by hand, fill the sink basin or a large container and rinse when all of the dishes have been soaped and scrubbed.

- **#99**

Catch water in an empty tuna can to measure sprinkler output. One inch of water on one square foot of grass equals two-thirds of a gallon of water.

- **#100**

Turn off the water while you shave and save up to 300 gallons a month.

- **#101**

When you give your pet fresh water, don't throw the old water down the drain. Use it to water your trees or shrubs.

- **#102**

If you accidentally drop ice cubes when filling your glass from the freezer, don't throw them in the sink. Drop them in a house plant instead.

- **#103**

To save water and time, consider washing your face or brushing your teeth while in the shower.

- **#104**

While staying in a hotel or even at home, consider reusing your towels.

- **#105**

When backflushing your pool, consider using the water on your landscaping.

- **#106**

For hanging baskets, planters and pots, place ice cubes under the moss or dirt to give your plants a cool drink of water and help eliminate water overflow.

- **#107**

Throw trimmings and peelings from fruits and vegetables into your yard compost to prevent using the garbage disposal.

- **#108**

When you have ice left in your cup from a take-out restaurant, don't throw it in the trash, dump it on a plant.

- **#109**

Have your plumber re-route your gray water to trees and gardens rather than letting it run into the sewer line. Check with your city codes, and if it isn't allowed in your area, start a movement to get that changed.

- **#110**

Keep a bucket in the shower to catch water as it warms up or runs. Use this water to flush toilets or water plants.

- **#111**

When you are washing your hands, don't let the water run while you lather.

<http://www.wateruseitwisely.com/100-ways-to- conserve/index.php>

# Household Water Saving Tips

Nevadans have access to an abundance of water much of the time, so the importance of clean water is often overlooked. For most of us, water use is a habit. We are accustomed to having water available at the twist of a faucet. We usually do not think about how much water we use.

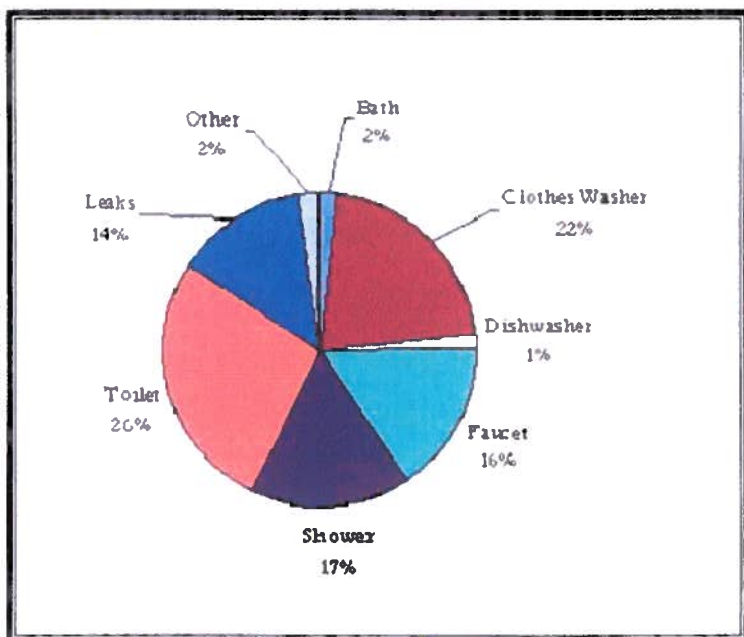
## AVERAGE DAILY WATER USE

Be aware of how much water you use! Awareness is the first step in conservation. The average US citizen uses almost **100** gallons of water per person per day on the following activities:

- Toilet
- Bathing & hygiene
- Laundry
- Kitchen
- Housekeeping
- Outdoor Activities

Indoor water use by fixture is shown in the following graph:

## Indoor Per Capita Use by Fixture Source: AWWA, 1999



You can determine your average daily water use by conducting a household water audit. See [Conducting a Household Water Audit](#)

## **WATER SAVINGS**

The amount of savings depends on current water consumption habits, water, sewer and energy costs, current flow rates of fixtures and flush volumes of toilets, system pressure, and the amount of water leakage through fittings and toilets. Water can be conserved by making improvements in the home or by modifying behavior.

### **Retrofit or Replace Water Fixtures**

Water-saving devices are economical and permanent. Low-flow showerheads and faucet aerators save valuable water and energy used to heat water without requiring changes in personal water use habits. The following chart highlights how much water can be conserved by installing water-saving equipment in place of conventional plumbing fixtures, fittings and appliances.

<b>Conventional Fixture/Appliance</b>	<b>Water Use (gallons)</b>	<b>Water Saving Fixture/Appliance</b>	<b>Water Use (gallons)</b>	<b>Water Savings (gallons)</b>
Vintage Toilet*	4 - 6 per flush	Low Consumption Toilet***	1.6 per flush	2.4 - 4.4 per flush
Conventional Toilet**	3.5 per flush	Low Consumption Toilet***	1.6 per flush	1.9 gal/flush
Conventional Showerhead*	3-10 per min	Low-Flow Showerhead	2-2.5 per min	0.5 - 8 per min
Faucet Aerator*	3-6 per min	Flow Regulating Aerator	0.5-2.5 per min.	0.5- 5.5 per min
Top-Loading Washer	40-55 per load	Front-Loading Washer	22-25 per load	15 - 33 per load

\* Manufactured before 1978

\*\* Manufactured from 1978 to 1993

\*\*\* Manufactured since January 1, 1994

### **Repair All Leaks**

A dripping faucet is more than annoying...it is expensive. Even small leaks can waste significant amounts of water. Hot water leaks are a waste of water and of the energy used to heat the water.

Leaks inside the toilet can waste up to 200 gallons of water a day. Toilet leaks can be detected by adding a few drops of food coloring to water in the toilet tank. If the colored water appears in the bowl, the toilet is leaking.

If you have a leaking faucet or toilet, stop pouring money down the drain and repair it.

## **How to Save Water in The Bathroom**

- When constructing a new home or remodeling your bathroom, install low consumption (1.6 gal/flush) toilets.
- Place a weighted plastic one-half gallon jug or a toilet dam in the tanks of conventional toilets to displace and save water with each flush.
- Install low-flow aerators and showerheads. They are inexpensive, easy to install, and save water and energy.
- Do not let the faucet flow while brushing your teeth or shaving. Use a glass of water for rinsing teeth.
- Take showers instead of tub baths. Consider bathing small children together.
- If your shower has a single-handle control or shut off valve, turn off the flow while soaping or shampooing.
- Leaking diverter valves (valves which divert water from the tub spout to the showerhead) should be replaced.

## **How to Save Water in The Kitchen And Laundry Room**

- Refrigerate a pitcher of drinking water instead of letting a faucet flow until the water is cold enough to drink.
- Use a dishpan or plug the sink for washing and rinsing dishes. Install a low-flow aerator on all faucets.
- Do not pre-rinse dishes prior to loading in a dishwasher. Prerinsing is an unnecessary and wasteful use of water.
- Operate the washing machine and dishwasher only when they are fully loaded.
- Use the proper water level or load size selection on the washing machine.
- When purchasing a washing machine or dishwasher, consider water consumption as well as energy efficiency. Most manufacturers now provide this information to consumers.

## **How to Save Water Outside The Home**

Watering of lawns and gardens can double normal household water use during the hot, dry summer months. At standard household water pressures, a garden hose will discharge up to 10 gallons of water per minute. To apply an inch of water to 1,000 square feet of lawn or garden requires close to 1,000 gallons of water.

Watering should be limited to gardens, and newly planted lawns and landscaped areas. Established lawns and landscape plantings will usually survive without watering. Inadequate watering encourages shallow root growth and increases the risk of mortality. When water is scarce, your community or individual water supply should be reserved for your most essential needs.

- Equip your hose with an automatic shut-off nozzle.
- Use a broom, not a hose, to clean driveways, steps and sidewalks.
- Water your garden during the coolest part of the day. Do not water on windy days.
- Use mulch around shrubs and garden plants to reduce evaporation from the soil surface and cut down on weed growth.

Source: Rural Community Assistance Corp.

## CONDUCTING A HOUSEHOLD WATER AUDIT

### WHAT IS A HOUSEHOLD WATER AUDIT?

A household water audit is an assessment of how much water is used and how much water can be saved in the home. Conducting a water audit involves calculating water use and identifying simple ways for saving water in the home.

### WHAT ARE THE BENEFITS OF CONDUCTING A WATER AUDIT?

Conducting a water audit can help you save money by reducing your home water bill (and sewer bill if you are connected to a public sewer system). Conducting a water audit will make you aware of how you use your water and help to identify ways you can minimize water use by implementing certain conservation measures. It is possible to cut your water usage by as much as 30 percent by implementing simple conservation measures and without drastically modifying your lifestyle.

### HOW DO I CALCULATE WATER USAGE IN MY HOME?

It is important to realize that water use throughout the year often varies with the season. Most people use more water in the warmer months for gardening, washing cars, and other outdoor uses. If you conduct your water audit in the winter or fall, you should still consider the additional water you use in the summer months. The American Water Works Association (AWWA) estimates that the average indoor water use per person is 94 gallons of water per day; this does not take into account outdoor water use (watering lawns, washing cars).

#### Calculating Water Use From Your Water Bill



If you obtain water from a community water system, you probably receive a water bill that tells you how much water you use. Many water utilities provide customers with bills that contain information regarding the amount of water consumed and average daily consumption during the billing period. If the average daily consumption is not provided, you can calculate it by dividing the total amount of water used by the number of days in the billing period. Determine whether your water is measured in cubic meters ( $m^3$ ), cubic feet ( $ft^3$ ), gallons (gal), or liters (L) and convert to gallons.

For converting into gallons, use the following conversion factors:

$$m^3 \times 264 = \text{gal}$$

$$ft^3 \times 7.48 = \text{gal}$$

$$L \times 0.264 = \text{gal}$$

There are several conversion tools available on the Internet that can be used to make your calculations easier. (<http://www.onlineconversion.com/volume.htm> or <http://www.mathconnect.com/volume1.htm>)

### **Calculating Water Use With A Meter**

If your water bill does not provide water consumption data, then you can read your water meter to obtain this information. Water meters measure the total amount of water used in your home and are usually located at the property line or on the house. The meter may measure in cubic meters, cubic feet, gallons, or liters. To obtain your water use over the course of a 24-hour day, read your meter at the same time on two consecutive days. You may want to measure water use for several days and then calculate a daily average.

### **Estimating Water Use Without A Meter**

If you do not have a water meter you can estimate your water use. It will be important to measure all water use, indoor and outdoor, to accurately estimate the quantity of water used. To determine how much you consume water in your home it is necessary to measure water flow from each fixture in your house:

- To calculate flow for faucets (indoor and outdoor) and showerheads, turn faucet to the normal flow rate that you use, and hold a container under the tap for 10 seconds and measure the quantity of water in the container. Multiply the measured quantity of water by 6 to calculate the gallons per minutes (gpm).
- To calculate flow for toilets, turn off the water supply to the toilet, mark the water line on the inside of the tank, flush, and then fill tank with water from tap. Measure the volume of water that is required to fill water back up to the water line mark on the tank and record this number. Turn water on to the toilet to resume normal use.
- If your appliances or fixtures are relatively new, you may be able to obtain the flow rate from the manufacturer's specifications. Otherwise, use the following averages:
  - Washing machine – 41 gal per use
  - Dishwashing machine – 9 gal per use

Next, measure how many times per day or how many minutes each day you use each fixture or appliance. Multiply the water flow per fixture by the minutes per day the fixture is used. Multiply the flow average for each appliance by the number of times the appliance is used each week. Don't forget to include the amount of time you use outdoor faucets each day. The [water audit spreadsheet](#) is a useful tool to evaluate water use in the home.

### **HOW DOES MY WATER USAGE RANK?**

The average Maryland citizen uses about 100 gallons of water per day. This includes indoor as well as outdoor water usage. To calculate the per person daily water usage rate, divide your daily water usage by the number of people in your home, and then look at the following chart to rate your water usage.



Gallons Per Person Per Day	Rank	Comments
<80 gal/day	Excellent	Wow! You use water wisely. Please share your conservation techniques with friends and neighbors.
80 – 100 gal/day	Good	Good Job! You use less water than the average Maryland citizen. Look at the conservation tips below to learn how you can conserve even more water.
101 – 120 gal/day	Fair	You use more water than the average Maryland citizen. Read the conservation tips below to learn how you can conserve water.
>120 gal/day	Poor	You use a lot of water. Read the conservation tips below to learn how to conserve water in the home.

## HOW CAN I CONSERVE WATER?

### Check for Leaks

An average of about 14 percent of residential water is lost through leaking fixtures or pipes. You still pay for this water!



An easy way to check whether you have leaks in your house is to read your water meter. Turn off all water fixtures inside and outside your home, and check the reading on your water meter. Wait one hour, ensuring that no one uses any water, and then check the meter again. If the meter reading has changed, you have a leak somewhere in your home.

### Pipes

A leaky pipe is usually pretty obvious. Visually inspect all pipes in your home and look for telltale watermarks on walls or ceilings. In the yard, the ground above the water line may stay wet continuously or water may actually flow on the surface. If a pipe is leaking, repair or replace it.

### Toilets

Leaking toilets are common and can be large sources of water loss. A leaking toilet can waste anywhere from several gallons to more than 100 gallons per day (that's over a quarter million gallons per year!). Leaking toilets are not as easily identifiable as leaking faucets. The following are clues that you may have a leak:

- If you have to jiggle the handle to make a toilet stop running;
- If you regularly hear sounds from a toilet that is not being used; or
- If a toilet periodically turns the water on ("runs") for 15 seconds or so without anyone touching the handle.

Even if your toilet does not display any of the above symptoms, it could still be leaking. These “silent leaks” can go undetected for long periods of time, potentially wasting thousands of gallons of water.

To check your toilet for silent leaks, do the following:

- Remove the cover on the toilet tank and set it aside;
- Remove any “in-tank” bowl cleaners and flush so that water in the bowl and tank are clear;
- Add dye to the tank (You can use dye capsules or tablets from the hardware store, but food coloring or powdered fruit drink mixes work well). Use enough dye so that the water has a deep hue;
- Wait for 30 minutes (Do not use toilet during this time period);
- If after 30 minutes the water in the bowl contains dye, then the toilet is leaking (A properly operating toilet will store water in the tank indefinitely without any water running into the bowl).

There are two possible culprits when a toilet leaks, the flush valve or the refill valve. To determine which valve is responsible for the leak, draw a pencil line on the inside of the tank at the water line. Turn the water supply for the toilet off (located behind the toilet) and wait for 20 to 30 minutes. If the water level remains the same, it means the leak is occurring at the refill valve (unit in the left side of the tank). If the water level falls below the pencil mark, the flush valve (unit located in the center of the tank) is leaking.

Most homeowners are capable of making their own toilet repairs. Visit your local home improvement or hardware store, purchase the parts, turn off the water supply to the toilet, and follow the directions. With a little effort, you can conserve many gallons of water and reduce your water bill at the same time.

### ***Faucets***

A leaking faucet is easily identified, but do you know how much water can be wasted from what seems like an insignificant drip?

To find out, count the number of drips per minute. You can use the following chart to estimate the amount of water waste, or you can use WaterWiser’s© [drip calculator](#).

<b>Estimated Water Loss Through Leaks</b>		
<b>Drips per minute</b>	<b>Water Wasted per Month</b>	<b>Water Wasted per Year</b>
10	43 gallons	526 gallons
30	130 gallons	1,577 gallons
60	259 gallons	3,153 gallons
120	518 gallons	6,307 gallons
300	1,296 gallons	15,768 gallons

Drips can usually be eliminated by replacing worn washers, or by tightening or repacking the faucet. Replacement washers or repair kits for washerless faucets are available at hardware or home improvement stores.

### **Retrofit/Replace Fixtures and Appliances**

Once you have repaired any leaks in your home, the next step is to evaluate the efficiency of your current fixtures and appliances. Often simple retrofits can conserve a lot of water. The following table provides average water use for conventional and low-flow appliances.

<b>Fixture/Fitting/Appliance</b>	<b>Water Use In Gallon Per</b>
Vintage Toilet*	4-6 flush
Conventional Toilet**	3.5 flush
Low Consumption Toilet***	1.6 flush
Conventional Showerhead*	3-10 min
Low-Flow Showerhead	2-2.5 min.
Faucet Aerator*	3-6 min.
Flow Regulating Aerator	0.5-2.5 min.
Top-Loading Washer	40-55 load
Front-Loading Washer	22-25 load
Dishwasher	8-12 load
* Manufactured before 1978	
** Manufactured from 1978 to 1993	
*** Manufactured since January 1, 1994	

### ***Faucets***

Retrofitting your faucet with an aerator will help save water in your home. A faucet aerator is a small circular screen that is screwed into the faucet. It reduces flow by adding air to the water, giving the sensation of more water with less volume. An aerator can reduce the flow to about 1 to 2 gpm, reducing your water use by half. Aerators are inexpensive and easy to install.

Check to see if aerators are installed on any faucets. Even if aerators have been installed, they may be older and less efficient. If the flow from your faucet exceeds 2.5 gpm, you should install a new aerator. Some older faucets may not be able to accommodate an aerator. If this is the case or if for any other reason you need to install a new faucet, you should purchase and install a faucet that uses less than 2.5 gpm.

### ***Toilets***

The best way to improve toilet efficiency is to replace an old inefficient toilet with a new toilet. Toilets made before 1993 use between 3.5 gallons per flush (gpf) and 8 gpf. New high efficiency toilets use 1.6 gpf or less. Depending on how inefficient your old toilet is, you could



reduce your water use by up to 75 percent by installing a new efficient toilet. There are other alternative toilets available, including waterless toilets and composting toilets. Fixtures must comply with Code of Maryland Regulations (your certified plumber is aware of these regulations).

You can reduce water use in older toilets easily and inexpensively by simply installing a displacement device. You can save a half-gallon per flush, which equates to, on average, 12 gallons per day per household. These devices work by displacing water in the tank, thereby reducing the water used per flush. Hardware stores sell plastic or rubber bags that can be filled with water and hung from the side of the tank, or you can place some pebbles in an empty half-gallon milk jug, or other durable container, and fill it with water. Toilet dams work in a similar fashion, by blocking off an area of the toilet tank to decrease the amount of water per flush. Another device that can be used is an early closure device that causes the flapper to close early, releasing a reduced amount of water per flush. Do not place bricks in your toilet tank as they can dissolve and cause future plumbing problems.

### ***Showerheads***

Low-volume showerheads use 2.5 gpm or less (older ones use as much as 5 gpm or more), resulting in a water savings as great as 50 percent (on average, about 38 gallons per day per household saved). Low-volume showerheads conserve water through mixing air and water and using different spray patterns to give the sensation of a higher-volume shower. Some showerheads also feature temporary shut-off valves that allow the user to turn off the water while shampooing or washing while maintaining the desired temperature the same. Conserving water in the shower will also lead to substantial energy savings, since showers use hot as well as cold water.



### ***Appliances***

On average about 22 percent of indoor residential water is used to wash clothes. The best way to improve clothes washer efficiency is to replace an old inefficient machine with a new high efficiency washer. Traditional clothes washers use approximately 41 gallons per load (gpl) and high efficiency models use a little more than half that, about 23 gpl.

Dishwashers account for only about 1.5 percent of indoor residential water use; however, more efficient models will reduce water use by about 50 percent. It is usually more efficient to wash a full load of dishes in the dishwasher rather than hand washing the same dishes in the sink.

## **Examine and Modify Your Habits**

Some of the simplest and least expensive ways to conserve water involve making small changes in how you use water. A complete water audit should involve a close look at your family's water use habits.

For example:

- Do you let the water run while you brush your teeth or shave?
- Do you run your clothes washer or dishwasher before it is fully loaded?
- Do you take long showers or baths?
- Do you use a dishpan or plug the sink when washing and rinsing dishes by hand?
- Do you pre-rinse your dishes prior to loading them in the dishwasher?
- Do you have an automatic shut-off nozzle on your outdoor hose?
- Do you water your plants during the coolest part of the day?

See our [Water Conservation Tips for Homeowners](#) for a comprehensive list of suggestions you might want to consider to help you conserve water in your home.

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**Maryland Department of the Environment  
Water Supply Program  
1800 Washington Boulevard  
Baltimore, Maryland 21230**

For questions, please call 410-537-3706





# WaterSense® Labeled Toilets



**T**oilets are by far the main source of water use in the home, accounting for nearly 30 percent of residential indoor water consumption. Toilets also happen to be a major source of wasted water due to leaks and/or inefficiency. WaterSense, a program sponsored by the U.S. Environmental Protection Agency (EPA), is helping consumers identify high-performance, water-efficient toilets that can reduce water use in the home and help preserve the nation's water resources.



## What Are WaterSense Labeled Toilets?

Recent advancements have allowed toilets to use 20 percent less water than the current federal standard, while still providing equal or superior performance. The WaterSense label is used on toilets that are certified by independent laboratory testing to meet rigorous criteria for both performance and efficiency. Only high-efficiency toilets that complete the third-party certification process can earn the WaterSense label.

## How Much Can WaterSense Labeled Toilets Save?

Over the course of your lifetime, you will likely flush the toilet nearly 140,000 times. If you replace older, existing toilets with WaterSense labeled models, you can save 4,000 gallons per year with this simpler, greener choice.

## What About Price?

WaterSense labeled toilets are available at a wide variety of price points and a broad range of styles. EPA estimates that a family of four that replaces its home's older toilets with WaterSense labeled models will, on average, save more than \$90 per year in reduced water utility bills, and \$2,000 over the lifetime of the toilets. Additionally, in many areas, utilities offer rebates and vouchers that can lower the price of a WaterSense labeled toilet.

## And Performance?

Unlike some first-generation, "low-flow" toilets, WaterSense labeled toilets combine high efficiency with high performance. Design advances enable WaterSense labeled toilets to save water with no trade-off in flushing power. In fact, many perform better than standard toilets in consumer testing.

## Look for the WaterSense Label!

Whether remodeling a bathroom, starting construction of a new home, or simply replacing an old, leaky toilet that is wasting money and water, installing a WaterSense labeled toilet is a high-performance, water-efficient option worth considering. If every American home with older, inefficient toilets replaced them with new WaterSense labeled toilets, we would save nearly 640 billion gallons of water per year, equal to more than two weeks of flow over Niagara Falls! Go to [www.epa.gov/watersense](http://www.epa.gov/watersense) for more information.





# WaterSense® Labeled Bathroom Sink Faucets



**M**ost of us know we can save water if we turn off the tap while brushing our teeth (as much as 3,000 gallons per year!), but did you know that there are products that will help save water when you turn on the tap too? WaterSense, a program sponsored by the U.S. Environmental Protection Agency (EPA), can help you identify high-performance, water-efficient bathroom sink faucets and faucet accessories that can reduce water use in the home and help preserve the nation's water resources.

## Faucet Flows

Faucets account for more than 15 percent of indoor household water use—more than 1 trillion gallons of water across the United States each year.

WaterSense labeled bathroom sink faucets and accessories can reduce a sink's water flow by 30 percent or more without sacrificing performance. We could save billions of gallons each year by retrofitting the country's 222 million bathroom sink faucets with models that have earned the WaterSense label.

## The WaterSense Label

All products bearing the WaterSense label complete a third-party certification process that includes independent laboratory testing to ensure they meet EPA criteria. Faucets and faucet accessories—products that can be attached easily to existing faucets to save water—that obtain the WaterSense label will have demonstrated both water efficiency and the ability to provide adequate flow.



## WaterSense Savings

By installing WaterSense labeled bathroom sink faucets or faucet accessories, an average household can save more than 500 gallons each year. Also, since these water savings will reduce demands on water heaters, households will also save energy. Achieving these savings can be as easy as twisting on a WaterSense labeled aerator, which can cost as little as a few dollars.

If every household in the United States installed WaterSense labeled bathroom sink faucets or faucet accessories, we could save more than \$350 million in water utility bills and more than 60 billion gallons of water annually—enough to meet public water demand in Miami for more than 150 days! In addition, U.S. homes could avoid about \$600 million in energy costs for heating water.



## Look for WaterSense Labeled Faucets and Accessories!

Whether replacing an older, inefficient faucet that's wasting water and money, or simply looking for options to reduce water use in your home, choose a WaterSense labeled bathroom sink faucet or faucet accessory. The next time you wash your hands or brush your teeth, you'll know that you're doing your part to help protect our precious water resources.

For more information, please visit the WaterSense Web site <[www.epa.gov/watersense](http://www.epa.gov/watersense)>.

# Seven Principles of Xeriscaping

1. **Planning and Design** - Have a Plan. Take a look at your garden's topography, exposure and soil. Don't try to fight your site. Create planting zones and group your plants by their needs. For example, groups tough, drought tolerant plants in areas exposed to full day sun, give less tolerant plants some partial shade and keep the more delicate or demanding plants for a spot near your water source.
2. **Choose Appropriate Plant Material** - You may choose to incorporate a few plants that will need to be coddled, but for the most part, selecting plants that thrive in your area during low water conditions will give you the best results. This often includes native plants that we so often take for granted. The choice of plants will vary by region, even within a single yard. You may also be surprised to see how many plants are considered xeric, once they have established themselves and when properly cared for.
3. **Soil Improvement** - The old adage that if you take care of the soil, the soil will take care of the plants, is very true here. The key, as always, is incorporating generous amounts of organic matter. This will improve water penetration and retention in any type of soil. Rich, loose, water holding soil will encourage good root development and lessen the plant's need for supplemental water. It is best to amend your soil before planting and to regularly use organic mulch, as mentioned in Step 4.
4. **Mulch** - Mulching is a naturally occurring process, but as gardeners we tend to want things tidy and we rake away all the leaves and debris that coat and decay into the soil. So we have to bring in more aesthetically pleasing mulch, such as shredded bark and compost.

However it gets there, mulch adds a great deal to your garden. It moderates soil temperature, holds moisture, slows erosion and suppresses weeds that would compete with your plants for food and water. It also gradually decomposes and feeds the soil. Apply about 4 inches of mulch at the initial planting and check it each season to see if it needs to be replenished.

5. **Practical and Appropriate Turf Areas** - Most of us still want some areas of lawn in our landscape and many of us want way too much lawn. Think about how much water, fertilizer and gasoline it takes to keep your lawn green throughout the summer.

Where to place the lawn should be part of your initial design plan, taking into consideration what you plan to use your lawn for. If you are using grass as a ground cover, there are other options that would be less labor and water intensive.

Choose an appropriate grass seed for the lawn's exposure. Different seeds do well in different regions. Kentucky Blue grass is beautiful, but it can also be a water hog where it's not happy.

6. **Efficient Watering** - Not all plants need the same amount of water and those needs may change with the seasons. If you've followed the steps above, you have your plants grouped by their water needs, including your lawn, and can water only where it's needed.

Drip irrigation systems are often recommended for efficient watering. These systems allow you to control when and how much water a plant gets and to direct the water only to the plants that need it.

Base your watering schedule on the needs of the plants and not on an arbitrary schedule. All plants will require more supplemental watering for the first year or two that they are becoming established. However after they have acclimated and developed a good root system, supplemental watering should become much less frequent.

7. **Appropriate Maintenance** - Yes, even a xeriscape garden will require some maintenance. Watering, weeding, pruning, deadheading and sensible pest management will all factor into the quality of your garden.

Here's a list of some [drought tolerant plants](#) for your garden.

Many plants will continue to grow just fine in drought conditions, if they have been selected wisely and were allowed to establish themselves before being stressed by drought. No plant will survive forever without some water and different plants will thrive in different regions and conditions, but here is a list of great garden plants to get you started.

## A Partial List of Drought Tolerant Plants

- [Achillea](#) (Yarrow)
- [Alyssum](#)



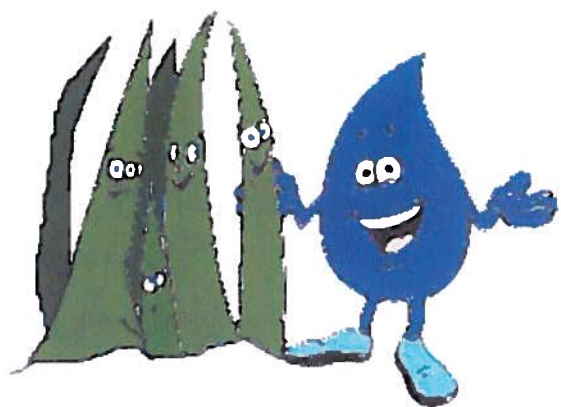
- Artemisia
- Asclepias (Butterfly Weed)
- Beebalm
- California Poppy
- Campanula carpatica (Bellflower)
- Campsis (Trumpet vine)
- [Coreopsis](#)
- Cosmos
- Cranesbill Geranium
- Daylily
- [Echinacea](#) Coneflower
- Euphorbia
- [Gaillardia](#)
- Goldenrod
- [Greek gregano](#)
- Heliopsis
- Hosta
- Iris
- Kniphofia (Red Hot Poker)
- [Lamb's Ears](#)
- [Lavender](#)
- Liatris
- [Nasturtium](#)
- [Nepeta](#) Catmint
- Penstemon
- [Perovskia](#) (Russian Sage)
- Portulaca
- Rudbeckia
- Salvia nemerosa
- [Sedum](#)
- Tradescantia (Spiderwort)
- Veronica
- [Zinnia](#)

## Grasses

- Feather Reed Grass (Calamagrostis acutiflora)
- Fescue
- Fountain Grass (Pennisetum)
- Maiden Grass (Miscanthus)
- Switch Grass (Panicum)

## Shrubs

- Amelanchier (Shadbush)
- Aronia (Chokeberry)
- [Buddleia](#) (Butterfly Bush)
- Caryopteris
- Cotoneaster
- Hypericum (St. Johnswort)
- Juniper
- Potentilla
- Cytisus (Scotch Broom)
- [Viburnum](#)



# The All Seeing All Knowing Lawn Care Manual

## Your Lawn and Water

Your lawn is more than just grass. It's one of the things that makes a house a home. We walk on it, play on it, and even lie down on it to watch the clouds roll by on a summer day. It also helps the environment by trapping many pollutants before they can get into the ground water.

Imagine the perfect lawn. A green velvet carpet that's cool on your feet and springs back when you walk on it.

This can be your lawn and with less water-more than 20 percent less-than you may already be using.

We've developed a system that will let you water less and still have an attractive lawn. It will show you how to use just the right amount of water to replace moisture that is lost from the soil and grass.

We call it "EvapoTranspiration"-ET for short.

The ET method of lawn watering helps us save Nevada's most precious resource -water. ET also helps improve water quality. By watering less, you avoid runoff. Overwatering causes more water to run off than soak in. This runoff could carry pollutants from the gutter into our surface water supply.

The two key ingredients to using water efficiently are knowing how much water your sprinkler system puts on your lawn and how much water your lawn needs.

This manual explains how you can determine both, through the ET system.

By using ET, you can save water, time and money and still enjoy:

- A cool, green lawn
- Cleaner water
- The pride of knowing you are making a difference.

## Turf Tip #1 Check Your Sprinklers

Good watering practices begin from the ground up, so let's start with the sprinklers.

First, check your sprinkler system. This will tell you if you're getting even water distribution. Dry, brown spots and wet, swampy areas in your lawn are the most obvious signs that there's a problem with your sprinklers.

Another sign is water constantly draining from the sprinkler system and running into the gutter. This could indicate a broken line, a plugged valve or stuck automatic drain valve.

Even a well-designed sprinkler system needs regular checkups and necessary corrections

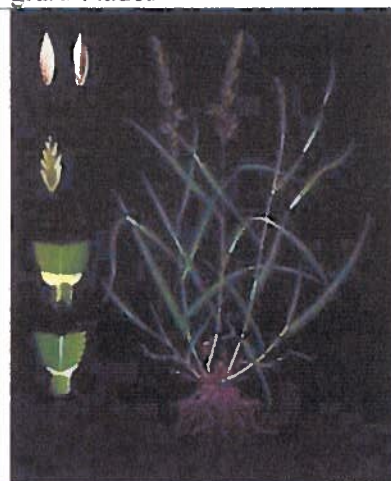
Sprinkler Problem	Solution
Clogged sprinkler heads.	Clean sprinkler heads by removing and blowing them out. If you can't unclog them, replace them.
Broken, worn or leaking sprinkler heads.	Replace them with the same kind of sprinkler heads. This will ensure the same rate of water application. Never try to mix sprinkler head brands on the same circuit.
Crooked or tilted sprinklers.	Straighten the sprinklers to their upright positions.
Sunken sprinkler or grass growing around the heads.	Raise the sprinkler by adding a "riser" or install a taller pop-up head; or trim the grass around the head so it doesn't interfere with water distribution.
Poor overlapping spray pattern.	Check the spray pattern of the sprinklers. Each sprinkler must throw water to the adjacent sprinklers

## Turf Tip #2 Get to Know Your Grass

Kentucky Bluegrass forms a dense, tightly-knit turf that withstands wear and has the ability to mend when damaged. The grass blades are narrow and dark green.



Tall Fescue is a grass with wide, coarse blades. The Turf-type Improved Tall Fescue is more desirable because it grows lower, denser, is deep rooted and has finer grass blades



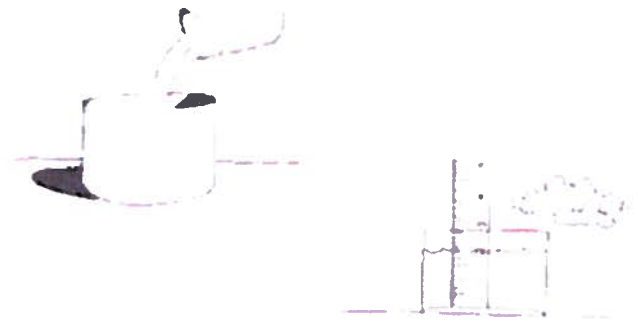
Perennial Rye is a grass with a medium to fine texture. It is fast germinating and because of tough veins in the leaf blades, it often has a ragged appearance when mowed. It is often used in a seed mix.



## Turf Tip #3 Take the ET Test

You are now ready to take the ET test. This will determine how long and how often to water your lawn. First, you will need these items:

- 10 or more straight-sided cups or cans (We recommend coffee cups or soup cans, at least 4" to 6" deep, all with the same diameter)
- A pencil
- A ruler
- A calculator



Now, just follow these simple steps to take the ET test:

**Step One:** On a calm day (early morning is best), distribute the cans randomly around your front yard.

**Step Two:** Run the sprinklers for 15 minutes. If the water begins to puddle or run off the lawn before the 15 minutes are up, write the number of minutes the sprinkler ran before runoff occurred. If runoff occurs wait for an hour, then turn the sprinklers back on long enough to complete the 15 minutes. Record the length of time the sprinklers ran here: \_\_\_\_ This is the longest you can run this set of sprinklers at a time, as we'll explain on Page 9.

**Pause for a moment.** Note the amount of water in the cans. There should be about the same amount in each can. You may need to make some minor sprinkler adjustments, such as turning the screws in the center of a nozzle to restrict or increase the water spray. However, if the water levels are more than 50 percent different (for example, one can contains  $\frac{3}{4}$ " water and another  $\frac{1}{4}$ "), you might need some major repairs. If so, call in a professional.

Often an area is irrigated by a second station, and the spray pattern is needed to complete the coverage for the area. In this case, randomly place the cans over the area covered by both stations and run the water for 15 minutes for each station. Pick up the cans and continue to Step Three.

**Step Three:** For easier figuring, pour the water into one of the cans used in the test. it may take more than one can to collect all the water.

**Step Four:** Next, place these cans of water on a level surface. With your ruler, measure the depth of water in each can and record the amount. Using your calculator, add the figures and divide by the number of cans used in the test. This will determine the average inches of water your sprinkler system applied. Record the average water depth here: \_\_\_\_

**Step Five:** To determine how much and how often you need to water, check the ET charts on pages 10 and 12. For example, you have done the cup test on your lawn and your average water depth is  $.5$  ( $\frac{1}{2}$ "). Look on Chart 1, (twice a week watering) and under average can depth find  $.5$ " (from Step Four). In the column directly under it, go down to where the cross column reads June. It tells you to water your lawn 22 minutes on each watering day in June. Record this number here for future reference: \_\_\_\_

Check the ET chart each month to make sure you're using the right amount of water on your lawn. Adjust your clock accordingly. If it rains during the week and the amount of moisture adds up to the amount you would be applying on your next watering day, skip watering that day and resume on the next watering day.

**Step Six:** Repeat Steps One through Five for the side yards and back yard to get the average water depths for those areas. These water depths may be different than your front yard.

Record these numbers for future reference:

Side Yards: \_\_\_\_

Back Yard: \_\_\_\_

**If puddling or runoff occurs before the 15 minutes used in the test, break up your watering time.** For example, if your required watering time is 12 minutes but runoff begins after 6 minutes, water twice-6 minutes each cycle-one or two hours apart. Allow the water to soak in. Remember: **Water and Wait!**

**If you water with a hose you still need to do a can test.** Place the cans in the front yard and turn on the water for 15 minutes using the sprinkler you normally use for watering the lawn. If you have more than one setting to cover the front yard, place the sprinkler at each spot and run the water for 15 minutes for each location. Take the average from the ten cans and use the charts.



## LAWN WATERING CHART 1 FOR NORTHERN NEVADA GRASSES

	AVERAGE WATER DEPTH FROM CAN TEST</DIV< TD>						
TENTHS OF INCH	.25"	.31"	.375"	.44"	.50"	.56"	.625"
FRACTION OF INCH	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"
AMOUNT NEEDED PER WEEK	MINUTES TO WATER EACH WATERING DAY (twice a week watering)</DIV< TD>						
April .98"/week	29	23	20	17	15	13	12
May 1.18"/week	35	28	24	20	18	16	14
June 1.45"/week	43	35	29	25	22	20	17
July 1.60"/week	47	38	32	28	24	22	19
August 1.50"/week	46	37	30	26	23	20	18
September 1.12"/week	34	27	23	20	17	15	13
October .96"/week	29	23	19	17	15	13	12

Minutes based on a 15 minute cup test and ET data. If runoff occurs, water more frequently. For example: Water twice for 10 minutes each instead of once for 20 minutes, allowing water to soak in between cycles.

## LAWN WATERING CHART 1 FOR CARSON CITY GRASSES

	AVERAGE WATER DEPTH FROM CAN TEST						
TENTHS OF INCH	.25"	.31"	.375"	.44"	.50"	.56"	.625"
FRACTION OF INCH	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"
AMOUNT NEEDED PER WEEK	MINUTES TO WATER EACH WATERING DAY (thrice (3x) a week watering)						
April .98"/week	15	12	10	9	8	7	6
May 1.18"/week	18	14	12	10	9	8	7
June 1.45"/week	22	18	15	13	11	10	9
July 1.60"/week	24	19	16	14	12	11	10
August 1.50"/week	23	19	15	13	12	10	9
September 1.12"/week	17	14	12	10	9	8	7
October .96"/week	15	12	10	9	8	7	8

Minutes based on a 15 minute cup test and ET data. If runoff occurs, water more frequently. For example: Water twice for 10 minutes each instead of once for 20 minutes, allowing water to soak in between cycles.

## Turf Tip #4 Water Early in the Morning

During the summer, water early in the morning when it's calm. Here are some reasons why:

- Less water is lost from evaporation
- Spray drift caused by wind is reduced
- Water soaks deep into the soil and is there when it's most needed- in the heat of the day

## Turf Tip #5 Shape Up Your Turf

**Problem #1 Thatch:** If you're still experiencing water runoff or if dry spots won't go away, your lawn may have developed too much thatch. To check for thatch, take a sample of grass and soil 2" wide by 2" deep. If the spongy area between the grass and soil is more than 1/2" thick, you probably have a thatch problem. This may be due to overwatering or overfertilizing.

- To remove the thatch, use a power rake or hire a professional.
- Before dethatching, mark your sprinkler heads to avoid damaging them. Recheck your irrigation system after power raking to be sure it's still okay.
- 

**Problem #2 Compacted Soil:** Your lawn may have developed compacted soil. This soil will not allow water and nutrients to soak down to the roots. Aeration (or coring) in the spring and fall is a way to open up compacted soil and reduce water runoff. It also helps to reduce thatch buildup.

Coring is done by inserting hollow tubes-1/2" wide by 4" deep and spaced 4" to 6" apart-into the ground.

Cores of soil come out of the tubes to allow water, air and fertilizer to penetrate deep into the soil.

Leave these cores on the grass- your mower will break them up and they will filter back into the soil.

Purchase a hand soil aerator (about \$20) to do the aerating or rent a coring machine from a local garden outlet. To make the job easier, have it done professionally.

Aerating and dethatching:

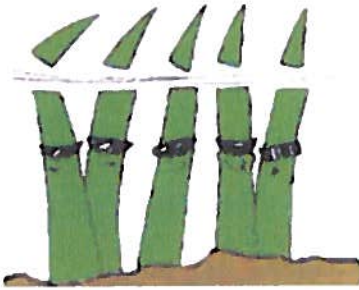
- Improve water penetration
- Reduce water runoff on slopes
- Increase fertilizer effectiveness
- Lessen thatch accumulation
- Help grass root growth
- Relieve compaction
- 

## Turf Tip #6 Fertilize Less to Save Water

You still need to fertilize your lawn but do it in the spring and autumn when it's cool to promote root growth not top growth. Reduce or even eliminate fertilization during the summer. By fertilizing less, you'll slow down grass growth and use less water.

Select a balanced, slow-release lawn fertilizer with iron and especially with potassium to build in heat and cold resistance, stimulate root growth and increase disease protection.

Follow the instructions on the package and apply only the amount needed. Water immediately after applying the fertilizer to promote quick absorption. However, avoid overwatering to prevent runoff and pollution of our water supply.



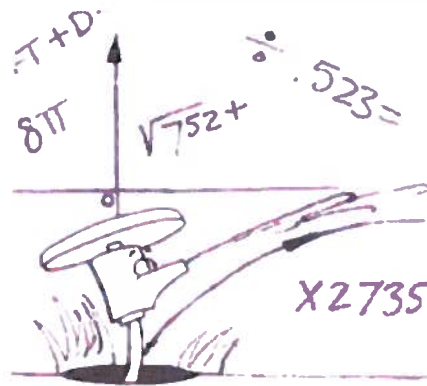
## Turf Tip #7 Mow Sharp and by the Chart

Keep your mower blades sharp. Mowing with dull blades or when the grass is wet can result in a ragged-looking lawn and stressed turf.

Mowing heights affect water conservation. Mow your lawn according to the chart below. Follow the recommended height to use less water while still keeping a healthy and attractive lawn. Mow when the grass has grown one-third taller, and leave the clippings on the lawn.

### Mowing Heights For Northern Nevada Grasses (In Inches)

Grass Type	Preferred Cut
Grass Type	2" - 2 1/2"
Bluegrass	2 1/2"-3"
Tall Fescue	1 1/2"-2"
Improved Fescue	1/2"
Perennial Rye;	2" - 2 1/2"



## Finally. Keep an Eye on Your Lawn

This manual will help you to monitor your lawn's health with more precision. By keeping an eye on your lawn and your sprinklers, you will get a feel for the many components that go into good lawn care. ET helps you water your lawn by its need, using your sprinkler clock, calendar and scientific information to apply water right and life!

If you have any questions about the ET method or lawn care in general, just ask us. We'll be happy to help. Call: University of Nevada Cooperative Extension 784-4848 (Washoe County) or call The Water Conservation Hotline 689-5005 (Westpac)

## The Scientific Facts

If you're wondering how we came up with the figures on the ET charts, they're based on a University of Nevada Cooperative Extension research project- the first study of its kind in northern Nevada.

University scientists use a weather station in the Truckee Meadows to collect the data. The station keeps track of temperature, relative humidity, solar radiation and wind speed.

The information is then fed into a computer. The results? Accurate figures that help you know just how much water to apply to your lawn at any given time during the year.

These figures are provided as a public service to homeowners and commercial turf managers to help everyone water more efficiently.

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University of Nevada Cooperative Extension  
5305 Mill Street  
Reno, Nevada 89520-0027  
Phone: 784-4848

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Notes for customers without lawn sprinkler systems:

If you use a hose with a sprinkler on the end to water your lawn, the following guidelines apply (see “The All Seeing, All Knowing Lawn Care Guide”).

Use a tuna can as described in the “Take the ET Test” section of the Guide to measure the water applied by your hose sprinkler. Position the can about half way between the sprinkler and the edge of the spray pattern.

After measuring the water height in the can, see the “Lawn Watering Chart for Northern Nevada Grasses” to find out how many minutes to water each day (the chart assumes you water two days each week).

Each time you move your sprinkler, water for the number of minutes shown on the chart. It is strongly suggested that you use an automatic timer for watering with your hose. These timers attach to the outside faucet, and shut the flow of water off when the pre-set time is reached. Remember that if the water starts to puddle or run off when watering, break your watering time into two or more sessions to allow it to soak in completely.

Please read the entire Guide for more good lawn care tips.

## Eureka County

### Lawn Evapotranspiration (ET) Rates and Seasonal Distribution

*Evapotranspiration (ET)* is the loss of water from the soil, both by evaporation and by transpiration from plants growing in the soil (plants consuming water.)

Use the following information in conjunction with the Lawn Care Manual to determine how much water your lawn needs each month. Note that in Eureka County's changeable climate, the amount of water that the lawn needs varies considerably. You can save water in the spring and fall by not watering as much as you need to during the peak of summer.

Also note that by not watering in the heat of the day or during times of wind, you may conserve water and control your water bill.

Lawn watering requirements vary by month as follows.

April = 1.92 inches

May = 4.16

June = 5.44

July = 7.36

Aug = 6.08

Sept = 3.52

Oct = 1.6

Per the local agmet weather station, lawn e-t in Eureka is 38 inches per year.

<http://www.usbr.gov/pn/agrimet/ETtotals.html>

Subtract 6 inches of effective precipitation from that total = 32 inches of irrigation required. On a per month bases you will need the irrigation amounts shown above.

*Estimates provided by Steve Walker, Walker and Associates, March 2008*

## Tips for the Home Gardener for Efficient Water Use

**Water infrequently, deeply, and thoroughly.** This will encourage rooting and greater tolerance to dry spells. Plants send out extra roots in dry conditions to seek water. Plants often bloom more profusely when stressed, as the natural instinct to reproduce creates more flowers.

**Water responsibly, using correct watering techniques.** Water early in the day, especially as the weather warms, to reduce evaporation loss. Water less often for longer lengths of time to encourage deep root growth. Be sure your irrigation system is in proper working condition. If drip irrigation won't work for you, try a hand held hose rather than a sprinkler.

**Properly condition your soil.** Water does not easily penetrate clay soils and water passes too quickly beyond the root zone of plants in sandy soil. Adding organic matter to clay and sandy soils will increase the penetrability of clay soils and the water holding capacity of sandy soils. Claybreaker and Ultra-light soil amendments are suggested for proper conditioning.

**Mulch soil surface.** Mulching cuts down on water loss due to evaporation. A two-inch layer of mulch or compost is recommended. Apply mulches to shrubs, trees, annuals, vegetable gardens, and even containers.

**Shelter container plants.** To conserve water, move containers to areas with partial shade to keep them from drying quickly in hot windy areas.

**Install a drip or other water conserving irrigation system.** Slow drip and deep root watering systems can save up to 60% of all water used in garden care. Professionally installed and maintained irrigation systems will further help conserve water.

**Discourage water competition from weeds.** Keep weeds pulled and reduce the likelihood of them returning by mulching. Consider using landscape fabric between the soil and your mulch to further reduce weeds.

## Water Conservation and Washing Vehicles

Water conservation begins at home. Taking a few, simple steps when washing your boat or vehicle (including automobiles, trucks, motorcycles, and trailers) can help to conserve water and protect the quality of nearby water bodies.

**Wash vehicles on grass, not on pavement.** Wash your vehicle over an unpaved area, such as an area covered with grass or gravel. Washing over an unpaved surface will allow the soapy water to soak into the ground, be filtered, and eventually recharge the groundwater. If you have your own well, you should wash your vehicle at least 100 feet from the well head. If you wash the vehicle on a paved surface, the runoff flows into a storm drain, and the water and contaminants are discharged to the nearest lake or stream.

**Wash vehicles using a bucket with soapy water.** Soap and water usually work well. If you need a special cleaning product for vehicles, read the label carefully and be sure to use a non-toxic, biodegradable detergent. Do not use a product that says Poison, Harmful, or Danger. Be sure to turn the running water off while you are washing a vehicle.

**Rinse vehicles with a hose equipped with an automatic shutoff nozzle.** A standard garden hose uses about 10 gallons per minute. This means you use 100 gallons of water with only a 10-minute car wash. When you use an automatic shutoff nozzle on your hose, water does not flow continuously while you wash your vehicle, saving as much as 70 gallons per wash.

Using a power washer can conserve even more water; power washers use, on average, about 2 to 5 gallons per minute, with a potential savings of up to 80 gallons over using a standard house without an automatic shutoff nozzle.

**Consider going to a commercial car wash.** If you cannot wash your vehicle in an area that drains to the lawn or a gravel area, take it to a commercial spray booth or car wash. A properly designed car wash is connected to a sanitary sewer that carries the dirty water to a wastewater treatment plant.

There are three types of commercial car washes: self-serve car washes, in-bay automatic car washes, and conveyor car washes. The following table provides water use information by car wash type. The data represents the total water used, and does not take into account whether or not a car wash recycles its water.

**Average Water Consumption (gallons per vehicle)  
by Car Wash Type**

<b>Car Washing Type</b>	<b>International Car Wash Association<sup>1</sup></b>	<b>Mid-Atlantic Carwash Association<sup>2</sup></b>	<b>WaterWiser<sup>3</sup></b>
Home wash (with automatic shut-off nozzle)	--	--	30
Home wash <sup>4</sup> (without automatic shutoff nozzle)	--	--	100
Self Serve	15	15	--
In-Bay	50-60	35	65-100
Conveyor	66-85	60	30-50

<sup>1</sup> Brown, Chris. 2002. "Water Use in the Professional Car Wash Industry & Car Wash Association." p. 47.

<sup>2</sup> Mid-Atlantic Carwash Association, Inc. Information provided to the Maryland Water Conservation Advisory Committee. June 2000.

<sup>3</sup> WaterWiser [[http://www.waterwiser.org/watch/wiser\\_watch.cfm?ArticleID=96](http://www.waterwiser.org/watch/wiser_watch.cfm?ArticleID=96)]. February 2003.

<sup>4</sup> Assumes a 15 minute car wash with flow of 10 gpm.

Many newer conveyor car washes and some newer in-bay car washes clean and recycle water in their car wash bays. Car washes that recycle their water use much less water than standard car washes. The quantity of water recycled varies from 10 percent to 80 percent of the water used. Check to ensure that the car wash you choose recycles its water.



## NEVADA DROUGHT FORUM

### SUMMARY: Current and Planned Actions Related to Drought

About Nevada's Drought Forum  
drought.nv.gov

Questions about the Form  
chunt@gov.nv.gov  
1-775-684-5670

Under the [Governor's Executive Order 2015-03](#), issued April 8, 2015, state agencies, municipal water providers and federal agencies are requested to provide a summary of current and planned actions related to drought. This information must be provided to the Nevada Drought Forum by no later than **May 15, 2015**. Please use the following form to submit your agency's information.

#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Gaye Haven Intermediate Care Facility	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
1813 Betty Lane	Las Vegas, NV 89156
<b>CONTACT NAME</b>	<b>TITLE</b>
Veronica	On-site Manager
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-452-8399	N/A

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This medical facility serves 50 patients.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Site Manager about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked them to make the maintenance staff aware of water conservation options and have them routinely check the appurtenances associated with the distribution system. We have asked the Site Manager to notify the Distribution Operator immediately if the maintenance staff see any leaks within the distribution system or have other issues with the water.



## NEVADA DROUGHT FORUM

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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Georgia Pacific Gypsum	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
PO Box 337350	North Las Vegas, NV 89033
<b>CONTACT NAME</b>	<b>TITLE</b>
Faustino Cintron	Facility Environmental Coordinator
<b>CONTACT PHONE</b>	<b>EMAIL</b>
703-643-8100 ext.321706	Faustino.Cintron@gapac.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This is a private, commercial plant that provides water only to employees.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Site Manager regarding the drought and have asked them to observe the policies outlined in the most recent version of their Water Conservation Plan. We have asked them to send out email to all staff who deal with the public water system on site to make the person in charge aware of any leaks within the distribution system. The on-site manager will notify the Distribution Operator immediately if there are issues that need to be corrected.





## NEVADA DROUGHT FORUM

### SUMMARY: Current and Planned Actions Related to Drought

About Nevada's Drought Forum  
drought.nv.gov

Questions about the Form  
chunt@gov.nv.gov  
1-775-684-5670

Under the Governor's Executive Order 2015-03, issued April 8, 2015, state agencies, municipal water providers and federal agencies are requested to provide a summary of current and planned actions related to drought. This information must be provided to the Nevada Drought Forum by no later than **May 15, 2015**. Please use the following form to submit your agency's information.

#### CONTACT INFORMATION

AGENCY NAME	
Gerlach General Improvement District	
STREET ADDRESS	CITY, STATE ZIP
410 Cottonwood Street	Gerlach Nevada 89412
CONTACT NAME	TITLE
Jonathan Farnsworth	Public Works Supervisor
CONTACT PHONE	EMAIL
775-557-2601	gerlachgid@gmail.com

#### ABOUT THE AGENCY

AGENCY TYPE (Check One)		
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input type="checkbox"/> Other	
WATER SUPPLY SOURCES (Check all that apply)		
<input type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Surface Water (Describe sources) garden & railroad springs	<input type="checkbox"/> N/A
SERVICE AREA DESCRIPTION (Size, number of customers served, location)		
town of Gerlach 145 residents		

#### DROUGHT IN NEVADA

Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)
We have adequate water to meet current needs we have a water conservation plan in place should water shortages become an issue.





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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Harris Springs Ranch	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
401 S. Martin Luther King Blvd.	Las Vegas, NV 89106
<b>CONTACT NAME</b>	<b>TITLE</b>
Kevin Morss	Manager
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-385-3642	kevin.morss@westcare.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
This institution serves 40 people.		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the On-Site Manager about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked the Manager to make the maintenance crew aware of water conservation policies and procedures and increased routine checks on all appurtenances. We have asked the Manager to notify the Distribution Operator immediately if there are issues within the distribution system or if there are other issues with the water.



## NEVADA DROUGHT FORUM

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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Hillcrest Manor Water Users Association	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
PO Box 570065	Las Vegas, NV 89157
<b>CONTACT NAME</b>	<b>TITLE</b>
Richard Avila	Board Member - President
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-332-7181	avilacharter@gmail.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)		<input type="checkbox"/> N/A	
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This residential community serves 450 water users.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Board President about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked them to make all of the homeowner's aware of water conservation policies by email or flyers. We have asked the Boad President to notify the Distribution Operator immediately if the homeowner's see any leaks within the distribution system or have other issues with the water.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Incline Village General Improvement District	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
1220 Sweetwater Rd	Incline Village, NV 89451
<b>CONTACT NAME</b>	<b>TITLE</b>
Joseph Pomroy	Director of Public Works
<b>CONTACT PHONE</b>	<b>EMAIL</b>
775-832-1269	jjp@ivgid.org

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input checked="" type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Surface Water (Describe sources) Lake Tahoe	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
Communities of Incline Village and Crystal Bay, Population = 9082.		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
Lake Tahoe has dropped below its natural rim of 6223. The Incline Village General Improvement District is currently able to deliver water to its Burnt Cedar Water Disinfection Plant from Lake Tahoe at this lake level. We do not see a concern for the remainder of 2015 based on our pumping rates and historical Lake Tahoe drawdown. Lake Tahoe reached a historic low level of 6220.3 in November 1992. The District did not experience water pumping issues at that lake level. The District is currently in the process of developing a new low lake level pumping plan to deliver water to the Disinfection Plant so that there is a plan of action should water levels drop below that historic low.

**INSTRUCTIONS FOR FOLLOWING SECTION:**

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Water Meter Continuous Use Notification.
<b>SUMMARY</b>	The District has water meters on all customer connections. The water meters are read monthly and all continuous use of water is noticed on the monthly bill to the customer. Customers that also receive their water bills electronically are sent an email notifying them of continuous water use on their account.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Watermain Leak Detection Survey
<b>SUMMARY</b>	The District contracts with a company to perform leak detection on its watermain twice per year to find and repair all leaks on water distribution piping.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Public Education
<b>SUMMARY</b>	The District performs public education to promote "Protect the Source" and "Drink Tahoe Tap" in monthly newsletters, tabling events, print media, social media, radio and television spots. This media campaign raises awareness of water issues including conservation.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Irrigation Audits and Water Use Best Practices
<b>SUMMARY</b>	The District provides free irrigation audits and consultations from an American Water Works Association Certified Water Use Efficiency Practitioner employed by the District. The District also conducts patrols for water wasting activities and educates customers on best practices.

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Water Conservation Required Under Certain Emergency Conditions.
<b>SUMMARY</b>	The District has three levels of water conservation specified in the Ordinance; limited, moderate and strict conservation that can be enacted in an emergency, water scarcity situation, water production limitation, on order of State or Federal Agency or other condition. This requires a public notice and approval by the Board of Trustees.

<input checked="" type="checkbox"/> <b>Action Taken or Underway</b> <input type="checkbox"/> <b>Action Planned</b>	
<b>ACTION</b>	Landscape Ordinance and Turf Installation Limitations
<b>SUMMARY</b>	The landscape ordinance is in place to implement landscaping standards which will result in the conservation of water and eliminate water waste. The District currently restricts the amount of turf that can be installed on a property. This is implemented as part of the building permit process.

<b>What types of topics/issues would you like the Nevada Drought Forum to address?</b> Regional differences in water supply source, use patterns and current conservation practices.
---



**When complete, please return to:**

**William (Bill) Elliott, Division of Emergency Management**  
 welliott@dps.state.nv.us



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Kingston Town Water Utility	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
HC 65 Box 130	Austin
<b>CONTACT NAME</b>	<b>TITLE</b>
Shannon Thiss	Water System Operator/Deputy Clerk
<b>CONTACT PHONE</b>	<b>EMAIL</b>
775-964-2120	kingstonh2o@gmail.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input checked="" type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
Town of Kingston, Lander County, Nevada 144 Service connections.( 1) 225,000 water storage tank. (1) 185,000 water storage tank. Three pressure zones. 2 wells.		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
Kingston Town Water Utility has not been overly impacted at this time. We anticipate we will see a lowering of well static levels further into summer. We have a Water Conservation plan in place and have had the plan on the last month's agenda to discuss. Water wise idea websites have been put onto water bills that are mailed to customers and the Stage One warnings, while not yet implemented have been posted around Kingston.

**INSTRUCTIONS FOR FOLLOWING SECTION:**

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Implement State One warnings according to Water Conservation Plan
<b>SUMMARY</b>	Customers will be notified of Stage One warnings and will be ask to implement. No enforcement.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Water saving tips and websites printed onto bills.
<b>SUMMARY</b>	All customer bills will be printed with drought awareness and water saving website suggestions

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Active leak detection and customer leak warnings.
<b>SUMMARY</b>	Employees are actively looking for leaks and paying close attention to meter readings both at main pumps and on customer side. Customers with leaks will be given a week to correct water waste or be turned of with proper notice.

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	

<b>SUMMARY</b>	
----------------	--

<b>What types of topics/issues would you like the Nevada Drought Forum to address?</b>
Tiered Rate issues. Enforcement of Water Conservations Plan violations, when implemented. Vegetation planted on streets, medians, and highways regardless of drought concerns (Reno and Carson City).



**When complete, please return to:**

**William (Bill) Elliott, Division of Emergency Management**  
 welliott@dps.state.nv.us





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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Laker Plaza	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
2310 E. Lake Mead Drive	Henderson, NV 89015
<b>CONTACT NAME</b>	<b>TITLE</b>
David Grossheim	Owner
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-985-2391	davidgrossheim@gmail.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This convenient store serves at least 25 people per day.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Owner about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked the Owner to increase any routine checks on all appurtenances. We have asked the Owner to notify the Distribution Operator immediately if there are issues within the distribution system or other issues with the water.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Lyon County Utilities Department	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
34 Lakes Blvd , PO Box 1699	Dayton, NV 89403
<b>CONTACT NAME</b>	<b>TITLE</b>
Mike Workman	Director of Public Works
<b>CONTACT PHONE</b>	<b>EMAIL</b>
(775) 246-6220 x3	mworkman@lyon-county.org

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input checked="" type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input checked="" type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
Dayton and Mound House from Carson City line to 10 Mile Hill. 6,200 service connections. Provide water & sewer.		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have not pumped our induction well (surface water rights) for the last 2 years due to low water flows in the Carson River. Very few well serve letters were issued on surface water so pumping that source is not critical at this point in time. Our ground water levels have seen a slight drop of about 5 feet or so.

**INSTRUCTIONS FOR FOLLOWING SECTION:**

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Odd/Even outside watering schedule from May-October each year.
<b>SUMMARY</b>	Helps reduce outside watering (a little) and stabilizes pressures in the distribution system.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Voluntary 10% reduction in outside watering this summer.
<b>SUMMARY</b>	This will get people engaged and give them the opportunity to do their part and help get them prepared for next year should the drought continue.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Hired 2 seasonal staff that will serve as water watchers for the summer.
<b>SUMMARY</b>	We will post doors, talk with people and help them set sprinkler timers, etc. This is meant to be a public education campaign not a punitive program. We need to get the customers buy in.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Mailed informational flyers, posted on FaceBook & Web Page and have handouts.
<b>SUMMARY</b>	Again, just trying to inform and engage the public.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Give monthly water system update to local advisory boards.
<b>SUMMARY</b>	Getting the word out and providing the public with current information

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

**What types of topics/issues would you like the Nevada Drought Forum to address?**

Nothing at this time.



**When complete, please return to:**

**William (Bill) Elliott, Division of Emergency Management**  
wellriott@dps.state.nv.us



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
McGill Ruth Consolidated Sewer & Water General Improvement District	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
29 Fourth Street	McGill, NV 89318
<b>CONTACT NAME</b>	<b>TITLE</b>
Amy Garcia	Office Manager
<b>CONTACT PHONE</b>	<b>EMAIL</b>
775-235-7701	mcgillruthgid@sbcglobal.net

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
Serving two communities; McGill Nevada, population 1,168 and Ruth Nevada, population 420. We have 959 customers in total. 285 in Ruth, and 674 in McGill.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have noticed earlier high water usage. Typical exceeded usage starts in May and June whereas this year it was as early as March. It has not impacted our operations and our water resource is good.

**INSTRUCTIONS FOR FOLLOWING SECTION:**

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input checked="" type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Water Restrictions to be enforced
<b>SUMMARY</b>	At our regular board meeting held in April the board discussed water conservation due to possible drought. Water restrictions of no watering between the hours of 1-5:00 for the months of May, June, July, August, and September will be enforced.

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

What types of topics/issues would you like the Nevada Drought Forum to address?



**When complete, please return to:**

**William (Bill) Elliott, Division of Emergency Management**  
wellriott@dps.state.nv.us





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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Pershing County Water Conservation District of Nevada	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
20 S. McDougal Industrial Complex/PO Box 218	Lovelock, Nevada 89419
<b>CONTACT NAME</b>	<b>TITLE</b>
Bennie Hodges	Manager
<b>CONTACT PHONE</b>	<b>EMAIL</b>
775-273-2293 Cell 775-770-4018	pcwcd@irritaion.lovelock.nv.us

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input checked="" type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Surface Water (Describe sources) Humboldt River	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
We are the Pershing County Water Conservation District located in the Lovelock Valley in Pershing County Nevada. PCWCD is an irrigation district with over 40,000 acres within its' boundaries. We serve 100 to 105 Constituents who produce Alfalfa, Wheat, Alfalfa seed, Teff seed and livestock, mostly cattle. Our source of water is Rye Patch Reservoir which is fed by the Humboldt River.		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
A full allotment of water for PCWCD is 3.0 Ac/Ft/AC. The 2013 allotment was 0.3 ac/ft/ac, the 2014 allotment was 0.00 ac/ft/ac and for 2015 the allotment is 0.00 ac/ft/ac. PCWCD constituents are suffering through some of the most severe financial consequences imaginable. This current drought is having a severe impact on Humboldt River flows that supply Rye Patch Reservoir, but another issue is the massive over pumping that is going on upstream from Rye Patch on the Humboldt River. There are 32 Basins in the Humboldt River drainage, of which 23 are over appropriated, some by a huge amount. This over appropriation of ground water pumping is severely affecting the surface flows of the Humboldt River and is lowering the water table in the affected basins. PCWCD has spent a lot of time and money trying to get the State Engineer to address these issues.

### INSTRUCTIONS FOR FOLLOWING SECTION:

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	N/A
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	
<b>SUMMARY</b>	

**What types of topics/issues would you like the Nevada Drought Forum to address?**

1. Basin Over appropriation of ground water
2. Mine de-watering



**When complete, please return to:**

**William (Bill) Elliott, Division of Emergency Management**  
wellriott@dps.state.nv.us



## NEVADA DROUGHT FORUM

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Questions about the Form  
chunt@gov.nv.gov  
1-775-684-5670

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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Rainbow Gardens Water Users	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
5710 N. Rainbow Blvd.	Las Vegas, NV 89130
<b>CONTACT NAME</b>	<b>TITLE</b>
Keith Pearson	President
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-860-4229	sandcastles5@cox.net

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This residential community provides water for 45 people.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the President about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked the President to send email and/or flyers to all homeowners to also make them aware of water conservation options. We have asked the President to notify the Distribution Operator immediately if the residents notice any leaks within the distribution system or have other issues with the water.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Rancho Co-Op Water Company	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
PO Box 1371	Las Vegas, NV 89125
<b>CONTACT NAME</b>	<b>TITLE</b>
Dr. Dennis Gordon	President
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-278-8785	dgordon437@aol.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This residential community provides water for 110 people.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the President about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked the President to send email and/or flyers to all homeowners to also make them aware of water conservation options. We have asked the President to notify the Distribution Operator immediately if the residents notice any leaks within the distribution system or have other issues with the water.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Rancho Vista 4	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
1561 Rio Way	Pahrump, NV 89048
<b>CONTACT NAME</b>	<b>TITLE</b>
Linda Cardinal	President
<b>CONTACT PHONE</b>	<b>EMAIL</b>
775-537-7910	rvwa4@yahoo.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This residential community provides water for 25 people.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the President about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked the President to send email and/or flyers to all homeowners to also make them aware of water conservation options. We have asked the President to notify the Distribution Operator immediately if the residents notice any leaks within the distribution system or have other issues with the water.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Roark Estates Water Association	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
2450 Box Canyon Drive	Las Vegas, NV 89128
<b>CONTACT NAME</b>	<b>TITLE</b>
Barbara Domingo	Property Manager
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-942-2500	bdomingo@cmg-hoa.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This residential community provides water for 62 people.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Property Manager about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked the Property Manager to send email and/or flyers to all homeowners to also make them aware of water conservation options. We have asked the Property Manager to notify the Distribution Operator immediately if the residents notice any leaks within the distribution system or have other issues with the water.





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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Sky Ranch Water Service	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
3670 Grant Dr. #103	Reno, NV 895095
<b>CONTACT NAME</b>	<b>TITLE</b>
Judy Gillmore	Water Conservation Coordinator
<b>CONTACT PHONE</b>	<b>EMAIL</b>
775-727-5575 ext 1208	jegillmore@uiwater.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
Located in Spanish Springs (Sparks), NV; 580 water service connections; service territory covers 2 square miles.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
<p>The Sky Ranch Water Service (SRWS) water conservation plan outlines prudent and effective water resource management practices within SRWS's service area. This plan considers the resources of the utility as well as the number of customers served by the utility. To a large extent, this plan relies on the cooperation and the resourcefulness of both customers and the utility personnel.</p> <p>SRWS continually encourages customers to save water because of the resource, economic and community benefits. Therefore, conservation measures are routinely used during normal SRWS operations. Additionally, conservation measures may be increased during periods of drought or when demand exceeds supply capabilities. These measures will be implemented to assure adequate service to all customers. The following measures are considered in case of more severe drought.</p>

**INSTRUCTIONS FOR FOLLOWING SECTION:**

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Water Waste Notification
<b>SUMMARY</b>	Any waste of water or other violation of this Plan, together with proof that the waste or violation originated or took place at any particular residence or place of business, shall constitute, in evidence, a prima facie presumption that the owner, current occupant, or manager of real property of such residence or place of business was responsible for the waste or other violation.

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Watering Restrictions
<b>SUMMARY</b>	watering restrictions will be as follows: Odd numbered addresses may water on Tuesday, Thursday, and Saturday. All even numbered addresses may water on Monday, Wednesday, and Friday. There is no outdoor watering between 1:00 p.m. and 7:00 p.m. daily. Without exception – there is no outdoor watering on Sundays.

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Drought Alert Provisions
<b>SUMMARY</b>	<p>(a) No new turf may be installed in residential front yards. In single-family residential development, the installation of new turf shall not exceed fifty percent of the gross area of the side and rear yard or one hundred square feet, whichever is greater (up to a maximum of five thousand square feet). No turf area may be installed in the side or rear yard if any dimension thereof is less than ten feet.</p> <p>(b) During the months of May through August, the planting of cool-season grasses (i.e. tall fescue or rye grass) is prohibited. The planting of warm-season grasses (i.e. bermuda and zoysia) is permitted.</p>

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Cooling System Provisions

<b>SUMMARY</b>	During drought watch and drought alert conditions, outdoor mist cooling systems are not restricted within residential development. In commercial operations, outdoor mist cooling systems relating to animal safety are permitted, but those relating to human comfort are permitted only during the months of June, July, and August, and only between the hours of twelve noon and ten p.m.
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<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Washing Paved Surfaces, buildings or equipment
<b>SUMMARY</b>	The washing of paved surfaces, buildings, or equipment (other than vehicles) is prohibited unless the water is discharged to a sanitary sewer in accordance with applicable laws and regulations or is contained on site.

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Washing personal and commercial vehicles
<b>SUMMARY</b>	Under drought watch and drought alert conditions, the washing of personal vehicles upon residential properties is limited to once per week per vehicle and requires a positive shut-off nozzle. Commercial vehicles may be washed without limitation as to frequency, but only: <ul style="list-style-type: none"> <li>(a) At a commercial facility in accordance with applicable laws and regulations, or;</li> <li>(b) By means of a high-pressure, low volume sprayer using less than ten gallons per vehicle.</li> </ul>

<b>What types of topics/issues would you like the Nevada Drought Forum to address?</b>	
SRWS's education efforts and the actions listed above are no doubt beneficial during a drought. However, education is the key to long term water conservation. The Nevada Drought Forum should include a plan for the state agencies, water providers and communities to work together to educate all Nevadans that the wise use of water begins in each home and business. The Sky Ranch community, as a whole, understands the importance of water conservation. This community effort needs to be emulated throughout Nevada.	



**When complete, please return to:**

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 welliott@dps.state.nv.us



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Southern Nevada Water Authority	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
1001 S. Valley View Blvd.	Las Vegas, NV 89153
<b>CONTACT NAME</b>	<b>TITLE</b>
John J. Entsminger	General Manager
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-875-7080	john.entsminger@snwa.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input checked="" type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input checked="" type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Surface Water (Describe sources) Colorado River water, Muddy and Virgin River water	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
The Southern Nevada Water Authority (SNWA) is the regional water agency that manages water resources and water quality in Southern Nevada. It serves the region's 2 million residents and 40 million annual visitors. Its service area spans approximately 7,000 square miles.		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
<p>Southern Nevada relies upon Colorado River water, accessed in Lake Mead, to meet 90 percent of the community's demands. Beginning in 1999, the Colorado River Basin began experiencing record-setting drought conditions, which has substantially reduced water levels in Lake Mead. With the community nearly fully reliant upon Colorado River water, the SNWA took immediate response to address drought conditions and the notion of reduced water supplies. Drought has significantly affected SNWA operations and ultimately shaped how the community grew in the early 2000s.</p> <p>With the onset of drought, Southern Nevada initiated a drought planning process, which evaluated how the community was prepared for water reductions and resulted in the implementation a more aggressive conservation program. As drought conditions worsened, the SNWA employed other resource planning activities,</p>

such as securing temporary water supplies, diversifying water resources, and further conservation efforts. As lake levels drop in Lake Mead, the community has invested hundreds of millions of dollars into securing access to Colorado River water.

For the past 16 years, nearly every major decision or investment was in response to ongoing drought conditions. Every step of the way, the community has been involved in those decisions through public participation and outreach efforts. As drought endures, the SNWA continues to work with its customers to find solutions that provide for a reliable and sustainable water supply for the community.

#### INSTRUCTIONS FOR FOLLOWING SECTION:

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Landscape Development Codes
<b>SUMMARY</b>	Municipalities enacted development codes for new development. Since 2004, turf installation has been prohibited in new residential front yards and limited to 50 percent of the landscaped area in new backyards. Lawn is prohibited in new non-residential developments.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Golf Course Water Budgets
<b>SUMMARY</b>	Golf courses are subject to water budgets based on irrigated acreage, with surcharges applied for overuse. Water budgets are determined using the following formula: 6.3 acre-feet of water per year, per irrigated acre.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Landscape Watering Restrictions
<b>SUMMARY</b>	Customers are assigned mandatory watering groups that limit watering to one day a week in winter; three days a week in summer and fall; and prohibit watering from 11 AM to 7 PM in summer.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Water Waste Investigations
<b>SUMMARY</b>	Allowing water to runoff into streets and/or adjoining property is prohibited. It is also considered water waste to violate policies that limit the time of day or assigned days of the week when watering when occur. Violations are first noticed with a warning, but incur financial penalties if left unresolved.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Tiered Rate Structure
<b>SUMMARY</b>	Southern Nevada's municipalities utilize tiered rate structures, which charge higher rates as water use increases. These rate structures encourage efficiency while ensuring the affordability of water for essential uses.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Offering free retrofit kits to homeowners
<b>SUMMARY</b>	Property owners of older homes that pre-date 1989 when low-flow ordinances were instated can receive a retrofit kit at no cost to replace inefficient fixtures (showerheads, aerators).

<b>What types of topics/issues would you like the Nevada Drought Forum to address?</b>



**When complete, please return to:**

**William (Bill) Elliott, Division of Emergency Management**  
 welliott@dps.state.nv.us

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Partnering with the development community on Water Smart Homes
<b>SUMMARY</b>	The Water Smart Homes Program certifies new homes and neighborhoods as water smart. A water smart home can save as much as 75,000 gallons of water per year versus traditional residential development.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Partnering with the landscape community
<b>SUMMARY</b>	Nearly 100 landscape contractors have qualified to be certified "Water Smart Contractors." To obtain status, licensed landscape contractors must attend SNWA water-efficiency training. Water Smart Contractors assure that their projects meet specific criteria to conserve water.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Partnering with the restaurant industry to be more efficient
<b>SUMMARY</b>	The SNWA teamed up with local restaurants, which agree to serve water to patrons only upon request. For every glass of water not served, as much as 1.5 to more than 3 gallons of water is saved. More than 180 restaurants have signed up to participate.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Partnering with the business community through the Water Conservation Coalition
<b>SUMMARY</b>	The Water Conservation Coalition (WCC) is a public/private partnership designed to promote water efficient practices. The WCC provides presentations on the benefits of water efficient practices to business and professional organizations. The CAC conducts water conservation projects for groups or properties in need of assistance.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Launched ongoing marketing campaigns
<b>SUMMARY</b>	Customers remain informed of drought conditions and ways to conserve water through an aggressive advertising campaign using television/radio, direct mail, print and billboards to reach target audiences. Outreach efforts during fall compliance campaigns typically yield a 15.4 percent reduction in water use.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Performed extensive community outreach
<b>SUMMARY</b>	Each year, the SNWA hosts booths at community outreach events and fairs to educate the public on water conservation opportunities. Additionally, Deputy Drip -- the SNWA's unofficial mascot -- attends community events and leads school-age children in water conservation lessons.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Offered community desert demonstration gardens
<b>SUMMARY</b>	Through the combined efforts of SNWA and its member agencies, there is a demonstration garden in every part of the valley. These demonstration gardens offer inspiration of how to maintain a beautiful, yet water smart landscape.



<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Opened and maintain the Springs Preserve
<b>SUMMARY</b>	Opened in 2007, the Springs Preserve is a 180-acre facility that offers hundreds of examples of water-efficient landscaping, as well as classes by master gardeners and horticulturalists. In addition, the facility offers a variety of information about the drought, including interpretive exhibits, art shows and related programming.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Developed and maintain drought-related curriculum for teachers
<b>SUMMARY</b>	H2O University, a comprehensive education program for teachers in the Clark County School District, maintains drought and conservation-related curriculum for students.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Involving youth in drought-planning activities
<b>SUMMARY</b>	The SNWA created the Youth Advisory Council (YAC) to gain a fresh perspective on water issues. A new group of high school students is selected each year and meets regularly to implement water-related projects and make formal recommendations to the SNWA Board of Directors. This year's project focuses on hydroponics, which can be a more efficient means to yield crops in the desert.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Developed an annual conference whose focus is water smart innovations
<b>SUMMARY</b>	In 2008, the SNWA partnered with the EPA and other major water-efficiency organizations to launch the Water Smart Innovations Conference. The annual event is the largest conference on urban water efficiency and draws more than 900 professionals.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Encouraged property owners to replace grass with water efficient landscapes
<b>SUMMARY</b>	The SNWA Water Smart Landscape Program offers resident a rebate (currently \$1.50 per square foot) to remove turf and replace it with water efficient plants and trees. To date, more than 172 million square feet of turf has been removed.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Offer rebates for efficient landscape controllers
<b>SUMMARY</b>	Smart controllers can achieve a 15 to 30 percent reduction in water use by automatically adjusting their watering schedule according to weather and plant demands. With SNWA's rebate coupon, customers can save up to 50% off the cost of a "smart" controller or rain sensor.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Offer rebates for pool covers
<b>SUMMARY</b>	Pool covers reduce evaporation by an estimated 50 percent when used appropriately. The pool cover rebate value is \$50 or 50 percent off the purchase price of a pool cover.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Offer rebates to business to develop or install technologies that reduce water use within business operations
<b>SUMMARY</b>	The SNWA Water Efficient Technologies rebate encourages businesses to retrofit existing equipment with more water-efficient technologies. The program targets both consumptive and non-consumptive use technologies. Businesses can choose from a menu of pre-approved technologies with predictable savings and a defined monetary incentive.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Offer coupons for water efficient car washes
<b>SUMMARY</b>	The SNWA's Water Smart Car Wash program offers residents free coupons that are good for \$2 off designated washes at more than 65 valley car washes. Water Smart car washes capture and recycle the water used on-site or send it to a water-treatment facility where it is treated and sent back to Lake Mead for reuse.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Extended Lake Mead Intake No. 1
<b>SUMMARY</b>	Lake Mead's best water quality is found where its deepest and coldest. As Lake Mead's water levels dropped, an extension was added to Lake Mead Intake No. 1 in 2004 to access water below the thermocline. This provided for better water quality and lower treatment costs.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Constructed a bypass pipeline between Intake Pumping Station No. 2 and Alfred Merritt Smith Water Treatment Facility
<b>SUMMARY</b>	In 2006, a bypass pipeline was constructed between Intake Pumping Station No. 2 and the Alfred Merritt Smith Water Treatment Facility. This will protect system capacity in the event that lake levels drop below 1,050 and Intake No.1 becomes inoperational and provides Southern Nevada's intake system more flexibility.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Increased the capacity of pumps at Intake Pump Station No. 2
<b>SUMMARY</b>	The pumps at Intake No. 2 were modified in 2011 to increase the pump station's capacity should Intake No. 1 become inoperable due to declining lake levels. Overall, pumping capacity at Intake No. 2 was increased from 600 million gallons to 720 million gallons per day.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Constructed Lake Mead Intake No. 3
<b>SUMMARY</b>	Construction of a third drinking water intake began in 2008 and it is expected to make its first water deliveries this fall. Intake No. 3 will draw water from the deepest part of Lake Mead, resulting in better water quality and lower treatment costs. The deeper intake also will protect the community's access to Colorado River water should Lake Mead elevations fall below 1,000 feet.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Modified Intake No. 1
<b>SUMMARY</b>	Intake No. 1 was modified again in 2013 as a measure to preserve the intake in the event of a drop in lake elevation. A connection was made from Intake Pumping Station No. 1 to a connector tunnel, along with Intake No. 3 to Intake Pumping Station No. 2.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Constructing a new low lake pumping station
<b>SUMMARY</b>	A new low lake level pumping station is currently in design. It will have the capacity to pump 900 million gallons of water per day from elevations as low as 875 feet. The pumping station will be constructed to provide replacement capacity should existing pumping stations become inoperable.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Banking unused Colorado River water in California
<b>SUMMARY</b>	Since 2004, the SNWA has been working with the Metropolitan Water District of Southern California to store a portion of unused Colorado River water in Southern California until needed. To date, the SNWA has banked 162,892 acre-feet of water.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Banking arrangements with Arizona
<b>SUMMARY</b>	Since 2001, the Southern Nevada Water Authority has been working with the Arizona Water Banking Authority to store Arizona groundwater in Arizona in exchange for additional Colorado River supplies. To date, Nevada has banked 601,041 acre-feet of water in Arizona.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Funded construction of California reservoir to capture water that would otherwise go lost
<b>SUMMARY</b>	The SNWA funded a portion of the costs to construct the Brock Reservoir in exchange for additional water resources from the Colorado River System. The facility captures Colorado River water that would otherwise go unused in the Lower Basin. As part of the arrangement, SNWA receives 400,000 acre-feet in total (up to 40,000 annually), but not during times of designated shortage conditions on the Colorado River.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Funded a pilot demonstration run of the Yuma Desalting Plant
<b>SUMMARY</b>	In 2008, the SNWA funded a demonstration run of the Yuma Desalting Plant. The desalter, was constructed by the Bureau of Reclamation in Yuma, AZ, but hadn't been operated in some time. The SNWA funded the project to determine the availability and cost of obtaining interim water supplies from the desalting plant for municipal needs.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Purchased water groundwater rights in Coyote Spring Valley to utilize as Intentionally Created Surplus, as part of the Colorado River's 2007 Interim Guidelines
<b>SUMMARY</b>	The SNWA purchased and/or lease water rights in the Coyote Spring Valley groundwater basin. In 2010, a pipeline was completed to convey a portion of these rights to Lake Mead. This augmentation project created 9,000 acre-feet of additional water for SNWA, which is stored in Lake Mead.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Purchased/leased water rights on the Muddy and Virgin rivers
<b>SUMMARY</b>	The SNWA purchased and/or lease water rights on Colorado River tributaries that pre-dated the Boulder Canyon Project Act. These water rights are conveyed to the Colorado River for storage and credit under the ICS provisions. The SNWA currently has over 128,000 acre-feet of Tributary ICS stored in Lake Mead.

<input type="checkbox"/> Action Taken or Underway	<input checked="" type="checkbox"/> Action Planned
<b>ACTION</b>	Pursuing development of water rights in five groundwater basins located in eastern Nevada.
<b>SUMMARY</b>	Similar to other Nevada communities who utilize interbasin transfers to supplement existing water supplies, the SNWA maintains a groundwater development project in its water resource portfolio. When constructed, the project will convey up to approximately 80,000 acre-feet per year of water rights from five groundwater basins in eastern Nevada for municipal use in Southern Nevada.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Coordinated the Colorado River's operation and management among the six other Colorado River Basin States
<b>SUMMARY</b>	Colorado River drought conditions punctuated the need for coordinated management of the river, especially in periods of low inflows. Together, the States came together on some very important decisions, namely the 2007 Interim Guidelines, which accomplished a number of concerns related to the river system. The Guidelines coordinated operations of the systems two largest reservoirs: Lake Mead and Lake Powell, defined shortage conditions for Lower Basin State users of Colorado River Water, and developed a framework for adding more water into the system.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Funded and participated in the Colorado River Basin Water Supply and Demand Study
<b>SUMMARY</b>	In 2009, a process was initiated among the Basin States and the U.S. Bureau of Reclamation for a larger, more comprehensive study of the Colorado River and how it is used. The study assessed future water supply and demand imbalances, risks to the Basin users (including the threat of long term climate change), evaluated opportunities for resolving imbalances and to mitigate impacts to resources.

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Participated in bi-national discussions with the country of Mexico
<b>SUMMARY</b>	The drought on the Colorado River is not limited to U.S. but also effects Mexico, which relies on Colorado River for agricultural production. The U.S. and Mexico recognized that long-term success of the Interim Guidelines depends on formal understandings between the two countries to manage environmental concerns, shortages and other trans-boundary water issues. Since 2010, the U.S. and Mexico have signed three significant "Minutes", or formal international agreements, regarding the Colorado River and how the system is managed between the two countries.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Partnered to launch the Colorado River System Conservation Pilot Program
<b>SUMMARY</b>	This program was initiated by the major Colorado River municipalities to determine to what extent mutual, system-wide conservation, is cost-effective and feasible to mitigate drought impacts. Any potential water savings would be directed to improving the health of the entire Colorado River system, and not to a particular water user.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Executed the Lower Basin Memorandum of Understanding
<b>SUMMARY</b>	Lower Colorado River Basin partners signed a Memorandum of Understanding to reduce the risk of reaching critical reservoir elevations by voluntarily developing additional quantities of water to be stored in Lake Mead. The four partners, which include the U.S. Bureau of Reclamation, Metropolitan Water District of Southern California, Central Arizona Water Conservation and the Southern Nevada Water Authority, have a goal of adding 1.5 to 3 million acre feet to Lake Mead by 2019.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Worked alongside Colorado River Basin partners and the country of Mexico to establish bi-national intentionally created surplus (ICS)
<b>SUMMARY</b>	Created through Minute 319 with the country of Mexico, the SNWA worked alongside its Colorado River Basin partners to create a mechanism for Mexico to store surplus Colorado River water in Lake Mead, thus protecting its water levels.



## NEVADA DROUGHT FORUM

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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Spirit Mountain Utility	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
PO Box 33	Cal-Nev-Ari, NV 89039
<b>CONTACT NAME</b>	<b>TITLE</b>
Nancy Kidwell	Owner
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-379-4715	kcalnevari@aol.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This mobile home community provides water for 375 people.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Owner about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked the Owner to send email and/or flyers to all homeowners to also make them aware of water conservation options. We have asked the Owner to notify the Distribution Operator immediately if the residents notice any leaks within the distribution system or have other issues with the water.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Spring Creek Utilities Co.	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
14891 Lamoille Hwy	Spring Creek, NV 89815
<b>CONTACT NAME</b>	<b>TITLE</b>
Judy Gillmore	Water Conservation Coordinator
<b>CONTACT PHONE</b>	<b>EMAIL</b>
775-727-5575 ext 1208	jegillmore@uiwater.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
Located 300 miles east of Reno, NV; 4500 water service connections; 2 independent water systems; service territory covers 24 square miles.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
<p>The Spring Creek Utilities Company (SCUC) water conservation plan outlines prudent and effective water resource management practices within SCUC's service area. This plan considers the resources of the utility as well as the number of customers served by the utility. To a large extent, this plan relies on the cooperation and the resourcefulness of both customers and the utility personnel.</p> <p>Additionally, SCUC has provided bulk water to ranchers in the community which was not specifically addressed in our tariff.</p> <p>During the drought, SCUC has seen a drop in consumption, and therefore, revenues. We have had to implement curtailment in part of the community through off day watering due to a decline in ground water levels in that area. In addition, SCUC has proposed projects to the PUCN in its current IRP to further address drought</p>

conditions, through increased monitoring, and even the proposal of redrilling a well which has severely declining capacity due to decreased water table level.

#### INSTRUCTIONS FOR FOLLOWING SECTION:

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Water Waste Notification
<b>SUMMARY</b>	Any waste of water or other violation of this Plan, together with proof that the waste or violation originated or took place at any particular residence or place of business, shall constitute, in evidence, a prima facie presumption that the owner, current occupant, or manager of real property of such residence or place of business was responsible for the waste or other violation.

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Watering Restrictions
<b>SUMMARY</b>	watering restrictions will be as follows: Odd numbered addresses may water on Tuesday, Thursday, and Saturday. All even numbered addresses may water on Monday, Wednesday, and Friday. There is no outdoor watering between 1:00 p.m. and 7:00 p.m. daily. Without exception – there is no outdoor watering on Sundays.

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Drought Alert Provisions
<b>SUMMARY</b>	(a) No new turf may be installed in residential front yards. In single-family residential development, the installation of new turf shall not exceed fifty percent of the gross area of the



	<p>side and rear yard or one hundred square feet, whichever is greater (up to a maximum of five thousand square feet). No turf area may be installed in the side or rear yard if any dimension thereof is less than ten feet.</p> <p>(b) During the months of May through August, the planting of cool-season grasses (i.e. tall fescue or rye grass) is prohibited. The planting of warm-season grasses (i.e. bermuda and zoysia) is permitted.</p>
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<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Cooling System Provisions
<b>SUMMARY</b>	During drought watch and drought alert conditions, outdoor mist cooling systems are not restricted within residential development. In commercial operations, outdoor mist cooling systems relating to animal safety are permitted, but those relating to human comfort are permitted only during the months of June, July, and August, and only between the hours of twelve noon and ten p.m.

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Washing Paved Surfaces, buildings or equipment
<b>SUMMARY</b>	The washing of paved surfaces, buildings, or equipment (other than vehicles) is prohibited unless the water is discharged to a sanitary sewer in accordance with applicable laws and regulations or is contained on site.

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Washing personal and commercial vehicles
<b>SUMMARY</b>	<p>Under drought watch and drought alert conditions, the washing of personal vehicles upon residential properties is limited to once per week per vehicle and requires a positive shut-off nozzle. Commercial vehicles may be washed without limitation as to frequency, but only:</p> <p>(a) At a commercial facility in accordance with applicable laws and regulations, or;</p> <p>(b) By means of a high-pressure, low volume sprayer using less than ten gallons per vehicle.</p>

<b>What types of topics/issues would you like the Nevada Drought Forum to address?</b>	
<p>Education is critical to get communities to work together towards water conservation particularly during periods of drought. Water conservation needs to be a part of community culture and pride in the driest state in the nation. Utilities who charge for water are not always the voice which is the most heeded, particularly in Spring Creek where residents are cognizant that decreased consumption can mean increased rates for the utility to meet their revenue requirement. Joint efforts at education is a must. NvRWA has been a good ally in this effort. One education effort implemented by SCUC is a rebate program for our customers for the purchase of High Efficiency Toilets and Washers. .</p>	



**When complete, please return to:**

**William (Bill) Elliott, Division of Emergency Management**  
 welliott@dps.state.nv.us



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Spring Mountain Motor Sports Ranch	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
3601 State Hwy 160	Pahrump, NV 89048
<b>CONTACT NAME</b>	<b>TITLE</b>
Raquel Slusher	Event Coordinator
<b>CONTACT PHONE</b>	<b>EMAIL</b>
800-391-6891	Raquel@racespringmountain.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This racetrack provides water for 450 people.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Site Manager about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked the Site Manager to increase any routine checks of the system and be in compliance with any water conservation policies. We have asked the Site Manager to notify the Distribution Operator immediately if there are any leaks within the distribution system or other issues with the water.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Stagecoach General Improvement District	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
5000 Navajo Tr	Stagecoach, NV 89429
<b>CONTACT NAME</b>	<b>TITLE</b>
Teri A. Hurt	Manager
<b>CONTACT PHONE</b>	<b>EMAIL</b>
775-629-0849	sgid@pyramid.net

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input checked="" type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
Stagecoach GID PWS NV0000224 is located in the Stagecoach Valley in Lyon County Nevada the total service area is approx. 65 sq. miles. The total number of connections served is currently 550 with an est. population of 1269.		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
Our water levels are monitored daily through our telemetry system. In the past 9 years we have seen no significant reduction in those levels. We are proactive in our efforts to promote water conservation through literature made available at our office and through our website. We monitor our system through meter readings, visual inspections and citizen reports for water waste and unexplainable high usage. We actively repair and/or replace infrastructure leakage in a timely manner.

**INSTRUCTIONS FOR FOLLOWING SECTION:**

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Public Education
<b>SUMMARY</b>	Water Conservation Tips on our Website and handouts given at the counter. Provide educational material to the COW (Classroom on Wheels) Bus educating our youth on the importance of Water Quality and Conservation.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Promote use of drip irrigation and encourage use of arid/semi-arid plants in landscaping.
<b>SUMMARY</b>	Literature available at our Office and on our Website.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Water Waste / Shut-off provision in our Ordinance
<b>SUMMARY</b>	Anyone found to be wasting water either through visual inspection or citizen report is issued a written warning followed by shut-off if cooperation is not forthcoming.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Reduce leakage
<b>SUMMARY</b>	Replacement of aged distribution lines completed. Monthly audit of production vs. sales to determine amount of unaccounted water. If necessary leak survey initiated.

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Drought / Emergency Contingency Plan
<b>SUMMARY</b>	When it is determined through monitoring water levels at our well sites that drought/emergency conditions exist our GID has a four stage plan which may be enacted as conditions warrant. This plan is reviewed every five years (last review was April 2014) and has been submitted to and approved by the State of Nevada Division of Water Resources. Plan elements can begin as simple as requesting voluntary reductions in water usage, and escalate to implementation of odd/even watering days or mandatory reduction in water usage with no outside watering permitted.

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

What types of topics/issues would you like the Nevada Drought Forum to address?



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Sunrise Mountain Trailer Park	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
1450 N. Nellis Blvd.	Las Vegas, NV 89110
<b>CONTACT NAME</b>	<b>TITLE</b>
LeRoy Dains	Distribution Operator
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-556-8069	utilityservicesllc@gmail.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This mobile home park provides water for 100 people.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Site Manager about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked the Site Manager to send flyers to all homeowners so they are aware of the water conservation policies. We have asked the Site Manager to notify the Distribution Operator immediately if there are any leaks within the distribution system or other issues with the water.



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Topaz Ranch Estates GID	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
1490 Albite Rd #8	Wellington, NV, 89444
<b>CONTACT NAME</b>	<b>TITLE</b>
Joe Pomeroy	Operations Supervisor
<b>CONTACT PHONE</b>	<b>EMAIL</b>
1-(775)-790-7926	tregidjoe@gmail.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input checked="" type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
We currently serve 715 residential and 6 commercial customers in Topaz Ranch Estates.		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
At this time we are not directly affected, but as a precaution we have implied assigned watering days.

**INSTRUCTIONS FOR FOLLOWING SECTION:**

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Assigned watering days
<b>SUMMARY</b>	All customers have been advised to use even and odd addresses

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	



**What types of topics/issues would you like the Nevada Drought Forum to address?**

The effects of a dominishing water table.



**When complete, please return to:**

**William (Bill) Elliott, Division of Emergency Management**  
wellcott@dps.state.nv.us



## NEVADA DROUGHT FORUM

### SUMMARY: Current and Planned Actions Related to Drought

About Nevada's Drought Forum  
drought.nv.gov

Questions about the Form  
chunt@gov.nv.gov  
1-775-684-5670

Under the [Governor's Executive Order 2015-03](#), issued April 8, 2015, state agencies, municipal water providers and federal agencies are requested to provide a summary of current and planned actions related to drought. This information must be provided to the Nevada Drought Forum by no later than **May 15, 2015**. Please use the following form to submit your agency's information.

#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Topaz Ranch Estates GID	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
1490 Albite Rd #8	Wellington, NV, 89444
<b>CONTACT NAME</b>	<b>TITLE</b>
Joe Pomeroy	Operations Supervisor
<b>CONTACT PHONE</b>	<b>EMAIL</b>
1-(775)-790-7926	tregidjoe@gmail.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input checked="" type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
We currently serve 715 residential and 6 commercial customers in Topaz Ranch Estates.		

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
At this time we are not directly affected, but as a precaution we have implied assigned watering days.

**INSTRUCTIONS FOR FOLLOWING SECTION:**

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input checked="" type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	Assigned watering days
<b>SUMMARY</b>	All customers have been advised to use even and odd addresses

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

**What types of topics/issues would you like the Nevada Drought Forum to address?**

The effects of a dominishing water table.



**When complete, please return to:**

**William (Bill) Elliott, Division of Emergency Management**  
wellcott@dps.state.nv.us



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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Torrey Pines/Tina Lane Water Association	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
5500 N. Torrey Pines Drive	Las Vegas, NV 89130
<b>CONTACT NAME</b>	<b>TITLE</b>
Randy Bradshaw	President
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-523-4207	randallp57@hotmail.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This residential community provides water for 70 people.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the President about the drought and have asked them to observe the policies outlined in the most current version of the water system's Water Conservation Plan. We have asked the President to send email and/or flyers to all homeowners so they are aware of the water conservation policies. We have asked the President to notify the Distribution Operator immediately if there are any leaks within the distribution system or other issues with the water.



## NEVADA DROUGHT FORUM

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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Tropicana Resort and Casino	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
3801 Las Vegas Blvd. South	Las Vegas, NV 89109
<b>CONTACT NAME</b>	<b>TITLE</b>
Mark Sinnott	Chief Engineer
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-739-3595	msinnott@troplv.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This casino provides water to 5950 per day.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Chief Engineer about the drought and have referred him to the most recent version of the water system's Water Conservation Plan. The maintenance staff at the Tropicana is expected to adhere to water conservation policies and procedures and notify the Distribution Operator immediately if they are experiencing issues with the distribution system or the water quality.



## NEVADA DROUGHT FORUM

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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Trout Canyon Land & Water Users Association	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
PO Box 35908	Las Vegas, NV 89133
<b>CONTACT NAME</b>	<b>TITLE</b>
Bob McCormick	President
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-245-3596	bob@troutcanyonwater.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A		
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This residential community serves 60 water users.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the President about the Drought and have referred him to follow the policies and procedures outlined in the most recent version of their Water Conservation Plan. The President will send emails and flyers to all residents to educate them on the water conservation policies. The President will notify the Distribution Operator immediately if there are any leaks within the system or other issues with the water.

**TRUCKEE MEADOWS WATER AUTHORITY**  
**2015 DROUGHT-YEAR RESPONSE PLAN**

**Submitted to:**

**NEVADA DROUGHT FORUM**

**May 1, 2015**



## INTRODUCTION

In response to Governor Sandoval's establishment of the Nevada Drought Forum on April 8, 2015 to assess the drought in Nevada, the Truckee Meadows Water Authority ("TMWA") submits, pursuant to that order, its current plans to enhance its conservation activities and programs for calendar year 2015.

As the largest water purveyor in Washoe County, serving approximately 90% of the region's municipal water customers, TMWA is a key player in developing the region's responsible water use mission and takes the lead role in implementing programs that support that mission. TMWA has a comprehensive and extensive demand-side management program ("DMP") outlined in Chapter 5 of its 2010-2030 Water Resource Plan. The DMP includes a section that describes in general terms how the utility responds to consecutive, low-precipitation years in a drought cycle with enhanced conservation activities. As water supply conditions oscillate between normal and below normal snowpacks, TMWA and its customers are able to respond to the degree and duration of conservation warranted by supply conditions. TMWA continually assess the benefits from these measures and may modify programs to reflect new practices and technologies. Success of a program is evaluated differently depending on the type of program, and may be measured by customer participation, water saved, estimated reduction of peak day usage, and visibly improved water management practices.

The region's 2015 snowpack was the lowest in recorded history. On April 1, 2015 snowpack in the Truckee River Basin was 16% of average, and snowpack in the Lake Tahoe Basin was 0% of average. As a result, the 2015 water supply outlook is bleak.

- The most recent runoff forecasted for the Truckee River is 37% of average between April and July. This is the most likely projection assuming average hydrologic conditions over the next couple of months. And the forecast for Lake Tahoe is also below average once again. Tahoe's projected rise this year is just 26% of average or 0.45 feet between now and its peak.
- Upstream reservoir storage is worse than last year through this same point in time. As of this writing the elevation of Tahoe is 6222.85 feet, which is 0.15 feet below the invert of the outlet gates (-18,190 acre-feet of storage); releases of water into the Truckee River are impossible under these conditions. Last year on this day, the elevation of Lake Tahoe was 6224.34 feet elevation (or 1.34 feet above the rim) and there was 162,700 acre-feet in storage behind the dam. Forecasts indicate that the spring run-off season has passed and only natural (or base) flows will be seen in the river as no water will be available to augment required river flows from any reservoir on the Truckee system.

In preparation for these types of dry years, TMWA builds up water in its upstream and groundwater reserves to have available to meet customer demands. TMWA's privately owned stored water ("POSW") in upstream reservoirs to start the summer of 2015 is over 26,000 acre feet which is about 1,500 acre feet less than 2014. TMWA is enhancing its existing DMP to seek

at least 10 percent reduction in water use in 2015 in the event the 2015/2016 winter is another low-precipitation snow season.

## 2015 ENHANCED DEMAND MANAGEMENT PLAN

### A. Situation Analysis and Planning Criteria

Developed for prior water resource plans, the following classification table is a simplified representation to improve customer understanding between climatologically induced droughts and its effect on Truckee River water supplies. This classification system suggests enhancements to the annual, baseline conservation measures that can be deployed depending on the water available from the Truckee system as a drought cycle progresses and oscillates year-over-year.

	Non-Drought Situation Supplies are Normal	Supplies are Adequate [River Flows Drop-Off After Labor Day]	Supplies are Impacted [River Flows Drop-Off Before Labor Day]
	a	b	c
A Assigned Day Watering			
Monday	No water day	No water day	No water day
Even addresses:	Tuesday, Thursday and Saturday	Tuesday, Thursday and Saturday	Tuesday, Thursday and Saturday
Odd addresses:	Wednesday, Friday, and Sunday	Wednesday, Friday, and Sunday	Wednesday, Friday, and Sunday
B Water Day Time Restrictions			
Between Memorial Day and Labor Day	12 to 6 PM	12 to 6 PM	11 AM to 7 PM
C Public Education & Advertising	Standard programs	Standard programs	Increased programs
D Water Waste Prevention	Standard enforcement	Standard enforcement	Increased enforcement
E Other Actions			
Though not inclusive, these enhancements could be deployed depending on the severity of the circumstances and the potential impact to supplies			Expand water day time restrictions Reduce the number of watering days Set daily watering allotments Drought rates

NOTE: The term "supplies" refers to (1) Truckee River water available from natural flows plus releases from Federally operated reservoirs to support Floriston Rates and (2) TMWA's Privately Owned Stored Water held in Independence and Donner Lakes and Federal reservoirs.

Based on current conditions, the Truckee Meadows is in a Drought Situation with reserve supplies being impacted (column "d").

The above classification system is further delineated to provide general guidelines on when enhanced "DMP" measures need to be deployed and when, at the least, associated

media-messaging on water supply conditions and enhanced calls for reductions in water use need to begin. Those guidelines are presented below.

State of Supply to Truckee Meadows Service Areas		Month					
		May	Jun	Jul	Aug	Spt	Oct
<b>Non-Drought Situation</b>		SDMP	SDMP	SDMP	SDMP	SDMP	SDMP
<b>Drought Situation</b>							
Supplies Adequate (Loss of Floriston rates after Labor Day)		SDMP	SDMP	SDMP	SDMP	SDMP	SDMP
Supplies Impacted	Level 1	SDMP	SDMP	EMB	EDMP	EDMP	SDMP
(Loss of Floriston rates before Labor Day)	Level 2	SDMP	EMB	EDMP	EDMP	EDMP	SDMP
	Level 3	EMB	EDMP	EDMP	EDMP	EDMP	SDMP

SDMP - standard conservation program, upstream reserves not used

EDMP - enhanced conservation program, upstream reserves used

EMB - enhanced message begins at least a month prior to loss of Floriston Rates

Based on the preceding discussions and current projection of 2015 Truckee River supplies for the region, the current classification is for a drought situation and supplies (i.e., upstream reserves and underground reserves) to be impacted at Level 3. TMWA will take steps in 2015 to make customers more aware of current conditions including the fact that low precipitation years have just as severe an impact on upstream reservoir supplies as they do on underground supplies.

### **B. Communication Objectives and Strategies**

Specific communications and actions TMWA staff began implementing in March 2015 are delineated below. The primary objectives of TMWA's DMP include:

- 1) Targeting at least a 10% reduction in water use during the irrigation season months beginning June through October
- 2) No watering between 11 a.m. and 7 p.m. from Memorial Day through Labor Day
- 3) Increased enforcement of no-waste
- 4) Increased frequency of advertising and messaging about current supply conditions.

Specific measures to achieve TMWA's primary objectives are grouped under three headings: System Management, Public Education and Other Demand Management Measures. The specific measures that comprise TMWA's DMP, the target audiences, and the primary benefit to TMWA of each program are summarized in this table:

DMP Category	Primary Benefit	Target Audience
<b>A. System Management</b>		
Coordination of Treated Effluent Use	3, 4	Irrigation
Leaks and System Repairs	1, 4	All users
Meter Replacement	1	All users
Non-Potable Water Service	3, 4	Irrigation
System Pressure Standards	1, 4	All users
Unauthorized Use of Water	1, 4	Construction
<b>B Public Education</b>		
Assigned-Day Watering	1, 2, 3, 4	All users
Distribution of Water Savings Devices & Information	1, 2	Residential
Education Programs for Kids	2	Children
Homeowner Workshops	1, 2	Residential
Landscape Retrofit	1, 3	Irrigation & residential
Water Audits	1, 2	Residential & business
Water Waste Prevention	1	All users
<b>C. Other Measures</b>		
Codes and Ordinances	1	All users
Program Management and Droughts	1, 2, 3, 4	All users
Program Management and Emergency Supply Conditions	1, 2, 3, 4	All users
Water Management Programs	1, 3	Large water users
Water Rates	1, 4	All users

1 - Reduces water waste

2 - Education

3 - Peak day savings

4 - Minimize operation and maintenance to distribution facilities

**Objective 1--** To communicate the water conservation target (Reduce water use by *at least 10%*) to meet water supply goal

Measurable targets, as proposed, are an important part of communications during a drought. Included in the messaging will be descriptions or indicators to water users as to how much their water use has changed in response to diminishing flows of the Truckee River and/or preserving groundwater.

**Objective 2--** To promote responsible water use and best practices as identified by Nevada Landscape Association (NLA) and University of Nevada Cooperative Extension (UNCE).

Responsible water use needs to be practiced at all times by all residents and businesses. This message will be continually communicated—that the Truckee Meadows is an arid, high-desert environment. Responsible water use can mitigate some of the drought impacts. TMWA will be partnering with the NLA and UNCE to provide more information on how residents and businesses can use less water than usual and still preserve their landscaping.

**Objective 3--** To provide information on water supply and drought conditions that will foster the understanding that, “we are all in this together.”

Better decisions are made and behaviors change when data and information are provided that justify conservation recommendations. Knowledge of TMWA’s water system and water supply help people connect their efforts to overall results.

### **Target Audiences:**

This year, messages will be delivered with varied communication methods and timing to the audiences identified below. For each audience, the message is educational and tailored to how they use water. Education about best practices, drought updates and where interested persons can learn more about these topics forms the basis of the messages.

- TMWA customers—residential (homeowners 25+ years)  
Advertising campaign-mass media, news coverage, direct customer communications (bills, emails, etc.), social media
- TMWA customer—commercial  
Direct communications, advertising, news coverage
- TMWA customers—Home Owners Associations (HOAs)  
Direct communications
- Domestic Well Owners—direct communications
- Community at large  
Adverting campaign, news coverage, social media
- Local media  
Direct communications

### **Communication Strategies:**

Communication strategies are overall approaches used to achieve stated objectives and are explained below.

**Advertising Campaign:** The media buy is expanded this year and will be based on a strategic media mix to effectively reach TMWA’s target audience of age 25+, single family homeowners. Advertisements will be placed in local print, radio, television, billboards, venues and social media channels. Added value (contributed space) is sought on all placements either in more space, website content, on-air contests, etc. Television stations will be offering weather sponsorships where forecasters can provide up-to-date information. The campaign will utilize a new creative team this year, who will be focused on acknowledging the problem and inviting people to be part of the solution. Campaign dates: May-September.

**Content/Messaging:** TMWA will convey the conservation message (*Save at Least 10%*), and the actions or changes in water use required – including expanded no-watering times (11 a.m. – 7 p.m.), sprinkler run-time guidelines, and required watering schedules (assigned days). Other content to be distributed includes landscaping best practices to achieve the goal, all facets of drought information, water supply updates, promotion of water audits, etc. These messages will appear in all forms of communication strategies—online, news releases, FAQ’s, videos, infographics, emails, bill inserts, etc. TMWA is partnering with the NLA and UNCE to establish best practices for preserving landscaping during a drought. Staff will be using these recommendations to inform the community. Staff began with, “landscaping preparation helps” the first week of April. Staff will keep Board Members briefed so they have information needed to answer their constituents’ questions and to encourage conservation in the community. This will not only include monthly Board Reports, but updates from the General Manager, as needed.

**News Coverage:** The local media and weather forecasters play an important role in conveying the conservation and drought message to the community. Staff will start with desk sides this month and are always responsive to incoming requests. Tools used to convey the message include: editorial board meetings, desk sides, interviews, press release, media, FAQs, infographics, tours, etc. This effort has already begun.

**Direct Customer Communications:** Monthly inserts, envelope backers, bill messages, etc. will contain all messages. Conservation messages began with the April bill insert. In addition to traditional direct customer mailing, customer-specific (social-norm type messaging) mailings will be used in some areas. Social-norms, direct-mail programs provide customers with additional information about their personal water use and how their use compares over time with similar users, and/or compares with other users in their own neighborhood. As part of this messaging the customer could be given a water-use target and told how their current use compares similar homes in their neighborhood.

**Website:** TMWA.com will be linked to a specific microsite for all drought information and landscaping resources. Staff will promote this through all forms of media, including TMWA’s blog and social media. A new conservation video and an infographic/app will be developed which would compare available inventory of water resources (groundwater and drought reserves) to the savings goal and show how the community is achieving that goal.

**Social Media:** To foster conversations and sharing, staff will utilize daily postings, paid and boosted ads, videos, photos, and infographics on various social media channels, including local media, Facebook and Twitter. Active listening is also part of what staff does every day—answering what needs to be answered, looking for trends for future content, and sharing good content from others.

**Conservation Staff Program:** TMWA will have an enhanced presence in the community this year for two primary reasons. First, there is a heightened awareness of water usage due to the fourth year of drought. Second, the addition of the former Washoe County Department of Water Resources and South Truckee Meadows General Improvement District customers adds a significant base to the service area, most of which have not been exposed to assigned watering days and TMWA’s conservation programs in general. TMWA is doubling the amount of conservation staff from previous summers, and will have an increased focus on waste.

**Internal Communications:** An educated staff helps manage interactions with customers in and outside of work. TMWA staff will be fully briefed on all drought topics through staff meetings and internal “*from the source*” e-mail communications.

**Customer Workshops:** TMWA workshops will feature irrigation and landscaping best practices. New this year will be a water supply workshop at the beginning of the season to help customers understand how TMWA responds to drought conditions and what customers can do to help. These will be promoted in all forms of customer communications, news coverage and social media. Staff is also working to add more technical workshops through partnerships with NLA and UNCE.

**Community Engagement:** Staff will schedule additional presentations to community groups, citizens’ advisory groups and be present at community events to dispense drought information. Constant updates on supply and conservation will go out in all forms of communication, including TWMA’s e-newsletter. Tree consultations will be promoted, as well as the Community Forestry and TMWA Landscape websites.

**Restaurant and Business Outreach:** Tent cards for restaurants were distributed, promoting conservation and ordering water, “only if you need it.” In several bigger venues, like the Aces Baseball Stadium, mirror stickers will be placed above the restroom sinks with a friendly reminder about saving water.

**“Conservation Champions”/Good Water User Program:** TMWA is targeting the media and partners (NLA and UNCE) to help us recognize those who are saving water, and doing things right. This includes residential customers as well as commercial and HOA’s. Staff is also exploring a Top 100 *Savers* list.

**Public Service Billboards:** Staff will be contacting entities that have billboards to ask for a conservation message to be included, i.e., NDOT highway readers, hotel billboards, etc.

Commercial Customer and HOA Engagement: Through the data collected last year on water use, a program will be started to communicate directly with commercial customers and HOA's. Staff has conducted a focus group with members of TMWA's Standing Advisory Committee, as well as met with the NLA and UNCE. Using what is learned, staff will be implementing the following tactics: direct communications to association managers, establishing a network of contacts of all large users, partnering to institute more technical workshops for landscapers, etc. A presentation has been given to the presidents of HOA's/Associations to engage this group to determine best time, tactics and practices to encourage conservation.

Engagement of Governmental Agencies: Work directly with the local agencies encouraging them to set the example for the community at parks, schools, etc. Staff has approached the fire departments to request they curtail fire hydrant flushing where they can. Also, on a longer-term basis, TMWA will be engaging the planning departments to look at landscaping requirements.

#### **If Conditions Worsen (from situational analysis):**

Other actions mentioned below may be considered (not included in this year's timeline at this time) depending on how the water supply conditions unfold during the 2015 irrigation season.

- Water-use restrictions that would be considered: no sod or seed planting, no fountain operation, and car wash limits
- Expand advertising campaign through October
- Direct mail campaign to areas suffering more impacts than others
- Direct mail from the General Manager and/or Board Chairman to targeted audiences encouraging conservation
- Drought rates, increasing water violation fines, etc.
- Town Hall Meetings
- Moderated web chats
- Bus advertising
- Press conference(s)

#### **C. Supply Improvement Projects**

TMWA currently has 27 groundwater wells permitted for Aquifer Storage and Recovery ("ASR"). The ASR program recharges the groundwater aquifers with treated surface water in the off-peak months (approximately October through April) that is stored underground and used when needed to augment drought supplies. With the consolidation of the former Washoe County Water Utility and the South Truckee Meadows General Improvement District into TMWA, staff is aggressively pursuing the permitting of an additional 30 groundwater wells for ASR in



Spanish Springs and southern portion of the Truckee Meadows which will enhance the ability to store water in the underground aquifers.

Also, three other major drought-related projects are planned in the southwest Truckee Meadows for the Mt. Rose-Galena fan areas. These areas currently rely on groundwater wells for 100 percent of their water supply and the continuing drought situation has severely limited the amount of natural recharge to the local aquifers.

The first project consists of water system improvements to deliver up to 1,500 gallons per minute of off-peak water supply for conjunctive use in the Arrowcreek and ultimately the Mt. Rose water systems. Phase 1 of the proposed improvements consist of about 3600 feet of 10-inch pipe on Zolezzi Lane along with two new booster pump stations to get the water up into the Arrowcreek system where it can be used as the primary source of supply during the winter off-peak season and allow the municipal wells to rest. The \$2.8 million project is scheduled for construction in the summer of 2015 with a planned in-service date in November 2015 to allow use throughout the off-peak water season. Phase 2 of the project to be constructed in 2016-2017 consists of an additional \$1.2 million of improvements to deliver some of the supply up into the Mt. Rose/Galena water system to provide a source of supply for conjunctive use in those areas.

A project to provide a surface water supply to establish a conjunctive use program for the former STMGID West system is also planned. The \$3.8 million project consists of a new booster pump station near the reclaim water reservoir on Arrowcreek Parkway and approximately 8,100 feet of 14-inch pipe up Arrowcreek Parkway. The new system will ultimately allow up to 2,500 gallons per minute of surface water supply to be put into storage in the STMGID #4 & #5 storage tanks for use within the distribution system during the off-peak season. The phased project is scheduled for completion in 2018.

TMWA is currently performing a siting study to locate a new 2.0 million gallon per day (mgd) water treatment plant on the upper Mt. Rose fan near the Thomas and Whites Creeks. The new plant will treat creek water to provide a more reliable supply for the area. The \$8.2 million project is scheduled for completion in 2018.

In the valley below, TMWA is proceeding with the completion of three new production wells including the Double Diamond #3 well, the Innovation well located off of Longley Lane and the Huffaker Place well to provide up to 3,000 gallons per minute of new groundwater supply during the peak season. Total project costs will approach \$3.0 million and the new supply is scheduled to be available in the summer of 2016.

In the North Valleys, TMWA will construct 29,000 feet of 24-inch pipe on Lemmon Drive to allow 100 percent of the Fish Springs groundwater supply (currently 6,500 gallons per minute up to 8,000 acre-feet per year) to be available for use within the North Valleys areas. This groundwater supply will offset an equal amount of surface water supplies that are normally pumped from the Truckee Meadows to the North Valleys areas and will help TMWA to conserve additional upstream drought reserves should the drought continue. The \$17.8 million project is currently under design with construction scheduled to begin sometime in the late summer or fall of 2015 with an in-service date of June 1, 2016.

6 May 2015

Cory Hunt  
Senior Policy Analyst  
Office of the Governor-State of Nevada  
State Capitol Building  
101 N. Carson Street  
Carson City, NV 96162

RE: Nevada Drought Forum: Summary Report of Drought Response Planning

Dear Mr. Hunt:

Few places in Nevada are as fortunate as the Truckee Meadows which has a river running through it; but that does not change the fact that we live in a high-desert area with annual average rainfall of 7.5 inches per year. In essence, the region (if not the whole state) is in a perpetual drought periodically interrupted by above-average precipitation years. When the water year ended in October 2014, the community was hopeful the winter of 2014/2015 would be well above average. As it happened, run-off forecasts released April 1, 2015 for the Lake Tahoe and Truckee River basins marked the lowest recorded snowpack, precipitation and run-off levels since record keeping began in 1909.

Fortunately, the Truckee Meadows Water Authority ("TMWA") has prepared for significant dry periods. The utility owns and manages storage rights in Donner Lake (4,750 acre feet), Independence Lake (17,500 acre feet) and up to 14,000 acre feet in various federal reservoirs under a federal storage contract. These upstream reserves are used only in low-water years and are typically replenished during the winter months. August through October of 2014 was the first time these drought reserves had been used in significance since 1992. In addition, TMWA recharges the groundwater aquifer with treated surface water during the winter months at 23 well sites.

TMWA's water resource plan is based on the worst drought of record, that being from 1987 through 1994. The operating strategy developed based on that drought is being followed for the current drought period which began in 2012. The results thus far indicate the plan is working. However, prudence dictates that TMWA plan for additional water use reductions in 2015 in preparation for whatever water supply may or may not be available for 2016. The objective during these dry years is to preserve as much of TMWA's upstream and groundwater reserves as reasonably practicable while minimizing disruption to the Reno/Sparks economy and quality of life. The following factors are key to understanding the current conditions:

- The region has experienced four straight significantly below-average water years which has not been experienced in the recorded history.

- 2012, 2013, 2014 -- some of the driest, consecutive years in the 106 years for which we have data -- were followed by a fourth year which is the driest on record.
- Heading into the 2015 irrigation season, TMWA's upstream reserves are near capacity, similar to the start of the 2014 irrigation season.
- Based on the latest U.S. Natural Resource Conservation Service forecast, Truckee River flows will be reduced to natural or base flows by the end of May, the earliest recorded reduction of flows on record.
- TMWA is targeting at least a 10% water use reduction for 2015 that is estimated to save over 5,000 AF of water from June through October.
- A 10 percent reduction by customers in 2015 can conserve enough surface water storage to help us manage through additional dry years with minimal impact to the community.
- Further communication and outreach components will assist in successful management of TMWA's 2015 water supplies.

Since April 1, 2015, TMWA began enhancing its Demand Management Program ("DMP") in response to low run-off forecasts and to get the message to the community to allow customers to begin adapting sooner rather than later. TMWA's DMP is one tool available to address the timing of use of raw water supplies for customer demands while meeting TMWA's revenue/cost targets, working within the constraints of various rules and regulations of the river system, and meeting the stated needs of the local community (i.e., economic vitality, quality of life, and response to local entity land use objectives). Like most DMP programs, you'll find TMWA's DMPs target (a) responsible water use; (b) water waste; (c) distribution system leak detection, water theft, and repair; and (d) low-water-year river supplies. TMWA's DMP educates consumers through all media forms as well as providing on-site service visits on the efficient and responsible use of water. The DMP is designed to be flexible in its response to annual water supply variations during drought cycles.

In response to the Governor's Executive Order 2015-03, attached is a report which summarizes a series of actions TMWA has begun to implement to address the low water conditions for calendar year 2015 and potentially beyond should low-precipitation years continue. These actions are in addition to the long-established, annual activities TMWA implements as part of its overall demand-management program.

If I can be of further assistance, please do not hesitate to contact me.

Sincerely,



Mark Foree  
General Manager

Cc:

John Erwin, Dir Natural Resources  
Scott Estes, Dir Engineering  
Kim Mazeres, Dir Customer Relations  
Jeff Tissier, Chief Financial Officer



## NEVADA DROUGHT FORUM

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<b>CONTACT PHONE</b>	<b>EMAIL</b>
775-727-5575 ext 1208	jegillmore@uiwater.com

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<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
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<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
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**When complete, please return to:**

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<p>The Utilities, Inc. of Nevada (UIN) water conservation plan outlines prudent and effective water resource management practices within UIN's service area. This plan considers the resources of the utility as well as the number of customers served by the utility. To a large extent, this plan relies on the cooperation and the resourcefulness of both customers and the utility personnel.</p> <p>UIN continually encourages customers to save water because of the resource, economic and community benefits. Therefore, conservation measures are routinely used during normal UIN operations. Additionally, conservation measures may be increased during periods of drought or when demand exceeds supply capabilities. These measures will be implemented to assure adequate service to all customers. The following measures are considered in case of more severe drought.</p>

**INSTRUCTIONS FOR FOLLOWING SECTION:**

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Water Waste Notification
<b>SUMMARY</b>	Any waste of water or other violation of this Plan, together with proof that the waste or violation originated or took place at any particular residence or place of business, shall constitute, in evidence, a prima facie presumption that the owner, current occupant, or manager of real property of such residence or place of business was responsible for the waste or other violation.

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Watering Restrictions
<b>SUMMARY</b>	watering restrictions will be as follows: Odd numbered addresses may water on Tuesday, Thursday, and Saturday. All even numbered addresses may water on Monday, Wednesday, and Friday. There is no outdoor watering between 1:00 p.m. and 7:00 p.m. daily. Without exception – there is no outdoor watering on Sundays.

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Drought Alert Provisions
<b>SUMMARY</b>	<p>(a) No new turf may be installed in residential front yards. In single-family residential development, the installation of new turf shall not exceed fifty percent of the gross area of the side and rear yard or one hundred square feet, whichever is greater (up to a maximum of five thousand square feet). No turf area may be installed in the side or rear yard if any dimension thereof is less than ten feet.</p> <p>(b) During the months of May through August, the planting of cool-season grasses (i.e. tall fescue or rye grass) is prohibited. The planting of warm-season grasses (i.e. bermuda and zoysia) is permitted.</p>

<input type="checkbox"/> Action Taken or Underway <input checked="" type="checkbox"/> Action Planned	
<b>ACTION</b>	Cooling System Provisions

<b>SUMMARY</b>	During drought watch and drought alert conditions, outdoor mist cooling systems are not restricted within residential development. In commercial operations, outdoor mist cooling systems relating to animal safety are permitted, but those relating to human comfort are permitted only during the months of June, July, and August, and only between the hours of twelve noon and ten p.m.
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<input type="checkbox"/> Action Taken or Underway	<input checked="" type="checkbox"/> Action Planned
<b>ACTION</b>	Washing Paved Surfaces, buildings or equipment
<b>SUMMARY</b>	The washing of paved surfaces, buildings, or equipment (other than vehicles) is prohibited unless the water is discharged to a sanitary sewer in accordance with applicable laws and regulations or is contained on site.

<input type="checkbox"/> Action Taken or Underway	<input checked="" type="checkbox"/> Action Planned
<b>ACTION</b>	Washing personal and commercial vehicles
<b>SUMMARY</b>	Under drought watch and drought alert conditions, the washing of personal vehicles upon residential properties is limited to once per week per vehicle and requires a positive shut-off nozzle. Commercial vehicles may be washed without limitation as to frequency, but only: <ul style="list-style-type: none"> <li>(a) At a commercial facility in accordance with applicable laws and regulations, or;</li> <li>(b) By means of a high-pressure, low volume sprayer using less than ten gallons per vehicle.</li> </ul>

<b>What types of topics/issues would you like the Nevada Drought Forum to address?</b>
<p>UIN's education efforts and the actions listed above are no doubt beneficial during a drought. However, education is the key to long term water conservation. The Nevada Drought Forum should include a plan for the state agencies, water providers and communities to work together to educate all Nevadans that the wise use of water begins in each home and business.</p>



**When complete, please return to:**

**William (Bill) Elliott, Division of Emergency Management**  
 welliott@dps.state.nv.us



## NEVADA DROUGHT FORUM

### SUMMARY: Current and Planned Actions Related to Drought

About Nevada's Drought Forum  
drought.nv.gov

Questions about the Form  
chunt@gov.nv.gov  
1-775-684-5670

Under the [Governor's Executive Order 2015-03](#), issued April 8, 2015, state agencies, municipal water providers and federal agencies are requested to provide a summary of current and planned actions related to drought. This information must be provided to the Nevada Drought Forum by no later than **May 15, 2015**. Please use the following form to submit your agency's information.

#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Van's Trailer Oasis	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
3610 N. Las Vegas Blvd.	Las Vegas, NV 89115
<b>CONTACT NAME</b>	<b>TITLE</b>
LeRoy Daines	Distribution Operator
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-556-8069	utilityservicesllc@gmail.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>				
<input type="checkbox"/> Municipality	<input type="checkbox"/> State Agency	<input type="checkbox"/> Tribe	<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other
<b>WATER SUPPLY SOURCES (Check all that apply)</b>				
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)		<input type="checkbox"/> N/A	
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>				
This mobile home park provides water to 75 per day.				

#### DROUGHT IN NEVADA

<b>Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)</b>
We have alerted the Property Owner of the drought conditions and have referred him to the most recent version of the water system's Water Conservation Plan. We have asked that they send flyers to all the homeowners in the community to make them aware of the water conservation policies. We have asked that the Distribution Operator be notified immediately of any leaks within the distribution system or other issues with the water.





## NEVADA DROUGHT FORUM

### SUMMARY: Current and Planned Actions Related to Drought

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#### CONTACT INFORMATION

<b>AGENCY NAME</b>	
Virgin Valley Water District	
<b>STREET ADDRESS</b>	<b>CITY, STATE ZIP</b>
500 Riverside Road	Mesquite, NV 89027
<b>CONTACT NAME</b>	<b>TITLE</b>
Kevin Brown	General Manager
<b>CONTACT PHONE</b>	<b>EMAIL</b>
702-346-5731	kbrown@vvh2o.com

#### ABOUT THE AGENCY

<b>AGENCY TYPE (Check One)</b>		
<input type="checkbox"/> Municipality	<input checked="" type="checkbox"/> State Agency	<input type="checkbox"/> Tribe
<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Other	
<b>WATER SUPPLY SOURCES (Check all that apply)</b>		
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water (Describe sources)	<input type="checkbox"/> N/A
<b>SERVICE AREA DESCRIPTION (Size, number of customers served, location)</b>		
<p>The Virgin Valley Water District services Mesquite and Bunkerville, Nevada and has an estimated 8,330 customers.</p> <p>Beginning at the northeast corner of section 10, Township 13 South, Range 71 East, Mount Diablo Meridian and running south approximately 15 miles along the section lines to the southeast corner of section 22, Township 15 South, Range 71 East, Mount Diablo Meridian; thence westerly along the section lines approximately 15 miles to the southwest corner of section 20, Township 15 South, Range 69 East; thence northerly along the section lines approximately 2 miles to the northwest corner of section 17, Township 15 South, Range 69 East; thence easterly along the north line of that section 17, a distance of 1 mile more or less to the southwesterly corner of section 9, Township 15 South, Range 69 East; thence northerly along the westerly section lines of sections 9 and 4 to the northwesterly corner of section 4, Township 15 South, Range 69 East; thence westerly along the south lines of Township 14 South approximately 14 miles to the southwesterly corner of section 31, Township 14 South, Range 67 East, that point also being on the west range line of Range 67 East; thence northerly along that range line a distance of 12 miles more or less to the northerly line of Clark County;</p> <p>4 2 VIRGIN VALLEY WATER DISTRICT</p>		

thence easterly along the north line of Clark County 28 miles more or less to a point in the north-south boundary line between the States of Nevada and Arizona; thence southerly along the Nevada-Arizona state line to the northeast corner of section 10, Township 13 South, Range 71 East, Mount Diablo Meridian, that point being the true point of beginning.  
(Ch. 100, Stats. 1993 p. 160; A-Ch. 266, Stats. 1995 p. 440)

## DROUGHT IN NEVADA

**Briefly summarize how drought has impacted operations, resource availability and/or planning activities (500 words)**

Drought has not impacted the Virgin Valley Water District.

## INSTRUCTIONS FOR FOLLOWING SECTION:

Utilize the following boxes to outline specific activities your agency has taken or is planning to take in response to drought. Please use additional sheets as necessary.

If you are a state agency, please cite applicable authority for each action.

Sample

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	<i>Assigned watering days</i>
<b>SUMMARY</b>	<i>All customers are prescribed assigned watering days that change seasonally. For example, one assigned day in winter and three assigned days in spring and fall.</i>

<input checked="" type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	Water rates changed
<b>SUMMARY</b>	Changed tier structure and reduced demands

<input type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway	<input type="checkbox"/> Action Planned
<b>ACTION</b>	

<b>SUMMARY</b>	
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<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<input type="checkbox"/> Action Taken or Underway <input type="checkbox"/> Action Planned	
<b>ACTION</b>	
<b>SUMMARY</b>	

<b>What types of topics/issues would you like the Nevada Drought Forum to address?</b>



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