



TOWN OF ORO VALLEY  
Water Utility  
11000 N. La Cañada Drive  
Oro Valley, Arizona 85737  
(520) 229-5000 Fax (520) 229-5029

December 5, 2006

Ms. Melanie Ford  
Drought Planner  
Arizona Department of Water Resources  
3350 North Central Ave.  
Phoenix, AZ 85012

**Re: Drought Preparedness Plan for Oro Valley Water Utility**

Dear Ms. Ford:

In accordance with House Bill 2277, The Oro Valley Water Utility (OVWU) is submitting to the Arizona Department of Water Resources our Drought Preparedness Plan. OVWU meets the requirements as set forth under HB 2277 as a Large Municipal Provider and has received a Designation of Assured Water Supply dated June 26, 2003. As such only the Drought Preparedness Plan is required for submission.

**The following items are enclosed:**

- Drought Preparedness Plan approved for submission by Council November 15, 2006.
- AWS No. 2003-01 DECISION AND ORDER No. 26-400765
- IGA with Town of Marana
- IGA with Tucson Water

If you have any questions or need further information, please contact Kevin McCaleb at 520-229-5024 or me at 520-229-5010.

Sincerely,

Philip C. Saletta, P.E.  
Water Utility Director

C: Shirley Seng, Water Utility Administrator  
Kevin McCaleb, Water Conservation Specialist

**DROUGHT PREPAREDNESS PLAN**

**Submitted by:**

**Town of Oro Valley  
11000 N. La Canada Drive  
Oro Valley, AZ 85737**

**Contact Information:**

**Philip C. Saletta, P.E.  
Water Utility Director  
(520) 229-5010**

**Shirley Seng  
Water Utility Administrator  
(520) 229-5013**

**Approved on November 15, 2006 by the Oro Valley Town Council  
for submission to the Arizona Department of Water Resources**

## Town of Oro Valley Drought Preparedness Plan

Oro Valley, like other municipalities in southern Arizona, is suffering from the effects of the continuing drought. Oro Valley is taking actions in the event current drought conditions presently affecting the region continue or worsen. The Town began delivering reclaimed water to large turf users late last year. Phase II of the reclaimed water system is currently in the design stage. When completed, the reclaimed water system will reduce Oro Valley's pumping of groundwater by approximately 25% annually. Additionally, the Town is working closely with the Town of Marana, Flowing Wells Irrigation District and Metropolitan Domestic Water Improvement District to design and construct treatment and conveyance facilities that will provide direct delivery of CAP water, further reducing the consumption of groundwater. Even with the use of renewable water resources such as CAP water and reclaimed water, the Town will continue to utilize groundwater as either a supplement to increased demands or as a backup supply.

Although there is no imminent threat of drought caused water shortages in Oro Valley, the continuation and severity of the drought has placed additional stress on groundwater reserves by reducing regional natural recharge levels. Historically, annual rainfall in this region produces an estimated 5000 acre feet per year of natural recharge to the aquifer in Oro Valley. Since the onset of the drought, we have seen annual precipitation rates plummet sometimes to less than half of what is considered normal or acceptable levels. Based upon a precipitation analysis performed by Brown and Caldwell for the Utility's Groundwater Action Plan (GAP), drought conditions commenced locally around 1995. Modeling performed by Brown and Caldwell for the GAP indicated average annual recharge during this drought estimated at 580 acre feet per year or roughly 10% of average. With the Town's annual average production of approximately 8500 acre feet per year, we are removing groundwater at a rate significantly greater than the environment is able to replace.

The Arizona Department of Water Resources, under the authority of House Bill 2277, is requiring all water providers to file a Drought Response Plan by January 1, 2007. The Oro Valley Water Utility already has a conservation ordinance in place relating to reduced water production capabilities and water outages<sup>1</sup>. The Drought Response Plan will be climate related and will be developed to monitor four separate environmental indicators or triggers to gauge conditions that would affect natural recharge. Fluctuations of these triggers above and below specified limits will identify the stage or severity of current drought conditions and the corresponding actions that will be required of water users to help mitigate the effects upon potable water resources. Any two of these triggers in effect simultaneously will indicate the stage of drought and the actions to be taken by the Utility, its staff and its customers.

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<sup>1</sup> Oro Valley Town Code Article 15-18

## Triggers

**Temperature** will be monitored as to its intensity and the number of days of sustained excessive levels in any three month period. This information will be monitored through the Arizona Meteorological data base monthly and evaluated.

**Average Annual Precipitation Rates for the water year** will be monitored and evaluated for the percentage of that rate that has accumulated up to the time of the evaluation. This information will come from The University of Arizona Climate Assessment for the Southwest (CLIMAS) web site forecasts and will be evaluated twice a year on or about October 1st and April 1st.

**Drought Monitor Level** will be monitored on a regional basis. The data will be gathered from the U.S. Drought Monitor that is published on the CLIMAS web site weekly. Evaluations of the data will be done monthly.

**Annual Average Decline of Water Levels** will be gathered monthly by Oro Valley Water Utility Production Facilities Personnel. Evaluations on the data will be made twice a year on or around October 1st and April 1st.

## Categories

**Categories** will identify the three classifications for customers of the Oro Valley Water Utility and its service areas. The Utility, as well as its customers, will be responsible for engaging in specific actions in response to the stage of drought that has been declared. Penalties for non-compliance may be imposed depending on the drought stage.

**Category A** includes all single family residential water users.

**Category B** includes all commercial water users such as businesses, schools, hotels, apartments, public facilities, parks and Town buildings.

**Category C** includes all reclaimed water customers.

## Actions

**Actions** are the specific steps or measures to be taken by the Utility and its customers. Activities will define the designated reduction levels and/or restrictions assigned to the individual categories at a specific stage of drought and the actions to be taken by the Water Utility to monitor and enforce reductions and/or restrictions. These actions are provided to elicit necessary reductions during the various drought stages. The following is an example of what would occur in Stage 1:

**The Utility:** The Utility's actions would include increasing customer awareness through education by dispensing literature, newsletters and informational mailings and by performing water use audits on residential and commercial properties. The Utility would continue to expand its use of alternative water sources such as reclaimed water and CAP water. The Utility would also cooperate and work with other neighboring providers in their efforts to reduce the impact of the drought.

**Category A Customers:** The action for customers would be to reduce their overall water use by 10%. There are no specific areas where they are required to conserve. Decisions may be based upon the customers' individual habits and needs to meet the required reductions whether it is landscape irrigation, reduction of shower times, etc.

**Category B Customers:** The action for the customers would be to reduce their landscape irrigation. The Utility would ask for, but not enforce, any interior reduction of water use. The Utility would monitor water use and request justifications from the customer for any significant interior water use increases that may occur.

**Category C Customers:** The action for the customers would be to reduce their landscape irrigation, but with a smaller percentage to achieve, due to the fact they are already reducing the demand on the aquifer by using reclaimed water. The reduction in landscape irrigation is to compensate for the reduction of effluent generated resulting from conservation efforts of the other customers.

For all categories of customers, when a drought stage moves into the next elevated stage, all of the previous actions will remain in place and additional restrictions will be added as needed.

### Oro Valley Drought Response Plan

Drought Conditions/Triggers	Actions
<p><b>Stage 1 - Heightened Conditions:</b></p> <p>40 days of temperatures <math>\geq</math> 98 degrees in any three month period</p> <p>80% to 90% of average precipitation for water year as reported by CLIMAS</p> <p>Drought Monitor Level of D-1 or greater as reported by CLIMAS</p> <p>An average annual decline of groundwater levels <math>\geq</math> 4 feet</p>	<p><u>Utility:</u></p> <ul style="list-style-type: none"> <li>▪ Increase customers awareness through education, literature, newsletters, water use audits, etc.</li> <li>▪ Strict enforcement of Town water wasting ordinance(s)</li> <li>▪ Continue overall water management efforts and work to expand alternative water supplies.</li> <li>▪ Cooperate and work with neighboring water providers to reduce the impact of drought conditions.</li> </ul> <p><u>Category A: Residential Customers</u></p> <ul style="list-style-type: none"> <li>▪ Voluntary reduction of overall water use by 10%</li> </ul> <p><u>Category B: Commercial Customers:</u></p> <ul style="list-style-type: none"> <li>▪ Voluntary reduction of landscape water use by 10%</li> </ul> <p><u>Category C: Reclaimed Customers:</u></p> <ul style="list-style-type: none"> <li>▪ Voluntary reduction of landscape water use by 5%</li> </ul>

## Stage 2 – Severe Conditions:

50 days of temperatures  $\geq 98$  degrees in any three month period

70 to 80% of average precipitation for water year as reported by CLIMAS

Drought Monitor Level of D-2 or greater as reported by CLIMAS

An annual average decline of groundwater levels  $\geq 6$  feet

All of Stage 1 actions remain in effect and

### Utility:

- Increase customer awareness efforts by putting on workshops, classes and utilizing the media.
- Notifications sent to customers that fail to meet reduction goals.

### Category A: Residential Customers

- Strongly encouraged to reduce overall water use by 10%
- Notifications for non-compliance (second billing after notice that a drought stage has been declared)

### Category B: Commercial Customers

- Strongly encouraged to reduce landscape irrigation by 10%.
- Notifications for non-compliance (second billing after notice that a drought stage has been declared)
- Misting systems allowed **only** in occupied areas of businesses. Systems must be off if no occupants are present.
- Fund raising events utilizing water (car washes) will be allowed provided written notice is sent to the Utility at least two weeks prior to the date of the event. Notice must be sent by the business that is hosting the event and must include the address where the event will be held, the organization benefiting from the proceeds and the hours it will be operating.
- No recreational usage or demonstrations using water will be allowed to be performed by or for any Town department, division or any agency under contract to provide services to the Town; including but not limited to Fire and Police Departments
- Use of fireworks of any kind are prohibited

### Category C: Reclaimed Customers

- Strongly encouraged to reduce landscape irrigation by 10%.
- Notifications for non-compliance (second billing after notice that a drought stage has been declared).

Drought Conditions/Triggers	Actions
<p><b>Stage 3 – Extreme Conditions:</b></p> <p>60 days of temperatures <math>\geq 98</math> degrees in any three month period</p> <p>Below 70% of average precipitation for water year as reported by CLIMAS</p> <p>Drought Monitor Level D- 3 or greater as reported by CLIMAS</p> <p>An average annual decline of groundwater levels <math>\geq 7</math> feet</p>	<p>All of Stage 2 actions remain in effect and</p> <p><b>Utility:</b></p> <ul style="list-style-type: none"> <li>▪ Notices issued of impending penalties/surcharges for failure to reduce consumption</li> <li>▪ Penalties imposed for violations</li> </ul> <p><b>Category A: Residential Customers</b></p> <ul style="list-style-type: none"> <li>▪ Mandatory reduction of overall water use by 10%</li> <li>▪ No use of outdoor water features</li> <li>▪ No over seeding of lawns in the fall</li> <li>▪ Penalties for violations</li> </ul> <p><b>Category B: Commercial Customers:</b></p> <ul style="list-style-type: none"> <li>▪ Mandatory 10% reduction of landscape irrigation water use</li> <li>▪ No use of water for any fundraising events</li> <li>▪ No use of mister systems allowed</li> <li>▪ No use of outdoor water features</li> <li>▪ No over seeding of turf areas</li> <li>▪ No potable water for construction</li> <li>▪ Penalties for violations</li> </ul> <p><b>Category C: Reclaimed Customers</b></p> <ul style="list-style-type: none"> <li>▪ Mandatory 10% reduction of reclaimed water use</li> <li>▪ No over seeding of turf areas</li> <li>▪ Penalties for violations</li> </ul>

### **Stage 4 – Crisis Conditions:**

Conditions  $\geq$  Stage 3 continue past one full year.

All of Stage 3 actions remain in effect and

#### **Category A: Residential Customers**

- No landscape watering except by hand and only trees and large shrubs.
- No use of outdoor water features
- No potable water for construction
- No new water services issued
- Stricter penalties for violators

#### **Category B: Commercial Customers**

- No landscape watering except by hand and only trees and large shrubs.
- No misting systems allowed
- No use of outdoor water features
- No potable water for construction
- No new water services issued
- Stricter penalties for violators

#### **Category C: Reclaimed Customers**

- Mandatory 20% reduction of reclaimed water use.
- No over seeding of turf areas
- Stricter penalties for violators

### **Penalties and Surcharges**

As any stage listed in the Drought Response Plan is reached, the Utility will issue a notice to all water customers informing them that a specific drought level has been declared. Included in this notice will be voluntary and/or mandatory water use reduction levels and/or restrictions that will be in effect, as well as specific activities that will be prohibited. **Activities that are specifically prohibited in any drought stage may be subject to a fine for non-compliance.** Should the Town declare a Stage III Drought, notification will be sent to all water customers that the Utility will impose penalties and/or surcharges on all user categories that fail to meet reduction levels and/or restrictions. These penalties will be imposed in addition to existing commodity rates that

may be in effect. The penalties implemented will be based upon water use starting with the month that Stage III Drought is declared. The Utility will continue to monitor customer use until a lower drought stage is achieved. Penalties and surcharges that are assessed for non-compliance shall be charged at the rate most recently adopted by the Town Council and on file in the Water Utility Office.

### **Waivers and Exemptions**

Customers using less than 4,000 gallons of water per month will be exempt from mandatory reductions.

Customers in all categories that are utilizing real-time E.T. based control systems for their landscape irrigation may apply for a full or partial waiver by submitting a letter to the Water Utility office stating the manufacturer of the unit or system being used, copies of recent audits on all zones that are operated by that specific controller,<sup>2</sup> monthly operating schedules, valve runtimes, the manufacturer's name, model or type of the weather station used to collect E.T. data and its location or address. Upon receipt of the letter an appointment will be made with the applicant that allows the Water Conservation Specialist to perform a site inspection verifying the information provided. A determination as to whether a partial or complete waiver is granted will be made by the Conservation Hearing Committee.

Customers wishing to apply for a waiver due to economic hardship or health reasons may refer to the Appeals section for specific procedures.

### **Appeals**

An administrative appeal may be requested whenever a violation or dispute of any of the requirements of the Article is determined, because of code interpretation, to be an unreasonable hardship. The appeal may be made to the Conservation Hearing Committee as follows:

1. The applicant shall file a written appeal on the forms provided by the Oro Valley Water Utility.
2. The appeal will be heard by the hearing Committee within seven (7) business days, at a specified time.
3. The Hearing Committee shall consist of the Oro Valley Water Utility Director or his designee, a member of the Oro Valley Water Utility Commission, and the Water Conservation Specialist. Other technical persons may be included for unique appeals at the discretion of the Water Utility Director. The Hearing Committee shall have a minimum of three (3) members present at each meeting.
4. Adequate information shall be provided by the applicant in order to fully describe the conditions in question.
5. The decision(s) reached by the Hearing Committee shall be considered final.

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<sup>2</sup> Audits must be performed by an Irrigation Association Certified Landscape Irrigation Auditor in good standing and all audit sheets must be signed. Audits must have been performed less than 1 year from the time of submittal.

RESOLUTION NO. (R) 06-95

**A RESOLUTION OF THE MAYOR AND COUNCIL OF THE TOWN OF ORO VALLEY, ARIZONA, AUTHORIZING THE WATER UTILITY DEPARTMENT OF THE TOWN OF ORO VALLEY TO SUBMIT A DRAFT DROUGHT PREPAREDNESS PLAN TO THE ARIZONA DEPARTMENT OF WATER RESOURCES (ADWR).**

**WHEREAS**, the Town of Oro Valley is a political subdivision of the State of Arizona vested with all associated rights, privileges and benefits and is entitled to the immunities and exemptions granted municipalities and political subdivision under the Constitution and laws of the State of Arizona and the United States; and

**WHEREAS**, pursuant to A.R.S. 9-511, *et seq.*, the Town has the requisite statutory authority to acquire, own and maintain a water utility for the benefit of the landowners within and without the Town's corporate boundaries; and

**WHEREAS**, pursuant to A.R.S. Title 45 Chapter 1 Article 13, the Town must submit a Drought Preparedness Plan to the Arizona Department of Water Resources (ADWR) on or before January 1, 2007; and

**WHEREAS**, the ADWR will review the Drought Preparedness Plan for compliance; and

**WHEREAS**, after approval of the Town's Drought Preparedness Plan by ADWR, the Water Utility Staff will present to the Mayor and Council the final Drought Preparedness Plan for adoption by Ordinance; and

**WHEREAS**, it is in the Town's best interest to submit a Drought Preparedness Plan to the ADWR on or before January 1, 2007 as required by Arizona law.

**NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE TOWN OF ORO VALLEY, ARIZONA:**

**Section 1.** The Water Utility Director is hereby authorized to submit a Drought Preparedness Plan to the Arizona Department of Water Resources on or before January 1, 2007.

**Section 2.** All actions of the officers and agents of the Town of Oro Valley which conform to the purposes and intent of this resolution and which further the completion of the Drought Preparedness Plan as contemplated by this resolution, whether heretofore or hereafter taken are hereby ratified, confirmed and approved. The proper officers and agents of the Town of Oro Valley are hereby authorized and directed to do all such acts and things and to execute and deliver such Drought Preparedness Plan to the Arizona Department of Water Resources on behalf of the Town of Oro Valley as may be necessary to carry out the terms and intent of this resolution.

**PASSED AND ADOPTED** by the Mayor and Council of the Town of Oro Valley, Arizona, this 15th day of November, 2006.

**TOWN OF ORO VALLEY**

  
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Paul H. Loomis, Mayor

**ATTEST:**

  
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Kathryn Cuvelier, Town Clerk

Date: 11-20-06

**APPROVED AS TO FORM:**

  
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Melinda Garrahan, Town Attorney

Date: 11/17/06