



City of Goodyear

Water Conservation and Curtailment Plan

December, 2008



Summary

Understanding that the City of Goodyear resides within an arid environment susceptible to drought cycles and climate variability concerns, the City of Goodyear plans to ensure a sustainable and resilient water supply for its customers. The Drought Preparedness Plan (DPP) defines water use reduction goals and identifies strategies to be used to reduce demand to protect essential water uses in the event of water shortages due to operational emergencies or water potential shortages caused by drought. These guidelines are meant to provide a framework for expedient responses while maintaining the flexibility to respond to each unique water supply reduction event. They assist City officials in making the necessary decisions throughout the duration of shortage episodes.

There are three primary components of the DPP – recognition of incidents that could trigger water supply reduction events, establishment of a Water Emergency Response Team (WERT) to advise the City Manager, and the corresponding measures that are recommended for responding to them. The DPP identifies four stages with each stage progressively requiring more restrictive measures to be implemented.

The DPP will be implemented in stages when foreseeable demand or regional conditions reach specific trigger levels. Stage 1 (Water Watch), Stage 2 (Water Alert), and Stage 3 (Water Warning) will be triggered as demand rises from 90% to 95% and 100% or more of daily available water delivery capacity. “Daily available capacity” will include all resources available for delivery beyond 24 hours. Stage 4 (Water Emergency) will be declared when demand exceeds supply; the City Manager will have the authority to declare all stages and relevant measures to reduce water use.

The WERT will be integral in assessing and implementing the measures that best address the water supply shortage event. The DPP provides a **Drought Matrix (Appendix A)** with a menu of measures focused on reducing water use which the WERT may choose to recommend to the City Manager for implementation. The City Manager may cancel restrictions when the WERT, determines and advises the conditions for that stage no longer exist.

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Drought Preparedness Plan

Introduction

In accordance with A.R.S §45-342(A) the State of Arizona requires that all potable water providers prepare and utilize Drought Preparedness Plans (DPP). The DPP must identify demand reduction measures, the levels of water shortage at which they would be triggered, and the ways in which the plans would be implemented and enforced.

The Plan aims to implement both proactive measures that respond to potential local and regional water concerns, as well as it creates very clear trigger points that identify action to acute water supply issues related to the ability for the system to maintain proper operations and an adequate level of water supply contingency levels.

Purpose and Objectives

The DPP enables City staff to respond promptly and apply measures that suit the particular circumstances. By addressing each emergency event specifically rather than broadly, the City has greater flexibility and control in applying the correct level of response that minimizes service disruptions and minimizes water curtailment.

The Plan defines water supply curtailment stages, provides authority and enforcement, and offers a set of demand reduction measures for the Water Emergency Response Team (WERT) to deploy.

City of Goodyear Water System Information:

Designated Water Provider Number:
002019.0000

Address:
4980 S. 157th Ave
Goodyear, AZ 85338

Key Personnel
Public Works Director
Deputy Public Works Director
Water Resources and Sustainability Manager
Process Operations Manager

Phone Number
623-932-3010, Option 3

Water Use Restriction Stages

The City may invoke four stages of any combination of voluntary or mandatory water restrictions based on anticipated or direct levels of shortage. Shortage conditions are defined when demand reaches or exceeds a specified percentage of the City's total daily available water production capacity available for delivery beyond 24 hours. The restrictions may be imposed on portions of the service area or the entire region, depending upon the cause of the shortage. Additional restrictions may be imposed in accordance with the City Charter.

Stage 1 Water Watch

The City of Goodyear may enact stage 1 in response to anticipated or direct impacts to Goodyear's water portfolio due to regional drought conditions. Stage 1 does not have mandatory water curtailment measures in place in this stage. Active community outreach and messaging by the City's Water Conservation staff with the goal to bring awareness and information will increase and will challenge residents to meet prescribed water savings goals. The city will serve as an example by implementing higher levels of water conservation measures in city owned facilities in order to meet a prescribed target. The WERT will be activated and assess the emergency and will determine the appropriate actions to take.

Stage Two Water Alert

The City of Goodyear will request voluntary reductions from some or all users. The WERT will assess the emergency and determine the appropriate actions to take. Stage two may be triggered when demand reaches or exceeds 90% of the daily available water production capacity available for delivery and there is no expected recovery of service for the next seven days.

Stage Three Water Warning

The City invokes mandatory restrictions from some or all users. Stage three may be triggered when demand reaches or exceeds 95% of the daily available water production capacity available for delivery and there is no expected recovery of service for the next seven days.

Stage Four Water Emergency

The City invokes the most severe restrictions and enforcement for all users. Stage Four may be triggered when demand exceeds the daily available water production supply.

(Reference Appendix)

Category Exemptions

- Uses to maintain health, welfare and safety of water customers of the City of Goodyear
- Hospitals
- Essential city services that protect the health and safety of the community
- Immediate fire, hazardous waste, or sanitation hazards
- Construction of projects essential to maintain health, safety and welfare of the public
- Users of reclaimed, remediated or other non-potable sources of water

PLAN OF ACTION

The DPP will establish a Water Emergency Response Team (WERT) assigned to assess the current and projected water supply, water use demands, and water shortage incidents. The WERT will report findings and make recommendations to the City Manager. The WERT will assemble when one or

more of the identified triggers are met. The WERT is tasked with assessing and determining the appropriate level of response for each water shortage emergency. A drought matrix (Appendix A) has been created listing several water reduction measures for implementation by the WERT. The team may choose one or a combination of measures found within the drought matrix to implement and solicit the assistance of other departments within the city. The WERT will ensure open communication and outreach is achieved both with internal and external customers for the duration of the water emergency event.

The WERT will be activated and led by the Public Works Director and be comprised of key members of the Utilities team staff. The Director could assemble representatives from Parks and Recreation, the City Attorney's office, Finance, Communications and other city departments as appropriate.

The Drought Matrix (Appendix A) is a menu of options that serves as a resource for the management of water shortages. The measures identified in the matrix are based on the following areas:

Demand Management Options

Below is a list of water reduction strategies that the city could impose during times of water shortage. The strategies provided here are very broad and identify categories where reductions in water use can be realized. The drought matrix provides more specific actions the WERT can recommend to mitigate any water emergencies.

Enhance Voluntary Reduction Through Public Education

The city will build cooperation in reducing demand through enhancing public awareness of the water supply status. The city conducts regular educational outreach to build understanding of droughts, regional drought status, the DPP, and ways to reduce citywide demand as part of its conservation education program.

The WERT and Digital Communications Department will escalate communication when demand approaches levels that would trigger implementation of the DPP. Social media, marquee signage, web site features, reverse 911 calling, and all other appropriate media will be used in the event the Plan is implemented.

Regional Water Shortage Awareness Campaign

Each city has its unique trigger points for implementing their Drought Preparedness Plans. Enacted restrictions in neighboring municipalities doesn't necessarily mean the City of Goodyear's water supplies have been impacted. Water Shortage Awareness messaging may be enacted as part of a regional effort to provide public outreach and education to residents, however, implementation of restrictions within the City will only be enforced as part of the City's direct efforts in addressing specific water supply issues.

Increasing Financial Incentive Programs

In drought and other water shortages with long durations, the city will look at ways to escalate and enhance its rebate, retrofit and other conservation programs that can produce immediate reliable water demand reductions.

Municipal Use Reductions

All City Departments are subject to any water restriction measures enacted by the WERT. The city will set the example and comply so long as essential services are not disrupted

Outdoor Use Restrictions and Bans

In Goodyear, over half of water consumption occurs outdoors. Because swimming pools, non-athletic irrigated landscapes are amenities rather than essential life services, it is appropriate to reduce the water used for these functions before other uses. Should water shortages reach extreme levels, the WERT could impose measures that ban certain outdoor water uses. The City would delay imposing restrictions upon the Goodyear Ballpark until the shortages are severe. The Goodyear Ballpark is irrigated with multiple sources of water which includes non-potable water, i.e. remediated and effluent.

Reduction of New Connections

Goodyear is a growing area, with construction and development continuing to add new demand. The new development provides jobs and revenue to the City. In a water shortage, adding new demand to the water system exacerbates the problem.

Because development is vital to Goodyear's health, the City would only completely halt addition of new customers and construction in the most extreme shortages. Limits on new permits and service would expire with the end of the shortage. During less severe shortages, the City will decrease the issuance of new permits and otherwise limit the addition of new demand. This will avoid magnifying the problem. Applicable federal, state, and local laws will be followed by the City during the implementation of mandatory water restrictions. The drought matrix lists specific measures that will achieve this result.

Physical Rationing and Mandatory Bans

Physical rationing of water can be imposed through percentage reductions or specific use bans. Percentage reductions assign customers a consumption reduction goal, depending on water use, compared to some established prior use. Violations of physical reduction requirements can only be caught after the water has been used, when meters are read.

Specific use bans are imposed primarily through education and enforcement. Allowing watering only on specified days and prohibiting use of water features and refilling pools can be effective. Bans build awareness and prioritize water uses. They establish a sense of equity within the community. They can be enforced while water is in use, so that the undesired use may be immediately halted. This plan incorporates bans rather than percentage reductions.

Implementation of Plan and Restrictions

The Curtailment Ordinance will authorize the City Manager to request that the Public Works Director or the City Manager's designee update the Plan as needed.

The DPP may be initially implemented at any stage, depending on the shortage level. The WERT will provide information to the City Manager on water supplies in the event that shortages appear likely. The City Manager may declare Stage One through Stage Four as demand reaches the level specified for each stage and approve all mandatory water restrictions.

The City Manager may terminate the Curtailment of any Stage upon learning that the water shortage no longer exists from the WERT. Applicable federal, state, and local laws will be followed by the City during the implementation of mandatory water restrictions.

Enforcement and Penalties

The City will enforce the mandatory restrictions of each stage of the DPP in all parts of the service area that lie within the City. When a report of a violation is investigated or a City Code Enforcement, Water Conservation, or staff designated by the City Manager observes a violation, an educational notice will be handed to the resident or business operator or left at the address. If the violation is not corrected in a timely manner, defined in proportion to the severity of the shortage, enforcement will move to the next step.

Violations of mandatory restrictions will be treated as civil code violations, as laid out in the current Waste of Water Ordinance (14-7-8). After a warning notice is given on the second report, the City will issue a citation. Each day a violation is not corrected will be treated as a separate violation.

Second and succeeding violations of Stage Four restrictions will be treated as possible misdemeanors as defined in the current Unauthorized Use of Water Ordinance (14-7-6). Each day may be charged separately.

EMERGENCY SUPPLIES

Groundwater Savings Facilities:

The city has stored water in both the Salt River Project (SRP), and Roosevelt Irrigation District (RID) Groundwater Savings Facilities (GSF). The water can be pumped and delivered as wet water by SRP through their canals to the city. The additional water will add to the City's supplies should it enact its Drought Preparedness Plan.

Interconnection:

Two interconnects between the City and Liberty Utilities exist. The connections are used to flow water to the city when needed. There is an existing agreement in place between the two parties allowing for the exchange of water.

Municipal Groundwater Wells:

Should additional supplies be needed the city has the option to add water by bringing online any or all of its 15 municipal wells to meet water demands. Existing wells provide redundancy to the water system and increase operational flexibility.

Conclusion

The DPP provides an orderly, rapid means for the City to reduce water demand when shortages require prompt action. Publicizing the DPP and its trigger levels to build advance awareness will be essential to obtain quick, full cooperation from affected water users. The DPP is focused on protecting the City's ability to deliver water to our existing customers.

References

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