



Arizona Department of Water Resources *Conserving Water Today for Arizona's Tomorrow*

Developing Ordinances to Prohibit Fugitive Water from Irrigated Landscapes (and other sources of outdoor water waste)

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Introduction

In Arizona, a significant portion* of outdoor water use is applied to the landscape. Water used to irrigate landscapes is wasted when it runs off due to application rates that far exceed plant requirements, the inability for soils to absorb the water at the rate applied, or inefficient irrigation systems. Water waste from landscape irrigation, referred to as fugitive irrigation water, occurs across the board — from single family homes to businesses to cities and towns.

To combat this problem, many Arizona towns and cities have, or are in the process of, implementing ordinances prohibiting waste from fugitive irrigation water (run-off). These ordinances typically apply to both new and existing properties, whether publicly or privately owned.

This document provides examples of the kind of information needed to develop an ordinance that prohibits fugitive irrigation water. The information is drawn from ordinances in effect as of 2008 for the following Arizona towns and cities: Avondale, Chandler, Payson, Peoria, Phoenix, Scottsdale, Tempe, and Tucson. Ordinances vary between communities depending on the dominant irrigation type and delivery system used, e.g., flood-irrigation via ditches, flood-irrigation via pipes, drip irrigation, and/or sprinklers.

Prohibiting Other Sources of Unnecessary or Inefficient Water Uses

In addition to prohibiting fugitive irrigation water, a community may wish to consider implementing regulations or prohibitions on other unnecessary or inefficient water uses such as: ornamental water features, draining swimming pools, outdoor misting systems, and under certain circumstances washing vehicles. See #2 for examples of ordinance components that address these considerations

For More Water Conservation Information Contact:

Statewide Conservation Office
(602) 771-8422

Phoenix AMA
(602) 771-8585

Pinal AMA
(520) 836-4857

Prescott AMA
(928) 778-7202

Santa Cruz AMA
(520) 761-1814

Tucson AMA
(520) 770-3800

1. Components to Consider

When developing an ordinance to prohibit fugitive irrigation water, the following components should be considered:

- A. Application of the Ordinance
- B. Definitions of the Terms in the Ordinance
- C. What is Prohibited and Required
- D. Exclusions
- E. Enforcement

Please note that the following sections contain examples that are presented for informational purposes only. Each community is encouraged to develop ordinance components that best meet their specific needs.

A. Application of the Ordinance

Defines to whom or what the ordinance applies. Entities commonly identified include:

- Person, owner, occupant, lessee, agent, manager or responsible person
- Firm, corporation, residential, commercial or industrial facility or operation
- County, state, federal or municipal or other government facility

Example:

This Article shall apply to all water whether potable or effluent and all citizens, businesses, and governmental entities within the corporate limits of _____ and all water customers of the _____ wherever situated.

B. Definitions of the Terms

Definitions are included so that meanings are clear for the purpose of the ordinance.

Examples:

- **Berm:** a bank of soil used to retain water-- a term often used in conjunction with rainwater harvesting or flood irrigation.
- **Fugitive irrigation water or run-off:** water that escapes or flows away from the landscape being irrigated, even if such flow is not onto a hard surface.
- **Gray water:** wastewater that has been collected separately from a sewage flow and that originates from a clothes washer or a bathroom tub, shower or sink but that does not include wastewater from a kitchen sink, dishwasher or toilet.
- **Harvested rainwater:** precipitation (rainwater) that has been collected for irrigation purposes (may be directed through swales to landscaped areas and/or collected and stored in tanks, cisterns, etc. for future irrigation purposes).
- **Irrigation distribution system:** channels, aqueducts, ditches, swales, pipes and fixtures designed to carry irrigation water for plants or a landscape from one place to another.

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- **Irrigation:** the application of water to outdoor plants or landscapes by artificial means, including the use of rainwater or gray water for such purposes.
- **Potable water:** water of sufficient quality to serve as drinking water, whether it is used for drinking or not.
- **Reclaimed water or treated effluent:** water that has been treated or processed by a wastewater treatment plant or an on-site wastewater treatment facility, whether publicly or privately owned and that can be used for irrigation purposes.
- **Swale:** a low place in a tract of land—a term often used in conjunction with rainwater harvesting.

C. What is Prohibited and Required

Once the jurisdiction enacting the ordinance has determined the specific sources of water waste to be included in the ordinance and the relevant terms have been defined, the ordinance describes: a) what is prohibited and b) what is required.

1. Examples of Prohibitions

- Allowing the excess use, loss or escape of water through breaks, leaks or other malfunctions in the water user's irrigation distribution system for any *period of time* after such escape of water should have reasonably been discovered and corrected. The period of time could range from 24 hours to 30 days.
- Overflow or spray that *causes erosion damage* to public property or public rights-of-way; interferes with pedestrian or automobile traffic; or causes long-term damage due to chronic wastefulness.
- Escape of flood irrigation water in such quantity as to cause water to be wasted through the *failure or neglect* to properly operate or maintain any irrigation distribution system.
- Escape of irrigation water that *results in puddles* on hard surfaces.
 - The source of water may be described, e.g., from pumping, flow, release, escape, or leakage of any potable water from any irrigation distribution system.
 - The size of puddles may be included, e.g., to a depth greater than ¼ inch or over a cumulative surface area greater than 10 square feet.
- *Leaks* from broken sprinkler heads, valves, or faucets.
 - This may be quantified, e.g., leaks in excess of 0.10 gallons per minute, or a sprinkler head that is spraying more than 10 percent of the spray onto the area surrounding the basin or object being irrigated, onto public property or into the public right-of-way. This may be qualified, e.g., “only applies to emitters or heads designed to deliver more than 1 gallon of water per hour”.
- Water *running off* a landscaped area to another area where it is not beneficially used such as to a street, sidewalk, gutter, alley, storm drain, ditch, public utility easement or public or private parking area, paved or unpaved.

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- Irrigation of any area of land through a water application system unless the system is *designed and installed* to retain all water on the property.

2. **Examples of Requirements** (by owner, occupant, lessee, agent, manager or responsible person for any residence, firm, corporation, commercial or industrial facility, or county, state, federal, or municipal facility).

Plumbed Irrigation Systems

- Maintain irrigation systems by replacing damaged or missing spray heads, bubbler heads, drip irrigation emitters and irrigation lines.
- Maintain retention/detention berms, laterals, pipes and valves for urban irrigation.
- Maintain and seasonally adjust automatic irrigation controllers.

Irrigation Conveyance Systems

- Construct the embankments prior to irrigating so that irrigation water cannot escape from the premises.
- Sufficiently maintain the banks of irrigation ditches to retain water.
- Restrict water from irrigation ditches to the property of user.
- Close irrigation ports at completion of irrigation.

D. Exclusions

Ordinances may also include a description of the situations in which the ordinance *does not* apply. For example, the fugitive irrigation water prohibitions may not apply to:

- Water that reaches or flows onto adjacent property, public rights-of-way or easements or private easements when caused by vandalism, wind, emergencies, natural disasters, storm run-off or snowmelt run-off.
- Flow resulting from water utility system failures or malfunctions.

E. Enforcement

A range of enforcement options are possible, from issuing a notice, to citations and fines, to discontinuation of water service (if the entity adopting the ordinance is the water provider). The sequence of enforcement may include the following steps:

1. Complaint (some providers have a hotline to report violations)
2. Inspection
3. Verbal Notice

For a first violation, verbal notice of the violation may be given to the water user in person or by telephone. Educational materials on water conservation, including a copy of the ordinance, may be delivered in person or sent by mail.

4. Written Notice

The written notice is delivered in person, sent by mail, or posted in a conspicuous place in or about the property. The written notice may include a description of the violation,

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procedure for compliance, instructions for presenting objections, and other information as appropriate.

5. Re-inspection
6. Close the Complaint

If violation persists, then

7. Civil Citation and/or Terminate Water Supply (if the entity adopting the ordinance is the water provider)
8. Pay Fine or Court Appearance

Enforcement Officials

The enforcing official is authorized to make inspections in response to a complaint and issue a written notice. Examples of enforcing officials:

- Code Compliance Manager or Officer
- Water Conservation Coordinator or Specialist
- City Manager or Authorized Designee
- Water Provider Manager

¹“Only about one quarter of the residential water use [in Phoenix] is consumed indoors.”
<http://phoenix.gov/WATER/wrpdemand.html>.

“The largest single use of treated water in American cities (that require irrigation) is water on the landscape, from one-third to two-thirds of total treated water use.” Urban Water Waste, Causes, Solutions and the EPA Water Efficiency Program. Laurence Budd. Water Efficiency: The Journal for Water Conservation Professionals, September October 2006.

“In the Tucson area, single family residents use 30 to 50 percent of their water outdoors, for landscape watering, swimming pools, spas, evaporative cooling and other such uses.” Chapter 5, page 50. Water in the Tucson Area: Seeking Sustainability. University of Arizona Water Resources Research Center (WRRC), Summer 1999.

“About 60% of your total water use occurs outside the home.” Salt River Project, September 2008.
<http://www.srpnet.com/water/conservation.aspx>



2. Other Sources of Water Waste in Addition to Fugitive Irrigation Water

Irrigation Systems

Provisions may include the following:

- All new irrigation systems (drip, bubbler, spray) shall be efficient. Plants shall be grouped according to the frequency with which they need to be irrigated, and separate valves shall be used to water each zone (or group of plants). The frequency of watering depends on slope, soil texture, exposure, the water use requirements by plant type; and plant root depth (e.g., trees need to be watered longer due to deeper roots, but less frequently than shrubs). Irrigation systems shall include automatic rain shut-off devices, and/or automatic controllers that meet certain specifications [e.g., “smart” controllers that adjust irrigation application based on soil moisture and/or evapotranspiration (ET) from local weather stations or satellite transmissions].
- All new spray irrigation systems, including both in-ground and above-ground sprinklers, are prohibited. *Exceptions may include situations where water harvested from precipitation is the sole source of irrigation water.*
- New multi-family residences, model homes, and commercial and industrial developments are prohibited from using potable water for outdoor irrigation. Instead, these facilities are encouraged to construct and maintain rainwater harvesting storage cisterns [above or below ground storage tanks, with or without pumps], catchment areas and distribution systems, and/or use gray water to provide water for landscaping.

Ornamental Water Features

These are typically defined as fountains or ponds, and do not include swimming pools or spas. If allowed at all, provisions may include the following for new ornamental features:

- Ornamental water features shall be designed to be compatible with the concept of water conservation in an arid lands environment.
- Water features with moving water are required to use re-circulating pump technology so that the water is recycled through the feature.
- The water feature shall be designed to prevent water seepage or leaking.
- Water features may be used if (some/all) the following conditions are met:
 - Rainwater is the exclusive water source.
 - The water feature is designed to prevent water seepage or leaking.
 - The total water surface area does not exceed a maximum area, e.g., 1 percent of the net site area of the development.
 - The water feature is located in an interior oasis, e.g., within a building or courtyard.

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- The sum of the square feet of water surface area plus the square feet of turf area does not exceed the total allowed square feet for the oasis allowance (determined by the jurisdiction –if an oasis area is allowable by code).
- The water feature has a capacity of less than a maximum volume, e.g., 500 gallons.

Hosing Down Outdoor Spaces

Provisions may include the following:

- Automatic shutoff nozzles required for all hoses used for hand watering or other outdoor uses.
- Washing driveways, sidewalks, parking areas, or other impervious surface areas with an open hose or with a spray nozzle attached to an open hose is prohibited.
- Limitations on the hosing down of driveways, sidewalks and other landscape so that the water will run-off into other landscaped areas, but in no event, shall water be used in excess of what is reasonably necessary for washing and rinsing.

Washing Cars and other Vehicles

Provisions may include the following:

- When using a hand held hose to wash automobiles, trucks, trailers, boats, and other types of mobile equipment, the hose shall be equipped with an automatic shut-off nozzle that completely shuts off the flow of water, even if left unattended.
- Washing vehicles in a driveway in a manner that uses excess water beyond that reasonably necessary for washing and rinsing is prohibited.
- New commercial car washes shall utilize best-available water-recycling technology to recycle a minimum amount of water, e.g., 50 percent of water used for auto washing and rinsing purposes.
- Self serve car washes shall utilize high pressure nozzles that deliver a maximum water flow rate of 3 gallons per minute.

Outdoor Misting

Provisions may include the following:

- New outdoor misting systems for cooling are prohibited in any unoccupied, non-residential areas.
- May be banned entirely.

Pools, Ponds, and Lakes

Provisions may include the following:

- Restrictions on the number, size and applications of new water play apparatus such as slides, sprinklers, and wading pools.
- New pools, ponds and lakes with a total water capacity greater than a maximum volume, e.g., 500 gallons, shall require a permit prior to installation.

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- New ponds and lakes shall utilize alternative water supplies where feasible, and utilize best available re-circulating technology.

Draining Swimming Pools and Spas

Provisions may include the following:

- Discharging or allowing water to escape into a city street, other rights-of-way, other city property, and/or other private property is prohibited.

Choice of Plants for Landscapes

Provisions may include the following:

- Limitations on the amount of allowable turf (square footage or percent of total landscaped area) and to certain applications (e.g., recreational uses, playing fields and parks, backyards).
- Requirements to use only approved low-water use plants in certain applications, e.g., medians, rights of way, commercial landscapes, common areas of master-planned communities (usually based on jurisdictional code requirements for developers going through the permit process).

Water Tampering

Provisions may include the following:

- No person shall open or close any fire hydrant or stop-cock connected with a water system.
- No person shall lift or remove the covers of any gate valves or shut-offs, or tap into the _____ (city or water provider) water mains or otherwise remove water from _____ (city or water provider) water works without a permit (except in the case of fire, and then under the direction of the fire department).

Water Outlets and Plumbing

Provisions may include the following:

- Consumers shall keep all water outlets closed when not in actual use. All water outlets, including those used in conjunction with hydrants, urinals, water closets, bathtubs and other plumbing fixtures, shall not be left running for any purpose other than the use for which they were intended.
- Property owners are responsible for all leaks, damages (or water consumption) due to leaks, from the service pipes leading from the consumer's side of the meter to the premises served.

Exclusions to Waste of Water Ordinances

In addition to the exceptions provided for ordinances that address fugitive irrigation water and ornamental water features, the following exceptions may be considered for ordinances that address water waste from other sources:

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- Water uses that are necessary, e.g., for protection of public health and safety.
- Flow resulting from fire fighting or routine inspection of fire hydrants or from fire training activities.
- Water applied to abate spills of flammable or otherwise hazardous materials.
- Intentional washing of hard surfaces for an explicit public health, safety, or sanitation purpose if approved first (the washing of outdoor eating areas and sidewalks is not included in this exemption).
- Water that reaches or flows onto adjacent property, public rights-of-way or easements or private easements when caused by vandalism, wind, emergencies or natural disasters.
- Flow resulting from a routine inspection or maintenance of the city or town water utility system or temporary town system malfunctions.
- Water used in the installation, maintenance, repair, or replacement of public facilities and structures including but not limited to, traffic control devices, storm and sanitary sewer structures and road or street improvements.
- Storm run-off, including snowmelt run-off.
- Flow resulting from water utility system failures or malfunctions.
- Incidental run-off caused by vehicle washing (provided that a positive shut-off nozzle is used).
- Periodic draining of swimming pools and spas, unless code requires that these are drained into the sewer.




3. Examples of Public Information

Water Efficiency Tips:

- * If your irrigation schedule causes water to run off your property, split the watering time in half and use two different start times.
- * Use a soil probe or long screwdriver to test how deep you have watered. Water grass to a depth of 10 inches, groundcover to a depth of 1 foot, shrubs to a depth of 2 feet, and trees to a depth of 3 feet.
- * Adjust your irrigation controller to accommodate seasonal water demand changes.
- * Request a copy of "Landscape Watering by the Numbers" from the City of Peoria Utilities Department. The booklet, which is also available online at www.wateruseitwisely.com, will help you determine the proper watering schedule for your landscape.






City of Peoria Code, Section 25-33, states "Water running off a landscaped area to another area where the water is not beneficially used, such as on to streets, sidewalks, gutters, alleys, public utility easements, public or private parking areas is prohibited."


Water, originating from your address, was reportedly flowing off your property into the sidewalk, street, parking lot, or right-of-way.

Please check your property for:

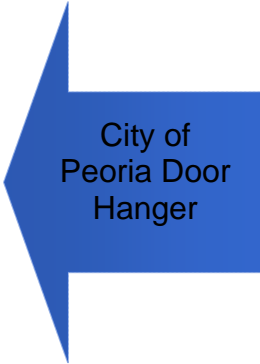
- Irrigation system continuously running
- Irrigation system leaks (including damaged or missing bubblers, sprinkler heads, or irrigation lines)
- Misaligned or overshooting sprinkler heads
- Damaged berms
- Improper backwashing or draining (Water from pools and spas may not be discharged into the street.)



City of Peoria Utilities Department
www.conserve.peoriaaz.com
conservation@peoriaaz.com
 (623) 773-7286



City of Peoria Water Conservation



Developing Ordinances to Prohibit Fugitive Water from Irrigated Landscapes (and Other Sources of Outdoor Water Waste)

CITY OF TUCSON WATER WASTE ORDINANCE

In June 2000, the Mayor and Council approved revisions to Tucson Code 27-15, the Water Waste Ordinance, which prohibit the following activities:

1. Allowing water to escape from any premises onto public property, such as alleys or streets, or upon any other person's property.
2. Allowing water to pond in any street or parking lot to a depth greater than 1/4 inch or to permit water to pond over a cumulative surface area greater than 150 square feet on any street or parking lot.
3. Washing driveways, sidewalks, parking areas, or other impervious surface areas with an open hose, or a spray nozzle attached to an open hose, or under regular or system pressure, except when required to eliminate conditions that threaten public health, safety or welfare. This restriction does not apply to residential customers.
4. Operating a misting system in unoccupied non-residential areas.
5. Operating a permanently installed irrigation system with a broken head or emitter, or with a head that is spraying more than 10 percent of the spray onto the street, parking lot, or sidewalk. This prohibition does not apply unless the head or emitter was designed to deliver more than one gallon of water per hour during normal use.
6. Failing to repair a controllable leak, including a broken sprinkler head, a leaking valve, or a leaking faucet.

TIPS TO REDUCE WATER WASTE

Irrigation System

- Regularly check irrigation systems for leaks, overspray, pressure, damaged or broken sprinklers (heads, pipes, emitters, tilted heads, and valves).
- Install rain, relative humidity, or evapotranspiration (ET) sensors on timers.
- Adjust irrigation run times to meet plant demands:
 - Over-watering causes most water waste violations.
 - Know how much time you can run each valve before water runoff occurs.
 - On slopes, reduce run time to eliminate runoff and add another start time (if necessary).
 - Improve Distribution Uniformity (DU) – the measurement of how evenly the water is distributed over the irrigated area. Poor uniformity results in higher water use & over-watering to reach the under-irrigated areas (brown spots).
- Check spacing of sprinklers based on DU.
- Replace sprinkler heads so they are uniform by type (rotors, spray) and brand.
- Insist on SmartScape trained professionals.

MORE TIPS TO REDUCE WATER WASTE

Design

- Consider reducing overall turf area.
- Eliminate small and irregular size turf areas (less than 5' width).
- Eliminate turf adjacent to hardscape (sidewalks, streets, parking lots).
- Make sure turf areas are lower than hardscapes.
- Make sure plants are planted by hydrozone (desert-adapted plants together, high water use plants together) and are being watered correctly.



For more information about the Water Waste Ordinance, call 791-4331



Si usted desea este en español, llame al 791-4331.

City of Tucson TTY# 791-2639

Visit our website: www.tucsonaz.gov/water/

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CITY OF TUCSON WATER WASTE VIOLATION ENFORCEMENT PROCESS



CITY OF TUCSON WATER WASTE ORDINANCE

In June 2000, the Mayor and Council approved revisions to Tucson Code 27-15, the Water Waste Ordinance.

"It is declared that, because safe, high quality potable water and reclaimed water are a precious resource, the general welfare requires that the water resources available to the city be put to maximum beneficial use, and that the waste or unreasonable use, or unreasonable method of use, of water be prevented. For the purposes of this section, the person, corporation, or association in whose name the water utility of the city is or was last billed or who is receiving the benefit of the water supply on the premises, as defined under section 27-10, is presumed to have knowingly made, caused, used, or permitted the use of water received from the city for in a manner contrary to any provision of this section, if the water has been used in a manner contrary to any provision of this section.

(a) The following uses are a waste or unreasonable use or method of use of water and are prohibited:

- (1) Allowing water to escape from any premises onto public property, such as alleys or streets, or upon any other person's property.
- (2) Allowing water to pond in any street or parking lot to a depth greater than one-quarter (1/4) inch or to permit water to pond over a cumulative surface area greater than one hundred fifty (150) square feet on any street or parking lot.
- (3) Washing driveways, sidewalks, parking

(1993 Code, ch 25, § 16; Ord. No. 6096, § 1, 10-1-84; Ord. No. 7547, § 2, 1-7-91; Ord. No. 9407, § 1, 6-19-00)

areas, or other impervious surface areas with an open hose, or with a spray nozzle attached to an open hose, or under regular or system pressure, except when required to eliminate conditions that threaten the public health, safety or welfare. This restriction does not apply to residential customers.

- (4) Operating a misting system in unoccupied non-residential areas.
 - (5) Operating a permanently installed irrigation system with a broken head or emitter, or with a head that is spraying more than ten (10) percent of the spray on a street, parking lot, or sidewalk; this prohibition does not apply unless the head or emitter was designed to deliver more than one (1) gallon of water per hour during normal use.
 - (6) Failing to repair a controllable leak, including a broken sprinkler head, a leaking valve, or a leaking faucet.
- (b) Any person who violates any portion of this section is guilty of a civil infraction, and shall be fined upon the first offense, a minimum of two hundred fifty dollars (\$250); and upon the second offense within a period of three (3) years and upon each subsequent conviction within such period, a minimum of five hundred dollars (\$500). The imposition of civil liability shall not preclude the city from taking any other enforcement actions permitted under section 27-14 or section 27-97 of this chapter."

ENFORCEMENT

When a violation is observed, a written notice requiring the violation to be corrected may be given to the customer. A citation may be issued at this time or the responsible party may be given time to correct the problem. If the violation is not corrected within the specified time, a citation will be issued and a fine in the amount of \$250 per violation may be imposed for a first time offense. Subsequent violations are subject to a minimum fine of \$500 per violation and up to a maximum fine of \$2,500 per violation.

Despite the availability of penalties, the main effort of the Water Waste Enforcement program is educational, even after a citation has been issued. The money used to pay a fine would be much more effectively spent improving water use efficiency and eliminating waste. To that end, Tucson Water seeks fines primarily in cases where repeated water waste is occurring, where property owners or managers are unwilling to make necessary improvements, or where violations are intentional.

For more information about the Water Waste Ordinance, call 791-4331



Si usted desea este en español, llame al 791-4331.
City of Tucson TTY# 791-2639

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CITY OF TUCSON WATER WASTE VIOLATION ENFORCEMENT PROCEDURE



Tucson Water Commercial
Conservation: 791-5080, ext. 1471

4. Links to City Codes

Avondale

<http://www.ci.avondale.az.us/index.asp?NID=268>
Chapter 24. Water. Sewers and Sewage Disposal
Article 2. Municipal Water System. Division 1. Generally
[24-34. Waste of water prohibited.](#)

Chandler

http://www.municode.com/resources/ClientCode_List.asp?cn=Chandler&sid=3&cid=1594
Chapter 52 Water Services. Article 2. Irrigation Water

Payson

[http://www.amlegal.com/nxt/gateway.dll/Arizona/payson/paysonarizonacodeofordinances?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:payson_az](http://www.amlegal.com/nxt/gateway.dll/Arizona/payson/paysonarizonacodeofordinances?f=templates$fn=default.htm$3.0$vid=amlegal:payson_az)
Chapter 50 Water. Water Conservation. 50.84. Water Waste

Peoria

http://www.peoriaaz.gov/citycode/chapter_25.asp
Chapter 25 Water, Sewers, and Sewage Disposal
Water Conservation and Drought Management Procedures.
25-53. [Water; unnecessary waste, turnoffs, water leaks.](#)

Phoenix

<http://www.municode.com/resources/gateway.asp?pid=13485&sid=3>
Chapter 37 Water. Article 1. In General.
Sec. 37-27. Waste of water; failure of consumer to make repairs to pipes, valves and fixtures

Scottsdale

<http://www.municode.com/Resources/gateway.asp?pid=10075&sid=3>
Chapter 49 Waters, Sewers, and Sewage Disposal
Article VII. Water Conservation. Sec. 49-249. Leakage, escape of water prohibited

Tempe

<http://www.tempe.gov/citycode/>
Chapter 33 Water. Article 6. Water Wasting

Tucson

http://www.municode.com/Resources/ClientCode_List.asp?cn=Tucson&sid=3&cid=4669
Chapter 27 Water. Sec. 27-15. Waste or unreasonable use of water; violation declared a civil infraction



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**5. Prohibiting Waste of Water:
Example Measures from Lease Restrictive to Most Restrictive**



COMPONENTS	NO RESTRICTIONS	SOMEWHAT RESTRICTIVE	MOST RESTRICTIVE
Fugitive irrigation water	Water from irrigation is allowed to run-off property.	Water run-off is prohibited only if it causes damage to public property. Water run-off is prohibited only if it results in puddles greater than a specified size, e.g., 10, feet square.	Irrigation leaks are prohibited. Water run-off (from sprinklers, drip emitters, broken irrigation, or sprayers) in any amount is prohibited.
Irrigation Water Source	Potable (drinking) water can be used for outdoor irrigation.	New multi-family, commercial, and industrial developments are prohibited from using potable water for irrigation. Reclaimed water, gray water, or rainwater must be used instead.	Potable water may not be used for irrigation by anyone, including individuals (single family residences). Reclaimed water, gray water, or rainwater must be used instead.
Types of Irrigation Systems	Any type of irrigation system is allowed.	Sprinklers and drip irrigation systems are allowed, but not flood irrigation.	All new irrigation systems require rain sensors and smart controllers (ET, or weather based). All new irrigation systems are prohibited, unless the irrigation water source is rainwater, gray water or reclaimed water.
Types of Vegetation	Any type of plant may be grown, even those that are water intensive.	Turf is limited in size, and to certain applications (such as multi-family or residential back yards only).	Only low water use plants may be planted. No turf or water intensive plants allowed.
Watering Schedule	Plants and yards may be watered at any time, any day.	All outdoor irrigation must comply to a schedule for specific watering days and/or times (Usually in response to a supply issue or drought conditions).	All outdoor irrigation is banned unless the irrigation water source is rainwater, gray water or reclaimed water.
Ornamental Water Features	Water features of any size or design may be constructed.	New water features must use re-circulating water technology. Size may be restricted. Source of water may be specified, e.g. gray water.	All ornamental water features are prohibited.

**Developing Ordinances to Prohibit Fugitive Water from Irrigated Landscapes
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COMPONENTS	NO RESTRICTIONS	SOMEWHAT RESTRICTIVE	MOST RESTRICTIVE
Misting	Misting is allowed anywhere at any time.	Misting is restricted to public areas where people congregate. Must be turned off when public not present.	All misters are prohibited.
Hosing Down Outdoor Spaces	Hoses may be used at any time and for any purpose.	Businesses are restricted from using hoses to clean sidewalks, driveways, and patios. Water-brooms may be used. All residents must use a nozzle with automatic shut-off.	Hosing down outdoor spaces is prohibited at all times.
Water Play Apparatus	No restrictions on water play slides, wading pools, sprinklers, etc.	Parks and businesses have restrictions on the number and size of their water play apparatus.	All water play apparatus are prohibited.
Swimming Pools & Spas	No restrictions on swimming pools and spas.	Residential single family pool construction may be restricted or require a permit. Only community pools for new master-planned communities or multi-family complexes may be allowed.	No refilling, emptying, or filling of new pools is allowed (pool construction may be denied or restricted in response to supply limitations or drought).
Washing Vehicles	No restrictions on any type of car wash or water waste at home.	Vehicles may only be washed using a bucket, commercial car wash or hose with automatic shut off nozzle. Commercial car wash must recycle water.	Vehicles may only be washed using a bucket or commercial car wash with recycling systems, and only one time per month.
Ponds and Lakes	No restrictions on any number of or size of artificial lakes or ponds.	Must receive a permit and are limited in size; must use re-circulating technology. New ponds must be lined to reduce losses due to seepage.	All artificial lakes and ponds (except reservoirs or watering holes for animals) are prohibited.



6. Sample Ordinance Template for Cities, Towns, and Counties in Arizona

Please note that the following template is presented for informational purposes only. Each city, town, and/or county is encouraged to develop an ordinance that best meets their specific needs. As applicable, this template could be utilized by irrigation districts, as well.

Prohibiting Fugitive Water from Irrigation

ORDINANCE NO. _____

RELATING TO WATER: PROHIBITING FUGITIVE IRRIGATION WATER, PROVIDING FOR CIVIL ENFORCEMENT OF SPECIFIED VIOLATIONS OF CHAPTER [#] SECTIONS [#'s] OF THE [*Name of Jurisdiction with authority to institute ordinance or zoning code changes, e.g., city, town, irrigation district or county*]

Section 1.

- A. WHEREAS, the [*City, Town, County*] is located in the [*County, _____ desert region, or State of Arizona*] an area of limited water resources; and
- B. WHEREAS, water conservation is vital to the future health, safety and economic well-being of the residents of [*the City, Town, County*];
- C. WHEREAS, the [*city/town council, board of supervisors*] understands that water supplies must not be wasted and must be used in an efficient manner;
- D. WHEARAS, the [*City, Town, County*] understands that a significant amount of water is wasted by inefficient, or poorly designed and/or maintained irrigation systems and resulting fugitive water;

Section 2. Ordaining Clause

BE IT ORDAINED BY THE [*MAYOR AND CITY/TOWN COUNCIL, BOARD OF SUPERVISORS*] OF _____ [*CITY/TOWN, COUNTY*], ARIZONA:

Section — Subsection ____ of the _____ [*City/Town/County*] Code is hereby (enacted, or amended, or repealed and reenacted) to read as follows:

Developing Ordinances to Prohibit Fugitive Water from Irrigated Landscapes (and Other Sources of Outdoor Water Waste)

Section 3. Fugitive Irrigation Water; Violation Declared a Civil Infraction

This Ordinance shall apply to all water users within the corporate limits of _____.

No person to which this Ordinance applies shall allow water to escape or flow away from landscape being irrigated, even if such flow is not onto a hard surface.

It shall be a civil infraction for any person, firm or corporation to violate the provisions of this section.

The following activities are prohibited:

- Irrigation of any area of land through an irrigation distribution system, unless the system is designed to be efficient and installed to retain all water on the property.
- The pumping, flow, release, escape, or leakage of water from any irrigation distribution system onto any hard surface such that water accumulates in such a manner as to create individual puddles in excess of [e.g., 10 square feet in size].
- Overflow or spray that causes erosion damage to public property or public rights-of-way, interferes with pedestrian or automobile traffic, causes long-term damage due to chronic wastefulness, or sprays more than [e.g., 10] percent of the spray onto the area surrounding the basin or object being irrigated.
- Failure to repair leaks in excess of [e.g., 0.10 gallons per minute]from broken irrigation lines, sprinkler heads, valves, or faucets within [e.g. 24 hours] after discovering the leak.

Section 4. Definitions

- **Fugitive irrigation water or run-off:** water that escapes or flows away from the landscape being irrigated, even if such flow is not onto a hard surface.
- **Irrigation distribution system:** channels, aqueducts, ditches, swales, pipes and fixtures designed to carry irrigation water for plants or a landscape from one place to another.
- **Irrigation:** the application of water to outdoor plants or landscapes by artificial means, including the use of rainwater or gray water for such purposes.

Section 5. Citation Process

- To be determined by city, town, or county as applicable.

Section 6. Exclusions

The article does not apply to:

- Water uses that are necessary, e.g., for the protection of public health and safety.
- Flow resulting from fire fighting or routine inspection of fire hydrants or from fire training activities.

Developing Ordinances to Prohibit Fugitive Water from Irrigated Landscapes (and Other Sources of Outdoor Water Waste)

- Water applied to abate spills of flammable or otherwise hazardous materials.
- Intentional washing of hard surfaces for an explicit public health, safety, or sanitation purpose if approved first (the washing of outdoor eating areas and sidewalks is not included in this exemption).
- Water that reaches or flows onto adjacent property, public rights-of-way or easements, or private easements when caused by vandalism, wind, emergencies or natural disasters.
- Flow resulting from a routine inspection or maintenance of the city or town water utility system or temporary town system malfunctions.
- Water used in the installation, maintenance, repair, or replacement of public facilities and structures including but not limited to, traffic control devices, storm and sanitary sewer structures, and road or street improvements.
- Storm run-off, including snowmelt run-off.
- Flow resulting from water utility system failures or malfunctions.
- Incidental run-off caused by vehicle washing (provided that a positive shut-off nozzle is used).
- Periodic draining of swimming pools and spas, unless code requires that these are drained into the sewer.

Section 7. Effective Date

This ordinance shall be effective as of _____.

