City of Phoenix

Report

280240

Agenda Date: 6/13/2023, **Item No.** 2

Resolution Adoption - The Sustainable Desert City Development Policy-Water (Resolution 22129)

Request City Council approval of a resolution to address water consumption of new development.

THIS ITEM IS FOR DISCUSSION AND POSSIBLE ACTION.

Summary

The history of the City of Phoenix is built on water management and conservation. From the canals of ancient Hohokam societies through the Salt River Project to the construction of the Central Arizona Project, human's ability to thrive in the desert has always depended first and foremost on our ability to use the limited water resources available with care. For this reason, the City, and Central Arizona more broadly, have elected to develop on a backbone of renewable surface water resources rather than a finite resource of groundwater, unlike many other communities in the American West.

Because it is not sustainable to revert to groundwater supplies, the City has taken great care to protect surface water in the region. In 2014, the Council authorized the Colorado River Resiliency fund, improving local watershed resiliency and providing for underground water storage. Water supply is only one side of the equation. Due to the foresight of current and previous civic leaders, the City has made significant progress in demand management and conservation. In 1980, the State of Arizona passed the Groundwater Management Act, becoming the first US state to regulate groundwater and mandate water conservation measures at that scale. Because of these measures and other efforts, per-person water use has fallen by more than 30 percent over the last 30 years. However, hydrologic conditions in the Colorado River, which currently comprise approximately 40 percent of the water delivered to residents, are currently experiencing significant reductions in flow. Therefore, the City can no longer depend on receiving its full allocation from the Colorado River. For this reason, in June 2022, the Water Services Director declared a "Stage 1 Water Alert" as part of the City's Drought Management Plan, which means a supply insufficiency is likely in the future.

To adapt to a challenge of this magnitude, the City will have to embrace its heritage of water-problem solving. Only by adopting institutional water conservation policies will

the City be able to maintain a pattern of sustainable growth and efficient water use. The resolution requested (**Attachment A**) includes the sections highlighted below:

- Section 1: Conservation Measures for New Development.
- Section 2: Conservation and Restrictions on New Large Water Users.
- Section 3: Annexations outside the current Water Department Service Area.
- Section 4: Applicability and Implementation.

Financial Impact

There is no financial impact from this resolution.

Concurrence/Previous Council Action

- The Transportation, Infrastructure and Planning Subcommittee received an Update on Supply Shortages in the Colorado River on June 15, 2022.
- The Transportation, Infrastructure and Planning Subcommittee received an Update on Proposed Water Conservation Measures for New Development on Nov. 16, 2022.
- The Transportation, Infrastructure and Planning Subcommittee received an Update on Proposed Water Conservation Measures for New Development on Jan. 18, 2023.

Responsible Department

This item is submitted by Deputy City Managers Alan Stephenson and Ginger Spencer along with the Planning and Development and Water Services departments.

ATTACHMENT A

DRAFT

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RESOLUTION #

A RESOLUTION ADDRESSING THE FUTURE WATER CONSUMPTION OF NEW DEVELOPMENT

WHEREAS, The Council of the City of Phoenix seeks to maintain the City's position as the most sustainable desert city in the world.

WHEREAS, The Council of the City of Phoenix recognizes that water security is the cornerstone of sustainability in desert cities.

WHEREAS, The City identifies that water serves many purposes in a desert city, providing environmental services such as shade and heat mitigation in addition to being a critical component in many economic processes.

WHEREAS, The Council of the City of Phoenix has taken significant action to prepare the City for drought, including supporting construction of Gatewater and New Conservation Space resources on the Salt and Verde rivers, authorizing the Colorado River Resiliency Fund, funding "system conservation" to stabilize Lake Mead, participating in the "500+ Plan," and constructing the "Drought Pipeline."

WHEREAS, The Council of the City of Phoenix recognizes that any use of the City's precious water resources should consider the economic and community benefits of that use.

WHEREAS, It is important to protect water resources serving existing customers in a time of drought.

WHEREAS, A large water user can create significant strain on water resource and infrastructure planning.

WHEREAS, The Council of the City of Phoenix understands that the City cannot thrive if it does not use its water resources efficiently.

WHEREAS, The Council of the City of Phoenix wishes to expand upon the water conservation practices identified by the Ad Hoc Water Conservation Committee.

WHEREAS, The Council of the City of Phoenix understands that the use of the latest water conservation technologies and practices is key to being the most sustainable desert city in the world.

Background:

The history of the City of Phoenix is a history of water management and conservation. From the canals of ancient Hohokam societies through the Salt River Project to the construction of the Central Arizona Project, human's ability to thrive in the desert has

always depended first and foremost on our ability to use the limited water resources available with care. For this reason, the City, and Central Arizona more broadly, have elected to develop on a backbone of renewable surface water resources rather than a finite resource of groundwater, unlike many other communities in the American West.

Because it is not sustainable to revert to groundwater supplies, the City has taken great care to protect surface water in the region. In 2014, the Council authorized the Colorado River Resiliency fund, improving local watershed resiliency and providing for underground water storage. In 2017, the City partnered with the Gila River Indian Community, State of Arizona, Bureau of Reclamation, and Walton Family Foundation to fund "system conservation," which permanently left water in Lake Mead to delay shortages. In 2022, the City chose to voluntarily forgo 30,000 acre-feet of Colorado River water use as one of the leading participants in the "500+ Plan." Perhaps most importantly, construction of the "Drought Pipeline" is nearing completion, which will allow the more efficient transport of drought supplies to areas of the City that rely upon Colorado River supplies.

Water supply is only one side of the equation. Due to the foresight of current and previous civic leaders, the City has made significant progress in demand management and conservation. In 1980, the State of Arizona passed the Groundwater Management Act, becoming the first US state to regulate groundwater and mandate water conservation measures at scale. Because of these measures and other social forces, per person water use has fallen by more than 30% over the last 30 years. Since 2000, the Water Services Department has seen demands fall by more than 19,000 acre-feet, despite the service population growing by more than 305,000 residents and a thriving economy. With more yet to accomplish, in 2019 the City adopted the recommendations of the Ad Hoc Water Conservation Committee for new and enhanced water conservation programs. These recommendations radically increased the scope and staffing of the City's water conservation work, adopting 12 new or expanded conservation programs and a new Citywide water efficiency goal of 155 gallons of water delivered per person per day by 2030. If this goal is attained per person water use in the City will have fallen by more than 35% in the last 30 years.

However, hydrologic conditions in the Colorado River, which currently comprises approximately 40% of the water delivered to residents, are currently the worst they have been in over a millennium. As of August 2022, Lakes Mead and Powell were at 26% and 27% of capacity, respectively. Over the summer of 2022, the Bureau of Reclamation, who serves as the water master on the Colorado River, stated that it would be necessary for water users in the Colorado River Basin to radically reduce water demands on the river and threatened to unilaterally institute water cuts if users cannot collaboratively agree on a framework to protect hydropower generation and water deliveries. Therefore, the City can no longer depend on receiving its full allocation from the Colorado River. For this reason, in June 2022, the Water Services Director

declared a “Stage 1 Water Alert” as part of the City’s Drought Management Plan, which means a supply insufficiency is likely in the future.

To adapt to a challenge of this magnitude, the City will have to embrace its heritage of water-problem solving. Only by adopting institutional water conservation policies will the City be able to maintain a pattern of sustainable growth and efficient water use. The policy document below describes these policies in detail.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF PHOENIX as follows:

Section 1: Conservation Measures for New Development

1. Development of a list of standards for consideration as stipulations for all rezoning cases that will address best practices related to water usage. Stipulations will be evaluated for appropriateness on a case-by-case basis and may address the following best practices:

a. Third-party water efficiency certifications such as EPA WaterSense or an equivalent.

b. Utilization of drought tolerant and / or native landscaping.

c. Restrictions on the utilization of turf.

d. Outdoor irrigation efficiency standards.

e. Green infrastructure / low-impact development provisions for surface parking areas, streets and sidewalks.

f. Participation in the City’s Efficiency Checkup program.

g. Enhanced standards for swimming pools.

h. Design standards for wet-cooling systems.

i. Preservation of natural open space.

2. Staff will propose updates to the following ordinances and processes to codify the water usage best practices that will be implemented initially via rezoning stipulations.

a. Zoning Ordinance

i. Landscaping standards

ii. Open space preservation

iii. Outdoor irrigation efficiency standards

iv. Green infrastructure / low-impact development provisions

b. Building Code

i. Water efficiency standards

ii. Participation in third-party water efficiency certification

iii. Design standards for wet-cooling systems

c. Drainage Design Manual

i. Green infrastructure / low-impact development provisions

3. Staff will also explore the following:

a. Requirements for separate water meters for indoor and outdoor areas.

b. Framework for the issuance of swimming pool permits that could address the size and location of pools.

Section 2: Restrictions on New Large Water Users

1. A large water user is defined as a user that is projected to use an average of 250,000 gallons or more of water per day.

2. Proposed large water users would be required to submit a Water Conservation Plan. The plan shall:

a. Describe the measures the user will take to create water efficiencies specific to its use, including technologies or best practices that will be implemented to conserve water, and an estimate of water savings attributable to the technologies or best practices.

b. For a large water user proposing to use >500,000 gallons per day, the Water Conservation Plan must include a specific plan that demonstrates that at least 30% of the large water user's consumptive use is from a recycled or conserved water source.

3. Staff will evaluate and approve of the plan of the Water Conservation Plan. This evaluation will include an assessment of following plan aspects:

a. Adequacy

b. Innovation

c. Feasibility

4. The City will evaluate the proposed large water use based on multiple factors, including water resource availability in the proposed location; consistency with the City's planning documents (including General Plan, Water Services' master plan, infrastructure plans and Water Resource Plan); the economic value of the proposed water use to the City and economic impact to the City; consistency with the City's

Designation of Assured Water Supply; impact to City water rates based on infrastructure and resource needs of the project; and whether the project is a key industry identified by the City as significantly beneficial to the City's economy.

5. Based on these evaluations, the City may determine the project is incompatible with available water resources, consistency with planning documents or an insufficient economic benefit to warrant the large water use.

Section 3: Annexations

1. When the City of Phoenix Drought Management Plan is active, the City of Phoenix should employ increased level of scrutiny regarding request for annexations.

2. Request for annexation from properties outside of the current Water Services Department service area should be discouraged to ensure that water resources are focused on areas within the current service area. County islands located within the Water Services Department service area will not be affected by this policy.

Section 4: Applicability and Implementation

The policies will be implemented after City Council adoption. Any updates to codes or ordinances will include specific standards and will be vetted through the public hearing process and brought forward for City Council consideration and approval.

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