CALL TO ORDER

CALL TO THE PUBLIC

MINUTES OF MEETINGS

1 For Approval or Correction, the Minutes of the Water, Wastewater, Infrastructure and Sustainability Subcommittee Meeting on Nov. 7, 2018

Responsible Department
This item is submitted by Deputy City Manager Karen Peters.

CONSENT ACTION (ITEMS 2)

2 Approval for 15-Year Contract with SRP for Solar Energy

This report requests the Water, Wastewater, Infrastructure and Sustainability Subcommittee recommend City Council approval to enter into a 15-year contract with Salt River Project (SRP) to provide up to 15 percent of the City's total SRP electricity use from a new solar farm as part of the SRP Sustainable Energy Offering.

THIS ITEM IS FOR CONSENT ACTION.

Responsible Department
This item is submitted by Deputy City Manager Karen Peters and the Office of Sustainability.
DISCUSSION AND POSSIBLE ACTION (ITEMS 3-4)

3 2019 State and Federal Legislative Agendas

This report requests input from the Water, Wastewater, Infrastructure and Sustainability Subcommittee on the City's water, wastewater, infrastructure and sustainability-related priorities for the 2019 State and Federal Legislative Agendas. The complete State and Federal Legislative Agendas will be presented to Mayor and Council at the Dec. 11 Policy meeting.

THIS ITEM IS FOR DISCUSSION AND POSSIBLE ACTION.

Responsible Department
This item is submitted by Deputy City Manager Karen Peters and the Office of Government Relations.

4 Authorization to Enter into Lease Agreement with Closed Loop Fund for Zero Percent Interest Loan to Finance Recycling Equipment

This report requests the Water, Wastewater, Infrastructure and Sustainability Subcommittee recommend City Council approval to authorize the City of Phoenix to enter into a lease agreement with the Closed Loop Fund for a zero percent interest loan to finance an upgrade of the recycling facility at North Gateway Transfer Station.

THIS ITEM IS FOR DISCUSSION AND POSSIBLE ACTION.

Responsible Department
This item is submitted by City Manager Ed Zuercher, Deputy City Manager Karen Peters, and the Public Works and Finance departments.
INFORMATION AND DISCUSSION (ITEMS 5-6)

5 Community Food Assessment and Phoenix Food Action Plan

This report provides the Water, Wastewater, Infrastructure and Sustainability Subcommittee an update on the results to date of the regional Community Food Assessment and progress on the Phoenix Food Action Plan. The work is being completed to achieve the 2050 Local Food System goal to maintain a sustainable, healthy, equitable, thriving local food system as approved by Phoenix City Council in 2016.

THIS ITEM IS FOR INFORMATION AND DISCUSSION.

Responsible Department
This item is submitted by Deputy City Manager Karen Peters and the Office of Environmental Programs.

6 System Development Charges Update

This report provides the Water, Wastewater, Infrastructure and Sustainability Subcommittee information about Development Impact Fees and Water Resource Acquisition Fees. Councilwoman Debra Stark requested additional information regarding this topic at the November Water, Wastewater, Infrastructure and Sustainability Subcommittee meeting.

THIS ITEM IS FOR INFORMATION AND DISCUSSION.

Responsible Department
This item is submitted by Deputy City Managers Mario Paniagua and Karen Peters, and the Planning and Development and Water Services departments.

CALL TO THE PUBLIC
FUTURE AGENDA ITEMS

ADJOURN

For further information or reasonable accommodations, please call Jennifer Wingenroth, Management Assistant II, City Manager's Office at 602-262-7526. 7-1-1 Friendly.

Persons paid to lobby on behalf of persons or organizations other than themselves must register with the City Clerk prior to lobbying or within five business days thereafter, and must register annually to continue lobbying. If you have any questions about registration or whether or not you must register, please contact the City Clerk's Office at 602-534-0490.

Members:
Mayor Thelda Williams, Chair
Vice Mayor Jim Waring
Councilwoman Debra Stark
Councilwoman Vania Guevara
For Approval or Correction, the Minutes of the Water, Wastewater, Infrastructure and Sustainability Subcommittee Meeting on Nov. 7, 2018

Summary
This item transmits the minutes of the Water, Wastewater, Infrastructure and Sustainability Subcommittee Meeting on Nov. 7, 2018 for review, correction or approval by the Water, Wastewater, Infrastructure and Sustainability Subcommittee.

The minutes are attached.

Responsible Department
This item is submitted by Deputy City Manager Karen Peters.
City Council Subcommittee Room  
Phoenix City Hall, Assembly Rooms A, B, and C  
200 West Washington Street  
Phoenix, Arizona

Subcommittee Members Present  
Mayor Thelda Williams, Chair  
Vice Mayor Jim Waring  
Councilwoman Debra Stark  
Councilwoman Vania Guevara

Subcommittee Members Absent

Call to Order
Mayor Williams called the Water, Wastewater, Infrastructure and Sustainability Subcommittee meeting to order at 9:08 a.m., with Vice Mayor Waring and Councilwoman Vania Guevara present. Councilwoman Stark arrived at 9:13 a.m.

Call to the Public
None

1. For Approval or Correction, the Minutes of the Water, Wastewater, Infrastructure and Sustainability Subcommittee Meeting on Oct. 3, 2018
Vice Mayor Waring made a motion to approve the minutes of the Oct. 3, 2018 Water, Wastewater, Infrastructure and Sustainability Subcommittee. Councilwoman Guevara seconded the motion which passed unanimously, 3-0.

Items 2-3 were for consent action. No presentations were planned and staff was available to answer questions.

2. Intergovernmental Agreement with Flood Control District of Maricopa County and the City of Scottsdale for the Rawhide Wash Project
Vice Mayor Waring made a motion to approve consent item 2. Councilwoman Guevara seconded the motion, which passed unanimously 3-0.

3. Solid Waste Cost of Service Study
Councilwoman Guevara made a motion to approve consent item 3. Mayor Williams seconded the motion, which passed 2-1.
4. Solid Waste Fleet Asset Management Program
Public Works Director Ginger Spencer introduced the item, as well as fellow presenters Assistant Public Works Director Joe Giudice and Deputy Public Works Director Keith Carbajal.

Councilwoman Stark arrived at 9:13 a.m.

Mr. Giudice presented solid waste fleet and asset management, explaining the importance of preventative vehicle maintenance, repair and replacement. He outlined market and technology changes affecting solid waste management, as well as future population growth considerations.

Mr. Carbajal detailed solid waste vehicle life-cycles, the current fleet age, and considerations related to preventative maintenance, warranty repairs, normal wear and tear, non-warranty failures and major component failures. He described types of solid waste vehicles and their cost, as well as the types of vehicle currently due for repair.

Ms. Spencer stated the Public Works Department will work with the Finance Department to strategize on ways to address the condition of the fleet.

Councilwoman Stark asked whether staff has considered increasing impact fees as a source of revenue for the solid waste fleet.

Ms. Spencer clarified impact fees have not previously been used to purchase fleet vehicles, but could be a future consideration.

5. Air Quality Ozone Update
Environmental Programs Administrator Nancy Allen introduced the item, as well as fellow presenter Director of Arizona Department of Environmental Quality Misael Cabrera.

Ms. Allen presented United States Environmental Protection Agency (EPA) ground-level ozone federal health standards, local ozone trends, and the City’s recent history of moderate nonattainment. She explained two recent exceptional events which occurred due to Arizona and California wild fires, which the EPA may consider in order for the City to maintain moderate nonattainment. Ms. Allen stressed, however, if both events are not accepted as exceptional events beyond human control, the City could be reclassified as being in serious nonattainment.

Ms. Allen detailed potential challenges in sufficiently reducing carbon emissions in order to offset emissions both within and beyond human control throughout the City. She outlined possible economic development impacts related to regulation, expansion and new locations of emissions-producing facilities.
Mayor Williams asked how emissions offsets are calculated.

Mr. Cabrera explained difficulties associated with calculating tons of offset. He stressed the importance of recent Maricopa Association of Governments (MAG) presentations to the EPA related to the two exceptional events. Mr. Cabrera stated the City will find out by the end of November whether the events will be accepted by the EPA as exceptional. He continued by stating in January 2019, the City will find out whether Phoenix is in nonattainment due to lack of offset.

Mr. Cabrera detailed the City partnership with the Arizona Department of Environmental Quality (ADEQ), the Air Quality Ozone Coalition.

Ms. Allen outlined City and regional programs aimed at controlling ozone.

Mayor Williams asked whether the City of Phoenix, Maricopa County or State of Arizona has authority to regulate emissions.

Mr. Cabrera clarified Maricopa County has the authority to regulate emissions.

6. Water Pipeline Asset Management Update

Water Services Assistant Director Troy Hayes introduced item 6, as well as Deputy Water Services Director Darlene Helm.

Mr. Hayes presented capital needs related to water distribution pipeline systems. He explained types of pipelines, aging infrastructure challenges and population growth considerations. Mr. Hayes stressed the importance of proactive repair and replacement.

Ms. Helm explained asset-based management systems designed to inspect and identify life expectancies of existing pipelines, recommending sections for repair and replacement. She detailed common replacement timelines based on the material and age of a pipeline.

Ms. Helm stressed the importance of inspecting large water mains, which pose potential catastrophic property damage and road closures. She explained pipeline replacement considerations and recent City investments in rehabilitation and replacement of water pipelines.

Councilwoman Stark requested an explanation of how large areas of North Phoenix development built around the same time are inspected.

Mr. Hayes explained large areas are broken down into smaller neighborhoods for inspection and analysis used to identify likelihood of failures.
Mayor Williams requested clarification on City policies related to potential soil reactions to pipeline materials. She outlined recent development issues in North Phoenix causing property damage.

Mr. Hayes stated pipeline materials are analyzed for applications in certain types of soil.

7. Groundwater Well Management Update
Water Services Assistant Director Troy Hayes introduced item 7, as well as fellow presenter Deputy Water Services Director Darlene Helm.

Mr. Hayes presented on aquifer storage and recovery well systems, recovery of groundwater processes, and current availability of stored groundwater.

Ms. Helm explained increased needs for City-owned and drilled wells, as well as partnerships to exchange banked groundwater and access regional well systems. She detailed locations of current wells throughout the City and proposed locations of new wells, either presently being drilled or planned for future expansion of well systems.

Mayor Williams asked about the size of construction sites, citing large construction materials at the sites currently under construction.

Mr. Hayes clarified construction materials will be removed from well sites once construction is complete, leaving minimal long-term footprints at well sites.

Vice Mayor Waring asked how many aquifer recharge storage and recovery wells, spreading basins, and groundwater savings facilities are being built. He requested clarification on the size and locations of spreading basins.

Mr. Hayes clarified facilities are being built to supplement existing infrastructure with access to groundwater and aquifers. He stated spreading basins are the size of several football fields, and are typically located in rural areas, over aquifers.

Call to the Public
None

Future Agenda Items
Councilwoman Stark requested an update on solid waste impact fees.

Adjournment
Mayor Williams adjourned the meeting at 10:06 a.m.

Respectfully submitted,
Alexa Martin
Management Intern
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Approval for 15-Year Contract with SRP for Solar Energy

This report requests the Water, Wastewater, Infrastructure and Sustainability Subcommittee recommend City Council approval to enter into a 15-year contract with Salt River Project (SRP) to provide up to 15 percent of the City's total SRP electricity use from a new solar farm as part of the SRP Sustainable Energy Offering.

THIS ITEM IS FOR CONSENT ACTION.

Summary
SRP recently approached its largest customers to participate in the purchase of renewable energy at a fixed price of 2.7 cents per kilowatt-hour (kWh) for fifteen years as part of a proposed 100 megawatt (MW) solar farm being constructed in southern Arizona. The initial offering is for an allocation of seven percent of the City of Phoenix's annual electricity load; however, that allocation may increase slightly assuming some customers will elect not to participate.

The offering is quite unique, in that, the volume contracted from SRP will be decoupled from current and future rates, and instead, be reflected as a separate line item on the SRP bill as a bill credit based on the difference between SRP rates at the time and a fixed contract price of 2.7 cents per kWh. Currently, SRP rates for the commodity portion of the bill average close to three cents per kWh, meaning in the first year the contract would result in a credit of approximately $25,000. If commodity prices rise for renewable electricity over the next 15 years, then the credit would increase; however, if the price of renewable energy falls, then the credit would decrease.

After consultation with SRP, staff report that the offering has a strong upside of an immediate credit on the annual SRP energy bill. Even if SRP rates were to fall below the 2.7 cent contract price, the total energy bill from SRP would still fall because the majority of the City's energy use would benefit from the lower price.

In addition to financial considerations, there are several other benefits of entering into the contract:

a. The renewable energy attributes purchased through this agreement would accrue to the City. The City could claim a percent increase in renewables in its portfolio once
the project becomes active.
b. The offering supports and contributes to the Council-adopted goal to reduce carbon pollution from operations 40 percent by 2025.
c. SRP indicates that customer participation in this offering would encourage SRP to provide similar offerings in the future. This is significant given the recent announcement by SRP indicating it has plans to grow this initial 100MW solar investment to 1,000MW of renewable solar by 2025.

Financial Impact
The initial impact of the contract, not to take effect until 2020, would likely be an annual bill reduction in the range of $25,000. Over the fifteen-year life of the contract, that annual credit may rise or fall depending on SRP rates in the future. Given that the most likely scenario is an ongoing bill credit, staff recommend applying the credit specifically to general fund electricity accounts.

Responsible Department
This item is submitted by Deputy City Manager Karen Peters and the Office of Sustainability.
2019 State and Federal Legislative Agendas

This report requests input from the Water, Wastewater, Infrastructure and Sustainability Subcommittee on the City's water, wastewater, infrastructure and sustainability-related priorities for the 2019 State and Federal Legislative Agendas. The complete State and Federal Legislative Agendas will be presented to Mayor and Council at the Dec. 11 Policy meeting.

THIS ITEM IS FOR DISCUSSION AND POSSIBLE ACTION.

Summary

Each year, the Office of Government Relations requests that City departments submit issues for inclusion in the City's State and Federal Legislative Agendas. Once input is received from the Mayor and Council, the State and Federal Legislative Agendas will define the City's legislative priorities and guide the City's lobbying activities during the First Regular Session of the 54th Arizona Legislature and the 116th Congress, 1st Session.

Guiding Principles

In order to prioritize and guide staff's lobbying efforts, we recommend that the Mayor and Council endorse familiar, but critical, guiding principles as our highest priorities - maintaining and protecting shared revenues, opposing unfunded mandates, preserving local authority, and involvement in water resource matters.

Shared Revenues - The City’s budget includes revenues from a number of State sources, most importantly “shared revenues” from state income, sales, and vehicle license taxes. Shared revenues make up approximately 32 percent of the City’s general fund, helping to pay for police, fire, streets, parks, and other critical City services. Staff recommends the City oppose any reduction of shared revenues.

The state shared revenue system first came into existence in 1942, when Arizona voters approved an initiative requiring that a percentage of state sales taxes be shared with cities and towns. In 1960, statewide voters approved a measure to share the gas tax with municipalities. And, in 1972, statewide voters approved the sharing of a percentage of state income taxes with local governments. Shared revenues have
become a critical component of the City’s general fund budget.

Oppose Unfunded Mandates - Staff recommends the City oppose state legislative efforts to shift new responsibilities to the City without accompanying funds.

Local Authority - The City’s Charter empowers Phoenix residents to determine the structure and authority of City government in our community. Staff recommends the City work to protect the ability of the Mayor and Council to set policy at the local level and oppose legislation that preempts local authority.

Water Resources - While Phoenix and the Valley have sufficient water resources for now and the foreseeable future, the Arizona Department of Water Resources and stakeholders from statewide organizations are working to coordinate efforts in building adequate infrastructure and protecting water resources. Staff recommends that the City participate in these efforts to ensure that Phoenix’s water supply is protected.

In order to prioritize and guide federal lobbying efforts, staff recommends that the Mayor and Council endorse two guiding principles as the City's highest priorities: to promote fiscal sustainability and to protect local authority. To promote fiscal sustainability, the City would, for example, support efforts to achieve parity in federal funding for Phoenix compared to other cities of equivalent population. Staff would also oppose federal actions imposing unfunded mandates on cities or reducing funding available for important programs or infrastructure needs. To protect local authority, staff would support federal action that empowers local communities and oppose efforts to preempt local decisions.

State Agenda
Staff recommends the following priorities for inclusion in the 2019 State Legislative Agenda. These items are described in Attachment A.

Sustainability
1. Volkswagen “Clean Diesel” Settlement Monies

Federal Agenda
Staff recommends the following priorities for inclusion in the 2019 Federal Legislative Agenda. These items are described in Attachment B.

Water
1. System Conservation
2. Intentionally Created Surplus
3. Reservoir Pilot
4. WaterSMART
5. Forest Restoration

*Environmental Programs*
6. Brownfields

*Sustainability*
7. Urban Tree Canopy
8. Electric Vehicle Infrastructure
9. Resiliency
10. Renewable Energy

**Responsible Department**
This item is submitted by Deputy City Manager Karen Peters and the Office of Government Relations.
SUSTAINABILITY

1. Volkswagen “Clean Diesel” Settlement Monies - The Volkswagen Group has been ordered to pay $15 billion as part of a settlement with the U.S. federal government to address thousands of Volkswagen vehicles that were sold in America without proper emission controls. A portion of these monies will be provided to states that apply to participate in “Clean Diesel” programs. If Arizona opts in, it would receive an estimated $53 million for clean diesel programs that result in air quality improvements.

   Staff recommends working with the State in order to receive funding for qualifying projects that would result in air quality improvements in the Greater Phoenix area.
Water Services

1. **System Conservation** -- System Conservation is a water resource management tool currently used in the Colorado River Basin where water is intentionally left in Lake Mead in order to slow declines in reservoir volume. In recent years the Lower Basin States (California, Nevada and Arizona) and Mexico contributed significant portions of their respective Colorado River allocations to the Pilot System Conservation Program to help stabilize lake elevations in order to curtail a Secretarial declaration of shortage.

   Arizona’s junior priority status on the Colorado River makes it particularly vulnerable to a shortage declaration. Continued funding to the Pilot System Conservation Program could stabilize Lake Mead and provide some certainty for delivery of Arizona’s Colorado River supplies.

   **Staff recommends supporting dedicated funding and an extension of the Pilot System Conservation Program.**

2. **Intentionally Created Surplus** -- Intentionally Created Surplus (ICS) is a mechanism to encourage conservation of water supplies in Lake Mead. ICS provides Lower Basin states the ability to save and store their allocated water in the lake and access it in the future. Currently, Arizona is allowed 345,000 acre-feet (AF) of ICS storage and the subsequent savings in the lake. After the maximum ICS storage is reached, no more water can be stored on Arizona’s behalf.

   Additional ICS storage space and funding could contribute to stabilizing Lake Mead and provide some certainty for delivery of Arizona’s Colorado River supplies.

   Currently, only the Central Arizona Water Conservation District CAWCD can contribute to ICS. Bureau of Reclamation contractors, including tribal interests, should be allowed to create and/or contribute to additional ICS space. Expanding the pool of contributions to include in-state contractors could help bolster Lake Mead surface elevations. The ability for more and different entities to store additional water as ICS is crucial going forward.

   Creating additional ICS space is a tangible solution to protect Lake Mead storage levels and lessen the risk of a shortage declaration. It is important for Arizona’s water future to increase volumes of ICS capacity from new contractors and Central Arizona Water Conservation District (CAWCD) and allow subcontractors, like the City, to contribute.

   **Staff recommends supporting efforts to allow contractors to create or contribute to additional ICS space in Lake Mead.**
3. Reservoir Pilot -- New Conservation Space (NCS) water is water that Phoenix, along with five other Valley cities, received the rights to as a result of contributing funds in the 1990s to modify the Roosevelt Dam, creating additional water storage capacity on the Salt River.

When stored water on the Salt River system exceeds pre-Roosevelt Dam modification levels, NCS water becomes available. The modifications also altered the flood control capacity, providing additional space above the NCS portion of the dam. The ability to use this flood control space for water shortage in certain situations could increase overall storage capacity, improve the health of Roosevelt Lake and provide a way for Salt River Project (SRP) to curtail pumping groundwater supplies.

**Staff recommends supporting the creation of a pilot program to examine how Roosevelt Dam’s operation manual and flood control space would be beneficial.**

4. WaterSMART -- Through the U.S. Department of the Interior’s WaterSMART (Sustain and Manage America's Resources for Tomorrow) program, the Bureau of Reclamation (BOR) provides leadership and technical assistance focusing on water conservation and helping water and resource managers make wise decisions about water use. In the Lower Basin, BOR funds metering programs, residential indoor and outdoor conservation, commercial, industrial and institutional conservation and water reuse. The potential for project funding through WaterSMART could be an enormous help for the City’s infrastructure investment plans.

Investments in regional water projects are beneficial to the City’s water supplies. The availability of federal funding to aid in construction of infrastructure to improve resiliency on the Colorado River is especially important. WaterSMART could provide cost-sharing opportunities for the City’s infrastructure investment plans.

**Staff recommends supporting funding WaterSMART for its ability to contribute to Arizona’s resiliency and cost-sharing opportunities for the City’s infrastructure investment plans.**

5. Forest Restoration -- Climate variability, catastrophic wildfires and diminishing river flows are legitimate threats to Southwestern water supplies. Catastrophic wildfires result in significant retrofit to water treatment facilities and threaten upstream reservoirs. Phoenix understands the need to protect and restore the forested headwaters of its source water supplies. One way to address these issues is through investment in forest restoration projects within Arizona’s five National Forests. Forest restoration activities provides source water quality protection for the Salt and Verde River watersheds.

Existing federal forest restoration programs within the Salt River and Verde River watersheds are often available before scheduled and approved National Environmental Policy Act (NEPA) forest treatments. One reason is the time, length
and planning resources required by the NEPA review process. To complete large scale forest restoration projects across large swaths of Arizona National Forest lands, significant funding and expedited turnaround on NEPA decisions are needed.

There are a number of existing U.S. Forest Service (USFS) programs and joint public-private partnerships underway within Arizona. Examples of existing forest restoration include USFS healthy forests programs, such as the Four Forest Restoration Initiative (4FRI), and non-USFS programs such as the Northern Arizona Forest Fund (NAFF) and the Salt and Verde Alliance Water Fund.

**Staff recommends funding for forest restoration activities and easing of environmental restrictions for shovel-ready forest restoration projects.**

**Environmental Programs**

6. **Brownfields** -- Brownfields are properties that are overlooked for development because of the presence of hazardous substances and petroleum products. Examples include former gas stations, closed landfills and former manufacturing facilities. These properties are often abandoned, vacant, blighted and pose potential health concerns. The cleanup and redevelopment of brownfields brings many economic development benefits to the City. Redevelopment creates jobs, increases property values, reduces potential health risks, revitalizes neighborhoods and improves community health.

Since 1998, more than $304 million in private investment has restored approximately 285 acres of previously contaminated land in the City and created or maintained over 3,300 jobs. In addition, 21 sites have been redeveloped for public uses, such as parks. This work was accomplished through a number of funding sources, including from the U.S. Environmental Protection Agency (EPA). Brownfields grants are the foundation of EPA's Brownfields Program. Phoenix has used EPA brownfields assessment, revolving loan fund, job training and area-wide planning grants to transform brownfields into thriving assets for the community. It is critical that funding from this federal resource continues.

**Staff recommends support for legislation that would provide federal funding for environmental assessment, clean-up and redevelopment of brownfields.**

**Sustainability**

7. **Urban Tree Canopy** -- The urban tree canopy is a critical component of the City’s living infrastructure. It benefits and attracts residents and tourists alike to live, work, shop and play in the City. Phoenix’s urban forest is a diverse ecosystem of soils, vegetation, trees, associated organisms, air, water, wildlife and people. The urban forest is found not only in parks, mountain preserves and native desert areas, but also in neighborhoods, commercial corridors, industrial parks and along streets. The
urban forest is made up of a rich mosaic of private and public property that surrounds the City and provides many environmental, economic and social benefits. The urban forest is a keystone to creating a sustainable city because it addresses multiple problems with a single solution. By investing in trees and the urban forest, the City can reduce its carbon footprint, decrease energy costs, reduce stormwater runoff, increase biodiversity, address the urban heat island effect, clean the air and increase property values. In addition, trees can help to create walkable streets and vibrant pedestrian places.

According to the U.S. Forest Service, trees benefit the community by: providing a cooling effect that reduces energy costs; improving air quality; strengthening quality of place and the local economy; reducing stormwater runoff; improving social connections; promoting smart growth and compact development; and creating walkable communities.

Reduction of urban heat island is a priority for many U.S. cities. However, since the Great Recession, government funding for longer term objectives such as tree planting and maintenance have been deferred in light of immediate needs of recovery and other growing social issues. Trees provide numerous societal and financial benefits and a focus is needed at the national scale; the lack of canopy is most prominent in areas with vulnerable populations—those in need of shade in Phoenix’s hot climate.

Staff recommends pursuing federal grants and assistance for tree planting, particularly in low-income areas of the City where the canopy has been significantly affected.

8. Electric Vehicle Infrastructure -- The City would benefit from increasing adoption of electric vehicles (EVs). The adoption of EVs, which are zero-emission, would benefit air quality in the region. Because they are zero-emission, they improve air quality and mitigate concerns over non-compliance with ozone standards. One way to increase market adoption of EVs is to increase the deployment of EV charging infrastructure, which the City needs federal grant funds to accomplish. Although electric vehicles (EVs) are anticipated to be abundant on the roads a decade from now, there has been limited capacity to install EV charging infrastructure throughout the country. Many of the benefits are in the future as EVs come online. The issue is that there is a lost opportunity from not building the charging infrastructure upfront when the costs are lowest.

Most U.S. cities have adopted goals to improve air quality and reduce the use of fossil fuels in transportation over time—for reasons of air quality, reduced operating cost, fuel security, emission reductions and future-proofing against potential future shortages and escalating fuel costs.

Staff recommends pursuing federal grants and assistance to assist with expansion of EV charging infrastructure in Phoenix.
9. **Resiliency** -- The City would benefit from federal funding to assist with adoption of resiliency measures. Resiliency is considered a best practice for ensuring the long-term viability of a city. The need for resiliency efforts has received renewed focus as extreme weather events increase in frequency and intensity in the U.S. Increasingly, cities are realizing the importance of building both social cohesion and infrastructure resilience, most notably as they effect vulnerable populations.

Natural disasters like Hurricane Katrina and Hurricane Sandy both highlighted that emergency plans did not adequately address vulnerable populations. Cities are needing to build resilience in both their constituents and their infrastructure to better prepare for future extreme weather events.

Rather than focusing on emergency management at the time an incident occurs, the best practice is to focus on becoming more resilient, both in infrastructure and social systems, with the goal of reducing the impact of extreme events and hastening recovery when extreme events do occur. Numerous reports have indicated that building resiliency in a community – in its infrastructure as well as social systems – is considerably more cost effective than responding to an extreme event after it occurs. Building resiliency greatly lessens the potential financial risk to the City of being impacted by an extreme event.

The City has already begun taking steps to become more resilient. Notably, the City received an AmeriCorps grant to assist with undertaking a vulnerability assessment and creating a resiliency plan.

**Staff recommends pursuing federal grants and assistance to assist cities with building resiliency programs.**

10. **Renewable Energy** -- A renewable energy mix is an important component of a robust energy system, as renewables have the ability to decarbonize the energy supply and produce local energy in the case of major grid failure. The latter is highly important in Phoenix, because grid failures have the highest likelihood of occurring during extreme temperatures. Additionally, increased use of renewables can also improve air quality.

A distributed energy system is more robust and can be leveraged to reduce overall costs. Utility scale and building scale solar result in an overall reduction in costs for consumers. There are also good synergies with increased daytime use of electric vehicles supplied by daytime solar to result in a dramatic reduction in carbon intensity of transportation.

Federal policy and programs have been intermittent in regards to encouraging renewable energy and have historically been separate and distinct from conversations related to subsidies for oil and gas exploration and energy security. Renewable energy, most notably solar, has become a cost effective component of
the energy mix. In addition, over 80 cities, including Phoenix, have adopted long term goals of carbon neutrality and renewable energy will be a necessary component to achieve these objectives.

**Staff recommends pursuing federal grants and assistance to encourage renewable energy projects and policies for continuous and increased renewable energy.**
Authorization to Enter into Lease Agreement with Closed Loop Fund for Zero Percent Interest Loan to Finance Recycling Equipment

This report requests the Water, Wastewater, Infrastructure and Sustainability Subcommittee recommend City Council approval to authorize the City of Phoenix to enter into a lease agreement with the Closed Loop Fund for a zero percent interest loan to finance an upgrade of the recycling facility at North Gateway Transfer Station.

THIS ITEM IS FOR DISCUSSION AND POSSIBLE ACTION.

Summary
Closed Loop Fund offers zero percent loans to municipalities to develop recycling infrastructure and waste reduction programs. Funding for the Closed Loop Fund comes from various manufacturing and retail companies such as Coca-Cola, Wal-Mart, 3-M, Proctor and Gamble, and Colgate-Palmolive, with a goal of advancing recycling technologies and developing the circular economy.

The Public Works Department desires installation of mechanical equipment upgrades, consistent with best industry practices, to restore the loss of yield and production speed, necessary to comply with new quality standards for recycled commodities. The equipment would be installed at the North Gateway Material Recovery Facility.

Financial Impact
This report requests a recommendation to enter into a $3,000,000 lease purchase agreement with Closed Loop Fund to finance or reimburse costs of acquiring, constructing and improving real and personal property. The lease purchase amount would be repaid to Closed Loop Fund over a five-year period at zero percent interest. The new equipment will restore 30 percent in commodities produced for sale. The increased commodity sales and savings generated from reduced hauling expense to the landfill will fund repayment of the loan and generate additional revenue to the Solid Waste fund. Upon full payment of the lease purchase amount, the Public Works Department would own the installed recycling equipment.

Location
The North Gateway Material Recovery Facility is located at 30205 N. Black Canyon
Freeway.
Council District: 2

**Responsible Department**
This item is submitted by City Manager Ed Zuercher, Deputy City Manager Karen Peters, and the Public Works and Finance departments.
Community Food Assessment and Phoenix Food Action Plan

This report provides the Water, Wastewater, Infrastructure and Sustainability Subcommittee an update on the results to date of the regional Community Food Assessment and progress on the Phoenix Food Action Plan. The work is being completed to achieve the 2050 Local Food System goal to maintain a sustainable, healthy, equitable, thriving local food system as approved by Phoenix City Council in 2016.

THIS ITEM IS FOR INFORMATION AND DISCUSSION.

Summary

In March 2018, the Office of Environmental Programs (OEP) provided an update to the former Sustainability, Housing, Efficiency and Neighborhoods Subcommittee on the development of a Phoenix Food Action Plan to achieve the 2050 Local Food System goal. The first step in creating a Food Action Plan (Plan) is to understand the status of the local/regional food system through completion of a food assessment. In partnership with the Maricopa County Food System Coalition (MarCo), OEP was awarded a $151,000 grant award from the Gila River Indian Community to complete a regional community food assessment for Maricopa County and portions of Pinal County. MarCo is the subrecipient of the funding and tasked with conducting the assessment. MarCo is the largest regional food coalition in Arizona, consisting of more than 60 individual members, with access to more than 130 stakeholders from diverse aspects of the food system.

Community Food Assessment

A Community Food Assessment (CFA) is an evaluation tool used to measure the food assets and needs of a specific community or region and point to opportunities for improvement. The goals of the MarCo CFA are to:

1. Inform on the nature of the food system as it currently operates within the central Arizona region.
2. Inform on the existing assets, needs and opportunities to support and grow a food system in the region that is equitable, healthy, sustainable, and thriving.
3. Apply the results of the assessment to the development of short and long-term
MarCo Action Plans.

The CFA is a well investigated snapshot of a complex food system in the region that highlights where it is working well and where it can be improved. The work has been conducted over a three-year period led by MarCo's Food Assessment Coordination Team (FACT), chaired by Kate O'Neill and Gina Lacagnina. The Maricopa County Department of Public Health, University of Arizona Cooperative Extension, Crossroads Resource Center, Community Alliance Consulting, the Planning Center, and many MarCo members contributed to the CFA.

Maricopa County is a national leader in agriculture. The regional food system is working very well for a small set of large producers and those exporting products out of the region. As was indicated by the analysis completed by the University of Arizona Cooperation Extension (Contribution of Agriculture to the Maricopa County and Gila River Indian Community Economies, January 2018, https://cals.arizona.edu/arec/sites/cals.arizona.edu.arec/files/publications/contrib_ag_maricopa_county_GRIC_economies.pdf), it is important to understand what is being produced, where and how it is being sold, and the potential economic impacts of encouraging growth or changes in regional food systems.

**Economic Contribution:** An estimated $1.95 billion total sales of on-farm agricultural production was contributed to the Maricopa County economy in 2015. The total value-added contribution, also known as the gross state product (GSP) was $831 million, including $586 million labor income, $192 million in profits and $52 million in taxes. Rough estimates of local foods activity suggest that local foods sales/spending in Maricopa County could total in the tens of millions of dollars annually.

**Jobs Contribution:** 14,200 jobs, full- and part-time, are created by on-farm agricultural production, directly and indirectly.

**Major Crops and Livestock Produced:** Major agricultural product categories are: milk and dairy; greenhouse, nursery, and floriculture production; all other crop farming (includes hay and alfalfa); vegetable and melon farming; and cattle ranching and farming.

**Food Production:** In 2012, $129 million of fruit, vegetable, nut and food grain crops were sold by Maricopa County farms. Direct consumer sales of agricultural products in Maricopa County totaled $2 million from 218 operations in 2012. Most local food sales are not direct to consumer, but rather occur through intermediate marketing channels such as retail, restaurants, or food hubs.
Despite our agricultural capacity and national leadership, our food system is not working for a large number of people in Maricopa County, especially low-income, ethnic minorities, seniors, and children. MarCo, in partnership with Community Alliance Consulting, a local organization providing program evaluation, capacity building, and facilitation services, conducted "Community Food Conversations" in Glendale, Tempe, and South Phoenix. The purpose of the conversations was to collect qualitative data from the community and to engage the community in development and execution of co-created solutions to support a food system that is equitable, healthy, sustainable, and thriving. The investigation collected community perspectives and experiences related to gaps, challenges, assets, and values pertaining to three of the most insecure areas in the local food system. These were the key findings from the conversations:

1. Regardless of income, all participants were concerned about the quality of the food they eat. They want ripe, seasonal, organic produce.
2. Respondents want education on nutrition, community resources, gardening, and how to cook. Community members are eager for more opportunities to learn.
3. Overall, affordability is an issue for participants, especially when it comes to their ability to pay for the quality food they feel they deserve.
4. Participants did not feel that they had ample access to the equivalent food outlets, such as grocery stores, as was found in more affluent areas.
5. Across community sites, participants spoke about food as being very important in terms of connection. They feel that sharing food is a way to show love, and participants also feel that food connects them to their community.

We face some serious challenges in sustaining regional agriculture and community food, especially with regards to land, water, and relationships. Food system coalitions across the nation are looking to the role of Community Food Networks to improve the food system for small to medium-sized producers while also increasing access to quality, healthy and affordable foods. Ken Meter, a national renowned local food economist and assessment expert, conducted a study with 33 key stakeholders. The purpose of the study (Building Community Networks Through Community Foods, June 23, 2018, http://www.crcworks.org/azmaricopa18.pdf) was to strengthen local community networks, promote health, and retain local wealth through economic activity generated in Maricopa County. A significant finding was that farmers in Maricopa County are among the most productive vegetable growers in the United States; yet they may very well be the most isolated farmers. Most farms are family or individually owned farms, small both in terms of acreage and sales. Of the total 2,470 farms, 868 have less than $1,000 in annual sales and 1,495 are between one and nine acres. Ninety five percent of total farm sales in Maricopa County come from just 7.5 percent of farms; a few large farms are responsible for most sales in the county.
The analysis also revealed:

**Key Strengths**: Growers are capable; independent distributors are engaged; food system leaders are strong; consumer markets are strong and diverse.

**Key Weaknesses and Gaps**: Farmers feel isolated; too few growers serving the local market; declining margins and skills gaps threaten growth; limited dedication to local food; access to supportive infrastructure and resources are limited; civic officials hold limited interest.

**Opportunities**:
1. In collaboration with local partners, convene informal meetings in which diverse farmers build trust among each other and with diverse civic leaders.
2. Conduct outreach and education campaigns that persuade Maricopa County residents to buy food from farms in the county.
3. Launch a long term effort to grow new farmers.
4. Collaborate with Tribal Nations to ensure long-term water access.

Water and sprawl can drive decline in county farmland and both have sizable inertia due to development and water policies. Concentration of the means of production stifles accountability, community cohesion, and locally oriented production, thus affecting the ability to acquire and maintain "human scale" farms, which tend to grow food for local consumption.

**Phoenix Food Action Plan**

The information presented in the CFA provides a foundation for understanding how to improve the local food system. The CFA's findings will be strongly considered as OEP continues to develop the Plan with several stakeholders including MarCo, the Health Improvement Partnership of Maricopa County, the Valley of the Sun United Way, and the community. The MarCo Policy Work Group is focusing on providing recommendations for development/improvement of zoning and land use policies for food production, incorporating urban agriculture into economic development and land use plans, and to support small and medium-sized producers.

Through the end of the year, community engagement to gather input for the Plan will continue with significant outreach to residents living in areas where access to healthy, high quality, fresh food is challenging. In South Phoenix, the Community Food Conversation will continue with the Local Foods, Local Places workshop made possible through technical assistance from the U.S. Environmental Protection Agency. The goals of the workshop are: 1) to understand the food system needs and
challenges in South Phoenix along the South Central Light Rail Corridor and surrounding areas, and 2) to engage the community to create a local action plan around food strategies. Future engagements include replicating this workshop in West Phoenix.

OEP intends to complete a draft of the Phoenix Food Action Plan for submission to stakeholders for review in Spring 2019 prior to formal submission to Phoenix City Council for approval.

**Responsible Department**
This item is submitted by Deputy City Manager Karen Peters and the Office of Environmental Programs.
System Development Charges Update

This report provides the Water, Wastewater, Infrastructure and Sustainability Subcommittee information about Development Impact Fees and Water Resource Acquisition Fees. Councilwoman Debra Stark requested additional information regarding this topic at the November Water, Wastewater, Infrastructure and Sustainability Subcommittee meeting.

THIS ITEM IS FOR INFORMATION AND DISCUSSION.

Summary
System development charges (SDCs), commonly referred to as impact fees, help the City recover the costs of certain capital facilities needed to serve new development. The charges are applied to permits and are paid at the time building permits and/or water meters are purchased from the Planning and Development Department. SDC amounts can vary by location. Some SDCs are charged citywide, while others are only charged in designated “growth” areas. SDCs represent a significant funding source for the City’s growth-related infrastructure projects. In addition, SDCs can help level the playing field when land development requires offsite infrastructure improvements.

General Overview
SDCs are fees that are assessed on new development to pay for new or expanded infrastructure or resources that are required to accommodate the new development, and are used across North America, especially in high-growth locations. SDCs are not taxes and are authorized under the police power, like zoning or building regulations. Many restrictions exist on the collection and expenditure of revenue from SDCs. Under case law, SDCs must be proportionate, fair and directly connected to the needs of new development. In 2012, the State of Arizona enacted new laws that imposed administrative requirements on municipalities that have impact fee programs, and prohibited collection of several types of fees, including impact fees for solid waste facilities and equipment. Among other things, the state statute imposes lengthy fee adoption procedures, requires onerous grandfathering provisions for property owners that might be affected by future fee increases, and establishes timeframes for the collection and expenditure of fees. The City’s most recent impact fee update took effect in April 2015.
Development Impact Fees

Development Impact Fees (DIF) are collected for Fire, Police, Parks, Libraries, Storm Drainage, Streets, Water, and Wastewater. When these fees were first implemented in the 1980s, Council decided to charge these fees only in designated “growth” areas in the north and south. Currently the DIFs range from just over $6,500 per home in Ahwatukee to nearly $15,000 per home in the Desert View area. The large variation in fees is a result of different levels of new infrastructure needed to serve the areas. For example, due to the mountains in north Phoenix, the water distribution system requires more pumps and reservoirs, and is costlier to construct. In some locations, the necessary infrastructure has been constructed and the debt paid off, so certain impact fees may no longer be necessary. DIFs have been updated and changed many times, with areas being added, categories being added or eliminated, and infrastructure requirements and costs being recalculated. The state statute now requires updates at least every five years but the City has generally updated more frequently.

Water Resource Acquisition Fees (WRAF)

The WRAF is collected to pay for acquisition of additional water resources needed to supply new development, and is an impact fee. The WRAF was originally enacted in 1989 but the fee was phased-in over many years. There were originally three fee zones but that has recently been reduced to two: one for "off-project" and one for "on-project" lands ("project" referring to the Salt River Project). The fee for on-project land was set at $0 in 2015 because water supplies for new development were deemed adequate over the subsequent ten-year period. Fees are assessed in off-project areas to pay for future water supplies and associated infrastructure.

Evolution of System Development Charges

Over time the types of fees that the City has charged have evolved for two primary reasons - overall cost-effectiveness of the fees, and restrictions imposed by the State. Experience has shown that it is not cost effective to collect fees (and provide credit) for smaller facilities or equipment. It is usually best to focus on large-scale backbone infrastructure like treatment plants, transmission mains, arterial roads, regional storm drainage facilities, and fire stations. The administrative burden of providing impact fee credit for small facilities that are routinely constructed by private development, outweighs the benefit of including these in the impact fee program. In other cases, action by the State has required elimination of certain fee categories, including the solid waste and park preserve fees. Changes to state impact fee laws have also excluded or set limits on specific types of facilities like large parks, community centers exceeding 3,000 square feet, and libraries exceeding 10,000 square feet.
Success of System Development Charges
Overall the use of SDCs to ensure that new growth pays for itself and that new development is served with adequate municipal services has proven to be a significant success for Phoenix. A conservative estimate of the total amount of fees collected, plus the value of facilities dedicated in return for impact fee credit, is $800 million over the past 22 years. The DIF program has proven to be successful in facilitating delivery of key water, wastewater, street and storm drainage infrastructure in Laveen, Estrella, North Gateway and Desert View, not only through direct collection of fees to fund improvements, but also through development agreements that leverage private and public funds. Examples include: the Laveen Area Conveyance Channel, the Durango Regional Conveyance Channel (now under construction in Estrella), water transmission main projects in North Gateway, and recent Deer Valley Drive improvements in Desert View. The DIF program has facilitated construction of infrastructure in growth areas to accommodate new development in an efficient and timely manner while reducing the burden on City taxpayers.

Future Updates
A review of the DIF and WRAF programs is currently underway. As with prior impact fee update processes, the City Manager has convened the Impact Fee Advisory Committee consisting of development stakeholders. A presentation will be scheduled with the Water, Wastewater, Infrastructure and Sustainability Subcommittee once proposed changes and a staff recommendation have been prepared.

Responsible Department
This item is submitted by Deputy City Managers Mario Paniagua and Karen Peters, and the Planning and Development and Water Services departments.