

PUBLIC MEETING AGENDA



Sustainability Commission

MEETING DATE

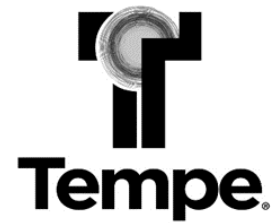
Wednesday, October 23, 2019
4:30 p.m.

MEETING LOCATION

Engineering & Transportation Conference Room
31 E. 5th Street, City Hall, Garden Level
Tempe, Arizona

AGENDA ITEM	PRESENTER	ACTION or INFORMATION
1. Public Appearances The Sustainability Commission welcomes public comment for items listed on this agenda. There is a <i>three-minute time limit</i> per citizen.	Kendon Jung, Commission Chair (4:30 – 4:33 pm)	Information
2. Approval of Meeting Minutes The Commission will be asked to review and approve meeting minutes from the September 16, 2019 meeting.	Kendon Jung, Commission Chair (4:33 – 4:35 pm)	Action
3. Salt and Verde Alliance The Nature Conservancy will give a presentation.	Christian Stumpf, Director of External Affairs, Rebecca Garrett, Associate Director of Development, Nature Conservancy, (4:35 – 4:55 pm)	Information
4. Upcoming Council Meeting for Climate Action Plan Chair will provide updates.	Kendon Jung, Commission Chair (4:55 – 5:15 pm)	Information
5. Plans for mobilizing around highlighted actions Chair will provide updates.	Kendon Jung, Commission Chair (5:15 – 5:55 pm)	Information
6. Housekeeping Items	Kendon Jung, Commission Chair, (5:55 – 6:10 pm)	Action
7. Future Agenda Items Commission may request future agenda items.	Kendon Jung, Commission Chair (6:20 – 6:30 pm)	Information

According to the Arizona Open Meeting Law, the Sustainability Commission may only discuss matters listed on the agenda. The City of Tempe endeavors to make all public meetings accessible to persons with disabilities. With 48 hours advance notice, special assistance is available at public meetings for sight and/or hearing-impaired persons. Please call 350-2775 (voice) or 350-8400 (TDD) to request an accommodation to participate in a public meeting.



Minutes City of Tempe Sustainability Commission September 16, 2019

Minutes of the Tempe Sustainability Commission meeting held on Monday, September 16, 2019, 4:30 p.m., at the Engineering & Transportation Conference Room, City Hall, 31 E. 5th Street, Tempe, Arizona.

(MEMBERS) Present:

Kendon Jung (Chair)
Barbie Burke
Steven Russell
Sukki Jahnke
John Kane

Stephanie Milam-Edwards
Serita Sulzman
Katja Brundiers
Gretchen Reinhardt

(MEMBERS) Absent:

Ryan Mores (Vice Chair)

City Staff Present:

Braden Kay, Sustainability Director
Grace DelMonte Kelly, Energy Management Coordinator
Parrish Spisz, Senior Management Assistant
Tanya Chavez, Interim Deputy Director of Municipal Utilities
Steve White, Municipal Utilities Planning Resource Analyst
Tony Miano, Solid Waste Manager

Guests Present:

Jennifer Stroud
Daniel Boswell
Linsey Boswell
Frances Burnuel
Patricia Hillman
Keith Hillman
Connor Franklin Rey

Chair Jung called the meeting to order at 4:32 p.m.

Agenda Item 1 – Public Appearance

Chair Jung asked the guests to introduce themselves.

Agenda Item 2 – Approval of Meeting Minutes

Chair Jung introduced the minutes of the August 19, 2019 meeting. Commissioners Jahnke and Reinhardt recommended edits to the meeting minutes. Commissioner Burke made a motion to approve the minutes with recommended edits. Commissioner Russell seconded.

Motion: Commissioner Burke

Second: Commissioner Russell

Decision: Approved 9-0

Voted to Approve:

Kendon Jung (Chair)
Barbie Burke
Steven Russell
Stephanie Milam-Edwards
Serita Sulzman
Katja Brundiers
Gretchen Reinhardt
Sukki Jahnke
John Kane

Agenda Item 3 – Solid Waste Rate Study Update

Interim Deputy Director of Municipal Utilities Department Tanya Chavez said solid waste is working with Stantec Consulting on a solid waste rate study. Tanya said they are going to city council on Thursday night to look at rates for the next two fiscal years. She said the presentation will focus on:

- Tempe's commitment to the recycle program
- Change in trash collection days
- Green organics program – collect organics
- Alley maintenance program
- Solid waste rate study
- In relation to Council priority #4 :
 - performance measure #4.04, Achieve or exceed diversion rate by 2020. The diversion rate goal is 40% for residential and 25% for commercial
 - They are currently at 22.8% for residential and 24.2 % for commercial
- They will show Council how rates compare. Tempe is 3rd in the valley with a monthly solid waste fee of \$25.60, after Mesa and Phoenix, and in comparison, to cities providing similar services
- Tempe is one of the only cities that collects green waste to both use in our parks and give out to residents

Solid Waste Manager Tony Miano said there was a recycling crash and we used to collect \$600,000 in revenue. Now, the cost is \$500,000 for recycling. It is currently 69\$ per ton to recycle material and \$25.56 per ton to send it to the landfill. Casa Grande and some other cities are choosing to landfill instead. Tucson changed collection to every other week. We have a mandate in Maricopa County to collect every other week.

- We went to council. They supported us. We are working on “top 10 in the bin”. The more people contaminate the container, the higher the costs to recycle so we are educating residents on what can be recycled
- The average 1 lb. container has 14% contamination
- SMART (Save Money and Recycle Tempe) program has been successful in its first year
- We are looking at re-routing city for collection and moving collection dates to reduce fuel use in trucks and we are in the process of switching trucks to CNG to reduce our carbon footprint.

Why change the rate?

- Improve customer service
- Improve efficiencies
- Reduce mileage
- Reduce costs

Alley Maintenance Program Challenges

- Schedule not being followed
- Material is thrown in alley
- Trees and bushes are not trimmed
- Truck takes up most of alley

There are nearly 200 miles of alleys, we would like to see 50 miles/ year cleaned up.

Re-use of diverted materials:

- We collaborate with Parks, Golf, Water Utilities, Engineering
- We take recycled asphalt, grind with palm fronds and mix it together
- We are going to change the way we landfill material and find ways to re-purpose it
- From 2009- 2015, we didn't ask for higher rates
- Performance Measure #4.04 helps us to solidify our programs
 - Bulk green organics
 - Compost
 - Recycling
 - SMART
 - Rate study

Timeline is:

- Council review - September 19
- Public comment period -September 23 – October 7
- 1st draft of 20/21 rates – October 1
- Public meeting – October 3
- Public meeting – October 5
- Council adoption – Council adoption

Commissioners commented and asked:

- Is the city doing anything to incentivize getting jobs and recycling plants here? Tony said we are working with RISN, Phoenix and cities in the valley. ASU is facilitating to determine what we can do.
- What caused the changes in diversion rates in FY15/16? Tony said we had 1 truck with 100 containers when we started. Now we have a lot more trucks and more containers out there.
- ASU is working on a 2000 toilet retrofit and reusing porcelain to make concrete. Tony said they are using sand from parks for sandbags and are re-purposing any material they can.
- Do you anticipate in public participation process there will be a question of equity? Rate increases may affect some more than others. Tony said they went out to the public and are trying different programs to address equity. The SMART program offers smaller families an opportunity to save.
- Any thoughts on closing alleys? Tony said we went to Council and we heard an absolute no.

Chair Jung thanked Tony, Tanya and Steve and said if any staff have more questions for Solid Waste staff to send them to staff.

Agenda Item 4 – Climate Action Plan Approval Timeline

Sustainability Director Braden Kay said we presented the Climate Action Plan to council on September 5th. Council gave instructions including incorporating equity with the Climate Action Plan. Council said the proposed equity section for Climate Action Plan 2.0 wasn't enough.

Council gave staff direction to move forward on carbon reduction goal of

- 80% of 2015 community GHG emissions by 2050 and 100% carbon neutral by 2060.

We are doing another Climate Action Plan event, a heat walk at Kiwanis Park on September 21st. We will give an overview of the plan and then walk with residents to measure the temperature and collect data with ASU researchers. This is a hands-on opportunity, researchers are convinced there are not a lot of people doing this research.

Chair Jung said this is also helping us with 20-minute city and multi-modal city. This is one of the reasons this is so important.

Commissioners commented and asked:

- You had over 90 people at the climate action plan public meeting. Did you review the comments? Braden said yes there as a lot of energy and excitement about the plan and how we are turning that into policy
- One couple from Gilbert travelled and said they want to duplicate in their city
- There were no negative comments
- There were a wide range of ages and background which is good to see

Agenda Item 5 - Climate Action Plan 1.0 - Highlighted Actions

Chair Kendon Jung said all council members were receptive to the Climate Action Plan. This shifts our work on how we will engage council members. We need to formalize our support for the plan and staff drafted a memo and we would like to get your thoughts on it. We are hoping to start the highlighted actions with this letter.

The commission reviewed the draft letter to Council, discussed some potential revisions and provided written comments to staff.

Commissioner Kane made a motion to approve the letter with recommended edits to be reviewed by the Chair and then forwarded from the commission to the City Council. Commissioner Burke seconded.

Motion: Commissioner Kane

Second: Commissioner Burke

Decision: Approved 9-0

Voted to Approve:

Kendon Jung (Chair)
Barbie Burke
Steven Russell
Stephanie Milam-Edwards
Serita Sulzman
Katja Brundiers
Gretchen Reinhardt
Sukki Jahnke
John Kane

The letter of support for the Climate Action Plan will be sent to council. Braden said if a councilmember wants to talk Chair Jung will coordinate meetings with the council members.

Sustainability Director Braden Kay said the last 12 months have been exclusively about the climate action plan and thanked Chair Jung, Ryan Mores and the commissioners for being so focused. The next 3 to 6 months is all about the highlighted action and how to move them forward.

Chair said we are going to work in teams to decide what we can do to discuss the actions with stakeholders. He will connect with SRP to look into the currently policy and think about those pieces.

Commissioners discussed the TDM and said is a complicated framework. Braden said it will be about listening to the chamber and stakeholders and coming back to the commission after hearing their comments.

Agenda Item 6 – Housekeeping Items

Chair Jung reminded commissioners of the heat walk on September 21st and the next commission meeting is on October 23rd.

Commissioner Burke recognized Braden Kay for receiving the Gabe Zimmerman emerging leaders award in Tucson last month. The commissioners congratulated Braden and he thanked the commission.

There was discussion of the solid waste presentation and a request of suggestions to solid waste staff. Braden said the agenda items are focused on the climate action plan and commissioners can request an item in a future meeting.

Agenda Item 7 – Future Agenda Items

Highlighted actions

A motion was made to adjourn.

All approved 7 – 0

Motion: Commissioner Jahnke

Second: Commissioner Milam-Edwards

Decision: Approved

Kendon Jung (Chair)

Barbie Burke

Steven Russell

Stephanie Milam-Edwards

Serita Sulzman

Katja Brundiars

Gretchen Reinhardt

Sukki Jahnke

John Kane

All present approved.

The meeting was adjourned at 6:35 pm.

Prepared by: Grace DelMonte Kelly

Reviewed by: Braden Kay

Climate Action Plan



Public Forum
September 10, 2019



What is a Climate Action Plan (CAP)?

Tempe's Climate Action Plan:

- Global Covenant of Mayors
- 12 actions to reduce GHG emissions and improve resilience to extreme heat
- New Performance Measure for community GHG emissions

Related Performance Measures

- Carbon neutrality in municipal operations by 2050, with a strategy of 100% renewable energy sources by 2035 **(4.19)**
- Achieving a citywide 25% tree and shade canopy by 2040 **(4.11)**
- Creating a multimodal transportation system (20-minute city) where residents can meet all basic daily, non-work needs **(3.26)**

What is in Tempe's Climate Action Plan?

- Overview
- Community Actions
 - **Emissions Reduction**
 - Energy & Energy Efficiency
 - Transportation
 - **Resilience**
 - Extreme Heat
- Municipal Actions – GHG Inventory
- Climate Action Plan 2021 Update

Emission Reduction vs. Resilience

- **Emissions Reduction: Energy and Transportation**
 - Reduce greenhouse gas emissions
 - Become a more livable and economically viable
 - Invest in a better city for future generations
- **Resilience: Extreme Heat**
 - Become more resilient to climate change
 - Help Tempe achieve its sustainability goals

Emissions in Tempe

- **Municipal emissions:** City facilities and operations
- **Community emissions:** Electricity production and transportation emissions

GHG Emissions Baseline

Municipal

**2015 Emissions -
City of Tempe**

28,723 metric tons
CO₂e, electricity only

40,670 metric tons
CO₂e, electricity and gas
for vehicles and buildings



equivalent to
electricity use of

**6,096
homes**

Community

**2015 Emissions -
All residents, business,
and organizations in
Tempe**

2,023,229 metric tons
CO₂e, electricity only

3,667,560 metric tons
CO₂e, electricity and gas for
vehicles and buildings



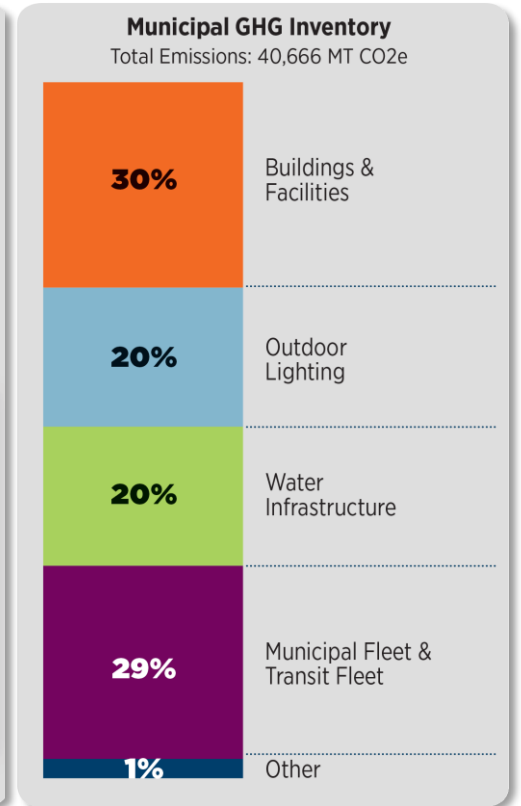
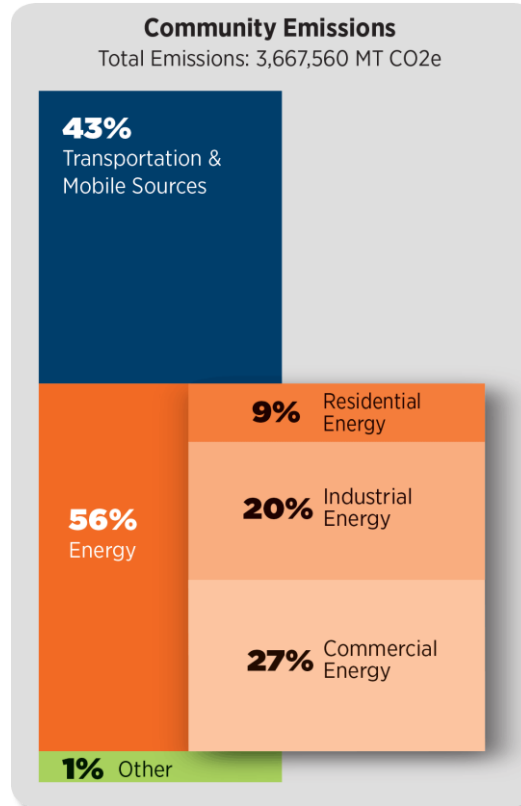
equivalent to
electricity use of

**549,694
homes**

Emissions in Tempe

- Community emissions: Electricity production and transportation emissions

- Municipal emissions: City facilities and operations



Municipal Operations Emissions

- City buildings, outdoor lighting, and water treatment account for **70% of municipal emissions**
- City fleet, transit fleet, and employee commute account for **30% of municipal emissions**



Municipal Actions: City Buildings

City Buildings

- Solar panels at six facilities
- Energy audits and retrofits

Next action

- Facilities Sustainability Plan



Municipal Actions: Outdoor Lighting

Outdoor Lighting

- Converted streetlights to LED



Next actions

- LED street lighting
- LED park lighting
- LED building exterior lighting



Municipal Actions: Water Treatment

Water Treatment

- Research technologies to lower energy & water use
- Power operations with renewable energy

Next action

- Assessment of water treatment operations



Municipal Actions: City Fleet

● Fleet and Transit Fleet

- Prioritize electric vehicle (EV) investments
- Orbit & Flash buses – alternative fuel

● Next actions

- Electric vehicle feasibility study
- Increase EV purchasing

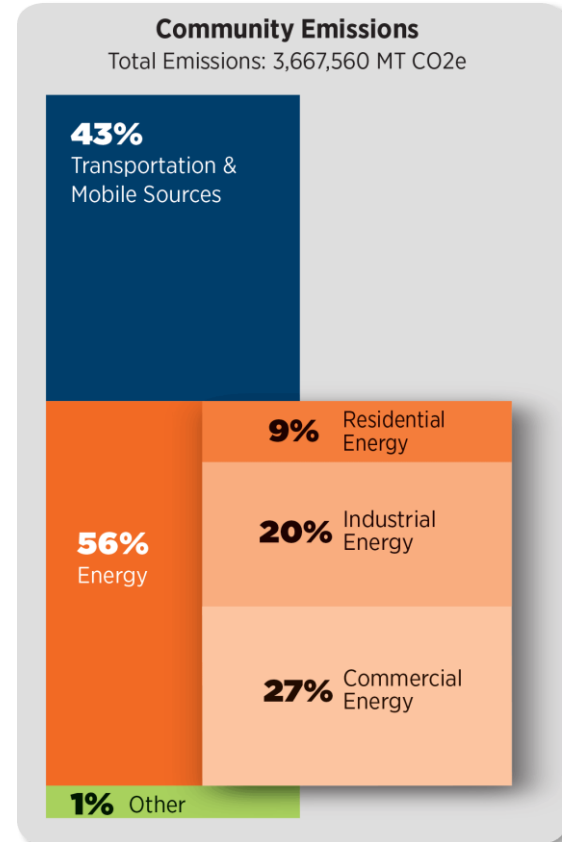


Moving Towards Municipal Carbon Neutrality

- **Partner** with utilities on fleet electrification & renewable energy
- **Collaborate** with city departments - facilities, streets, transit, water utilities - to reduce carbon emissions
- **Measure and report** on carbon emissions reduction

Community GHG Emissions

- **56% of GHG emissions** in Tempe are from energy production across residents, businesses, industries, and nonprofits
- **43% of the GHG emissions** in Tempe are from transportation



Community Climate Action: Energy

- 56% of community GHG emissions = **electricity production**
- Challenge:** A least 50% of electricity that powers Tempe homes and businesses comes from fossil fuels
- Support** businesses and residents in **load shifting and energy upgrades**
 - Saves money
 - Promotes clean energy economy



Community Climate Action: Transportation

- **43%** of community GHG emissions = **vehicular emissions**
- Tempe **leads Arizona** in alternative transportation: bus, bike, light rail
- The shift from **single-occupancy vehicles to alternative modes of transportation:**
 - Improves air quality
 - Lowers GHG emissions



Community Climate Action: Extreme Heat

- Summers have **more extreme heat days**, fueled by **urban heat island (UHI)** effect
- Extreme heat poses **serious health risks** for vulnerable populations and **Tempe's economy**
- **Green infrastructure** and low-impact development can make Tempe **cooler and more livable**.



Collaboration on the CAP

- Building Capacity
- Community Engagement



Capacity Building

- Future Shocks and City Resilience boardgame
 - **Engage/educate** city leaders about sustainability issues
 - Present **new perspectives** and thinking for sustainable management
- Sustainability Goal Setting and Strategy Workshop
 - **Introduce** focus areas of CAP
 - Develop **deeper understanding** of **sustainable** infrastructure and **resilient** communities



Community Engagement

● Forums

- Build support for key investments in target areas (energy, transportation, heat, etc.)

● Engagement with City Departments

- Ensure alignment of actions and the climate action planning process with existing city actions and planning

● Interviews

- Generating ideas, getting feedback on initial concepts and testing communications strategy



Forum Discussions and Stakeholders

Energy:

- Opportunities to support energy upgrades in residential and commercial buildings
- Community solar development to increase access to renewable energy
- **Stakeholders:** APS, SRP, ASU, Renewable Energy Firms

Transportation:

- Electric vehicles use and infrastructure
- Streetcar and other modes of transportation that reduce congestion and the need for car travel
- **Stakeholders:** Valley Metro, ADOT, Waymo, Tempe Chamber of Commerce

Extreme Heat:

- Cooling the city with trees, vegetation, material use and smart stormwater practices
- Lessening the impact of extreme heat through education and preparedness
- **Stakeholders:** AZ Dept. of Forestry & Fire Management, Watershed Management Group, SRP Sustainability Team, Tempe FMR, ASU

Engagement with City Departments

- ASU, MAG, DTA, and Engineering and Transportation on transportation actions
- ASU and Strategic Management and Diversity Office on autonomous vehicles
- Engineering and Transportation and Internal Services on energy actions
- Sustainable Cities Network on extreme heat and green infrastructure
- Fire Medical Rescue Department, and Police Department on Emergency Management
- Community Development on Green Building Code

Interviews

- Conducted semi-structured, group interviews with:
 - 42 Tempe city staff
 - Non-profits
 - Commissioners
 - Key stakeholders such as the Tempe Chamber of Commerce and Local First Arizona
- Results included:
 - Current actions to reduce emissions
 - Recommendations for future collaborations
 - Areas of strength, investment, expertise for CAP

Timeline: CAP Engagement

- Spring 2018 Internal Interviews
- Summer 2018 External Interviews
- Fall 2018 Engagements with City Departments
- September 2018 Forums on *Extreme Heat*
- October 30th 2018 Forum on *Energy*
- Oct./Nov. 2018 Forums on *Transportation*
- February 26th 2019 Forums on *Extreme Heat and Energy*
- March 19th 2019 Climate Action Plan Open House
- Summer 2019 Finalize Plan
- September 7th CAP Draft Review
- September 10th CAP Draft Review
- September 21st CAP Draft Review
- Fall 2019 Council Adoption

Climate Action Plan Overview

Energy and Energy Efficiency

- 1 Create resilient energy hubs with renewable energy and energy storage.
- 2 Create a revolving fund to support energy upgrades to businesses and schools in Tempe.
- 3 Create a centralized sustainability platform to help businesses implement energy upgrades.
- 4 Pilot solar electric vehicle charging to capture and store energy during peak sunlight hours.

Transportation

- 1 Create an urban core Transportation Demand Management program and a Transportation Management Association.
- 2 Prioritize safe and low-stress connections by walking, biking or riding transit in all transportation projects.
- 3 Invest in electric vehicle charging infrastructure and adopt building code changes that support electric vehicles.
- 4 Develop an automated mobility readiness guide and policy framework.

Extreme Heat

- 1 Adopt Green Infrastructure and low-impact development standards.
- 2 Adopt Green Building Code with support for increasing shade and use of cool materials.
- 3 Further invest in Urban Forestry Master Plan to provide more shade in parks and along streets.
- 4 Invest in new emergency management program and develop resilience plan for extreme heat.

Highlight Energy Action

● Resilient energy hubs

- Partner with utilities to **reduce barriers to adding solar and battery storage** to community centers, schools, and churches.
- Meet the power needs of the most **vulnerable populations** in case of **emergency**



Highlight Transportation Action

- **Transportation Demand Management (TDM) program**
 - A TDM program **encourages transit and carpooling**
 - Provides **congestion mitigation alternatives**
 - The Transportation Management Association (TMA) is a public-private partnership that aims to **reduce traffic congestion and carbon emissions.**



Highlight Extreme Heat Action

- **Green Infrastructure & Low Impact Design Standards**
 - Design landscapes that **capture stormwater** while growing **vegetation** for **shade** and urban **cooling**
 - Promotes a **walkable** and comfortable city
 - **Saves water**
 - Keeps Tempe **cool**



Highlight Extreme Heat Action

- International Green Construction Code (IgCC)
 - Make construction **more sustainable**
 - **Increased resilience** to extreme heat
 - Encourage **sustainable construction methods** and **materials**
 - Structural **shade**
 - Supports **cool** materials
 - Requires more **tree canopy** coverage



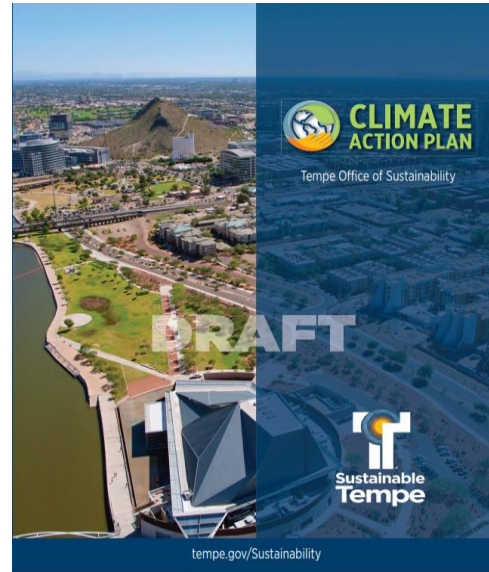
What's Next: CAP 2021 Update

- Tempe's CAP 2021 Update will incorporate the following **guiding principles** to ensure **quality and effective climate action** is taken:
 - **Fiscal responsibility**
 - Make financially wise climate action investments
 - **Equity**
 - Prioritize job creation and professional development
 - **Engagement/Education**
 - Create engagements that allow residents connect with content
 - **Enterprise**
 - Tempe businesses can promote climate action
 - **Effectiveness/Evidence**
 - Evidence that climate actions have an impact

Timeline (Future and CAP 2021 Update)

- September 7th Public Event
- September 10th Public Event
- September 21st Public Event and Heat Walk
- Fall 2019 Finalize CAP
- Fall 2019 Council Approval
- Spring 2020 Forums on CAP 2021 Update
- Spring 2021 Analyze 2020 data
- Summer 2021 Draft & edit CAP 2021 Update
- November 2021 Council Adoption

GHG Reduction Target Recommendation



- 80% of 2015 community GHG emissions by 2050 and 100% carbon neutral by 2060

From: STEPHANIE MILAM-EDWARDS <smilam@tempeunion.org>
Sent: Monday, September 16, 2019 5:30 PM
To: Kelly, Grace DeMonte <Grace_Kelly@tempe.gov>
Subject: Solid Waste Questions

Grace,

Questions for Solid Waste Department:

Doesn't it increase costs to have people on call for missed collection? **Yes, but it's a service we provide. We have to have someone on call for all emergencies, so it is something we have to provide as a crucial service**

How can you help avoid these extra trips? **I don't understand extra trips?**

Where is the MERF we use in Tempe? **The MRF is owned and operated by Waste Management at 99Ave and Deer Valley Rd, city of Surprise.**

How do we increase awareness of bulk item collection and green waste collection? **We are currently working with our PIO, community Services staff to update our outreach plan to advise our customers what to place out and separate green organics from their waste stream.**

When and where you get Tempe Gold and for how much? **Residents of Tempe can purchase a pickup truck load or smaller for \$20 per yard. All they need is their Utility bill and drivers license to match. Our yard is just north of Hardy and Rio Salado.**

Where is the compost yard? Can students visit? **Our yard is just north of Hardy and Rio Salado. Yes, Dan and Dawn can coordinate this.**

Dawn_ratclife@tempe.gov and Daniel_Montgomery@tempe.gov

Would either of you be willing to come and talk to the Eco Ambassadors Club at Tempe High School? **I would love to speak about sustainability, tony_miano@tempe.gov**

Garbage collection truck gets 2.5 miles /hour, but 50% are CNG – are rates going to go down after 100%? How soon before 100% CNG?

How much before 100% compliance?

We still will get 2.5 miles per gallon even with CNG compared to liquid fuel. We replace 3-4 trucks per year so it will take close to five years. However, residential trucks should be at 100%by 2022.

Steph