Overview

Ongoing data monitoring and evaluation is critical in understanding a community's progress towards its climate goals and targets. It ensures programs and activities are best serving the community, generating positive impact, and ultimately informing the development and delivery of evidence-based climate actions.

Through the 2021-22 biennial budget, the City will explore and implement strategies to modernize and streamline sustainability data tracking efforts. This effort builds on more than 10 years of sustainability data tracking and aligns the City's sustainability work with the vision of the TIS 4 Year Strategic Plan.

Background

Redmond has been tracking key climate and sustainability indicators for more than 10 years using multiple platforms and tools, including:

Scope 5

- **Description**: From 2013-2018 Redmond leveraged the online platform Scope 5 to visualize key sustainability metrics. This was done in partnership with King County-Cities Climate Collaboration (K4C) members Bellevue, Kirkland, Mercer Island, and King County.
- **Purpose**: Scope 5 allowed the City to calculate greenhouse gas (GHG) emissions, transparently track metrics, and share progress with stakeholders via a public website. The City tracked more than 25 metrics through Scope 5 across the following focus areas:
    - Government Operations
    - Community Emissions
    - Community Energy Use
    - Community Transportation
    - Community Waste
    - Community Water Consumption
- **Current status**: K4C members mutually agreed to transition away from the Scope 5 platform in 2018 due to limitations in the software. The City now calculates its municipal and community GHG inventory through ICLEI's online platform, ClearPath. This is a widely used tool among local governments and a best practice across the field. All other indicators continue to be tracked as outlined below.

Environmental Sustainability Action Plan (ESAP)

- **Description**: A comprehensive sustainability inventory (Appendix B of the ESAP) was compiled at the onset of the ESAP planning process to summarize Redmond's past, current, and potential future sustainability-related activities and context. The sustainability inventory included a quantitative assessment of baseline conditions and future trends in key sustainability performance indicators (KPIs).
- **Purpose**: The data inventory informed the metrics and the wedge analysis – the analysis that quantifies the path to the City's GHG reduction goals – included in the final ESAP. This data also informed future trends, which were provided for three scenarios:
    - A Business-As-Usual scenario that assumes the City takes no further action to further sustainability goals.
    - An Adjusted Business-As-Usual scenario that considers existing and anticipated external policies and activities.

  - A Target scenario that can be used to compare projected future trends to relevant adopted targets, such as those set by Washington State or King County (K4C, PSRC).
- **Current status**: The ESAP includes data and historical trends for more than 30 KPIs, which the City will continue to monitor and report on moving forward. As outlined in the ESAP, Redmond will leverage two key mechanisms to monitor progress, including public annual progress reports and biennial GHG inventory updates.

2021 Data Dashboard Project Overview

To date the foundation of the City's data tracking efforts have included Excel-based spreadsheets. While this is common practice, it limits sharing capabilities and requires frequent updates to be most effective. Through the 2021-2022 biennial budget, City Council allocated $250,000 for the environmental sustainability data dashboard initiative. The goal of this effort is to implement strategies to enhance data transparency and increase data-informed learning opportunities to guide the City's progress towards its climate and sustainability goals.

To achieve this vision, funds from the 2021-2022 budget will support the development of enhanced data tracking capabilities and a dashboarding system to monitor and inform the City's programming and progress. The project will buildout automated data collection and visualization procedures where feasible, as well as explore the addition of key software and services subscriptions.

The data dashboard development will follow four key phases:

1. **Research** *(in progress)*: During the research phase staff will complete an inventory of sustainability metrics, refine the project scope of work with Council and internal stakeholders, explore best practices across the climate data space, and identify any gaps in the City's data and technology capabilities to inform a clear path forward.
2. **Automate**: With a clear scope of work and understanding of the key metrics to be tracked, staff and consultants will begin building out the database and technological infrastructure for the data dashboard. Standards for data collection and tracking will also be established to ensure consistency and accuracy.
3. **Collaborate and Share**: Resources and data will be made available to internal and external stakeholders to facilitate collaboration and transparency. Partnerships with other stakeholders will be explored during this time.
4. **Learn**: Leverage the platform to support data-informed decision making and adapt programming based on data trends. The City will follow a process of continuous improvement to refine the data dashboard based on lessons learned.

Draft Metrics Inventory List

Below is a draft list of sustainability-related performance metrics currently tracked by City staff to inform both internal and external initiatives. This list of draft metrics will guide inputs into the sustainability data dashboard. During the Study Session, Council will be asked to provide input on the leading indicators it would like to see in an effort to distill the information visualized for Council and the public.

Metric	Unit
Focus Area: Transportation and Land Use	
Community Indicators	
Community vehicle miles traveled	Community VMT

Metric	Unit
Per-capita vehicle miles traveled	Per-Capita VMT
Mode share	% single occupancy commuting
Transit ridership	# of riders
Transportation GHG emissions	MTCO2e
EV permits issued	# of permits
Publicly available EV chargers	# of chargers
EVs licensed in Redmond	% of EVs licensed in Redmond
Affordable units within 1 mile of public transportation	# of affordable units / # of total units constructed
Mobility Report Card: Ratio of Redmond's transportation supply to transportation system demands (i.e. concurrency)	Ratio
Transportation network completed for all travel modes	%
Redmond commute trips using alternative to single occupancy vehicles	%
Municipal Indicators	
Municipal Fleet	
Municipal fleet - Gasoline	Gallons
Municipal fleet - Diesel	Gallons
Municipal fleet - Propane Autogas	Gallons
Municipal fleet - Electricity	kWh
Municipal fleet - Vehicle mileage	MPG
Municipal fleet emissions	MTCO2e
Fuel cost savings as a result of alt. fuel fleet	Dollars in fuel cost savings
Percentage of light duty alternative fuel vehicles within the City fleet	% of fleet
Municipal Employee Commute	
Municipal Employee Commute - City Campus	MTCO2e
Municipal Employee Commute - MOC	MTCO2e
Municipal Employee Commute Total - GHG emissions	MTCO2e
Number of employees telecommuting	# of employees
Number of employees on alternative work week schedule	# of employees
Municipal Employee Commute - Number of Employees	Employees
GoRedmond users	# of active GoRedmond users
Focus Area: Buildings & Energy	
Community Indicators	
Community energy use	MMBTU
Carbon Intensity of Energy	MTCO2e/MMBTU
Natural gas use	Therms
Commercial	
Industrial	
Residential	
Electricity use	kWh
Commercial	

Metric	Unit
Industrial	
Residential	
Building energy GHG emissions	MTCO2e
PV permits issued	# of permits
Green Building Zoning Code provision use	# of and % of land use applications using the Green Building Zoning Code provision
Total # of green certified structures in the City	# of LEED, Energy Star, and other green building certifications
Municipal Indicators	
City facilities - electricity	kWh
City facilities - natural gas	therms
City facilities - generator fuel use	Gallons
Water delivery - electricity	kWh
Water delivery - natural gas	therms
Water delivery - generators	gallons
Wastewater delivery - electricity	kWh
Wastewater delivery - generators	gallons
Streetlights and Traffic signals - electricity	kWh
Green power purchased	kWh
Municipal GHG emissions from energy	MTCO2e
Energy savings from energy efficiency upgrades	kWh
Focus Area: Materials Management & Waste	
Community Indicators	
Community diversion rate	% of waste recycled or composted
Commercial and multi-family complexes patriation in organics services	# of businesses/complexes
Organic waste diversion	tons diverted
Commercial garbage production	average weight of garbage generated per commercial employee
Residential garbage production	average weight of garbage collected per single family account per week
Site visits	# of site visits to commercial and multi-family
Solid waste GHG emissions	MTCO2e
Municipal Indicators	
Municipal diversion rate	% of waste recycled or composted
Organics waste diversion	tons diverted
Recyclable materials diversion	tons diverted
Landfilled materials	tons sent to landfill
Municipal GHG emissions from solid waste	MTCO2e
Focus Area: Natural systems	
Community Indicators	
Tree canopy cover	%
Number of acres enrolled in active management for restoration	Acres
Forest Stewards volunteers	# of active forest steward volunteers
Volunteer hours performing stewardship opportunities	Volunteer hours
Developments achieving at least 35% tree retention	# and %

Metric	Unit
Replacement trees planted	# of trees planted
Tree removal permits issued	# of permits
Freshwater Water Quality Index	
Catch basins inspection	# inspected
Catch basin cleaning	% of catch basis cleaned within six months of inspection
Stormwater flow control	% of area with adequate stormwater flow control
Stream habitat quality	% of stream length with good in-stream habitat
Stream health	% of streams that are considered healthy in an urban setting
Municipal Indicators	
Trees planted on City property	# of trees
Active management for restoration	# of acres enrolled
Focus Area: Water Management	
Community Indicators	
Pollution prevention site visits	% of high-risk sites visited and provided technical assistance
Percentage of drinking water quality tests that meet compliance regulations	%
Percentage of groundwater monitoring wells that meet quality standards	%
Groundwater quality	% of groundwater quality samples that meet Groundwater Quality Standards
Groundwater quality	% of groundwater quality samples that meet Primary Drinking Water Standards
Aquifer recharge	change in Aquifer Recharge Area
Remaining high-priority septic systems remaining in City limits	#
Community water consumption	HCF
Municipal Indicators	
Water consumption by facility	HCF
Total municipal water consumption	HCF
Focus Area: Climate Resilience & Cross-Cutting	
Community Indicators	
Community GHG emissions	MTCO2e
Per-capita community GHG emissions	MTCO2e/capita
Municipal Indicators	
Municipal GHG emissions	MTCO2e
Municipal GHG emissions by "sector" (facilities, water treatment, wastewater, etc.)	MTCO2e
Number of staff trained on climate and sustainability concepts	# of staff
General	
Population	# of residents
Employment	# of jobs