ENVISION CAMBRIDGE

Climate & Environment Working Group
Indicators and Targets

Overview: This document contains climate and environment indicators, incorporating feedback from the discussion at the fourth meeting of the Climate & Environment Working Group on November 28, 2017.

Climate & Environment Indicators and Targets

The below matrix summarizes the consultant team's recommended indicators for inclusion in the Envision Cambridge plan. The recommended indicators were developed to cover as many as possible of the Envision Cambridge goals:

A. **Preparedness and Resilience:** Safeguard the lives and livelihoods of Cambridge community members, particularly those that are at disproportionate risk of climate change and environmental impacts
B. **Engagement and Benefits Sharing:** Meaningfully engage and share the benefits of strengthening the City's climate and environment initiatives with the entire Cambridge community (residents, institutions, and businesses)
C. **Natural Environment:** Preserve and enhance Cambridge's natural environment, including the preservation of open space, habitats and plants vegetation, and the reduction of air, light, noise, and toxic pollution
D. **Carbon Neutrality:** Achieve carbon neutrality
E. **Sustainable Water Resources:** Maintain sustainable water resources by taking action to reduce potable water usage, manage stormwater runoff, and improve the quality of surface water and groundwater
F. **Zero Waste:** Minimize waste generation and eliminate waste to landfill

Indicator	Existing / Target	Category	Potential Source	Recommendation	Additional Resources Required
Tree canopy coverage	• **Baseline:** 28% tree canopy coverage citywide (2014); 30% tree canopy coverage citywide (2009) • **2030 Target:** TBD by the Urban Forestry Master Plan	Goal C. Natural Environment	City of Cambridge Department of Public Works	**Recommended:** This indicator provides insight into the success of actions to expand Cambridge's tree canopy, particularly in neighborhoods that currently lack trees.	
Community-wide greenhouse gas emissions (MT CO2e)	• **Baseline:** 1.46 million MT CO2e (2012) • **2030 Target:** 770,000 MT CO2e (47% over 2012 baseline) by 2030	Goal D. Carbon Neutrality	City of Cambridge Community Development Department	**Recommended:** This indicator demonstrates the City's efforts to mitigate greenhouse gas emissions. The community-wide greenhouse gas emissions inventory is updated on a regular basis.	Need to hire consultant every 3-5 years
Citywide potable water use	• **Baseline:** 4,689.67 million gallons • **2030 Target:** Increase at a rate that is slower than increases in population and employment	Goal E. Sustainable Water Resources	Cambridge Water Department	**Recommended:** This is a direct indicator that tracks the total consumption of potable water, providing insight into conservation and efficiency efforts.	
Trash collection (pounds per household per week)	• **Baseline:** 23 lbs/HH/week (2008) 17.3 lbs/HH/week (2017) • **2030 Target:** 12 lbs/HH/wk	Goal F. Zero Waste	City of Cambridge Department of Public Works	**Recommended:** This indicator provides insight into the City's efforts to reduce and divert waste from landfill via recycling and separation of organics and other waste streams.	
Percentage of green roofs of total building area	• The City plans to track albedo and percentage of green roofs of total building area, but currently has no baseline data. The city will determine a methodology for tracking and report when data is available	Goal A. Preparedness and Resilience Goal C. Natural Environment	City of Cambridge Community Development	**Recommended:** These indicators serve as a proxy for assessing urban heat island.	Need to determine way to assess square footage of green roofs
Albedo		Goal A. Preparedness and Resilience			Need to hire consultant to determine methodology

Indicator	Data	Goal	Source	Notes	
Percentage of non-building impervious surface	**Summary: Building vs. non-building** *Square feet* / *Acres* / *Percentage of city land area* Impervious buildings — 47,940,631 — 1100.6 — 26.9% All other impervious surfaces — 70,926,515 — 1628.2 — 39.8% Total impervious surfaces — 118,867,145 — 2728.8 — 66.7% • **Baseline**: 39.8% non-building impervious surface • **2030 Target**: Reduce non-building impervious surface to 36% by 2030	Goal A. Preparedness and Resilience	City of Cambridge Community Development Department	**Recommended:** This indicator serves as a proxy for assessing urban heat island.	
Percentage of land area at risk of flooding (10 and 100-year storm) for 2030	**Baseline**: 5% 2030 10-yr precipitation 15% by 2030 100-year precipitation **2030 Target:** 4% 2030 10-yr precipitation 13% by 2030 100-year precipitation	Goal A. Preparedness and Resilience	City of Cambridge Community Development Department	**Recommended:** This indicator provides insight into the success of flood mitigation and adaption strategies.	