



MID-OHIO REGIONAL  
**MORPC**  
PLANNING COMMISSION

111 Liberty Street, Suite 100  
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**NOTICE OF A MEETING**  
**SUSTAINABILITY DASHBOARD WORKING GROUP**  
MID-OHIO REGIONAL PLANNING COMMISSION  
111 LIBERTY STREET, SUITE 100, COLUMBUS, OHIO 43215  
MUSKINGUM CONFERENCE ROOM

**October 8, 2019, 1:00 pm – 2:30 pm**

**AGENDA**

- 1. Welcome & Introductions (1:00-1:05pm)**  
*Justin Milam, Co-Chair*  
*Rick Stein, Co-Chair*
- 2. Regional Sustainability Dashboard Updates (1:05-1:25pm)**  
*Adam Porr, CURA*
- 3. Review of Problematic Metrics (1:25-2:25pm)**  
*Natalie Hurst, MORPC*  
*Brandi Whetstone, MORPC*
  - 2.3 Reduce the amount of solid waste per capita disposed in landfill
  - 2.1 Reduce emissions to meet federal air quality standards
  - 2.2 Increase number of people receiving air quality information and education
  - 5.1 Establish the annual Summit on Sustainability as premiere environmental conference through high participation and visibility
  - 2.5 Reduce per capita water consumption
  - 2.6 Improve water quality in the upper Scioto watershed
- 4. Next Steps (2:25-2:30pm)**  
*Justin Milam*  
*Rick Stein*

Please notify Lynn Kaufman at 614-233-4189 or [LKaufman@morpc.org](mailto:LKaufman@morpc.org) to confirm your attendance for this meeting or if you require special assistance.

**The next Sustainability Dashboard Working Group Meeting will be**  
**November 5, 2019, 2:30 p.m. – 4:00 pm**  
111 Liberty Street, Suite 100, Columbus, Ohio 43215

**PARKING AND TRANSIT:** When parking in MORPC's parking lot, please be sure to park in a MORPC visitor space or in a space marked with a yellow "M". Handicapped parking is available at the side of MORPC's building. MORPC is accessible by CBUS. The closest bus stop to MORPC is S. Front Street & W. Blenkner St. Buses that accommodate this stop are the Number 61 - Grove City, the Number 5 - West 5th Ave. /Refugee, and the Number 8 - Karl/S. High/Parsons. One electric vehicle charging station is available for MORPC guests.

**William Murdock, AICP**  
Executive Director

**Rory McGuiness**  
Chair

**Karen J. Angelou**  
Vice Chair

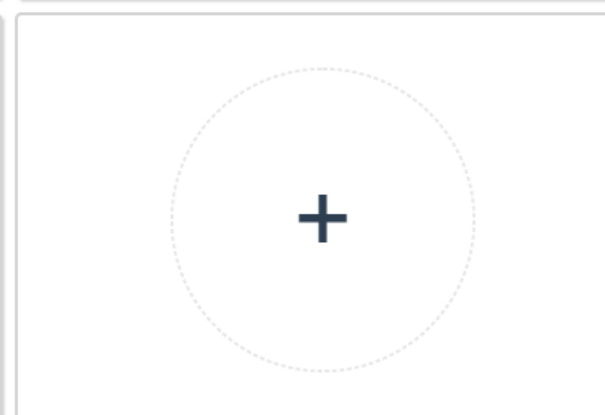
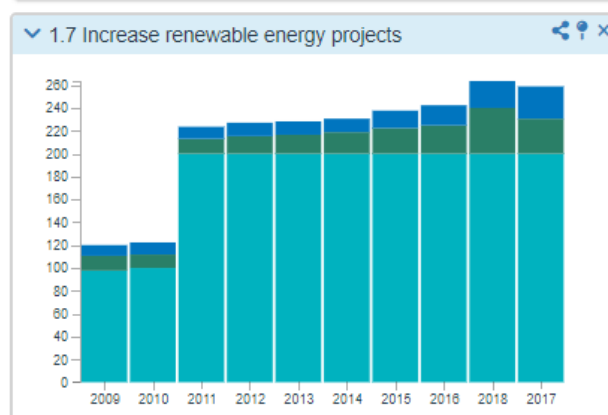
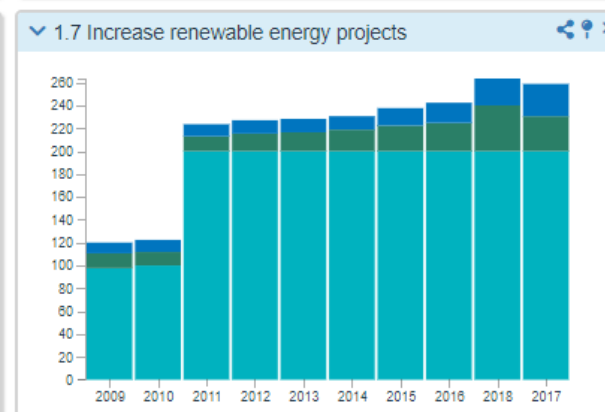
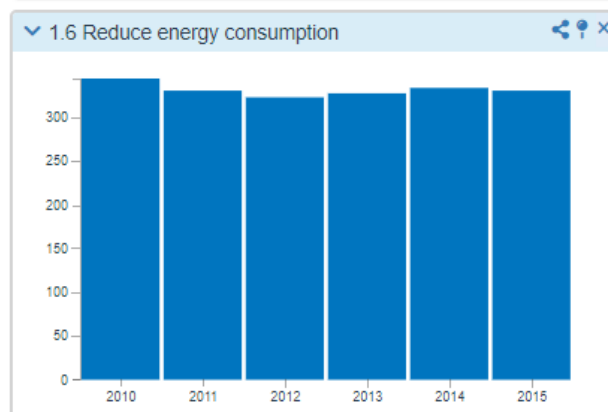
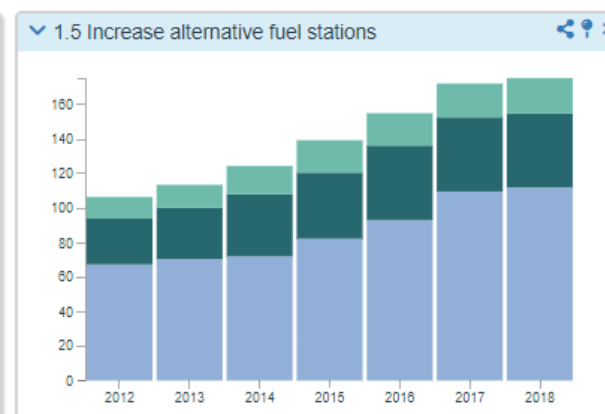
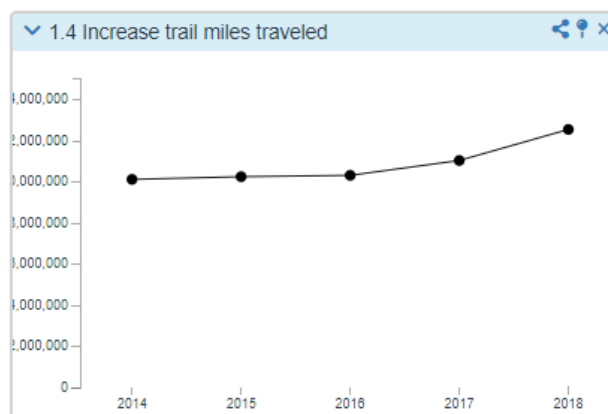
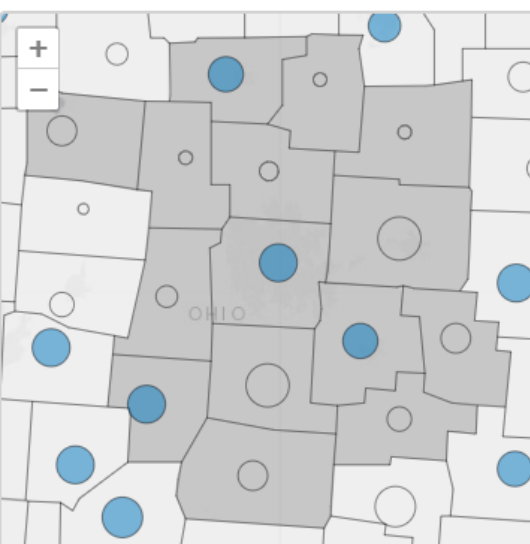
**Erik J. Janas**  
Secretary



# Demo

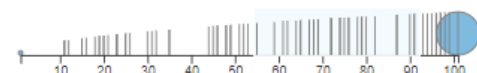
Live now\* at

<https://cura-sco-dev.asc.ohio-state.edu>



## Map Visualizations

Proportional Symbol



## Map Control

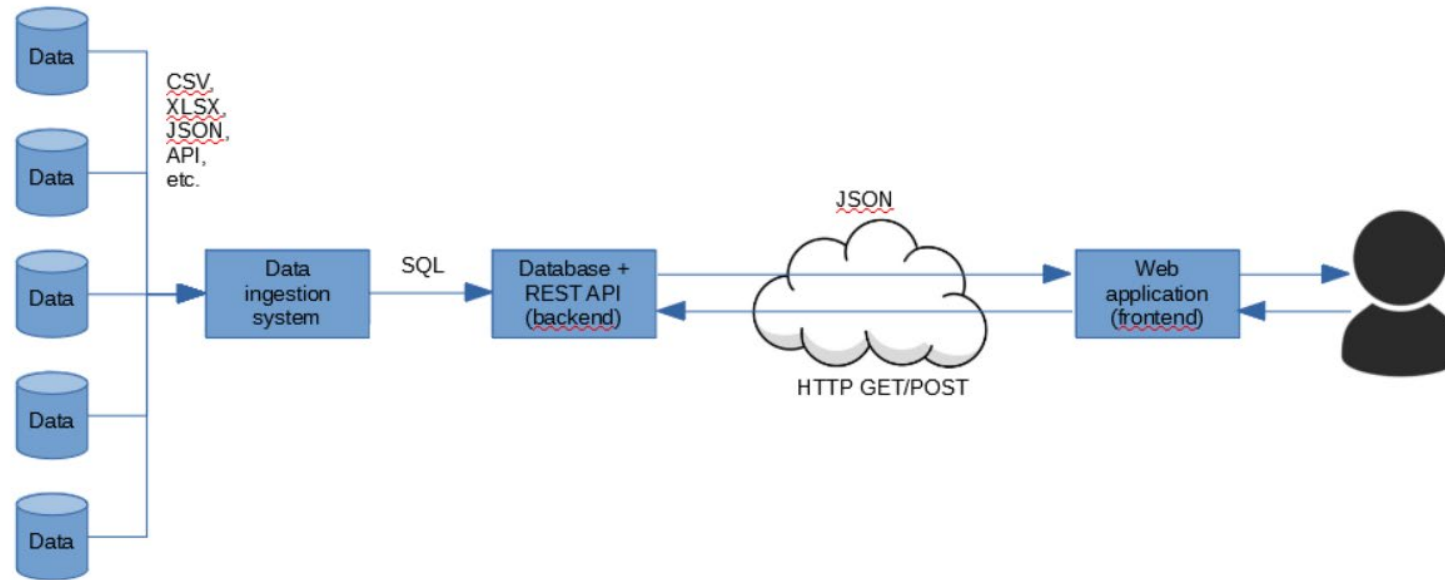
## Map Plot Control

## Layer Query



# Recent work

- Aesthetics/branding (screenshots for Summit)
- User interface (esp. mouse interaction)
- Explanatory text content (placeholder for now)
- Database and API
- Considering landing page and mobile support

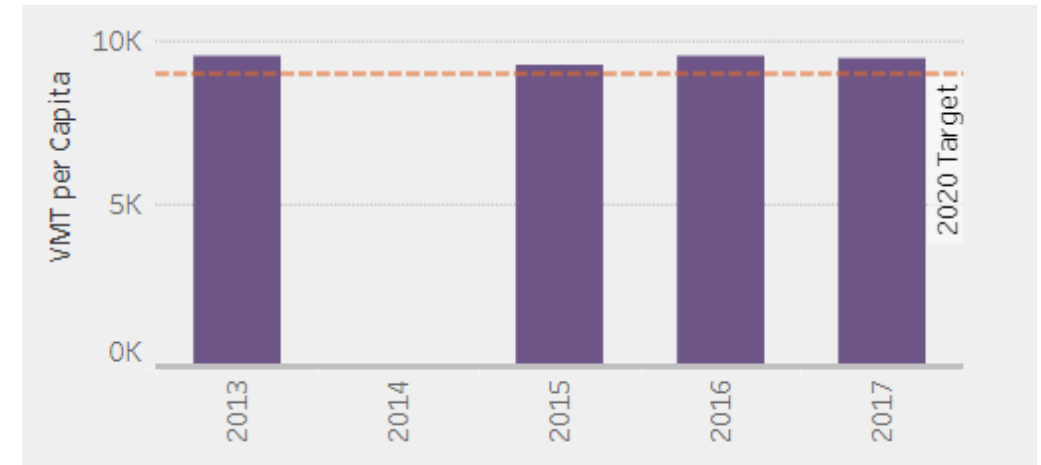


# Priority tasks

- Add legends to cards
- Include target in visualizations
- Progress indicators
- Window resizing
- Data API
- State preservation by URL
- Share via social media



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- 1.1 Reduce vehicle miles traveled
- 1.2 Reduce commuters driving alone and increase active transportation
- 1.3 Increase alternative fuel vehicles
- 1.4 Increase trail miles traveled
- 1.5 Increase the number of alternative fuel stations.
- 1.6 Reduce per capita energy consumption
- 1.7 Increase local renewable energy projects and generating capacity



# Teaser: Digital Accessibility



## [OSU Minimum Digital Accessibility Standards](#)

To be functionally accessible, a Digital Information or Service must consider use by people who may:

- have severe or moderate visual impairment
- be colorblind
- be deaf or hard of hearing
- have motor disabilities
- have cognitive disabilities

# REFERENCE



MID-OHIO REGIONAL  
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# Our goal (a reminder)

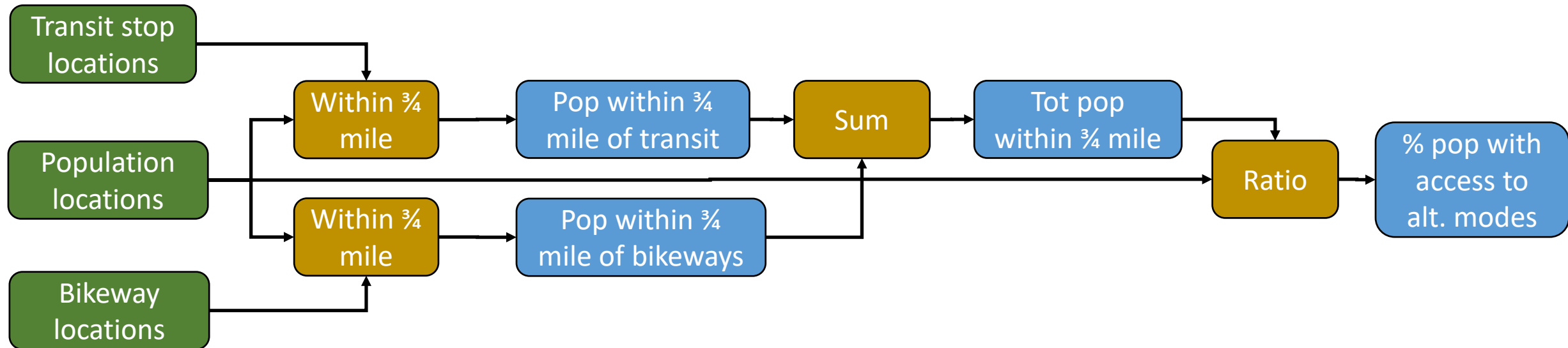


Current state ( <a href="#">Report Card</a> )	Target state (Dashboard)
Regional data	Regional + subregions
Updated infrequently	Updated whenever new data is available
Limited interactivity	Highly interactive
Fixed configuration	Customizable
Share links to specific pages	Easily share a variety of content types



# Vocabulary primer

- Working definitions:
  - **Indicator** - A measure of sustainability constructed from one or more datasets
  - **Objective** – How we want to influence the indicator
  - **Target** – A threshold value that we would like the indicator to achieve



4.4

**Objective:** Target transit and bikeway infrastructure development to serve a higher number of people.

**2020 Target:** 72% of population live within 3/4 mile of a transit stop;  
72% of population live within 3/4 mile of a bikeway.





# SUSTAINABILITY DASHBOARD WORKING GROUP

Adam Porr, CURA  
Natalie Hurst, MORPC  
Brandi Whetstone, MORPC



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# Agenda



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- Regional Sustainability Dashboard Updates
- Review of Problematic Metrics
- Next Steps

## 2.3: REDUCE THE AMOUNT OF MUNICIPAL SOLID WASTE PER CAPITA DISPOSED IN THE LANDFILL



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### 2.3

**Objective:** Reduce the amount of municipal solid waste per capita disposed in the landfill.

**2020 Target:** 4.0 lb per person per day (6% reduction) of solid waste disposed in the landfill.

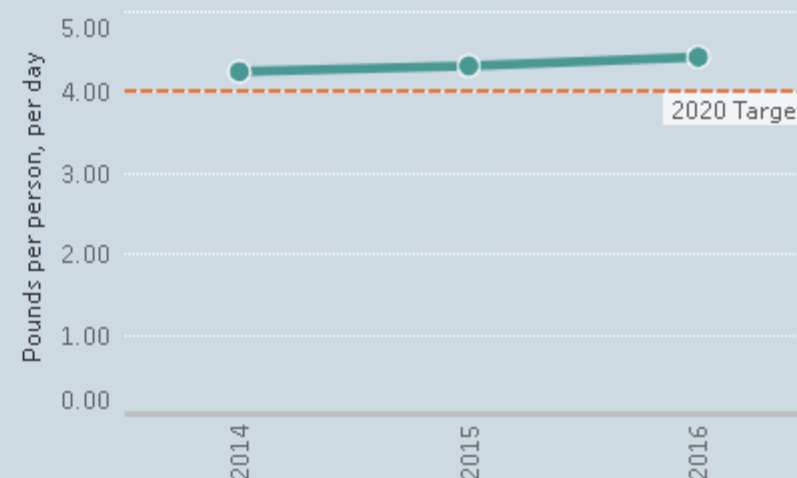


Despite many organizations' and communities' efforts, we are moving away from our target of waste reduction. In fact, each person, on average, still consumes about 4.5 lbs per day. It may not seem like much, but it adds up. If we reach our goal, it would keep over 100,000 tons of solid waste out of landfills each year--that's the weight equivalent of 125 cars every single day.

The Solid Waste Authority of Central Ohio (SWACO) has recently taken the lead in the launch of the **Central Ohio Food Waste Initiative**, just one of their strategies toward reducing landfill waste in the region. The initiative will use education, redistribution and composting as three ways to help reduce and divert more food waste from landfills.

Visit <https://www.cofwi.com/> for more information.

Daily Municipal Solid Waste per Capita



## 2.3: REDUCE THE AMOUNT OF MUNICIPAL SOLID WASTE PER CAPITA DISPOSED IN THE LANDFILL



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- Ohio EPA Solid Waste Reporting

Select a county on the map to view the solid waste management district contact in the table below.

### Solid Waste Management Districts

- Ashland; Greene; Wood; CCH
- Ashtabula; Crawford; Mercer; FHPR
- Auglaize; Clark; Preble; Wyandot; STW
- Brown; Portage; Van Wert; GMMMNW
- Butler; Henry; Lake; DKMM
- Clinton; Holmes; Logan; Athens-Hocking; OSS
- Cuyahoga; Hancock; Montgomery; CFLP
- Darke; Hamilton; Medina; DFPW
- Erie; Mahoning; Pike; ACHMSU
- Franklin; Huron; Summit; Warren; Lawrence-Scioto
- Lorain; Richland; Geauga-Trumbull; GJMV
- Lucas; Miami; Putnam; Adams-Clermont; Belmont-Jefferson



## 2.3: REDUCE THE AMOUNT OF MUNICIPAL SOLID WASTE PER CAPITA DISPOSED IN THE LANDFILL



- Options
  - [Ohio Solid Waste Facility Data Report](#)
  - [Annual District Reports](#)
  - EPA Database Query (by request)

SWMD	Facility Type	ASBESTOS	GENERAL	INDUSTRIAL	EXEMPT	CDD	OTHER	Total	
Total for SWMD			470	1,084,128	56,718	39,019	52	0	1,180,388

DISPOSAL RECYCLING AND GENERATION SUMMARY FOR 2017				
Disposal Recycling and Generation				
Year:	2017			
Member:	Franklin County SWMD (Solid Waste Authority of Central Ohio)			
Population:	1,279,905			
	RESIDENTIAL/COMMERCIAL	INDUSTRIAL	EXEMPT	TOTAL
Adjusted Disposal	1,084,623 Tons	58,521 Tons	39,071 Tons	1,182,216 Tons
	4.64 P/P/P/D	0.25 P/P/P/D	0.17 P/P/P/D	5.06 P/P/P/D
Recycling	876,428 Tons	232,380 Tons	N/A	1,108,808 Tons
	44.69 %	79.88 %		49.24 %
Waste Generation (Disposal + Recycling)	1,961,052 Tons	290,901 Tons	39,071 Tons	2,291,024 Tons
	8.40 P/P/P/D	1.25 P/P/P/D	0.17 P/P/P/D	9.81 P/P/P/D

# 2.3: REDUCE THE AMOUNT OF MUNICIPAL SOLID WASTE PER CAPITA DISPOSED IN THE LANDFILL



	Facility Data Report	Annual District Reports	EPA Database Query
Geographic Granularity	SWMD (4 county)	SWMD (4 county)	County
Accuracy	Does not include solid waste exported outside of Ohio	Includes asbestos (small portion of total SW) in residential/commercial tonnage	Does not include solid waste exported outside of Ohio
Ease of Use	Information online in PDF	Information online in PDF	Information sent in CSV format

Recommendation: Use online Annual District Reports to obtain solid waste tonnage and distribute to each county based on MORPC population values

# 2.1: REDUCE EMISSIONS; MEET AIR QUALITY STANDARDS



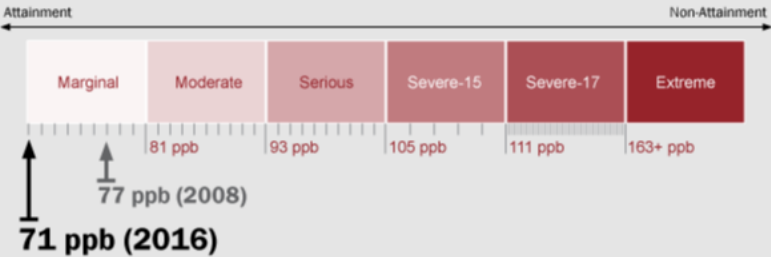
2.1

**Objective:** Reduce emissions to meet federal air quality standards.

**2020 Target:** Ozone Attainment, PM2.5 Attainment.



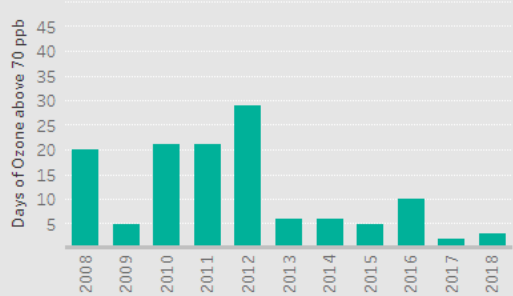
**8-Hour Ozone Air Quality Designation for Columbus, Ohio**  
Ozone measured in parts per billion (ppb)



Currently, Central Ohio is achieving the national standards for fine particulate matter but not for ozone pollution. Ozone pollution is created when emissions from sources such as cars and industry react chemically in the presence of heat and sunlight. The region is slightly over the threshold for ozone and so is in marginal non-attainment of the standards. The latest assessment of air quality data concluded in 2016 shows the region at 71 parts per billion (ppb), an improvement over the previous 2008 assessment at 77 ppb.

The concentrations of ozone and particulate matter pollution in the Columbus region have been decreasing over time. The region is moving in the right direction toward attainment with the 2015 US EPA ozone pollution standard. Innovations in transportation, such as the C-Pass program, Smart Columbus initiatives, and the use of alternative fuels by local government fleets reduce pollution from local sources. Regional improvements in energy efficiency and renewable energy through programs such as Local Government Energy Partnership, Property Assessed Clean Energy, and gas and electric utility programs are key in improving air quality.

**Ozone Exceedances for Columbus, Ohio**



Reduced number of ozone exceedances shows an improvement in air quality overall.



## 2.1: REDUCE EMISSIONS; MEET AIR QUALITY STANDARDS



- Challenges
  - Completeness and timeliness— attainment tracked for Columbus region
    - [Ohio EPA: Current Air Quality Map](#)
    - [AirNow](#)
  - Geographic granularity and accuracy
    - [Air Quality Sensor Performance Evaluation Center](#)
    - [Purple Air](#)

## 2.2: INCREASE NUMBER OF PEOPLE RECEIVING AIR QUALITY INFORMATION AND EDUCATION



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2.2

**Objective:** Increase the number of people receiving air quality (AQ) information and education.

**2020 Target:** 10% increase in number of people receiving a combination of Air Quality Alerts, Air Quality Alert highway sign exposure, and media marketing exposure.



Making sure the community knows when air pollution is a concern, and what to do to protect their health, is an important piece of our mission. It is especially important that the message reaches people particularly sensitive to air pollution: individuals with lung diseases, older adults, and children. Along with sending out air quality forecasts and alerts by email and text, communication partners are key for spreading the word through social media, TV, and radio when there is an Air Quality Alert.

Currently, more than 1.5 million people are made aware of Air Quality Alerts through the Ohio Department of Transportation's highway Dynamic Message Signs. This number increases by around 2% annually. Communication partnerships with other organizations that help spread the message broadly, are trusted resources in our communities, and have access to especially vulnerable communities are continually being established to help amplify the Air Quality Alert message. Efforts to create and maintain these relationships helps achieve the 10% increase in the number of people receiving air quality information by 2020 and makes certain that the people who need the information most are receiving it.

The 2% annual increase in ODOT messaging signs, plus preliminary data pointing to sizeable increases in Central Ohio residents signing up for Air Quality Alerts in 2018 are indicators that we are moving in the right direction. Adding the new enhanced communication partnerships that are currently underway, we believe we are likely to meet or exceed this objective by 2020.

### 2017 Air Quality (AQ) Information Outreach in Central Ohio



Recipients of AQ  
Email Alerts

AADT\* Passing by  
AQ Dynamic Messaging Signs



\*Average Annual Daily Traffic

To learn more about air quality and sign up for Air Quality Alerts:  
<http://www.morpc.org/program-service/air-quality-program/>

## 2.2: INCREASE NUMBER OF PEOPLE RECEIVING AIR QUALITY INFORMATION AND EDUCATION



- E-mail subscribers and marketing campaign provide consistent values
- Challenges: Air quality highway sign exposure
  - Accuracy – Difficult to estimate total people passing road sign in given day
  - Validity – May not correspond with progress towards improving air quality in region

Recommendation: Continue reporting people reached with e-mail alerts and marketing campaign but do not count sign passerby's towards those reached

# 5.1: SUMMIT ON SUSTAINABILITY AS PREMIERE ENVIRO EVENT

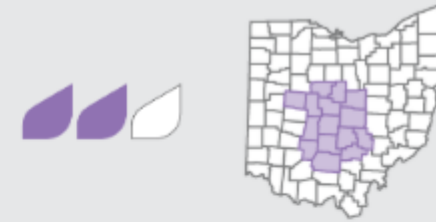


Goal: Increase regional collaboration and educational opportunities to advance innovative sustainability solutions.

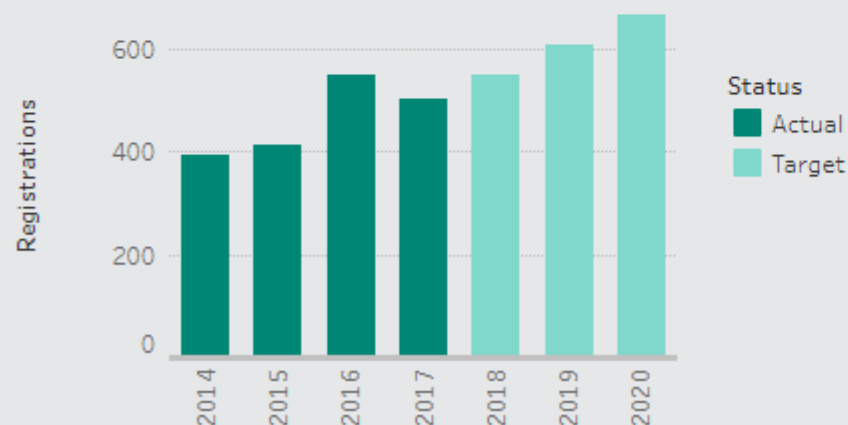


**Objective:** Establish the annual Summit on Sustainability as a premier environmental conference through high participation and visibility.

**2020 Target:** Increase attendance by 10% annually.



Summit on Sustainability Registrations



The Summit on Sustainability is MORPC's signature environmental conference. This objective uses registrations of this annual event as a way to advance the goal of innovation in sustainable education and regional interest in sustainability.

Since the baseline year, attendance has increased an average of 24% with a bump in attendance in 2016. While attendance was down slightly the following year, the upwards trend is positive.

Go to the Summit page:

<http://www.morpc.org/event/summit-on-sustainability/>

## 5.1: SUMMIT ON SUSTAINABILITY AS PREMIERE ENVIRO EVENT



- Challenges
  - Validity
    - Goal and measure do not necessarily align
- Suggestions
  - Number of collaborative projects
  - Number of sustainability events
  - Local sustainability plans
  - Sustainability awareness
    - “Percent of Vancouver residents who are aware of the ecological footprint and understand their contribution to it” ([Report of Regional Vancouver Urban Observatory](#))

## 2.5: REDUCE PER CAPITA WATER CONSUMPTION



2.5

**Objective:** Reduce per capita water consumption.

**2020 Target:** 5% reduction in CCF (Hundred Cubic Feet) of water per capita per year consumed.



### Water Consumption in Central Ohio

56.03 CCF in 2015

53.23 CCF in 2020 (Target, 5% Reduction)



**2015 Footprint:** 114.8 Gallons per person per day

**2020 Target:** 109 Gallons per person per day

**Difference:** 5.74 Gallons per person per day

MORPC is currently engaged with local suppliers to obtain and interpret updated data on water consumption in the region--stay tuned for updates, which may impact the score for this objective.

Water consumption is just one factor of many to consider in ensuring clean and secure water resources for Central Ohio residents, businesses, and visitors. Sustaining Scioto is a partnership which aims to implement research-based recommendations to protect the longterm future of the Upper Scioto Basin--the source of 85% of the region's water supplies! Click the link to learn more about the Sustaining Scioto study that was completed in 2015.

## 2.5: REDUCE PER CAPITA WATER CONSUMPTION



- Challenges
  - Completeness: Geographic extent
  - Data collection
    - Previously, each water resource was contacted
- Suggestions
  - [US Geological Survey's National Water Use Science Project](#)
    - By County
    - Up to 2015
  - Extra info (for data fun) [Ohio water system map](#)



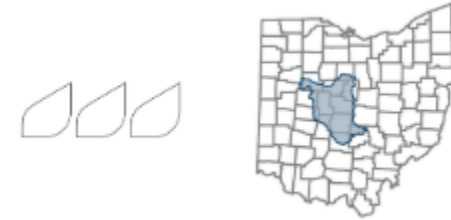
## 2.6: IMPROVE WATER QUALITY IN UPPER SCIOTO WATERSHED



2.6

**Objective:** Improve water quality in the Upper Scioto Watershed.

**2020 Target:** 85% of Upper Scioto Watershed sampling sites are in attainment.



## 2.6: IMPROVE WATER QUALITY IN UPPER SCIOTO WATERSHED



- Need new data source
  - Timeliness: Estimates created at long intervals
- Suggestions
  - Creating unofficial “attainment designations” based on EPA criteria
    - [US Geological Service Water Quality Data \(Current and Historic\)](#)
    - [US EPA Water Quality Assessment Criteria](#)

## 4.5: INCREASE HOUSEHOLDS RECEIVING FREE WEATHERIZATION & SAFETY-RELATED HOME REPAIRS



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- Challenges
  - All funding sources maintain separate records
  - One home could be double counted

## 1.3: INCREASED USE OF ALTERNATIVE FUEL VEHICLES



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## 1.6: REDUCE PER CAPITA ENERGY CONSUMPTION ACROSS ALL SECTORS



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# 2.4: MINIMIZE GREENFIELD DEVELOPMENT AND PROMOTE INFILL



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2.4

**Objective:** Minimize greenfield development and promote infill and redevelopment.

**2020 Target:** 50% of development occurred inside the urban area between 2010 and 2020.



Central Ohio Development Patterns



From 2010 – 2018, nearly 40% of development occurred inside the urban area. Improvement between the baseline measure and recent years is a promising indicator of change in the right direction. Consistent with **insight2050** efforts, more Central Ohio communities are adopting focused growth approaches to planning and development.

New in 2018, **insight2050 Corridor Concepts** is encouraging even greater strides, as it uses a variety of metrics to assess the impacts of more walkable, compact environments along five key corridors in the region.

Learn more about Corridor Concepts:  
<http://www.morpc.org/wordpress/wp-content/uploads/2018/05/Corridor-Concepts-Fact-Sheet.pdf>

## 2.4: MINIMIZE GREENFIELD DEVELOPMENT AND PROMOTE INFILL



- Challenges
  - Ease of use – previous analysis time intensive
  - Accuracy – land use changes may not always reflect development



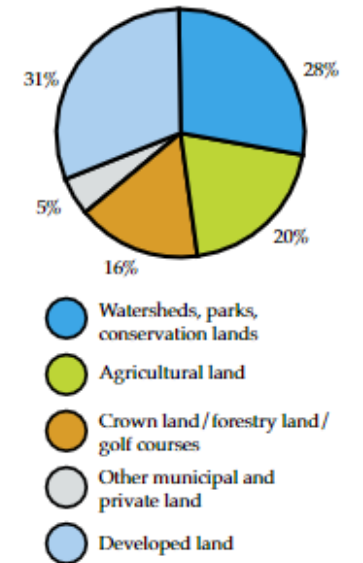
## 2.4: MINIMIZE GREENFIELD DEVELOPMENT AND PROMOTE INFILL



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Organization	Measure
Greater Vancouver Regional District <ul style="list-style-type: none"> <li><a href="#">Report of Regional Vancouver Urban Observatory</a></li> </ul>	<ul style="list-style-type: none"> <li>Number of non-farm dwelling units in Green Zone within defined “Green zone” (see image on right)</li> <li>Proportion of population in growth concentration areas</li> <li>Opportunities for “eco-industrial networking” (diverse partners work together to use and reuse resources efficiently)</li> </ul>
Geneva and Zurich	<ul style="list-style-type: none"> <li>Area of valuable natural land</li> </ul>
<a href="#">The United Nations Indicators for Sustainable Development</a> (pg 67/99)	<ul style="list-style-type: none"> <li>Land use change</li> <li>Land degradation</li> </ul>
<a href="#">Seattle Office of Sustainability and Environment</a>	<ul style="list-style-type: none"> <li>Acres of greenspace per resident</li> <li>Tree cover</li> <li>Trees planted in neighborhoods</li> </ul>
<a href="#">Environmental Performance Index</a>	<ul style="list-style-type: none"> <li>Protected natural areas</li> <li>Wetland conservation</li> </ul>

Land Types in the Green Zone



## 3.2: INCREASE LOCAL FOOD PURCHASING POLICIES



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