

Environmental actions by city

1. *Education is the key.*
2. *Consider:*
 - a. Hiring a full-time grant writer whose work would include seeking grants for environmental initiatives.
 - b. Establishing a sustainability commission or environmental committee.
 - c. Providing tax credits to businesses and individuals who adopt green infrastructure.
 - d. Some cities start the process of addressing climate change by declaring a climate emergency after which they adopt a climate action plan, such as Ann Arbor's A2Zero community-wide carbon-neutrality plan to make Ann Arbor carbon neutral by 2030.
3. *Ordinances*
 - a. Consider ordinances for solar, wind, geothermal, trees, native vegetation, chickens, and bees.
 - b. City councils, planning, zoning, and other commissions must abide by the city's ordinance language. If a city changes its mission to improve its energy footprint, lower pollution and become more environmental and sustainable, ordinance language must change to reflect that desire. Otherwise, denied permits will result in litigation.
4. *Energy efficiency in city-owned and commercial buildings*
 - a. Save energy and money in city-owned buildings by adding solar panels and other energy saving devices.
 - b. Promote or legislate LEEDS or FUTURE LIVING sustainable building standards. City ordinances may only require minimal energy-saving construction standards; buildings will be inefficient for the extent of their lives.
 - c. If the city is replacing inside or outside lighting with LED lighting, avoid blue/white light which is rated at 4000 Kelvins or more. Instead, choose warm light at 2700 Kelvins.
5. *Bird-friendly glass*
 - a. Promote or mandate bird-friendly anti-collision glass on new construction and during refurbishment or retrofit projects above the second floor.
6. *Vegetation*
 - a. Hire a full-time certified arborist, horticulturalist, or forester, or all of them.
 - b. Native Michigan Plants / turf grass
 - i. Add this language to your existing vegetative ordinance: "The city will strive to plant Native Michigan Plants, greatly reduce mowed turf grass areas, increase tree canopy, water during the hours of darkness, and encourage property owners to do the same."
 - ii. When mowing grass, "Mow it high and let it lie," i.e., don't pick up the clippings.
 - c. Trees
 - i. A city can start their own tree nursery.
 - ii. Establish a land bank to save the forested areas left in your city.
 - iii. Do everything possible to preserve public and private trees.
 1. Adopt a tree ordinance that protects public and private trees.
 2. Adopt a program where residents can choose a free tree by species for their front easement or front yard.
 3. Require residents to obtain permits before removing trees at or above a certain caliper.
 - iv. End clearcutting for city and private developments.

- v. Educate the public on the value of trees.
- vi. Trees can be over-pruned and over-trimmed for little or no reason. Trees lose their capacity to nourish themselves, spending more energy getting nutrients to the remaining branches.
- d. Wetlands
 - i. Michigan wetland standards are low. Cities can opt for stricter standards.
- e. Topsoil
 - i. A foot or more of topsoil is often removed at city and city subcontractor projects. Often, little of the topsoil is put back when the project is finished. Topsoil may be hauled away, bagged, and sold.
 - ii. Trees planted in areas of minimal topsoil can never achieve their full potential.
- 7. *Storm Water Runoff*
 - a. Billions of gallons of partially treated or untreated sewerage flow into our lakes each year.
 - i. Increasing detention and retention of storm water helps to solve the problem of CSO's (combined sewer overflows) and SSO's (sanitary sewer overflows.)
 - ii. Green infrastructure methods will help keep rainwater out of the sewer system.
 - 1. Reduce turf grass in favor of Michigan Native Plant gardens. The deep root systems of native plants help retain water that would otherwise enter the sewer.
 - 2. Include rain gardens, bioswales, curb cuts, permeable pavers and native plants in parking areas in building permits.
 - 3. Consider a graduated storm water tax (as in Detroit) based on the percentage of impermeable surface of residential and commercial properties.
- 8. *Electric vehicles (EV's)*
 - a. Electric motors are 80% efficient; gas motors are 30% efficient.
 - b. Move toward electric police vehicles, fire engines, garbage trucks, loaders, lawn mowers, weed whackers, blowers, edgers, etc.
 - c. EV's have high predicted reliability and don't have an exhaust system, radiator, starter, alternator, fuel pump, fuel line, fuel tank, timing belts, transmission fluid, spark plugs, oxygen sensors, catalytic converters, don't need oil changes, etc.
 - d. One of the most practical uses of electric vehicles is electric school busses because school busses spend a lot of time idling.
 - i. Diesel engines generate 2.5pm (particulate matter) that's bad for kids (in fact, everyone.) Switching to electric school busses means healthier air for kids to breathe.
 - e. Post "please do not idle" signs in front of schools, reminding parents that idling produces pollution.
 - f. Install charging stations in city parking structures and commercial parking spaces.
 - g. When selling cars, dealerships may not inform customers of the benefits of hybrid & electric vehicles.
- 9. *Idling-reduction*
 - a. The transportation sector is currently the U.S.'s largest sector of emissions; reducing the idling of vehicles is a low-hanging fruit to reduce emissions.
 - b. Adopt an idling-reduction ordinance such as Detroit, Sylvan Lake and Mt. Clemens has.
 - c. Post "please do not idle" signs in front of city buildings.
 - d. Write "idling-reduction" specifications for city-owned vehicles and into subcontractor contracts.
 - e. Adopt gasoline pumps that help keep customers from topping off gas tanks such as Costco has.
- 10. *ITS (Intelligent Transportation System)*
 - a. In counties where available, ITS regulates the timing of traffic lights with equipment on one or more poles at traffic lights with a controller box located on a short pole nearby. Sensors may also be buried in cement.

- b. As you are driving, it's easy to spot ITS functions that are working to their full potential. Contact your county about the functionality of your ITS system.
- c. Replace stop signs with yield signs wherever possible. Incorporate roundabouts.

11. Dark sky lighting

- a. How many stars do you see at night? How much Artificial Light at Night (ALAN) is visible that has no function.
- b. Dark Sky Lighting principles include:
 - i. Use a minimal number of fixtures that emit a minimal number of lumens.
 - ii. Shielding fixtures so that no light is emitted above the horizontal plane of the bottom of the bulb.
 - iii. Directing light to fall only on the area where artificial light is needed.
 - iv. Light bulbs should be in the warm spectrum (2700k or less), not blue/white spectrum (4000k and above.) Blue/white spectrum light produces glare, loss of night vision, distraction, and difficulty seeing.
- c. Blue/white light is not good for plants, insects, birds and reduces nighttime melatonin production in humans due to the brain identifying blue/white light as midday sunlight.
- d. Adopting Dark Sky principles gives kids a chance to see more stars and saves the city and residents money.
- e. Use motion detectors where appropriate and add reminders to light switches to turn off lights.

12. Bicycle infrastructure

- a. Make bicycle infrastructure a priority in your city.
- b. Create a system of bicycle lanes & routes that connect with neighboring cities; add repair infrastructure stations and bike parking racks.
- c. Initiate city-sponsored group rides.

13. Coal Tar Sealants ban

- a. Coal tar sealants add a shiny coating over new asphalt roads. Coal tar sealants are carcinogenic, mutagenic, and teratogenic (cause birth defects) and wear away in weeks. End the use of coal tar sealants in your city.

14. Restaurants

- a. Ban Styrofoam carryout containers (carcinogenic) from restaurants.
- b. Encourage restaurants to provide water and straws only when requested.

15. Pesticides / rat poison

- a. Consider banning pesticides and other non-specific poisons from use in the city including seeking alternatives to Glyphosate (used in RoundUp.)
- b. Trap rats instead of using poison. If poison is used, use Bromethelin (nerve agent), NOT Bromadiolone (2nd gen anti-coagulant.)

16. Support public transportation

17. Celebrate Earth Day, April 22nd, Earth Week and Earth Hour