

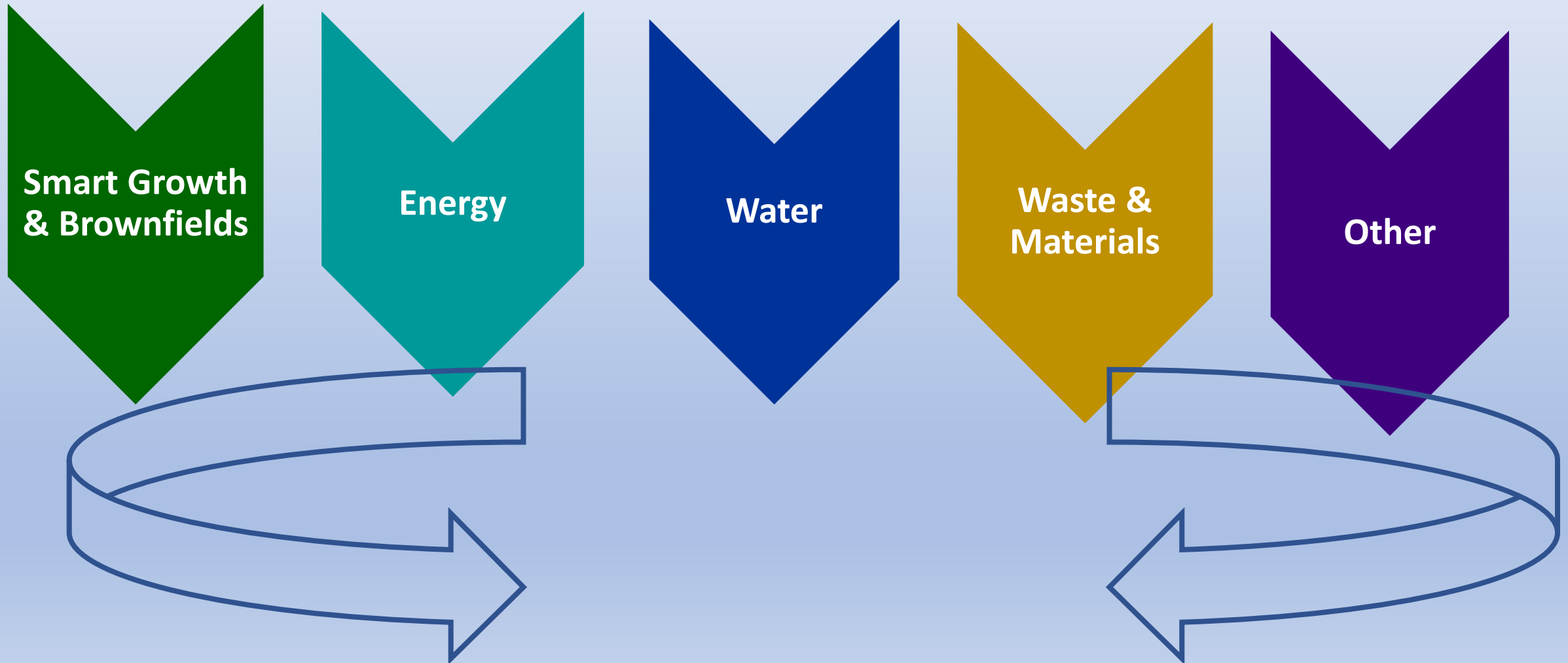
Sustainable Strategies for Communities: An EPA Perspective

Karen Irwin & John Katz

US EPA Region 9 (Pacific Southwest)

September 21, 2017

Overview of EPA Voluntary Programs / Initiatives



EPA / Sustainability / Local Governments



Smart Growth & Brownfields

- **Smart Growth Technical Assistance**
 - Local workshops led by expert consultants and a next steps report
- **Resilience projects / FEMA partnership**
- **Brownfields Assessment & Cleanup grants**



Energy

- **Energy Star** (building benchmarking & labeled products)
- **Renewable Energy initiatives**
 - e.g., solar on contaminated land, anaerobic digestion

EPA's Office of Community Revitalization

- Local Foods Local Places
- Cool & Connected
- Healthy Places for Healthy People
- Building Blocks for Sustainable Communities
- Greening America's Communities



Building Blocks Technical Assistance

Apache Junction, AZ

- Attracting infill development in economically distressed communities
- EPA Contractor-facilitated workshop in March 2017
- Customized final report with next steps



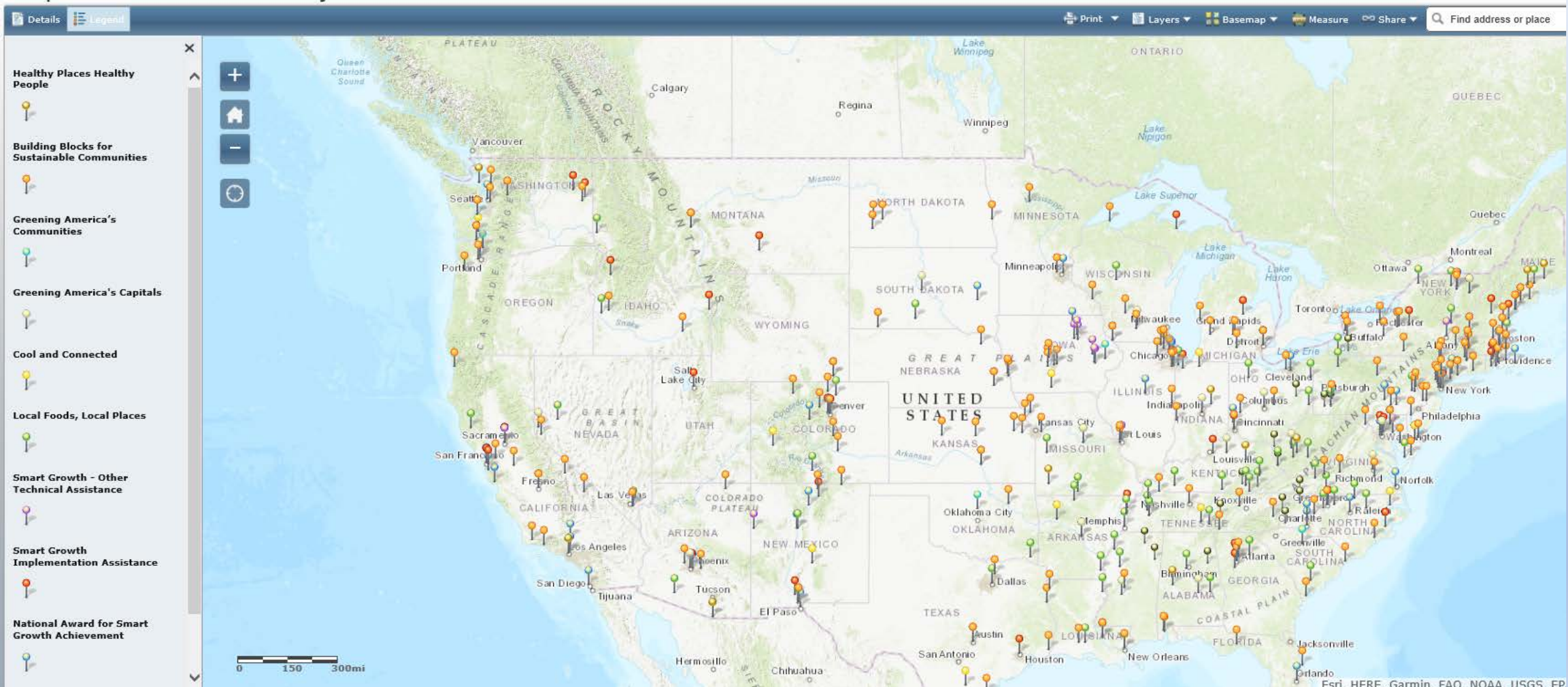
Next Steps Memorandum for Apache Junction, Arizona

PLANNING FOR INFILL DEVELOPMENT BUILDING BLOCKS TECHNICAL ASSISTANCE

July 2017

Map of Smart Growth Projects

Map of Smart Growth Projects



Got Brownfields?



Brownfields Grants

Assessment	• \$200-550K, no match
Revolving Loan Fund	• \$1M, 20% match
Cleanup	• \$200-600K, 20% match
Areawide Planning	• \$200K, no match
Environmental Workforce and Job Training	• \$200K, no match
+	
Targeted Brownfields Assessment	• \$100K in contractor assistance

RE-Powering America's Land

Encouraging siting renewable energy on current or formerly contaminated lands, landfills, and mine sites when aligned with the community's vision

www.epa.gov/re-powering

- Mapping & Site Screening Tools
- Informational Resources
- Fact Sheets & Success Stories

Solar geomembrane capping landfill



Solar array at Superfund site



Wind turbines installed during remediation at abandoned steel mill



Solar array on landfill cap



Solar array at former manufactured gas plant



Solar array at former foundry



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Water

- **WaterSense** (labeled products)
- **Grants** administered by States
 - e.g., Clean Water State Revolving Fund with Green Project Reserve
- **Green Infrastructure** (webcasts, guidance, tools)
- **Water Infrastructure** (financing & efficiency info)
-



Waste & Materials

- **Sustainable Materials Management**
 - e.g., food waste reduction, SMM web academy
- **Safer Choice and Green Product Ecolabels**
- **Pollution Prevention (P2) and source reduction grants**

Green Infrastructure

- Cost-Benefit Studies
- Design & Implementation Resources
- Modeling Tools
- Policy Guides
- Funding Guides

2017 Campus RainWorks Challenge Announced

[Calling all college students! Take the challenge to campus! Register now!](#)

Green Infrastructure Webcast Series

[Join us for Teach, Learn, Grow: The Value of Green Infrastructure in Schoolyards on October 11 from 1-2:30pm EDT. Register now!](#)



Food Recovery Challenge

■ Participants:

- ◆ Track and measure their surplus food
- ◆ Move toward their food recovery goals

■ Endorsers:

- ◆ Educate on sustainable food management
- ◆ Conduct Food Recovery Challenge outreach

www.epa.gov/sustainable-management-food/food-recovery-challenge-frc



Food Loss Prevention Options for Restaurants

Below is a list of ideas and activities that restaurants may consider implementing to help prevent food loss and waste. Contact your local EPA representative for log sheets, signs, and other tools.

- ☐ Perform a food waste audit. See what's being thrown out and why.
 - Pick a day and gather a few extra staff members, buckets, log sheet and a weight scale. Stand at the trash can(s) and record what is being thrown out, how much is being discarded and the reason the food is being disposed (ask your customers why they threw out food!).
 - In the kitchen, have only one food waste trash can and provide each staff member a small container to fill with food waste at their station. Before they empty their container, have staff weigh it and record the amount, type and reason the waste is being discarded on a log sheet located near the trash can.
 - Use this information to adjust menus, purchasing and portion size.
- ☐ Call a meeting to discuss food waste prevention strategies with kitchen staff. Get their thoughts and ideas.

Prep and Storage Tips

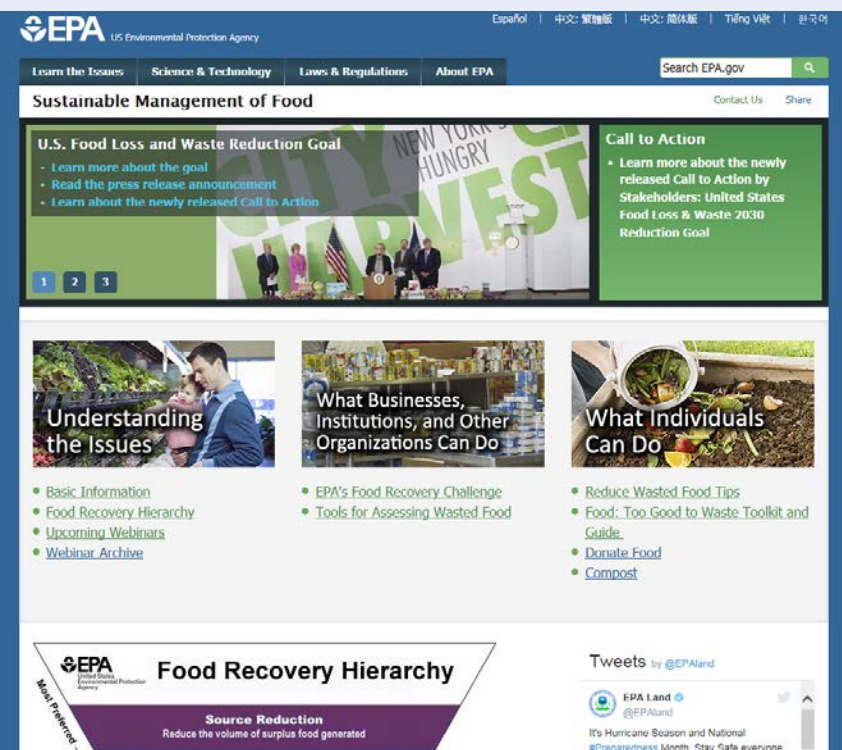
- ☐ Reduce batch sizes. Batch cooking is preparing meals ahead of time and storing them for future use.
- ☐ Use cook-to-order instead of bulk-cooking either all day or toward the end of the day.
- ☐ Incorporate leftovers from the day before. Steak one day can be used for beef stew the next day.
- ☐ Train staff on knife skills to make more efficient knife cuts to use more of the food being prepared.
- ☐ Use as much of the food as possible. Cook up carrot greens and don't peel cucumbers or potatoes.
- ☐ Reconstitute stalky vegetables that have wilted by immersing them in warm water (100°F) for 15 minutes.
- ☐ Freeze surplus and fresh fruits and veggies near the end of peak freshness for later use instead of throwing them away.
- ☐ Marinate meats to extend their shelf life for a few more days.
- ☐ Finish preparation at the line. Do not finish the food item until it's ready to go on the line so you can more easily use leftover ingredients in different recipes later.
- ☐ Different foods like different storage conditions. Refresh staff on storage techniques for different foods (e.g., don't store tomatoes and lettuce in the same container or near each other).
- ☐ Use see-through storage containers to allow staff to see what is available and to keep an eye on freshness.
- ☐ Eliminate garnishes that typically don't get eaten.



United States Environmental Protection Agency (5305P)
Washington, DC 20460
EPA-530-F-16-019-C
August 2016

For more information, including who
your local EPA representative is, visit:
<https://www.epa.gov/foodrecovery>

Sustainable Management of Food



Guide to Conducting Student Food Waste Audits

A Resource for Schools



Food: Too Good to Waste Toolkit



www.epa.gov/sustainable-management-food



Managing and Transforming Waste Streams: A Tool for Communities

CONTACT US

SHARE



Helping Communities Plan for Less Waste

- [Learn About the Tool](#)
- [Go to the Tool](#)
- [Go to the Policy and Program Impact Estimator](#)
- [Browse Examples By Topic](#)

Waste is a valuable resource. Communities can recover the lost value of material discards by setting up systems for reuse, recycling, and composting.

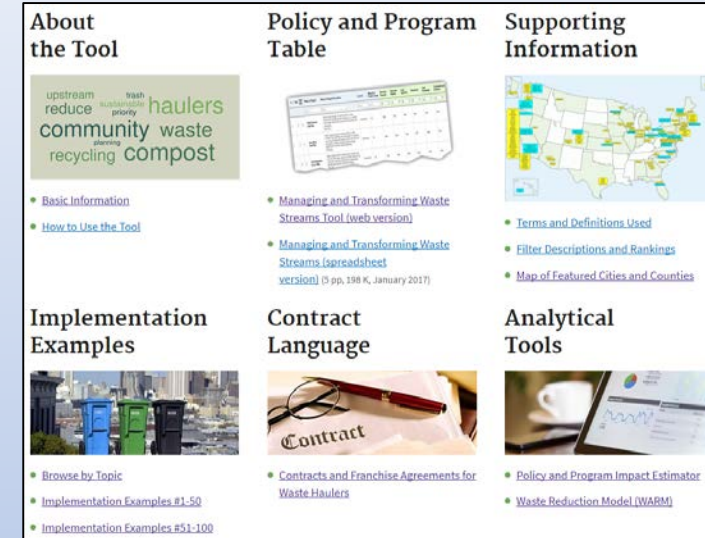


Charting a Path Towards Zero Waste

The Managing and Transforming Waste Streams Tool: Explore 100 policies and programs communities can implement to reduce the amount of waste disposed in landfills and promote waste prevention and materials reuse across waste generation sectors. Access city and county ordinance, contract, and franchise agreement language and program websites.

Managing & Transforming Waste Streams

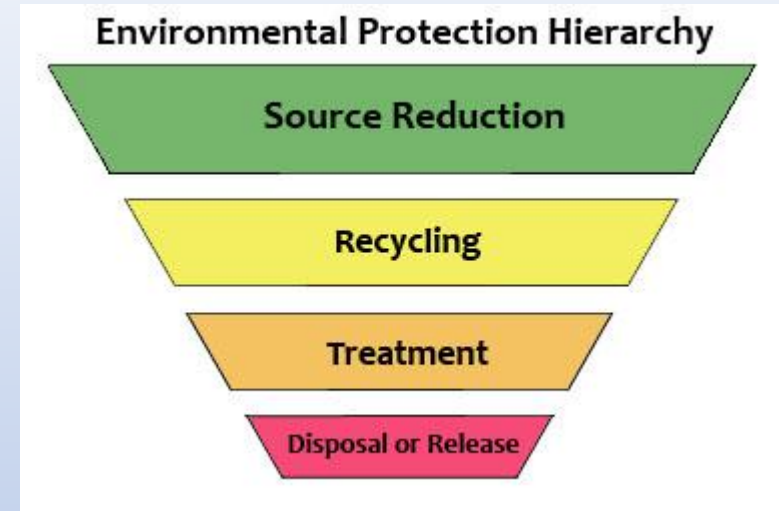
- Develop strategies for a local high diversion or zero waste plan from a menu of 100
- Learn about exemplary policies & programs implemented by communities across the U.S.
- Identify local ordinances & outreach materials that can be tailored to your community



- Review case studies & model language to inform new terms for your community's hauler contract or agreement

www.epa.gov/transforming-waste-tool

Pollution Prevention Grants



- Pollution Prevention (PPG)
 - reserved for states & state entities (e.g. state colleges and universities), tribes, territories
 - ~ \$375K per year, grants range from \$50-150,000
 - Focus on source reduction technical assistance to businesses
- Source Reduction Assistance (SRA)
 - States, tribes, local governments, non profits
 - ~\$80-100,000 per year, grants range from \$20-80,000
- RFPs released in January, applications due Spring, decision by June, money available October.

EPP – Ecolabels and Standards

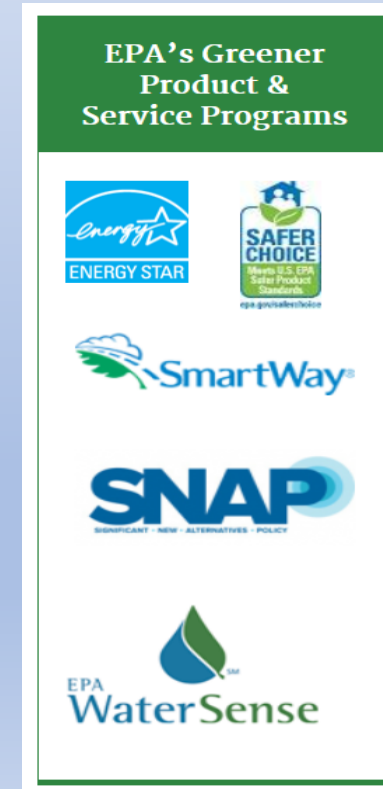
Evaluated numerous standards and ecolabels against EPA Guidelines

- Development process – consensus, stakeholder engagement, balance
- Environmental effectiveness – address lifecycle, demonstrate reduced impact
- Conformity assessment – product assessment rigorous, transparent, independent
- Label management – transparent business model, dispute resolution

Current products

- Cafeteria (take out service ware, detergent, etc.)
- Construction (carpet, wallboard, flooring)
- Custodial
- Electronics
- Grounds / Landscaping
- Office / Furniture

Find the full list at www.epa.gov/p2/greenerproducts



Safer Choice

- Focus on safer chemical ingredients - with provisions for performance, packaging, and ingredient disclosure
- All Products must meet the Safer Choice Standard
 - Every chemical ingredient is reviewed for human health and environmental safety
 - Be covered under a Partnership Agreement between the manufacturer and EPA
 - Undergo annual audits
- About 2,000 labeled products from 500 partners - >1,300 Industrial & Institutional
- Opportunity for Purchasing / Procurement
 - Federal government wide
 - Seattle, Massachusetts
 - LEED credit

www.epa.gov/saferchoice



EPA / Sustainability / Local Governments



Other

- **Clean Diesel Grant**
- **Greener Cleanups of contaminated sites**
- **State & Local Energy and Environment Program**
 - Federal funding opportunities, webinar announcements
 - Urban Heat Island

Moving Toward Cleaner Air

Reducing emissions that impact our health



Clean Diesel Grant

American Samoa, Island of Ta'u

EPA grant to retire a large, old diesel generator with solar array + energy storage

Other partners: Solar City and Tesla

Solar installation – Oct. 2016

Island now powered by 100% renewable energy



Greener Cleanups



Footprint Methodology Metric Examples

Energy

- Total energy used
- Total energy voluntarily derived from renewable resources

Air

- GHGs
- Criteria Pollutant (NOx, SOx, PM)
 - On-site emissions
 - Total emissions
- Hazardous air pollutants (HAPs)
 - On-site emissions
 - Total emissions

Water

- On-site water use (including public/potable water)
 - Quantity
 - Source of water
 - Fate of used and treated water

Urban Heat Island Reduction

Heat Island Effect

What Communities are Doing to Reduce Heat Islands

Communities are Taking Action!

Find out what state and local entities across the country are doing to reduce the urban heat island effect.

[Learn more>>](#)

- Trees & Vegetation
- Green Roofs
- Cool Roofs & Pavements

Impacts:

- Increased energy demand/use
- Increased smog formation
- Increased GHGs
- Thermal pollution to water bodies
- Human health – incidents of heat stroke & heat-related mortality



Other Initiatives



Water Infrastructure and Resiliency Finance Center



Looking for Water Infrastructure Funding and Financing?

[Find water infrastructure funding sources and financing resources.](#)

[Register for a webinar to learn more about the Water Finance Clearinghouse.](#)

What is a sustainable street?

Encouraging a holistic, cross-strategy approach to local projects...

Source: SamTrans



Complete Streets

- improved safety for pedestrians (e.g., high-visibility crosswalks, curb extensions, median refuge)
- transit-oriented development

Source: Nevue Ngan Associations



Green Infrastructure & Stormwater Runoff

- rain gardens & tree planters
- filter strips & buffers
- porous pavement
- low-toxic sealant for street pavement

Source: Lawrence Berkeley National Laboratory



Urban Heat Island Effect

- large, canopy trees optimized for shading benefits
- Solar reflective paved surfaces

Source: California Nevada Cement Assoc.



Materials Reuse & Recycling

- industrial material byproduct reuse in pavement mixes
- pavement reclamation technologies and less energy-intensive practices

Source: ReScape California



Sustainable Landscaping

- compost or organic mulch
- low water-use plants
- limited turf
- pollinator-friendly species

Source: DOE Gateway Demonstration Results



Energy-Efficient Lighting & Reduced Light Pollution

- use of LED lights
- "Dark Sky" protective measures

Project Ideas for Students



...Utilizing EPA tools

- ☐ Evaluate municipal waste recovery / reduction policy & program strategies
- ☐ Estimate 10-year tonnage & GHG reduction potential of waste recovery policy & program strategies
- ☐ Incorporate pollinator-friendly plants & practices into public landscapes

Project Ideas for Students



...Utilizing EPA tools

- ☐ Evaluate reducing supply chain GHG emissions from municipal purchases
- ☐ Assess feasibility of solar on contaminated land
- ☐ Benchmark building performance for energy/water/waste
- ☐ Conduct a food waste reduction initiative in the community
 - e.g., commercial food vendors, hotels, schools, residents

EPA Websites

<https://www.epa.gov/smartgrowth>

<https://www.epa.gov/brownfields>

<https://www.energystar.gov>

<https://www.epa.gov/re-powering>

<https://www.epa.gov/greenpower>

<https://www.epa.gov/watersense>

<https://www.epa.gov/anaerobic-digestion>

<https://www.epa.gov/cwsrf>

<https://www.epa.gov/transforming-waste-tool>

<https://www.epa.gov/green-infrastructure>

<https://www.epa.gov/waterfinancecenter>

<https://www.epa.gov/smm>

<https://www.epa.gov/saferchoice>

<https://www.epa.gov/greenerproducts>

<https://www.epa.gov/p2>

<https://www.epa.gov/cleandiesel>

<https://www.epa.gov/heat-islands>

<https://www.epa.gov/greenercleanups>