

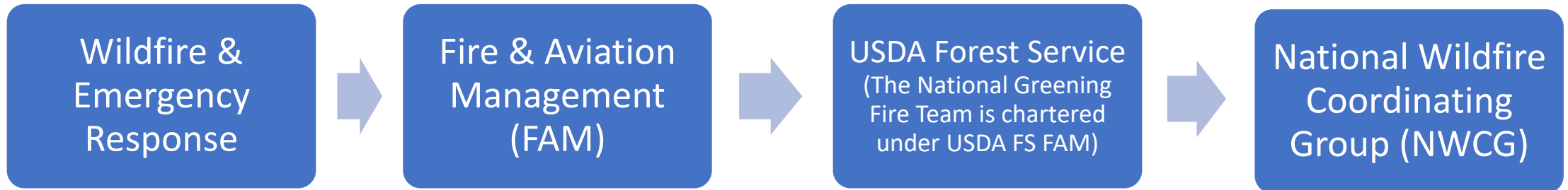
Let's Do This!



**GreeningFire**  
**Sustainable** Operations

In Pursuit of Zero Waste with Incident Recycling

# Organizational Context



Active and Emerging Fires  
(Snapshot on 20 May 2021)



## National Wildfire Coordinating Group (NWCG) Member Agencies:

- *Bureau of Indian Affairs (US Department of the Interior)*
- *Bureau of Land Management (US Department of the Interior)*
- *Fish and Wildlife Service (US Department of the Interior)*
- [\*Forest Service \(US Department of Agriculture\)\*](#)
- *International Association of Fire Chiefs*
- *Intertribal Timber Council*
- *National Association of State Foresters*
- *National Park Service (US Department of the Interior)*
- *US Fire Administration (Federal Emergency Management Agency)*
- *Office of Wildland Fire (US Department of the Interior) – Associate Member*
- *National Weather Service (Associate Member)*



# Operational Context

## Fire Camp:

- A campsite for firefighters and support personnel. It is typically set up for a large project fire which requires a large amount of staffing, organization, and logistics. According to the National Incident Management System, a fire camp is one of five predesignated temporary facilities.



# National Greening Fire Team

## Mission, Vision, Focus & History

---

### MISSION

- Integrate sustainable best management practices on incidents & in the fire community

### VISION

- **Achieve net zero environmental impact by 2030**

### FOCUS

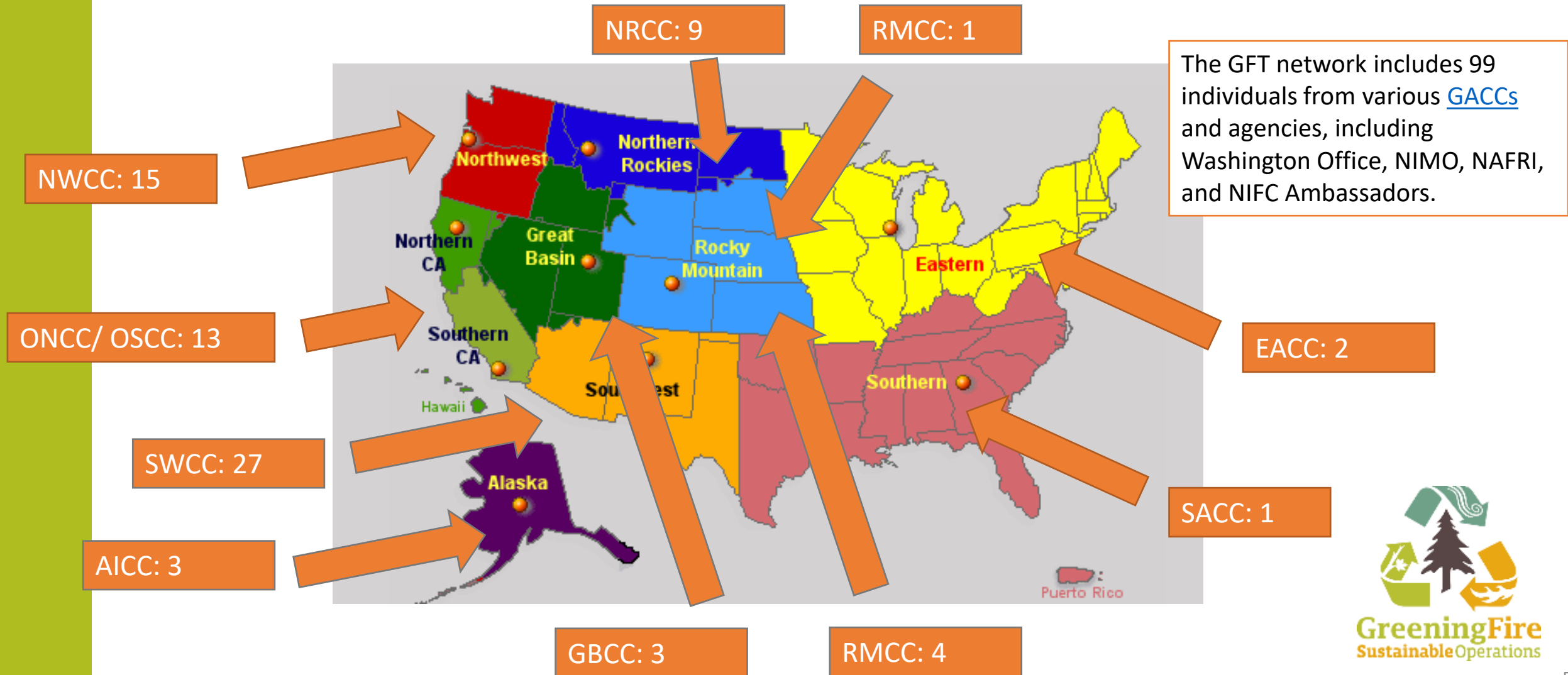
- Energy Conservation
- Water Conservation
- **Waste Reduction**
- Fleet and Fuel Efficiency
- **Sustainable Acquisition**
- **Sustainability Leadership, Education, and Outreach**
- **Business Efficiency & Return on Investment**

### HISTORY

- **2010** Team Established
- **2010 – 2018** Team Develops as “Grassroots” Entity
- **2019** Team Officially Chartered under Washington Office Fire & Aviation Management



# Greening Fire Team Network by Geographic Area Coordination Center (GACC)



# Greening Fire Team Network By Agency

Agency	Number of Individuals
Forest Service	81
Bureau of Land Management	3
Bureau of Indian Affairs	1
CAL FIRE	1
National Park Service	2
National Renewable Energy Laboratory	1
State of Arizona	1
State of Montana	1
Other	8

*“Our goal is to have the human impact on the environment from fighting wildfires not outlive the life of an incident. The GFT Ambassador Program provides me with a network of field experts willing to assist me and direct me to information and training to achieve this goal.”*

**-Merced Arguello**  
 Recycling Coordinator and Federal Property Analyst, California Department of Forestry and Fire Protection

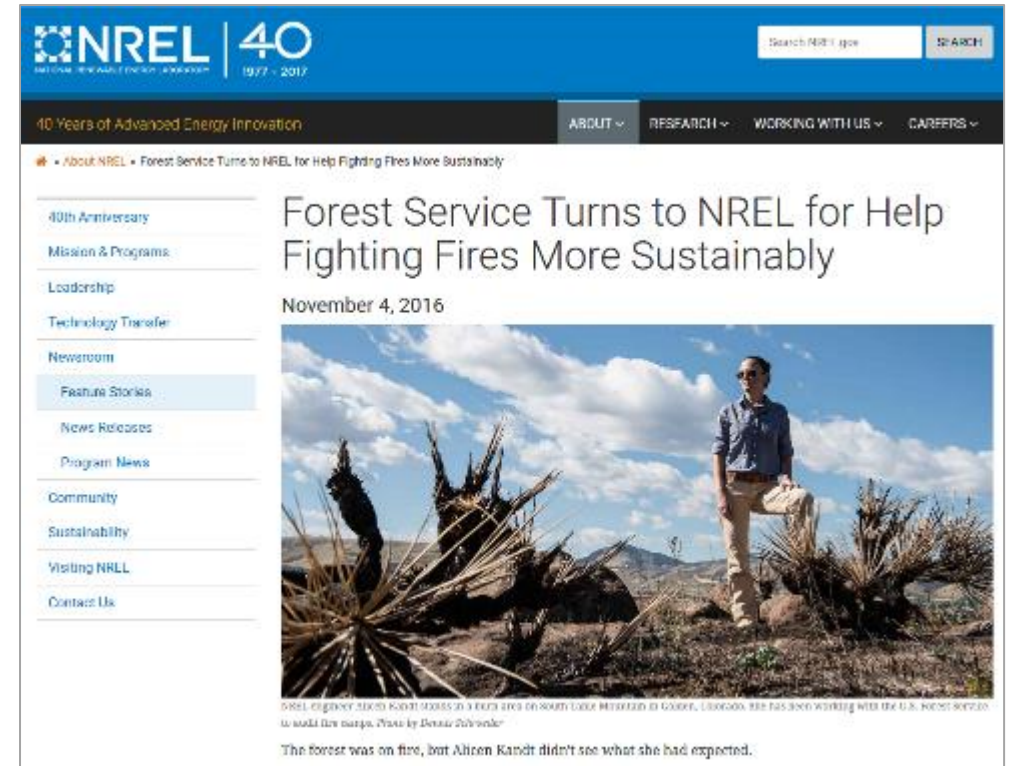


- A Greening Fire Team (GFT) Ambassador is an individual with a desire to help advance sustainability Best Management Practices (BMPs) in incident operations.
- Our GFT Ambassadors champion the Greening Fire Team mission by participating at the level of involvement that suits their interests, passions, and available time and resources.



# National Renewable Energy Laboratory (NREL) and Sustainability Best Practices On Incidents

- Energy
  - Renewable Energy systems
  - LED lights
- Water
  - Nonpotable, recycled water for vehicle washing
- Waste Reduction
  - Reduce consumption of plastic bottles for sports drinks/bottled waters
  - Expand use of rechargeable batteries in radios
  - Develop holistic strategy to manage food and other compostable waste
  - **Implement standardized recycling on incidents**



Read the NREL report at:  
<https://www.nrel.gov/docs/fy19osti/73771.pdf>



# Focusing on Reducing Waste



Triple Recycle Station  
(2020 Red Salmon Complex, ONCC)





# Congressional Findings (42 USC 6901)

## Solid Waste Disposal

Many cities will be running out of suitable solid waste disposal sites within 5 years!



### (b) Environment and health

The Congress finds with respect to the environment and health, that-

- (1) although land is too valuable a national resource to be needlessly polluted by discarded materials, most solid waste is disposed of on land in open dumps and sanitary landfills;
- (2) disposal of solid waste and hazardous waste in or on the land without careful planning and management can present a danger to human health and the environment;
- (3) as a result of the Clean Air Act [42 U.S.C. 7401 et seq.], the Water Pollution Control Act [33 U.S.C. 1251 et seq.], and other Federal and State laws respecting public health and the environment, greater amounts of solid waste (in the form of sludge and other pollution treatment residues) have been created. Similarly, inadequate and environmentally unsound practices for the disposal or use of solid waste have created greater amounts of air and water pollution and other problems for the environment and for health;
- (4) open dumping is particularly harmful to health, contaminates drinking water from underground and surface supplies, and pollutes the air and the land;
- (5) the placement of inadequate controls on hazardous waste management will result in substantial risks to human health and the environment;
- (6) if hazardous waste management is improperly performed in the first instance, corrective action is likely to be expensive, complex, and time consuming;
- (7) certain classes of land disposal facilities are not capable of assuring long-term containment of certain hazardous wastes, and to avoid substantial risk to human health and the environment, reliance on land disposal should be minimized or eliminated, and land disposal, particularly landfill and surface impoundment, should be the least favored method for managing hazardous wastes; and
- (8) alternatives to existing methods of land disposal must be developed since many of the cities in the United States will be running out of suitable solid waste disposal sites within five years unless immediate action is taken.

### (c) Materials

The Congress finds with respect to materials, that-

- (1) millions of tons of recoverable material which could be used are needlessly buried each year;
- (2) methods are available to separate usable materials from solid waste; and
- (3) the recovery and conservation of such materials can reduce the dependence of the United States on foreign resources and reduce the deficit in its balance of payments.

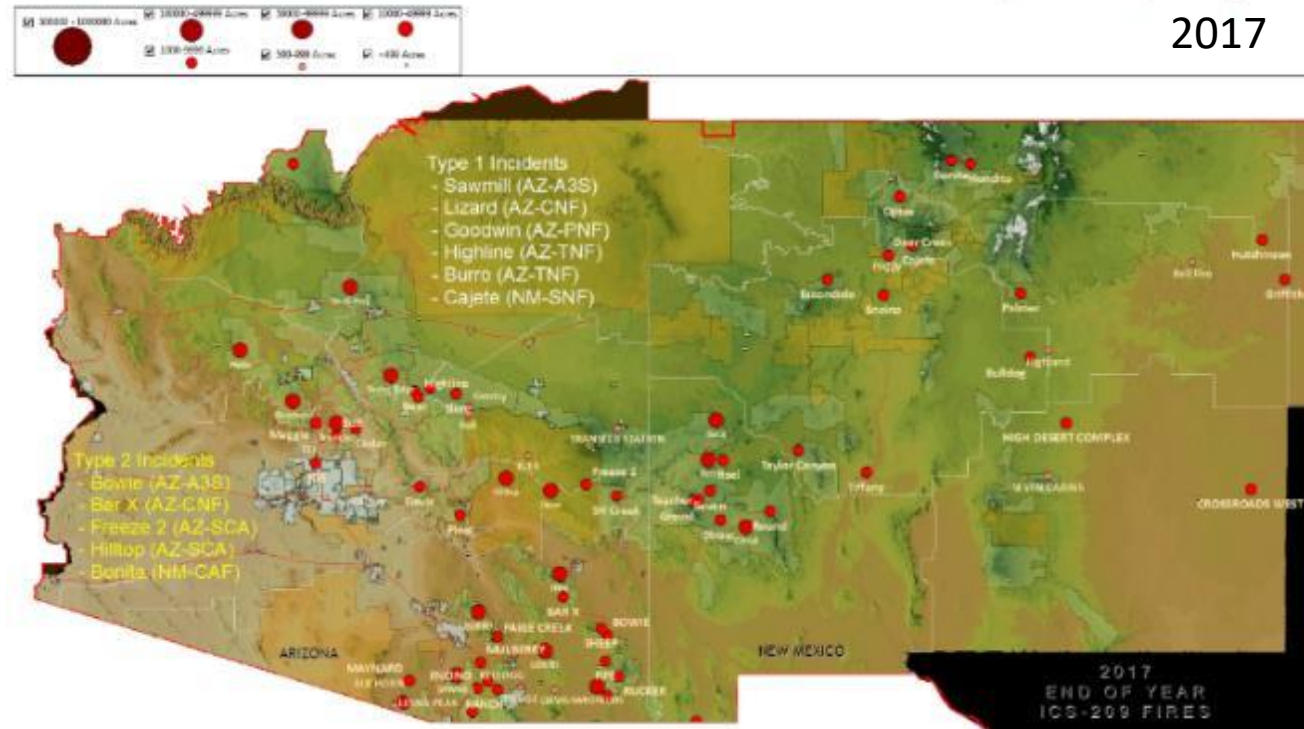
# How Much Trash Comes from Incidents?

2017

Over the **2017 fire season**, it is estimated that:

- **Fire camps** in the Southwest likely generated roughly **6.1 million pounds of trash on incidents**.
- Forest Service **offices** in AZ and NM likely generated roughly **6.98 million pounds of trash**.

This means that **47% (almost ½!) of Forest Service trash in this region came from incidents!**



Source for converting CY of trash to pounds of Municipal Solid Waste:  
[https://www.epa.gov/sites/production/files/2016-04/documents/volume\\_to\\_weight\\_conversion\\_factors\\_memorandum\\_04192016\\_508fnl.pdf](https://www.epa.gov/sites/production/files/2016-04/documents/volume_to_weight_conversion_factors_memorandum_04192016_508fnl.pdf)

Source for estimating trash from office space:  
[https://www.wastecare.com/usefulinfo/Waste\\_Generated\\_by\\_Industry.htm](https://www.wastecare.com/usefulinfo/Waste_Generated_by_Industry.htm)



# What is the Cost of Trash on Incidents?

- The cost for hauling trash varies GREATLY by locale, however costs between \$400 and \$800 per hauled dumpster/roll-off are common.
- On a larger incident, this could mean costs between **\$11,200 and \$22,400 per week**.
- More trash generated = Higher trash costs



# Challenges to Standardizing Recycling

- “In house” recycling efforts struggled with lack of standard recycling equipment, processes, staff, etc
- No single contract vehicle available for ordering recycling
  - Recycling is expensive, right?
  - Do vendors exist that can provide on-site recycling on incidents?
  - What qualifications and experience do such vendors have?
  - What would a scope of work look like?
  - Who will write and manage such a contract vehicle?



# Incident Recycling

## 2021 is the Third Year of the Three-Year Pilot

- **Standardized recycling equipment, signs, processes, expectations** means that our rotating fire camp personnel have a similar recycling experience on each camp, which increases efficacy and engagement
- **Highly qualified vendors** can provide Incident Management Teams assurance that waste diversion services at fire camps will improve waste management practices with reduced strain on logistics personnel
- **Reduced person-hours** tied to submitting and processing requests for recycling on a case-by-case basis across all four GACCs
- Standardized waste diversion reporting that enables the agency to easily capture and communicate our efforts to achieve **compliance with USDA Directive 5600-005 to divert 55% of our agency's waste** from the landfill.





# What On-Site Incident Recycling Services Are Provided?

1) On-site set-up/maintenance/tear-down of incident recycling equipment

2) Standardized collection and sorting of waste and recyclables

3) Process back-hauled waste and recyclables from remote camps

4) Transport recyclables to the nearest recycle outlet

5) Waste diversion tracking and reporting

6) Recycle revenue management (if applicable)



# What is Recycled?



## PRIMARY RECYCLING

- Cardboard
- Plastic #1 and #2
- Paper
- Aluminum/Tin Containers
- Glass

## ADDITIONAL SERVICES:

- Cooking Oil
- Tires
- Batteries (All Types)
- Wood Pallets
- Scrap Metal



# Top GFT Deliverable: “Turn-key” Incident Recycling



U.S. Forest Service - Shasta-Trinity National Forest

August 17 · 🌐

New Kind of Forest Service Green: Recycling Ties, Cans, Cardboard and Paper at the Red Salmon Complex and Salmon Complex



Before



After





# Initial Challenge to Adoption

## Perceived Expense of Recycling

### Recycling on incidents is too expensive, right?

- When we compare the cost of incident recycling to other common services at fire camps, **portable toilets and hand wash stations cost nearly three (3) times as much as incident recycling.**
- On the Whitewater Fire in 2017, the **contracted incident recycling amounted to only .05%** of the daily fire camp operating costs!
- What is the cost of not recycling? New landfills are estimated to cost between **\$11.9 and \$27.5 million in taxpayer dollars.**



# Recycling can Reduce Trash Hauling Costs

- The recycling BPA team can work with Logistics to reduce the frequency of dumpster hauls and cut trash hauling costs by 50%-80%.
  - This could mean a savings of up to \$18,000 per week!
  - Additional benefit: Our agency is reducing its long-term negative impact on local community landfills.



Photo from 2019 Cellar Fire showing a 50% reduction in trash by removing the recyclables

# Feedback from the Field 2020

## Recycling significantly reduces the trash problem!



2020 Slater/Devil Incident Waste Diversion Report posted at:  
[http://cms.fs.usda.gov/sites/default/files/2020-12/SlaterFire\\_FINAL%202.pdf](http://cms.fs.usda.gov/sites/default/files/2020-12/SlaterFire_FINAL%202.pdf)

- Slater Fire (OR): Contracted incident recycling (through the BPA).
  - The team diverted over 37,000 pounds of materials and achieved a 43% waste diversion rate.
  - The incident recycling vendor also managed the donation of **3,600 pounds of non-perishable food** to the local community.



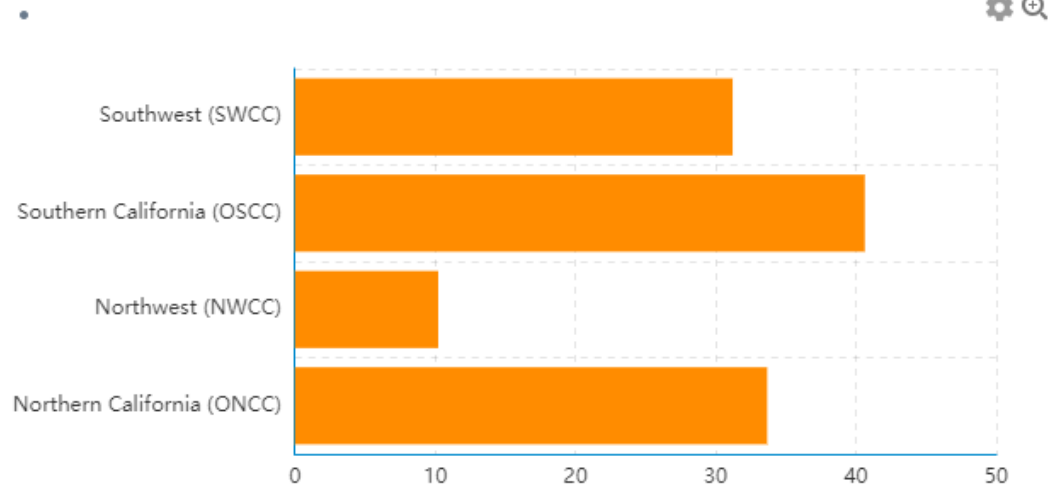
# Other Intangible Benefits of Recycling



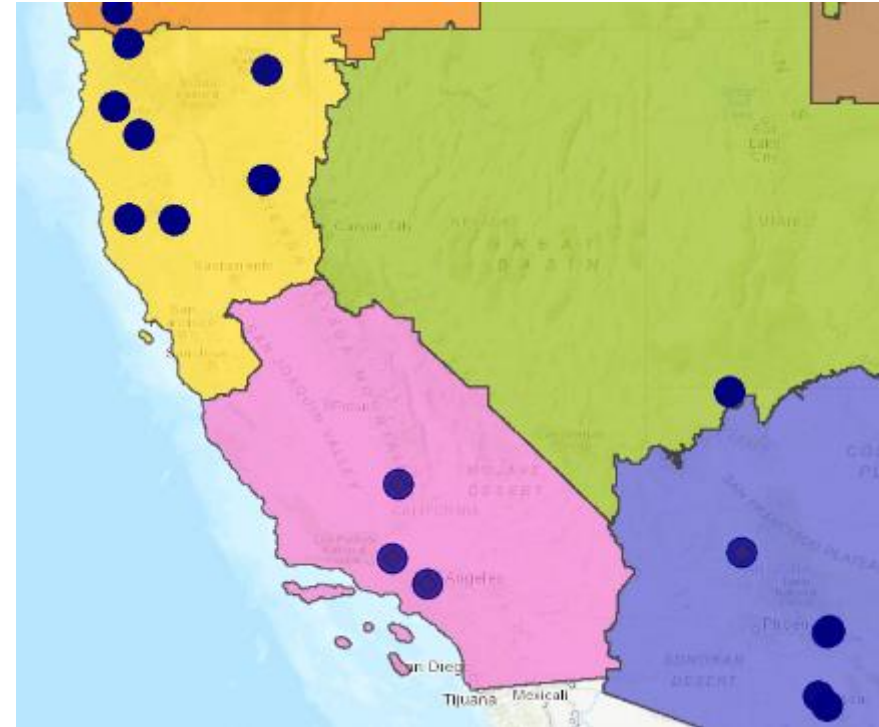
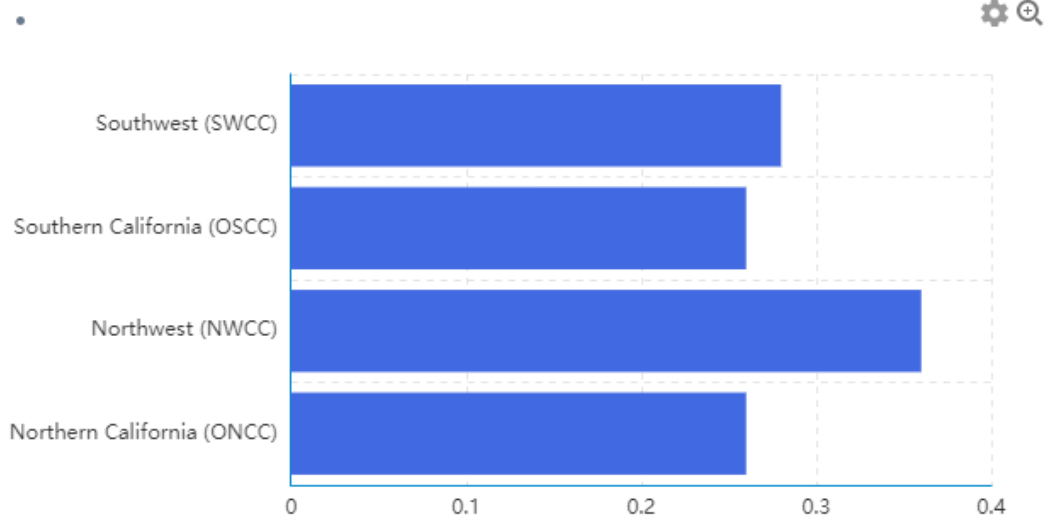
# 2020 Incident Recycling Results

## Waste Diversion Dashboard

Average Cubic Yards of Primary Recyclables by GACC



Average Diversion Rate by GACC



# Striving to Increase Participation By Simplifying and Standardizing Messaging

The most current electronic version of these posters will be maintained on the GFT public website at: <https://www.fs.usda.gov/managing-land/fire/sustainable-ops/incident-recycling>

USDA Forest Service U.S. DEPARTMENT OF AGRICULTURE

**HELP ELIMINATE PLASTIC WASTE, REFILL YOUR WATER BOTTLE!**

CHOOSE TO RECYCLE

SCAN TO LEARN MORE ABOUT HOW TO RECYCLE ON THE FIRE: <https://www.fs.usda.gov/land>

SCAN TO LEARN MORE ABOUT HOW TO RECYCLE ON THE FIRE: <https://www.fs.usda.gov/land>

GreeningFire Sustainable Operations

USDA Forest Service U.S. DEPARTMENT OF AGRICULTURE

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GreeningFire Sustainable Operations

USDA Forest Service U.S. DEPARTMENT OF AGRICULTURE

**WHAT CAN I RECYCLE IN A BLUE BAG?**

**CANS, PLASTIC & BOTTLES**

ONLY #1 AND #2 PLASTICS

CHOOSE TO RECYCLE

SCAN TO LEARN MORE ABOUT HOW TO RECYCLE ON THE FIRE: <https://www.fs.usda.gov/land>

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GreeningFire Sustainable Operations

USDA Forest Service U.S. DEPARTMENT OF AGRICULTURE

**DID YOU KNOW THAT WE HAVE RECYCLING ON THIS INCIDENT?**

**RECYCLING STATION**

CHOOSE TO RECYCLE

SCAN TO LEARN MORE ABOUT HOW TO RECYCLE ON THE FIRE: <https://www.fs.usda.gov/land>

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GreeningFire Sustainable Operations

# Does the Public Value the Program?



**Jo Young** BIGGEST THUMBS UP TODAY! Thanks for the good news.

2w



**Adrienne Vaughn** Thank you so much! My sons school received a large donation of food snacks left over from the fire! Way to give to the local communities!

2w



6



**Norene Kimes** Tis amazing the effort this company puts in to save the 🌍🙏

2w



**Kathryn Axton Hardin** This is wonderful! I always hated the waste that went on in fire camp. I'm really thrilled to hear about this effort.



2w



18



Top Fan

**Becky Stockton Walker** So cool - thank you for saving our land ~ plus entertaining & appreciating the welfare of animals 🙏❤️😊

2w



**U.S. Forest Service-Plumas National Forest**

September 26 at 1:00 PM · 🌐

The Plumas National Forest partnered with a private contractor, Human Eco Consulting, to reduce the amount of garbage at both fire camps. This company has reduced the amount of camp garbage by 43%! Approximately 1,400 lbs of batteries, 3,200 lbs of plastic bottles, 13,100 lbs of paper, and 19,200 lbs of cardboard have been recycled. The incident has donated nearly 3,500 lbs of non-perishable food items to local pantries. Roughly, 3,200 lbs of cooking oil have been recycled with a local community college, and about 5,600 lbs of damaged fire hose have been donated to Hose2Habitat (<https://www.hose2habitat.org/photo-gallery>) in California. Take a look at all of the ways hose2habitat uses hose for their animals.



**Walker Fire 2019**

**Human Eco Recycling Vendor**

800 reactions, 83 comments, 190 shares

<https://www.facebook.com/USFSPlumas/>

# Preparing for 2022 (and 2030)

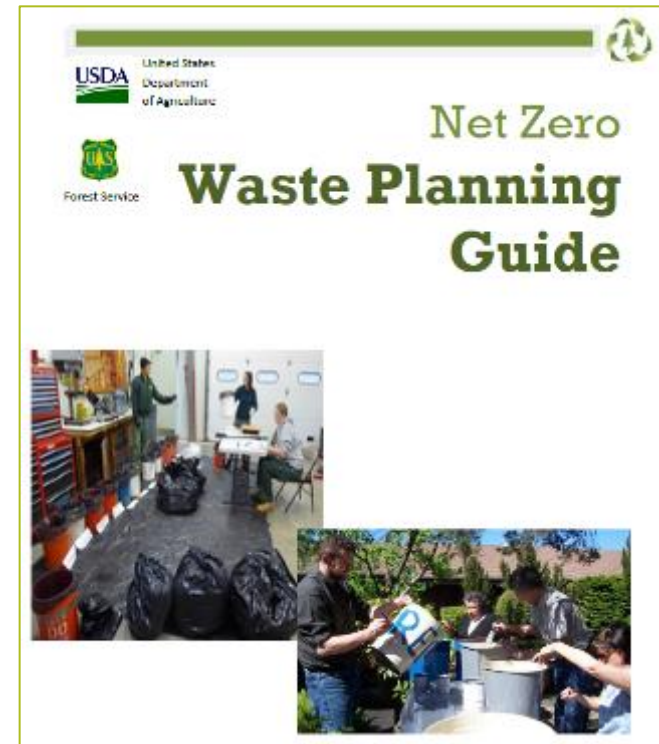




# GFT Waste Reduction Initiative

## Net Zero Waste Design and Assessment

- Net Zero Waste Design and Assessment
  - FY21 – Phase One: Supply Chain, Recycle Infrastructure and Partnerships Analysis and On-Site Waste Audits at Select Caches



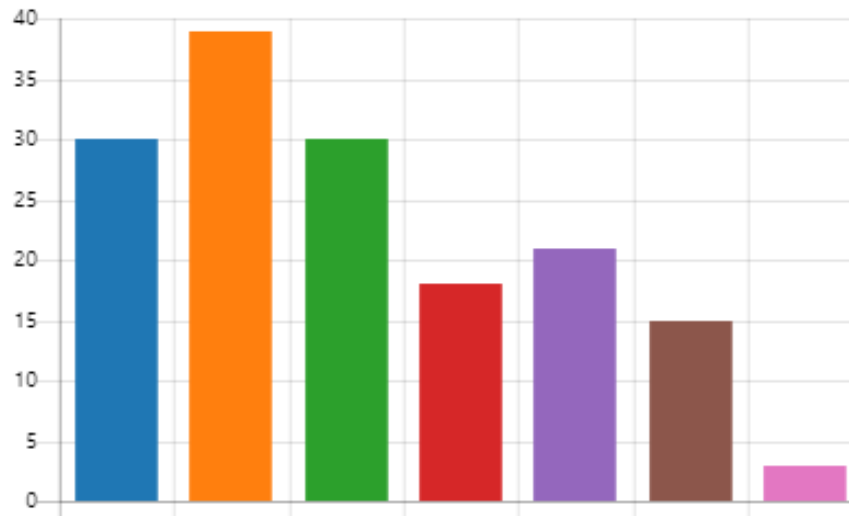


In response to feedback from the Logistics community, we are starting the process to expand the incident recycling to other geographic areas in 2022.

5. The GFT has identified incident recycling vendors that can provide recycling services on-site at incidents across the country. In the future, would you like any of the GACCs below to be added to the incident recycling BPA? Please select ALL that apply.

[More Details](#)

● RMCC (Rocky Mountain)	30
● Northern Rockies (NRCC)	39
● Great Basin (GBCC)	30
● Eastern (EACC)	18
● Southern Area (SACC)	21
● Alaska (AICC)	15
● Other	3



# 2022 – Preparing for an Expanded Incident Recycling BPA

- Circulating nationwide incident recycling vendor market research survey through contacts with US Green Building Council, National Recycling Coalition, EPA, etc
- Goal: Identify sufficient, qualified vendors that can provide on-site recycling services at all wildland fire camps across the US in the future
- Deadline for responses extended to: **Friday, 28 May 2021!**



## USDA Forest Service Wildland Fire Incident Recycling Market Research

On behalf of the USDA Forest Service, GSA is conducting market research to understand capabilities related to providing the below requirement.

The National Greening Fire Team (GFT) is conducting market research to identify vendors that have the skills and experience to provide On-Site Incident Recycling services at wildland fire camps across the United States in the future.

Information describing the On-Site Incident Recycling program can be found at: <https://www.fs.usda.gov/managing-land/fire/sustainable-ops/incident-recycling>.

If your company is interested in providing such services, please complete the questionnaire below.

NOTE: Completion of this questionnaire is optional and is for \*market research\* purposes only and does not affect any \*current\* VIPR agreements, Dispatch Priority Lists (DPLs), contracts, etc. nor does it constitute submission of a bid, quote, or proposal. No contracts will result from completion of this questionnaire, but your responses might be included on an internal source list for future market research conducted by an Incident Management Team during an active incident.

**Responses Due: 5/21/2021**

Greening Fire Nationwide Incident Recycling Market Research questionnaire:

[https://feedback.gsa.gov/jfe/form/SV\\_5nymUFkeBnBzVTU](https://feedback.gsa.gov/jfe/form/SV_5nymUFkeBnBzVTU)

# Other Ways We Are Working to Help Green Fire



Forest Service Employee in  
the NWCC Receiving  
HydroFlask via Partnership  
with the Greening Fire Team



# Solar Powered Water Filtration System + Reusable Potable Water Storage

Solar panels charge electronics and communication equipment in the field with no noise and no emissions.



Solar-powered water filtration system provides potable water to the reusable 5-gallon water container.



# GFT Green Procurement Initiative

- Green Vendor Market Research
  - Goal: Better understand what green products/services are currently available, how much they cost, where they can be provided, what companies provide them and their technical specifications related to size, equipment requirements, performance, etc.



Solar/Wind Powered / Off Grid Light Towers

# EPA Federal Green Challenge Award Innovation



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## News Releases

### News Releases from Region 09

## EPA Recognizes Vallejo, Calif.-Based USDA Forest Service Operation for Innovative Zero Waste Wildfire Response Initiative

06/25/2020

Contact Information:  
Soledad Cabino ([soledad.cabino@epa.gov](mailto:soledad.cabino@epa.gov))  
415-887-6288

**SAN FRANCISCO** – Today, the U.S. Environmental Protection Agency (EPA) recognizes federal facilities in California and nationwide for effectively applying measures to conserve money and resources as part of the Federal Green Challenge program. The Challenge is a national EPA effort which encourages federal agencies to reduce the federal government's environmental impact.

"We recognize the Forest Service's initiative and teamwork approach to reducing waste during wildfire response incidents. This effort constitutes a replicable model of sustainable disaster response operations," said **EPA Pacific Southwest regional administrator John Buserud**.

Under the Federal Green Challenge program, the USDA Forest Service Region 5 in Vallejo, Calif. has won the Regional Innovation Award. Their work in establishing the [National Greening Fire Team \(NGFT\)](#) to achieve net zero waste at all large fire incidents by 2030 and integrating sustainable operations best practices into the fire community merits this national recognition.

"The NGFT's efforts are in direct service to the USDA Forest Service's conservation mission," said **Kelly Jaramillo, the Forest Service Region 5 sustainable operations coordinator and Blanket Purchase Agreement (BPA) program lead**. "USFS Fire operations have an extensive



[EPA 2020 Federal Green Challenge Award Winner](#)



# GreeningFire

## Sustainable Operations

**Greening Fire Team Website:**

<https://www.fs.fed.us/managing-land/fire/sustainable-ops>

**Contract/Blanket Purchase Agreement Information:**

<https://www.fs.usda.gov/managing-land/fire/sustainable-ops/incident-recycling>

**National GFT's Shared Inbox:** [SM.FS.greeningfire@usda.gov](mailto:SM.FS.greeningfire@usda.gov)



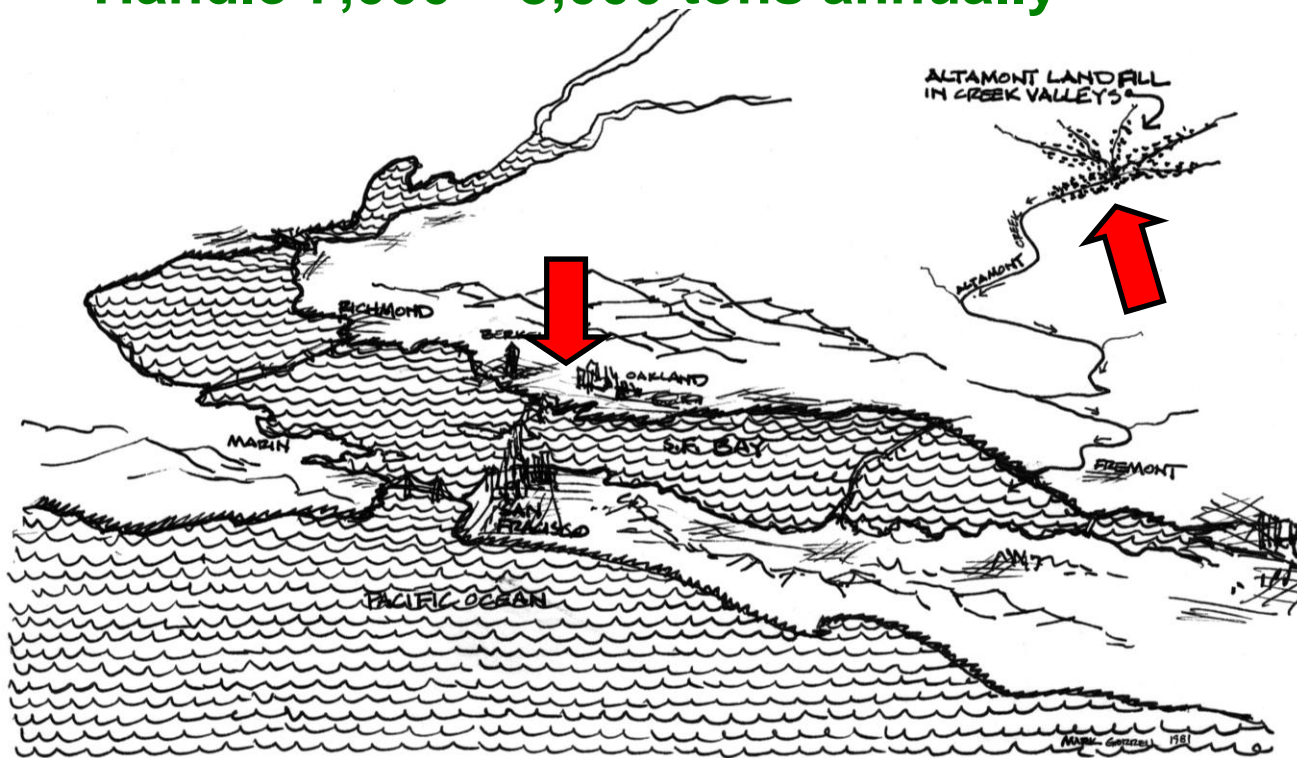
# U.S. EPA SMM Web Academy Achieving Zero Waste with Innovative Reuse and Recycling Contracts



By Max Wechsler  
Operations Manager  
May 25, 2021

# Urban Ore-orientation

- For-profit corporation founded in 1980
- \$2.7M gross revenue in 2020
- 31 employees (28 full-time) + regular contractors
- Handle 7,000 – 8,000 tons annually



# What is an EcoPark?



# The Bad Old Days (1979)



**URBAN**  **ORE**<sup>®</sup>  
TO END THE AGE OF WASTE

# 1976 Berkeley Municipal Code



**Mandated salvaging at the dump**

# We still salvage



# Urban Ore Tour



**Unloading the salvage truck =  
The first activity every morning**

# Store Receiving Department





# General Store Department



**30,000 square-foot warehouse**

**URBAN**  **RE**<sup>®</sup>  
TO END THE AGE OF WASTE

# Building Materials Department



2.5-acre yard + doors, trim, flooring inside

# Building Materials Receiving



# Outside Trader Department



# What Isn't Reused, We Recycle



**URBAN**  **ORE**®  
TO END THE AGE OF WASTE

# Disposal Numbers (2017)

2017	Transfer Station (Tons)		Recycled (Tons)					Recycled (Pounds)				Total Recycled (Tons)
	Salvaged	Dumped	Nonferrous Metals	Ferrous Metals	Glass	Ceramics	Electronic Breakage	Plastics	Textiles	Auto Batteries	Cardboard	
Jan	60.5	1.2	6.6	15.1	0.2	-	3.9	94.3	360	-	2,510	27.4
Feb	56.2	11.6	3.8	-	0.1	-	3.0	90.4	360	-	1,980	8.2
Mar	67.1	6.7	6.7	18.2	-	13.44	3.4	-	1,050	-	2,020	43.2
Apr	56.4	21.6	3.5	15.1	0.1	-	0.7	89.4	480	-	3,050	21.2
May	68.7	10.8	6.8	16.8	9.8	-	4.3	399.0	1,000	35	920	38.8
Jun	62.4	6.8	7.0	16.5	9.8	12.05	1.9	81.2	680	-	-	47.8
Jul	60.5	2.6	4.6	16.2	0.1	-	3.7	575.4	1,160	-	-	25.5
Aug	62.0	1.4	30.2	-	0.1	-	4.4	91.3	1,440	-	-	35.5
Sept	63.3	1.7	4.2	14.7	0.1	-	2.6	88.9	1,070	805	-	22.6
Oct	64.6	0.7	6.5	-	10.1	8.72	2.3	-	930	-	-	28.0
Nov	58.2	14.3	15.2	1.8	10.1	-	2.1	-	810	224	-	29.7
Dec	49.4	1.0	3.2	1.3	-	-	2.3	-	850	-	-	7.2
<b>Total Pounds</b>								1,510	10,190	1,064	10,480	
<b>Total Tons</b>	<b>729.1</b>	<b>80.3</b>	<b>98.3</b>	<b>115.7</b>	<b>40.6</b>	<b>34.2</b>	<b>34.5</b>	<b>0.8</b>	<b>5.1</b>	<b>0.53</b>	<b>5.24</b>	<b>335.0</b>

## Dollars and Cents (2018)

• Purchases for resale*	\$ 56,500
• Sales taxes collected	\$226,000
• Property taxes	\$114,000
• Payroll taxes, fed & state	<u>\$315,000</u>

**TOTAL**     \$711,500

\* What we pay out to supply-side customers for bringing us high-quality merchandise. Averages ~\$100K annually

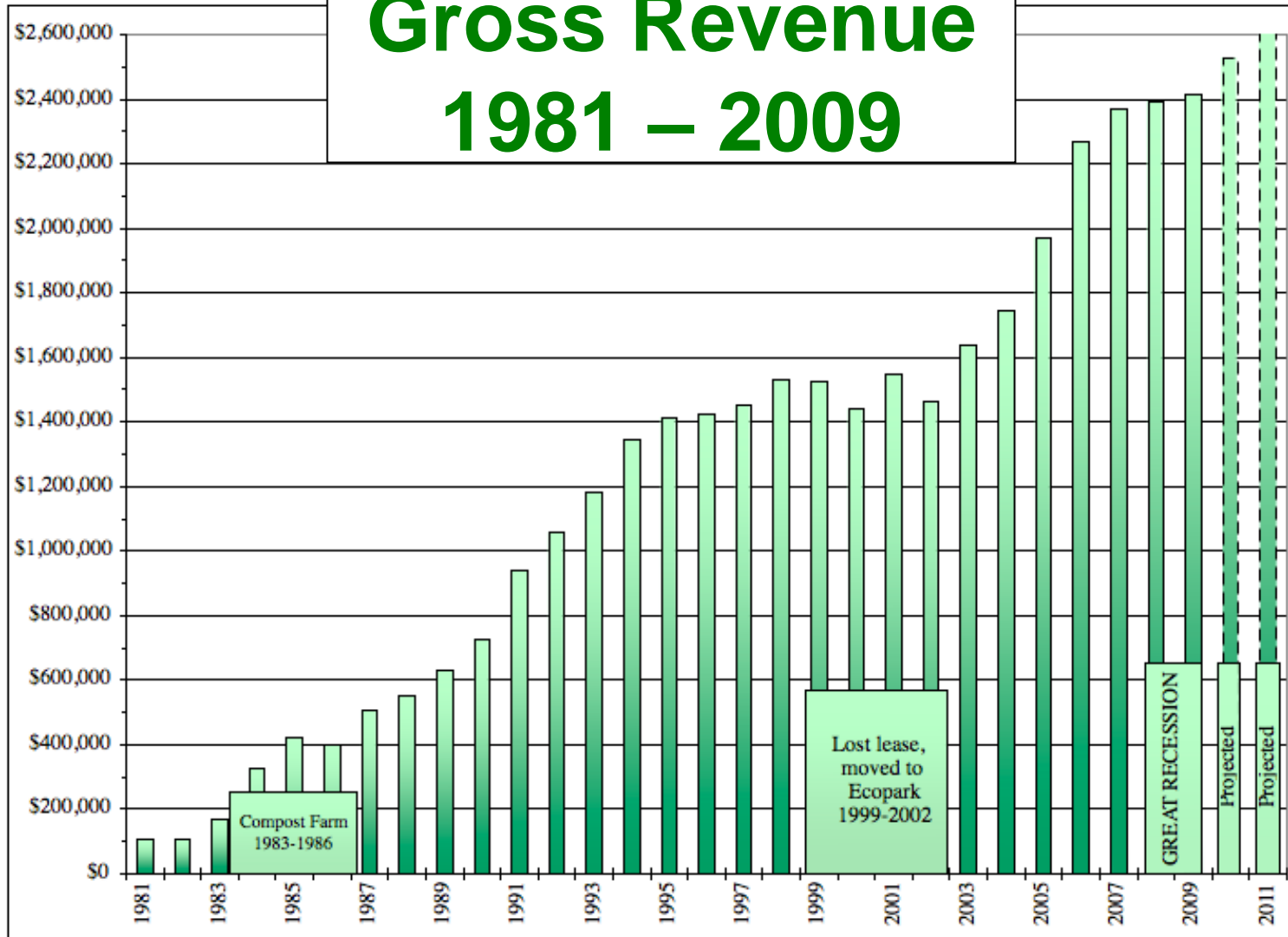
# Dollars and Sense

Intangible economic, environmental, community, and social benefits = PRICELESS

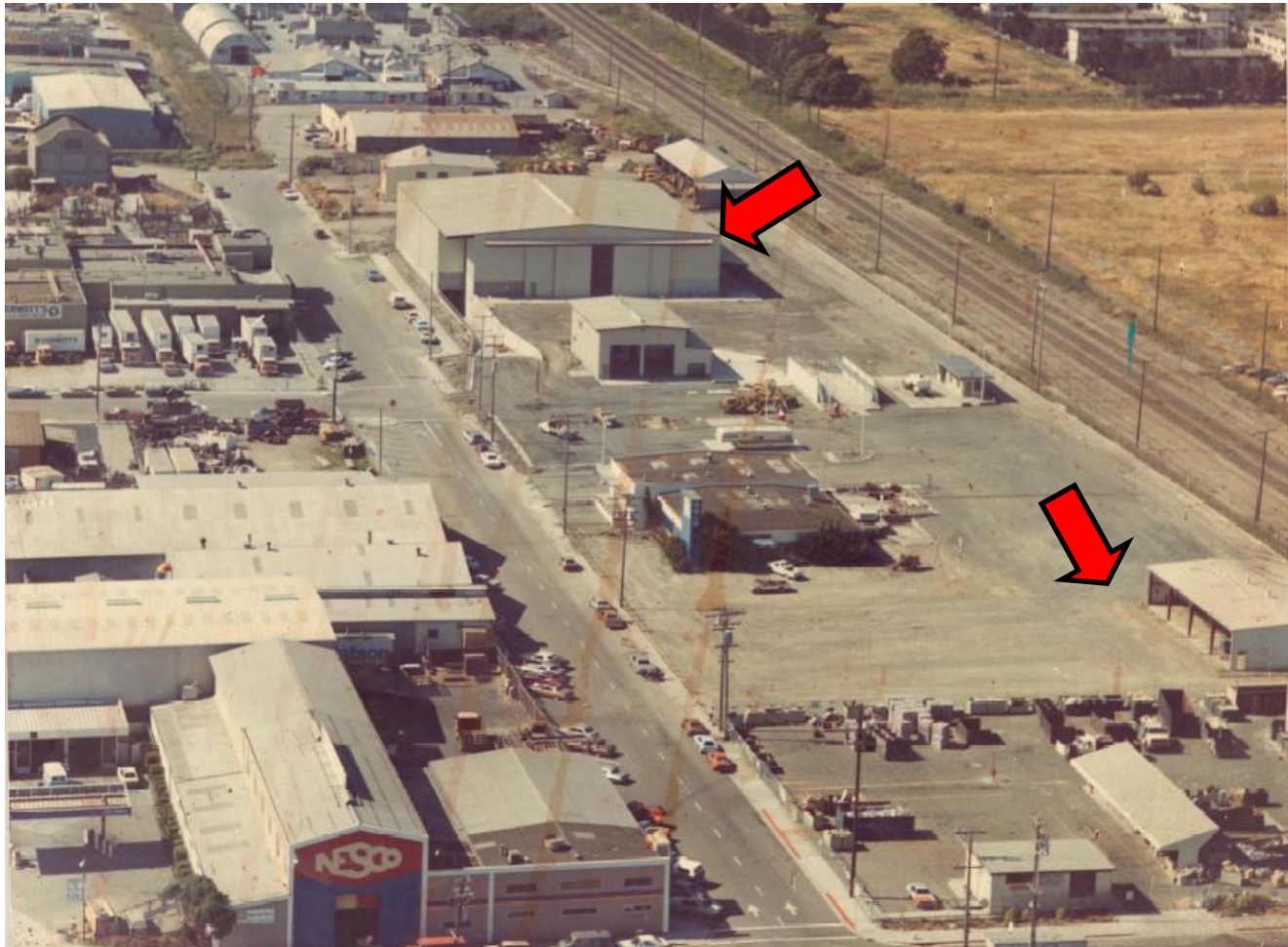
- Disposal costs saved by customers at the Transfer Station (supply side)
- \$\$\$ saved by customers purchasing our affordable goods (demand side)
- Preservation of cultural and material value
- Creation of local jobs and local community
- Climate impacts (!!!)



# Gross Revenue 1981 – 2009



# 1983 = New Transfer Station



# City Incubation = 1983-89



**URBAN**  **RE**®  
TO END THE AGE OF WASTE

# The 2000's

# Cal Recycle

# STOP WASTE

at home • at work • at school

**We invented Material Recovery Enterprise in the zoning code:** A business that diverts discarded materials from a number of waste streams including but not limited to the Transfer Station, drop-off, pick-up and curbside collection...

## Zero Waste Case Study: Berkeley

On this page:

- [Reuse Partnership](#)
- [Contractual Arrangement](#)
- [Advantages](#)
- [Disadvantages/Omissions](#)



### Public-Private Reuse Partnership

Berkeley has a longstanding commitment to reducing and ultimately eliminating the waste that goes to landfills and established one of the first municipal recycling programs in the nation.

**Reuse is a key zero waste strategy for extending the life of materials and products.** In 2019, the City adopted the [Berkeley Single Use Foodware and Litter Reduction Ordinance](#) to reduce the use and disposal of single use foodware, including cups, lids, utensils, straws, clamshells, and other disposables that contribute to street litter, marine pollution, harm to wildlife, greenhouse gas emissions, and waste sent to landfills. This is the first ordinance in the nation to require that food vendors utilize reusable foodware for on-premises dining, and to require a \$0.25 itemized charge on customers' receipts for all disposable take-out beverage cups. The disposable cup charge is intended to incentivize reusable cups; customers bringing their own reusable cups do not pay the \$0.25 charge.

The City of Berkeley owns and operates its transfer station, and the City has a contract with a locally owned for-profit business called Urban Ore, which was founded in 1980. Urban Ore has exclusive rights to salvage reusable materials from the City's transfer station tip floor, where materials are collected and hauled to the landfill. Urban

### Contact Information

Links on this page  
exit the site [EXIT](#)

#### City of Berkeley Solid Waste Management Division

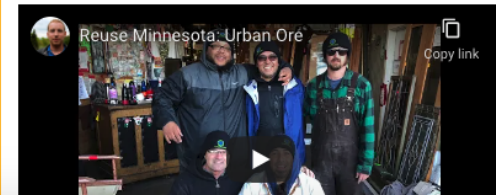
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Recycling Program Manager  
(510) 981-6357  
[Berkeley Zero Waste Programs & Services Website](#)

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[Urban Ore Website](#) [EXIT](#)

### Urban Ore Salvage Contract Video [EXIT](#)



# URBAN ORE®

TO END THE AGE OF WASTE

# 2005 = Zero Waste Resolution

RESOLUTION NO. 62,849–N.S.

REAFFIRMING THE CITY'S ZERO WASTE GOAL AND REFERRING THE ISSUE TO  
THE SOLID WASTE COMMISSION

WHEREAS, in 1976, only six years after the first Earth Day, Berkeley's City Council established a goal of recycling 50% of its then-landfilled discard stream; and



BE IT FURTHER RESOLVED, that the City also sets a Zero Waste Goal of eliminating Berkeley's materials sent to landfills by the year 2020.

BE IT FURTHER RESOLVED, that the Solid Waste Commission examine changing its name to something more reflective of the City's waste reduction goals and report back to the Council with an potential suggestions.

# 2018 = Zero Waste Reaffirmation

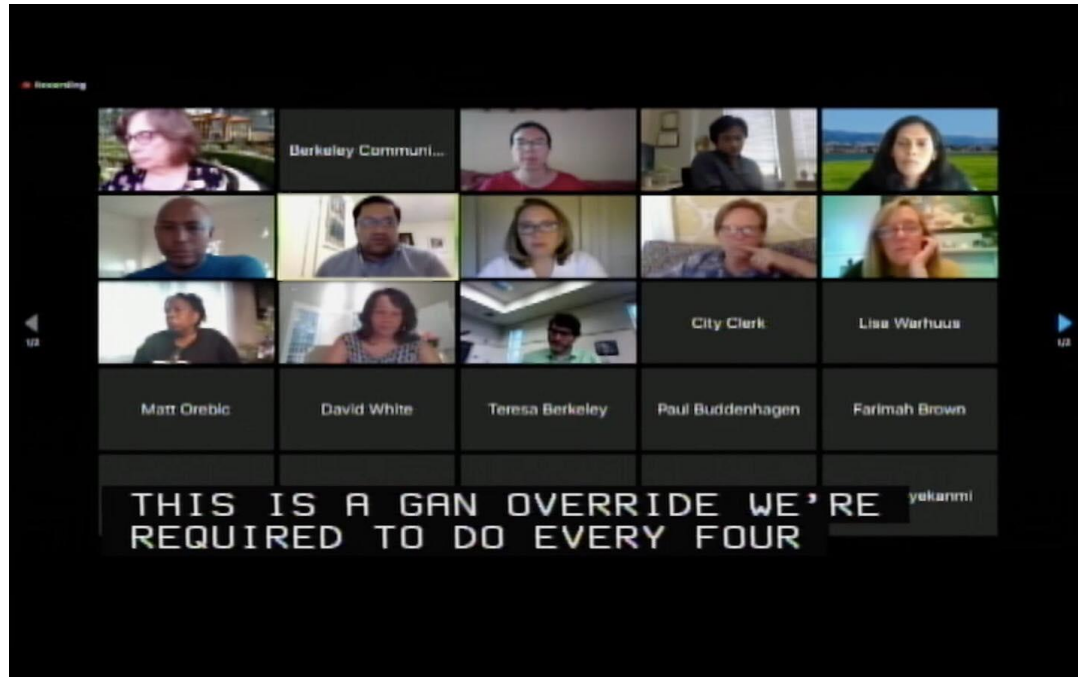
WHEREAS, at least six separate service functions, which individually could be called Material Recovery Enterprises as defined in the Berkeley Municipal Code, are provided in the transfer station, including three that are privately owned (Ecology Center, Community Conservation Center, and Urban Ore) and three that are owned by the City and financed through an Enterprise Fund; and



**THEREFORE BE IT RESOLVED**, that the elected City Council, who represent the citizens of Berkeley, expresses its satisfaction that its transfer station has developed an ecology of commerce among City programs and contracted operators, and that its focus on labor instead of machinery has provided more jobs than automated systems, and has also produced some of the highest-quality secondary resources in the market; and

**BE IT FURTHER RESOLVED**, that Berkeley should analyze the structure of fees paid to recovery operators to assure that Berkeley's whole system can function reliably in the face of changing markets; and

# 2020 = City Renews Contract



## RATIONALE FOR RECOMMENDATION

This salvage and reuse/recycling program supports increased diversion of materials from landfills, and helps move the City toward its Zero Waste Goal. In addition, the Transfer Station's operational expenses associated with long-haul transportation and landfill use are also reduced.

# Salvaging Contract

Salvage service fee of **\$47.74/ton** = what the City pays for landfill hauling and disposal tipping fees

- Assists in attaining Berkeley's **Zero Waste and Climate Action Plan goals**
- Reduces manufacturing **resource use and energy impacts** by returning goods and materials to the commerce cycle
- Reduces the City's **transportation costs** to haul waste to the landfill



# Salvaging Contract

Public-Private Reuse Partnership  
(3-year term)

## Urban Ore has:

- **Exclusive rights to salvage reusable materials** from the City's transfer station tip floor
- Space on the transfer station property for a **staff shed and a box truck**
- **Salvagers spot and report hazardous materials** to City staff to avoid illegal disposal

## Contract Requirements

- **Hazardous materials recognition training** offered by the City or an independently certified safety training company
- Salvage workers shall **notify City workers if they observe hazardous materials or materials banned from landfill** being unloaded onto the tipping floor
- **Detailed safety requirements**, notifications and reporting
- **Monthly written report:** Invoice to include number of **tons of material recovered** from the salvage and diversion program, and **total staff hours worked**

# What's Covered

- Goods that may be reused for their **originally intended purpose** or goods that may be **re-purposed**
- Eligible material categories (may be updated periodically by mutual consent): **building materials, institutional fixtures, housewares, furniture, clothing and goods and some non-ferrous scrap metal** (with exclusions for 3<sup>rd</sup> party C&D contracted materials)
- Contractor has sole right and discretion to determine whether any item is acceptable

# Salvage Contract Documents

- **City Council Authorization and Contract:**  
<https://www.epa.gov/transforming-waste-tool/full-contracts-and-agreements-berkeley-ca>  
[Scope of Services, Second Document, pages 15-16]
- **EPA Zero Waste Case Study: Berkeley**  
<https://www.epa.gov/transforming-waste-tool/zero-waste-case-study-berkeley>



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Transfer station salvaging and Urban Ore, Inc. EcoPark, Berkeley, California

# Questions?



Main Recycling Station at the  
Lime Fire Camp in  
Northern California

