



Strategies on the Road to Zero Waste:
Teton County Integrated Solid Waste and Recycling
FY2015 to FY2018



Teton County Integrated Solid Waste and Recycling

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Table of Contents

- 2 Zero Waste & Zero Waste in Teton County
- 3 On the Road to Zero Waste
- 3 R2ZW Goal & Timeline
- 4 Diversion vs. Landfill Bound Tons FY2015 TO FY2018
- 4 Solid Waste Diversion Profile FY2015 TO FY2018
- 5 Recycling and Reuse Material Profile FY2015 TO FY2018
- 5 Compost Material Profile FY2015 TO FY2018
- 5 Waste To Energy Material Profile FY2015 TO FY2018
- 6 A Focus on Short-Term Strategies
- 6 Strategies Implemented FY2015 TO PRESENT
- 7 Progress Toward
 - Short-Term Goals
 - Percent Diversion From Landfill
- 8 Overview of Mid and Long-Term Strategies
- 9 Appendix A
- 12 Appendix B
- 14 Appendix C



What is Zero Waste?

Zero waste is a universal term that means to throw nothing away. Jackson Hole is one of over fifty communities nation-wide and many more around the world that have adopted the principle of zero waste as a way to conserve resources, save money, create jobs, and sustain the health of the environment. Locally, the pursuit of zero waste means a commitment to Reduce, Reuse, Recycle and Compost as much as possible and limit the amount of material disposed of through incineration and landfilling. The Road to Zero Waste is the name for the initiative undertaken by

Teton County Integrated Solid Waste and Recycling (ISWR) to provide and coordinate strategies to waste less. Currently, Teton County is able to divert, or keep out of the landfill, 34% of discards. A resolution, approved in 2014 by Teton County Commissioners and The Town of Jackson, calls for 60% diversion by the year 2030.

What does Zero Waste mean for Teton County?

As a Road to Zero Waste community, Teton County will:

- Strive to reach a diversion rate of 60% from landfill by the year 2030, surpassing the national average and joining the leading zero waste communities in the Rocky Mountain West and the nation;
- Participate in the reduction, reuse, recycling and composting of additional types and quantities of materials;
- Rely on business leaders to provide models to pave the way for more organizations to incorporate sustainable practices;
- Infuse education and outreach with connections to national and international efforts and standards; and,
- Work together as a community toward a zero waste future.

On the road to Zero Waste

Use of the phrase “Road to Zero Waste” is intended to emphasize that Teton County is working toward zero over time. Following the adoption of the Zero Waste Resolution, Teton County Integrated Solid Waste and Recycling (ISWR) staff compiled a list of recommended strategies to increase landfill diversion from 34% to 60% over a 15-year period.*

The strategies were identified as Short-Term (FY2015-2020), Mid-Term (FY2021-2025), and Long-Term (FY2026-2030). This incremental approach is common among zero waste communities.

As Teton County nears the achievement of its initial goal, by 2030, an evaluation of programs, services and technologies will be used to determine the appropriate next goal in percent diversion over a given time.

*Further explanation of Road to Zero Waste strategies in Appendix A.

Road to Zero Waste (R2ZW) Goal & Timeline

The R2ZW strategies coordinate with the timeline of Teton County’s planned waste management initiatives, as well as infrastructure and program expansions that include the remediation of the Horsethief Canyon Landfill site. The baseline for

measured progress is the 34% diversion rate recorded in 2014, which represented the recovery of 13,171 tons of material from landfill. The graphic below illustrates the targeted schedule for diversion over the proposed 15-year timeline.

Short-Term Strategies FY2015 to 2020

Additional Annual Diversion
+1,500
tons per year by FY2020

Estimated Diversion Potential
38%

Mid-Term Strategies FY2021 to 2025

Additional Annual Diversion
+6,300
tons per year by FY2025

Estimated Diversion Potential
50%

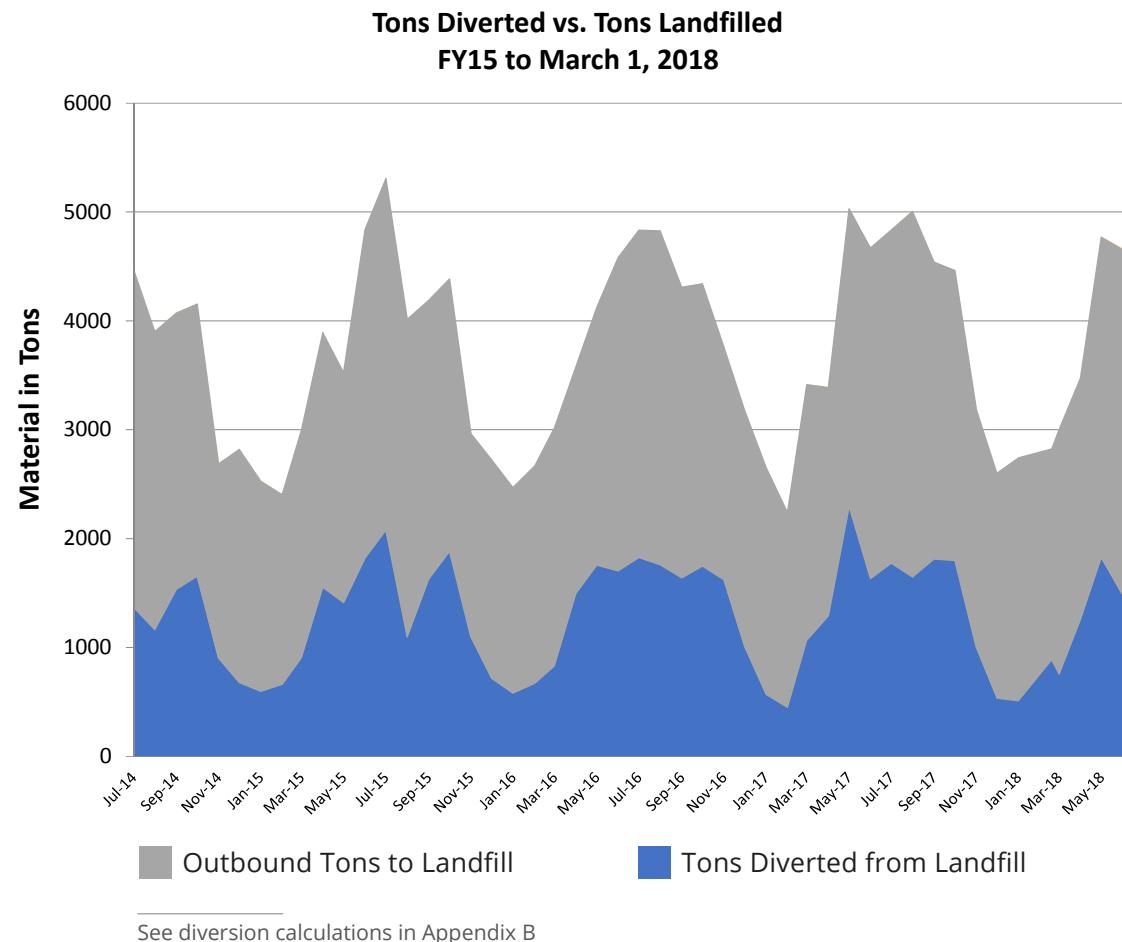
Long-Term Strategies FY2026 to 2030

Additional Annual Diversion
+12,000
tons per year by FY2030

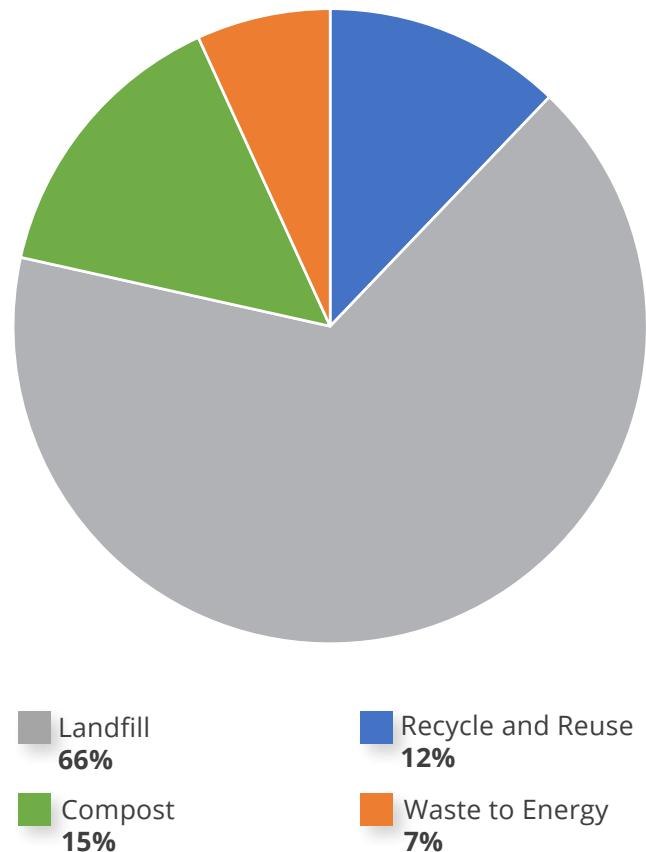
Estimated Diversion Potential
60%

**The Teton County Zero Waste Resolution
calls for an increase from 34% to 60%
diversion from landfill by 2030.**

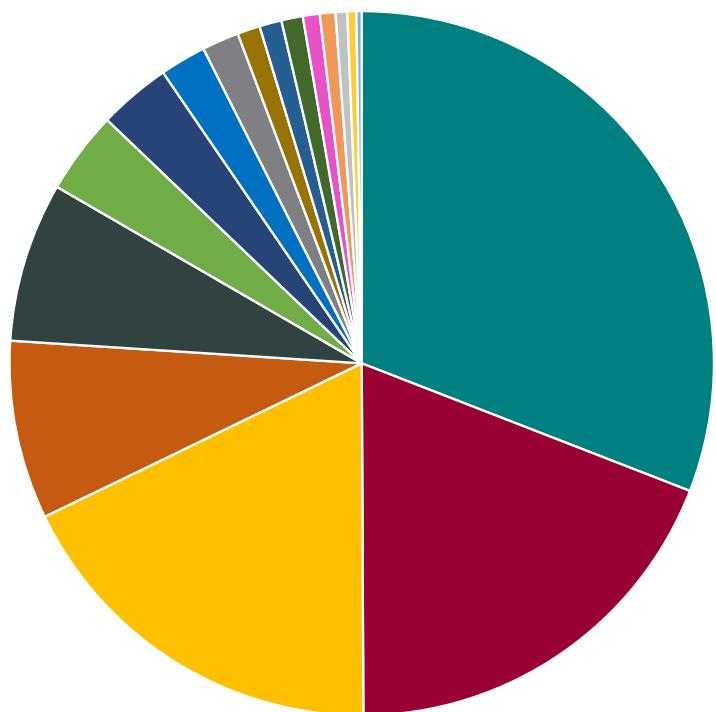
Diversion vs. Landfill Bound Tons FY2015 TO FY2018



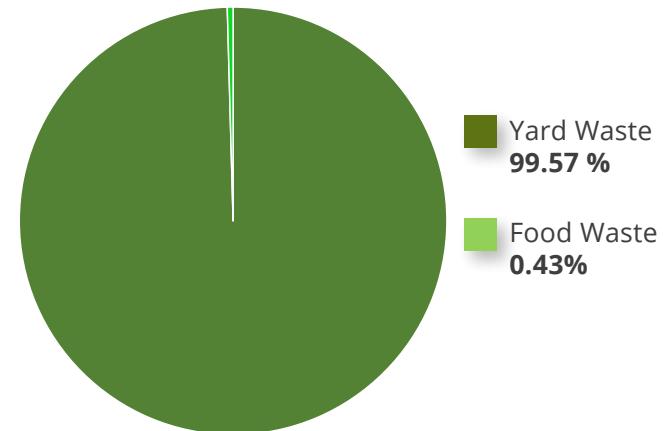
Solid Waste Diversion Profile FY2015 TO FY2018



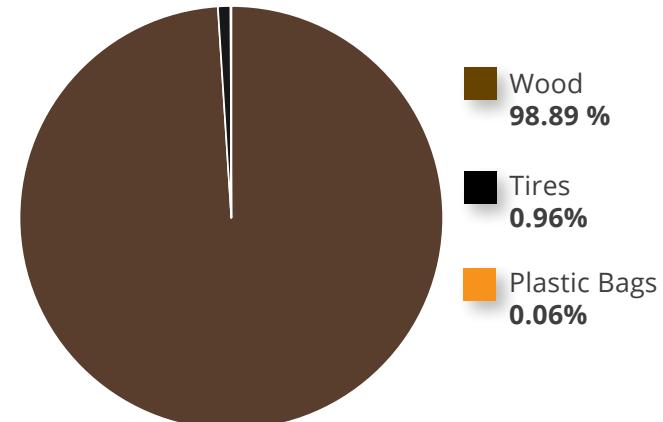
Recycling and Reuse Material Profile FY2015 TO FY2018



Compost Material Profile FY2015 TO FY2018



Waste To Energy Material Profile FY2015 TO FY2018



A Focus on Short-Term Strategies

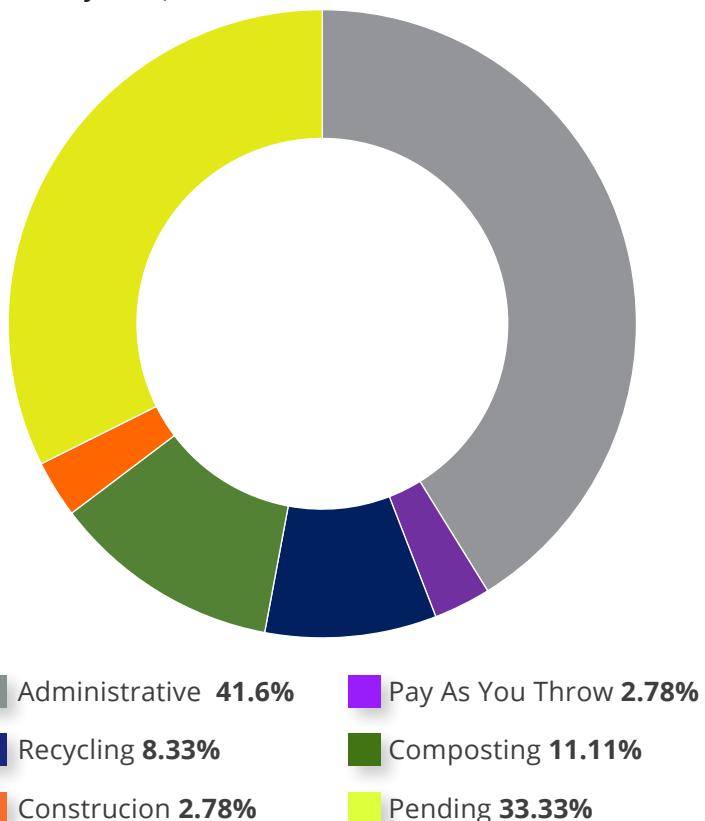
The following is a summary of waste diversion focus areas recommended for the short-term, FY2015-2020. Many of these strategies are currently underway or have already been completed. See the detailed list of Strategies By Fiscal Year in Appendix A.

- Recycling Outreach and Education
- Pay As You Throw
- Food Waste Composting
- Residential Yard Waste Collection and Incentives
- Master Composter Certification
- Construction and Demolition Material Diversion

- Zero Waste Event Modeling
- Plastic Bag Alternatives
- Annual Road to Zero Waste Report Card
- Green Purchasing Initiatives
- Recognition Programs for Waste Diversion Efforts
- Regional Reuse Directory

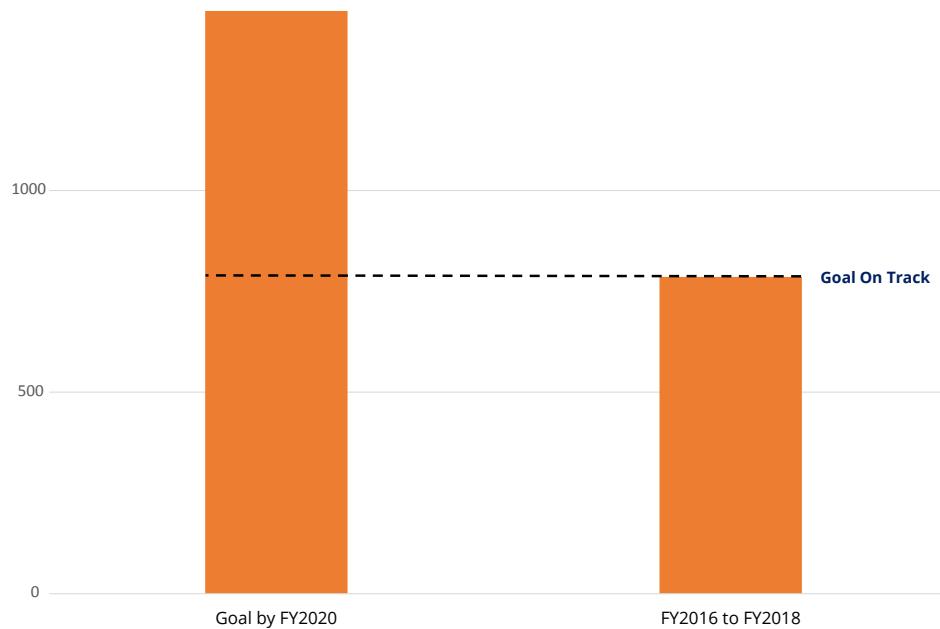
Strategies Implemented FY2015 TO PRESENT

67% (or 24 of 36) planned Short-Term R2ZW Strategies have been initiated and/or completed as of June 1, 2018.



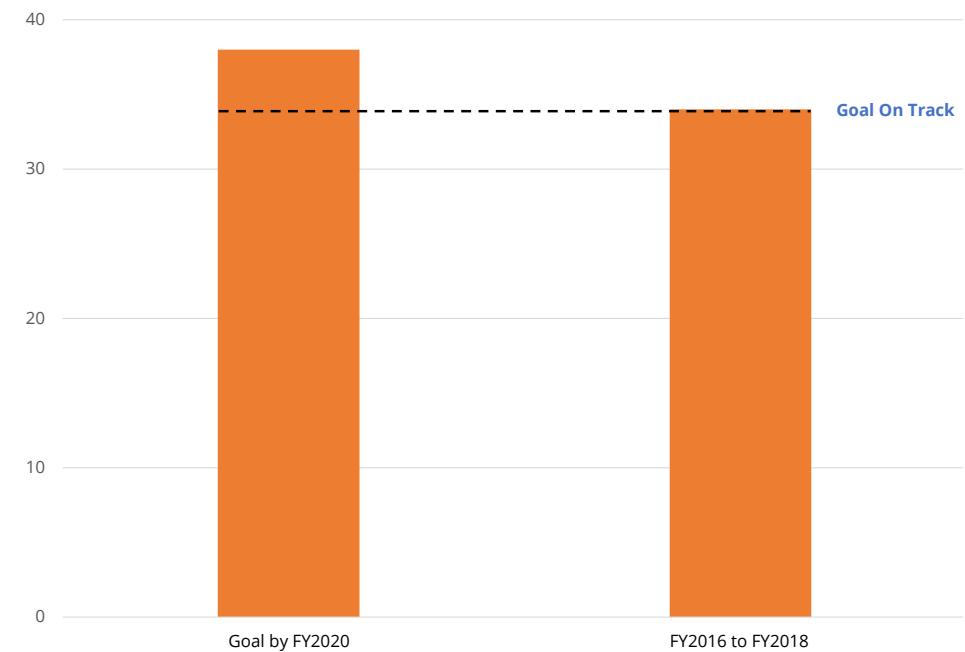
Progress Toward Short-Term Goals

Additional Tons Diverted Per Year



Progress Toward Short-Term Goals

Percent Diversion From Landfill



Overview of Mid and Long-Term Strategies

FY2021-2030

Partial Co-mingling of Recyclables

Implement Residential Multi-Family

Pay As You Throw

Implement Building Code Requirements
for Construction and Demolition
Material Diversion

Zero Waste Plan Requirements for Businesses
and Commercial Facilities

Beverage Container Recycling Ordinance

Required Separation of Yard Waste
for Composting

Required Separation of Corrugated Cardboard
for Recycling



Appendix A

Short-term Strategies by Fiscal Year

The following list details each of the R2ZW strategies recommended to achieve short-term waste diversion goals. The strategies are listed by fiscal year and divided into five categories as indicated below: **Administrative, Pay As You Throw, Recycling, and Composting.** A solid square identifies the strategies that are in-process or complete, and an open square indicates strategies that are pending implementation.

In-Process/Complete

Pending

Fiscal Year 2017

Administrative Strategies

Annual Zero Waste Report Card
• In-process spring/summer 2018.

Develop a Recognition Program for Zero Waste Planning by RRR Business Leaders
• Zero waste concepts and terminology are incorporated into ISWR's support of the RRR Business Leaders. Efforts by Business Leaders to minimize landfill disposal and progress toward zero waste are encouraged and recognized by ISWR.
• Implemented FY2017 and ongoing. Additional collaboration with B.E.S.T. program began FY2017.

Tiered Tip Fees
• ISWR continues to offer tiered tip fees that financially incentivize waste diversion.

Goal Integration Across Plans

- ISWR staff meets regularly with organizers of the Teton County Sustainability Plan, the Town of Jackson GPS Plan, the Zero Landfill Initiative in national parks, JH&Y Sustainable Destinations, Travel and Tourism Board, and others to identify aspects of the R2ZW strategies that correspond or have the potential for collaboration with other plans in the region.

Town of Jackson to Process Recycling Through ISWR

- ISWR met with Town of Jackson staff in February 2018 to discuss scrap metal, electronics and other materials that could be processed and tracked through ISWR as part of the R2ZW.

Guarantee Town Council Liaison to ISWR

- Encourage collaboration and communication between the ISWR Advisory Board and the Town of Jackson in order to achieve zero waste goals.
- Johnny Ziem selected as Town of Jackson liaison to ISWR Advisory Board FY2016.

Community Recycling Survey

- Jackson Hole & Yellowstone Sustainable Destinations staff and volunteers completed a sustainability survey in 2017 which included recycling and waste diversion topics. The results indicated a high, general familiarity with recycling as part of the effort for greater sustainability in Teton County.
- Additional survey information that would be helpful as part of the R2ZW includes more details on the amount and type of recycling practiced by Teton County participants; a commercial recycling survey of business license holders to determine strategies to best serve commercial recycling customers; information regarding additional materials that Teton County participants would like to see recycled, etc...
- Additional survey opportunities to be discussed by ISWR staff and partners during FY2018-2019.

Develop Zero Waste Branding for Teton County

- ISWR staff and RRR Advisory Committee to develop R2ZW branding (logo, color scheme, consistent phrasing, ...) for all related communication and outreach.
- Contract with Creative Curiosity JH approved February 6, 2018. Design work began March 1, 2018.

Recycling Strategies

■ Education and Awareness to Increase Recovery of Materials Currently Accepted for Recycling

- ISWR staff and advisory committees to optimize education, outreach, processing, storage capacity and market feasibility for increased recycling of currently accepted materials.

■ Recycling Containers to Accompany Municipal Trash Bins in Town of Jackson (TOJ)

- TOJ staff is working to completed the installation of the first phase of recycling containers adjacent to municipal trash bins near Town Square. Initially, recycling containers will be labeled for acceptance of source separated aluminum and #1 plastic bottles. Additional materials may be accepted in the future.

Composting Strategies

■ Continue and Expand Seasonal and Special Event Composting Programs

- Promote yard waste composting participation and awareness with seasonal composting events such as the Fall and Spring Clean Up events, the Halloween Pumpkin Smash, and the annual Backyard Composting Workshop.

■ Food Waste Collection Pilot Program with Grand Teton National Park

- The first season of a food waste collection pilot program in Grand Teton National Park was conducted May-October 2017. This collaboration took place as part of the Subaru Zero Landfill Initiative in Grand Teton National Park and included a number of regional organizations and Park concessioners. A total of 73 tons of food waste was hauled to the West Yellowstone Composting Facility in Montana. The second pilot season is underway with the goal of diverting 150 tons in 2018. A report of the 2017 program is available through ISWR.

■ Complete Survey of Commercial Food Waste Recovery Program

- Completed in 2016. ISWR staff and board volunteers Identified interest in and feasibility of a food waste recovery program among local, commercial food industry operations.



Fiscal Year 2018 Administrative Strategies

- Commit Additional Staff Time to R2ZW Planning
 - With the addition of a new customer service position in the spring of FY2017, more ISWR staff time is committed to R2ZW planning.
- Provide Zero Waste Event Toolkits and Instruction
 - Implemented spring/summer 2016.
 - ISWR supports and recognizes zero waste events through the ISWR Zero Waste Green Events Program. These events incorporate waste minimization tactics such as: waste stations with recycling and food recovery bins, reusable dinnerware and cups, instructional signage, zero waste volunteers, and enhanced outreach. ISWR zero waste event resources are available at [www.roadtozerowastejh.org](http://roadtozerowastejh.org)
- Food Waste Minimization Opportunities
 - Generate awareness and recognition for food waste minimization opportunities including sourcing local food, donating food for human/animal consumption, and composting.
- Support Development of Town of Jackson (TOJ) and Teton County Green Purchasing Policies
 - ISWR is working with Teton County sustainability planners and TOJ to support the inclusion of green purchasing policies in internal sustainability plans.
- Provide Waste Diversion Information in Support of Efforts to Reduce Plastic Bag Use by Retail and Food Service Businesses
 - ISWR staff provided waste diversion data and education/outreach recommendations for citizen efforts to reduce plastic bag use in Teton County.

Pay As You Throw Strategies

- Explore Residential Pay As You Throw (PAYT) Ordinance
 - ISWR is researching PAYT programs in comparable communities and working with TOJ to explore options for the implementation of variable rate solid waste disposal services.

Recycling Strategies

- Consider Opportunities for Acceptance of New Materials for Recycling
 - ISWR staff to research and consider opportunities to add additional materials to the recycling program. Items for consideration include: mattresses, cartons, expanded polystyrene, gypsum board, asphalt, etc...

Composting Strategies

- Education/Outreach to Promote Residential Backyard Composting
 - ISWR plans to distribute information on backyard composting, lawn mower mulching, and other practices to reduce waste and reinforce sustainable home and lawn care practices. This outreach will occur in conjunction with Eco-Fair and the ISWR annual Backyard Composting Workshop and Sustainability Series.

Appendix B

Calculating Waste Diversion From Landfill

The formula for calculating waste diversion varies widely among zero waste communities. Discussion is underway nationally to coordinate the tracking and reporting of municipal data, but it will likely be a number of years before a standard takes shape. In the meantime, Teton County follows the general formula common to communities of similar size and situation:

$$\text{Waste Diversion from Landfill} = \frac{\text{Amount of Material Diverted} \text{ (Reused + Recycled + Composted + Waste to Energy + Hazardous Waste)}}{\text{Amount of Material Diverted} + \text{Amount Landfilled}}$$

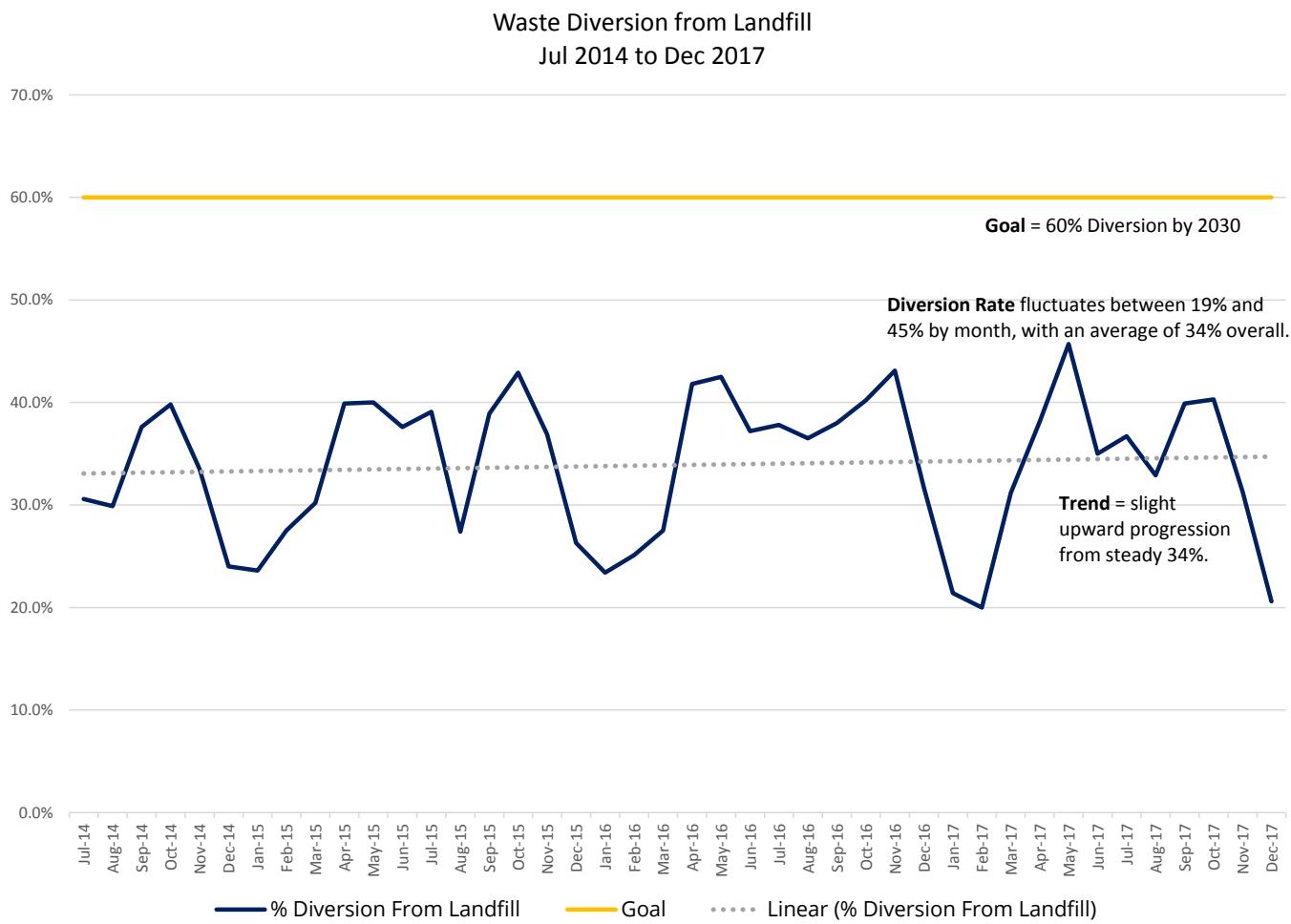
Materials delivered to ISWR facilities that are **included** in waste diversion from landfill totals:

- Recyclables
- Reusables (textiles, books)
- Electronics
- Compostables (yard waste, sod, manure, food waste pilot program FY2018 only)
- Household hazardous waste
- Construction and demolition materials (dimensional lumber, wood, concrete)
- Tires - recycled into athletic field cushioning FY2015-2016; processed as waste to energy FY2017-18.

Materials delivered to ISWR facilities that are **excluded** from waste diversion from landfill:

- Landfill bound discards
- Clean fill - used in landfilling operations

The following graph illustrates the percentage of waste diversion from landfill from Jul 2014 to Dec 2017. The diversion percentage is progressing steadily from 34%.



Appendix C

Additional Waste Diversion Calculations

Currently, Teton County reports progress on the Road to Zero Waste as percent diversion from landfill (see Appendix B). As mentioned above, this is the standard for communities of similar size and scope. As waste diversion reporting methods evolve, there continue to be a myriad of approaches to measuring and tracking this information. Teton County will continue to research and monitor these trends over the near term and may begin to include additional calculations and tracking metrics in annual zero waste reporting. The following are brief descriptions of some of the additional calculation methods used in other communities.

Per capita waste generation, or pounds per person per day, is an example of an alternative waste diversion measurement. This indicator, as explained by the Environmental Protection Agency, is intended to connect waste diversion trends to the patterns and behaviors of individuals. According to the EPA, the national average for waste generation per person per day is 4.38 pounds. Note: per capita calculations in Teton County would be based upon the seasonal effective population, to accommodate for seasonal tourism patterns.

Some communities calculate a **Recycling Rate** in addition to overall waste diversion. This provides the opportunity to look specifically at

recycling activity; excluding compost, construction, and other industrial materials. This may be useful in Teton County to monitor any future diversion efforts that target specific recyclables (see Long Term goals requiring the separation of corrugated cardboard or beverage containers for recycling).

Another distinction communities make is between true zero waste, as defined by the **Zero Waste International Alliance (ZWIA)**, and the broader practice of simply diverting or sending less to the landfill. The ZWIA definition of zero waste excludes disposal through burning (incineration) or burying (landfilling). Material disposed of through either of these methods is not included in true zero waste accounting. Teton County and the Town of Jackson both adopted resolutions in keeping with the ZWIA definition of zero waste, with the ultimate goal of not disposing of material through burning or burying. At present, however, opportunities to divert material through true zero waste means can be limited. When access to services is available, decisions regarding solid waste management and disposal are based upon the following EPA waste disposal hierarchy: Reduce, Reuse, Recycle/Compost, Incinerate (or Waste to Energy), and, finally, Landfill.



- 1% for the Tetons
- A touch of class
- ACE Hardware
- Akasha Yoga
- AllTrips
- Alpenhof Lodge
- Altamira Fine Art
- Alternative Building Solutions LLC
- Amangani
- Barker-Ewing River Trips
- Belle Eco
- Bentwood Inn
- Big-D Signature
- Blue Spruce Cleaners
- Bon Appe Thai
- Boreal Property Management
- Bridger-Teton National Forest
- Browse 'N Buy
- Cafe Genevieve
- Carney Logan Burke Architects
- Center For the Arts
- Central Wyoming College
- Changes Hair Salon
- Clearview Strategies, Inc
- Community Entry Services
- Community Foundation of Jackson Hole
- Cowboy Coffee Co.
- Crazy Horse
- Current LLC
- Dornan's

- EcoTour Adventures
- Elk Refuge Inn
- Esteam Architecture, LLC
- Exitus Escape Room
- Flat Creek Ranch
- First Interstate Bank
- Four Seasons Resort and Residences- Jackson Hole
- Friends of Pathways
- Frontier Landscape Maintenance
- General Laundry
- Glorietta's
- Goosewing Ranch
- Grand Targhee Resort
- Grand Teton Lodge Company
- Haagen-Dazs
- Habitat for Humanity of the Greater Teton Area
- Hawtin Jorgensen Architects
- Healthy Being Juicery
- Heather James Fine Art
- Hole Food Rescue
- Hotel Jackson
- Hotel Terra
- Huidekoper Ranch
- Hungry Jack's
- Inn at Jackson Hole
- Inn on the Creek
- InSight Sustainability
- Jackson Cupboard
- Jackson Curbside Recycling
- Jackson Hole Airport
- Jackson Hole Chamber of Commerce
- Jackson Hole Childrens Museum
- Jackson Hole Community Housing Trust
- Jackson Hole Community Radio (KJHL)
- Jackson Hole Conservation Alliance
- Jackson Hole Insurance Services
- Jackson Hole Land Trust
- Jackson Hole Lodge
- Jackson Hole Mountain Resort F&B
- Jackson Hole Mountain Resort OPS
- Jackson Hole News&Guide /
- Jackson Hole Daily
- Jackson Hole Pop
- Jackson Hole Real Estate Associates
- Jackson Hole Still Works
- Jackson Hole Wild
- Jackson Hole Wildlife Safaris
- Jackson Whole Grocer
- Jedediah's at the Airport
- Jenny Lake Boating
- JH Compunet
- Jtec, Inc.
- Kilmain Painting
- Lexington at Jackson Hole Hotel & Suites
- Local Restaurant and Bar
- Lucky's Market
- Million Dollar Cowboy Steakhouse
- Montessori School of the Tetons
- National Museum of Wildlife Art
- Native
- New West Knife Works
- Northern Rockies Conservation Cooperative
- Orvis Jackson Hole
- O'Ryan Cleaners
- Painted Buffalo Inn
- Penny Lane Cooperative
- Persephone Bakery
- Pet Place Plus
- Picas Mexican Taqueria
- Picnic
- Pizzeria Caldera
- Premier Green Cleaning Services LLC
- Pureley By Chance
- Pursue Movement Studio
- Quiznos Sub
- RAD Recycling
- Red Rock Ranch
- Rendezvous River Sports
- Riverwind Foundation
- Rocky Mountain Bank
- Rustic Inn Creekside Resort and Spa
- Signal Mountain Lodge
- Signal Mountain Lodge Restaurants (Trapper Grill, Peaks Restaurant, Deadman's Bar, Leek's Pizzeria, Skillet
- Staff Dining)
- Silver Star Communications
- Skinny Skis
- Slow Food in the Tetons
- Snake River Anglers
- Snake River Brewery
- Snake River Grill
- Snow King Mountain Resort
- Spring Creek Animal Hospital
- Springhill Suites Marriott Jackson Hole
- St. John's Medical Center
- Stio Mountain Studio
- Straw Free Jackson Hole
- Sweet Cheeks Meats
- Terra Firma Organics
- Teton Backcountry Rentals
- Teton Barber Shop
- Teton Conservation District
- Teton County
- Teton County ISWR
- Teton County Library
- Teton County Search and Rescue Foundation
- Teton County Weed & Pest District
- Teton Gravity Research
- Teton Motors, Inc.
- Teton Mountain Lodge & Spa
- Teton Mountaineering
- Teton Outdoor Adventures
- Teton Pines Country Club
- Teton Raptor Center
- Teton Science Schools
- Teton Tailoring & Haberdashery/ JH Sewing Store
- Teton Technology Solutions
- Teton Valley Community Recycling
- The Alpine House Lodge & Cottages
- The Liquor Store of Jackson Hole, Inc
- The Wort Hotel
- Togwotee Mountain Lodge
- Town of Jackson
- Trail Creek Ranch
- TravelStorysGPS
- Trio
- Turner Fine Art
- Turpin Meadow Ranch
- Valley Bookstore
- Vertical Harvest
- Westbank Sanitation
- Wyoming Karate Club, Inc.
- Xanterra Parks & Resorts in Yellowstone
- Xtropy Web Marketing, LLC
- Yellowstone-Teton Clean Cities