Regular Town Council Workshop

September 16, 2024
1:30 PM
Town Council Chambers
Chair: Hailey Morton Levinson

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I. ZOOM LINK FOR PUBLIC PARTICIPATION

The Town reserves the right to close Public Comment via Zoom at any time. In-person comment will continue to be taken and written comments can always be submitted to Town Council by emailing electedofficials@jacksonwy.gov.

To join, click link or copy it to your browser: https://us02web.zoom.us/j/81628154593?pwd=rx73lt5Jd5T7VF8tpQiXTrw5fonh6f.1

Or join at zoom.com with Webinar ID: **+1 719 359 4580** and Password: **816 2815 4593** or by phone: **83001**

II. CALL TO ORDER AND ROLL CALL

III. WORKSHOP ITEMS

A. Total Compensation and Benefits Review (Roxanne Robinson, 60 mins)

B. Police Officer Staff Retention (Roxanne Robinson, 45 mins)

C. Pay As You Throw Pricing for Residential Trash Service (Tanya Anderson, 45 mins)

IV. MATTERS FROM MAYOR AND COUNCIL

V. UPCOMING AGENDA UPDATE

A. Council Priorities and Upcoming Agendas

VI. ADJOURN

Please note that at any point during the meeting, the Mayor may change the order of items listed on this agenda. In order to ensure that you are present at the time your item of interest is discussed, please join the meeting at the beginning to hear any changes to the schedule or agenda.

STAFF REPORT

Meeting Date:	September 16, 2024	**Meeting Title:**	Workshop
Submitting Department:	Internal Services	**Presenter:**	Roxanne Robinson
Agenda Item:	Total Compensation and Benefits Review	**Public Comment:**	Yes

Purpose & Policy Considerations.
Council prioritized a review of the total compensation and benefits package at its January 2024 retreat as Phase 2 of completion of the Classification and Compensation Study begun in 2022. The purpose of this item is to review the adopted Pay Philosophy, for Council to gain an understanding of the employee benefit package, the value of that employee benefit package as it relates to the total compensation package, the value of that benefit package as it relates to the overall Town budget, and to provide the opportunity for Council to determine whether they would like more information on specific benefits.

Requested Action.
Staff requests no action at this time unless Council chooses to provide direction on bringing back more information on specific benefits.

Recommendations.
Staff recommends Council review the adopted Pay Philosophy, receive a presentation on the benefit package supporting that Pay Philosophy, the value of the benefit package and its relationship to total compensation and the overall Town budget, and take no action at this time. Staff will bring back information when the overall budget is being discussed and when Policy Manual updates are presented in order to:

1. Potentially offer more choice to employees,
2. Review the overall cost effectiveness of the benefit package,
3. Potentially address equity issues,
4. Potentially consider shifting funding currently allocated from benefits to wages, or between benefits, and
5. Potentially consider any enhancements to the benefit package.

Council may identify any additional areas for staff to provide information, recommendations and/or alternatives to Benefits and/or the Policy Manual to be considered at a future date.

Background.
This review of the benefits package is phase 2 in our process of a comprehensive review of pay and benefits. The identified phases are outlined below and decisions on evolving our practices and policies can occur at any phase and have already occurred with Phase 1:

Phase 1: Adoption of a Pay Philosophy and Cost of Labor and Merit Increase Plan (Completed January 2023)
Phase 2: Review of Benefits Portion of the Total Compensation Package (Fall 2024)
Phase 3: Comprehensive Update of the Policy Manual (Including Leave Policies) (Fall/Winter 24-25)
Phase 4: Adoption of an Employee Housing Strategy (Fall 2025)

A review of the benefit package first begins with the Pay Philosophy and Key Components that were adopted by Resolution in early 2023 when the Classification and Compensation Study was completed. References to benefits are italicized and in red below.

Town of Jackson Pay Philosophy

The Town of Jackson recognizes that its employees are its greatest asset in providing quality municipal services and strives to maintain a positive organizational culture. To maintain that positive culture, the Town is committed to showing how much it values its employees *through comprehensive compensation and benefits packages.* The Town of Jackson's philosophy is to retain the incredible staff we have, recruit new staff fitting into our organizational culture and philosophy through providing clear and transparent pay bands, grade assignments, and an overall pay plan competitive with the market. The Town also prioritizes retention of current employees through an advancement program that fosters career progression across the organization. *In addition, the Town encourages work/life balance by providing a significant paid time off program* and regularly recognizes staff through appreciation awards. Going forward, the Town is committing to complete annual cost of labor check-ins to guide annual market and merit adjustments and a comprehensive compensation study every 5-7 years.

Town Pay Philosophy Key Components

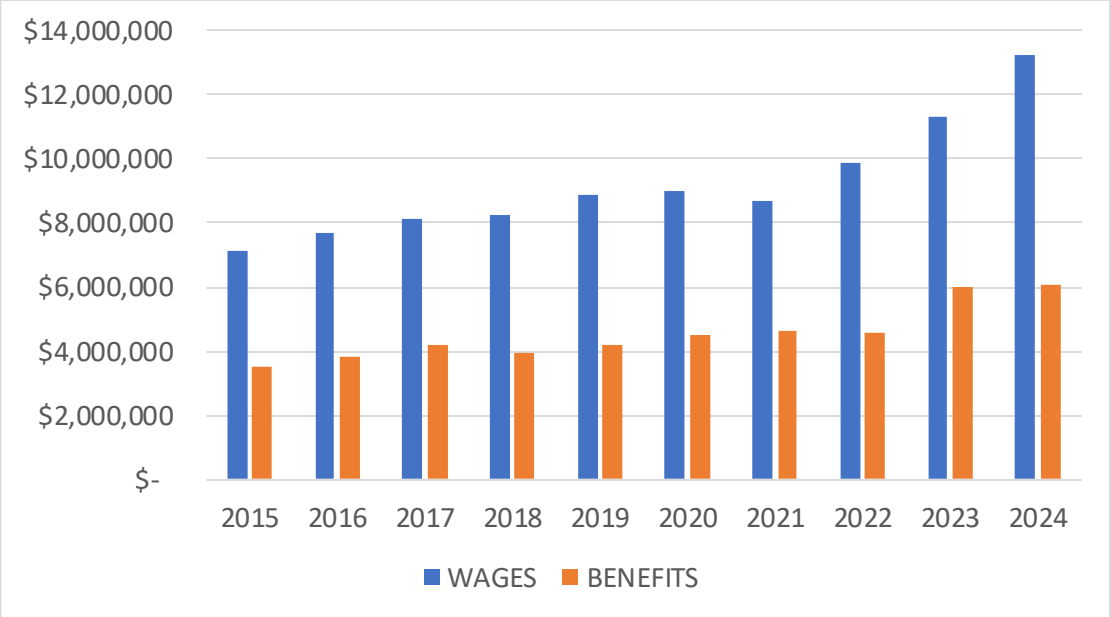
The Town of Jackson:

- Strives to maintain a values based, positive organizational culture by:
  - Prioritizing culture-building training,
  - Emphasizing equity and inclusion in the workforce, and
  - *Supporting a comprehensive classification and total compensation package that allows the Town to successfully attract and retain qualified employees who stay with the Town for the long-term.*
- Prioritizes retention of current staff by:
  - Anchoring our pay plan utilizing a lead/lag approach to market wages,
  - Supporting an annual review and update of pay plans and wages using comparative data, and
  - Completing a comprehensive classification and compensation study every 5-7 years.
- *Recognizes the need for and provides high-quality benefit packages that incentivize retention that leads to work/life balance for employees by prioritizing:*
  - *Health care security,*
  - *Long term employee retirement investment,*
  - *Disability insurance coverage, and*
  - *Significant paid time off program.*
- Defines the market for employees by comparing with peer, rocky mountain resort communities for all positions, and other regional peer and private sector organizations for non-exempt and public safety positions.
- Defines 3 separate open range Title and Grade Structures for Exempt, Non-Exempt, and Public Safety with supplemental income options that allows the Town to:
  - Set a narrower range spread for non-exempt employees in order to adequately recruit at a competitive starting wage while recognizing the potential for a shorter time frame to achieve proficiency,
  - Identify sworn law enforcement as a separate critical class of non-exempt professionals,
  - Provide flexibility in determining merit increases as one of the initial steps in the annual budgeting process, and
  - Augment hourly wages for priority targeted activities and positions.
- Supports recognition and retention of employees through formalization of an advancement program to foster career progression for multiple positions throughout the organization with a corresponding wage increase.

The benefits provided to employees, when combined with salaries, constitutes the total compensation package for employees. The goal of the total compensation package, combined with supportive policies and practices, is to recruit new employees and retain the highly capable and competent staff currently serving our community. Comprehensive benefit comparison information from responsive surveyed peer communities was provided to Council in 2022 with the results of the Classification and Compensation Study and the results of that survey are attached to this staff report. At that time, the budget implications of each employee benefit provided was not discussed and any comprehensive benefit

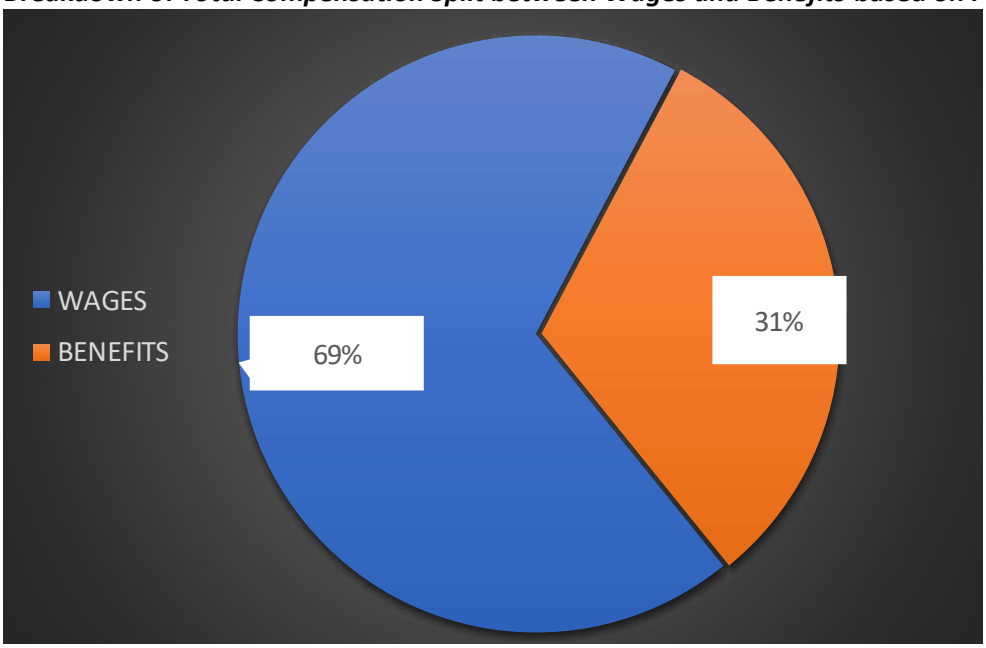
discussion was delayed in order to focus on bringing employee wages up to the market level and adoption of a pay philosophy. The following charts show an overview of the cost of wages and benefits to the organization, a comparison of the cost of benefits to the overall budget and the makeup and cost of the current employee benefit package for context and consideration in this discussion.

Bar chart and table showing the *Cost of Wages and Benefits for the past 10 years* based on actual expenditures:

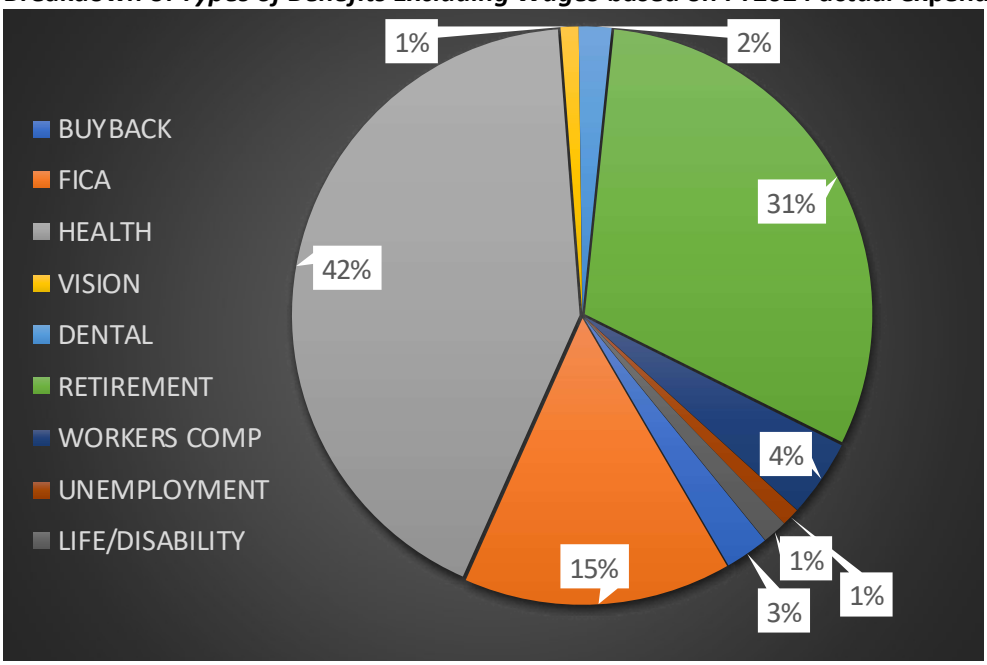


	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
WAGES	$ 7,155,558	$ 7,681,134	$ 8,116,797	$ 8,249,804	$ 8,895,073	$ 8,991,822	$ 8,651,447	$ 9,891,262	$ 11,315,576	$ 13,203,016
BENEFITS	$ 3,486,489	$ 3,803,222	$ 4,200,863	$ 3,962,248	$ 4,214,625	$ 4,526,150	$ 4,657,038	$ 4,591,197	$ 5,986,602	$ 6,048,914
FULL-TIME EQUIVILANTS	136	135	142	144	147	149	141	142	146	153

Breakdown of *Total Compensation Split between Wages and Benefits* based on FY2024 actual expenditures:

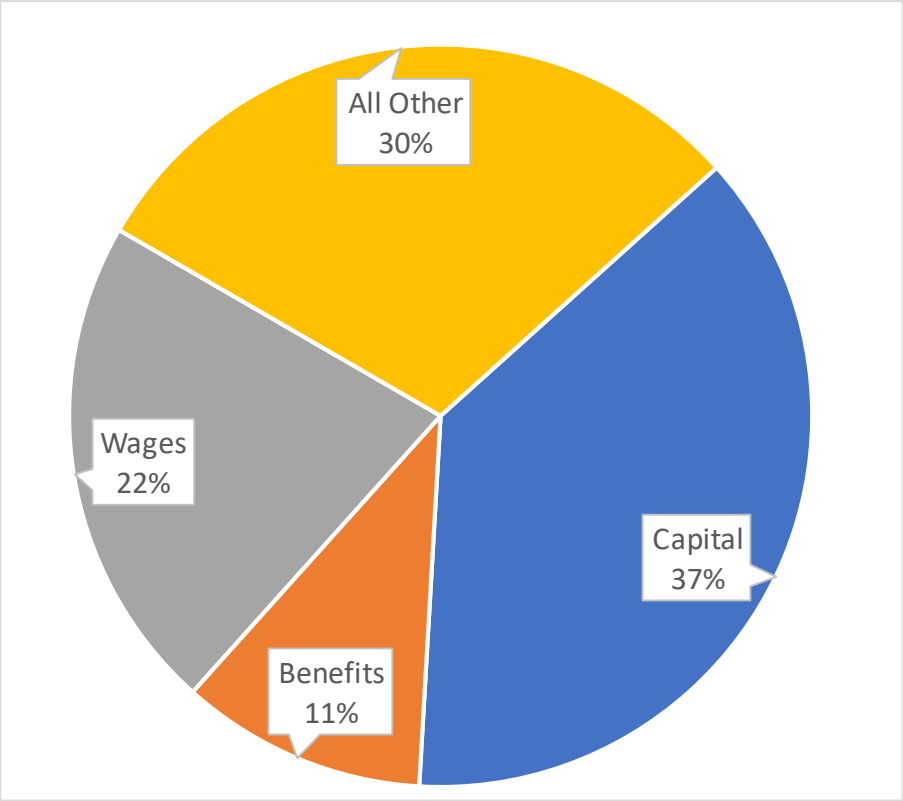


Breakdown of *Types of Benefits Excluding Wages* based on FY2024 actual expenditures:



Overall, the Town spent approximately $6.1 Million in FY24 on the benefit package provided to employees as one part of their total compensation. Please note that certain benefit expenditures increase simply as a result of base salary increases. The benefit package adds an additional 35-45% value to the employee on top of the wages provided.

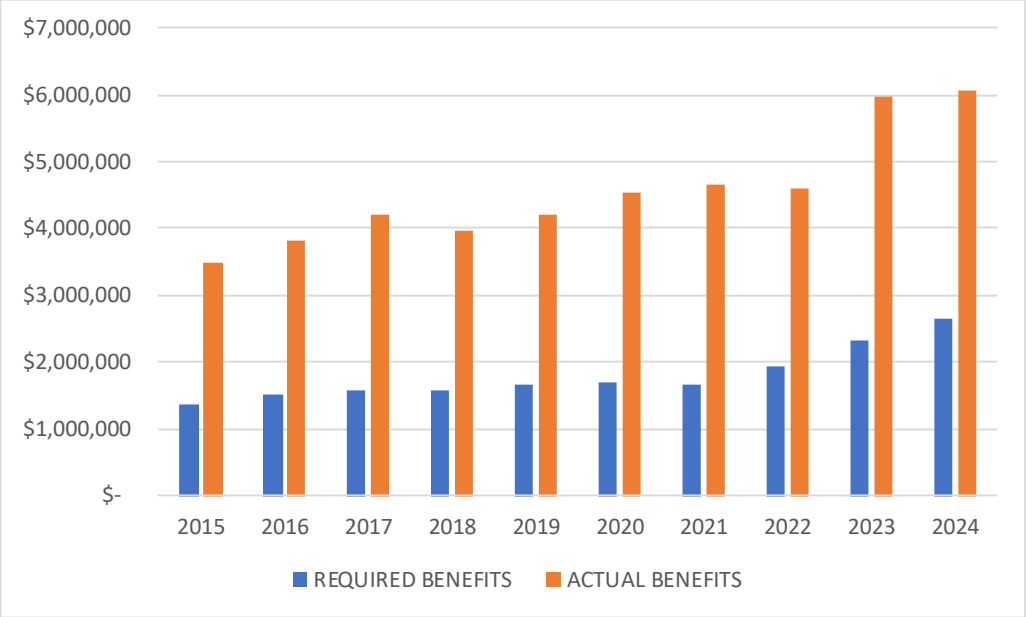
Chart and table show the *Ten-Year Average of Expenditures Town Wide [All Funds]* based on actual expenditures:



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Capital	$ 16,948,317	$ 10,974,517	$ 9,656,837	$ 12,479,419	$ 14,101,522	$ 10,947,078	$ 10,772,880	$ 5,475,994	$ 34,166,883	$ 33,987,292
Benefits	3,486,489	3,803,222	4,200,863	3,962,248	4,214,625	4,526,150	4,657,038	4,591,197	5,986,602	6,048,914
Wages	7,155,558	7,681,134	8,116,797	8,249,804	8,895,073	8,991,822	8,651,447	9,891,262	11,315,576	13,203,016
All Other	8,457,040	8,909,361	9,294,124	10,559,287	12,816,590	12,197,392	13,430,001	14,454,321	17,231,429	19,900,726

In terms of required provision of benefits, the Town of Jackson is *not* required to provide benefits other than the Federal Insurance Contributions Act (FICA) which earns employees credits for Social Security benefits and Medicare, Worker's Compensation, State Unemployment, Wyoming Retirement System (WRS) minimum contributions (because we are currently a member of WRS), the provision of minimal health insurance pursuant to the Affordable Care Act (Required to Offer Health Insurance Coverage due to having more than 50 employees), and unpaid Family and Medical Leave Act (FMLA) job protections. In support of the adopted Pay Philosophy, the Town provides a premium benefit package above the minimum required benefits. The chart below compares required versus discretionary benefits for context and consideration in this discussion.

Bar chart and table showing *Required Benefits vs Discretionary Benefits* paid for the past 10 years based on actual expenditures:



	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
ACTUAL BENEFITS	$ 3,486,489	$ 3,803,222	$ 4,200,863	$ 3,962,248	$ 4,214,625	$ 4,526,150	$ 4,657,038	$ 4,591,197	$ 5,986,602	$ 6,048,914
REQUIRED BENEFITS	$ 1,377,002	$ 1,512,802	$ 1,567,524	$ 1,581,162	$ 1,663,456	$ 1,704,305	$ 1,674,044	$ 1,919,226	$ 2,310,260	$ 2,665,406
DISCRETIONARY SPENDING	$ 2,109,487	$ 2,290,419	$ 2,633,339	$ 2,381,086	$ 2,551,170	$ 2,821,844	$ 2,982,994	$ 2,671,972	$ 3,676,342	$ 3,383,508

The main components (see attachment for further details) of the Town's benefit package have not significantly changed in the past 25-30 years including:

a. No requirement for health care premium contributions for family coverage or single coverage. Other plans may cover the premium contribution for the employee's coverage but have evolved to require the employee to pay all or a portion of the difference for spouse/family coverage.
b. The Town pays a significant portion of the employee's contribution to the Wyoming Retirement System. Other organizations may have evolved such that the employee pays their required share of the contributions or a larger portion of the required employee share.
c. Limited changes to the generous Paid Time Off (PTO) system. The PTO system was created in the early 2000s, and the only significant changes since then were to increase the years required to advance to the second tier of base PTO from 3 years to 5 years, creation of a smaller PTO balance combined with holiday wages for Full Time Transit Operators, and the addition of 8 hours of base PTO to allow employees to observe the Juneteenth federal holiday. Leave policies in other organizations may have evolved during this time period.

Additionally, staff notes that the benefit package is neither equal for all employees (providing the same resources and opportunities to everyone), nor is it entirely equitable (providing every employee resources proportional to their needs). A simple example to consider in understanding equity is providing size 10 shoes to a group of people rather than shoes that actually fit each individual. Putting this in context with the benefit plan, the healthcare plan may be more beneficial to employees that are married with kids than someone who is single, but both groups have similar options. Compensation and benefits are not and cannot be either one-size-fits-all or tailored for every employee individually. However, a related consideration here is if Council would like staff to explore areas in the benefit plan that may be tweaked to make them more equitable.

Charts summarizing the Town's current benefits are provided below broken down into three categories: 1) required benefits provided to all employees, 2) discretionary benefits available to all employees, and 3) discretionary benefits not available to all employees. A document further explaining the details of each benefit and historical data back to 2015 is attached to this staff report. Staff will present a summary of the below information at the workshop for Council questions, comment and discussion. Please note that Staff is not presenting a comprehensive picture of the housing benefits (highlighted in yellow) (example: rights of first purchase, employee rental offerings, rents charged, etc. are not included) and Staff is not asking Council to review housing at this time. Comprehensive employee housing benefits will be discussed when the Housing Strategy is brought forward in the fall of 2025. Additionally, Staff is not presenting the full detail associated with leave policies (highlighted in yellow). The policies related to leave that were surveyed in the Baker Tilly Classification and Compensation Study are detailed in this report. Leave policies will be addressed when staff brings forward a comprehensive rewrite of the Policy Manual. Additional intangible benefits such as training, travel and employee development are not included in this summary but do have a positive impact on employee retention and morale.

Required Benefits Provided to All

	Benefit	Summary	Cost to the Town - FY24 Actual
1	FICA	Federal Payroll Tax Funding Social Security & Medicare	$985,040
2	Worker's Compensation	State Fees Based on Salary for Wages Paid for Absences Due to Injury	$264,396
3	Unemployment Insurance	State Fees Based on Salary for Wages Paid for Employees Laid Off	$8,096
4	Healthcare: Medical Insurance	Employee Coverage With Deductibles	$267,300
5	Retirement Contributions	Wyoming Retirement System (WRS) 9.37% and 9.5% for Public and Police Pension Plans Due to Membership	$1,140,574
6	Family and Medical Leave Act (FMLA) Leave	12 Weeks (480 hours) Unpaid Leave For Specific Reasons	$0 Direct, Indirect - Productivity Loss, OT for Others, Etc.

Discretionary Benefits (Not Required) Available to All

	Benefit	Summary	Cost to the Town - FY24 Actual
7	Healthcare: Medical Insurance	Employee/Spouse/Family Medical Insurance Maximum Coverage including Full Premium Payments and Matching Health Savings Account Contributions	$2,305,614
	Healthcare: Dental Insurance	Employee/Spouse/Family Dental Insurance Maximum Coverage including Full Premium Payments	$110,200
	Healthcare: Vision Insurance	Employee/Spouse/Family Vision Insurance Maximum Coverage including Full Premium Payments	$21,410
8	Life Ins. & Short & Long Term Disability Ins.	Life Insurance Policy and Replacement Wages after 15th Day of Absence	$84,305
9	Retirement Contributions	Wyoming Retirement System (WRS) Town Contributes Addl 6.7% for Public Pension Plan and 2.93% for Police Pension Plan	$711,923
10	Deferred Compensation Matching Contributions	Self Funded Retirement Investment Program Where Town Matches Up to $1000 Per Employee Investment	$66,124
11	Childcare Benefit	Employees have Rights of First Placement at Town Provided Childcare Facility Operated by Vendor	$0 Direct, Loss in Rental Revenue to Town Approx $36,000
12	Tuition Assistance	75% Tuition Reimb for Degree Programs in Field and 50% Tuition for Degree Programs Outside Field Upon Request	Annual Average of $6,838 since 2015
13	Bus Pass Subsidy	Employees Receive 50% Discount on all Bus Passes	$1,260 into START Fund
14	Paid Time Off (PTO)	Sick Leave, Holidays, & Vacation for 139 Benefitted Employees Averaging 273 hours Annually	Employee Paid 2080 Hours Whether Working or on Leave. Hours out of 2080 that could be PTO for Approx 139 Employees is $1,483,976
15	Cash Out of PTO	40 hr Cashout of PTO Each Fiscal Year & at Separation	$158,848
16	Paid Parental Leave	80 Hours Paid Leave to Care for Birth of a Child	$11,090
17	Requirement to Only Utilize 1/2 Paid Leave Concurrent with FMLA	Employees Required to Utilize 1/2 of PTO Available at Time of FMLA Instead of All PTO Available	Employee Paid 2080 Hours Whether Working or on Leave

Discretionary Benefits (Not Required) – Not Available to All

	Benefit	Summary	Cost to the Town - FY24 Actual
18	Housing Assistance	Police Officers Receive 2 Yrs of 1/2 Rent in Town unit or $500/mo Stipend If Residing in Teton County	Lost Rent - $33,416 $500 Stipend - $0
		All Other: Temp Housing Stipend/Reduced Rent - New Hires, Reduced Rent - Summer Interns, Taxable Benefits - Long Term Housing Agreements for Executives, Temp Rent Suspension - Repairs, and Similar Situations	All Other - $33,709
19	Shift Differentials	Police Officers DUI Enforcement Grant - Overtime Rate	Wages Reimbursed, Benefits on Wages Not Reimbursed
		Police Officers Airport Duty Per Contract- $3/hr Premium Rate	$3 Premium + Benefits on Wages Reimbursed, But Overhead for Hiring/Training/Housing Addl Officers to Provide Service Not Reimbursed
		Commuter Transit Operators - Commuter Route $1.50/hr Premium Rate	$12,198
20	Stipends	Spanish Fluency Stipend $12.50 - $400/mo DOQ	$33,188
		Commuter Operator Report Stipend $50.40/day for Star Valley & $37.74/day for Teton Valley	$576
		Cell Phone Stipend $75/mo.	$61,238
21	Bonuses	Police Officers - $3,000/year for 5 Years	$43,094
		Public Works CDL Street/Water/Sewer Operators - $2,500/year for 3 Years	$17,244
		Winter/Summer Transit Operators - $8,700 Winter/$300 Summer	$233,029
22	Take Home Car	Police Officers Able to Drive Assigned Vehicle To Residence From Town Limits to Lincoln County, Sublette County, Idaho in Exchange for Reimbursement of Fuel	10 Officers Paid Approx $15,000 for Fuel. Impact of annual Wear & Tear/Higher Maintenance Costs/Quicker Replacement of 10 vehicles Estimated $45,082.

Analysis and Key Policy Questions.

When discussing the overall budget, wages and benefits are areas where the Town makes a significant investment. When thinking about how to address the costs associated with wages and benefits the Town may consider:

1) A new source of revenue, and/or
2) Reducing staff (which would need to correspond with reducing services), and/or
3) Reducing expenditures in the overall budget that may include a reduction in total compensation (salaries and benefits) along with reductions in other areas of the Town overall budget.

Staff is not requesting direction at this time. Staff requests feedback from Council on any additional areas the Council finds appropriate for further consideration.

Key Policy Question: Does Council support staff's recommendation to bring back information when the overall Town budget is being discussed and when Policy Manual updates are presented in order to:

1. Potentially offer more choice to employees,
2. Review the overall cost effectiveness of the benefit package,
3. Potentially address equity issues,
4. Potentially consider shifting funding currently allocated from benefits to wages or between benefits, and
5. Potentially consider any enhancements to the benefit package.

If the answer is yes to staff's recommendation, no action is needed. Council may identify any specific areas for staff to provide additional information.

Possible Alternatives.

Staff have identified the following alternatives:

- Council could choose to provide no direction at this time.
- Council could direct staff to provide additional information and/or alternatives to specific benefits.
- Council could direct staff to provide additional information and/or alternatives for benefit enhancements.
- Other.

Comprehensive Plan & Priority Alignment.

The ability of the Town of Jackson to implement and take actions aligned with the Comprehensive Plan depends on the ability to recruit and retain an effective workforce. Providing a quality benefit package that leads to recruitment and retention of employees in combination with a supportive pay philosophy is aligned with Common Value #3, Quality of Life, and directly relates to Section 8, Quality Community Service Provision.

Fiscal Impact.

The fiscal impact of each benefit is provided in this staff report and historical fiscal impacts are also highlighted in the attachment. Should Council request additional information on certain benefits, further fiscal impact information will also be provided.

Staff Impact.

There is no direct staff impact of providing information to the Council on the benefit package or the value and fiscal impact on the budget of those benefits. Any staff impact would depend ultimately on the evolution of any components of the benefit package. If the benefit package evolves, some changes may benefit one group of employees while altering benefits for others. Specific staff impacts will be presented with any future staff reports on requested areas.

Staff have spent approximately 200 hours on preparation of this staff report.

Attachments or Links.
Resolution 23-03 Pay Philosophy
Benefit Package Detail and Historical Expenditures
Baker Tilly Appendix for Pay Plan and Benefit Practices.

Suggested Motion. *Council always has the option to adopt, approve with conditions, continue, or deny items*.

I move to support Staff's recommendation to bring back information when the overall Town budget is being discussed and when Policy Manual updates are presented in order to:

1. Potentially offer more choice to employees,
2. Review the overall cost effectiveness of the benefit package,
3. Potentially address equity issues,
4. Potentially consider shifting funding currently allocated from benefits to wages or between benefits, and
5. Potentially consider any enhancements to the benefit package.

RESOLUTION 23-03

A RESOLUTION ESTABLISHING A PAY PHILOSOPHY

WHEREAS, the Jackson Town Council recognizes the critical importance of recruiting and retaining staff members in order to provide the core services required and desired by the Town of Jackson residents, the greater Jackson Hole community and guests to our beautiful and well maintained community; and

WHEREAS, providing for the health, safety and welfare of the community we serve is core to the purpose and mission of the Town of Jackson organization; and

WHEREAS, recruiting and retaining quality employees is essential for fulfilling the vision and common values of community character set forth in the Comprehensive Plan; and

WHEREAS, in order to provide additional clarity for current and future staff and elected officials regarding the Town Council's approach towards classification and compensation and to guide all future compensation decisions adoption of a Pay Philosophy is warranted; and

WHEREAS, establishing a Pay Philosophy by resolution reinforces the Council's support for staff that was expressed by Council's adoption of the Pay Philosophy as part of the actions taken to implement the Classification and Compensation Study adopted at the December 19, 2022 Town Council workshop.

NOW THEREFORE, BE IT RESOLVED that the Jackson Town Council hereby establishes the following Pay Philosophy and Key Components as outlined:

Town of Jackson Pay Philosophy

The Town of Jackson recognizes that its employees are its greatest asset in providing quality municipal services and strives to maintain a positive organizational culture. To maintain that positive culture, the Town is committed to showing how much it values its employees through comprehensive compensation and benefits packages. The Town of Jackson's philosophy is to retain the incredible staff we have, recruit new staff fitting into our organizational culture and philosophy through providing clear and transparent pay bands, grade assignments, and an overall pay plan competitive with the market. The Town also prioritizes retention of current employees through an advancement program that fosters career progression across the organization. In addition, the Town encourages work/life balance by providing a significant paid time off program and regularly recognizes staff through appreciation awards. Going forward, the Town is committing to complete annual cost of labor check-ins to guide annual market and merit adjustments and a comprehensive compensation study every 5-7 years.

Town Pay Philosophy Key Components

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- Strives to maintain a values based, positive organizational culture by:
  - Prioritizing culture-building training,
  - Emphasizing equity and inclusion in the workforce, and
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- Prioritizes retention of current staff by:
  - Anchoring our pay plan utilizing a lead/lag approach to market wages,
  - Supporting an annual review and update of pay plans and wages using comparative data, and
  - Completing a comprehensive classification and compensation study every 5-7 years.
- Recognizes the need for and provides high-quality benefit packages that incentivize retention that leads to work/life balance for employees by prioritizing:
  - Health care security,
  - Long term employee retirement investment,
  - Disability insurance coverage, and
  - Significant paid time off program.
- Defines the market for employees by comparing with peer rocky mountain resort communities for all positions, and other regional peer and private sector organizations for non-exempt and public safety positions.
- Defines 3 separate open range Title and Grade Structures for Exempt, Non-Exempt, and Public Safety with supplemental income options that allows the Town to:
  - Set a narrower range spread for non-exempt employees in order to adequately recruit at a competitive starting wage while recognizing the potential for a shorter time frame to achieve proficiency,
  - Identify sworn law enforcement as a separate critical class of non-exempt professionals,
  - Provide flexibility in determining merit increases as one of the initial steps in the annual budgeting process, and
  - Augment hourly wages for priority targeted activities and positions.

- Supports recognition and retention of employees through formalization of an advancement program to foster career progression for multiple positions throughout the organization with a corresponding wage increase.

PASSED, APPROVED, AND ADOPTED this 6th day of March, 2023.

TOWN OF JACKSON

Hailey Morton Levinson, Mayor

ATTEST:

THE TOWN OF JACKSON INCORPORATED SEAL 1914 TETON COUNTY, WYOMING

Riley Taylor, Town Clerk

Town of Jackson Benefit Package Detail and Historical Expenditures
Attachment to Staff Report for September 16 Workshop

Please Note for Tables and Charts below:

- All values are 10-year actual expenditures for each fiscal year.
- Green data represents dollar figures.
- Orange data represents hour/staff impact figures.

REQUIRED BENEFITS SECTION (ITEMS 1-6)

1. **FICA (Social Security and Medicare)**
   Summary of benefit: FICA is a U.S. federal payroll tax that earns the employee credits toward retirement benefits (Social Security and Medicare). It stands for the Federal Insurance Contributions Act and is deducted from each paycheck. As you work and pay FICA taxes, you earn credits toward retirement benefits. The law requires employers to withhold a certain percentage of an employee's wages to help fund Social Security and Medicare. The total bill is split between the employer and the employee. The current tax rate for Social Security is 6.2% for the employer and 6.2% for the employee, or 12.4% total. The current rate for Medicare is 1.45% for the employer and 1.45% for the employee, or 2.9% total. The total employer contribution of 7.65% cannot be changed by Town.

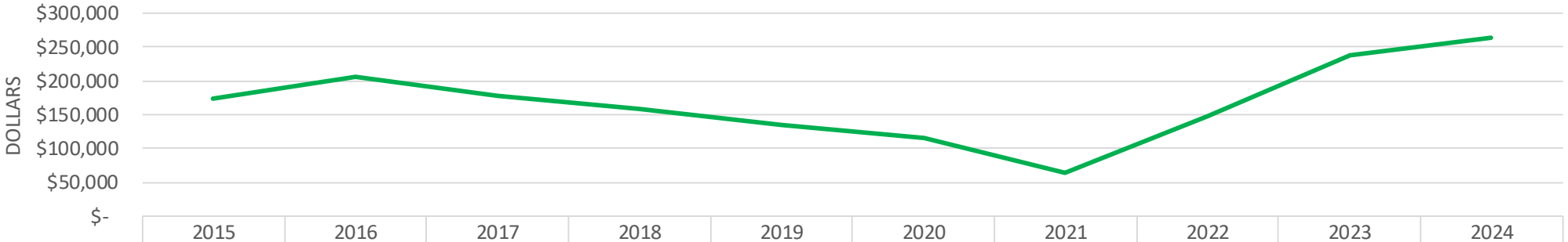
   Budgetary cost of benefit: The Town paid $985,040 for FICA in FY24.

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
DOLLARS	$527,805	$564,454	$594,698	$606,704	$659,736	$667,705	$641,440	$737,882	$851,214	$985,040

2. **Worker's Compensation (WC) Insurance**
   Summary of benefit: WC is a State of Wyoming (State) mandated program. WC is designed to protect both employees and employers from the negative consequences associated with a work-related accident. This is a type of insurance that provides medical care and benefits to employees who are injured or become ill due to their job. The Town pays an insurance premium to the State based on wages earned. The State then pays employees as claims occur.

The State sets the Town's insurance premium rate annually based on historical claims and benefits paid. The current rates are .3% for clerical staff and 2.6% for all other staff.

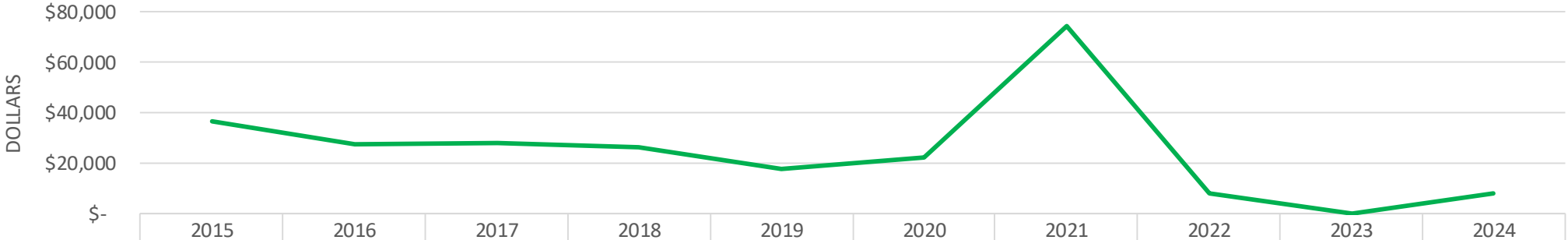
Budgetary cost of benefit:



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
DOLLARS	$174,147	$206,431	$177,435	$157,986	$135,447	$114,964	$63,564	$148,600	$238,851	$264,396

3. **Unemployment Insurance (UI)**
Summary of benefit: UI is a joint state-federal program that provides temporary financial assistance to unemployed workers who meet certain requirements. Unemployment insurance pays employees money if they lose their job through no fault of their own. The State manages its own program and pays benefits that follow federal guidelines. The State sets eligibility guidelines, benefit amounts, and the length of time benefits are available. The State sets the Town's insurance premium rate and wage base annually based on historical claims and benefits paid. The current rate is .2% and base wage is $30,900.

Budgetary cost of benefit:

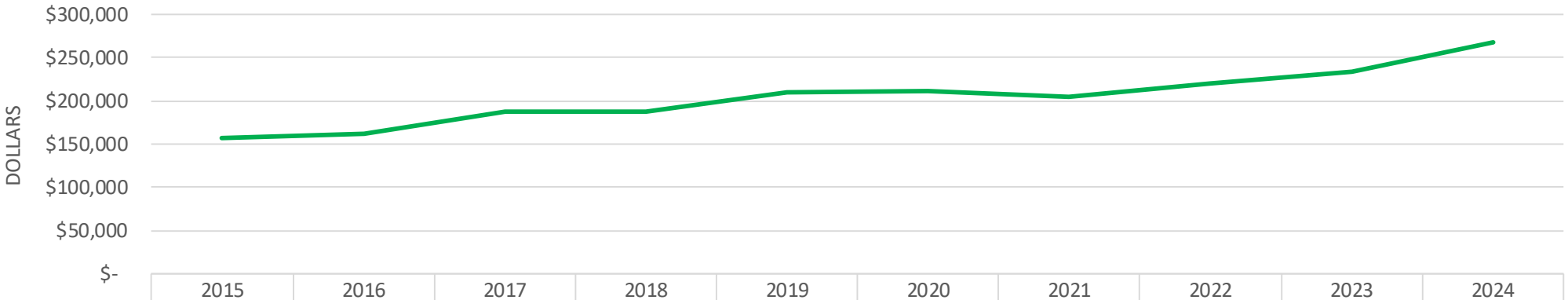


	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
DOLLARS	$36,791	$27,202	$27,860	$26,292	$17,614	$22,494	$74,579	$8,064	$-	$8,096

Note: 2021 rate increased for pandemic activity, the State then decreased rates as claims qualified for federal assistance.

4. **Healthcare Benefits – Medical Insurance**
   Summary of benefit: The Town's health insurance plan is described in the Baker Tilly Appendix on pages 13-18 along with comparisons to other responsive surveyed organizations. Because the Town has more than 50 full time employees, the Town is either required to provide affordable medical insurance of minimum value to employees or pay a penalty fee to the federal government.

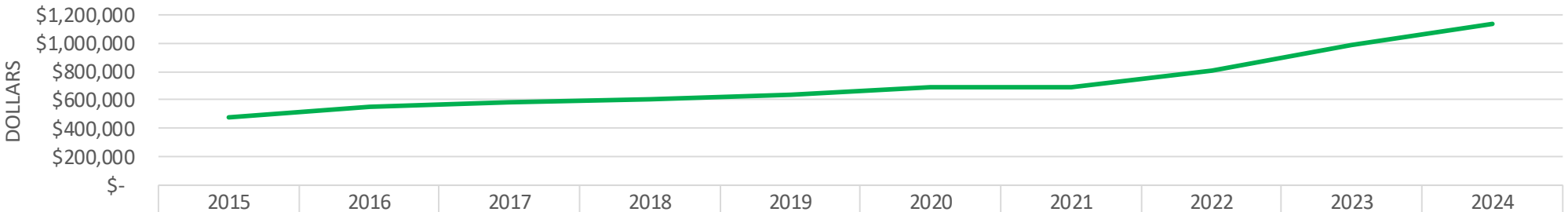
   Budgetary cost of benefit: In FY24, the cost to provide this minimum required insurance or pay the penalty fee would be $267,300.



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
REQUIRED	$156,000	$162,000	$187,580	$187,920	$210,000	$210,740	$205,200	$220,000	$233,280	$267,300

5. **Retirement Contributions**
   Summary of benefit: By statute, once in the Wyoming Retirement System (WRS), both employees and employers are required to contribute to the plan. The Town joined WRS in the 80s but the Town could decide to leave WRS and join a different pension plan. The Town is required to contribute 9.37% of wages for eligible employees in the WRS Public Employee Pension Plan and 9.5% of wages for eligible employees in the WRS Law Enforcement Pension Plan. The Town's retirement benefit is described on page 20 of the Baker Tilly Appendix.

   Budgetary cost of benefit: The cost to the Town of contributing the required amount in 2023 was $986,914 and in 2024 it was $1,140,574.



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
REQUIRED	$482,259	$552,716	$579,952	$602,260	$640,660	$688,403	$689,262	$804,681	$986,914	$1,140,574

6. **Family and Medical Leave Act (FMLA) Leave**
   Summary of benefit: FMLA requires employers offer unpaid leave for up to 12 weeks (480 hours) to eligible employees. This unpaid FMLA preserves the employee's job (or a substantially similar job) for this period under certain circumstances. Employees are eligible for unpaid FMLA for 1) incapacity due to pregnancy, prenatal medical care, or childbirth, 2) to care for the employee's child after birth, or placement for adoption or foster care, 3) to care for the employee's spouse, partner, child, or parent with a serious health condition, 4) a serious health condition that makes the employee unable to perform their job, 5) certain qualifying exigencies for employees with a spouse, partner, child or parent on active duty or called to active duty, or 6) caring for a covered service member or veteran undergoing medical treatment, recuperation or therapy, in outpatient status, temporarily disabled. FMLA is discussed on page 19 of the Baker Tilly Appendix.

   Budgetary cost of benefit: $0 Direct costs. Indirect costs incurred related to productivity loss, overtime for others, etc.

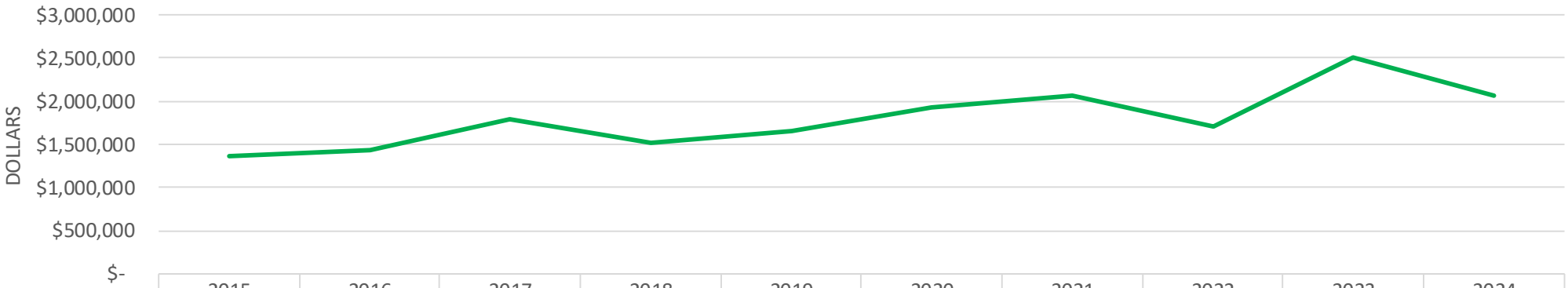
DISCRETIONARY BENEFITS SECTION (NOT REQUIRED) (ITEMS 7-22)

7. **Healthcare Benefits**
   Summary of benefit: In addition to what is required above in #4, the Town provides healthcare benefits above and beyond those required, including dental and vision coverage that are not required. As noted above, the Town's health insurance plan is described in the Baker Tilly Appendix on pages 13-18 along with comparisons to other responsive surveyed organizations. The Town's discretionary healthcare benefit results in coverage to employees above and beyond the minimum required and includes no premium contributions for single, spouse, or family coverage, lower than average deductibles for high deductible health savings account programs, matching Health Savings Account contributions, and no premium contributions for dental or vision coverage.

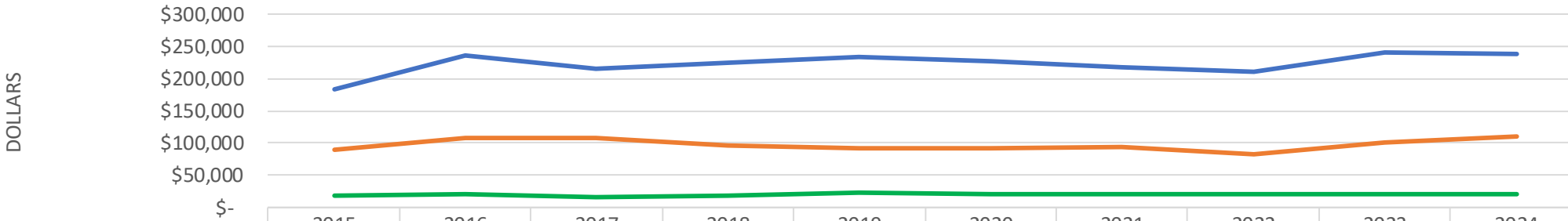
   The Town charges the minimum amount of deductible allowed by the IRS. For example, the Town charges a medical deductible of $3,200 to singles and $6,400 to families while the full deductible that could be charged (which is reflected in the deductible applied to separated employees electing coverage under the Consolidated Omnibus Budget Reconciliation Act (COBRA)) is $14,124 for singles and $34,267 for families.

The Town pays for the health/vision/dental insurance through a Self-Insurance Fund. The Town funds and pays insurance claims up to a base amount and then buys insurance to cover large claims over $90,000 (stop loss). The Town contracts with a third party administrator (TPA) to process our claims and that is a direct expense of $46,000 each year.

Budgetary cost of benefit: The following charts total $2,437,224, including medical, dental, vision, and health savings account, which are the discretionary portion of health benefits paid by Town.



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Medical	$1,366,020	$1,438,561	$1,784,015	$1,521,260	$1,656,193	$1,931,407	$2,061,915	$1,705,427	$2,512,758	$2,068,123

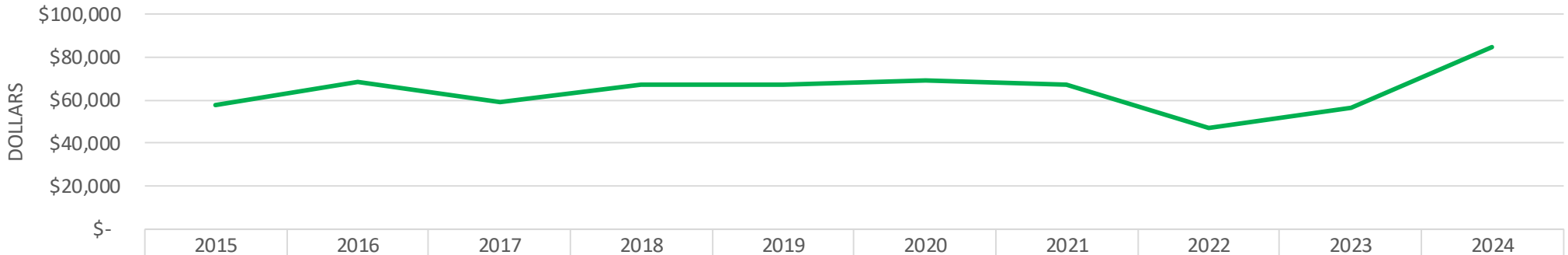


	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Dental	$89,882	$106,839	$107,168	$96,710	$92,166	$92,317	$93,354	$81,950	$101,487	$110,200
Vision	$18,148	$20,780	$16,649	$18,232	$23,391	$21,046	$20,867	$20,813	$20,964	$21,410
Health Savings Account	$183,833	$237,208	$215,778	$225,237	$234,875	$226,588	$218,453	$210,025	$239,872	$237,491

8. Life & Short and Long Term Disability Insurance

Summary of benefit: The Town's life insurance benefit is described in the Baker Tilly Appendix on page 17 along with comparisons to other responsive surveyed organizations. All organizations responding to the survey provide a life insurance benefit. The Town's short-and-long-term disability benefit is described in the Baker Tilly Appendix on page 18 along with comparisons to other responsive surveyed organizations. Short-and-long-term disability insurance is a replacement for a sick leave bank that the Town moved away from in 2000 when we switched to the PTO program and it provides 66 2/3 of the employee's wage. Should an employee experience a catastrophic injury or illness while working for the Town and end up leaving the Town's employment, short –and-long-term disability would continue to provide payments to them. Currently, premiums for life insurance, and short-and-long-term disability insurance are paid 100% by the Town.

Budgetary cost of benefit: In 2024, the Town paid $84,305 for Life & Short and Long Term Disability Insurance.

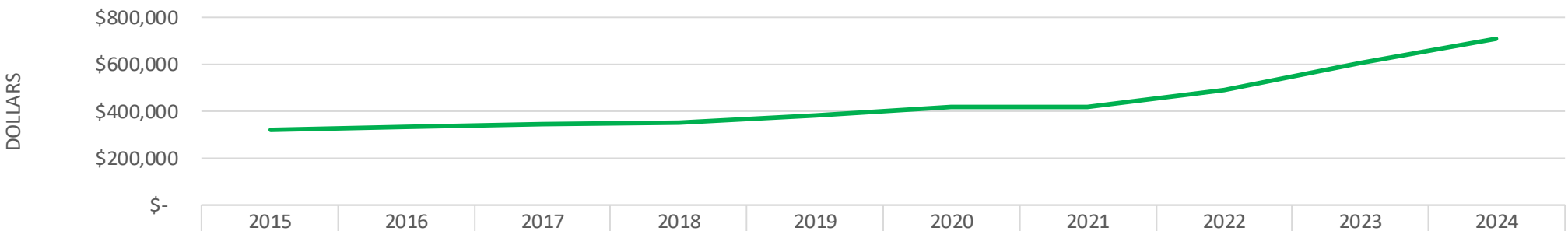


	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
DOLLARS	$57,718	$68,177	$59,026	$66,938	$66,937	$69,203	$66,954	$46,860	$56,081	$84,305

9. Retirement Contributions

Summary of benefit: In addition to the employer required contributions to WRS explained in #5 above, the Town pays a portion of the employee's required contribution. As noted above, the Town joined WRS in the 80s but the Town could decide to leave WRS and join a different plan. The Town contributes 6.7% of the employee's contribution ABOVE the required amount for eligible employees in the WRS Public Employee Pension Plan. The Town contributes 2.93% of the employee's contribution ABOVE the required amount for eligible employees in the WRS Law Enforcement Pension Plan. The Town's retirement benefit is described on page 20 of the Baker Tilly Appendix.

Budgetary cost of benefit: The cost to the Town of contributing more than the statutory minimum in 2023 was $609,179, and in 2024 it was $711,923.



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
DISCRETIONARY	$321,537	$331,571	$347,103	$351,390	$382,462	$418,853	$415,839	$492,500	$609,179	$711,923

10. **Deferred Compensation Matching Contributions**
Summary of benefit: Deferred compensation allows employees to invest money pre-tax into the Wyoming Retirement Deferred Comp program or Mission Square Deferred Comp (ICMA program) to augment the Wyoming Retirement System pension plan. The Town's deferred compensation benefit is described on page 21 of the Baker Tilly Appendix. This Town's matching program was started in FY2023 (July 1, 2022) and the Town provides matching contributions for deferred compensation up to $1000 annually as an incentive to encourage employees to further invest in their own retirement and not wholly rely on WRS. The Town currently has 68 employees contributing to deferred compensation.

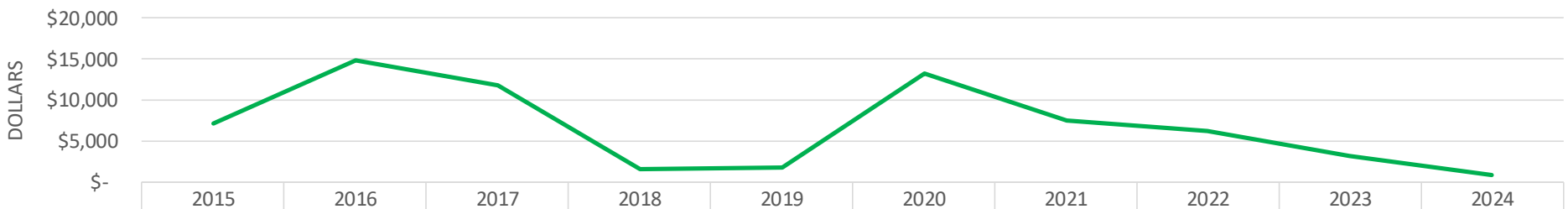
Budgetary cost of benefit: The cost to the Town of providing matching funds in 2023 was $60,923 and in 2024 was $66,124.

11. **Childcare Benefit**
Summary of benefit: The Town provides employees with first rights of placement for childcare in a facility owned by the Town of Jackson and operated by a for-profit entity in exchange for very low rent for the facility.

Budgetary cost of benefit: The cost of the childcare benefit is difficult to quantify but it could be looked at in terms of the rent the Town could generate from leasing the childcare space at a market rate or utilizing it for employee housing. The market rate to rent this as commercial space to the public is approximately $3000/month. and would be approximately $36,000 per year.

12. **Tuition Assistance**
Summary of benefit: The Town provides tuition reimbursement of 75% for courses/degree programs related to the employee's field and 50% if the classes do not relate. The reimbursement must be requested with the fiscal year budget and must receive budget authorization. The Town has been providing tuition reimbursement for 35 years. Historically there are between 2 and 5 employees each year requesting tuition reimbursement. Tuition reimbursement is discussed on page 25 of the Baker Tilly Appendix.

Budgetary cost of benefit:



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
DOLLARS	$7,099	$14,881	$11,826	$1,565	$1,835	$13,246	$7,443	$6,329	$3,270	$885

13. Bus Pass Benefit

Summary of benefit: The Town offers a 50% discount to employees for all bus passes including commuter passes. The Town pays the subsidy for the pass from the fund where the employee's wages are captured (Water, Sewer, General, START) into the START Bus Fund. The bus schedule does not work for all commuting employees but the benefit is available to all employees. This benefit is discussed on page 23 of the Baker Tilly Appendix.

Budgetary cost of benefit: The Town paid $1,260 into the START Bus for bus pass discounts in FY24.

14. Paid Time Off (PTO)

Leave is going to be addressed separately with the Policy Manual Update planned for Fall/Winter 24-25. Excerpts from the Leave policies are summarized below.

Summary of benefit: Paid leave for sick, holiday and vacation are combined to create Paid Time Off (PTO). Many traditional plans require this leave to be earned in increments each pay period whereas the Town provides PTO at the start of each fiscal year, July 1, and allows employees to manage that leave with approval of their Department Director. Many traditional plans also allow carryover of leave from one fiscal year to the next whereas the Town pays employees for one week of any unused leave on June 30 of each year and any remaining balance is forfeited. The very next day, July 1, employees receive their full bank of leave hours to again manage for the next fiscal year. The Town is not required to maintain funds in the budget to pay out the full accumulated PTO upon separation because we budget for the 40-hour buyout whether it is at the end of the fiscal year or at separation.

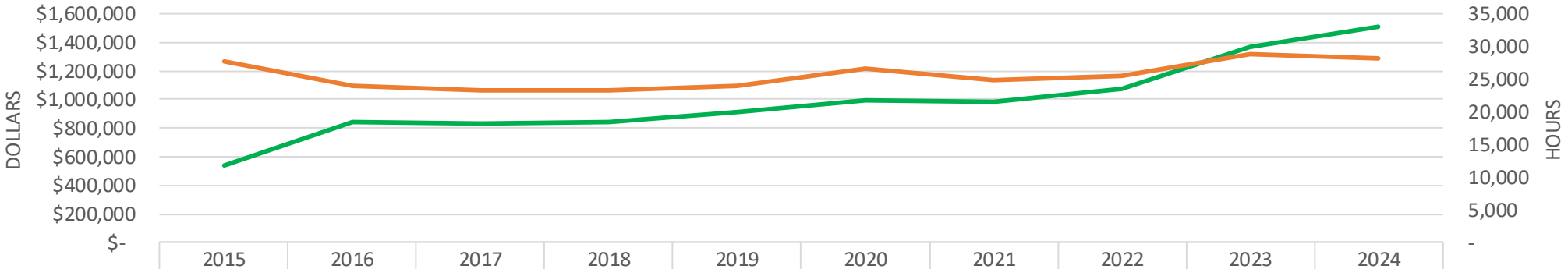
The beginning PTO balance provided to new hires is comprised of 5 days of sick leave (40 hours), 11 holidays (88 hours), and 14 vacation days (112 hours) for a combined total of 240 hours. The amount of PTO hours increases for the vacation portion after year 5, 6, 10, and 15 years. On pages 8-11 of the Baker Tilly Appendix, it shows a comparison of paid leave to other responsive surveyed organizations and specifically on page 8 it shows vacation days provided. Below is a list of holidays currently observed by the Town of Jackson. Please note when the PTO plan was created in the year 2000, the Town did not observe Columbus Day but allowed employees to take their birthday off when it occurred, and the Town also included a ½ day (4 hours) for Christmas Eve, which combined for a total of 92 hours. The Town now observes Juneteenth which was established as a federal holiday in 2021 and first observed by the Town in 2022.

Holidays Observed	
New Year's Day	8
Martin Luther King Jr./Wyoming Equality Day	8
President's Day	8
Memorial Day	8
Juneteenth	8
Independence Day	8
Labor Day	8
Veteran's Day	8
Thanksgiving Day	8
Friday After Thanksgiving	8
Christmas Day	8
Total Hours	88

The Baker Tilly report shows on page 8 that the Town's vacation days provided by years of service are comparable to the average for the first 4 years and for years 11-25. However, in the middle years, it shows the Town provides more vacation days than the average reported. Should employees not need to utilize 40 hours of their PTO for purposes of being sick and instead use that for vacation time, the Town's PTO plan is much more generous than the average. The Town provides a different package for Full Time Transit Operators, not including commuter or ADA operators, where holidays are not included in the balance provided in PTO and instead these operators are paid holiday wages.

The average PTO balance for all employees for FY25 is 273 hours.

Budgetary cost of benefit: The Town of Jackson is paying full time employees 2080 hours whether they are working or on PTO. However, there is a significant cost to the Town in the loss of productivity as well as overtime costs to pay other employees to cover shifts while employees are on PTO. In 2023, Town paid out 28,864 hours of PTO totaling $1,369,731. In 2024, Town paid out 28,119 hours of PTO totaling $1,508,346.



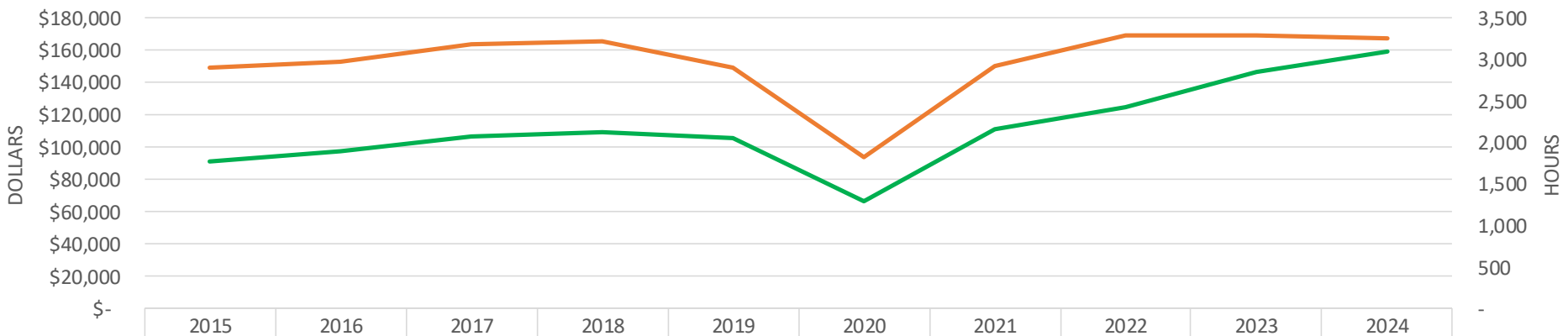
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
DOLLARS	$538,585	$844,179	$829,509	$844,863	$910,950	$999,842	$986,739	$1,074,687	$1,369,731	$1,508,346
HOURS	27,733	23,911	23,277	23,413	24,022	26,579	24,940	25,541	28,864	28,119

15. Cash Out of Paid Leave

Leave is going to be addressed separately with the Policy Manual Update planned for Fall/Winter 24-25. Excerpts from the Leave policies are summarized below.

Summary of benefit: The Town pays employees for up to 40 hours of unused PTO either at the end of the fiscal year or at separation. This comparison is shown on page 9 of the Baker Tilly Appendix. That comparison shows the Town pays out 10 hours more than other organizations surveyed.

Budgetary cost of benefit: In FY24, the Town paid out $158,848 for cash out of PTO. The cost of the cash out increases each year along with employee wage increases. Not all employees save hours to be paid out by the Town. In 2024, 108 employees cashed out an average of 28 hours of PTO. Note, in FY2020, the buyback policy was reduced to 30 hours as part of pandemic budget reductions.



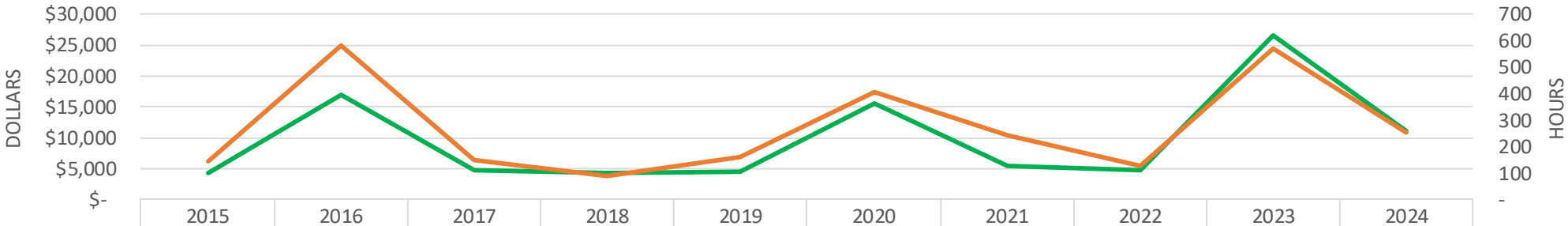
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
DOLLARS	$90,992	$97,249	$106,251	$109,543	$105,461	$66,464	$111,131	$124,797	$146,681	$158,848
HOURS	2,898	2,981	3,178	3,218	2,904	1,819	2,927	3,287	3,291	3,259

16. Paid Parental Leave

Leave is going to be addressed separately with the Policy Manual Update planned for Fall/Winter 24-25. Excerpts from the Leave policies are summarized below.

Summary of benefit: The Town's short term disability benefit is available for the birth mother as an employee for 4 weeks for a regular birth and 6 weeks for a C-section. Additionally, both the mother and father are eligible for up to 80 hours of Dependent Care each fiscal year and this leave can be used to care for a newborn as well as to care for other family members. Parental leave is discussed on page 19 of the Baker Tilly Appendix.

Budgetary cost of benefit: In FY23, 8 employees utilized Dependent Care for the birth of a child for a total of 572 hours combined and a total cost of $26,072. In FY24, 5 employees utilized Dependent Care for the birth of a child for a total of 255 hours combined and a total cost of $11,022. If employees did not have Dependent Care, they would either be utilizing PTO, Short Term Disability Insurance, or taking all their FMLA unpaid.



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
DOLLARS	$4,225	$16,858	$4,737	$4,212	$4,466	$15,583	$5,442	$4,720	$26,498	$11,202
HOURS	145	578	152	89	160	408	244	128	572	255

17. Requirement to Only Utilize ½ of Paid Leave Concurrent with FMLA

Leave is going to be addressed separately with the Policy Manual Update planned for Fall/Winter 24-25. Excerpts from the Leave policies are summarized below.

Summary of benefit: Unpaid FMLA protects the eligible employee's job for a period of 12 weeks and is described in #6 above. The Town only requires employees to utilize PTO concurrently with FMLA down to a floor of ½ the PTO hours available instead of requiring use of 100% of PTO while on unpaid FMLA. FMLA is discussed on page 19 of the Baker Tilly Appendix.

Budgetary Cost of Benefit: There is not a direct cost to the Town for requiring paid leave be used concurrently with FMLA but there is a significant productivity gain because the employee has access to less leave from the organization overall. The Town pays employees for 2080 hours each year regardless of whether it is time worked or paid leave.

18. Housing Assistance

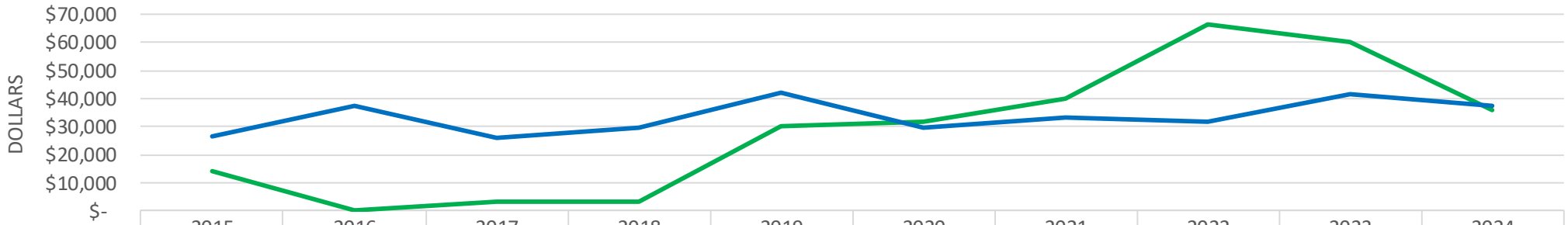
Housing is going to be addressed separately with a Housing Strategy brought forward in 2025. General housing assistance with budgetary impacts are summarized below. Please note the information provided below is not comprehensive and does not include information regarding the Town's rights of first purchase, rents paid for Town rental units, subsidized rents for primary leased units, etc.

Police Officers Receive 2 Years of Housing Assistance of ½ rent or $500/month stipend if residing in Teton County.

a. Police Officers pay either ½ rent in a Town owned rental unit or receive a $500/month housing stipend.
b. $500 stipend only applies within Teton County but not over Teton Pass. Many officers choose to reside in Star Valley or Teton Valley and are not eligible for this stipend.
c. Stipend extends for a period of 2 years from either date of hire or date of completion of Police Academy.

Other employees receive/received housing assistance on a case by case basis including temporary monthly housing stipends for new hires for a limited period for initial hiring incentive, reduced rent for summer interns, reduced/rent free for new hires for a limited period for initial hiring incentive, taxable benefits for long term housing agreements with executive employees, temporary rent suspension for unit repairs, temporary rent suspension for extended bunkhouse stays waiting for the Police Academy class to begin, and similar types of situations.

Budgetary Cost of Benefit: The loss of rental income to the Town for Police Officers paying ½ rent was $35,972 in FY24 and the expense for paying a $500 housing stipend in 2023 was $20,000. Remaining housing assistance across the organization in FY24 was $37,710.



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Police	$14,015	$-	$3,270	$3,250	$30,438	$31,552	$40,151	$66,504	$60,201	$35,972
All Other	$26,860	$37,600	$26,251	$29,462	$41,977	$29,649	$33,291	$31,940	$41,418	$37,710

19. Shift Differentials

Summary of benefit: Shift differentials are additional wages over someone's regular hourly rate for specific purposes and are an additional benefit to those employees eligible to receive these additional amounts. A shift differential is paid regardless of whether the employee is eligible for overtime. The Town of Jackson pays the following shift differentials to specific employee groups.

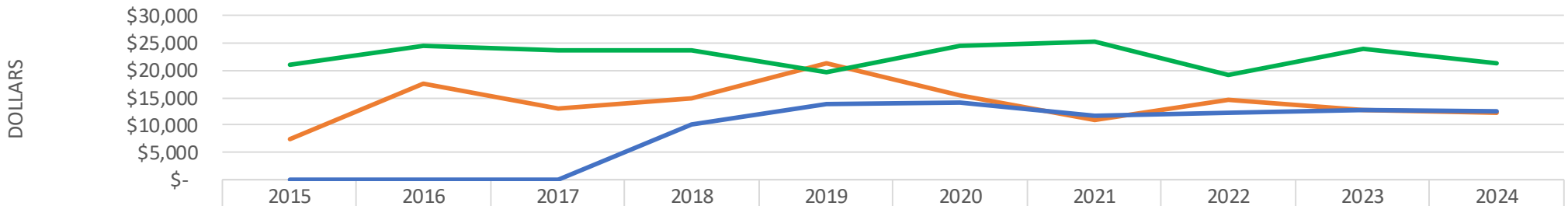
- Police Officers – Driving Under the Influence (DUI), Enforcing Underage Drinking Laws (EUDL), and Highly Visible Enforcement (HVE) Grant: Overtime Rate. Pursuant to the Traffic Safety Grant through the Wyoming Department of Transportation (WYDOT), the Wyoming Association of Sheriffs and Chiefs of Police ((WASCOP) - the administrator of the grant) required that any officer working under this grant would be compensated at their overtime rate (time and one half). The Town is reimbursed through the grant for these wages. However, the cost of the benefits associated with those wages are not reimbursed to the Town.
- Police Officers - Airport Duty: $3/hour Premium. The Town pays Officers an additional $3/hour for each hour worked at the Airport. The Town then bills the Airport a $5/hour premium in order cover both the shift differential and the payroll benefits (FICA, UI, WC, PTO paid out, overtime blended rate) associated with the shift differential. The Town is reimbursed through the agreement with the Airport for these wages. However, the reimbursement does not cover the cost of purchasing/subsidizing the actual employee housing for officers, staff recruitment and training

($125,000 per new entry level Police Officer), annual training costs for officers to obtain and maintain their Police Officer eligibility through Wyoming Police Officer Standards and Training (POST), the bonuses paid to Officers, or the housing stipend/discounted rent.

- Transit Operators – Commuter Routes: $1.50/hour Premium. The Town pays Transit Operators an additional $1.50/hour for driving the Snake River Canyon commuter route and the Teton Pass commuter route to recognize the technical competency needed to successfully and consistently navigate these roads, often in hazardous driving conditions.

Budgetary cost of benefit: The cost to the Town in 2024 for providing these shift differentials (not including the cost recovery from the grant, Airport Contract, or shared funding of START by Teton County) was:

- DUI/EUDL/HVE Grant Work $12,191 – Note: Wage is Reimbursed, but 35% Benefit Cost Not Reimbursed
- Airport Duty $21,387 – Note: $3 Differential and Payroll Benefits Reimbursed, But Neither 35% Benefit Cost nor Recruitment & Housing Not Reimbursed
- Commuter Routes $12,395



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Grant Work	$7,469	$17,522	$13,063	$14,976	$21,139	$15,325	$11,005	$14,581	$12,878	$12,191
Airport Duty	$20,950	$24,553	$23,529	$23,530	$19,721	$24,559	$25,210	$19,073	$23,918	$21,387
Commuter Routes	$-	$-	$-	$10,205	$13,873	$13,978	$11,631	$12,365	$12,682	$12,395

20. Stipends

Summary of benefit: Stipends are lump sum amounts provided monthly to address an added skill or requirement related to residency or to compensate for the requirement to carry a cell phone to communicate during the workday with staffers and others that are frequently mobile or working away from a land line. Only eligible employees have access to these stipends and they are an additional benefit to those eligible employees.

a. Spanish Fluency Stipend: $12.50 - $400mo. DOQ. Eligible employees provide interpretation services in their field of work or to other personnel if time allows. Employees are tested through an outside agency to determine their level of fluency and are provided a monthly stipend based on their fluency level. Non-Office and Non-Police personnel are only eligible for the oral proficiency stipend because these employees would not have the opportunity to utilize the reading and writing skills. Recertification is required every two years.

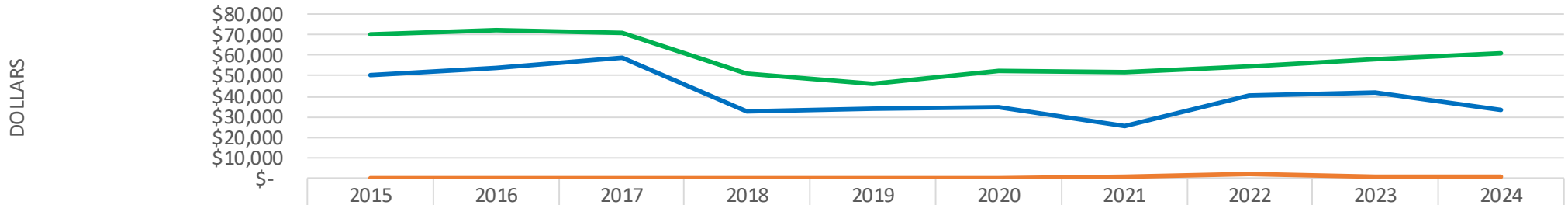
b. Commuter Operator Report Stipend: $50.40/day for Star Valley and $37.74/day for Teton Valley. Commuter Operators are REQUIRED to reside in the community from which their commuter route originates, it is a job requirement. The Town pays a stipend based on the federal mileage

reimbursement rate to Commuter Transit Operators that are scheduled and required to come to Jackson to report to work *WITHOUT* driving a commuter route to offset expenses associated with driving their own vehicle. Operators picking up shifts for others without being scheduled do not receive this stipend.

c. Cell Stipend: $75/month. Due to the need for staff to communicate via text and phone during the workday with Directors, fellow employees, and others that are frequently mobile or working away from a land line, authorized employees receive a $75/month. cell phone stipend. Law enforcement personnel receive use of a Town owned cell phone instead of a stipend for document production reasons, evidence/crime/accident photos, etc. For IT positions in the organization the Town both purchases the cell phone and provides the stipend.

Budgetary cost of benefit:

- 2024 Spanish Fluency $33,541
- 2024 Report Stipend $585
- 2024 Cell Stipend $61,238



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cell Phone	$70,125	$72,360	$71,145	$50,775	$46,275	$52,800	$51,600	$54,750	$57,825	$61,238
Spanish Fluency	$50,619	$54,069	$58,998	$32,360	$34,132	$34,604	$25,871	$40,221	$41,802	$33,541
Commuter Operator Report	$-	$-	$-	$-	$-	$-	$520	$2,351	$862	$585

21. Bonuses

Summary of benefit: Bonuses are provided to certain positions for recruitment and retention purposes and are a benefit to those eligible employees. The amounts vary based on the position and not all positions are eligible for bonuses.

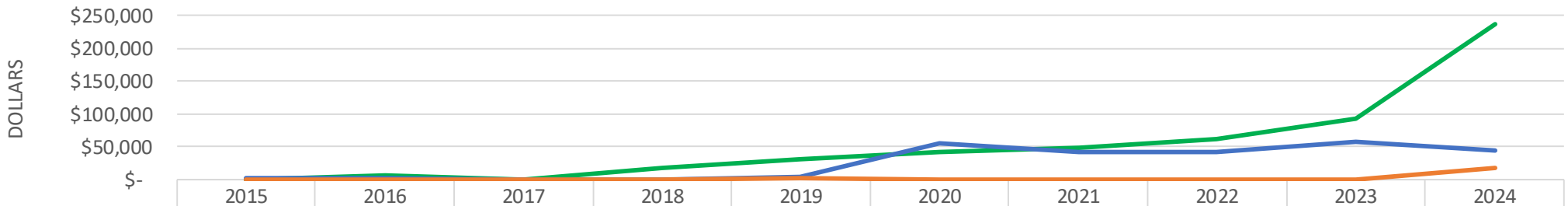
a. Police Officer: $15,000 Over 5 Years. Since November of 2019, Police Officers receive $1000 after completion of 1 year, $2000 after completion of 2 years, etc. up to $5000 for completion of 5 years. Police Officers are challenging to attract to work in Jackson and require a significant amount of training. To offset the Town being the training ground for other entities, the Town also has a Training Reimbursement Agreement in place with new hires that requires a 2 year work commitment or the requirement to reimburse the Town all wages over the Town's minimum wage of $18/hour and any direct payments such as the signing/longevity bonus and housing assistance.

b. Public Works CDL: $7500 Over 3 Years. Since July 1 of 2023 Public Works Commercial Driver's License (CDL) positions receive $2000 after completion of 1 year, $2500 after completion of year 2, and $3000 after completion of year 3. In the past three years, the Town has had extreme challenges hiring and retaining Public Works CDL positions. Public Works Street and Equipment Operators are challenging to attract and retain for local government work due to the wage and benefit competition with the private sector.

c. Winter/Summer Variable Hour Transit Operators: Winter $8700/Summer $300. The Town has been providing a winter season bonus for over 10 years. Separate sub bonuses are embedded in the winter bonus including signing ($500), performance ($2000), safety ($750), housing ($4450 – basically $1000/month for 4.5 months), and benefit differential ($1000) whereas the summer bonus is solely a performance bonus. There are also different tiers within the bonus depending on the hourly average per week worked by each Operator. In order to receive the maximum bonus, Operators must average 35 hours/week or more for the full season. Full time Operators are not eligible for these bonuses.

Budgetary cost of benefit:

- Police Officer. In 2024, the Town paid out a total of $43,895 in bonuses to Police Officers with 5 years or less experience.
- Public Works CDL. In 2024, the Town paid out a total of $17,544 in bonuses to Public Works CDL personnel with 3 years or less experience.
- Winter/Summer Variable Hour Transit Operators. In 2024, the Town paid out a total of $237,358 in bonuses to Variable Hour Transit Operators.



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
START	$-	$6,049	$-	$17,546	$31,647	$41,607	$49,338	$61,969	$93,666	$237,358
Police	$2,741	$2,114	$-	$-	$4,386	$56,096	$41,523	$43,279	$58,002	$43,895
Public Works	$-	$-	$-	$-	$2,193	$-	$-	$-	$-	$17,544

22. Take Home Car/Commuter Authorization with Town Vehicle

Summary of benefit: Sworn Officers in the Jackson Police Department are able to drive their assigned vehicle to and from their residence regardless of whether they reside in the State of Idaho, or Lincoln or Sublette County Wyoming. They are required to pay the fuel used from the Teton County line to their residence as part of the 'take home car' program. They are not required to pay any portion of the wear and tear on the vehicle. Vehicle wear and tear includes replacing tires more frequently with higher mileage, more frequent oil changes, and the requirement to replace the vehicle more quickly than if it were not driven outside of Town limits or Teton County limits.

Budgetary cost of benefit: In FY24, vehicles were driven 88,838 miles in Idaho, Lincoln and Sublette Counties. The fuel reimbursed by Police Officers for this use was $14,439 and affected 10 Officers. The fiscal impact to the Town for FY24 for the wear and tear/higher maintenance/quicker replacement is estimated at $45,000. Note: these figures do not include mileage to travel from municipal city limit to the county line, (portion not reimbursed by staff) which is estimated to be another 58,000 miles and $38,000 in fuel/parts/labor.

Participating organizations include:

- Blaine County, ID
- City of Casper, WY
- City of Gillette, WY
- City of Laramie, WY
- City of Sheridan, WY
- City of South Lake Tahoe, CA
- Sublette County, WY
- City of Vail, CO
- City of Vernal, UT
- State of Wyoming, WY

Pay Plan Design

Organizations using an adopted pay plan

Number of Responses	
6	Five (**5**) responding organizations use an adopted pay plan.
Jackson uses an adopted pay plan.	

Organizations using single or multiple pay plans

Number of Responses	Least Reported	Most Reported
6	Single (2)	Multiple (4)
Jackson uses a single pay plan.		

Type of system for the pay plan

Number of Responses	Responses
6	Grade and Step (2), Grades, No Steps (min and max only) (3); Other (please explain) (1).
Jackson has grades, no steps.	

Open Plans (Grades, no steps)

	Number of Responses	Least Reported	Most Reported	Average Reported
# Grades	5	12	31	22.20
% Between Grades	4	5.0%	11.0%	7.8%
Jackson has 31 grades, % between grades, 2.5% - 5%.				

Step Plans (Grade + Steps)

	Number of Responses	Least Reported	Most Reported	Average Reported
# Steps / grade	4	3	14	6.75
% Between Steps	4	3.0%	6%	4.75%

Pay Plan and Benefits practices

Peer organizations identified for the market study were also asked to provide information related to their pay plan and fringe benefits.

Peer Pay Plan Design

Five (5) peers have adopted a formal pay plan.

Four (4) have multiple pay plans.

Two (2) use a grade and step plan, three (3) use Grades, No Steps (min and max only) and one (1) Other (please explain) uses steps only system.

For open plans, on average, peers have about 22 grades in their pay plans.

On average, the percent difference between pay grades is 7.8%.

For step plans, on average, peers have about 6.75 steps for each grade. One (1) peer stated that they only have a step only system.

On average, the percent difference between steps is 4.75%.

How pay increases are administered

Number of Responses	Responses
6	Annual wage or step increases (automatic) (2), Budget process or financial ability (3), Other (please explain) (1)
Jackson is budget process or financial ability.	

Organization-wide average pay increase (%)

Fiscal Year	Number of Responses	Most Reported	Average Reported
2020	8	3%	0.6%
2021	8	4%	1.5%
2022	8	9%	4.1%
2023	4	5%	2.8%
Jackson 2023 2.5% merit + 6.5% range increase, 2022 2.5% merit + .5% range increase, 2021 2.5% merit, 2020 .5% merit and 2.5% range increase.			

Cost of Living Adjustment (COLA) (%)- Insufficient responses

How organizations provide one-time, lump-sum payments in addition to annual COLA increase?

Number of Responses	Responses
7	Budget process or financial ability (1), Annual internal review / adjustment (2), Collective bargaining agreement (1), Other (please explain) (3)
Jackson is budget process or financial ability.	

How organizations adjust pay structure

Number of Responses	Responses
10	Budget process or financial ability (3), Annual internal review / adjustment (2), Compensation Study (3), Other (please explain) (2)
Jackson is budget process or financial ability.	

Frequency organizations adjust their pay structure

Number of Responses	Responses
10	Annually (4), Every 2 years (1), Sporadically (5),
Jackson is sporadically.	

Pay increases

One (1) reporting peer administers pay increases for Sworn Police and Fire on their anniversary.

Organization-wide average pay increase (%)

One (1) peer reported to provide average pay increase % for all fiscal years FY2020 thru FY2023. One (1) peer reported to offer a 0% average pay increase for all fiscal years FY2020 thru FY2023. Six (6) peers reported to offer a 0% average pay increase for FY2020, three (3) peers reported to offer a 0% average pay increase for FY2021, two (2) peers reported to offer a 0% average pay increase for FY2022 and One (1) peer reported planning to offer a 0% average pay increase for FY2023.

Organizations one-time, Lump-sum payments to additional COLA increase

One (1) reporting peer considers a bonus to hold until a salary study is done.

How organizations adjust pay structure

Two (2) peers reported that they consider other considerations they use to adjust their pay structures. One (1) considered having a mix of CBA, budget rehire and pay studies while one (1) peer considers using market studies.

Organizations providing longevity pay

Number of Responses	Least Reported	Most Reported
9	Yes (2)	No (7)
Jackson is no.		

Pay Practices

Organizations providing either call-back or standby (on-call) pay

Number of Responses	Responses
8	Standby (0), Call-back (3), Both (5), No (0)
Jackson is both.	

How are employees paid when called back to work (Call-back pay)

Number of Responses	Holidays
10	Overtime rate (1.5x straight time) (3), Double time (2x straight time) (2), Other (please explain) (5)
Jackson is 2 hours at double pay, then straight or overtime depending on hours already worked during the week. Work on Holidays EXCEPT for 2 hours at double pay can be cashed in for equivalent number of PTO hours to receive double wages for hours worked on a holiday.	

Number of Responses	Saturdays
10	Straight time (1), Overtime rate (1.5x straight time) (4), Other (please explain) (5)
Jackson is 2 hours at double pay, then straight or overtime depending on hours worked already during the week.	

Number of Responses	Sundays
9	Straight time (1), Overtime rate (1.5x straight time) (4), Other (please explain) (4)
Jackson is 2 hours at double pay, then straight or overtime depending on hours worked already during the week.	

Call-back Pay

Holiday: Five (5) peers responded to provide other options for paying employees when on call-back pay. One (1) peer reported to offer time and a half (1.5x) straight time for holidays, one (1) peer offers on call-back pay if the employee is called out while on call, they would receive 2 hours on-call pay at their regular pay rate and their regular pay for each hour actually worked as a result of the call out, one (1) peer offers 3 hours pay for call-back pay, one (1) peer offers straight time unless hours are over 40 hours and one (1) peer offers a minimum of 2 hours at the regular rate of pay for overtime purposes only and only actual hours worked during call-back period are used.

Saturdays/Sundays/Regularly scheduled day off:

Four (4) peers responded to providing other options for paying employees when on call-back pay. One (1) peer offers on call-back pay if the employee is called out while on call, they would receive 2 hours on-call pay at their regular pay rate and their regular pay for each hour actually worked as a result of the call out, one (1) peer offers 3 hours pay for call-back pay, one (1) peer offers straight time unless hours are over 40 hours, and one (1) peer offers a minimum of 2 hours at the regular rate of pay for overtime purposes only and only actual hours worked during call-back period are used.

Regularly scheduled leave day: One (1) peer responded to not having an employee on call if they had scheduled time off.

Number of Responses	Regularly scheduled day off
10	Straight time (2), Overtime rate (1.5x straight time) (3), Other (please explain) (5)
Jackson is 2 hours at double pay, then straight or overtime depending on hours worked already during the week.	

Number of Responses	Regularly scheduled leave day
9	Overtime rate (1.5x straight time) (4), Other (please explain) (5)
Jackson is 2 hours at double pay, then straight or overtime depending on hours worked already during the week.	

Number of Responses	If Other, please explain – (6)
6	

How are employees paid when on-call (On-call or standby pay)

Number of Responses	Holidays
7	Other (please explain) (7)
Jackson pays standby at FLSA minimum wage.	

Number of Responses	Saturdays
7	Other (please explain) (7)
Jackson pays standby at FLSA minimum wage.	

Number of Responses	Sundays
7	Other (please explain) (7)
Jackson pays standby at FLSA minimum wage.	

On-call / Standby Pay

Seven (7) peers provide other options for paying employees when on-call (on-call or standby pay).

One (1) peer responded that on-call employees receive 1 hour of standby pay (base rate of pay) if holiday paid 1 additional hour (base rate of pay). One (1) peer stated that Holiday on-call pay is compensated three (3) hours of pay at their regular pay rate for each twenty-four-hour period they are on-call. For regular on-call days, they are compensated two (2) hours of pay at their regular pay rate for each twenty-four-hour period they are on-call. Another peer outlined payout is $2/hour to carry pager. One (1) peer responded that employees are paid $2.00 hourly to carry the on-call phone, if they are called out, they are compensated for their time at a regular hourly rate (unless it puts them into overtime).

One (1) peer stated that employees would receive on-call pay in the amount of 23% (less required taxes/withholdings) of the employee's base overtime rate (1.5 x base hourly rate) for each on-call weekend. One (1) peer offers 4 hours on-call/standby pay for Saturday or Sunday and one (1) peer stated to offer $1.00 per hour whenever the employee is on-call/standby.

Number of Responses	Regularly scheduled day off
7	Other (please explain) (7)
Jackson pays standby at FLSA minimum wage.	

Number of Responses	If Other, please explain:
7	Other (please explain) (7)

Minimum % increase with promotions

Number of Responses	Least Reported	Most Reported
9	No (2)	Yes (7)
Jackson is yes, 5% minimum.		

Vacancy requirement prior to promotion

Number of Responses	Least Reported	Most Reported
9	No (4)	Yes (5)
Jackson is no for some in advancement program, yes for non-advancement program.		

Minimum % increase with reclass to higher grade

Number of Responses	Least Reported	Most Reported
9	No (3)	Yes (6)
Jackson is yes, 5% minimum.		

Employees negotiate salary upon promotion

Number of Responses	Least Reported	Most Reported
9	No (2)	Yes (5)
Jackson is yes.		

Two (2) *peers responded to "Other (please explain)"*

Employees Negotiate salary upon promotion:

Two (2) peers responded "other". One (1) peer stated that employees can negotiate salary depending on the type of promotion and functional area. One (1) peer allows employees negotiate salary upon promotion only if the position requires an employment contract with the City Manager.

Are promotions or pay increases automatic upon achievement of specified milestone?

Number of Responses	Least Reported	Most Reported
9	No (2)	Yes (4)
	Three (3) *"Other"*	
Jackson is no; advancement is based on time in service, merit, and mastery of skills.		

New hires allowed to receive pay rate above the starting minimum for their position

Number of Responses	Least Reported	Most Reported
10	No (0)	Yes (9)
	Years of related experience (1), Additional experience OR education (2), Additional experience AND education (2) Management Discretion (3), Other please explain (2)	
Jackson is additional experience and education and management discretion.		

New hires allowed to negotiate paid time off accrual

Number of Responses	Least Reported	Most Reported
10	Yes (4)	No (6)
Jackson is no.		

New Hires allowed to receive pay rate above starting minimum:

Two (2) peers responded "other". One (1) peer stated that new hires receive pay rate above the starting minimum depending on HR review, internal equity, education, and experience. One (1) peer determines if a new hire receives a pay rate above the starting minimum for their position by Years of related experience, Additional experience OR education, Additional experience AND education and management discretion. Three (3) of the nine (9) peers that stated "yes" to new hires are allowed to receive pay rate above the starting minimum for their position, One (1) peer stated that they have an informal guide of 50% validity of other experience, one (1) peer stated that they also based the pay rate on market, and one (1) peer added that they provide pay rate above the starting minimum based on Experience, Education, Budget and Internal equity.

Employees "Maxed" at their current pay grade

Number of Responses	Least Reported	Most Reported
10	Yes (5)	No (5)
Jackson provides a lump sum benefit in lieu of base salary increase for those employees "maxed.".		

Time off

Vacation / Sick, Paid Time-Off (PTO) or other

Number of Responses	Responses
8	Vacation - Sick (8), Paid Time Off (PTO) (0)
Jackson utilizes a PTO time off model.	

Organizations providing different Vacation/PTO accrual rates for exempt vs. non-exempt employees

Number of Responses	Least Reported	Most Reported
8	Yes (2)	No (6)
Jackson does not have a different rate but does offer higher base rate for high level executives in the organization. Base PTO increases after 5 years.		

Employee "Maxed" at their current pay grade:

Five (5) peers responded "yes" to providing a "Lump sum benefit" in lieu of a salary increase. One (1) peer reported that the lump sum is a one-time payment of the percentage increase, one (1) peer reported that they offered a stipend percentage, one (1) peer determines what wage would be for the rest of the year, one (1) peer reported providing a lump sum of money in the years it's not capped, and one (1) peer provided a lump sum benefit if the legislature grants base pay increases for those that are at a maximum only if their pay grade is eligible for a one-time bonus.

Vacation days by years of service (6 responses)

PTO for Jackson includes vacation, sick, and holiday hours	City of Jackson, WY	Least Reported	Most Reported	Average of Vacation
Years of Service				
0 to 1 year	14	11	22	14
1 year	14	11	22	14
2 years	14	11	22	14
3 years	14	11	22	14
4 years	14	11	22	15
5 years	21	11	22	15
6 years	22.25	15	22	17
7 years	22.25	15	22	17
8 years	22.25	15	22	17
9 years	22.25	15	22	17
10 years	23.5	15	27	19
11 years	23.5	18	27	21
12 years	23.5	18	27	21
13 years	23.5	18	27	21
14 years	23.5	18	27	21
15 years	26	18	27	23
16 years	26	18	27	23
17 years	26	18	27	23
18 years	26	18	27	23
19 years	26	18	27	23
20 years	26	18	27	24
21 years	26	18	32	25
22 years	26	18	32	25
23 years	26	18	32	25
24 years	26	18	32	25
25 years	26	18	32	25
25+ years	26	18	32	25

City of Jackson, WY

Jackson has a vacation leave / sick leave / holiday leave mode. All other responding peers do not have this PTO model.

The vacation only leave ranges from 14 days to 25 days, based on a years-of-service scale.

Maximum accrual of Vacation or PTO days

Number of Responses	Least Reported	Most Reported	Average Reported
9	20	32.01	28.50
Jackson has maximum accrual of 26 days.			

Organizations allowing vacation / PTO carryover

Number of Responses	Least Reported	Most Reported
9	No (0)	Yes (9)
Jackson does not allow PTO days to be carried over from year to year.		

Number of carryover days allowed

Number of Responses	Least Reported	Most Reported	Average Reported
8	30	40	32.50
Jackson does not allow PTO days to be carried over from year to year.			

Organizations allowing cash-out of unused vacation / PTO days

Number of Responses	Least Reported	Most Reported
9	Yes (9)	No (0)
Jackson allows for a maximum cash-out of 40 hours at the end of the fiscal year.		

Number of cash out days allowed

	Number of Responses	Least Reported	Most Reported
Year End	5	0	30
Termination	9	0	30
Retirement	8	20	30
Jackson allows for 40 hours (5 days) to be cashed out at the end of the year. If over 40 hours are remaining, that time is forfeited.			

Vacation/PTO "Frontloaded" annually

Number of Responses	Least Reported	Most Reported
9	Yes (0)	No (9)
Jackson utilizes a PTO "frontloading" model vs. an accrual model. Jackson places all PTO hours for the upcoming year in an employee's bank on July 1 of each year.		

Vacation accrual & carryover

Nine (9) peers allow between 20 and 32.01 maximum accrued vacation days.

Unlike ***Jackson***, nine (9) peers allow employees to carryover unused vacation days. Though ***Jackson*** does not allow PTO days to be carried over, they do allow the option of cash-out at the end of the fiscal year.

Peers who allow unused vacation days to be cashed out have a variety of policies. Five (5) peers allow employees to cash out their balance of vacation/PTO days at the end of the year, nine (9) peers allow employees to cash out their balance of vacation/PTO days upon termination; 8) peers allow employees to cash out their balance of vacation/PTO days upon retirement.

Of the Nine (9) peers that allow employees to carry over unused vacation/PTO days, Two (2) peers stated to have unlimited amount of days that can be carried over, one (1) peer stated that in additional to allowing 30 days to carry over they do allow EEs with 15 years to carryover 40 days and one (1) peer in addition to 30 days allowance, they also allow 42 days after 14-19 years of service and 48 days after 19+ years of service.

Sick days provided per year

Number of Responses	Least Reported	Most Reported	Average Reported
9	0	12	10.00
Jackson utilizes a PTO model. Therefore, 40 hours of sick time are factored into that PTO model and are not carved out specifically as "sick time."			

Maximum sick day accrual

Number of Responses	Least Reported	Most Reported	Average Reported
9	12	120	61.67
	Three (3) organizations have unlimited sick days accrual		
Jackson utilizes a PTO model. Therefore, 40 hours of sick time are factored into that PTO model and are not carved out specifically as "sick time."			

Organizations allowing carryover of unused sick days

Number of Responses	Least Reported	Most Reported
9	No (0)	Yes (9)
Jackson does not allow PTO days to be carried over from year to year.		

In comparison to ***Jackson***, nine (9) peers allow employees to annually carryover unused sick days while Jackson does not allow carryover of unused sick days. The peer market average is about 83 days, which is significantly higher than ***Jackson's*** no annual carryover. Since Jackson uses a PTO model, the PTO policy covers all time off.

Number of unused carryover sick days allowed

Number of Responses	Least Reported	Most Reported	Average Reported
9	62.5	120	82.5
	Five (5) organizations allow unlimited carryover of sick days		
Jackson does not allow PTO days to be carried over from year to year.			

Organizations allowing cash out of unused sick days

Number of Responses	Least Reported	Most Reported
9	No (4)	Yes (5)
Jackson allows for up to 40 hours of PTO cash out at the end of the fiscal year.		

Two (2) peers who allow cash out of unused sick days only allow cash out upon retirement based on years of service and up to 50% of up to 960 hours. One (1) peer stated that employees can cash out unused sick days upon termination after all accrued after 10 years.

Organizations offering sick bank

Number of Responses	Least Reported	Most Reported
9	Yes (2)	No (7)

Two (2) of those nine (9) peers offer unlimited number of days employees can receive from sick leave donations.

Organizations allowing employees to donate sick leave

Number of Responses	Least Reported	Most Reported
9	No (0)	Yes (9)
	Organizations allowing sick leave donation have varying policies regarding allowed number of days to be donated/received	
Jackson allows for employees to donate PTO through the "Gifted PTO" program.		

Maximum number of days employees can *give* to other employees

Number of Responses	Least Reported	Most Reported	Average Reported
8	1	84	21
	Two (2) organizations have an unlimited amount employees can give, and one (1) organization allows donation of vacation time, not sick time		
Jackson allows for donations up to what FMLA time is available to the employee in need. However, time must be donated in one-hour increments.			

Maximum number of days employees can *receive* from sick leave donations

Number of Responses	Least Reported	Most Reported	Average Reported
8	48	120	78
The number an employee receives is based on the amount of PTO remaining in personal bank. However, overall, amount is capped at 12 weeks, or 60 days.			

Number of paid holidays per year

Number of Responses	Least Reported	Most Reported	Average Reported
9	9	13	10.44
Jackson provides eleven holidays each calendar year. However, these holiday hours are built into the employees PTO bank.			

Organizations providing personal or floating holidays

Number of Responses	Least Reported	Most Reported
9	Yes (3)	No (6)
Jackson does not provide floating holidays.		

Holidays

Nine (9) peers' average number of paid holidays is 10.44 annually. Nine (9) peers also offer from 9 to 13 paid holidays per year.

Jackson provides Eleven (11) holidays each calendar year. These eleven (11) holidays are built into the PTO bank.

Floating Holidays:

Three (3) peers stated to offer one floating holiday.

Health Benefits

Preferred Provider Organization (PPO)

	Number of Responses	Least Reported	Most Reported	Average Reported
Employee-only monthly premium	7	$695.00	$1,147.38	$882.12
% Paid by employer	7	80%	100%	87.3%
Employee + family monthly premium	7	$2,062.00	$2,596.00	$2,325.95
% Paid by employer	7	68%	88%	81%
Jackson does not offer a PPO Health option.				

Health Maintenance Organization (HMO) – *no responses*

High Deductible Health Plan (HDHP)

	Number of Responses	Least Reported	Most Reported	Average Reported
Employee-only monthly premium	7	$50.00	$1,147.38	$640.18
% Paid by employer	6	80%	100%	91.0%
Employee + family monthly premium	7	$100.00	$2,596.25	$1,636.01
% Paid by employer	6	80%	100%	90.8%
Jackson pays for 100% of all premiums, no matter the coverage level. Premium costs paid by Jackson are $1,042 for single coverage, and $2,689 for family per month.				

Participation policies

	Number of Responses	Least Reported	Most Reported
Organizations requiring 100% participation of all regular full-time employees	8	Yes (2)	No (6)
Organizations providing compensation to employees not participating	8	Yes (2)	No (6)
Jackson does not offer compensation for those employees "opting-out" of health care coverage. Jackson follows Affordable Care Act laws regarding offering of health care coverage.			

Health Benefits

Seven (7) peers responded to having PPO plans. and two (2) peers responded to having HD health plans.

PPO:

The peer average monthly premium cost for employee only is $882.12, and on average, cover 87.3% of the total monthly premium cost.

The peer average monthly premium cost for family is $2,325.95, and on average, cover 81% of the total monthly premium cost.

HMO: *no responses*

HDHP:

The peer average monthly premium cost for employee only is $640.18, and on average, cover 91.0% of the total monthly premium cost.

The peer average monthly premium cost for family is $1,636.01, and on average, cover 90.8% of the total monthly premium cost.

Participation policies:

Two (2) peers responded yes to providing compensation to employees not participating. One (1) peer provides $2,000 to an HRA for an individual policy and $4,000 to an HRA for an employee+ policy and One (1) peer provides $15 per month plus dental and life plan.

Deductible Plan Options

	Number of Responses	Least Reported	Most Reported
Organizations offer tiers or different plan options	8	Yes (3)	No (5)
Jackson offers both single and family tiers. Jackson offers one plan option – a Health Savings Account.			

Plans have Individual and Family deductions

	Number of Responses	Least Reported	Most Reported	Average Reported
Organizations have individual and family deductibles	8	No (1)	Yes (7)	
Individual	5	$375.00	$ 2,800.00	$ 1,595.00
Family	5	$ 750.00	$ 5,600.00	$ 3,210.00
Jackson's HSA plans have varying single and family deductibles. For both in-network and non-network - single (individual) deductible is $3,000.00 and family deductible is $6,000. This does not apply to preventative care.				

Plans have Individual and Family out-of-pocket maximums

	Number of Responses	Least Reported	Most Reported	Average Reported
Organizations have individual and family out-of-pocket Maximum	6	No (1)	Yes (5)	
Individual	6	$1,000.00	$ 5,000.00	$ 2,715.00
Family	6	$ 3,000.00	$ 10,000.00	$ 6,205.00
Jackson's HSA plan has varying out-of-pocket maximums based on in-network and out-of-network. In-network out-of-pocket expenses for single are $3,000 and $6,000 for family. Non-network out-of-pocket expenses for single are $5,000 for single and $10,000 for family.				

One (1) peer provides plans with different deductibles for both Family and Individual plans.

Matching Health Savings Account (HSA) Contributions

	Number of Responses	Least Reported	Most Reported	Average Reported
Organizations provide matching HSA contributions	8	No (2)	Yes (6)	
How much contribution	3	$3,000.00	$ 3,000.00	$3,000.00
Jackson provides an HSA match for single of $1,350 per year, and $2,700 for family.				

Mental and Behavior Health Services Health Insurance Plans

	Number of Responses	Least Reported	Most Reported
Organizations provide health insurance for mental & behavior health services	8	No (2)	Yes (6)
Number of allocated visits per year	*Insufficient responses*		
Jackson offers several ways to access mental and behavioral health offerings. Jackson offers a formal Employee Assistant Program (EAP) as well as a program called "Healthiest You" which offers free mental and behavior health intake. Jackson also offers mental and behavior health through medical plans.			

Formalized Wellness Program

	Number of Responses	Least Reported	Most Reported
Organizations have a formalized wellness program	8	No (3)	Yes (5)
Jackson does not offer a formalized wellness program.			

Formalized Wellness Program:

Four (4) peers that offer formalized programs have various programs; One (1) peer provides internal committee and regular monthly programming, one (1) peer provides Sharecare through BlueCross augmented by in -house programs, one (1) peer administers in-house formalized wellness program, and one (1) peer provides discounts on EE's monthly contributions for participation in wellness programs.

Prescription drug coverage

	Number of Responses	Least Reported	Most Reported
Organizations providing prescription drug coverage	8	No (0)	Yes (8)
Coverage separates from health insurance	7	Yes (0)	No (7)
Jackson provides a prescription discount card. 100% is paid after deductible is met.			

Insufficient responses on prescription drug premiums

Dental insurance coverage

	Number of Responses	Least Reported	Most Reported	Average Reported
Organizations providing dental insurance coverage	8	No (0)	Yes (8)	
Coverage is separate from health insurance	8	No (2)	Yes (6)	
Employee-only monthly premium	7	$22.15	$51.58	$39.60
% Paid by employer (excl 0%)	6	85%	100%	95.5%
Employee + family monthly premium	7	$48.92	$141.61	$110.01
% Paid by employer (excl 0%)	5	33%	100%	81.2%
Jackson pays 100% of dental premiums.				

	Number of Responses	Least Reported	Most Reported	Average Reported
Organizations providing vision insurance coverage	8	No (1)	Yes (7)	
Coverage is separate from health insurance	7	No (1)	Yes (6)	
Employee-only monthly premium	6	$7.58	$10.94	$9.87
% Paid by employer (excl 0%)	6	0.0%	100%	25%
Employee + family monthly premium	6	$24.38	$28.35	$26.17
% Paid by employer (excl 0%)	6	0.0%	100%	25%
Jackson pays 100% of vision premiums.				

Dental

Six (6) peers provide dental insurance that is separate from the health insurance plans.

The peer average monthly premium cost for employee only dental insurance is $39.60. Four (4) peers pay 100% of the monthly premium; two (2) peers pay 85 – 88% of the premium.

The peer average monthly premium cost for a family dental insurance is $110.01. Two (2) peers do not pay a portion of the monthly premium; five (5) pay 33 – 88% of the premium, and two (2) peers pay 100% of the monthly premium.

Vision

Six (6) peers provide vision insurance that is separate from the health insurance plans.

The peer average monthly premium cost for employee only vision insurance is $9.87. Six (6) of the peers contribute to the premium costs, one (1) peer pays 100% of the monthly premium.

The peer average monthly premium cost for family vision insurance is $26.17and Six (6) of the peers contribute to the premium costs, one (1) peer pays 100% of the monthly premium.

Other Health Benefits

Life Insurance

	Number of Responses	Least Reported	Most Reported
Organizations providing life insurance	8	No (0)	Yes (8)
Life insurance benefit respective to employee annual salary	6	1x salary (1),2x salary (1) Other (please explain) (4)	
Jackson provides life insurance to all qualifying employees.			

Eight (8) peers provide their employees with life insurance.

Six (6) of the reporting peers base the life insurance benefit off the employee's annual salary, which ranges from 1x – 2x the employee annual salary, while three (3) peers base the benefit off various reasons. One (1) peer provides benefits based on the employee's age and coverage option, one (1) peer sets amount for employee, spouse, and children and one (1) peer offers $50,000 for life insurance.

Maximum payout for life insurance

	Number of Responses	Least Reported	Most Reported	Average Reported
Organizations maximums pay out for life Insurance	8	$20,000.00	$150,000.00	$63,571.43
Total monthly cost for basic life insurance	3	$0.0652	$ 8.98	$ 5.02
% Premium employer paid	6	100%	100%	$ 6,205.00
Jackson pays 100% of life insurance premiums for a $35,000 policy to age 65 for qualifying employees. 100% of premiums for a $60,000 policy are paid by Jackson for sworn law enforcement employees				

Accidental Death and Dismemberment (AD&D)

	Number of Responses	Least Reported	Most Reported	Average Reported
Organizations provide accidental death and dismemberment (AD&D) Insurance	8	No (2)	Yes (6)	
% Employer Paid	7	0.0%	100%	71.43%
As part of the life insurance policy paid for by Jackson (100% of premium) AD&D pays an additional $25,000				

Accidental Death and Dismemberment (AD&D):

Five (5) peers provide 100% employer paid accidental death and dismemberment (AD&D) insurance. One (1) peer includes the AD&D insurance as part of life insurance.

Short-Term & Long-Term Disability Insurance

	Number of Responses	Least Reported	Most Reported	Average Reported
Organizations providing short-term disability insurance	8	No (3)	Yes (5)	
% Employee base pay	4	60%	67%	64.7%
% Paid by employer	3	0%	100%	33.3%
Organizations providing Long-term disability insurance	8	No (2)	Yes (6)	
% Employee base pay	5	40%	67%	60%
% Paid by employer (excl 0%)	6	40%	100%	90%
100% of both Short-Term and Long-Term Disability Insurance premiums are paid by Jackson for qualifying employees.				

Short-Term & Long-Term Disability Insurance:

One (1) peer pays 100% of the short-term disability and one (1) peer pays up to $600 per week depending on the employee base pay. Five (5) peers pay 100% of the long-term disability.

Parental leave

	Number of Responses	Least Reported	Most Reported
Do you provide paid parental leave?	8	Yes (2)	No (6)
Jackson provides 80 hours of dependent care each fiscal year that can be used to care for a newborn. All paid leave runs concurrently with unpaid FMLA including short-term disability insurance, PTO and dependent care leave.			

Parental Leave:

Insufficient responses on separate FMLA & STD, Maternity leave, Paternity leave and Adoption or foster Leave.

	Number of Responses	Least Reported	Most Reported	Average Reported
Do you provide paid parental leave?	8	Yes (2)	No (6)	
Separate from FMLA and short-term disability	3	Yes (1)	No (2)	
% Salary provided during maternity leave	3	0%	100%	66.7%
% Salary provided during Paternity leave	3	100%	100%	100%
% Salary provided during Paternity leave	3	100%	100%	100%

FMLA

	Number of Responses	Least Reported	Most Reported
Offer Family Medical Leave Act (FMLA) benefits	8	No (1)	Yes (7)
Using paid vacation or slick leave concurrent to FMLA benefits	7	Required (5), Voluntary (2)	
Using short term disability concurrent to FMLA	5	Voluntary (1), Not Applicable (4)	
Jackson requires the use of paid PTO concurrently with FMLA benefits to a certain level. A calculation of remaining PTO at the time of an unpaid leave is utilized to create a "floor of hours" that will not be required to be used for supplementation of unpaid leave.			

Retirement

Number of Responses	Least Reported	Most Reported
9	No (1)	Yes (8)
Jackson contributes to social security for all positions.		

Defined Benefit Plans

	Number of Responses	Least Reported	Most Reported	Average Reported
Plan Name	9	Wyoming Retirement Systems (6), Public Employees Retirement System of Idaho (1), CalPERS (1), Utah Retirement System (1)		
Employee contribution required amount (% of base salary)	9	No (2)	Yes (7)	
% Of base pay or Flat amount	8	7%	9%	9%
Maximum employer match of employee contributions	5	9%	12%	10%
Formula used to calculate Benefit	8	Flat-Benefit (3), Career-Average (5)		
Years of service eligibility	6	4	5	4.17
Employee % pay guaranteed	6	2%	100%	21.6%
Employee groups plan availability	9	All Employees (6), Other (please explain) (3)		

Jackson contributes various percentages to the Wyoming Retirement system – Public Employee Pension Plan. Employees contribute 2.55%. Per state statute Jackson is required as an employer to contribute 9.12%. However, Jackson contributes 16.07% (for 2022)

Jackson contributes various percentages to the Wyoming Retirement system – Law Enforcement Pension Plan. Employees contribute 5.95%. Per state statute Jackson is required as an employer to contribute 8.6%. However, Jackson contributes 11.25% (for 2022)

- *Two (2) peers have various percentages of base pay for sworn police and fire.*
- *One (1) peer matched sworn police contribution at 8.6% and 17.23% respectively for fire.*
- *One (1) peer guaranteed employee pay in Tiers. Tier 1 entitled employee to 2.125% of the highest average salary of the first 15 years of service, plus 2.25% of the highest salary average salary for each year over 15 years while Tier 2 entitled 2% of the highest average salary for each year of service.*

Defined Contribution Plans – 401(k) *No responses*

Deferred Compensation Plans – 457

	Number of Responses	
Plan Name	8	1) Wyoming Retirement Systems 457 or Mission Square (3) 2) Wyoming Retirement Systems (1) 3) Valic and Mission square (1) 4) Mission Square (1) 5) City of South Lake Tahoe (1) 6) State of Idaho Deferred Compensation Plan (1) *Three (3) peers offer more than one deferred compensation plan to employees*
Maximum employee contribution	6	*Four (4) peers* allow the annual IRS maximum
Maximum employer match of employee contributions	6	*Four (4) peers contribute to deferred compensation plans*
Employee groups eligible	8	All full-time employees (1); All employees (5); Other (please explain) (2)

- *Two (2) peers reported offering Other (please explain) group for employee eligibility for the deferred compensation plan. One (1) peer reported to offer the deferred compensation plan to all employees except for Fire and one (1) peer reported to offer the deferred compensation to all benefitted employees.*

	Number of Responses	Least Reported	Most Reported	Average Reported
Maximum employee contribution	6	$ 800.00	$ 20,500.00	$ 17,216.67
Maximum employer match of employee contributions	6	$0.00	$ 3,500.00	$1,166.67

Organization allows Employer contributions or match

Organizations allow employer contributions or match to more than one plan	Number of Responses	Least Reported	Most Reported	Other (Please explain)
	7	Yes (1)	No (4)	(2)
Jackson provides up to $1,000 annual match for either Wyoming Deferred Comp or Mission Square Deferred comp (formally ICMA-RC) for all employees.				

- *One (1) peer offered 457 matches for 2021-2022 and 2022-2023 match for only fire. One (1) peer allowed matching for part-time employees only*.

Retiree group health

	Number of Responses	Least Reported	Most Reported	Average Reported
Number of Responses	9	Yes (4)	No (5)	
% Of cost paid by employer	3	0%	0%	0%
Jackson provides continuation of benefits for retirees through COBRA				

Terminated participation in a pension plan last 30 years

Organizations terminated participation in a pension plan last 30 years	Number of Responses	Least Reported	Most Reported
	8	Yes (0)	No (8)

Other

Housing Assistance

Organizations offer housing assistance amount to employees	Number of Responses	Least Reported	Most Reported
	10	Yes (2)	No (8)
Jackson has provided housing assistance for high level executives and Department Directors as a recruitment tool. Housing assistance for these roles varies based on negotiation.			

Childcare Benefits

Organizations offer childcare benefits to employees	Number of Responses	Least Reported	Most Reported
	10	Yes (1)	No (9)

- *One (1) peer that offers childcare has a priority waitlist and gives small discounts for programs offered at their facilities.*

CDL Stipend Pay

Organizations offer CDL stipends pay to employees	Number of Responses	Least Reported	Most Reported
	9	Yes (1)	No (9)
Jackson provides a signing bonus of $2,000 paid out after one year of full time (for full time employees only). CDL stipend also provided to winter seasonal Transit Operators of $1,000 for winter season completion.			

- *One (1) peer offers one hour of CDL pay per employee.*

Parking or Commuter Benefits

Organizations offer parking or commuter benefits to employees	Number of Responses	Least Reported	Most Reported
	9	Yes (1)	No (9)
Jackson covers 50% of any bus pass.			

- *One (1) peer offers Free regional bus pass.*

Seasonal (Winter) Premium Pay

Organizations offer employees seasonal (winter) premium pay	Number of Responses	Least Reported	Most Reported
	10	Yes (0)	No (10)
Variable hour transit operators receive a winter bonus of $3,250 (maximum) based on average hours completed for the season.			

- *All peers reported not to offer employees seasonal (winter) premium pay*

Recruitment Bonus for Law Enforcement

Organizations offer recruitment bonus for law enforcement	Number of Responses	Least Reported	Most Reported
	10	Yes (2)	No (8)
Jackson provides Sworn Police Officers with a $15,000 signing bonus paid over 5 years.			

- *One (1) peer that offers recruitment bonus for new law enforcement, provides Lateral Police Officer program pay depending on police experience, Wyoming Lateral Police Officers who meet certain criteria are offered $ 12,500 sign-on bonus, Out of State Lateral Police officers who meet certain criteria are offered $ 7,500 sign-on bonus, previous Wyoming Police Officers that are decertified through absence $ 5,000 sign-on bonus and Entry-level Police Officers one-time sign-on bonus of $ 3,000*

Housing Assistance for Law Enforcement

Organizations offer Housing assistance for law enforcement	Number of Responses	Least Reported	Most Reported
	9	Yes (0)	No (9)
Jackson provides Police Officers two years of housing assistance through a variety of methods including stipends for housing, or decreased rent payments in Town owned property.			

Special Skills Pay

Organizations offer employees special skills pay	Number of Responses	Least Reported	Most Reported
	10	Yes (3)	No (7)
Jackson provides up to $400/mo. for Spanish fluency.			

- *One (1) peer that offers special skills pay, negotiates with the employees at the time of hire.*

Standby or Call Pay

Organizations offer employees standby or call pay	Number of Responses	Least Reported	Most Reported
	8	No (2)	Yes (6)
Jackson pays minimum wage is paid to winter plow drivers from 2:30 a.m. – 7:30 a.m. on Saturday and Sunday to "stand-by" in case they are called out to plow snow.			

- *Two (2) peers that offer standby or call pay; One (1) peer pays base plus 1 hour and one (1) peer pays water system employees for 4 hours for working on the weekend.*

Weekend Duty Work Premium Pay

Organizations offer employees weekend duty work premium pay	Number of Responses	Least Reported	Most Reported
	8	Yes (1)	No (7)

- *One (1) peer that offers weekend duty work premium pay, pays a 5% shift differential of base pay.*

Holiday Premium Pay

Organizations offer employees holiday premium pay	Number of Responses	Least Reported	Most Reported
	8	Yes (3)	No (5)
Jackson allows for the cash in of PTO hours for day of holiday or day it is observed. Should an employee work on the holiday in addition to cashing in PTO hours, this allows for a "double wage."			

- *Three (3) peers that offer holiday premium pay, pay 1.5x of the base salary.*

College Tuition Reimbursement

	Number of Responses	Least Reported	Most Reported	Average Reported
Organizations offer employees College Tuition Reimbursement	9	No (2)	Yes (7)	
Amount allowed per employee	6	$ 2,500.00	$ 3,000.00	$ 2,833.33
Jackson provides 75% reimbursement for tuition and books with Grade C or higher for general courses related to field of work. Jackson provides 50% reimbursement for tuition and books with Grade C or higher for courses not related to field of work.				

- *The average amount allowed per employee is $ 2,833.33. Three (3) of the seven (7) peers that offer employees college tuition reimbursement, one (1) peer offers the benefit depending on the budget and supervisor approval, one (1) peer offers reimbursement for three (3) semester hours per year if the course study benefits the city and one (1) peer offers reimbursement depending on the funding agency.*

Certification Stipend Pay

Organizations offer employees Certification Stipend Pay	Number of Responses	Least Reported	Most Reported
	9	Yes (2)	No (7)
Jackson does not provide certification stipend pay.			

- *One (1) peer stated to offer certification stipend pay $250.00-$500.00 per certification.*

4/10 Work Week

	Number of Responses	Least Reported	Most Reported
Organizations offer 4/10 Work Week	9	No (3)	Yes (6)
4day,10 hr. a day, work week option available for office staff	8	No (2)	Yes (6)
Jackson offers a 4/10 workweek for shift workers in Police, Public Works and Transit. Jackson does not offer a 4/10 workweek for office staff.			

Untraditional Municipal Office Schedule

	Number of Responses	Least Reported	Most Reported
Organizations offer untraditional municipal office schedule	9	Yes (2)	No (7)
Municipal offices closed to the public for one day per week	7	Yes (2)	No (5)
Jackson does not offer an untraditional office schedule. Jackson does not close the offices to the public for one day per week.			

STAFF REPORT

Meeting Date:	September 16, 2024	**Meeting Title:**	Workshop
Submitting Department:	Internal Services	**Presenter:**	Roxanne Robinson
Agenda Item:	Police Officer Staff Retention	**Public Comment:**	Yes

Purpose & Policy Considerations.
Council requested this item come before them for review during the January 2024 Council retreat. The purpose of this item is to provide information to the Council on several notable differences in compensation (salary ranges and take home car) between Town of Jackson Police Officers and Teton County Sheriff's Office (TCSO) Deputies, provide an opportunity for Staff and Council to discuss Police Officer staff retention, and provide direction on a proposal to help address Police Officer retention in this regard.

Requested Action.
Staff requests Council review the notable differences in compensation between the Town and the County for law enforcement personnel and provide direction on staff's proposal.

Recommendations.
Staff recommends Council approve staff's proposal to adjust Police Officer wages between 5% and 11% and eliminate the requirement for Officers to reimburse the Town for fuel utilized from the Teton County line to and from their residence to improve Police Officer retention.

Background.
This issue was raised at the January 2024 Town Council retreat and established as a priority. The issue being addressed is that out of 19 experienced law enforcement officers that have left the department since 2019, 10 of those, plus 1 prospective law enforcement officer, left the Town organization to work for the Teton County Sheriff's Office. These 10 personnel are comprised of 4 Police Officers (21 yrs of combined experience), 2 Corporals (9 yrs of combined experience), 2 Senior Corporals (33 yrs of combined experience), and 2 Sergeants (21 yrs of combined experience).

Staff finds that some of the contributing factors may be higher salaries offered by the County and no requirement to reimburse for mileage past the County line for take home cars. The issue of trained Officers, Corporals, and Sergeants leaving the Town organization is a concern because the Town spends significant resources recruiting and training these employees. When they leave, the Town loses both a financial and staff investment in these Officers. The Town estimates that as of July 1, 2024, each vacancy costs the Town approximately $125,000 in recruitment and training costs before an Officer becomes fully trained and able to patrol on their own. Losing an experienced Officer, Corporal or Sergeant is significantly more impactful because of the training investment over their years of employment, their institutional knowledge, and the leadership loss for the team.

The difference in Officer wages was exacerbated when Teton County completed and implemented its Compensation Study in June 2023. The County placed their Deputies higher in their Pay Band than the Town placed our Officers and provided a higher wage increase for each year of service. A general comparison of notable differences in compensation between a Town Police Officer and TCSO Sheriff's Deputy is shown in the table below.

Comparison Between TCSO Sheriff's Deputies and Town Police Officers		
Benefit	**Jackson Police Officer**	**Teton County Sheriff's Deputy**
Compensation Study Placement	Minimum +Addl Amt for Each Year in Position	Above Minimum + Higher Amt for Each Year of Service
Fuel Reimbursement Required for Take Home Car Outside Teton County	Yes	No
Bonus	$15,000 over 5 years	Up to $1500 Upon Hiring
Housing Assistance	1/2 Rent or $500/mo for 2 yrs	No
Deputy/Officer Range and Range Spread (% change from Min to Max)	$72,592 - $101,628 - 40% Spread	$73,178 - $113,425 - 55% Spread
Corporal Range and Range Spread	$86,566 - $121,193 - 40% Spread	$82,536 - $132,058 - 60% Spread
Sergeant Range and Range Spread	$94,533 - $132,346 - 40% Spread	$94,916 - $151,866 - 60% Spread
Lieutenant Range and Range Spread	$114,425 - $160,195 - 40% Spread	$109,154 - $174,647 - 60% Spread

Staff's recommendation to address the retention issue is to provide Police Officers up through Lieutenant between a 5% and 11% wage increase (depending on rank) and remove the requirement for Officers to pay for fuel when driving from the Teton County line to their residence. The cost to implement this recommendation is approximately $375,000 annually (salary increases combined with an approximate 35% for benefits), with the impact for FY25 prorated to approximately $297,000. Chief Weber believes, based on what we know, that these salary adjustments will allow the Police Department to stay more competitive with the TCSO resulting in the loss of fewer Officers from the organization. These wage adjustments will positively impact 32 members of the Police Department. The removal of the requirement to reimburse the Town for fuel from the Teton County line will impact 10 Officers in the Department resulting in a loss of approximately $15,000 to the Town for eliminating the fuel reimbursement.

Consequences and impacts of losing Officers, Corporals, and Sergeants to the TCSO include:

a. Continually working short staffed,
b. Losing institutional knowledge, and the retention of experienced Officers able to train new hires,
c. Stress related to turnover,
d. Loss of leadership personnel and opportunities for succession planning for the team,
e. Burnout for employees that stay in the organization and shoulder a heavier burden, and
f. The cost of recruitment and training.

As noted above, before an entry level Police Officer is able to work patrol on their own, the Town will have spent 1) approximately $125,000 per vacancy in wages, associated benefits, and direct costs, and 2) 1,700 hours of staff time over an approximate 11-month period to train that Officer.

- ✓ 4 months recruitment and background,
- ✓ 3 months Police Academy, and
- ✓ 4 months Field Training.

The 1700 hours in staff time includes approximately 27 hours spent by Internal Services (Human Resources) staff, 535 hours spent by Police staff (including interview time, conducting background, and field training), 1148 hours spent by the newly hired officer, and 13 hours spent by staff in other teams as part of orientation and onboarding.

If we are fortunate enough to hire an Officer with experience, and their law enforcement academy credits apply in Wyoming, these costs are significantly reduced but these opportunities are rare.

Analysis and Key Policy Questions.

Retaining experienced and trained Officers would result in better service to the community through experience, mentally healthier Officers, a deeper bench in terms of Officers able to promote and lead the team in the future, the ability of staff to spend time on priorities other than recruitment of Police Officers, and funds spent on recruitment able to be utilized for other priorities. The average tenure in the Police Department for current Police Officers through Lieutenant is 7.11 years.

Key Policy Question #1: Does Council support Staff's recommendation to address officers leaving the Town of Jackson Police Department to work for the Teton County Sheriff's Office that includes a 5% - 11% actual wage increase and removal of the requirement to reimburse the Town for fuel as part of the take home car program?

Taking this action would result in the need for a budget amendment for the FY25 budget and further add to the challenges of balancing the budget going forward. If approved, wage increases would take effect September 16, 2024 with the start of a new pay period, and elimination of the requirement to reimburse for fuel would take effect October 1, 2024. However, the action may also save the Town approximately $125,000 per vacancy should we retain Officers currently on staff. Staff also notes that a possible unintended consequence of changing the take home car policy is that it would incentivize Officers living outside the community.

Possible Alternatives.

Alternatives to consider regarding Police Officer recruitment and retention include:

1. Exploring alternatives for the signing bonus in addition to or instead of the wage adjustments plus elimination of take home car payments.
2. Exploring different amounts for wage adjustments.
3. Expanding the salary ranges.
4. Implementing wage adjustments but not adjusting the take home care allowance.
5. Implementing additional wage adjustments over those recommended and/or eliminating the take home car program.
6. Take no action.

Comprehensive Plan & Priority Alignment.

The ability of the Town of Jackson to implement and take actions aligned with the Comprehensive Plan depends on the ability to recruit and retain an effective workforce. Providing a quality benefit package that leads to recruitment and retention of employees, and in particular law enforcement personnel, in combination with a supportive pay philosophy aligns with Common Value #3, Quality of Life, and directly relates to Section 8, Quality Community Service Provision.

Fiscal Impact.

The fiscal impact to the Town to adjust all sworn officer wages by between 5% and 11% is approximately $375,000. This figure includes a 35% premium to cover the cost of benefits including but not limited to the FICA/Unemployment Insurance/Worker's Compensation Insurance cost implications, the additional cost of PTO buyout, and the amount contributed by the Town towards retirement. The fiscal impact of eliminating the fuel payment from Police Officers residing outside of Teton County or over Teton Pass is approximately $15,000 in lost reimbursement to the Town currently impacting 10 Officers. The action may also save the Town approximately $125,000 per vacancy should we retain Officers currently on staff.

Staff Impact.

The staff impact of proceeding with staff's recommendation for Police Officer wages would be positive in the Police Department and other staff involved with recruitment and onboarding as it may result in losing fewer staff to outside employment. There are significant mental health benefits to being fully staffed with experienced Officers and leadership within the Police Department. Staff currently experiences mental health strains related to consistently working short-handed, constantly training others, stress related to turnover, loss of institutional knowledge, and burnout for employees that stay in the organization and shoulder a heavier burden.

Taking this action will further exacerbate the issue of the provision of wage and benefit increases for law enforcement personnel over other Town employees. We are also experiencing similar turnover and retention issues with Street/Equipment operators due to higher salaries being paid in the private sector, and staff may bring forward information to address these critical employees also.

Total staff time spent on preparation of this staff report is estimated at 72 hours including time spent by Internal Services, Finance, Administration and Police.

Attachments or Links.
None

Suggested Motion. *Council always has the option to adopt, approve with conditions, continue, or deny items*.

I move to direct staff to adjust actual wages between 5% and 11% for sworn officer positions from Police Officer up through Lieutenant, and to eliminate the requirement for Officers to reimburse the Town for fuel.

STAFF REPORT

Meeting Date:	September 16, 2024	**Meeting Title:**	Town Council Workshop
Submitting Department:	Administration	**Presenter:**	Tanya Anderson
Agenda Item:	Pay As You Throw Pricing for Residential Trash Service	**Public Comment:**	Yes

Purpose & Policy Considerations.
Consider whether staff should draft a Pay As You Throw (PAYT) ordinance for Council to consider at a future date.

Requested Action.
Review policy questions regarding a potential PAYT ordinance and provide staff with direction.

Recommendations.
Staff recommendations are provided, where appropriate, for the key policy questions.

Background.
Pay As You Throw pricing for residential waste disposal was discussed at the 2024 Town Council retreat and established as a priority. The following definitions are provided to facilitate a common understanding of waste management terminology and Pay As You Throw pricing:

Landfilled waste refers to materials that are transported to a landfill.
Recycled waste refers to waste materials that are collected and sent to a facility to be recycled into new commodities. Recycled waste includes paper products, metals, plastics, glass, and more.
Diverted waste refers to all waste materials that are not landfilled, including recycled materials, organic waste that is composted, and clean wood waste that is chipped for reuse.
Municipal Solid Waste (MSW) is the total of both landfilled and diverted waste.
Diversion Rate refers to the percentage of MSW that is diverted waste.

Pay As You Throw (PAYT) pricing is a program that strives to incentivize waste reduction and diversion through pricing mechanisms. It has been effective in reducing waste and increasing recycling rates in communities across the country. It is a strategy within both the Town of Jackson Sustainability Plan and the Teton County ISWR Road to Zero Waste and has the potential to reduce the environmental impact of waste generated by Town of Jackson residents.

Principle 2.5 of the Jackson/Teton County Comprehensive Plan is to conserve energy through waste management and water conservation. Each ton of waste transported from the Teton County Transfer Station to the landfill contributes an estimated 0.52 tons of carbon dioxide equivalent (CO2e) emissions to the atmosphere. Reducing the quantity of landfilled waste is an effective means of reducing greenhouse gas emissions and moving our community towards our goal of net zero emissions by 2030. It also aligns with the Teton County Integrated Solid Waste and Recycling's Road to Zero Waste goal to divert 60% of the waste stream by 2030, and the Town of Jackson Sustainability Plan target to reduce landfilled waste 20% by 2030.

Waste Management and Recycling in Jackson and Teton County

Teton County Integrated Solid Waste and Recycling (ISWR) manages waste from more than 23,000 permanent residents and approximately 4,000,000 seasonal residents and visitors. According to a 2022 waste characterization study conducted by Trihydro Inc., over the three-year period from 2019 to 2021, the average total municipal solid waste (MSW) tonnage, which includes both landfilled and diverted wastes, was 48,393 tons, and the average diversion rate was approximately 30%. Generation of MSW has increased steadily over time, while the County-wide waste diversion rate has hovered between 29% and 35%. Most waste that is not diverted goes to a landfill in Bonneville County, Idaho, approximately 88 miles away. The combination of fuel used to transport waste from Teton County to the landfill and methane emitted at the landfill accounts for 0.52 tons of carbon dioxide equivalent (CO2e) emissions per ton of waste. Materials that are recycled have additional reductions in CO2e emissions that can be calculated through a lifecycle analysis of each material.

The 2022 waste characterization study projected that approximately 22.5% of the waste that Teton County sends to the landfill, or 7,594 tons annually, consists of materials that can currently be recycled. These commodities have an estimated market value of $441,000 to $1,204,000. Another 18.4%, or 6,093 tons of MSW is compostable, mulchable, or otherwise divertable. Recycling or otherwise diverting these materials from the landfill would reduce our community's CO2e emissions by more than 7,000 tons per year.

Reducing the amount of waste going to the landfill while increasing the percentage of commodities that are diverted for reuse or recycling will reduce CO2e emissions, increase revenue generated by the resale of recyclable materials, and decrease the number of trucks needed to transport waste to the landfill. One of the most fundamental ways to incentivize waste reduction, waste diversion, and recycling is by creating financial incentives that reward households that produce less landfill-bound waste.

<u>Pay As You Throw</u>

PAYT pricing, also referred to as "Pay As You Save" and "Variable-Rate Pricing", refers to systems where residents pay for the waste they dispose of by weight, volume, or frequency rather than as a flat fee. Within the Town of Jackson, it could be implemented through an ordinance requiring waste haulers to provide pricing options for different sizes of garbage cans and for different frequencies of pickup. By providing options for customers to save money, they are incentivized to reduce their waste output. PAYT has been successfully deployed in communities across the United States, including mountain communities, to reduce waste, lower the costs of waste transfer, and combat pollution and climate change. By moving away from a flat fee for waste disposal to one where customers have the choice to save money by using a smaller waste container and/or receive less frequent pickup, customers have a greater incentive to participate in recycling and composting. PAYT programs in other communities have reduced residential solid waste by 14-27% while increasing recycling rates by 32-59%. PAYT programs also encourage better purchasing habits and greater reuse of materials. As such, PAYT is one of the most effective policies for reducing waste.

Currently, three waste haulers have franchise agreements with the Town of Jackson. Franchise agreements with two of the haulers have been renewed in the past two years and contain wording stipulating that if the Town adopts a PAYT policy, they will participate in it. Implementing PAYT pricing will have an impact on waste haulers, who will have to process inquiries and paperwork for households that make changes to their service. All three waste haulers that have franchise agreements with the Town of Jackson already offer different frequencies of pickup. They do not all provide multiple options for bin sizes.

PAYT pricing is often paired with universal recycling, where curbside recycling is automatically provided for every curbside trash pickup. This provides residents a convenient means of recycling waste and reducing trash that is bound for the landfill. Currently, waste haulers in the Town of Jackson do not provide recycling pickup, and the recycling hauler, Jackson Curbside, provides service primarily to commercial clients. Implementing universal recycling requires more infrastructure, staff, and time to develop than implementing a PAYT pricing system alone, and staff is not recommending it at this time. However, some critics state that without universal curbside recycling, some people do not have access to a primary means of reducing waste. While there may be some residents who do not own personal vehicles and are not walking distance from our communal recycling bins, that number is small.

Other critics argue that PAYT pricing could raise prices for families, who tend to produce more trash than individuals. However, that is only true if waste haulers increase their base prices. A properly implemented PAYT pricing program maintains consistent pricing for current waste hauling options while adding lower cost alternatives for smaller-sized bins or less frequent pickup service. Thus, waste removal services should remain relatively constant for households that make no changes to their contract and should decrease for households that do. This can provide economic relief for senior citizens who live alone and other vulnerable populations.

Since April 1, 2023, the Town of Jackson has required bear-resistant trash containers within the designated Bear Conflict Zone, affecting 800-1000 households. Town Council has expressed interest in considering expanding the Bear Conflict Zone. However, waste collection service costs more for bear-resistant containers, typically around $10 more per month for similar service. Providing customers with cost-saving options prior to any future expansions of the bear-conflict zone will help ease concerns over cost for price-sensitive residents. Thus staff, find it important for Town Council to consider PAYT pricing before any additional households are required to make the switch to bear-resistant containers. Local waste haulers currently provide options for less frequent service. However, weekly removal of waste in smaller bins reduces the amount of time that odorous trash is left outside, helping to reduce the risk of bear conflicts for households that do not have a garage or shed. At least one manufacturer, Kodiak, provides bear-resistant cans in both 65-gallon and 95-gallon sizes.

Analysis.
PAYT pricing systems can be established by several means:

1. Weight collected
2. Volume collected
3. Frequency of pickup
4. Fees for trash bags

Weighing trash requires different garbage trucks from the ones that are currently used by local haulers and would be difficult to implement. Likewise, a bag-based system would not work in a community that has multiple waste haulers and that does not allow loose bags of trash at the curb. Thus, staff recommends a PAYT pricing system that provides multiple options for bin sizes (volume) and frequency of pickup.

<u>Stakeholder feedback:</u>
Staff met with each of the three residential waste haulers that operate within the Town of Jackson as well as the curbside recycling hauler, whose operations could also be affected by a PAYT program. Haulers expressed the following opinions regarding a potential PAYT program:

- Haulers were not worried about a requirement to provide multiple frequencies of pickup, as they already do this to some degree.
- Different haulers use different types of equipment (front-load, rear-load, automatic, etc), and did not want changes that would require the purchase of new equipment, such as a weight-based program.
- Some haulers expressed concern that a requirement to provide multiple sizes of bins would put undue financial burden on haulers to purchase and store the bins.
- Several haulers were concerned that residents would choose a bin that is too small for their needs and would overfill it, or that they would be required to leave trash behind if resident put out too much.
- Haulers also expressed concern that residents may switch haulers if some haulers charge more for extra trash and other haulers do not.
- Some haulers expressed concern that it will add paperwork if people switch bin sizes frequently and suggested they customers would need to stick with their choice for a while.
- One hauler expressed concern that there are not many smaller-sized bins available for bear-resistant cans, and that smaller bins are more likely to be removed from the Interagency Grizzy Bear Commission list of approved cans.
- There was some concern that a PAYT ordinance might incentivize people to put trash in other people's bins or in the recycling bins. They also expressed concerns about short-term rentals, where inhabitants are unaware of Town practices.
- Some haulers expressed concern that customers might switch to self-hauling, which adds to traffic congestion and increases labor costs at the transfer station. The per ton cost of trash has increased annually, but the minimum fee for self-haulers remains the same.

<u>Staff Recommendations:</u>
Staff recommends drafting a PAYT ordinance that requires haulers to provide pricing options for at least two sizes of bear-resistant trash containers and at least three options for frequency of pickup. To avoid residents or haulers purchasing additional cans that are not bear-resistant and potentially having to replace them with bear-resistant ones later, staff recommends that the requirement for different sizes of bins apply to bear-resistant cans only. The ordinance should include requirements for haulers to charge households that overfill cans, and to upgrade them to a higher service level after overfilling a pre-determined number of times. Private haulers should be responsible for setting their own pricing; however, staff recommends setting a minimum price difference between can sizes and pickup frequencies to ensure that the price marker is strong enough to provide an incentive. Staff recommendations are summarized in the table below:

Ordinance Element	**Recommendation**	**Reasons for Recommendation/ Explanation**
PAYT Pricing Mechanism	Require at least two options for the size of the trash container and at least three options for the frequency of pickup.	Less frequent pickup works well for seasonal residents, but weekly pickup of a smaller container benefits year-round residents and removes bear attractants from Town sooner.
Hauler Requirements	Require haulers to provide pricing options for multiple sizes of bins and multiple frequencies of pickups.	Removes the burden of purchasing and storing bins from the hauler and allows for a variety of business models, including models where customers purchase their own bins.

Bear-resistant Cans	Only require multiple bin sizes for bear-resistant cans.	Discourage the purchase of new cans that are not bear-resistant and incentivize conversion to bear-resistant cans.
Overfilling Deterrence	Include stipulation that haulers shall charge households that overfill cans and shall upgrade households to a higher level of service after a set number of overfilling incidents.	Maintain fairness for haulers to get paid for the work they are doing, and disincentivize households from switching haulers to avoid penalties.
Price differential	Establish a minimum price difference between different bin sizes and pickup frequencies.	Without explicit wording stating otherwise, haulers could charge more for smaller bins or less frequent pickup, thereby eliminating the incentive to produce less trash. A minimum price differential ensures that the price difference incentivizes diversion.

Discussion Question #1: Is Council interested in pursuing a PAYT program in Jackson?
If Council is interested in such a program, proceed to questions two:

Discussion Question #2: Does Council wish to give direction on the overall approach?
Staff recommends drafting a PAYT ordinance that requires waste haulers to provide pricing options for at least two different sizes of bear-resistant cans, and at least three different frequencies of pickup, includes stipulations that require haulers to charge households that exceed their bin size and requires households to increase their service level after a set number of exceedances, and establishes a minimum price differential between bin sizes and pickup frequencies. Alternatives to staff's recommendation include:

Possible Alternatives.

1. Council could decline staff's recommendation to create a PAYT ordinance
2. Council could approve moving forward with a PAYT ordinance with different stipulations.
3. Council could direct staff to pause discussions regarding PAYT until decisions are made regarding potential future expansions to the Bear Conflict Zone.
4. Council could direct staff to do a scoping report on universal recycling and delay creation of a PAYT ordinance until the two can be done together.

Comprehensive Plan & Priority Alignment.
<u>Principle 2.5 – Reduce greenhouse gas emissions through waste management and water conservation</u>
The community will reduce the amount of energy required to distribute, clean, and dispose of water and waste through conservation efforts. Our current water consumption and waste management practices will have long-term adverse impacts on the ecosystem and the community's energy demand if conservation measures are not pursued.

<u>Net Zero by 2030 Resolution</u>

<u>Town Sustainability Plan</u>
<u>Goal:</u> Reduce waste generation and increase diversion rates

Targets: Reduce landfilled waste 20% by 2030; divert 60% of our waste stream by 2030
Strategy: Implement Pay-As-You-Throw Pricing

Fiscal Impact.
Drafting a new ordinance will take staff time, primarily from the Administration and Legal Departments. Ordinance publishing costs can range from $100 to several thousand dollars depending on the length of the ordinance. Implementing a PAYT ordinance will also involve community outreach costs, which could include newspaper ads, water bill flyers, and posters, and would likely amount to a few thousand dollars. Enforcement costs are expected to be minimal, as an ordinance would only apply to waste haulers, and would only require them to provide options.

Staff Impact.
Conducting stakeholder interviews and drafting this report took approximately 16 hours of staff time in the Administration and Legal departments. Drafting an ordinance will take an estimated 20-30 hours of staff time. If approved, community outreach will take an estimated 20 hours.

Attachments or Links.
Pay As You Throw: A Method for Reducing Solid Waste – Final Report
Teton County Waste Characterization Study Report

Suggested Motion.
I move to direct staff to draft a Pay As Your Throw Ordinance as directed today, and to bring it back at a future Town Council meeting.

Pay As You Throw: A Method for Reducing Solid Waste - Final Report

ENR 4900/5900: Environmental Solutions

Image credit: https://en.wikipedia.org/wiki/Jackson,_Wyoming#/media/File:Jackson_from_snowking.jpg

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May 12, 2021

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Executive Summary

Due to current environmental concerns over climate change and waste production, Teton County, Wyoming has committed to a road towards zero waste. One of the many strategies to reach this goal is to implement a Pay As You Throw (PAYT) solid waste management system. Currently, Teton County residents pay a flat rate for waste collection. Under a PAYT system, residents and businesses would pay by weight, volume, or frequency of pickup for the waste they produce. A PAYT system would, therefore, incentivize customers to reduce their waste output.

Our purpose was to work with Teton County Integrated Solid Waste and Recycling (TCISWR) to help them understand waste hauler and stakeholder needs and concerns as they plan the PAYT program, and then develop ordinance language and a fee scale for the PAYT waste collection plan for future implementation in Jackson, Wyoming. To start, we conducted social, demographical, and historical background research on Jackson, Wyoming to gain an understanding of what specific obstacles the community is facing. Further, we identified four PAYT program types that have been used in other communities. Next, we conducted case studies of other communities that have implemented similar programs to gather key takeaways about PAYT systems and practices. Ultimately, we developed draft ordinance language for the Town and a draft fee-scale to support future efforts of implementing a PAYT program. Additionally, we include factors to consider when assessing the functionality of both the ordinance language and fee-scale.

Lessons learned through this project are:

- Haulers are eager to participate in the PAYT planning and roll-out process.
- Several hauler companies already operate with semi-PAYT programs, even if they are unaware.
- Haulers are concerned with how this program would operate in an open market.
- Haulers are concerned with how the future ordinance language will define "garbage" and "bear proof" in addition to how the fee structure will limit their control over their own revenue.
- Many haulers, and the Town Attorney, are concerned with enforcement of dumping, overflow, and the management of bear proof containers.

- The Town has statutory authority to establish a special municipal officer for enforcement, however, concerns then arise regarding how to pay for that new position.

Implementing a PAYT waste collection and management program has the potential to not only reduce the amount of waste that residents generate and is transported to the landfill, but also to reduce the amount that residents are paying for waste collection. Our project stands to set a solid foundation for implementing a successful PAYT pilot program.

Introduction and Purpose

Teton County Integrated Solid Waste and Recycling (TCISWR) wishes to achieve a goal of 60 percent waste diversion from landfill or incineration by the year 2030 as one component of their Road to Zero Waste plan (Road to Zero Waste, 2014). The Road to Zero Waste Resolution, which was adopted by Teton County in 2014 and the Town of Jackson in 2015, is an attempt to address the broader challenges of reducing waste, lowering costs of waste transfer, and combating climate change through a reduction in landfill space and greenhouse gas emissions (Resolution 2014-043, Sept. 16, 2014). Each year, Teton County produces nearly 47,000 tons of solid waste (B. Ashworth, April 23, 2020). About 32,000 tons of that total waste passes through the Teton County transfer station and is then hauled 88 miles to the landfill in Bonneville County, Idaho (B. Ashworth, April 23, 2020). Currently, Teton County residents pay a flat rate for their waste to be picked up, whether their can is empty or full. The Pay as You Throw (PAYT) program is an alternative to the flat rate trash collection system. Customers would be charged by the weight, volume or pickup frequency for the trash they produce, which would incentivize them to reduce their waste output. A PAYT program would divert waste through conserving natural resources, discouraging single-use products and materials, and promoting community waste education. Studies have shown these programs reduce the amount of solid waste disposed of by 14-27 percent while increasing recycling rates by 32-59 percent (DiMartino, 2011). By implementing a PAYT program, TCISWR can achieve similar waste reduction rates to help them reach their Road to Zero Waste Resolution goals.

Image credits: https://www.roadtozerowastejh.org/road-to-zero-waste/

Our purpose was to work with TCISWR to develop draft ordinance language and fee-scales for the PAYT waste collection plan to one day be implemented throughout the town of Jackson, Wyoming. TCISWR suggested focusing our efforts within the Town because they would like to implement a pilot PAYT program within a single neighborhood. By focusing on a single neighborhood to start, TCISWR hopes to gain useful information that can then be applied throughout the Town and eventually the entire County as well. We conducted contextual, in-depth research of PAYT projects in similar communities to identify best practices and common challenges to ultimately provide TCISWR a model under which to begin development. This research is coupled with virtual interviews to gauge opinions of local waste haulers – an important stakeholder group. Major stakeholders involved include private waste collection companies, municipal representatives and TCISWR. Other stakeholders of interest include local residents and businesses, government officials from the community and city, the National Parks Service, the National Forest Service, and Wyoming Game and Fish Department. Our model includes components such as a method of collection, a fee-scale, written ordinances, and educational outreach objectives to inform community members about the pilot project and future goals.

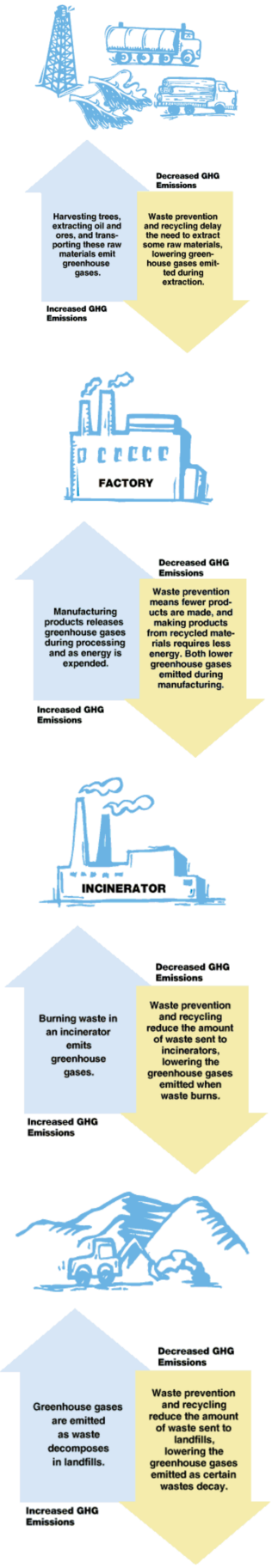


Image credits: https://archive.epa.gov/wastes/conserve/tools/payt/web/html/factfin.html

Background

Project Relation to Social/Ecological Concepts and Challenges

As the impacts associated with climate change become more apparent around the world, towns like Jackson, Wyoming are implementing programs and solutions to mitigate risks. Greenhouse gases are causing changes to the composition of the Earth's atmosphere which is resulting in a changing global climate (V. Ramanathan and Y, Feng, 2009). Some of these changes relating to solid waste include the release of methane produced from organic materials decomposing in landfills, and the transportation emissions of CO_2 produced during disposal activities (Platt, 2008).

The cycle of manufacturing, distribution, and use of disposable products results in greenhouse gas emissions via CO_2 in the manufacturing and distribution processes and methane in the disposal process due to decomposition in landfills (Platt, 2008). Additionally, the management of the resulting waste from those disposable products influences rising methane emissions through the breakdown of organic materials in landfills (Platt, 2008). By implementing programs to reduce waste and increase recycling and composting, communities can help mitigate climate change ("Climate Change," 2020). Hauling waste creates increased transportation miles and greenhouse gas emissions from fuel consumption in Jackson Hole, Wyoming because the county does not have a local landfill, so space allocated for waste is at a premium. Instead, Teton County hauls all waste to Bonneville County, Idaho. Moreover, although Jackson is a comparatively small community with a resident population of about 10,500 people, the town's waste stream is similar to a town of 75,000 people due to year-round tourism in the area (US Census Bureau, 2019; Ashworth, 2020). Accordingly, waste haulers transport solid waste to Idaho six days a week, making five trips a day, increasing the transportation miles and resulting CO_2 emissions even further (Ashworth, 2020), (Platt, 2008). Additionally, Jackson's geographic location makes the transportation of waste dependent on weather and road conditions. TCISWR has a contingency plan that mandates if the road to Bonneville is closed, waste is transported to Mud Lake, Idaho or additional long-distance back-up locations (Ashworth, 2020).

However, Teton County adopted a Road to Zero Waste Resolution in 2014 (Resolution 2014-043, Sept. 16, 2014). The term "road to zero waste" is one commonly used to denote

a goal of reducing and diverting as much solid waste as possible (Road to Zero Waste, 2014). For Teton County, "zero waste" is meeting or surpassing a goal of 90 percent waste reduction (Road to Zero Waste, 2014). By committing to the principles of zero waste, Teton County hopes to conserve resources, save money, create jobs, and sustain a healthy environment (Road to Zero Waste, 2014). Residents recognize the current process of transporting waste as an inefficient method of waste collection, costing individuals more than necessary and adding to global carbon emissions (Ashworth, 2020). In order to reduce waste, communities and individuals must find ways to reduce their consumption of single-use products and divert what they can towards recycling, reusing, and composting (Platt, 2008). Teton County specifically has a goal to reach 60 percent reduction of the county's solid waste by the year 2030 as part of their larger goal of reaching 90 percent zero waste further in the future (Road to Zero Waste, 2014).

One way that TCISWR plans to reduce the county's waste through piloting a PAYT program. The Environmental Protection Agency (EPA) defines these types of programs as "systems under which residents pay for municipal waste management and disposal services by weight or volume collected, not a fixed fee," ("Pay-As-You-Throw | Conservation Tools," 2020). Currently, Teton County residents pay a flat rate public utility fee for their waste collection, regardless of the amount of waste they produce. Under this program, TCISWR will create a price scale to incentivize individuals and businesses to reduce their waste by charging households less as they are producing less waste. Additionally, this program would incentivize individuals to use existing recycling and composting programs provided by TCISWR.

There is evidence that consequence strategies, as exhibited in a PAYT program, can be highly influential in creating environmentally focused behavioral change. (Lehman & Geller, 2004) Consequence strategies stem primarily from either rewards or feedback (Lehman & Geller, 2004). Rewards strategies work to reward individuals for making positive environmental behavioral changes (Lehman & Geller). Feedback strategies provides individualized information regarding environment-related behavior which makes the consequences of behavior more salient, and increased the potential for behavior change (Lehman & Geller, 2004). A PAYT program would use both of these strategies. Residents of Jackson will be rewarded monetarily by reducing their waste in addition to becoming more aware of their waste production.

Historical/Contextual Background

Demographic Considerations

Demographic considerations can help inform the development and implementation of PAYT structure in the Jackson Hole community. Demographics with clear effects on the amount of trash produced within a community include the community's population, average household/family size, and median household income (Kerzee et al., 1994). Median household income may provide a general sense of the financial stability of individuals within a community, which can inform inferences about the viability of increasing the costs of waste disposal services. This information can help avoid waste programming only accessible to financially well off residents and customers. (See Table 1 for demographic information for the Town of Jackson) Demographics are based on data from the 2020 Census.

History and Variance of PAYT Programming

PAYT programming has been developed and implemented in many communities and in many different ways across the United States. Analyzing the history behind, and differences between, PAYT programming provides a foundation from which to develop successful pilot programs in any community. We provide an analysis of these different systems and their effectiveness and relationship to the Jackson community in a pro/con list form below.

<u>Prepaid Bag System</u>:

Residents purchase "specially colored or marked trash bags either at government offices or area grocery and hardware stores. Only garbage placed in these bags is collected by sanitation workers or accepted at the landfill, transfer station or convenience center. Typically, bags are no bigger than 20 or 30 gallons in capacity to ensure that residents who generate less waste pay less. The price of the bag covers a portion of the hauling and tipping costs involved in the disposal of that garbage." (Georgia Department of Community Affairs (GDCA), 2020). Biddeford, Maine currently uses this system. The City charges $2.25 for their largest bags and $1.75 for their smallest (City of Biddeford, 2021).

Pros: Easy to integrate with current trash bins, cheap, effective, abundance of data

Cons: Teton County has committed to reducing use of plastic bags. This system is

likely not an option. Nonetheless, these systems provide valuable information regarding public perception and acceptance of PAYT programming.

Tag/Sticker System:

Residents purchase a tag or sticker that is affixed to their bags of trash or trash bins. This tag or sticker indicates that the resident has paid for the trash they have generated in the bin and is taken off the bin at the time of collection by the haulers. Dover, New Hampshire uses this system for their PAYT program (Pay-As-You-Throw Success Stories, 1997). Residents are usually provided with multiple locations throughout town to purchase tags or stickers. This can be anywhere from the local municipal building or local grocery stores and businesses. Residents would only need to purchase one annual tag unless their waste production changes and they would like to change which tag or unit they are in (payasyouthrow.org).

Pros: Inexpensive, effective, and accommodating to oversized and bulky materials

Cons: The system is subject to fraud and does "not work well with automated cart based systems" (Conservation Tools, 2020).

Single or Variable Can System:

The Single or Variable Can System method utilizes a hybrid method of Tag/Sticker and Prepaid Bag. For example, "some cities and counties have adopted hybrid systems that provide and charge residents for a base level of service ([such as], a single 30 gallon can per week), then offer a prepaid bag, prepaid sticker, or variable can service for waste in excess of the base level" (GDCA, 2020). Fort Collins, Colorado and Golden, Colorado currently operates a PAYT program that uses this system.

Pros: Ensures predictable flow of revenue while still incentivizing residents to reduce waste

Cons: Does not divert as much waste as the bag or tag systems above

Individualized Pick-up Schedules:

Using the standard trash cans currently issued by the town or county, under the Individualized Pick-up Schedules method, households pay rates based on frequency of trash collection. Rather than investing in new trash cans or requiring the use of bags, this system would only require individual households to decide their frequency of track pick-up in advance. The flexibility to change pickup frequency depends on what each waste hauler

offers. The longer the period between pick-ups, the cheaper the rates. We have not found this type of program in another community, however, with Jackson's unique current waste hauling we believe a program like this would work well. Many haulers in Jackson already implement some form of individual "on-call" programs for residential waste pick-up. Further, other ordinances limiting the use of plastic bags creates unique challenges for the community.

Pros: Cheap implementation, minimal change for residents

Cons: More work for the haulers, requires a platform for residents to periodically change their pick-up schedules, haulers must use a route-building app to create efficient routes

Fee Structures

To implement PAYT programming, there is flexibility in the method of the program itself, and how the fees are structured. We are investigating the different fee structure options because we need to find a program method and fee structure that is compatible with the Jackson community. There are four standard fee structure systems that all PAYT programs use as follows.

Proportional (linear) Rate System: This is likely the most simple fee structure for a PAYT community. Under this system, households and businesses are charged a flat price for each container of waste produced. Challenges with this system include finding a proportional rate per container that is not too high to create a resistance to the change altogether or to charge a rate too low that creates revenue shortfalls (Canterbury, 1996). Additionally, communities should expect revenue shortfalls if the program is successful, and need to plan for this to incentivize waste reduction.

Variable Container Rate System: This system charges a different price for differently sized containers. For example, residents pay $2 for every 60-gallon container and $1.25 for each 30-gallon container, depending on their waste needs. While this system incentivizes reducing waste, it has similar issues to the Proportional Rate System, because revenue may become unstable and ineffective if waste is substantially reduced. Additionally, this system would involve a more complicated billing system that would be difficult to administer (Canterbury, 1996).

Two-Tiered Rate System: This system combines the Flat-Rate system and the Proportional Rate system. Under this system, a monthly flat fee is charged to each household or business. Additionally, a separate per-container fee is then also administered. This allows for a stable and predictable income that would prevent revenue shortfalls, while at the same time incentivizing reducing waste (Canterbury, 1996). For example, a community could charge an annual fee of $65 (or about $5 a month) plus $1 per container placed on the curb for pick-up. This system has less of an incentive for waste reduction but allows for a stable program income, which is why many communities use the Two-tiered Rate System while transitioning to a PAYT program (Canterbury, 1996). Once decision-makers can gauge responses to unit-pricing, implementation of a different, proportional rate system could further incentivize waste reduction.

Multi-Tiered Rate System: This system combines the Flat-Rate system and the Variable Container Rate system. Under this system, a monthly flat fee is charged to each household or business. Additionally, a separate fee is administered based on the size and number of containers set out for pick up. For example, a community could charge an annual fee of $65 plus $2 for each 60-gallon container and $1.25 per 30-gallon container. This system is certainly the most complex and would be the most difficult to administer, but it also has a stronger waste reduction incentive than the Two-Tiered Rate system (Canterbury, 1996).

Case Studies

A large number of communities across the country have implemented PAYT systems. We chose case studies with extensive information available online, similar program structures to what we hope to implement in Jackson Hole, and similar community

demographics: Athens-Clarke, Georgia; Golden, Colorado; and Fort Collins, Colorado. We chose Athens-Clarke, Georgia, because their PAYT program pilot occurred in an area with a similar population size to Teton County and included examples of public education materials. Golden, Colorado has implemented a PAYT program incorporating a bin system, which we believe is the most promising system for Jackson Hole. Additionally, their local government presents a concise and helpful report for how to implement the program, including public comment opportunities. Some of these public comments are on their website, which provides a useful tool for helping to shape public involvement in Jackson. The Fort Collins, Colorado system is relatively new, but the information available about their program online is extensive and well-organized. In addition, they are a Mountain-West community that has similar demographics to the Jackson community. We have included a section after our case studies with additional communities for potential future investigation, but that we did not assess (i.e., communities with resources and information unavailable online, or community demographics are more dissimilar to Jackson).

Demographic Facts:

	Population	Average Household Size	Median Household Income
Jackson, WY	10,553	2.64	$73,411
Athens-Clarke, GA	17,000	2.37	$33,060
Golden, CO	20,956	2.24	$70,092
Fort Collins, CO	167,830	2.46	$62,132

Athens-Clarke Georgia:

The PAYT programming implemented in Athens-Clarke, Georgia was originally targeted to a county with a population of 17,000. While the median household income ($33,060) is only about half that of Jackson Hole, this community was

Barry Dale Gilfry, 2016

able to successfully pilot and expand PAYT programming (Athens-Clarke County Unified Government, 2020). Major components of Athens-Clarke Georgia's PAYT program included public education materials, automated collection rules, and the development of a solid waste ordinance.

A debrief document is available on the Athens-Clarke County Unified Government website including common synonyms for PAYT programs, statistics from accredited sources about the cost-effectiveness and environmental benefits of PAYT programs, and responses to commonly arising concerns such as increased burning and illegal dumping (Georgia Department of Community Affairs (GDCA), 2020). The do's and don'ts regarding automated collection rules are illustrated in Figure 2 as well as potential consequences for individuals in violation. The Athens-Clarke government also developed Solid Waste Ordinance (Section 5-2-29, 2021) requiring private haulers to offer recycling services upon request. These components, alongside many others such as well-defined terms and thorough enforcement strategies, ultimately produced the conditions for a successful PAYT initiative.

Lessons Learned

- Make more appealing and well-designed public education materials. These materials could include videos, easy to understand infographics, and printed materials.
- Use already standing social media and public forums to distribute educational materials.
- Clearly inform the public about automated collection rules and actively enforce them for at least the initial launch of the program.

Golden, Colorado

The city of Golden uses a three-size waste container system which uses 32, 64, and 96 gallon containers. Luckily for the City, businesses and apartment buildings were already paying based on volume, so the switch to PAYT had no effect on these entities regarding dumpsters. The city does not mandate container type, so the plastic container system was the result of a contracted hauler's decision to use them. Golden's ordinance language gives the haulers freedom to containers and system they prefer (Golden

Municipal Code 4.80.020, 2021). For instance, Chapter 4.82 specifies the three approximately sized bins, but allows for "other standard size containers as staff deems appropriate," (Golden Municipal Code 4.82.010, 2021)

Under this program, The City reduced its waste by 36% on average per household when it switched to PAYT, which may be attributable to using the differently sized containers instead of bags or tags which have garnered a higher percentage reduction in waste. A significant part of overall waste reduction is due to additional diversion programs such as composting, recycling, and safe drug disposal. (City of Golden, Waste, 2020). Finally, The fee is more vaguely defined in the ordinance and does not explicitly address PAYT. Instead, the ordinance requires payments of the fee regardless of use with City Council setting the fee schedule. This allows for some flexibility for any changes in the PAYT program (Golden Municipal Code 4.82.045, 2021).

Lessons Learned:

- Allowing for haulers to make their own decisions regarding containers and sizes eases the burden on haulers.
- Using a tiered waste container size system can significantly increase waste diversion, and Golden has shown the potential of such a system.
- Creating a PAYT program should be implemented in tandem with recycling, composting, and other initiatives to provide residents with a well-rounded waste diversion system.
- By making the City Council set the fee, rather than creating a fee explicitly within the ordinance, Golden has allowed for more flexibility for changing circumstances.

Fort Collins, Colorado

Fort Collins uses a volume-based rate system based on size of trash containers. Residents may purchase 64 or 96-gallon containers, with some haulers also offering 18-gallon tubs. Residents subscribe directly to private haulers, and their subscription is for a certain size of trash receptacle; residents may scale the size of their receptacle whenever necessary. Otherwise, residents subscribe indirectly through their HOA who contract to provide trash service for the residents within the HOA. Residents are only charged for trash collection and unlimited recycling is included at no additional cost. Additionally, each year, all haulers offer yard waste collection at an additional cost between the months of April and November. Haulers will mail yearly notices to their customers

regarding the PAYT ordinance in physical form or via email which helps keep residents up to date with changing regulations.

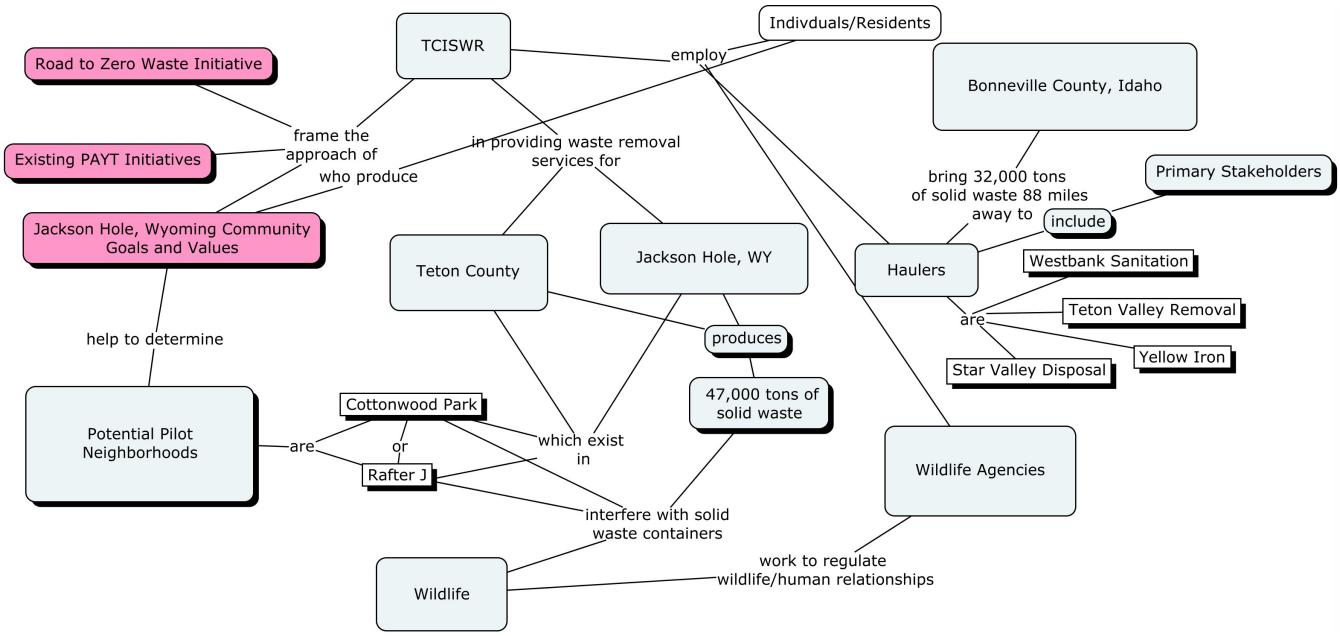
Lessons Learned

- Communicate early and frequent with the target community; Fort Collins officials and haulers began communicating with customers and citizens six months before the ordinance came into effect.
- Publicize information so that it is available to as many people as possible; utilize newspapers, advertisements, haulers' billings, etc.
- Do not underestimate the amount of time it will take to see a difference in the community; people may take three, six, or even nine months to realize that generating less waste will save them money with a PAYT system.
- The use of municipal codes are a tool used to create the legal framework for implementing and enforcing PAYT programs. At a minimum the Town of Jackson would need to pass ordinances that mandate the use of PAYT (and penalty for non-compliance), state how rates are to be set and who they are to be paid to.
- If private haulers are used, they may take the opportunity to increase collection rates during the transition; expect confusion from the community regarding who is at fault for the price increases.
- Ensuring the transition from different billing system runs smoothly is key.
- If mistakes are made, be prepared to take accountability by reimbursing residents for overcharges.
- When residents are given the ability to decrease their waste streams, they also increase the amount of material being recycled and composted, and advocate for more opportunities to do so. Having these complimentary diversion programs in place are essential to a successful program.

Each community has different needs that must be considered when researching a PAYT program. Our case studies and PAYT logistical research helped flesh out the complexity of implementing a PAYT program in Jackson Hole. Utilizing our research and case studies, we developed our project description and narrowed our scope to find best fits for the Jackson Hole community.

Systems Map

This map gives a visual representation of stakeholders within a PAYT waste collection program and their respective relationships to one another. The pink boxes represent the specific values or ideas identified in the implementation of a PAYT program.



Project Description

The Environmental Solutions in Jackson Hole Course began in Laramie, Wyoming during the Spring semester of 2020. We immediately started to familiarize ourselves with Jackson, Wyoming: the demographics, economy, geography, and the PAYT project. We a met virtually with Brenda Ashworth, the Superintendent of TCISWR. Due to the COVID-19 outbreak, we were unable to meet with Brenda face-to-face in Jackson in April as planned, and our 4-week in-person course in Jackson was cancelled entirely. However, we communicated through email and phone calls to gain a deeper understanding of the issues at hand. At the end of Spring 2020, we created an Investigation Plan, which provided a platform for a reimagined, virtual version of the project in Spring 2021. We began the Spring 2021 semester by connecting with Brenda at TCISWR to outline our objectives and identify

key stakeholders utilizing a tiered stakeholder list. With a team of only two working on PAYT, we had to significantly reduce the scope of our efforts, so we focused only on drafting ordinance language and a fee scale rather than planning and implementing a full PAYT pilot in a Jackson residential neighborhood. We decided to focus on gathering waste hauler input and use that information to develop the ordinance language and fee structure. Throughout Spring 2021, we continued to communicate with Brenda virtually. To inform ordinance language and fee structure, we interviewed residential haulers and a few key stakeholders including Ryan Hostetter, the Town's city planner, to gain additional perspective on the challenges and benefits of a PAYT program. We also conducted our own research into other PAYT programs for reference when drafting language and fee structures for potential implementation in Jackson/Teton County.

Our objectives for the project included actively working with Brenda, TCISWR and other Jackson officials to conduct hauler interviews, including investigating the roll-out of bear-proof trash cans simultaneously with PAYT. We identified hauler perspectives including foreseeable challenges and benefits to a PAYT program, and fleshed out haulers' current understanding of what a PAYT program is and why it is being implemented. Through all of our work, it was imperative to follow best practices through hauler interviews, meetings with Brenda and researching other town case studies. We used all of this information to recommend a usable fee scale system, a useful ordinance language and the analyzed alternatives, challenges and benefits of each.

Methods

To conduct waste hauler interviews, we first identified all residential waste haulers in the town of Jackson. We then created an interview protocol (see appendix 3a & 3b) with input from Brenda, TCISWR Superintendent, and Ryan Hostetter, Jackson City Planner. Next, we reached out to the residential waste haulers via email to set up an interview time and date. We conducted the interviews via Zoom or phone call which lasted anywhere from 45-60 minutes. While interviewing, one student would facilitate the interview by asking questions while the other took notes. To start, however, Ryan would begin the interview by asking a few generalized questions to gain input for the Town's purposes of overseeing the PAYT program, the Road to Zero Waste Resolution, and implementing bear-proof waste containers. Afterwards, Ryan would leave to give the students free rein over the remainder of

the interview. This was also done so that the haulers would feel more comfortable knowing the information they told the students was confidential and anonymous. See Figure 3a & 3b for our Interview Protocol. See figure 4 for our stakeholder contact list.

Outcomes

Due to our scope being dramatically narrowed, our outcomes are fewer, but more informative and detailed for moving the PAYT residential pilot program forward. As previously mentioned, we began with identifying stakeholders and conducting waste hauler interviews. We then used the information gathered to create the draft ordinance language and fee structure.

Waste Hauler Interviews

Waste hauler input proved to be helpful in contextualizing the challenges and feasibility of a residential PAYT program in Teton County. Teton County operates under a privatized waste hauling model – meaning waste haulers are more incentivized to stay competitive in the market than contribute to waste reduction. Waste hauler concerns included the up-front material costs of a PAYT system, the operational complexities of transitioning to a PAYT system, and the loss of revenue from citizens who do reduce waste and therefore pay lower costs. Additionally, waste haulers fear that citizens will opt for a lower PAYT option than their realistic waste output, causing excess waste that is not responsibly disposed of. Some haulers also mentioned that the residential community was not the problem in waste diversion efforts and that instead commercial and construction waste warrants greater targeting for reduction and diversion.

Conversely, despite some pushback from waste haulers on a PAYT system, more than half of residential waste haulers in Jackson already offer a version of PAYT similar to the Individualized Pick-Up Schedules method previously mentioned. Most haulers in Teton County are flexible with their customer pick-up schedules and allow weekly, bi-weekly or monthly pickup options. For this reason, we recommend contracting with a hauler that already provides individualized pick-up or could easily do so for the PAYT pilot.

Ordinance Language

When drafting ordinance language, the Town has flexibility. While comparing other municipalities' PAYT ordinance language, it is easy to find a wide array of organization, definitions, and PAYT programs. Because of the broad array of variability, we recommend that the Town of Jackson first focus heavily on the "definitions" section of their PAYT ordinance. We also recommended the ordinance create enforcement mechanisms. Finally, the ordinance should create a fee structure that regulates how haulers may determine fees while simultaneously allowing flexibility among hauling companies and to accommodate long-term program adjustments. The information below is directed specifically at the Town of Jackson for the purposes of a residential pilot program.

Definitions:

Some of the definitions needed for a PAYT program can easily be either directly taken from or adjusted from the current Garbage and Refuse Disposal ordinance found in Chapter 8.12.020 of Jackson's Municipal Ordinances. The three current definitions that stand out the most are *Garbage*, *Refuse*, and *Trade Waste*. These three definitions should be flexible and include room for other waste diversion considerations such as composting and recycling. For example, *Garbage* currently includes food waste and fruit and vegetable refuse; *Refuse* currently includes boxes, glass, cans, and bottles; and *Trade Waste* currently includes cardboard boxes, paper, and plastics. Each of these include materials already diverted through recycling and composting. Further, under the *Garbage* definition, the term *refuse* is used. This likely creates unnecessary confusion to use a term later defined separately. By creating strong definitions and categories for each type of waste, the Town can reduce confusion for haulers and residents.

The current definition used for *Garbage* is, "'Garbage' means and includes any and all kitchen refuse, rejected or wasted food, meats, fish, fowl, offal, carrion or their refuse accumulation of fruit, vegetable or animal matter that attends the preparation, use, cooking of, or dealing in, or storing of meats, fish, fowl, fruits, vegetables or anything whatsoever which may decompose and become foul, offensive, unsanitary or dangerous to health," (Jackson Municipal Code 6.12.020(A), 2021). We suggest changing this definition to, "'Garbage' means and includes any and all waste material not including compost, recycling, or trade waste and defined by the Town."

Refuse is currently defined as, "'Refuse' means hay, straw, shavings, excelsior, paper, ashes, rubbish, containers, boxes, glass, cans, bottles and residue from the burning or other

destruction of all combustible material whatsoever and any and all other material commonly known as rubbish or refuse of any kind or character, or by any name known, except as herein excluded (Jackson Municipal Code 6.12.020(D), 2021). Rather than changing this definition, we recommend removing the *Refuse* definition and replacing it with *Compost* and *Recycling Material* definitions. To start *Composting* should be defined as, "the controlled microbial degradation of source separated compostable material to yield a humus-like product or mulch to be used as a soil amendment." Next, *Compost materials* should be defined as, "garden wastes, weeds, lawn cuttings, leaves, prunings, and other organic material defined by the Town." Golden, Colorado uses a definition for *Recyclable materials* suitable for Jackson: "Recyclable materials means those goods or items deemed by the city as single stream recyclables collected and transported in accordance with the [town's] residential waste collection services program," (Golden Municipal Code 4.82.010, 2021). By letting the Town define what is and is not recyclable, this ordinance language allows for flexibility regarding the municipalities recycling capabilities.

Finally, *Trade Waste* is currently defined as, "'Trade waste' means all discarded wooden boxes, barrels, lumber, cardboard boxes, cartons, water paper, plastics, Styrofoam, insulation, leather, rubber, excelsior, cuttings, sweepings, rags and other inflammable waste materials and all discarded trade or manufacturing refuse from stores, factories, or other places of business which are not included within the definition of garbage, stove ashes and market waste," (Jackson Municipal Code 6.12.020(F), 2021). We suggest changing this definition to, "'Trade waste' means all material not defined as 'compost materials,' 'recyclable materials,' or 'garbage,' that are produced from trade or manufacturing refuse from stores, factories, or other places of business."

Other than the three terms just mentioned, when drafting ordinance language for a PAYT program, the Town should create definitions for *Bear Proof* and *Damaged Container*. Since Jackson is trying to implement the PAYT program in tandem with mandating bear proof containers throughout the town, it is imperative to create a definition for what is considered "bear proof." There are two organizations that already certify bear proof products, and they would likely create the easiest standard for the Town to follow. First is the American National Standards Institute (ANSI) and the second is the Interagency Grizzly Bear Committee (IGBC) (American National Standards Institute, 2021; Interagency Grizzly Bear Committee, 2021). Therefore, the Town should create language similar to, "A 'Bear proof' container means a waste container certified by either American National Standards Institute or the Interagency Grizzly Bear Committe as bear proof." By creating a bear proof standard,

the Town can limit haulers' ability to use merely bear resistant or unsatisfactory waste containers. After interviewing residential haulers, some already use containers throughout Teton County from the Rehrig Pacific Company, which already has bear proof containers certified by both the ANSI and IGBC. By aligning the Town's definition for *Bear Proof* with these two organizations, haulers will have clear guidance on which products they can use, in addition to a waste container company already making a qualified product.

The other critical definition needed is for *Damaged Container*. If a container becomes damaged, it risks defeating the purpose of deterring bears. Again, the IGBC offers a reference point that the Town should use. IGBC defines when a container is breached as, "if it is rendered non-functional, or if the hinges, seams, lids or doors are torn, bent or broken and the bear gains access at any of these points at any time during the test. For garbage containment products, gaps, tears or holes of 1 inch or less are allowable. For food storage products, gaps, tears or holes of ¼ inch or less are allowable." (Interagency Grizzly Bear Committee). Using these definitions, the Town can create a clear guideline for enforcement of using bear proof containers and ensuring they are in good condition.

Enforcement

Another strong piece of feedback we received from the hauler interviews was the need for enforcement. Additionally, after discussing this issue with the Town Attorney, the Town has current political incentives to create non-police enforcement professionals. The Town has State authority to do so under Wyoming Statute § 15-1-103(a)(*l*). This statute states, "(a) the governing body of all cities and towns may:

* * *

(*l*) Appoint special municipal officers, who are not certified as peace officers, to issue citations to individuals for the limited purpose of enforcing ordinances, resolutions and regulations in the areas of animal control, parking and municipal code enforcement. Special municipal officers are not law enforcement officers:

(A) For purposes of employee benefits provided in title 9 of Wyoming statutes;

(B) Are not peace officers for purposes of title 6 or title 7 of Wyoming statutes;

(C) Are not peace officers for purposes of W.S. 1-39-112;

(D) Shall not be required to carry a firearm;

(E) Shall not have the power of arrest;

(F) Shall not be issued a peace officer's badge; and

(G) Shall not represent themselves to be peace officers.

Under this statute, the Town should create a special municipal officer to enforce the mandates of a PAYT program. In doing so, the Town will take the burden of enforcement from the haulers and also create a more standardized way of enforcing a PAYT program. Another concern from haulers was how well competing hauler companies currently enforce waste regulations. For instance, in designated areas throughout Teton County, bear proof waste containers are required. However, some haulers believe that other haulers do not enforce this sufficiently. Therefore, they are concerned with enforcing customers/residents to use more expensive bear-proof containers if the customers/residents can use a different hauler company to bypass the additional costs of a bear-proof container. By creating a special municipal officer, the Town would be able to address this concern. We propose the Town adopt ordinance language similar to, "Under Wyoming Statute § 15-1-103(a)(*l*), the Town will create a Special Municipal Officer to enforce all solid waste town ordinances. The Special Municipal Officer shall be limited in authority to Wyoming Statute § 15-1-103(a)*(l)* and shall cite individuals not in accordance with town solid waste ordinances."

Fee Structure

While the Road to Zero Waste Plan in Teton County and the implementation of a PAYT program promote environmental sustainability, these efforts must incorporate equity to be sustainable long-term. There is a delicate balance between incentivizing waste reduction and providing public utilities that are unfeasible for citizens with lower socio-economic status. We recommend a fee structure modeled off the Multi-Tiered Rate System, mentioned previously, in order to achieve environmental, economic, and social dimensions of sustainability. This is a multi-dimensional, tiered fee structure example for Teton County's PAYT programming.

The current water and sewer ordinance language for Jackson offers an example of how garbage fees could be structured in a PAYT ordinance (Jackson Municipal Code, 2021). The Town currently offers a Water Rate Adjustment in Chapter 13.06 and a Sewer Rate Adjustment in Chapter 13.13 of its municipal code (Jackson Municipal Code, 2021). These chapters offer adjustments for seniors and disabled residents that fall below the 150% poverty line of Jackson (Jackson Municipal Code, 2021). Individuals that qualify for this adjustment receive a 50% reduction in their water and/or sewer bill (Jackson Municipal Code, 2021). However, the PAYT program should include all individuals that fall below a

certain income level. This way, residents below certain income levels can apply for and use regulatory adjustments in waste collection. Presumably, the Town could incorporate any waste fee adjustment application into the current water and sewer application process. This would avoid the need of creating a new office or entirely new procedures.

Below, see a mock fee structure adaptable by the private waste haulers in Teton County. The standard fee consists of a $30.00 flat rate paid by all residents. Next a monthly, bi-weekly, or weekly charge will be *added to* the flat rate to equal a total waste hauling charge of $36.00, $45.00, and $52.50, respectively, for each pickup option. Variably -priced pickup costs are determined by the standard flat rate, which are adjustable based on changes to hauling contracts and costs over time. Monthly pickup cost is 20% of the flat rate, bi-weekly is 50% of the flat rate and weekly is 75% of the flat rate. Residents who fall below Teton County's poverty line qualify to pay a reduced flat rate, but variable rates stay the same as the standard cost percentages. The table below outlines draft fee structure:

Category	**Base Price**	**Variable Price**		
Rate Type	*Waste Hauling Flat Rate*	*Monthly Pickup Cost* (20% of standard flat rate)	*Bi-Weekly Pickup Cost* (50% of standard flat rate)	*Weekly Pickup Cost* (75% of standard flat rate)
Reduced (net income < TC poverty level)	$20.00	$6.00	$15.00	$22.50
Standard (net income > TC poverty level)	$30.00	$6.00	$15.00	$22.50

The mock fee structure is organized to incentivize waste reduction in Teton County. Currently, monthly costs of a 96-gallon trash can with weekly pickup is about $45.00, according to waste hauler interviews. Under the PAYT fee structure, $45.00 is the rate for bi-weekly pickup. Residents who want to save money and reduce their current waste hauling costs will be incentivized to opt for monthly pickup to pay a price below $45.00. To keep weekly service, residents will pay a premium price. For the reduced rate, weekly pickup costs stay about the same as the current weekly rate, at $42.50, but a price reduction for bi-weekly or monthly pickup incentivizes residents to produce less waste. We structured the fee scale this way because we didn't want to increase trash costs for households who are economically disadvantaged, but still want to provide a monetary incentive to reduce waste.

Conclusion

In conclusion, implementing a PAYT program will require balancing stakeholder interests and multiple fee, ordinance, and collection considerations. For this project, we focused our efforts on hauler interviews to inform municipal ordinance drafting and creating a fee structure. With such variability between municipal PAYT programs and ordinances, the Town has flexibility when drafting language to specifically address its unique concerns and goals. This process should start with defining critical terms such as *Garbage*, *Composting, Compost materials, Recyclable materials, Trade waste, Bear proof*, and *Damaged container* that will be useful for future recycling and composting efforts and for enforcement. To enforce regulations, we recommend the Town of Jackson use its authority under Wyoming Statute to create a special municipal officer. This officer would be authorized to manage and ensure bear proof cans are being used, dumping is not occurring, and residents are not overflowing their waste containers. Additionally, the ordinance language should mimic what is already found in the Water and Sewer ordinances for creating an adjusted fee structure for the financially indigent.

In regard to a fee structure, and similar to the Water and Sewer fee adjustment system, the Town should use a fee structure that has a base rate with additional pricing based on frequency of pick-ups. With a base rate, the haulers can rely more on a steady revenue flow, which may increase program feasibility and acceptance while also prioritizing residents' needs. With additional pricing based on frequency of pick-ups, residents can begin working towards reducing their own waste in order to save money on their waste services. Finally, by creating a multi-tiered system, the Town can ensure those that cannot afford to reduce waste are not penalized for their inability to do so.

There is considerable flexibility in PAYT programs, so TICSWR and report users can and should absolutely use this document to explore other PAYT options that may be a better fit - now or in the future - as Jackson's program develops. The background information and specific recommendations should provide report users with what they need to continue to move forward on this project.

Appendix

Figure 1

POPULATION
10,553

MEDIAN HOUSEHOLD INCOME
$73,411

POVERTY RATE
6.0%

Figure 2

Education material outlining collection rules and consequences for violations

Overflow – Do's and Don'ts

Overflow happens when all of the trash does not fit into the roll cart with the roll cart lid completely closed.

DO's

- The customer can call and request a larger trash roll cart.
- The customer can purchase overflow stickers for $2 per extra bag. These stickers can be purchased at the:
  - ACC Solid Waste Department – 725 Hancock Industrial Way
  - ACC Water Business Office – 124 E. Hancock Ave.

DON'TS

- Leave the bags at the curb, the customer will be in violation of ACC policy and could get fined from ACC Code Enforcement.

Figure 3a

Pay As You Throw Interview Protocol 2021
Waste Reduction Plan - Jackson, WY

Preparation:

- Email interview confirmation with date, time and zoom link, and outlook invite if applicable
- Review Interview protocol in advance of conducting interview and bring protocol to interview
- Have chargers available

Date: _____
Time: _____

Interviewer: _____
Interviewee: _____

Interview Introduction:

- Introduce yourself and your role, and the note taker, if present
- PAYT is a waste reduction initiative that is part of the larger Road to Zero Waste Plan passed in Teton County in 2015. According to the Road to Zero Waste Plan, Teton County aims to divert 60% of their waste by 2030. PAYT is a waste collection program that incentivizes consumers to produce less waste. Contrary to a generic flat fee rate that is commonplace, PAYT is a waste collection method that charges households and businesses a fee based on the amount of waste they produce. That being said, we thank you for your participation and believe your input will be valuable to researching input on PAYT, and to help grow the PAYT waste collection program. Do you have any clarifying questions on the PAYT program?
- We appreciate your time, this interview should take about 30 minutes.

RYAN'S QUESTIONS:
Currently Teton County only requires trash containers and dumpsters to be "bear proof" in some areas of the County (I can provide map). The County is looking to make bear proof trash containers a Countywide requirement. Before we go down that route we would first like some feedback from you all about if/how this could work, and what your opinions are.

1. What is the best way to "roll out" bear proof trash containers within your area of coverage?
2. Are there higher costs for these containers, and if so how much? Could this effort tie together with the PAYT program and different sized containers?
3. Is your current equipment capable of handling bear proof trash containers and dumpsters?
4. Do you support this change Countywide?
5. What do you see are some of the most difficult challenges with doing this?
6. Any other information you have that could help in our research and conversations with the Planning Commission and County Commissioners?

General Questions:
Preface with: Teton County and Town of Jackson are committed to the Road to Zero Waste. In 2014, the Teton County Commission, and in 2015, the Town Council, signed resolutions declaring an initial goal of 60% waste diversion from landfill by 2030. The current waste diversion rate is 34%. In order to achieve the goal, improved infrastructure is necessary to offer expanded, efficient and convenient public services.

Figure 3b

- Please describe your current understanding/knowledge on the Road to Zero Waste plan:
    - What are your thoughts on the Road to Zero Waste plan?
    - What, if any, challenges do you have about the plan to reach zero waste?
    - What, if any, benefits do you see in a zero waste plan?
    - How would this affect you personally?

Preface with: PAYT is one of the recommendations established in the Road to Zero Waste Plan. Under the current trash disposal system in Jackson, citizens pay a fixed rate for a 96 gallon trash can to be picked up on a regular basis. Whether the can is nearly empty, or completely full, the resident pays the same rate. A variable rate system in Jackson will provide an incentive to residential generators to reduce waste. This is just one piece of the whole picture.
"Research has demonstrated that PAYT is the most effective single action that can increase recycling and diversion and can also be one of the most cost effective." (Skumatz Economic Research Associates, Pay as You Throw in the US: 2006 Update and Analyses, December 30, 2006)

- Please describe your current understanding/knowledge on the PAYT program:
    - How does the PAYT program relate to you and your interests?
    - What are your thoughts on the PAYT program?
    - What, if any, challenges do you have about the PAYT program?
    - What, if any, benefits do you see in a PAYT program? Negative effects?
    - How would this affect you personally?

Fee Scale Specific Questions:
Preface with: While environmental stewardship is of the utmost importance - especially to uphold the Road to Zero Waste Plan in Teton County - environmental efforts should not negatively impact Teton County citizens who already struggle to make ends meet. In order to make the PAYT program socially, environmentally and economically sustainable long-term, we are researching a tiered fee structure based on household size and median income.

- What does your current fee structure look like? (year round residents and second homes)
- What ideas or pieces do you think will be beneficial in a fee scale within a PAYT program?
- What challenges do you foresee in implementing a fee scale?
- What would be an acceptable minimum and maximum fee, in your opinion?
- How would your fee scale change if you were required to have bear proof trash cans, in addition to multiple sizes?

Ordinance Specific Questions:
Preface with: PAYT programs in other communities have had widely varying ordinance language. Because we can choose from many different options, it will be most helpful to hear from you about aspects of a PAYT program that you are excited for and aspects that you see will create the biggest challenges. *Maybe provide an example or two.*

- What would you like to see in PAYT ordinance language?
- Who should be in control of updating the fee scale?
- What challenges can you foresee with PAYT ordinance language?

Ending Questions:

- Is there anything else you would like to add?
- Is there anyone else you think we should talk to about this?

Figure 4

Contact	Organization	Phone/Email	Website	Reason for Contacting
Brenda Ashworth	Teton County Integrated Solid Waste and Recycling	bashworth@tetoncountywy.gov	http://www.tetonwyo.org/298/Integrated-Solid-Waste-Recycling	Brenda is leading the efforts for the program
Anonymous	Star Valley Disposal	(307)885-9645	http://starvalleydisposal.com/index.html	They are a trash hauler and will have an interested in knowing how this will affect their business
Anonymous	Teton Valley Removal	(307)733-6840	http://www.tetontrashremoval.com/	They are a trash hauler and will have an interested in knowing how this will affect their business
Anonymous	Westbank Sanitation	(307)733-2615	https://www.westbanksanitation.com/	They are a trash hauler and will have an interested in knowing how this will affect their business
Anonymous	Yellow Iron	(307)734-0583	https://www.yellowironexcavating.com/waste-removal	They are a trash hauler and will have an interested in knowing how this will affect their business
Ryan Hostetter	Jackson Principle Long-Range City Planner	rhostetter@tetoncountywy.gov	n/a	Ryan is overseeing a lot of the planning with Bear Proof Cans for the Town.
Chelsea Carson	Jackson Hole Conservation Alliance	chelsea@jhalliance.org	https://jhalliance.org/	Chelsea is working specifically on implementing Bear Proof Cans.
Lea Colasuonno	Jackson Town Attorney	lcolasuonno@jacksonwy.gov	n/a	Feedback on ordinance language.

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WASTE CHARACTERIZATION STUDY REPORT

TETON COUNTY INTEGRATED SOLID WASTE AND RECYCLING

TETON COUNTY, WYOMING

November 18, 2022

Project #: 803-002-001

PREPARED BY: Trihydro Corporation

1252 Commerce Drive, Laramie, WY 82070

PREPARED FOR: Teton County Integrated Solid Waste and Recycling

3720 Adams Canyon Road, Jackson, WY 83001

SOLUTIONS YOU CAN COUNT ON.
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1.0 INTRODUCTION

Trihydro Corporation (Trihydro) has prepared this Waste Characterization Study Report (Report) for the Teton County (County) Integrated Solid Waste and Recycling (ISWR) program in Teton County, Wyoming. This Report summarizes the methods and results of the winter and summer waste characterization sorting events completed by Trihydro during the weeks of February 28, 2022, and August 1, 2022, respectively. Winter and summer waste sorting events were conducted at the County's waste Transfer Station located at 5400 South Highway 191 in Jackson, Wyoming (Transfer Station) and the County's Recycling Center located at 3270 S Adams Canyon Drive in Jackson, Wyoming (Recycling Center; Figure 1 and 2).

The overall goal of this Waste Characterization Study is to characterize recyclable, compostable, non-recyclable, and non-compostable materials in both the total municipal solid waste (MSW) and recycling waste streams and to determine whether any additional materials are appropriate for diversion or recovery. Waste sorting activities were conducted in general accordance with the February 14, 2022, Waste Characterization Study Work Plan and the sampling methodology provided in the American Society of Testing and Materials (ASTM) D-5231-92 "Standard Test Method for Determination of the Composition of Unprocessed Municipal Solid Waste" (ASTM 2008).

This Waste Characterization Study was conducted as a part of the County's Road to Zero Waste initiative which, in accordance with a 2014 resolution, calls to divert 60% of the County's waste from landfilling by the year 2030 (ISWR 2022). Data generated from this Waste Characterization Study may help to identify potentially divertible wastes that are not currently being captured, identify potential sources of cross-contamination, and identify ways to best educate the community in waste diversion efforts.

2.0 CURRENT SOLID WASTE MANAGEMENT PRACTICES

Teton County ISWR collects and manages wastes generated throughout the County from over 23,000 permanent residents as well as approximately 4,000,000 seasonal residents and visitors. Historically, the County observes the following:

- Two Primary Tourism Seasons: the winter tourism season (approximately December through March) and the summer tourism season (approximately June through September)
- Two Shoulder Seasons: April through May and October through November

In 2020, the estimated average overnight visitor in Teton County during tourist seasons was as much as 269% higher than that during the shoulder season (Teton County 2020). These swings in tourism and non-resident population result in large seasonal fluctuations in tourism-generated wastes. Further, since 2020, the County has observed increasing residential growth and declining trends in seasonal residents (i.e., occasional/seasonal use residences; Teton County 2022). The dynamic nature of the effective population in Teton County create challenges in understanding the total MSW streams of the community. Additionally, a substantial increase in construction and demolition (C&D) activities within the County further highlight the unique characteristics of waste generation relative to the rest of the nation. This section discusses the County's current MSW management practices.

2.1 TRANSFER STATION

The Transfer Station serves as the primary processing and consolidation point of MSW for the County prior to transport to off-site landfilling. Commercial and private waste haulers are routed into the Transfer Station via the scale house where inbound and outbound hauler vehicles are weighed, and MSW tonnages are calculated. Waste brought to the Transfer Station is subject to a load sorting policy, and several waste streams are diverted at the Transfer Station. All non-diverted wastes are currently transported to the Bonneville County, Idaho Landfill for disposal. No MSW is landfilled in Teton County. Sources and fate of MSW throughput at the Transfer Station are discussed below.

2.1.1 COMMINGLED MSW AND C&D

Commingled MSW and C&D debris are hauled by private and commercial haulers to the County's Transfer Station. Private haulers include private businesses, private contractors, and residents. Commercial haulers who bring MSW to the County's Transfer Station include the following:

- West Bank Sanitation
- Teton Trash Removal
- Yellow Iron Excavation
- Star Valley Disposal

These commercial haulers operate a variety of vehicle types including front and rear load compactors. Commingled MSW are offloaded by haulers onto the floor in one of six bays in the Transfer Station building. Yellow Iron Excavation, who also serves as the County's primary on-site contractor at the Transfer Station, visually screens offloaded wastes for conformance with the County's load sorting policy. This screening process is designed to:

1. identify and separate divertible wastes such as clean wood, metal, electronics, and mattresses;
2. identify and reject hazardous or non-landfillable wastes such as aerosol and flammable gas cans, wet paint cans, etc.; and
3. implement/coordinate waste sorting fees or rejected loads with the scale house.

Wastes that conform with the County's load sorting policy are consolidated and pushed to the back of the building, loaded onto trucks, and transported offsite.

2.1.2 TRANSFER STATION DIVERTED WASTE STREAMS

The County currently implements multiple waste diversion programs at the Transfer Station. Diverted waste streams that are accepted at the County Transfer Station are subject to the County's load sorting policy and are managed by both the County and Terra Firma, a partnering contractor who manages organic yard waste and clean dimensional lumber to produce compost and mulch which are resold to the community. Several waste streams are not accepted at the Teton County ISWR including asbestos containing materials (ACM), asphalt wastes, liquid wastes (i.e., raw sewage sludge), household hazardous waste (e.g., automotive fluids, fluorescent light bulbs, oil-based paints, antifreeze, poisons, and propane/bear spray/ isobutane cannisters). The following sections provide a summary of diverted waste streams collected at the County Transfer Station.

2.1.2.1 ORGANIC DIVERTED WASTES

Several organic wastes are included in the County's load sort policy and are diverted at the Transfer Station including yard waste (i.e., leaves, branches, trees, and stumps), manure, and food wastes.

2.1.2.1.1 YARD WASTE AND CLEAN WOOD WASTE

Yard wastes and other organic materials are source-separated and diverted at the Transfer Station for composting, mulching, and heating fuel which is currently conducted by Terra Firma Organics. Terra Firm composts and mulches source-separated organic wastes at the Transfer Station and sells their end products back to the Teton County community via a local excavation contractor, Evan's Construction. Clean construction wood waste including unpainted and untreated dimensional lumber, plywood, and oriented strand board (OSB) are diverted to Terra Firma for mulching. Clean wood wastes can contain screws, nails, and staples that are less than 1/8-inch in diameter. Terra Firma's mulching process includes removal of metal scraps via magnet and resale of the ferrous metal materials.

2.1.2.1.2 FOOD WASTE

In February 2021, the ISWR opened a food waste composing facility at the Transfer Station which accepts source-separated and privately-hauled food waste from businesses and residents. Food wastes brought to the Transfer Station are subject to sorting guidelines which dictate several prohibited items including shellfish, paper products, service ware, and packaging. In August 2022, the ISWR began operation of a waste food depacker which is capable of separating packaging from incomplete source separated food wastes feedstocks.

2.1.2.2 CONSTRUCTION AND DEMOLITION DEBRIS

The County diverts several categories of C&D debris at the Transfer Station. Clean concrete (i.e., concrete blocks with no protruding steel, rebar, or wood) and clean masonry blocks are separated from general MSW and compiled in a concrete pile at the Transfer Station. As mentioned above, clean construction wood wastes are diverted to Terra Firma for mulching. Additionally, scrap metal, wire, metal fencing, and metal appliances are collected by the County in the scrap metal pile at the Transfer Station. C&D type wastes which are comingled with MSW are often hauled to the Transfer Station by private and commercial haulers. If identified as a part of the Transfer Station's screening procedures, these C&D type wastes are separated and diverted accordingly.

2.1.2.3 OTHER DIVERTED WASTES

Additional waste streams that are collected at the Transfer Station and diverted from landfilling include tires, refrigeration units, domestic and wild animal carcasses, and mattresses.

2.2 RECYCLING CENTER

The Recycling Center serves as the County's primary consolidation point for source-sorted recyclable materials. Source-sorted recyclable materials are screened and baled at the Recycling Center and shipped offsite for resale in various markets. Additionally, the Recycling Center serves as the collection point for many other source-separated waste streams as discussed below.

2.2.1 SOURCE-SEPARATED RECYCLABLES

The County accepts a wide variety of source-separated recyclable materials including aluminum cans, aluminum foil, steel cans, glass, old corrugated cardboard (OCC), brown paper, office paper, newspaper, magazines, phone books, #1 polyethene (PET) plastic bottles, #2 high density polyethylene (HDPE) plastic bottles, and stretchy plastic film. Source-separated recyclables are hauled to the Recycling Center by private and commercial haulers.

To increase diversion, the County maintains seven community recycling sites located throughout Teton County for use by private haulers and residents from which source-separated recyclables are hauled by the County to the Recycling Center. The seven community recycling sites include three locations in the Town of Jackson and one location each in the Aspens, the Teton Village, Hoback Junction, and near the Gros Ventre River Bridge on Spring Gulch Road. In addition to source-separated cardboard bins at all aforementioned drop-off locations, the County offers an OCC pick-up service to businesses and homeowner's associations and has a variety of dumpster sizes and pickup schedules. Further, Jackson Curbside, Inc., a commercial recycling hauler, transports source-sorted recycling from numerous commercial, institutional, and residential generators around the County to the Recycling Center.

Several source-separated recycling streams are screened for contaminants at the Recycling Center by ISWR staff including aluminum cans, OCC, newspaper, #1 PET plastic bottles, #2 HDPE plastic bottles, and aluminum foil. Other recycling streams are not screened for contaminants. The screening processes is conducted by ISWR operators on a conveyor prior to baling. Contamination is removed from the conveyor by operators and separated into waste bins according to type of waste that the contamination is comprised of (i.e., improperly sorted recyclable, contaminated recyclable, or unrecyclable MSW). In the spring of 2022, the County installed a Revolution Robotic Sorting System to automate the screening of aluminum cans and other recycling streams. Following the screening process, recycling

streams are baled and are sold as commodities in various markets across the country. Several recycling streams such as hardback books, textiles, and electronic wastes are not baled prior to sale on the commodity market.

2.2.2 OTHER DIVERTED WASTES

Other diverted wastes that are accepted at the Recycling Center include electronics, household hazardous wastes, batteries, fluorescent bulbs/tubes, compressed gas cylinders, bear spray cannisters, and reusables such as books and textiles.

2.2.1 OTHER COMMUNITY WASTE DIVERSIONS

In addition to waste diversion efforts conducted at the County ISWR facilities, waste diversion can occur within the community. These efforts are difficult to quantify and are generally not tracked at the Transfer Station scale house or Recycling Center. Examples of these community waste diversion efforts include do-it-yourself (DIY) composting, source reduction, and material reuse. As a part of past ISWR Annual Reports, the County has historically tracked self-reported estimated diversion efforts from several commercial and institutional entities in the County such as the Jackson Hole Airport and the St. Johns Medical Center. Additional commercial and institutional waste diversion efforts are conducted in the community and could be incorporated into total County wide waste diversion estimates. Some examples of community waste that is diverted from landfilling which is not currently included in the County waste diversion metrics include relocated houses destined for demolition by Shacks on Racks; food wastes composted by Haderlie Farms and the Worm Cowboy; single use container alternatives implemented by restaurants such as Teton Lunch Counter; and land applied biosolids generated by the Aspen Pines Water and Sewer District.

2.3 ANNUAL TONNAGES

Total MSW and diverted waste tonnages for Teton County for FY 2001 to 2021 are presented in Table 1 and Figure 3. The total MSW generated in the County, including diverted and landfilled wastes, has gradually increased over the last two decades with a slight decline in generation between 2010 and 2014 followed by a substantial increase to approximately 51,186 tons in 2021. Over the last three years (2019 to 2021), the average total MSW tonnage, including diverted and landfilled wastes, was approximately 48,393 tons, with an average diversion rate of approximately 30%. The total diverted waste streams, including wastes diverted at the Transfer Station and the Recycling Center, have also increased since 2001, outpacing the percent change in total MSW generation; however, the percentage of diverted wastes has remained relatively consistent since 2007 ranging between 29% and 35% of total MSW (Figure 4).

Since the County's 2014 Road to Zero Waste resolution, ISWR and the County have implemented several waste prevention, reuse, and recycling programs and initiatives including, but not limited to a 2019 plastic bag reduction ordinance, a 2016-2019 food waste pilot program, community outreach and diversion partnerships, and the Recycle Coach recycling app. These initiatives have been implemented with varying levels of reported success. However, over the past five years, total MSW generation has increased at a rate faster than total waste diversion. The 5-year average MSW generated in 2021 has increased approximately 22% from the 5-year average in 2016; however, the 5-year average diverted wastes in 2021 have increased approximately 13% relative to the 5-year average diverted wastes in 2016. It is important to note that these numbers reflect only the wastes coming through the Recycling Center and Transfer Station and do not reflect waste reduction initiatives that decrease waste generation (i.e., reduce and reuse) or alternative community diversion efforts that are not quantified by the County, as discussed above.

3.0 WASTE CHARACTERIZATION STUDY METHODS

Trihydro conducted two waste characterization sorting events at the Teton County Transfer Station and Recycling Center. The two sorting events were conducted during times of year to represent winter and summer conditions (i.e., the two tourism seasons). The sorting events were conducted in accordance with the February 2022 Waste Characterization Study Work Plan and generally based on the ASTM D5231-92 Method which describes procedures for measuring the composition of unprocessed MSW (Trihydro 2020; ASTM 2008). This section describes the methods implemented for the winter and summer waste sorting events. Photodocumentation of the sorting event is provided as Appendix A.

3.1 NUMBER OF SAMPLES SORTED

The number of solid waste samples (i.e., vehicle loads) to be sorted were determined using the procedures provided in the ASTM D5231-91 Method. Since wastes brought to the Recycling Center are already source-separated, this calculation was intended to estimate the number of samples required at the Transfer Station alone. Additionally, since it is a goal of this project to identify separate statistics for the winter and summer seasons, this calculation was intended to represent a single sorting event. Samples are identified in the ASTM method as approximately 200-to-300-pound (lbs) portions pulled from commercial vehicles entering the Transfer Station. The number of required samples will vary by waste component; therefore, a governing waste component must be chosen as the basis of calculations. For the purposes of this study, food waste was utilized as the governing waste stream because food waste comprises a relatively large mass per volume; the County is expanding current food waste diversion initiatives; and source-separated recycling activities are already conducted within the community. In accordance with the procedures of the ASTM D5231-91 method, the number of solid waste samples to be sorted are determined using the following equation:

$$n = \left(\frac{t^{*}s}{e\bar{x}}\right)^{2}$$

Where:

t*=	student t statistic corresponding to the desired level of confidence (90%)	1.645
s=	estimated standard deviation (Based conservatively on MSW Food Waste Statistics)	0.03
e=	desired level of precision (10%)	0.1
$\bar{x}$=	estimated mean (Based conservatively on MSW Food Waste Statistics)	0.1
n=	**the number of sorting samples**	**26**

Suggested values for s, $\bar{x}$, and t* are provided in ASTM D5231-92 and are based conservatively on MSW statistics for weekly sampling periods at several locations around the United States. Based on a 90% level of confidence for the governing component (e.g., food waste) and a 10% desired level of precision, 26 samples were required at the Transfer Station per event. A total of 27 samples were sorted during the winter sorting event and 34 samples were sorted during the summer sorting event. Additional randomized hauler loads were selected but were not sorted because the loads consisted of single waste streams (e.g., a sofa, OSB, etc.).

3.2 SORTING EVENT METHODS

Trihydro conducted two four and a half day sorting events at the Teton County Transfer Station and two half day sorting events at the Recycling Center during the weeks of February 28, 2022 (winter sorting event) and August 1, 2022 (summer sorting event). Sorting crews consisted of one field lead and two sorting team members, including one equipment operator. At various times throughout the sorting event, County personnel assisted in sorting procedures. Sorting was coordinated with County ISWR staff and the County's primary contractor at the Transfer Station, Yellow Iron.

To characterize MSW entering the Transfer Station, the sorting team occupied two bays of the Transfer Station trash tipping floor (Figure 2) which were separated into two primary areas: the hauler discharge area and the sorting area. Hauling vehicles were selected for sorting using a random number generator with numbers between 1 and 5 which were assigned to each vehicle as they entered the Transfer Station. The next random number was generated when the hauler discharge area was clear of the previous load and ready to accept the next load.

Selected haulers were asked to offload in the hauler discharge area in a contiguous pile. Haulers were asked a series of questions to determine the generation source of the waste in the loads. Samples were collected from the discharge area pile using a skid steer equipped with a bucket. Approximately 4 times the end sample weight (i.e., 800 pounds) were removed longitudinally along the waste pile. This aliquot was mixed, coned, and quartered. The final sample volume of approximately 200 pounds of MSW was removed from one of the quarters for sorting. If a private hauler was selected that had less than approximately 200 pounds, the entire load was sampled.

Using the skid steer, rakes, and shovels, the sample was spread in a single layer in the sorting area to identify potentially deleterious items. Waste was transferred to tarp-lined tables for sorting, and waste components were pulled from the sample and sorted into tared plastic bins. Wastes were sorted into 10 major categories and 52 sub-categories of waste components as identified by the County in the March 16, 2021, Request for Proposal (Table 3). Containers present in the waste sample (e.g., capped jars, paper bags, plastic bags, etc.) were emptied such that their contents could

be categorized. Sorting continued until the sample was completely segregated based on the waste component or until the maximum particle size of the remaining waste was approximately ½-inch or less. At that point the remaining particles of waste were apportioned to the corresponding component represented in the mixture based on a visual estimate of the mass fraction of waste component. When the bins were full or the sample sort was complete, the bins were weighed to obtain a gross bin weight. Tare bin weights were subtracted from gross bin weights to obtain net sample weight.

Once the sample sort was complete, the sample was placed back in the waste pile at the Transfer Station. Recyclable components removed during the sorting procedures included clean OCC, clean office paper, aluminum cans, tin/steel cans, and glass. Certain recyclable waste components were determined to be unsuitable for recycling at the Teton County Recycling Center such as contaminated OCC, contaminated #1 and #2 plastics, and contaminated stretchy plastics. These components were disposed of in the waste pile at the Transfer Station.

Trihydro conducted two half day sorting events at the Recycling Center on Thursday March 3, 2022, and Thursday August 4, 2022. Contaminants were removed from the #1 plastics, #2 plastics, OCC, and aluminum can (summer event only) recycling streams by Recycling Center staff during screening (i.e., normal Recycling Center operations) and placed into separate 3 cubic yard bins. A single 3 cubic yard bin of removed contaminants from each recycling stream was retained by the Recycling Center for Trihydro to sort resulting in a total of three sorted samples for the winter event and four total sorted samples for the summer event. These samples were sorted in a manner consistent with the above-described procedures.

4.0 WASTE CHARACTERIZATION STUDY RESULTS

At the Transfer Station, a total of 5,234 pounds and 5,748 pounds of MSW were manually sorted during the winter and summer sorting events, respectively. A total of 258 pounds and 353 pounds of recycling contaminants were sorted at the Recycling Center during the winter and summer sorting events, respectively. Raw data compiled during the winter and summer waste sorting events were reported to the County ISWR in letter reports dated April 1, 2022, and October 14, 2022, respectively. Raw data input forms from the winter and summer sorting events are provided as Appendix B and C. Results from the winter and summer sorting events are presented and discussed in this section.

4.1 TRANSFER STATION WASTE COMPOSITION

Results of the winter and summer sorting events at the Transfer Station are summarized by the major waste component category in Table 4 and by minor waste component sub-categories in Table 5. Weight totals generated at the Transfer Station Scale House were collected for the weeks of the winter and summer sampling events and are presented in Table 6. Inbound MSW tonnages are used to project seasonal and annual tonnages of waste components entering the Transfer Station tipping floor. Annual weight totals collected at the Transfer Station Scale House between August 5, 2021, and August 5, 2022, are tabulated in Table 7. The total inbound MSW weighed at the Scale House in this period was approximately 34,485 tons. The total projected annual MSW based on winter and summer waste characterization sampling events (Table 8) was 33,155 tons, approximately 4% difference from actual weighed values obtained from the Transfer Station Scale House and Recycling Center scales.

4.1.1 MAJOR WASTE COMPONENTS

Data obtained during the events are evaluated to be representative of the materials entering the Transfer Station tipping floor (i.e., landfilled MSW) during a typical day of operation in the two tourism seasons, winter and summer. As shown in Figure 5, waste compositions were generally similar during the winter and summer events and are summarized as follows.

- C&D type wastes constituted the largest major component of MSW entering the Transfer Station with mass composition percentages of 29% in the winter to 37% in the summer.
- Paper, Organics, and Plastics comprised the following three largest major components of MSW entering the Transfer Station with mass composition percentages ranging between 14% and 22%.

- Other major waste component categories (e.g., All Other, Glass, Metal, Special Wastes, Hazardous Wastes, and Other Wastes) individually constituted less than 10% of the overall MSW entering the Transfer Station during both events.

4.1.2 PRIVATE VS. COMMERCIAL HAULERS

Waste composition data are further summarized by separating MSW entering the Transfer Station by commercial haulers (i.e., solid waste collection entities hauling from one or multiple locations) or private haulers (i.e., private residential or private businesses hauling from a single location) in Figure 6.

- **Private Haulers** – MSW hauled to the Transfer Station tipping floor by private haulers was comprised of 44% and 65% C&D type wastes in the winter and summer events, respectively.
- **Commercial Haulers** – In contrast, the largest major waste component of MSW entering the Transfer Station from commercial haulers is Paper (31% in winter and 27% in summer), followed by Organics (17% in winter and 26% in summer), and Plastics (21% in winter and 18% in summer). Mass composition for C&D type wastes in MSW from commercial haulers constitutes only 12% in winter and 5% in summer.

4.1.3 TARGET DIVERTIBLE WASTES

The composition of target divertible wastes observed in Transfer Station samples are summarized in Table 8 and Figure 7. Target divertible wastes observed in the Transfer Station MSW are summarized as follows.

- **Recyclables** – Target Recycling Center recyclables (i.e., glass containers, aluminum cans, steel/tin cans, aluminum foil, #1 plastics, #2 plastics, stretchy plastic films, office paper, hardback books OCC and brown paper, magazines, newspaper, and textiles) constituted 22.5% of the total MSW entering the Transfer Station tipping floor during the winter and summer events.
- **Compostables** – Target organic compostable and mulchable wastes (i.e., loose food waste, yard waste, untreated wood, manure, and sod) constituted 10.3% and 13.3% of the total Transfer Station MSW during the winter and summer events, respectively.
- **Other divertibles** - Other target divertible wastes (i.e., other waste streams currently diverted at the Transfer Station and Recycling Center) constituted 6.0% and 6.9% of the total MSW entering the Transfer Station tipping floor during the winter and summer events, respectively.

Overall, approximately 38.8% to 42.6% of the wastes in the Transfer Station samples are identified as target recyclable or divertible. It is important to note that these values include wastes that may not be suitable for diversion under current Teton County ISWR practices. For instance, many of the wastes classified as target recyclable were contaminated (e.g., #1 or #2 plastic containers with excessive food wastes, greasy or saturated OCC, etc.) or unsuitable for recycling (e.g., #1 plastic thermoform clamshell containers, wax coated cardboard, etc.) under current Recycling Center operations. These data were used to project recoverable waste tonnages in Transfer Station MSW. Based on this data, it is estimated that approximately 7,549 tons of recyclable wastes, 2,142 tons of divertible waste, and 3,951 tons of compostable/mulchable organic wastes are disposed of on the Transfer Station tipping floor (i.e., landfilled) annually (Table 8).

4.1.4 NATIONAL COMPARISON

Transfer Station MSW composition was compared to national total MSW generation and recovery data published by the United States Environmnetal Protection Agency (USEPA) in Table 9 and Figure 8. Note that published national data are provided in different component categories than were established for this project and must be recategorized for the purpose of comparison. In general, the MSW entering the Transfer Station appear consistent with the national MSW generation with a few exceptions. “Wood” and “Other” waste components comprised a relatively larger percentage in Teton County MSW relative to national data. “Metals,” “Food,” and “Textiles” comprised a relatively smaller percentage of the wastes entering the Transfer Station. However, Teton County MSW generation data are much more consistent with the USEPA national waste composition when comparing only MSW brought to the Teton County Transfer Station via commercial haulers due to the substantially smaller percentage of C&D type wastes brought in by commercial haulers. Note that this data reflect only the MSW entering the Transfer Station tipping floor and do not reflect the diversion efforts already ongoing by the County. Additionally, note that “Rubber and Leather” was not a waste component category utilized during the Teton County sorting process, so data does not exist for comparison to this USEPA defined category. If encountered during the sorting events, these wastes were categorized as “All Other Wastes.”

Table 9 also presents the 2018 national average diverted wastes. In 2018, the national average diversion rate was 38.2% including recycling and composting. Diversion rates reported by Teton County (Table 1) fall short of the national average at rates ranging between 29% and 34% over the past 10 years. However, as noted in Section 2.3 above, substantial community waste diversions occur in Teton County that are not considered in these metrics.

4.2 RECYCLING CENTER RECYCLING STREAM CONTAMINATION

Results of the winter and summer sorting events at the Recycling Center are summarized by the minor waste component sub-category in Table 10. Contamination rates for the sampled recycling streams are shown in Figure 9 and summarized below. Excessive impurities (i.e., dirt, food waste, water) on recyclable materials was a major contributing factor to the contaminant stream.

- **OCC and Brown Paper Recycling** – Contamination rates in the OCC and brown paper recycling streams were 5.7% and 5.0% in the winter and summer events, respectively. Contamination in the OCC waste stream was comprised primarily of paper products including paperboard and contaminated or non-recyclable (i.e., wax-coated cardboard).

- **#1 and #2 Plastics** – Contamination rates for #1 and #2 plastics were notably less during the summer event (26.2% and 20.7%, respectively) relative to the winter event (38.5% and 30.7%, respectively). Contamination in the #1 and #2 plastics was comprised primarily of other plastic products including #1 and #2 plastics that are unsuitable for recycling under current Recycling Center operations (e.g., #1 plastic thermoform clamshell containers).

- **Aluminum Cans** – The contamination rate observed in the aluminum can recycling stream was 6.2% during the summer sorting event. The aluminum can recycling stream was not sampled during the winter event. Contaminants in the aluminum can recycling stream were primarily composed of compressed aluminum can "pucks". The recently installed Revolution Robotic Sorting system used for initial screening of aluminum can recycling streams does not separate aluminum can "pucks" from the recycling stream contaminants. ISWR Recycling Center Staff reportedly pull aluminum can "pucks" from the contaminant stream in a secondary sorting procedure which was not represented in the summer sorting event data. The observed contamination rate in the aluminum can recycling stream is reduced to 1.3% if the aluminum can "pucks" are disregarded in the data.

Volumetric contamination rates for #1 and #2 Plastic recycling streams, recorded by Teton County ISWR staff from December 2020 to March 2022, were obtained by Trihydro and are presented in Table 11. Contamination rates for the #1 and #2 Plastics recycling streams remain largely consistent throughout the year varying between 21% and 43% with large apparent increases during the summer months and are generally consistent with the mass-based contamination rates observed during the winter sorting event. However, the total volume of recycled plastics dramatically increases during the summer months between approximately June and August (Figures 11 and 12).

Annual production tonnage of recycled materials produced at the Recycling Center from July 2021 to June 2022 were reported by Teton County ISWR staff and is presented in Table 12. Monthly tonnages of produced recycled materials

ranged between approximately 252 and 451 tons and was predominantly comprised of OCC and glass which constituted approximately 50% and 28% of the total mass produced, respectively.

5.0 SECONDARY MARKETS EVALUATION

Trihydro obtained secondary materials market and secondary fiber market pricing from North American regional markets which indicate current regional average prices for various recyclable commodities. Secondary market pricing data is presented in Table 13. Current average commodity prices are presented by commodity type (e.g., plastic, aluminum, paper, etc.) for eight North American regions. Projected annual values for produced recycled materials from the Recycling Center and projected potential annual values for recyclable materials in MSW at the Transfer Station were calculated based on minimum and maximum regional price indices in Table 14. Projected market values presented for the Recycling Center's annual produced materials are provided for purposes of comparison and are primarily intended to show market values for commodities the Recycling Center is already selling.

Projected market values for thermoform #1 plastics which are not currently recycled at the Recycling Center (i.e., #1 plastics considered contaminants in current recycling streams such as clamshells) are also provided in Table 14. Based on the average volumetric contamination rate in the #1 Plastic recycling stream (Table 11) and the results of the waste sorting events (Table 10), an estimated 38 tons of thermoform #1 plastics are removed from the #1 recycling stream as contaminants annually by ISWR sorting procedures. Price indices for thermoform #1 plastics are relatively low, ranging from 0 to 6.5 cents per pound (¢/lb); however, this waste stream is already being sorted by current Recycling Center processes and is currently hauled to the Transfer Station for disposal. The projected annual value of thermoform #1 plastics in the #1 Plastic recycling stream is approximately $5,000.

Projected annual tonnages of target recyclables in MSW in the Transfer Station MSW (Table 8) and secondary market indices (Table 13) were used to calculate projected secondary market values for recyclable wastes passing through the Transfer Station tipping floor in Table 14. These secondary market projections represent potential unrealized values for recyclables that are currently landfilled and include the following highlights. Note that these secondary market projections do not account for contamination or sorting of recyclables in MSW, nor do they account for transportation to various secondary markets. Additionally, many of the secondary markets specify allowable contamination rates as well as additional requirements. Definitions, allowable contamination rates, and additional requirements for the various secondary market materials are provided in Appendix D.

- Approximately 514 tons of #1 PET Plastics are projected to be disposed of as MSW at the Transfer Station annually and have an estimated potential secondary market value of approximately $57,000 to $144,000.
- Approximately 239 tons of #2 HDPE Plastics are projected to be disposed of as MSW at the Transfer Station annually and have an estimated potential secondary market value of approximately $17,000 to $227,000.

- Approximately 331 tons of Aluminum Cans are projected to be disposed of as MSW at the Transfer Station annually and have an estimated potential secondary market value of approximately $324,000 to $479,000.
- Approximately 93 tons of Steel Cans are projected to be disposed of as MSW at the Transfer Station annually and have an estimated potential secondary market value of approximately $900 to $18,000.
- Approximately 1,768 tons of OCC are projected to be disposed of as MSW at the Transfer Station annually and have an estimated potential secondary market value of approximately $35,000 to $110,000.
- Approximately 885 tons of Office Paper are projected to be disposed of as MSW at the Transfer Station annually and have an estimated potential secondary market value of approximately $7,000 to $226,000.

6.0 SUMMARY

Trihydro manually sorted a total of 10,982 pounds of MSW at the Teton County Transfer Station and a total of 611 pounds of recycling stream contaminants at the Teton County Recycling Center during two five-day sorting events in February and August 2022. Wastes were sorted in general accordance with the February 2022 Waste Characterization Study Work Plan and the ASTM D5231-92 Method. Trihydro obtained additional data from the Transfer Station Scale House, and Teton County ISWR staff to assist in characterization of wastes generated in the County. The overall goal of this Waste Characterization Study was to characterize recyclable, compostable, non-recyclable, and non-compostable materials in both the total MSW and recycling waste streams and to determine whether any additional materials are appropriate for diversion or recovery. The following conclusions are made based on the results of this study:

- C&D type wastes were the largest category of MSW entering the Transfer Station constituting 44% (winter) and 65% (summer) of the overall mass of sorted MSW.
- C&D type wastes are predominantly brought to the Transfer Station by private haulers (average of 47% of waste composition) when compared to commercial haulers (average of 8% of waste composition).

Wastes identified as C&D debris at the Transfer Station Scale House is currently diverted. From August 2021 to August 2022, the County accepted approximately 9,513 tons of C&D debris (Table 7). The projected annual mass of C&D type wastes which are comingled with MSW and hauled to the Transfer Station tipping floor is approximately 11,170 tons (Table 8) constituting approximately 34% of the total Transfer Station MSW throughput.

- Approximately 22.5% (7,594 tons annually) of MSW at the Transfer Station consists of target Recycling Center recyclable wastes (i.e., glass containers, aluminum cans, steel/tin cans, aluminum foil, #1 plastics, #2 plastics, stretchy plastic films, office paper, hardback books OCC and brown paper, magazines, newspaper, and textiles).
- Approximately 11.9% (3,951 tons annually) of the MSW at the Transfer Station consists of target organic compostable or mulchable wastes (i.e., loose food waste, yard waste, untreated wood, manure, and sod).
- Approximately 6.5% (2,142 tons annually) of the MSW at the Transfer Station consist of other target divertible wastes (i.e., wastes streams currently diverted at the Transfer Station and Recycling Center).

The projected target recyclables, target organic compostables/mulchables, and other target divertibles constitute approximately 41% of the total MSW throughput at the Transfer Station tipping floor and represent waste streams that are potentially divertible via current Recycling Center and Transfer Station diversion efforts. These wastes are brought to the Transfer Station as comingled MSW and are largely contaminated or generally otherwise unsuitable for recycling

or diversion efforts in their current status which would likely require source separation to be realized as diverted wastes. Community education and outreach is identified as a primary strategy toward decreasing these target recyclable and divertible wastes in MSW. Additionally, many of these wastes could be identified and separated by increasing screening and acceptance criteria at the Transfer Station scale house and tipping floor.

- Contamination rates in Recycling Center recyclable waste streams are approximately 5.3% in Corrugated Cardboard (OCC), 32.4% in #1 Plastics, 25.7% in #2 Plastics, and 1.3% in aluminum cans.

Excessive impurities (i.e., dirt, food waste, water) on recyclable materials was a major contributing factor to the contaminant stream. Additionally, contaminants in the #1 Plastics and #2 Plastics recycling streams are primarily composed of #1 and #2 plastic materials that are not currently accepted as recyclable material at the Recycling Center. The primary source of contamination in the #1 Plastics recycling stream consists of #1 PET thermoform plastics (i.e., clamshells and similar containers). Secondary market values for #1 PET thermoform plastics are relatively low; however, this waste stream is already sorted by current Recycling Center processes and represents a potential divertible waste stream.

7.0 REFERENCES

American Society for Testing and Materials (ASTM). 2008. Standard Test Method for Determination of the Composition of Unprocessed Municipal Solid Waste. D5231-92 (Reapproved 2008).

Teton County. 2020. Jackson/Teton County Comprehensive Plan 2020 Annual Indicator Report. March 16, 2020.

Teton County Integrated Solid Waste and Recycling (ISWR). 2022. Strategies on the Road to Zero Waste: 2021 Annual Report. January 2022.

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TABLES

TABLE 1. TOTAL HISTORICAL MUNICIPAL SOLID WASTE TONNAGES
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

Fiscal Year	Total County MSW Tonnage[1]	Recycling Center Tonnage[2]	Transfer Station Diverted Tonnage[3]	Total Diverted Tonnage[4]	Total Landfilled MSW Tonnage[5]	Percent of Diverted MSW
FY2001	39,910	2,749	5,666	8,415	31,495	21%
FY2002	37,507	3,096	4,186	7,282	30,225	19%
FY2003	37,528	3,122	3,542	6,664	30,863	18%
FY2004	40,067	3,155	4,451	7,606	32,461	19%
FY2005	39,372	3,406	4,936	8,342	31,030	21%
FY2006	40,451	3,802	5,508	9,310	31,142	23%
FY2007	43,996	3,768	10,270	14,038	29,959	32%
FY2008	44,214	4,264	11,082	15,346	28,869	35%
FY2009	42,168	4,304	10,548	14,852	27,317	35%
FY2010	35,546	3,977	8,480	12,456	23,090	35%
FY2011	34,438	4,017	7,393	11,410	23,028	33%
FY2012	34,259	3,935	7,386	11,322	22,937	33%
FY2013	35,287	3,645	8,000	11,646	23,641	33%
FY2014	38,708	3,870	9,302	13,171	25,536	34%
FY2015	42,800	4,170	10,581	14,751	28,048	34%
FY2016	42,963	4,258	10,209	14,467	28,496	34%
FY2017	45,365	4,282	11,344	15,626	29,739	34%
FY2018	45,518	4,270	10,398	14,667	30,851	32%
FY2019	46,845	4,694	9,886	14,580	32,265	31%
FY2020	47,147	4,329	10,206	14,535	32,612	31%
FY2021	51,186	4,149	10,480	14,629	36,556	29%

Notes:
FY = Fiscal Year
MSW = Municipal Solid Waste
% = Percent
Tonnage values provided to Trihydro by Teton County Integrated Solid Waste and Recycling (ISWR)
1 = Total MSW streams through Teton County ISWR including Transfer Station and Recycling Center diverted wastes.
2 = Total diverted wastes through the Teton County ISWR source-sorted Recycling Center.
3 = Total diverted wastes through the Teton County Transfer Station including composting, mulching, and recycling.
4 = Total Recycling Center and Transfer Station diverted wastes
5 = Total landfilled MSW shipped from Teton County Transfer Station to Sublette County, Bonneville County, or Jefferson County Landfills.

TABLE 2. HISTORICAL DIVERTED WASTE COMPOSITION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Recycling Center Diverted Wastes																Transfer Station Diverted Wastes			
	Aluminum Cans	Office Paper	Corrugated Cardboard	Glass / all colors	Magazines	Newspapers	Telephone Directories	Steel Food Cans	Scrap Metal	Bottles #2 HDPE	Bottles #1 PET	Plastic Bags/Film	Textiles	Hazardous Waste	Electronic Waste	Food Waste Pilot	Outbound Scrap Metal	Outbound Concrete	Outbound Tires	Inbound and Sorted Wood / Compostables
FY2001	15.9	116.5	1,009.5	698.5	254.6	503.0	20.6	47.2	25.5	37.3	20.4	0.0	0.0	0.0	0.0	0.0	25.5	0.0	0.0	5,640.0
FY2002	16.3	125.0	1,177.7	766.7	329.5	555.2	0.0	21.0	30.0	31.5	29.9	0.0	0.0	7.1	6.0	0.0	30.0	0.0	0.0	4,156.0
FY2003	21.0	168.7	1,157.8	751.1	399.4	519.8	14.9	31.9	0.0	22.3	19.4	0.0	0.0	1.2	14.7	0.0	0.0	0.0	0.0	3,542.0
FY2004	36.3	174.0	1,195.7	720.5	422.4	452.0	20.0	33.4	1.0	25.6	31.9	0.0	0.0	17.3	24.8	0.0	1.0	0.0	0.0	4,450.0
FY2005	25.5	170.5	1,267.9	720.7	468.8	595.3	20.4	29.6	0.0	27.5	28.7	0.0	0.0	20.4	30.4	0.0	0.0	503.0	0.0	4,433.0
FY2006	20.4	218.9	1,360.5	887.1	492.5	626.9	30.1	27.8	0.0	28.2	46.8	0.0	0.0	19.7	43.5	0.0	326.8	345.7	16.8	4,818.2
FY2007	41.5	189.5	1,246.5	950.8	512.8	630.3	30.9	31.9	0.0	26.1	26.0	2.8	0.0	23.3	55.3	0.0	915.2	1,147.3	31.7	8,175.7
FY2008	20.5	201.3	1,434.4	1,168.1	485.3	701.9	32.9	54.8	14.6	18.1	53.4	5.5	0.0	32.9	40.0	0.0	1,003.3	879.5	48.5	9,150.7
FY2009	23.1	266.6	1,447.2	1,149.7	388.0	684.7	53.0	59.9	21.9	61.4	58.3	5.8	0.0	28.9	55.5	0.0	1,169.6	1,336.8	58.1	8,627.4
FY2010	43.4	221.2	1,356.4	1,022.2	434.1	593.8	43.1	65.1	0.0	34.6	92.8	3.9	0.0	27.0	39.1	0.0	561.9	1,081.1	42.3	6,794.3
FY2011	42.2	208.4	1,371.9	1,050.5	426.4	614.0	50.7	67.8	0.0	43.0	52.7	2.4	0.0	20.8	66.5	0.0	787.8	1,104.7	47.1	5,830.5
FY2012	41.2	241.2	1,217.2	1,180.0	392.9	583.1	21.0	56.2	0.8	42.3	64.8	1.7	0.0	16.2	76.8	0.0	687.2	601.7	36.6	6,060.8
FY2013	42.3	170.5	1,299.8	971.1	400.6	490.2	20.7	32.2	2.3	40.8	44.6	3.5	0.0	33.1	94.0	0.0	587.0	685.4	29.4	6,698.7
FY2014	40.7	189.8	1,389.5	995.5	372.9	488.9	42.3	65.0	4.1	40.7	41.9	5.8	66.1	24.3	102.6	0.0	737.3	761.5	47.0	7,755.7
FY2015	42.0	192.0	1,561.4	1,002.2	456.6	482.3	28.8	51.6	3.2	41.1	61.0	15.0	106.0	26.1	101.3	0.0	775.4	818.2	51.1	8,936.0
FY2016	64.1	186.7	1,623.3	1,038.4	428.1	448.3	38.7	56.7	23.8	42.3	40.5	16.4	128.8	19.7	102.8	0.0	484.0	0.0	65.0	9,659.8
FY2017	43.6	182.5	1,749.8	1,056.5	352.9	453.1	39.9	59.5	0.0	43.6	59.3	9.9	100.4	21.1	89.2	21.1	1,310.1	0.0	46.5	9,987.2
FY2018	64.3	155.2	1,734.3	1,008.3	343.2	434.1	48.1	51.8	0.0	39.5	64.1	17.7	122.4	22.6	72.4	91.7	1,266.4	0.0	67.7	9,063.9
FY2019	62.2	156.3	1,933.9	1,241.0	337.9	327.8	60.8	76.2	0.0	40.4	63.5	6.0	133.1	35.1	55.6	163.9	1,175.6	0.0	92.3	8,618.5
FY2020	81.2	135.8	1,864.9	1,068.7	297.8	321.8	29.4	55.9	0.0	40.3	61.5	11.6	101.9	30.0	67.0	161.2	1,074.8	0.0	55.7	9,075.6
FY2021	87.8	135.0	1,928.7	1,106.4	189.2	290.5	35.3	65.8	0.0	39.0	79.6	54.6	19.0	42.6	64.6	11.2	1,424.1	509.9	67.8	8,478.4

Notes:
FY = Fiscal Year
HDPE = High density polyethylene
PET = Polyethylene terephthalate
Tonnage values provided to Trihydro by Teton County Integrated Solid Waste and Recycling (ISWR)

TABLE 3. WASTE STREAM COMPONENT DESCRIPTION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

#	Major Waste Component Category	Minor Waste Component Sub-category	Description
1	Glass	Glass Food & Beverage Containers	All colors of food & beverage bottles & jars
2		All Other Glass	Non-fluorescent light bulbs, glassware, window glass, ceramic dishware
3	Metal	Aluminum Cans	aluminum beverage cans only
4		Steel/Tin Food Cans	steel/tin beverage and food cans; also empty aerosol cans
5		Aluminum Foil/Pie Plates	aluminum foil, pie plates, and other aluminum baking containers relatively clean of food waste
6		Portable Propane/Isobutane Cylinders	Camping fuel cylinders and containers
7		Bear Spray Containers	portable bear spray containers
8		All Other Metal	non-food containers, all scrap metal and items that are primarily metal, container lids/caps - excluding aerosols still containing product (move to hazardous waste)
9	Plastic	Plastic Bottles #1	Any non-brown #1 (PET) plastic bottle with the mouth of the container being narrower than the base
10		Plastic Bottles #2	Any #2 HDPE plastic bottle with the mouth of the container being narrower than the base
11		Stretchy Plastic Film	Any non-black plastic film that can be stretched by the fingers before it tears. Includes but is not limited to, plastic grocery bags and plastic food wrap. Film must not be contaminated with food.
12		Styrofoam	Styrofoam, other extruded polystyrene and foam products
13		All Other Plastic	Any resin number including plastic cups, tubs, clamshells, foil-lined chip bags, non-stretchy films such as pouches and heavy-duty resealable bags
14	Paper	Office Paper	White and light-colored paper, envelopes, junk mail, and manila file folders. No dark colors, neon, or construction paper, shredded office paper is accepted.
15		Hardback books	All hardback bound books
16		Paperback books	All glue bound publications, including phonebooks
17		Corrugated Cardboard and Brown Paper	All corrugated cardboard and brown paper or kraft paper
18		Paperboard	All thick paper-based packaging frequently found (but not limited to) for food and soda box packaging
19		Magazines	All super-calendared printed materials, including catalogs
20		Newspaper	All printed and non-printed newsprint paper
21		All Other Paper	Any other paper including but not limited to: carbon paper, construction paper, deep-toned or fluorescent paper, napkins, paper towels, paper plates and cup, photos, ream wrap, traditional architectural blueprints, wrapping paper, tissue paper, and gold tone envelopes
22	Other	Tetra Pak Cartons	Aseptic and non-aseptic cartons; milk juice, broth, beverages, etc.
23		Mattresses	All box springs and mattresses
24	Organics	Food Waste, Loose	All food waste (out of containers where active emptying is not required) including bone & rinds; no shellfish (place in trash)
25		Food Waste, Contained	All food waste in containers (to-go containers, food packs, plastic bags, etc. No need to empty); no shellfish (place in trash)
26		Yard Waste	Grass, leaves, weeks, pruning, stumps, trees
27		Untreated Wood	unpainted and untreated wood, free of glues and other materials
28		Manure	Horse corral operations
29		Ash	Campground fire pits and charcoal briquettes
30		Sod	Sod clumps and associated dirt
31	Hazardous Waste	Electronics	Electronics with circuit boards (computer monitors, televisions, VCRs, DVD players, Portable music devices, cell phones, digital cameras, etc.) but excluding other small household appliances like toasters (move to other metal)
32		Alkaline Batteries	All non-rechargeable alkaline batteries
33		Lithium Batteries	All rechargeable lithium batters. Includes individual batteries, and batteries from: laptops, cell phones, toys, etc.
34		Lead Batteries	Car batteries and other lead batteries
35		Other Hazardous Waste	Including but not limited to antifreeze, motor oil, pesticides, herbicides, cleaners, adhesives, glues, oil-based paint, aerosol containers with product, gasoline, kerosene, fuels, other household chemicals, and other hazardous or difficult to manage waste
36		Compact Fluorescent Lightbulbs	CFL tubes and curly bulbs
37		Medical Waste	Medical/biohazard waste and prescriptions
38		Propane Tanks - 5 Gallons or Greater	Grills, camping, RVs, generator tanks, etc.
39		Refrigeration Units	Refrigerators, freezers, and air conditioner freon
40	Special Wastes	Textiles	Clothing, linens, curtains that are relatively clean and dry. Also reusable shoes, purses, bags, and belts. No bed pillows
41		Automotive Tires	--
42		Bicycle Tires	--
43		Carcasses, domestic	Domesticated animal carcasses
44		Carcasses, non-domesticated	Elk, deer, moose, etc.
45	Construction & Demolition Type Wastes	Concrete and Asphalt	Concrete and Asphalt millings (no shingles)
46		Painted/Stained Wood	--
47		Treated Wood/Other Wood	Pressure treated
48		Drywall	--
49		Rock/Brick	--
50		C&D Based Scrap Metal	--
51		All other C&D	--
52	All Other Waste	Waste	Inorganic materials not classified elsewhere. Mixed MSW residuals.

Notes:
Waste component categories and descriptions provided by Teton County in original request for proposal
C&D = Construction and demolition
MSW = Municipal solid Waste
HDPE = High density polyethylene
PET = Polyethylene terephthalate

TABLE 4. TRANSFER STATION WASTE CHARACTERIZATION STUDY SUMMARY, MAJOR WASTE COMPONENT CATEGORIES
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

Transfer Station Winter Sort Event

Sample Number	Generator Category	Hauler Category	Total Sample Weight	Glass		Metal		Plastic		Paper		Other Wastes		Organics		Hazardous		Special Wastes		C&D Type Wastes		All Other	
			(lbs.)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)
Sample 1	C&D	Private	149.5	0	0.0%	3.4	2.3%	5.2	3.5%	19.7	13.2%	0	0.0%	32	21.4%	0	0.0%	0.2	0.1%	54.8	36.7%	34.2	22.9%
Sample 2	C&D	Private	218.1	0.2	0.1%	1	0.5%	2.2	1.0%	5.9	2.7%	0	0.0%	31.8	14.6%	0	0.0%	0.6	0.3%	176.4	80.9%	0	0.0%
Sample 3	C&D	Commercial	111.5	0	0.0%	0	0.0%	2.7	2.4%	0.2	0.2%	0	0.0%	30.6	27.4%	0.6	0.5%	0	0.0%	77.4	69.4%	0	0.0%
Sample 4	Residential	Commercial	62.4	3.2	5.1%	3.8	6.1%	12.3	19.7%	12.9	20.7%	0.2	0.3%	27.4	43.9%	0	0.0%	2.4	3.8%	0	0.0%	0.2	0.3%
Sample 5	Residential	Private	42.5	0	0.0%	0.6	1.4%	9.2	21.6%	16	37.6%	0.1	0.2%	16.6	39.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Sample 6	Commercial and multi-family residential	Commercial	42.7	2	4.7%	1.5	3.5%	10.3	24.1%	11.4	26.7%	0.1	0.2%	12.4	29.0%	0	0.0%	0.6	1.4%	0	0.0%	4.4	10.3%
Sample 7	C&D	Private	145.4	0	0.0%	0	0.0%	0	0.0%	8	5.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	137.4	94.5%
Sample 8	C&D, commercial, and multi-family residential	Commercial	323.8	13.6	4.2%	15.4	4.8%	70	21.6%	75.4	23.3%	0.8	0.2%	86	26.6%	0.6	0.2%	10.8	3.3%	22.6	7.0%	28.6	8.8%
Sample 9	Residential	Private	125.4	1.8	1.4%	1	0.8%	10.05	8.0%	14.45	11.5%	1.8	1.4%	27.4	21.9%	0	0.0%	0.1	0.1%	0	0.0%	68.8	54.9%
Sample 10	Residential	Private	120.4	14.4	12.0%	16.6	13.8%	25	20.8%	22.6	18.8%	0.4	0.3%	7.8	6.5%	3.4	2.8%	12.4	10.3%	11.2	9.3%	6.6	5.5%
Sample 11	Residential and C&D	Commercial	291.0	22	7.6%	16.6	5.7%	35.8	12.3%	36.2	12.4%	0.6	0.2%	31.8	10.9%	2.6	0.9%	19	6.5%	122.4	42.1%	4	1.4%
Sample 12	Recycling center contaminants	County	206.2	0	0.0%	0.2	0.1%	9.8	4.8%	184.2	89.3%	0.4	0.2%	1.8	0.9%	0	0.0%	0.2	0.1%	0	0.0%	9.6	4.7%
Sample 13	C&D	Private	309.4	0	0.0%	0	0.0%	26.6	8.6%	10.8	3.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	272	87.9%	0	0.0%
Sample 14	Residential and C&D	Private	118.5	0.8	0.7%	6.4	5.4%	30.2	25.5%	16.8	14.2%	0.8	0.7%	22	18.6%	6.05	5.1%	3	2.5%	30.2	25.5%	2.2	1.9%
Sample 15	Commercial and multi-family residential	Commercial	269.5	14.6	5.4%	31.8	11.8%	69.6	25.8%	88.2	32.7%	2.6	1.0%	35.8	13.3%	5.85	2.2%	9.8	3.6%	0	0.0%	11.2	4.2%
Sample 16	C&D	Private	118.9	3	2.5%	0.85	0.7%	55.85	47.0%	36.2	30.4%	0	0.0%	1.6	1.3%	0	0.0%	0.6	0.5%	14.6	12.3%	6.2	5.2%
Sample 17	C&D	Private	427.2	0	0.0%	1.55	0.4%	0	0.0%	0	0.0%	0	0.0%	1.8	0.4%	0	0.0%	0	0.0%	423.8	99.2%	0	0.0%
Sample 18	Commercial	Private	181.2	0	0.0%	0	0.0%	65	35.9%	115.6	63.8%	0	0.0%	0	0.0%	0	0.0%	0.6	0.3%	0	0.0%	0	0.0%
Sample 19	Commercial and C&D	Commercial	324.7	13.8	4.3%	16.6	5.1%	87	26.8%	76.2	23.5%	0.4	0.1%	36.8	11.3%	0.65	0.2%	5	1.5%	37.4	11.5%	50.8	15.6%
Sample 20	C&D	Private	191.8	0	0.0%	3.6	1.9%	21.4	11.2%	14.4	7.5%	0	0.0%	0	0.0%	51.4	26.8%	0	0.0%	71.4	37.2%	29.6	15.4%
Sample 21	C&D	Private	223.7	0.05	0.0%	0.65	0.3%	6	2.7%	21.8	9.7%	0	0.0%	0.4	0.2%	0	0.0%	0.2	0.1%	194.6	87.0%	0	0.0%
Sample 22	C&D, commercial, tourism, multi-family residential	Commercial	296.3	13.2	4.5%	18.45	6.2%	77.2	26.1%	77.2	26.1%	1.8	0.6%	72.6	24.5%	0.2	0.1%	1.2	0.4%	1.6	0.5%	32.8	11.1%
Sample 23	Commercial, C&D, multi-family residential	Commercial	246.05	7.6	3.1%	8.8	3.6%	69.8	28.4%	96.8	39.3%	0.4	0.2%	35.2	14.3%	0.25	0.1%	2.2	0.9%	19.2	7.8%	5.8	2.4%
Sample 24	C&D	Private	106.65	0	0.0%	0.05	0.0%	25	23.4%	16.2	15.2%	0	0.0%	0.2	0.2%	0	0.0%	0	0.0%	4.4	4.1%	60.8	57.0%
Sample 25	Tourism (airport compactor)	Commercial	227.5	0.4	0.2%	13.4	5.9%	67.2	29.5%	88.2	38.8%	0.6	0.3%	49.4	21.7%	0.9	0.4%	3	1.3%	0	0.0%	4.4	1.9%
Sample 26	Residential	Private	75.75	0	0.0%	2.25	3.0%	11.2	14.8%	17.5	23.1%	1.4	1.8%	23.4	30.9%	0	0.0%	0.2	0.3%	0	0.0%	19.8	26.1%
Sample 27	Residential	Private	278.3	11.8	4.2%	13.7	4.9%	48.2	17.3%	52.6	18.9%	1.6	0.6%	129.6	46.6%	1.6	0.6%	5.6	2.0%	1.4	0.5%	12.2	4.4%
		Totals	***5,234***	***122.45***	***2.3%***	***178.2***	***3.4%***	***852.8***	***16.3%***	***1135.45***	***21.7%***	***14***	***0.3%***	***714.4***	***13.6%***	***74.1***	***1.4%***	***77.7***	***1.5%***	***1535.4***	***29.3%***	***529.6***	***10.1%***

Transfer Station Summer Sorting Event

Sample Number	Generator Category	Hauler Category	Total Sample Weight	Glass		Metal		Plastic		Paper		Other Wastes		Organics		Hazardous		Special Wastes		C&D Type Wastes		All Other	
			(lbs.)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)	(lbs.)	(%)
Sample 1	Residential	Private	248.6	17.2	6.9%	13.4	5.4%	54.6	22.0%	24.2	9.7%	0	0.0%	0	0.0%	8.4	3.4%	115.8	46.6%	14	5.6%	1	0.4%
Sample 2	Commercial	Commercial	214.8	190.4	88.6%	10.2	4.7%	14.2	6.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Sample 3	Commercial	Commercial	167.1	14.6	8.7%	1.2	0.7%	19.8	11.8%	0	0.0%	0	0.0%	131.5	78.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Sample 4	Tourism (public campground dumpsters)	Commercial	178.4	9.2	5.2%	15.8	8.9%	56.6	31.7%	52.4	29.4%	1.4	0.8%	40.8	22.9%	0	0.0%	0.6	0.3%	0	0.0%	1.6	0.9%
Sample 5	C&D	Private	132.2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	132.2	100.0%	0	0.0%
Sample 6	Commercial	Private	65.5	2.8	4.3%	3.6	5.5%	22.3	34.0%	23.2	35.4%	0	0.0%	8.6	13.1%	0	0.0%	5	7.6%	0	0.0%	0	0.0%
Sample 7	Commercial	Private	49	0	0.0%	0.2	0.4%	48.6	99.2%	0.2	0.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Sample 8	Residential	Commercial	157	4	0.0%	6.2	3.9%	50	31.8%	32	20.4%	0.6	0.4%	54.6	34.8%	0	0.0%	2.8	1.8%	0	0.0%	6.8	4.3%
Sample 9	C&D	Private	174.2	0	2.3%	0.1	0.1%	2	1.1%	10.9	6.3%	0	0.0%	2	1.1%	0	0.0%	0	0.0%	159.2	91.4%	0	0.0%
Sample 10	C&D	Private	152.2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	152.2	100.0%	0	0.0%
Sample 11	C&D	Private	92	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	92	100.0%	0	0.0%
Sample 12	Commercial and residential	Commercial	301.2	35.8	0.0%	11.2	3.7%	20.2	6.7%	136.6	45.4%	0.2	0.1%	88.6	29.4%	0	0.0%	2.4	0.8%	6.2	2.1%	0	0.0%
Sample 13	C&D	Private	163.4	0	21.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0.4	0.2%	163	99.8%	0	0.0%
Sample 14	Residential	Private	44.4	10	0.0%	2.6	5.9%	10.2	23.0%	9.4	21.2%	0	0.0%	12.2	27.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Sample 15	Residential and Commercial	Commercial	85.7	2.4	11.7%	4.6	5.4%	20.5	23.9%	20.2	23.6%	2	2.3%	32	37.3%	0	0.0%	0	0.0%	0	0.0%	4	4.7%
Sample 16	C&D	Private	128.1	0.4	1.9%	0.2	0.2%	65.6	51.2%	40.1	31.3%	0	0.0%	0.6	0.5%	0	0.0%	4.8	3.7%	16.4	12.8%	0	0.0%
Sample 17	Commercial and Tourism (Town of Jackson public trash cans)	Commercial	81.1	7.2	0.5%	3	3.7%	31.8	39.2%	21.4	26.4%	0	0.0%	14.8	18.2%	0	0.0%	0	0.0%	0	0.0%	2.9	3.6%
Sample 18	C&D	Private	240.6	0	3.0%	0	0.0%	14	5.8%	9	3.7%	0	0.0%	103.2	42.9%	0	0.0%	0	0.0%	114.4	47.5%	0	0.0%
Sample 19	C&D	Private	237.7	0	0.0%	0.2	0.1%	4.4	1.9%	13.2	5.6%	0	0.0%	64.5	27.1%	0	0.0%	0	0.0%	155.4	65.4%	0	0.0%
Sample 20	Tourism	Commercial	186.6	6.4	0.0%	11.6	6.2%	32.6	17.5%	42.8	22.9%	0.2	0.1%	85	45.6%	0	0.0%	4.6	2.5%	0	0.0%	3.4	1.8%
Sample 21	C&D	Private	219.4	0	2.9%	0	0.0%	28.2	12.9%	23.2	10.6%	0	0.0%	52.4	23.9%	4.4	2.0%	2.6	1.2%	108.6	49.5%	0	0.0%
Sample 22	Tourism	Commercial	157.1	10.6	0.0%	16.6	10.6%	25	15.9%	47.9	30.5%	0.4	0.3%	40.2	25.6%	0	0.0%	3.8	2.4%	0	0.0%	12.6	8.0%
Sample 23	Tourism	Commercial	192.3	17.6	5.5%	6.4	3.3%	39.5	20.5%	41	21.3%	0.8	0.4%	74.4	38.7%	0	0.0%	2.8	1.5%	0	0.0%	9.8	5.1%
Sample 24	C&D	Private	171.6	0	10.3%	0.2	0.1%	10.2	5.9%	4.6	2.7%	0	0.0%	53.8	31.4%	0	0.0%	0	0.0%	102.8	59.9%	0	0.0%
Sample 25	C&D	Private	282.4	0	0.0%	0	0.0%	9.6	3.4%	6.2	2.2%	0	0.0%	2.8	1.0%	0	0.0%	0.2	0.1%	263.6	93.3%	0	0.0%
Sample 26	C&D	Commercial	140.3	0	0.0%	0.2	0.1%	3	2.1%	3.8	2.7%	0	0.0%	12.8	9.1%	0	0.0%	0.1	0.1%	120.4	85.8%	0	0.0%
Sample 27	Commercial	Commercial	292.4	16	0.0%	12.6	4.3%	63.6	21.8%	156	53.4%	0.2	0.1%	27	9.2%	2.8	1.0%	9.6	3.3%	4.6	1.6%	0	0.0%
Sample 28	Commercial, residential, and C&D	Commercial	235.4	4.8	6.8%	3.2	1.4%	45	19.1%	100.6	42.7%	0	0.0%	70.6	30.0%	0.4	0.2%	9	3.8%	1.4	0.6%	0.4	0.2%
Sample 29	Recycling center contaminants	County	244.1	3.6	2.0%	18.4	7.5%	55.1	22.6%	56.4	23.1%	0.2	0.1%	3.2	1.3%	0	0.0%	0.6	0.2%	0	0.0%	106.6	43.7%
Sample 30	Residential	Private	19	0	18.9%	0	0.0%	12.8	67.4%	5.6	29.5%	0	0.0%	0	0.0%	0	0.0%	0.6	3.2%	0	0.0%	0	0.0%
Sample 31	C&D	Private	310.8	0	0.0%	0	0.0%	0.4	0.1%	0	0.0%	0	0.0%	0	0.0%	2.4	0.8%	0	0.0%	308	99.1%	0	0.0%
Sample 32	Residential	Private	78.5	11.6	0.0%	5.9	7.5%	18.4	23.4%	8.8	11.2%	0	0.0%	6.6	8.4%	0	0.0%	0	0.0%	1.4	1.8%	25.8	32.9%
Sample 33	C&D	Private	271.4	0	4.3%	0	0.0%	2	0.7%	1.8	0.7%	0	0.0%	34.2	12.6%	0.6	0.2%	0	0.0%	232.8	85.8%	0	0.0%
Sample 34	C&D	Private	33.4	0	0.0%	4.8	14.4%	15	44.9%	0.6	1.8%	0	0.0%	12.6	37.7%	0	0.0%	0	0.0%	0.4	1.2%	0	0.0%
		Totals	***5,748***	***364.6***	***6.3%***	***152.4***	***2.7%***	***795.2***	***13.8%***	***892.1***	***15.5%***	***6***	***0.1%***	***1029***	***17.9%***	***19***	***0.3%***	***165.7***	***2.9%***	***2149***	***37.4%***	***174.9***	***3.0%***

Notes:
lbs = pounds
% = percent
C&D = construction and demolition

TABLE 5. WASTE CHARACTERIZATION STUDY SUMMARY, MINOR WASTE COMPONENT SUB-CATEGORIES
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

Major Waste Component Category	Minor Waste Component Subcategory	Transfer Station Winter Sort Total		Transfer Station Summer Sort Total	
		(lbs.)	(%)	(lbs.)	(%)
Glass	Glass Food & Beverage Containers	122.1	2.3%	339.4	5.9%
	All other glass	0.4	0.0%	25.2	0.4%
Metal	Aluminum Cans	47.1	0.9%	62.1	1.1%
	Steel/Tin Food Cans	22.6	0.4%	8.6	0.1%
	Aluminum Foil/Pie Plates	7.3	0.1%	9.3	0.2%
	Portable Propane/Isobutane Cylinders	0.0	0.0%	2.4	0.0%
	Bear Spray Containers	0.0	0.0%	0.0	0.0%
	All Other Metal	101.3	1.9%	70.0	1.2%
Plastic	Plastic Bottles #1	57.6	1.1%	111.2	1.9%
	Plastic Bottles #2	36.4	0.7%	42.6	0.7%
	Stretchy Plastic Film	200.4	3.8%	114.2	2.0%
	Styrofoam	71.4	1.4%	110.0	1.9%
	All Other Plastic	487.1	9.3%	417.2	7.3%
Paper	Office Paper	120.0	2.3%	171.7	3.0%
	Hardback books	0.0	0.0%	5.0	0.1%
	Paperback books	0.0	0.0%	0.0	0.0%
	Corrugated Cardboard and Brown Paper	416.4	8.0%	178.6	3.1%
	Paperboard	139.8	2.7%	96.3	1.7%
	Magazines	36.4	0.7%	40.4	0.7%
	Newspaper	36.5	0.7%	42.0	0.7%
	All Other Paper	386.4	7.4%	358.1	6.2%
Other Wastes	Tetra Pak Cartons	14.0	0.3%	6.0	0.1%
	Mattresses	0.0	0.0%	0.0	0.0%
Organics	Food Waste, Loose	439.0	8.4%	379.0	6.6%
	Food Waste, Contained	137.2	2.6%	257.6	4.5%
	Yard Waste	0.8	0.0%	82.4	1.4%
	Untreated Wood	98.0	1.9%	303.8	5.3%
	Manure	0.0	0.0%	0.0	0.0%
	Ash	39.4	0.8%	6.2	0.1%
	Sod	0.0	0.0%	0.0	0.0%
Hazardous Wastes	Electronics	57.6	1.1%	12.6	0.2%
	Alkaline Batteries	1.8	0.0%	0.4	0.0%
	Lithium Batteries	0.1	0.0%	0.0	0.0%
	Lead Batteries	0.0	0.0%	4.4	0.1%
	Other Hazardous Waste	14.2	0.3%	0.0	0.0%
	Compact Fluorescent Lightbulbs	0.1	0.0%	0.0	0.0%
	Medical Waste	0.5	0.0%	1.6	0.0%
	Propane Tanks - 5 Gallons or Greater	0.0	0.0%	0.0	0.0%
	Refrigeration Units	0.0	0.0%	0.0	0.0%
Special Wastes	Textiles	77.7	1.5%	165.7	2.9%
	Automotive Tires	0.0	0.0%	0.0	0.0%
	Bicycle Tires	0.0	0.0%	0.0	0.0%
	Carcasses, domestic	0.0	0.0%	0.0	0.0%
	Carcasses, non-domesticated	0.0	0.0%	0.0	0.0%
Construction/Demolition Type Waste	Concrete and Asphalt	176.4	3.4%	262.4	4.6%
	Painted/Stained Wood	279.2	5.3%	21.8	0.4%
	Treated Wood/Other Wood	390.0	7.5%	512.2	8.9%
	Drywall	579.8	11.1%	861.4	15.0%
	Rock/Brick	1.4	0.0%	0.0	0.0%
	C&D Based Scrap Metal	35.0	0.7%	60.2	1.0%
	All other C&D	73.6	1.4%	431.0	7.5%
All Other Waste	Other	529.6	10.1%	174.9	3.0%
TOTALS		***5,234.1***	***100%***	***5,747.9***	***100%***

Notes:

Sampling events conducting during week of February 28, 2022 (Winter Sort Event) and August 1, 2022 (Summer Sort Event)

Weights of less than 0.1 lbs. are negligible weights representing waste components existing in the sample, but at quantities less the precision of the scale.

lbs. = pounds

C&D = construction and demolition

TABLE 6. SORTING EVENT TRANSFER STATION SCALE HOUSE TICKET SUMMARY
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Winter Event Scale House Data (2/28/22 - 3/4/22)				Summer Event Scale House Data (8/1/22 - 8/5/22)			
Description	**Number of Tickets**	**Weight (ton)**	**Weight (lbs.)**	**Count**	**Number of Tickets**	**Weight (ton)**	**Weight (lbs.)**	**Count**
Inbound MSW								
Trash	308	425.1	850,136	--	657	539.4	1,078,900	2
C&D	202	152.6	305,137	--	153	144.2	288,380	--
Trash from Terra Firma	10	3.6	7,100	--	1	1.4	2,800	--
JCR Trash	2	2.6	5,200	--	2	2.9	5,860	--
Diverted Wastes								
Scrap Metal	123	31.5	63,062	--	144	31.5	63,000	1
Refrigeration Units	8	--	--	60	7	0.8	1,580	13
Tires	1	--	--	1	15	2.6	5,240	36
Domestic Animals	--	--	--	--	4	2.1	4,100	--
Road Kill/ Wild Game	3	1.7	3,420	--	--	--	--	--
Clean Concrete	4	5.9	11,729	--	7	5.6	11,120	--
Clean Mattresses	19		--	48	12	0.2	300	15
Clean Dimensional Lumber	112	35.1	70,136	--	163	69.2	138,300	--
Yard Waste	15	3.7	7,330	--	283	129.1	258,260	--
Manure	3	8.1	16,220	--	7	20.4	40,880	--
Food Waste	4	0.0	70	--	3	0.9	1,720	--
Electronic Waste	--	--	--	--	0	--	--	--
JCR Glass	1	25.6	51,280	--	--	--	--	--
JCR Metal	1	0.6	1,299	--	--	--	--	--
Rejected Wastes								
Rejected Load	3	--	--	--	2	0.8	1,680	--
Sort Fee Loads	9	15.3	30,600	--	3	3.1	6,140	--

Notes:

Data obtained from Teton County ISWR Scale House during weeks of waste characterization sorting events

lbs. = pounds

ISWR = Integrated Solid Waste and Recycling

JCR = Jackson Community Recycling

TABLE 7. TRANSFER STATION SCALE HOUSE ANNUAL TICKET SUMMARY, AUGUST 2021 TO AUGUST 2022
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

Description	Number of Tickets	Count	Weight (ton)
Inbound MSW			
Trash	30,966	152	24,412.26
C&D	9,350	--	9,512.98
Trash from Terra Firma	161	--	132.03
JCR Trash	2,194	110,698	428.18
Diverted Wastes			
Scrap Metal	7,801	10	1,499.25
Refrigeration Units	653	1,836	28.24
Tires	501	1,001	65.56
Domestic Animals	108	1	58.94
Wild Animal	155	--	20.10
Clean Concrete	569	1	926.93
Clean Mattresses	808	1,730	23.14
Clean Dimensional Lumber	7,320	2	2,799.92
Yard Waste	10,782	--	5,577.61
Manure	222	--	483.86
Food Waste	215	--	39.07
Electronic Waste	4	--	0.00
Rejected Wastes			
Rejected Load	74	--	--
Sort Fee Loads	565	--	1,304.43
Outbound Wastes			
Outbound to Landfill	1,556	--	34,972.95
Outbound Mulch and Wood Chips	165	--	2,833.54
Outbound Compost	70	--	1,127.49
Outbound Mattresses	10	--	32.91
Outbound Sand and Dirt	19	--	123.57
Outbound Wild Animals	10	--	15.36
Outbound Concrete	55	--	727.09
Outbound Refrigeration Units	73	--	1,602.14
Outbound Electronic Waste	9	--	4.85
Outbound tires	5	--	80.73

Notes:

Data obtained from Teton County ISWR Scale House

Scale house data generated between 8/5/2021 and 8/5/2022

lbs. = pounds

ISWR = Integrated Solid Waste and Recycling

JCR = Jackson Community Recycling

C&D = Construction and demolition

TABLE 8. PROJECTED TARGET DIVERTIBLE WASTES IN TRANSFER STATION MSW
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

Waste Category	Minor Waste Component Subcategories Included	Teton County Transfer Station Winter Sorting Event Composition (%)	Winter Weekly Estimated Teton County Transfer Station MSW Composition (tons)[1]	Winter Season Projected Teton County Transfer Station MSW Composition[2] (tons)	Teton County Transfer Station Summer Sorting Event Composition (%)	Summer Weekly Estimated Teton County Transfer Station MSW Composition (tons)[1]	Summer Season Projected Teton County Transfer Station MSW Composition[2] (tons)	Annual Projected Teton County Transfer Station MSW Composition (tons)
Target Recycling Center Recyclables in Transfer Station MSW	Glass Food & Beverage Containers	2.3%	14	355	5.9%	41	1,059	1,414
	Aluminum Cans	0.9%	5	137	1.1%	7	194	331
	Steel/Tin Food Cans	0.4%	3	66	0.1%	1	27	93
	Aluminum Foil/Pie Plates	0.1%	1	21	0.2%	1	29	50
	Plastic Bottles #1	1.1%	6	167	1.9%	13	347	514
	Plastic Bottles #2	0.7%	4	106	0.7%	5	133	239
	Stretchy Plastic Film	3.8%	22	583	2.0%	14	356	939
	Office Paper	2.3%	13	349	3.0%	21	536	885
	Hardback books	0.0%	0	0	0.1%	1	16	16
	Corrugated Cardboard and Brown Paper	8.0%	46	1,211	3.1%	21	557	1,768
	Magazines	0.7%	4	106	0.7%	5	126	232
	Newspaper	0.7%	4	106	0.7%	5	131	237
	Textiles	1.5%	9	226	2.9%	20	517	743
	Recyclables Total	***22.5%***	***132***	***3,432***	***22.5%***	***154***	***4,028***	***7,459***
Target Transfer Station Divertible Wastes in Transfer Station MSW	Portable Propane/Isobutane Cylinders	0.0%	0	0	0.0%	0	7	7
	Bear Spray Containers	0.0%	0	0	0.0%	0	0	0
	All Other Metal	1.9%	11	295	1.2%	8	218	513
	Mattresses	0.0%	0	0	0.0%	0	0	0
	Refrigeration Units	0.0%	0	0	0.0%	0	0	0
	Automotive Tires	0.0%	0	0	0.0%	0	0	0
	Bicycle Tires	0.0%	0	0	0.0%	0	0	0
	Carcasses, domestic	0.0%	0	0	0.0%	0	0	0
	Carcasses, non-domesticated	0.0%	0	0	0.0%	0	0	0
	Concrete and Asphalt	3.4%	20	513	4.6%	31	819	1,332
	C&D Based Scrap Metal	0.7%	4	102	1.0%	7	188	290
	Divertibles Total	***6.0%***	***35***	***909***	***6.9%***	***47***	***1,233***	***2,142***
Target Organic Compostables and Mulchables in Transfer Station MSW	Food Waste, Loose	8.4%	49	1,276	6.6%	45	1,183	2,459
	Yard Waste	0.0%	0	2	1.4%	10	257	259
	Untreated Wood	1.9%	11	285	5.3%	36	948	1,233
	Manure	0.0%	0	0	0.0%	0	0	0
	Sod	0.0%	0	0	0.0%	0	0	0
	Compostables and Mulchables Total	***10.3%***	***60***	***1,564***	***13.3%***	***92***	***2,388***	***3,951***
All Other Minor Waste Component Subcategories	All Other Plastics	9.3%	54	1,416	7.3%	50	1,302	2,718
	Styrofoam	1.4%	8	208	1.9%	13	343	551
	All other C&D type Wastes	25.3%	148	3,850	31.8%	219	5,699	9,549
	All other waste categories	25.2%	147	3,841	16.4%	113	2,943	6,784
	Other MSW Total	***61.2%***	***357***	***9,315***	***57.4%***	***395***	***10,287***	***19,602***
	Totals	***100%***	***584***	***15,219***	***100%***	***688***	***17,935***	***33,155***

Notes:
1 = Winter and summer weekly MSW total tonnages acquired from total inbound MSW measured at the Scale House during the weeks of the winter and summer sampling events (Table 6) and scaled using waste composition percentages acquired during the sampling event.
2 = Projected values to winter season (November through April) and summer season (March through October) based on 2022 Winter and Summer Sorting Event waste composition and Scale House Data
MSW = Municipal solid waste
% = percent

TABLE 9. TRANSFER STATION SORTING EVENT SOLID WASTE DATA COMPARISON TO 2018 USEPA PERCENTAGES
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

General Solid Waste Element (USEPA Categories)[1]	National Total MSW Generation, 2018[2] (%)	National Total Recycling, 2018[2] (%)	National Total Composting and Other Food Generation, 2018[2] (%)	Teton County Transfer Station Winter Sorting Event, All Hauler Types[3] (%)	Teton County Transfer Station Estimated Weekly Winter Trash Generation, All Hauler Types[4] (tons)	Teton County Transfer Station Winter Sorting Event, Commercial Haulers Only (%)	Teton County Transfer Station Summer Sorting Event[3] (%)	Teton County Transfer Station Estimated Weekly Summer Trash Generation[4] (tons)	Teton County Transfer Station Summer Sorting Event, Commercial Haulers Only (%)	Teton County Transfer Station Projected Winter Trash Generation[4,5] (tons)	Teton County Transfer Station Projected Summer Trash Generation[4,5] (tons)	Teton County Transfer Station Projected Annual Trash Generation (tons)
Paper and Paperboard	23.05%	66.54%	--	22%	127	31%	16%	107	27%	3,302	2,784	6,085
Glass	4.19%	4.43%	--	2%	14	4%	6%	44	12%	356	1,138	1,494
Metals	8.76%	12.62%	--	4%	24	6%	4%	25	5%	620	663	1,283
Plastics	12.20%	4.47%	--	16%	95	21%	14%	95	18%	2,480	2,481	4,961
Yard Trimmings	12.11%	--	52.35%	1%	4	0%	2%	11	2%	117	276	393
Food	21.59%	--	48%	11%	64	16%	11%	76	23%	1,675	1,986	3,662
Wood	6.19%	4.49%	--	15%	86	12%	15%	100	3%	2,231	2,614	4,845
Rubber and Leather	3.13%	2.42%	--	0%	0	0%	0%	NA	0%	NA	NA	NA
Textiles	5.83%	3.63%	--	1%	9	2%	3%	20	1%	226	517	743
Other	1.56%	1.40%	--	26%	153	7%	30%	207	8%	3,998	5,397	9,395
Misc. Inorganic Wastes	1.39%	--	--	1%	8	0%	0%	3	0%	215	78	293
Total Tonnage	***292,400,000***	***69,100,000***	***42,600,000***	***100%***	***584***	***100%***	***100%***	***688***	***100%***	***15,219***	***17,935***	***33,155***

Notes:
MSW = Municipal Solid Waste
1 = Teton County Waste Characterization Study waste components included additional categories for sorting. Data presented in this table reflect components to align with USEPA waste elements.
2 = U.S. Environmental Protection Agency (USEPA), National Overview: Facts and Figures on Materials, Wastes and Recycling. <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials#NationalPicture>
3 = Total MSW generation by material, 2022 Winter Sorting Event Waste Characterization Study, Teton County Transfer Station (Table 1).
4 = Total estimated tonnage for weeks of sampling events as measured at scale house (Table 6)
5 = Projected values to winter season (November through April) and summer season (March through October) based on 2022 Winter and Summer Sorting Event data, national recovery rates, and scaled to 52 weeks per year

TABLE 10. RECYCLING CENTER WASTE CHARACTERIZATION STUDY SUMMARY
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

Recycling Center Winter Sort Event

Major Waste Component Category	Minor Waste Component Subcategory	Recycling Center Sample #3			Recycling Center Sample #1			Recycling Center Sample #2		
		Recycling Stream Category		Corrugated Cardboard	Recycling Stream Category		#1 Plastic	Recycling Stream Category		#2 plastic
		Date of Screening and Baling		3/2/2022	Date of Screening and Baling		3/1/2022	Date of Screening and Baling		3/1/2022
		Weight of Final Clean and Baled Recycling Product (lbs.)		23,400	Weight of Final Clean and Baled Recycling Product (lbs.)		1,264	Weight of Final Clean and Baled Recycling Product (lbs.)		1,292
		Weight of Contaminants Removed (lbs.)		1,329	Weight of Contaminants Removed (lbs.)		487	Weight of Contaminants Removed (lbs.)		396
		Contamination Rate (%)		5.7%	Contamination Rate (%)		38.5%	Contamination Rate (%)		30.7%
		(lbs.)	(%)	Projected Contaminant Per Recycling Stream Screening (lbs.)[1]	(lbs.)	(%)	Projected Contaminant Per Recycling Stream Screening (lbs.)[1]	(lbs.)	(%)	Projected Contaminant Per Recycling Stream Screening (lbs.)[1]
Glass	Glass Food & Beverage Containers	1.4	1.3%	17.5	17.2	21.6%	105.2	3.4	4.7%	18.8
Metal	Aluminum Cans	0.0	0.0%	0.0	4.0	5.0%	24.5	1.0	1.4%	5.5
	Steel/Tin Food Cans	0.4	0.4%	5.0	0.6	0.8%	3.7	0.8	1.1%	4.4
	Aluminum Foil/Pie Plates	0.0	0.0%	0.0	0.4	0.5%	2.4	0.0	0.0%	0.0
Plastic	Plastic Bottles #1	0.0	0.0%	0.0	0.0	0.0%	0.0	4.4	6.1%	24.3
	Plastic Bottles #2	0.0	0.0%	0.0	0.0	0.0%	0.0	3.6	5.0%	19.9
	Stretchy Plastic Film	2.8	2.6%	35.0	0.8	1.0%	4.9	2.0	2.8%	11.0
	Styrofoam	2.2	2.1%	27.5	1.4	1.8%	8.6	0.0	0.0%	0.0
	All Other Plastic	0.4	0.4%	5.0	53.2	66.8%	325.3	53.2	74.1%	293.4
Paper	Paperback books	0.4	0.4%	5.0	0.0	0.0%	0.0	0.0	0.0%	0.0
	Corrugated Cardboard and Brown Paper	12.6	11.8%	157.4	0.1	0.1%	0.3	0.0	0.0%	0.0
	Paperboard	62.0	58.3%	774.4	0.4	0.5%	2.4	0.4	0.6%	2.2
	Magazines	2.2	2.1%	27.5	0.0	0.0%	0.0	0.0	0.0%	0.0
	Newspaper	0.4	0.4%	5.0	0.0	0.0%	0.0	0.6	0.8%	3.3
	All Other Paper	19.8	18.6%	247.3	0.0	0.0%	0.0	1.0	1.4%	5.5
Other Wastes	Tetra Pak Cartons	0.2	0.2%	2.5	0.2	0.3%	1.2	1.4	1.9%	7.7
Special Wastes	Textiles	0.2	0.2%	2.5	0.0	0.0%	0.0	0.0	0.0%	0.0
C&D Waste	Treated Wood/Other Wood	1.4	1.3%	17.5	0.0	0.0%	0.0	0.0	0.0%	0.0
All Other Waste	Other	0.0	0.0%	0.0	1.4	1.8%	8.6	0.0	0.0%	0.0
	TOTALS	***106.4***	***100%***	***1329.0***	***79.7***	***100%***	***487.0***	***71.8***	***100%***	***396.0***

Recycling Center Summer Sort Event

Major Waste Component Category	Minor Waste Component Subcategory	Recycling Center Sample #1			Recycling Center Sample #3			Recycling Center Sample #2			Recycling Center Sample #4		
		Recycling Stream Category		Corrugated Cardboard	Recycling Stream Category		#1 Plastic	Recycling Stream Category		#2 Plastic	Recycling Stream Category		Aluminum Cans
		Date of Screening and Baling		8/4/2022	Date of Screening and Baling		8/4/2022	Date of Screening and Baling		8/4/2022	Date of Screening and Baling		8/4/2022
		Weight of Final Clean and Baled Recycling Product (lbs.)		34,750	Weight of Final Clean and Baled Recycling Product (lbs.)		618	Weight of Final Clean and Baled Recycling Product (lbs.)		320	Weight of Final Clean and Baled Recycling Product (lbs.)		980
		Weight of Contaminants Removed (lbs.)		1,742	Weight of Contaminants Removed (lbs.)		162	Weight of Contaminants Removed (lbs.)		52	Weight of Contaminants Removed (lbs.)		61
		Contamination Rate (%)		5.0%	Contamination Rate (%)		26.2%	Contamination Rate (%)		20.7%	Contamination Rate (%)		6.2%
		(lbs.)	(%)	Projected Contaminant Per Recycling Stream Screening (lbs.)[1]	(lbs.)	(%)	Projected Contaminant Per Recycling Stream Screening (lbs.)[1]	(lbs.)	(%)	Projected Contaminant Per Recycling Stream Screening (lbs.)[1]	(lbs.)	(%)	Projected Contaminant Per Recycling Stream Screening (lbs.)[1]
Glass	Glass Food & Beverage Containers	2.2	1.3%	23.5	0.0	0.0%	0.0	0.0	0.0%	0.0	2.2	3.6%	2.2
Metal	Aluminum Cans	0.2	0.1%	2.1	0.0	0.0%	0.0	0.0	0.0%	0.0	47.8	78.6%	48.0
	Steel/Tin Food Cans	0.0	0.0%	0.0	0.0	0.0%	0.0	0.0	0.0%	0.0	3.2	5.3%	3.2
	Aluminum Foil/Pie Plates	0.0	0.0%	0.0	0.0	0.0%	0.0	0.0	0.0%	0.0	0.2	0.3%	0.2
	All Other Metal	0.0	0.0%	0.0	0.8	1.3%	2.1	0.0	0.0%	0.0	0.0	0.0%	0.0
Plastic	Plastic Bottles #1	2.0	1.2%	21.3	42.8	68.5%	110.9	10.8	16.3%	10.8	1.4	2.3%	1.4
	Plastic Bottles #2	0.0	0.0%	0.0	0.4	0.6%	1.0	4.8	7.3%	4.8	1.0	1.6%	1.0
	Stretchy Plastic Film	0.0	0.0%	0.0	1.0	1.6%	2.6	1.4	2.1%	1.4	0.0	0.0%	0.0
	Styrofoam	11.4	7.0%	121.5	0.0	0.0%	0.0	0.0	0.0%	0.0	0.0	0.0%	0.0
	All Other Plastic	10.6	6.5%	113.0	14.1	22.6%	36.5	47.8	72.2%	47.8	2.8	4.6%	2.8
Paper	Corrugated Cardboard and Brown Paper	42.2	25.8%	449.9	0.8	1.3%	2.1	0.2	0.3%	0.2	0.0	0.0%	0.0
	Paperboard	24.2	14.8%	258.0	0.0	0.0%	0.0	0.6	0.9%	0.6	0.6	1.0%	0.6
	Newspaper	9.8	6.0%	104.5	0.0	0.0%	0.0	0.0	0.0%	0.0	0.0	0.0%	0.0
	All Other Paper	21.0	12.9%	223.9	0.4	0.6%	1.0	0.4	0.6%	0.4	1.4	2.3%	1.4
Other Wastes	Tetra Pak Cartons	0.0	0.0%	0.0	0.0	0.0%	0.0	0.2	0.3%	0.2	0.2	0.3%	0.2
Organics	Food Waste, Loose	12.2	7.5%	130.1	2.2	3.5%	5.7	0.0	0.0%	0.0	0.0	0.0%	0.0
	Untreated Wood	1.0	0.6%	10.7	0.0	0.0%	0.0	0.0	0.0%	0.0	0.0	0.0%	0.0
Special Wastes	Textiles	26.6	16.3%	283.6	0.0	0.0%	0.0	0.0	0.0%	0.0	0.0	0.0%	0.0
	TOTALS	***163.4***	***100%***	***1742.0***	***62.5***	***100%***	***162.0***	***66.2***	***100%***	***66.2***	***60.8***	***100%***	***61.0***

Notes:
lbs. = pounds
C&D = Construction and Demolition
1 = Projected contaminant mass based on total weight of contaminants removed and percentage of waste component sorted.
2 = Waste component categories which were not encountered in the sorting event are not shown on this table.

TABLE 11. RECYCLING CENTER VOLUMETRIC CONTAMINANT DATA, #1 AND #2 PLASTICS
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	#1 Plastics			#2 Plastics		
Date	Total Volume (CY)	Contaminant Volume (CY)	Percent Contamination	Total Volume (CY)	Contaminant Volume (CY)	Percent Contamination
12/22/2020	30	11.5	38%	40	14.6	37%
12/29/2020	30	13	43%	40	14.5	36%
1/5/2021	30	11.9	40%	40	14.25	36%
1/12/2021	28	10	36%	37	12.5	34%
1/19/2021	26	9	35%	32	12	38%
2/2/2021	26	11	42%	34	12	35%
2/16/2021	28	11	39%	36	13	36%
3/1/2021	29	12	41%	41	14	34%
3/15/2021	32	13	41%	43	14	33%
3/29/2021	33	13	39%	44	14.5	33%
4/12/2021	32	11	34%	43	13	30%
4/26/2021	29	10	34%	41	11.5	28%
5/10/2021	32	11.5	36%	43	13	30%
5/24/2021	61	24	39%	45	14	31%
6/7/2021	92	19.5	21%	83	25	30%
6/21/2021	64	24	38%	79	23	29%
7/6/2021	95	34	36%	82	26	32%
7/19/2021	96	34	35%	83	26	31%
8/2/2021	63	23	37%	44	14	32%
8/16/2021	65	24	37%	83	26	31%
8/30/2021	92	32	35%	45	14	31%
9/14/2021	64	24	38%	46	15	33%
9/28/2021	93	22	24%	45	15	33%
10/12/2021	62	22	35%	44	15	34%
10/26/2021	34	13	38%	44	14	32%
11/19/2021	63	21	33%	46	16	35%
11/23/2021	62	20	32%	45	16	36%
12/7/2021	62	19	31%	44	15	34%
12/21/2021	33	12	36%	45	16	36%
1/4/2022	34	14	41%	43	14	33%
1/18/2022	33	13	39%	45	15	33%
2/1/2022	62	22	35%	46	16	35%
2/15/2022	34	14	41%	44	15	34%
3/1/2022	37	13	35%	45	14	31%
		Minimum	***21%***		***Minimum***	***28%***
		Maximum	***43%***		***Maximum***	***38%***
		Average	***36%***		***Average***	***33%***

Notes:

Data presented in this table represents estimated volumetric measurements of #1 and #2 Plastics screened and baled at the Recycling Center by Teton County ISWR staff between periods of 12/22/2020 and 3/1/2022. Data collected by Teton County ISWR and obtained and tabulated by Trihydro.

CY = Cubic Yards

TABLE 12. RECYCLING CENTER ANNUAL PRODUCTION TONNAGE
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

		Production Tonnage																								
	Contamination Screening Procedure	Jul-2021		Aug-2021		Sep-2021		Oct-2021		Nov-2021		Dec-2021		Jan-2022		Feb-2022		Mar-2022		Apr-2022		May-2022		Jun-2022		Annual Total
Recycling Stream		**Bales**	**Tons**	**Bales**	**Tons**	**Bales**	**Tons**	**Bales**	**Tons**	**Bales**	**Tons**	**Bales**	**Tons**	**Bales**	**Tons**	**Bales**	**Tons**	**Bales**	**Tons**	**Bales**	**Tons**	**Bales**	**Tons**	**Bales**	**Tons**	**Tons**
Aluminum	Screened	25	13	20	10	19	10	14	7	12	6	12	6	13	7	12	6	15	8	11	6	14	7	14	7	***91***
Aluminum Foil	Screened	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	***1***
Newspaper	Screened	43	3	35	3	42	3	39	3	33	2	36	3	30	2	29	2	34	3	29	2	31	2	46	3	***32***
Old Corrugated Containers	Screened	343	238	351	244	258	179	223	155	198	138	245	170	230	160	190	132	220	153	179	124	217	151	283	197	***2,041***
OPAC	Screened	15	11	13	10	17	13	15	11	16	12	10	8	12	9	14	11	15	11	13	10	11	8	16	12	***125***
Plastic #1	Screened	15	9	14	8	16	10	10	6	8	5	6	4	7	4	7	4	9	5	6	4	7	4	9	5	***68***
Plastic #2	Screened	4	3	7	5	5	4	5	4	4	3	4	3	4	3	4	3	5	4	3	2	4	3	4	3	***37***
Electronic Wastes	Not Screened	15	6	20	8	16	6	23	9	14	5	24	9	7	3	8	3	12	5	22	8	18	7	16	6	***73***
Glass	Not Screened	82	135	74	122	69	114	63	104	36	59	48	79	68	112	57	94	69	114	34	56	41	68	43	71	***1,129***
Hardback Books	Not Screened	2	1	3	2	2	1	3	2	1	1	1	1	3	2	2	1	2	1	1	1	1	1	3	2	***12***
Magazines	Not Screened	19	21	13	14	20	22	15	17	19	21	15	17	14	15	11	12	20	22	17	19	17	19	21	23	***221***
Phonebooks	Not Screened	2	1	3	2	2	1	3	2	1	1	2	1	4	3	1	1	4	3	1	1	2	1	4	3	***20***
Steel	Not Screened	7	7	6	6	5	5	5	5	4	4	5	5	4	4	5	5	5	5	3	3	4	4	4	4	***57***
Stretchy Plastic Bags	Not Screened	5	2	4	2	5	2	4	2	4	2	4	2	4	2	4	2	4	2	5	2	4	2	5	2	***20***
Textiles	Not Screened	2	1	18	7	30	12	42	17	41	16	33	13	33	13	16	6	27	11	40	16	55	22	52	21	***156***
	Totals	***579***	***451***	***582***	***442***	***507***	***381***	***464***	***342***	***392***	***275***	***445***	***319***	***434***	***338***	***360***	***281***	***442***	***345***	***364***	***253***	***427***	***298***	***520***	***358***	***4,083***

Notes:

Data obtained from Teton County ISWR Recycling Center

Recycling Center production data generated between July 2021 and June 2022

ISWR = Integrated Solid Waste and Recycling

TABLE 13. REGIONAL MARKET AVERAGES FOR RECYCLED PRODUCTS
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Major Recyclable Category	Description	Detail	Current Average Price: Midwest/Central Market Region	Pacific Northwest Market Region	Northeast USA / Maritimes Market Region	Southwest US Market Region	Southcentral USA Market Region	Southeast USA Market Region	Ontario / Western New York Market Region	Quebec Market Region	Min	Max	Average
Secondary materials Pricing	Plastics	PET - Premium	Refers to Deposit / Bottle Bill, Special Sort Baled Grades, ¢/lb, picked up	--	--	--	14	9.5	--	--	--	9.5	14	11.8
		PET	Baled, ¢/lb, picked up	9	5.5	9	8	9.5	10	8.5	8.5	5.5	10	8.5
		PET - Thermoform	Curbside, Post Consumer, Baled, ¢/lb, picked up	0	2.5	0	6.5	0	0	0	0	0	6.5	1.1
		Natural HDPE	Baled, ¢/lb, picked up	47.5	37	47.5	40.5	47.5	47.5	47.5	41.5	37	47.5	44.6
		Colored HDPE	Baled, ¢/lb, picked up	6.75	4.5	6.75	9.5	6.75	6.75	6.75	3.5	3.5	9.5	6.4
		Commingled	#1-7, Baled, ¢/lb, picked up	0.5	-1	-1	1.5	1.5	2	-0.5	1.5	-1	2	0.6
		Commingled	#3-7, Baled, ¢/lb, picked up	1.5	-2	1.5	1	1	1.5	1.5	1.5	-2	1.5	0.9
		HDPE Rigid	Baled, ¢/lb, picked up	2	1.5	2	1.5	2	2	2	2	1.5	2	1.9
		Mixed Bulky Rigid	Baled, ¢/lb, picked up	4.5	-1	4.5	7	4.5	4.5	2	2	-1	7	3.5
		FILM - Grade A	Sorted, 800+lb Bales, ¢/lb, picked up	18.5	19	18.5	23.5	22.5	21.5	16.5	16	16	23.5	19.5
		FILM - Grade B	Sorted, 800+lb Bales, ¢/lb, picked up	6.5	7.5	6.5	10	6.5	5.5	6.5	6.5	5.5	10	6.9
		FILM - Grade C	Sorted, 800+lb Bales, ¢/lb, picked up	1.5	-1	1.5	1.5	1	2	1.5	-0.5	-1	2	0.9
		PP Post Consumer	Baled, ¢/lb, picked u	5.5	5.5	5.5	5.5	5.5	5.5	5.5	4.5	4.5	5.5	5.4
		Polystyrene EPS	Baled, ¢/lb, picked up	2	2	2.5	--	2	2.5	2	1.5	1.5	2.5	2.1
	Metals	Aluminum Cans	Sorted, Baled, ¢lb, picked up	72	62.5	67.5	62.5	70	72.5	67.5	67.5	62.5	72.5	67.8
		Aluminum Cans	Loose, ¢/lb, dropped off at RC	62.5	52.5	57.5	49	61.5	62.5	57.5	57.5	49	62.5	57.6
		Steel Cans	Sorted, Baled, $/ton, picked up	190	190	190	190	177.5	190	190	190	177.5	190	188.4
		Steel Cans	Sorted, Densified, $/ton, dropped off at RC	27.5	--	10	25	24	17.5	30	--	10	30	22.3
		Steel Cans	Sorted, Loose, $/ton, dropped off at RC	12.5	17.5	2.5	17.5	3	7.5	12.5	--	2.5	17.5	10.4
		White Goods	Loose, $/ton, picked up	42.5	--	42.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5
	Glass	Flint	$/ton Delivered	30	30.00	50	30	30	30	32.5	32.5	30	50	33.6
		Amber	$/ton Delivered	20	20	35	20	20	27.5	27.5	22.5	20	35	24.1
		Green	$/ton Delivered	10	10	7.5	10	10	10	10	10	7.5	10	9.7
		3 Mix	$/ton Del. as Recyclable/Disposable - Incl. Environmental Fees/Battery Surcharge, etc	-25	-25	-27.5	-40	-40	-35	-10	0	-40	0	-25.3
Secondary Fiber Market	Paper	Mixed Paper - MP	Paper PS 54	0.5	-1.5	-1.5	0.5	0.5	-1.5	-1.5	-1.5	-1.5	0.5	-0.8
		Sorted Residential Papers - SRNP	Paper PS 56	57.5	7.5	32.5	25	42.5	52.5	32.5	32.5	7.5	57.5	35.3
		Corrugated Containers	Paper PS 11	52.5	20	37.5	30	62.5	42.5	37.5	37.5	20	62.5	40.0
		Sorted Office Paper	Paper PS 37	255	152.5	255	250	255	255	255	255	152.5	255	241.6
		Mixed Paper - MP	Paper PS 54	0.5	-1.5	-1.5	0.5	0.5	-1.5	-1.5	-1.5	-1.5	0.5	-0.8
		Sorted Residential Papers - SRNP	Paper PS 56	57.5	7.5	32.5	25	42.5	52.5	32.5	32.5	7.5	57.5	35.3
		Boxboard Cuttings	Paper PS 4	37.5	7.5	27.5	25	47.5	22.5	27.5	27.5	7.5	47.5	27.8
		Corrugated Containers	Paper PS 11	52.5	20	37.5	30	62.5	42.5	37.5	37.5	20	62.5	40.0
		New Double-Lined Corrugated Cuttings	Paper PS 13	67.5	27.5	55	50	85	65	55	55	27.5	85	57.5
		Sorted Office Paper	Paper PS 37	255	152.5	255	250	255	255	255	255	152.5	255	241.6
		Sorted White Ledger	Paper PS 40	285	227.5	287.5	300	312.5	287.5	287.5	287.5	227.5	312.5	284.4

Notes:
Secondary material pricing and secondary fiber pricing data presented in this table is data is management by Recycling Data Management Corporation, a division of Recycling Markets Limited. Prices were provided on a real-time basis and pulled from the data base on October 13, 2022.

Regional pricing descriptions:
- Midwest/Central Market Region includes Wyoming, Montana, North Dakota, South Dakota, Minnesota, Illinois, Nebraska, Iowa, Missouri, Indiana, Ohio, Michigan, Alberta, Saskatchewan, and Manitoba
- Pacific Northwest Market Region includes Washington, Oregon, Idaho, and British Columbia
- Northeast USA / Maritimes Market Region includes Eastern New York, Pennsylvania, New Jersey, Delaware, Maryland, West Virginia, Virginia, Connecticut, Vermont, Maine, New Brunswick, and Nova Scotia
- Southwest US Market Region includes California and Nevada
- Southcentral USA Market Region includes Utah, Arizona, New Mexico, Texas, Oklahoma, and Kansas
- Southeast USA Market Region includes Arkansas, Louisiana, Mississippi, Tennessee, Kentucky, North Carolina, South Carolina, Georgia, Alabama, and Florida
- Ontario / Western New York Market Region includes western New York, and Ontario
- Quebec Market Region includes Quebec

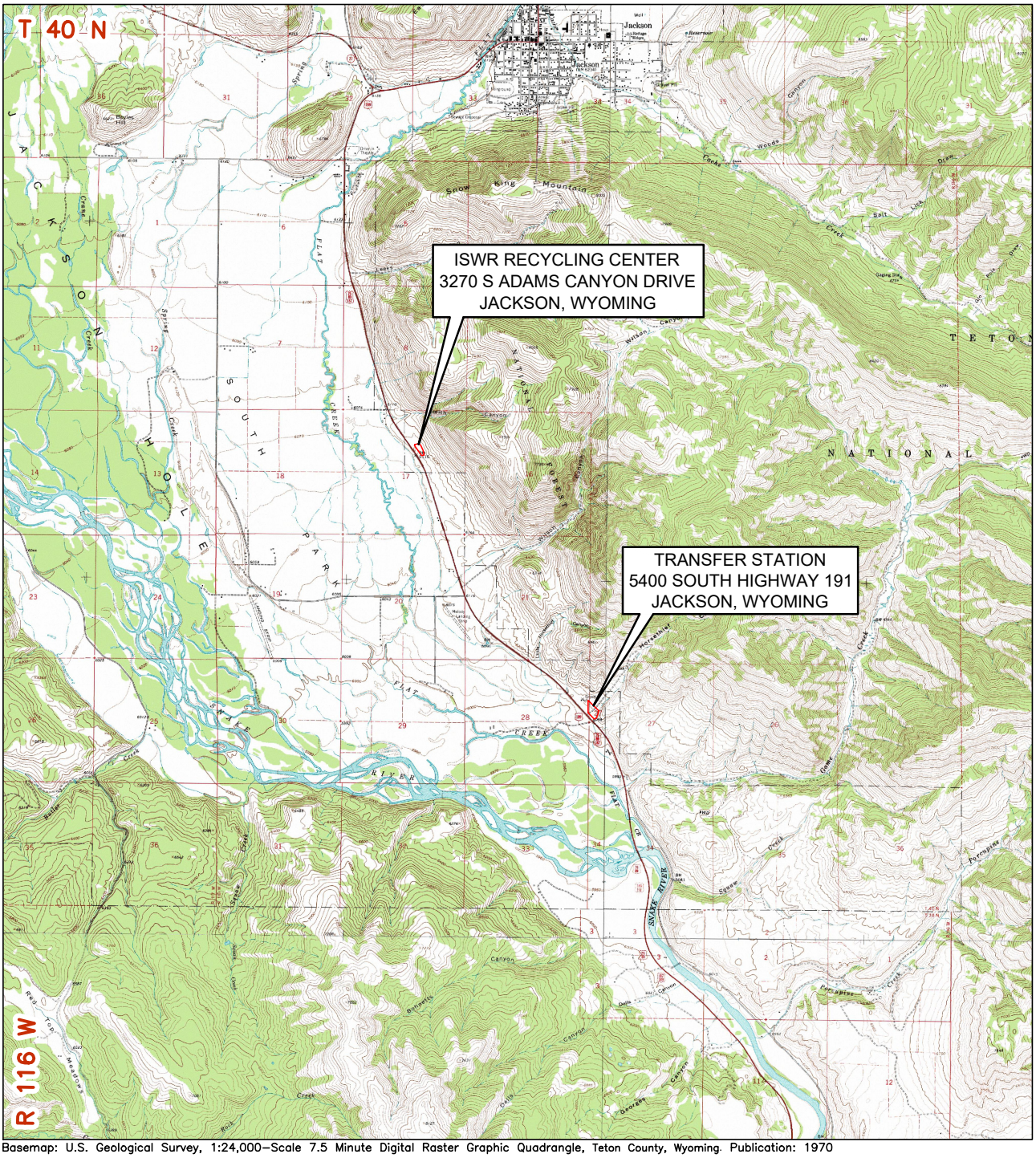
-- = Data not available
Definitions of material descriptions included as Appendix D of the Waste Characterization Report

TABLE 14. PROJECTED MARKET VALUE RANGES FOR REALIZED AND UNREALIZED RECYCLED MATERIALS
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

Major Recyclable Category	Description[5]	Detail	Recycling Center				Transfer Station			
			Annual Produced Tons[1]	Projected Annual Value based on Minimum Regional Price Index ($)[3]	Projected Annual Value based on Maximum Regional Price Index ($)[3]	Projected Annual Value based on Average Regional Price Index ($)[3]	Annual Projected Tons in MSW[2]	Projected Annual Value based on Minimum Regional Price Index ($)[3]	Projected Annual Value based on Maximum Regional Price Index ($)[3]	Projected Annual Value based on Average Regional Price Index ($)[3]
Plastics	PET - Premium	Refers to Deposit / Bottle Bill, Special Sort Baled Grades, ¢/lb, picked up	68	12,996.00	19,152.00	16,074.00	514	97,720.95	144,009.83	120,865.39
	PET	Baled, ¢/lb, picked up	68	7,524.00	13,680.00	11,628.00	514	56,575.29	102,864.16	87,434.54
	PET - Thermoform [6]	Curbside, Post Consumer, Baled, ¢/lb, picked up	38	0.00	5,001.75	865.69	--	--	--	--
	Natural HDPE	Baled, ¢/lb, picked up	37	27,454.00	35,245.00	33,065.38	239	176,580.31	226,690.94	212,671.89
	Colored HDPE	Baled, ¢/lb, picked up	37	2,597.00	7,049.00	4,753.44	239	16,703.54	45,338.19	30,573.45
	Commingled[4]	#1-7, Baled, ¢/lb, picked up	--	--	--	--	2,718	-54,363.12	108,726.24	30,579.26
	Commingled[4]	#3-7, Baled, ¢/lb, picked up	--	--	--	--	1,359	-54,363.12	40,772.34	25,482.71
	HDPE Rigid	Baled, ¢/lb, picked up	37	1,113.00	1,484.00	1,391.25	--	--	--	--
	Mixed Bulky Rigid	Baled, ¢/lb, picked up	--	--	--	--	--	--	--	--
	FILM - Grade A	Sorted, 800+lb Bales, ¢/lb, picked up	20	6,240.00	9,165.00	7,605.00	939	300,496.02	441,353.54	366,229.53
	FILM - Grade B	Sorted, 800+lb Bales, ¢/lb, picked up	20	2,145.00	3,900.00	2,705.63	939	103,295.51	187,810.01	130,293.20
	FILM - Grade C	Sorted, 800+lb Bales, ¢/lb, picked up	20	-390.00	780.00	365.63	939	-18,781.00	37,562.00	17,607.19
	PP Post Consumer	Baled, ¢/lb, picked u	--	--	--	--	--	--	--	--
	Polystyrene EPS	Baled, ¢/lb, picked up	--	--	--	--	551	16,525.45	27,542.42	22,820.86
Metals	Aluminum Cans	Sorted, Baled, ¢lb, picked up	91	113,125.00	131,225.00	122,627.50	331	413,226.53	479,342.78	447,937.56
	Aluminum Cans	Loose, ¢/lb, dropped off at RC	91	88,690.00	113,125.00	104,188.13	331	323,969.60	413,226.53	380,581.64
	Steel Cans	Sorted, Baled, $/ton, picked up	57	10,117.50	10,830.00	10,740.94	93	16,427.52	17,584.39	17,439.78
	Steel Cans	Sorted, Densified, $/ton, dropped off at RC	57	570.00	1,710.00	1,273.00	93	925.49	2,776.48	2,066.94
	Steel Cans	Sorted, Loose, $/ton, dropped off at RC	57	142.50	997.50	594.43	93	231.37	1,619.62	965.16
	White Goods	Loose, $/ton, picked up	--	--	--	--	--	--	--	--
Glass	Flint	$/ton Delivered	--	--	--	--	--	--	--	--
	Amber	$/ton Delivered	--	--	--	--	--	--	--	--
	Green	$/ton Delivered	--	--	--	--	--	--	--	--
	3 Mix	$/ton Del. as Recyclable/Disposable - Incl. Environmental Fees/Battery Surcharge, etc	1129	-45,144.00	0.00	-28,567.69	1414	-56,557.18	0.00	-35,790.09
Paper	Mixed Paper - MP	Paper PS 54	399	-598.35	199.45	-299.18	1,369	-2,053.85	684.62	-1,026.93
	Corrugated Containers	Paper PS 11	2,041	40,824.40	127,576.25	81,648.80	1,768	35,361.36	110,504.24	70,722.72
	Sorted Office Paper	Paper PS 37	125	19,100.63	31,938.75	30,255.70	885	134,914.99	225,595.55	213,707.55
	Mixed Paper - MP	Paper PS 54	399	-598.35	199.45	-299.18	1,369	-2,053.85	684.62	-1,026.93
	Sorted Residential Papers - SRNP	Paper PS 56	125	939.38	7,201.88	4,422.89	885	6,635.16	50,869.58	31,240.56
	Boxboard Cuttings	Paper PS 4	--	--	--	--	--	--	--	--
	New Double-Lined Corrugated Cuttings	Paper PS 13	--	--	--	--	--	--	--	--
	Sorted Office Paper	Paper PS 37	125	19,100.63	31,938.75	30,255.70	885	134,914.99	225,595.55	213,707.55
	Sorted White Ledger	Paper PS 40	--	--	--	--	--	--	--	--

Notes:
Secondary material pricing and secondary fiber pricing data presented in this table is data is management by Recycling Data Management Corporation, a division of Recycling Markets Limited. Prices were provided on a real-time basis and pulled from the data base on October 13, 2022.
-- = Data not available
MSW = Municipal solid waste
1 = 2021-2022 annual total recycled product produced at the Recycling Center. See Table 12
2 = Projected annual total in municipal solid wastes tipped on the Transfer Station floor. See Table 7
3 = Projected annual value of recyclable product based on minimum and maximum national average prices by region. See Table 12.
4 = Annual projected tons of commingled plastics include may plastics that are not #1-#7 and is therefore an overestimate. #3-#7 plastics estimated to be half of annual projected tons in "all other plastics" category.
5 = Definitions of material descriptions included as Appendix D of the Waste Characterization Report
6 = Estimated thermoform PET plastics generated at the Recycling Center are based on annual Recycling Center production tonnages for #1 Plastics (Table 12), average contamination rate by volume for #1 Plastics (Table 11), and measured percentage of #1 plastic contamination in the #1 Plastic contaminant recycling stream (Table 10).

FIGURES



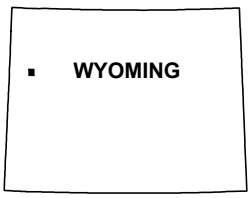
Basemap: U.S. Geological Survey, 1:24,000–Scale 7.5 Minute Digital Raster Graphic Quadrangle, Teton County, Wyoming. Publication: 1970

NOTE:

SITE LEGAL DESCRIPTION - TOWNSHIP 40 NORTH, RANGE 116 WEST, SECTION 17

N

0 2,000'



QUADRANGLE LOCATION

Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 1

SITE LOCATION MAP

WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

Drawn By: JLP	Checked By: KM	Scale: 1" = 2,000'	Date: 2/7/2022	File: 803_USGSSITELOC

L:\TETON COUNTY – DOCUMENTS\CADD_COREFILES\803_USGSSITELOC

Image Cite: Google Earth Pro imagery. Publication: October 2021.

N

0 30'

Trihydro CORPORATION
1252 Commerce Drive
Laramie, Wyoming 82070
www.trihydro.com
(P) 307/745.7474 (F) 307/745.7729

FIGURE 2

SITE MAPS

WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

Drawn By: JLP	Checked By: KB	Scale: 1" = 30'	Date: 2/7/2022	File: 803_SITEMAPS

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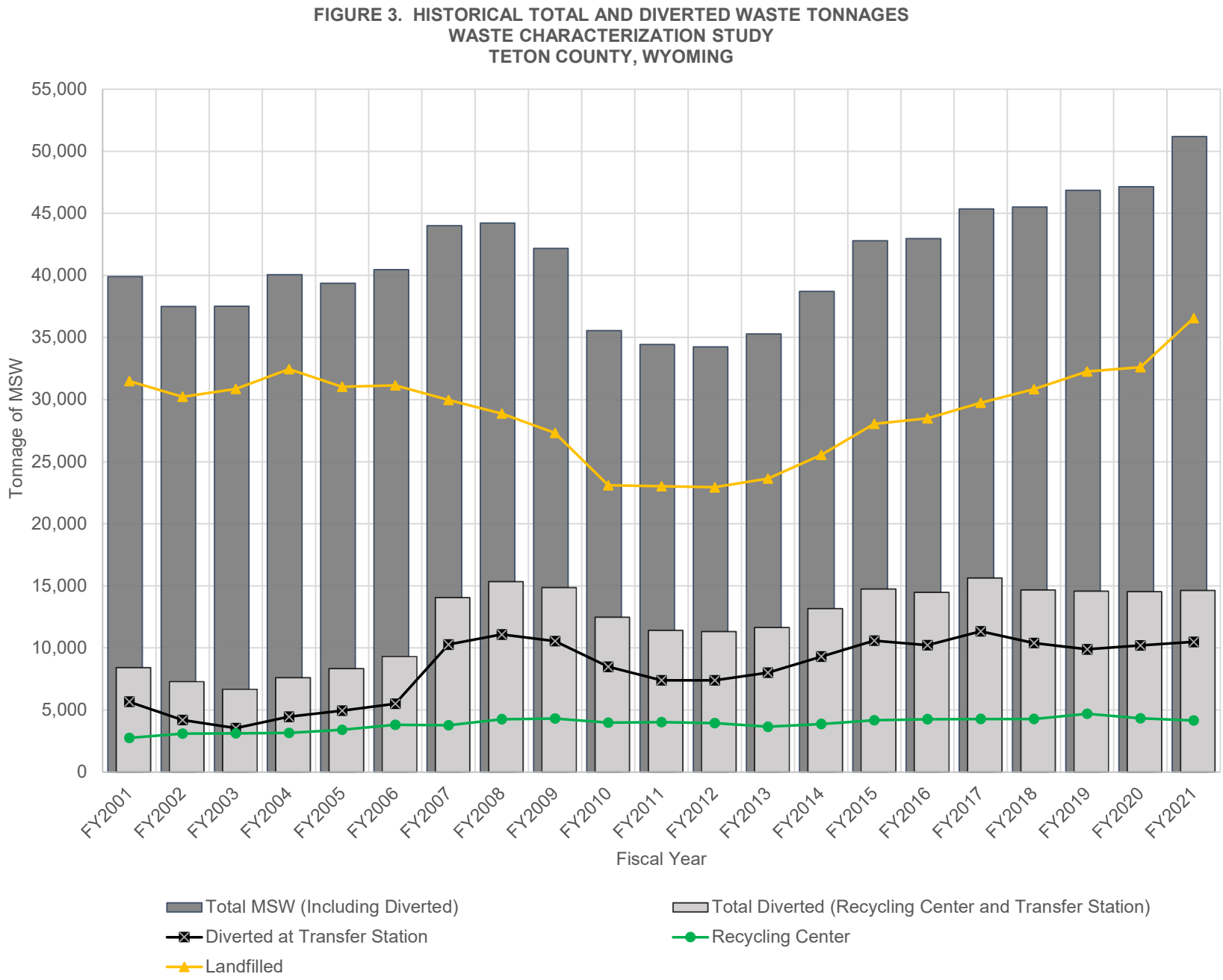
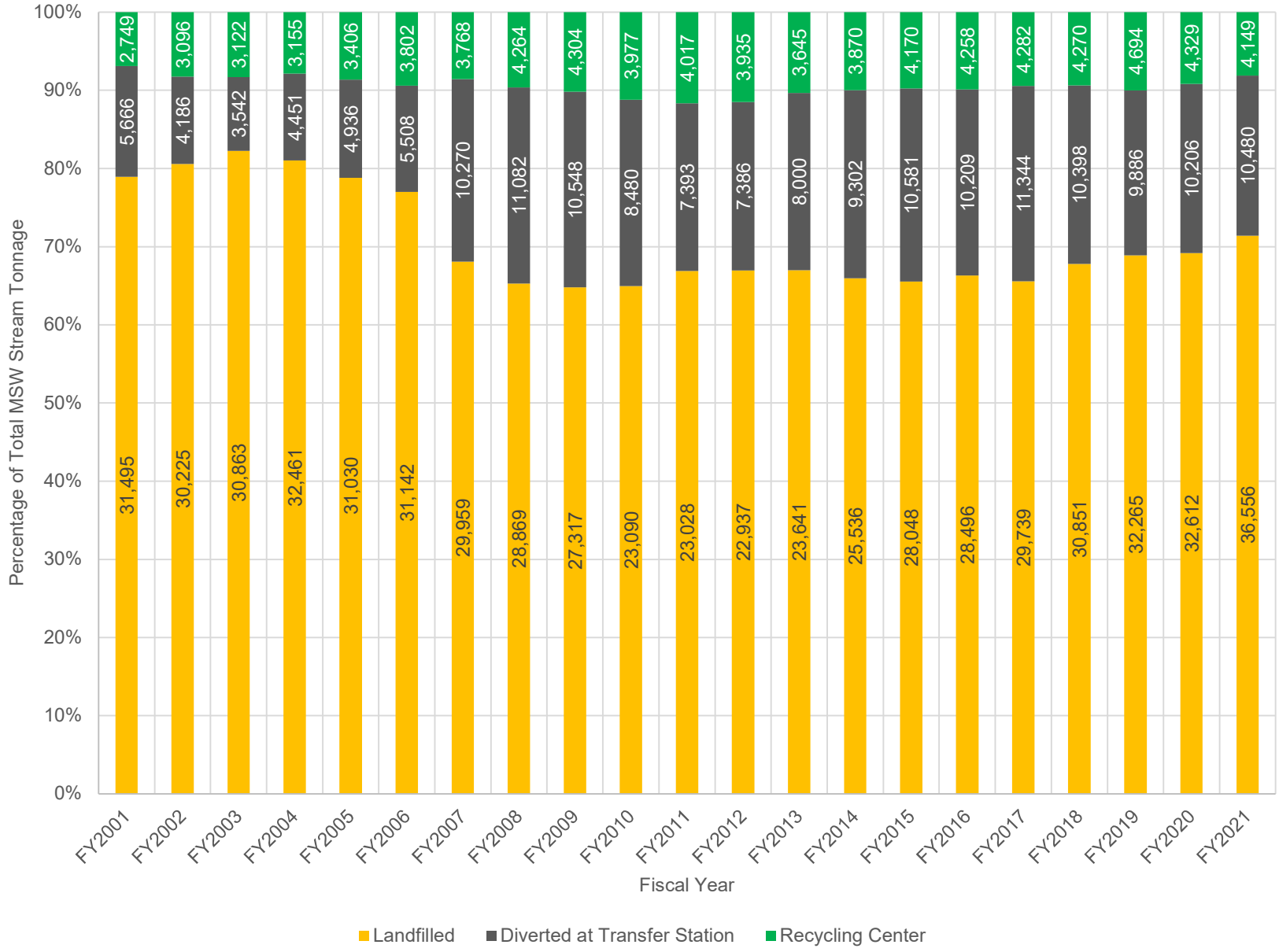


FIGURE 3. HISTORICAL TOTAL AND DIVERTED WASTE TONNAGES
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING
Tonnage of MSW
55,000
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
FY2001
FY2002
FY2003
FY2004
FY2005
FY2006
FY2007
FY2008
FY2009
FY2010
FY2011
FY2012
FY2013
FY2014
FY2015
FY2016
FY2017
FY2018
FY2019
FY2020
FY2021
Fiscal Year
Total MSW (Including Diverted)
Total Diverted (Recycling Center and Transfer Station)
Diverted at Transfer Station
Recycling Center
Landfilled

FIGURE 4. HISTORICAL FRACTIONATION OF TOTAL LANDFILLED AND DIVERTED MSW
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING



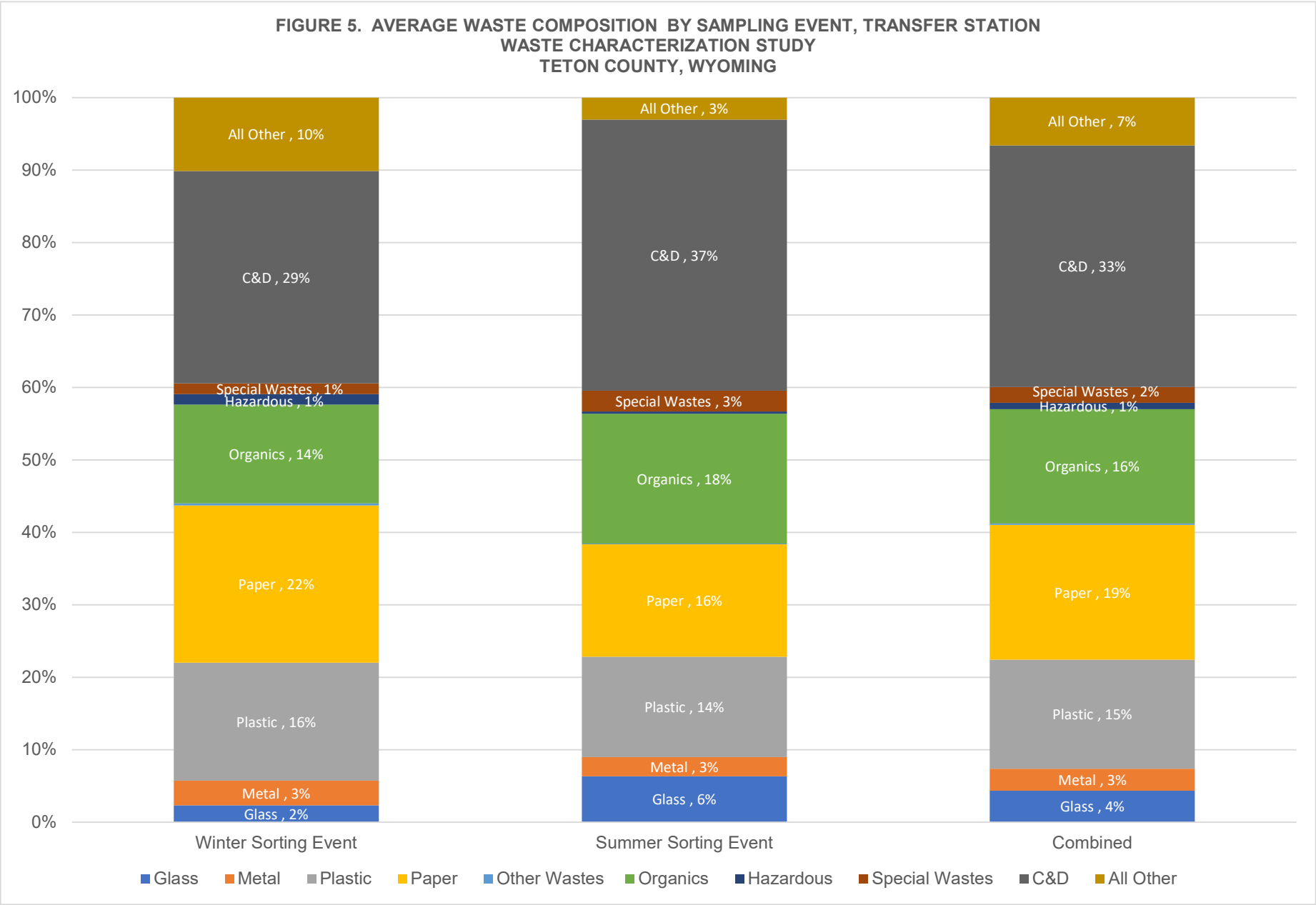


FIGURE 5. AVERAGE WASTE COMPOSITION BY SAMPLING EVENT, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
All Other , 10%
C&D , 29%
Special Wastes , 1%
Hazardous , 1%
Organics , 14%
Paper , 22%
Plastic , 16%
Metal , 3%
Glass , 2%
All Other , 3%
C&D , 37%
Special Wastes , 3%
Organics , 18%
Paper , 16%
Plastic , 14%
Metal , 3%
Glass , 6%
All Other , 7%
C&D , 33%
Special Wastes , 2%
Hazardous , 1%
Organics , 16%
Paper , 19%
Plastic , 15%
Metal , 3%
Glass , 4%
Winter Sorting Event
Summer Sorting Event
Combined
Glass
Metal
Plastic
Paper
Other Wastes
Organics
Hazardous
Special Wastes
C&D
All Other

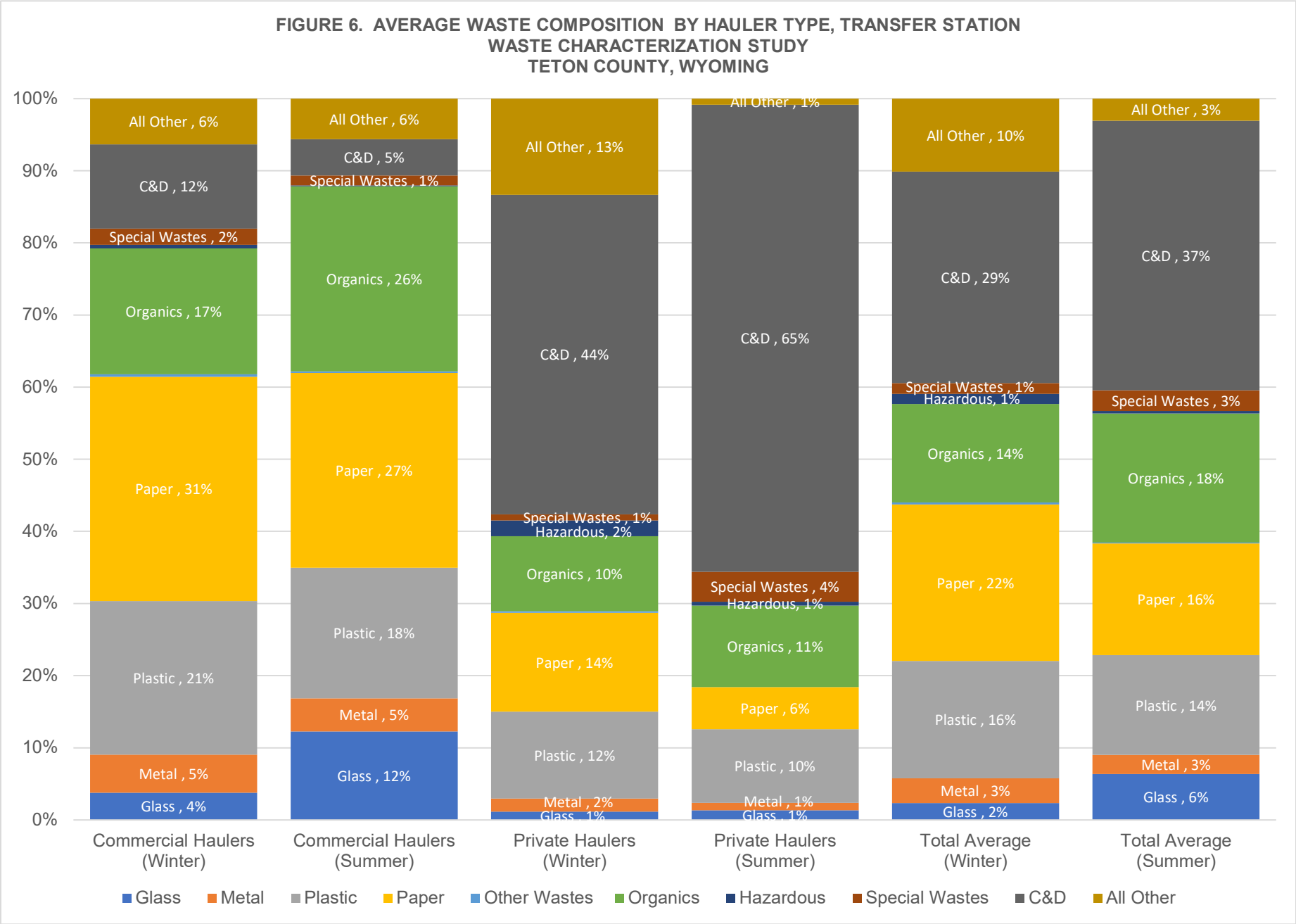


FIGURE 6. AVERAGE WASTE COMPOSITION BY HAULER TYPE, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
All Other , 6%
C&D , 12%
Special Wastes , 2%
Organics , 17%
Paper , 31%
Plastic , 21%
Metal , 5%
Glass , 4%
All Other , 6%
C&D , 5%
Special Wastes , 1%
Organics , 26%
Paper , 27%
Plastic , 18%
Metal , 5%
Glass , 12%
All Other , 13%
C&D , 44%
Special Wastes , 1%
Hazardous, 2%
Organics , 10%
Paper , 14%
Plastic , 12%
Metal , 2%
Glass , 1%
All Other , 1%
C&D , 65%
Special Wastes , 4%
Hazardous, 1%
Organics , 11%
Paper , 6%
Plastic , 10%
Metal , 1%
Glass , 1%
All Other , 10%
C&D , 29%
Special Wastes , 1%
Hazardous, 1%
Organics , 14%
Paper , 22%
Plastic , 16%
Metal , 3%
Glass , 2%
All Other , 3%
C&D , 37%
Special Wastes , 3%
Organics , 18%
Paper , 16%
Plastic , 14%
Metal , 3%
Glass , 6%
Commercial Haulers (Winter)
Commercial Haulers (Summer)
Private Haulers (Winter)
Private Haulers (Summer)
Total Average (Winter)
Total Average (Summer)
Glass
Metal
Plastic
Paper
Other Wastes
Organics
Hazardous
Special Wastes
C&D
All Other

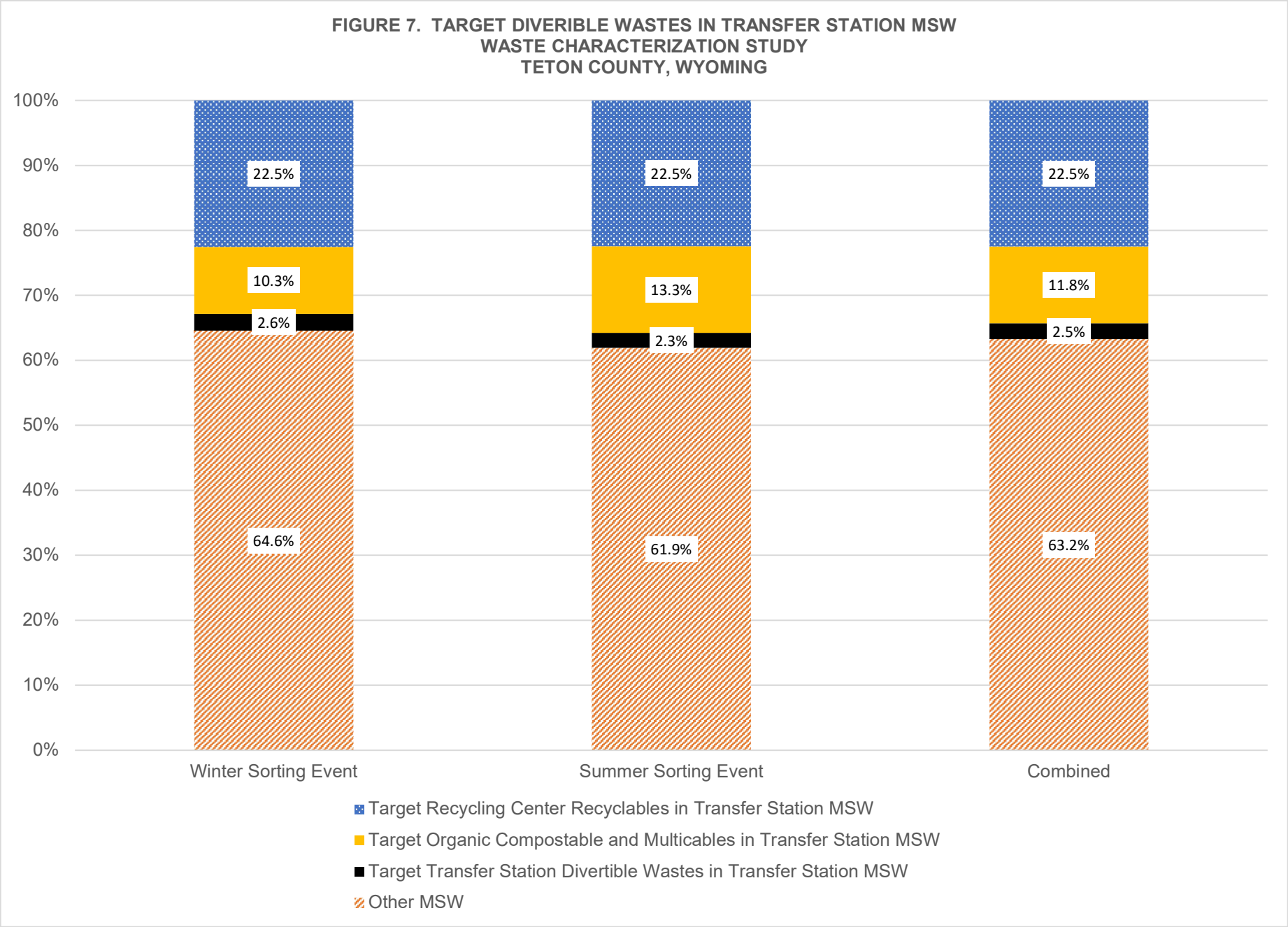
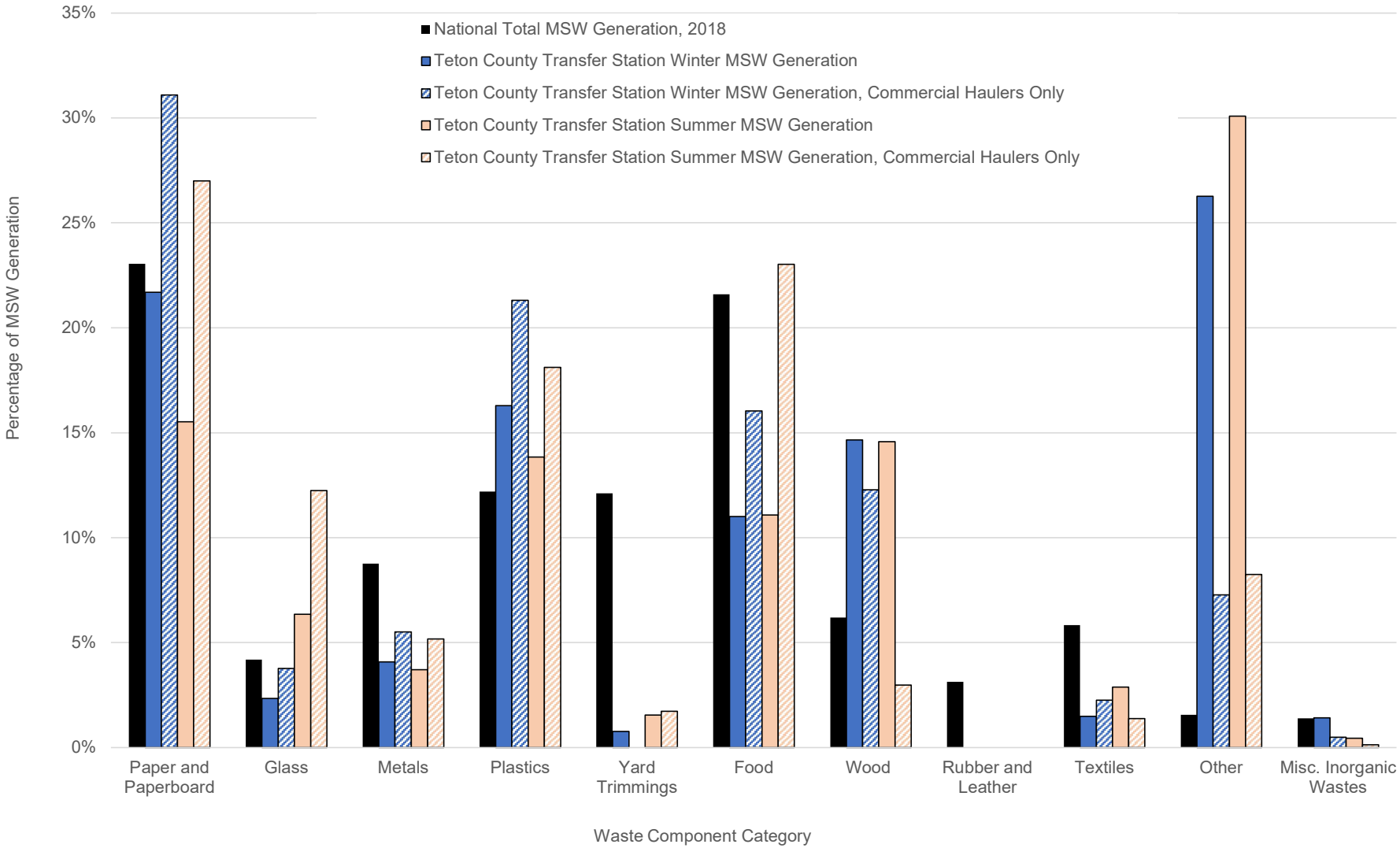


FIGURE 7. TARGET DIVERIBLE WASTES IN TRANSFER STATION MSW
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
22.5%
10.3%
2.6%
64.6%
22.5%
13.3%
2.3%
61.9%
22.5%
11.8%
2.5%
63.2%
Winter Sorting Event
Summer Sorting Event
Combined
Target Recycling Center Recyclables in Transfer Station MSW
Target Organic Compostable and Multicables in Transfer Station MSW
Target Transfer Station Divertible Wastes in Transfer Station MSW
Other MSW

FIGURE 8. TRANSFER STATION SORTING EVENT MSW COMPARISON TO 2018 USEPA PERCENTAGES
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING



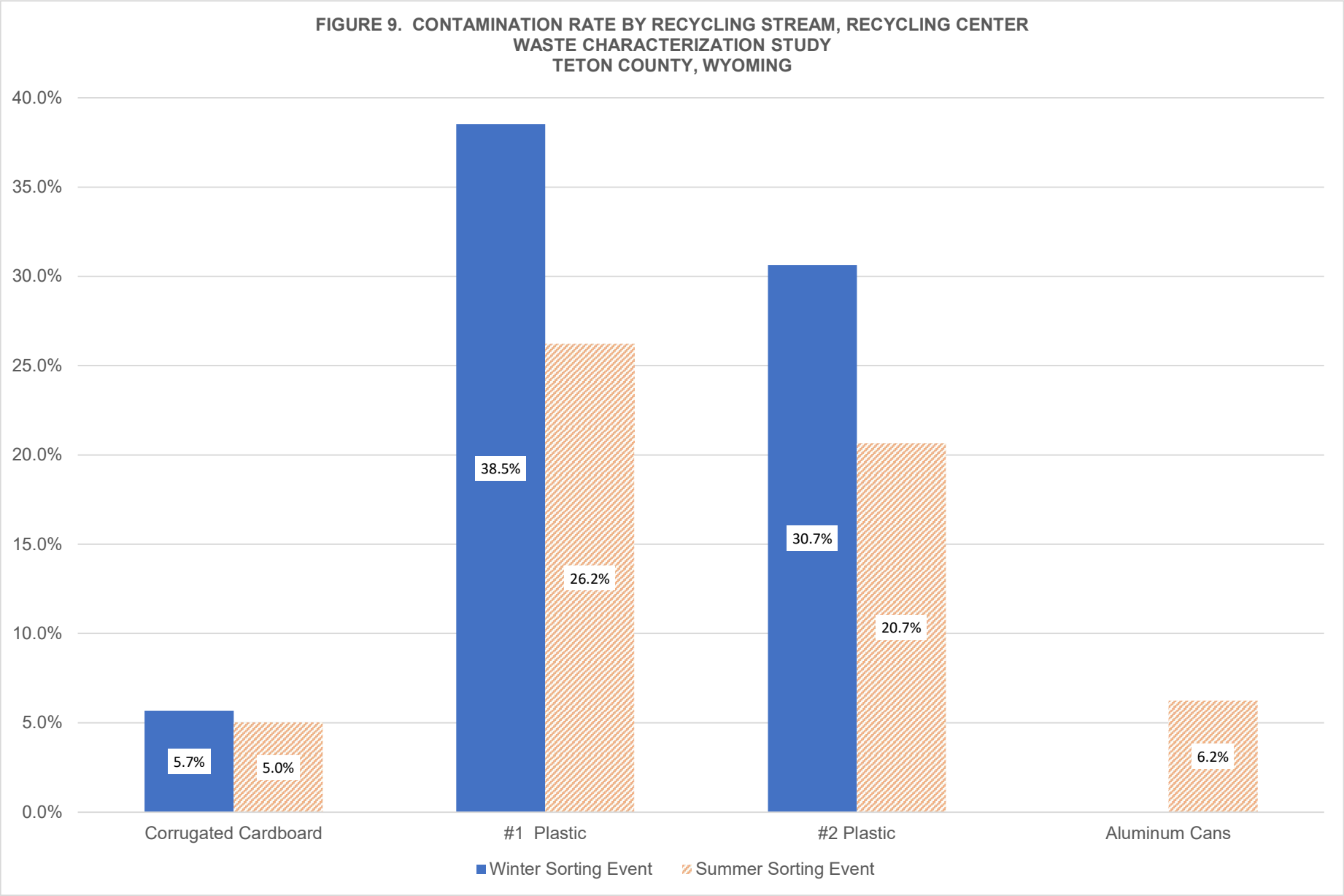


FIGURE 9. CONTAMINATION RATE BY RECYCLING STREAM, RECYCLING CENTER
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
5.7%
5.0%
38.5%
26.2%
30.7%
20.7%
6.2%
Corrugated Cardboard
#1 Plastic
#2 Plastic
Aluminum Cans
Winter Sorting Event
Summer Sorting Event

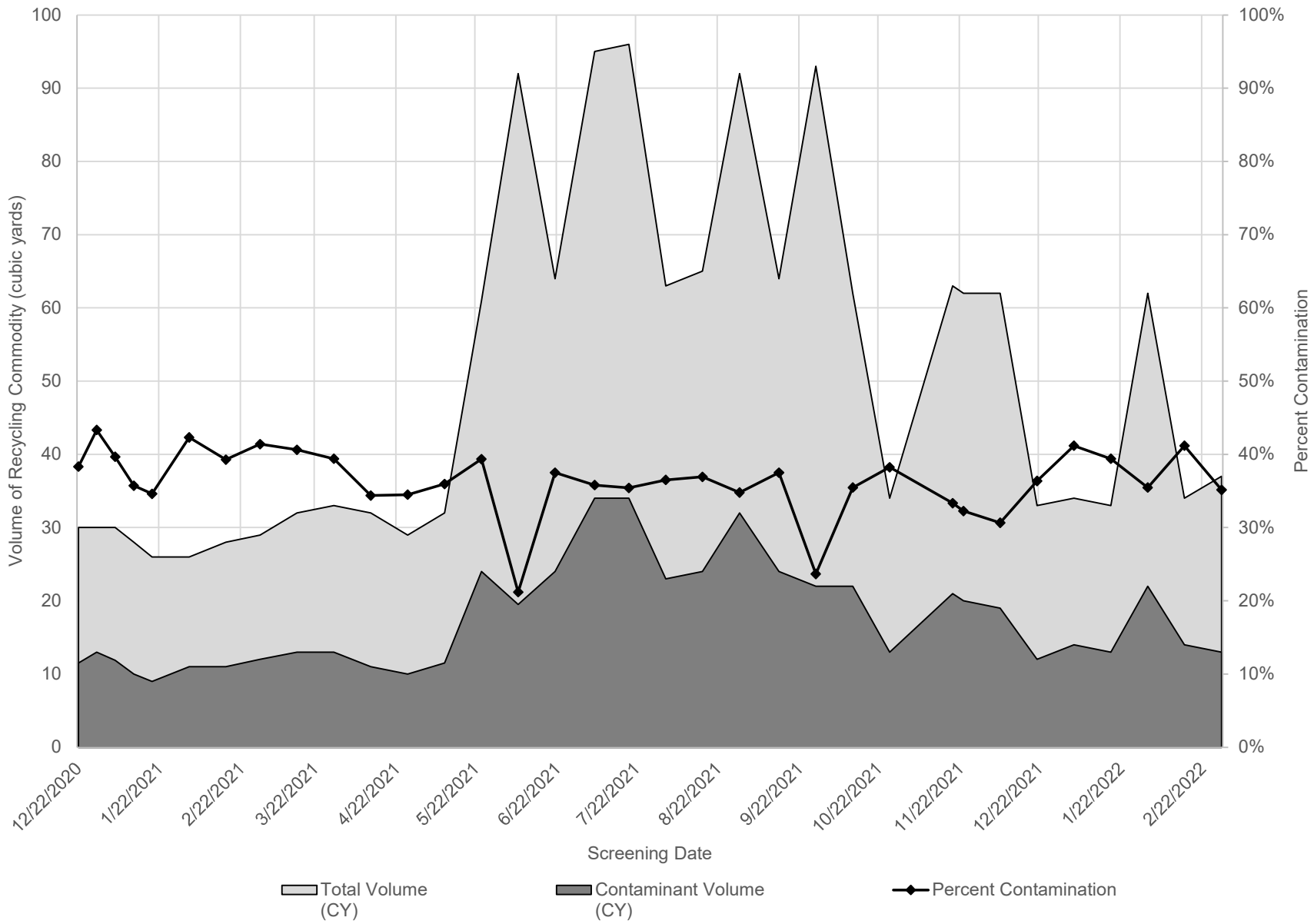
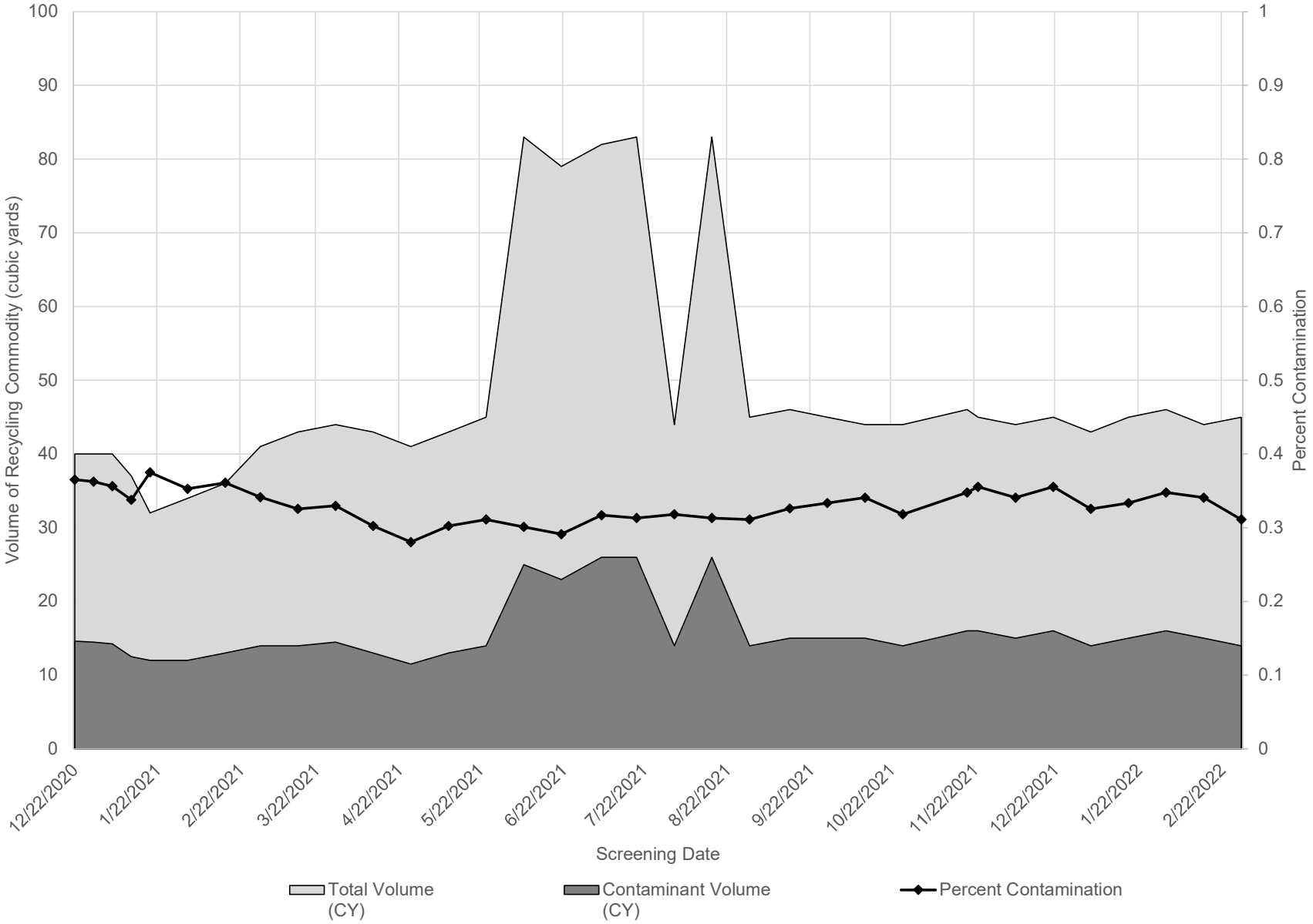


FIGURE 10. VOLUMETRIC TOTAL AND SCREENED CONTAMINANTS, #1 PLASTICS
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING
Volume of Recycling Commodity (cubic yards)
Percent Contamination
100
90
80
70
60
50
40
30
20
10
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
12/22/2020
1/22/2021
2/22/2021
3/22/2021
4/22/2021
5/22/2021
6/22/2021
7/22/2021
8/22/2021
9/22/2021
10/22/2021
11/22/2021
12/22/2021
1/22/2022
2/22/2022
Screening Date
Total Volume (CY)
Contaminant Volume (CY)
Percent Contamination

FIGURE 11. VOLUMETRIC TOTAL AND SCREENED CONTAMINANTS, #2 PLASTICS
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING



APPENDIX A

PHOTODOCUMENTATION LOG

APPENDIX A. PHOTODOCUMENTATION LOG
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

Photo 1. Sort area located in southern bay of Transfer Station Building, Winter event

Photo 2. Sort area located in southern bay of Transfer Station Building, Winter Event

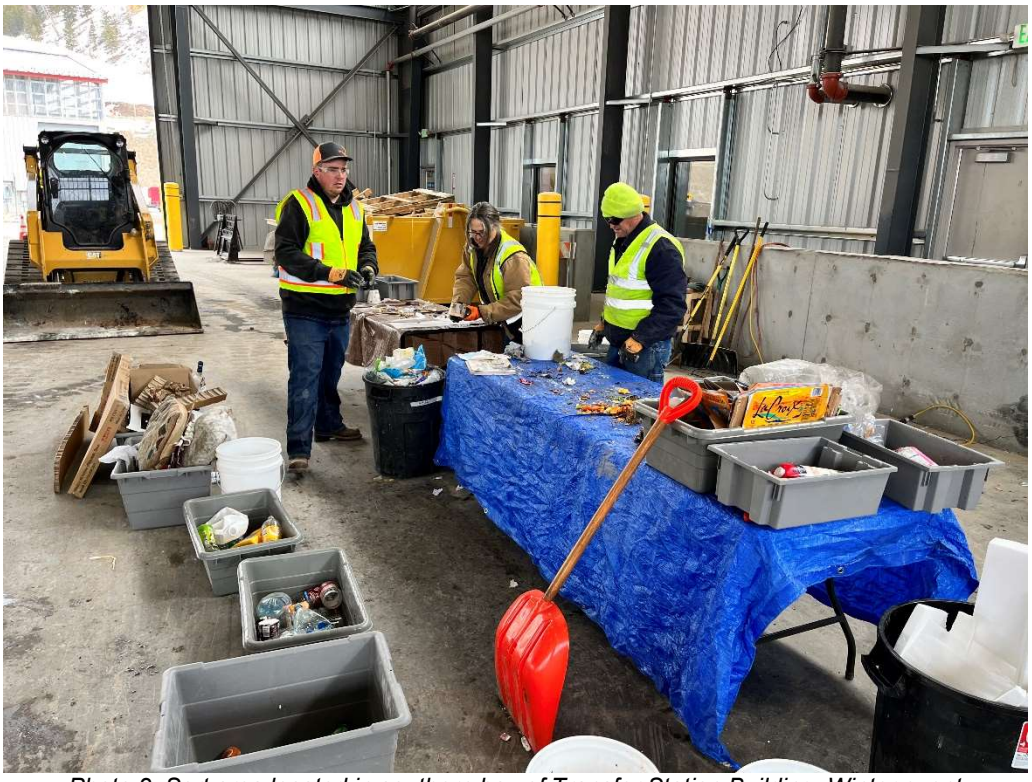


Photo 2. Sort area located in southern bay of Transfer Station Building, Winter event

Photo 4. Sort area located in southern bay of Transfer Station Building, Winter event

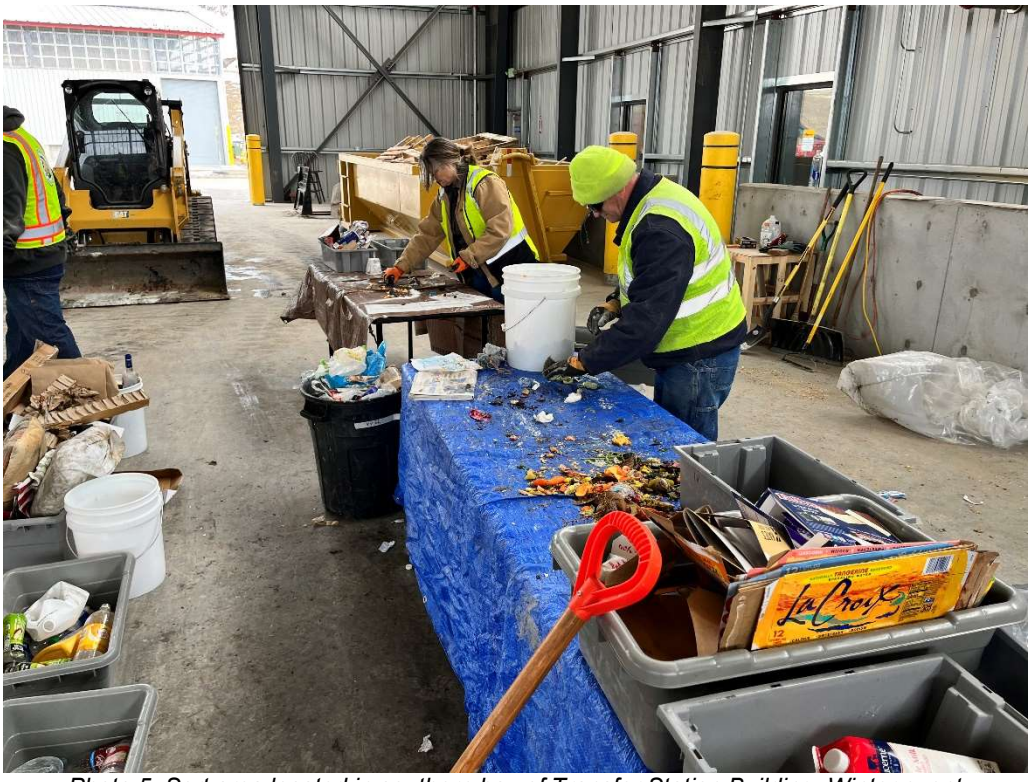


Photo 5. Sort area located in southern bay of Transfer Station Building, Winter event

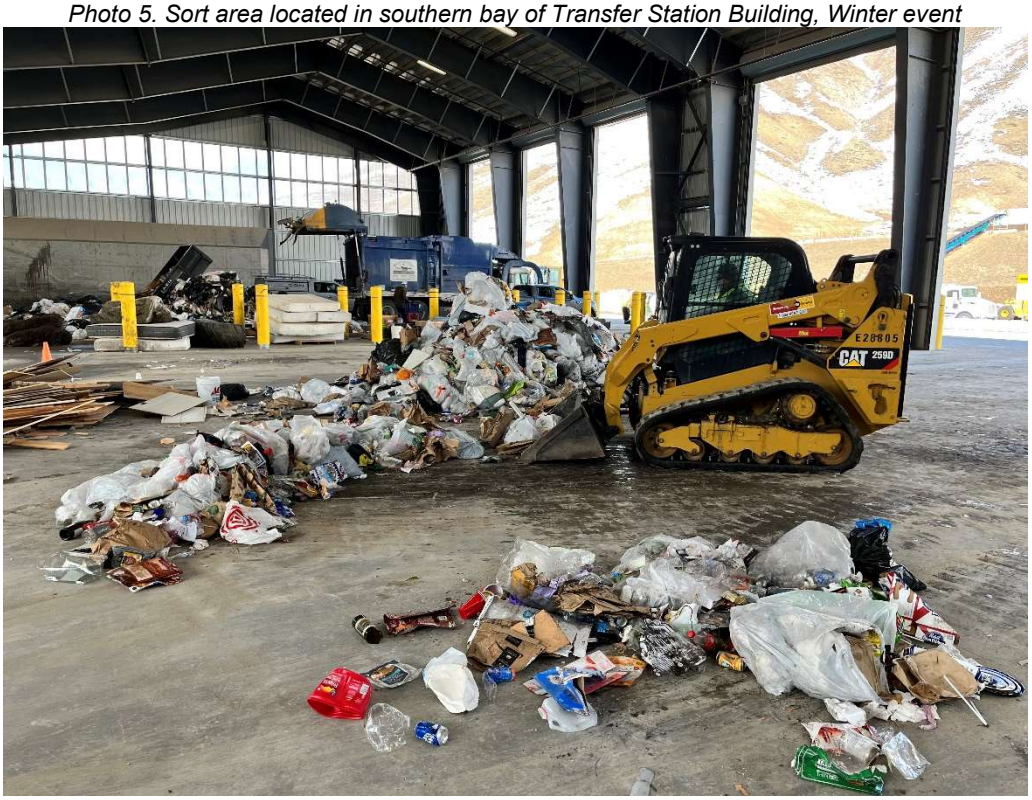


Photo 10. Skid steer operator coning and quartering load aliquot for Sample #4, Winter event

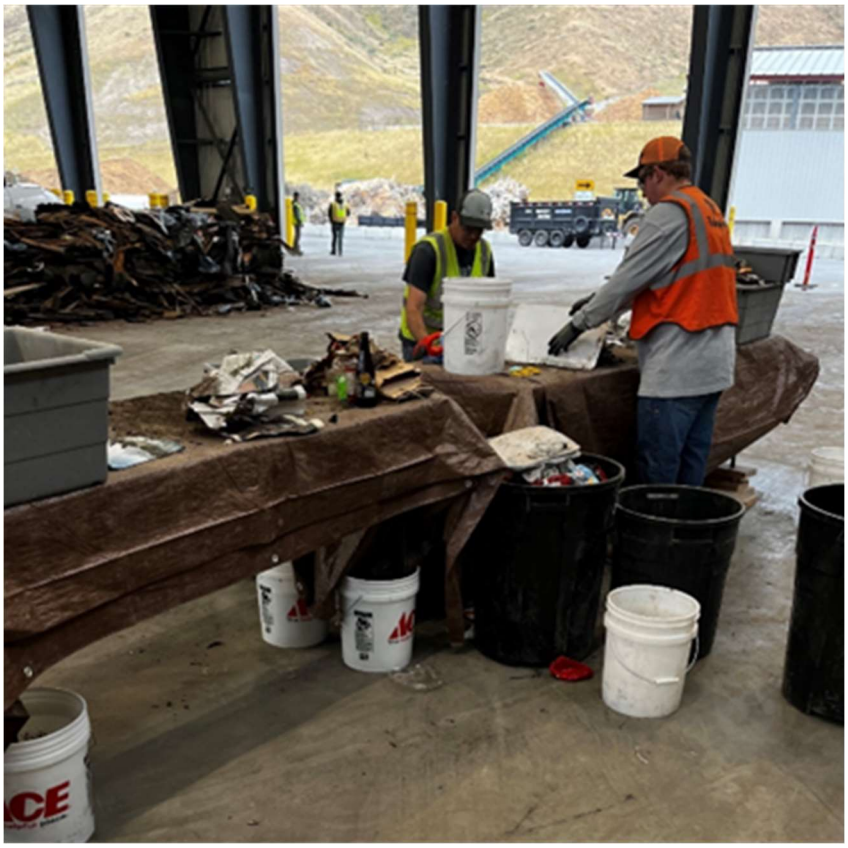


Photo 11. Sort area located in southern bay of Transfer Station Building, Summer event

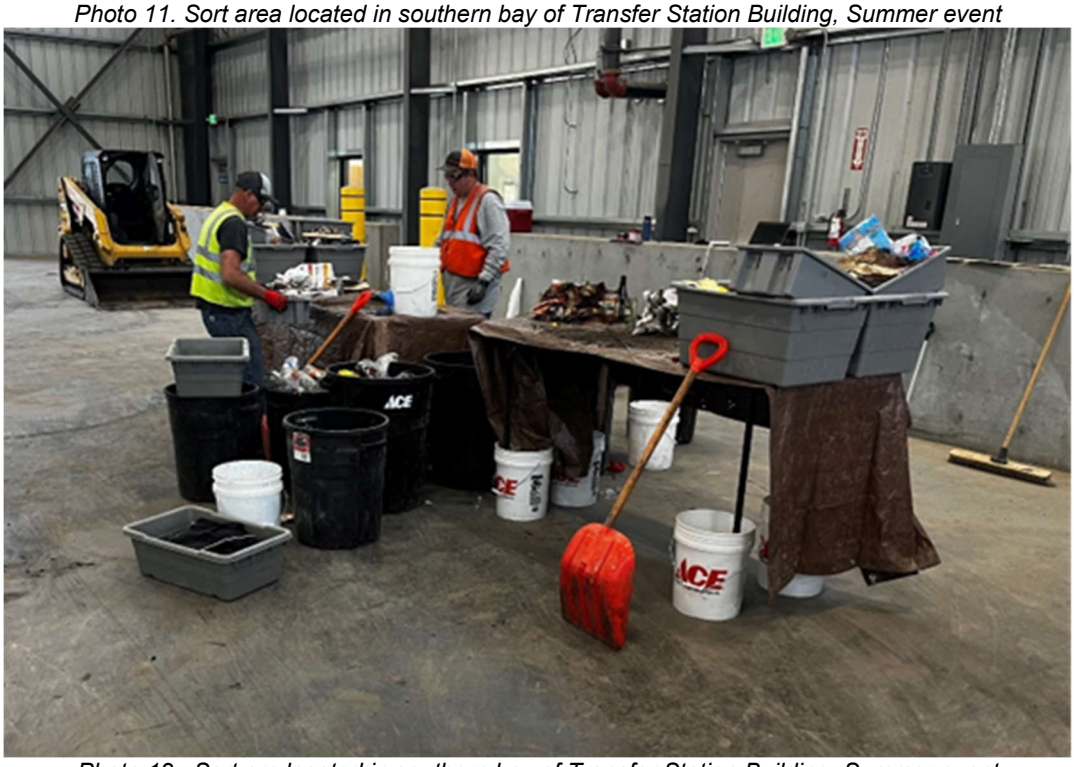


Photo 12. Sort are located in southern bay of Transfer Station Building, Summer event

APPENDIX B

WINTER SORTING EVENT DATA ENTRY SHEETS

APPENDIX B1. WINTER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 1			Sample 2			Sample 3			Sample 4			Sample 5			Sample 6			Sample 7		
Date/time:	2/28/2022 11:00			2/28/2022 12:30			2/28/2022 13:00			2/28/2022 13:30			2/28/2022			2/28/2022 14:45			2/28/2022 15:15		
Hauler info:	Jackson Hole Contracting			ate Hauler, JH Builders, Single site reside			Teton Trash Removal			Aspen Management			Private Residential			Yellow Iron			Jackson Hole Window and Door		
Generator Source Category:	Private C&D			Private C&D			Commercial C&D			Residential			Residential			Commercial and multifamily residential			Private C&D		
	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)
Glass			0			0.2			0			3.2			0			2			0
Glass Food & Beverage Containers			0			0			0	3.6	6.8	3.2			0	2.2	4.2	2			0
All other glass			0	1.8	2	0.2			0			0			0			0			0
Metal			3.4			1			0			3.8			0.6			1.5			0
Aluminum Cans	2.2	2.6	0.4	2.2	2.4	0.2			0	2.2	5.2	3			0	3.6	4	0.4			0
Steel/Tin Food Cans			0			0			0	1.8	2.6	0.8			0			0			0
Aluminum Foil/Pie Plates			0	1.8	2	0.2			0			0			0	3.6	3.9	0.3			0
Portable Propane/Isobutane Cylinders			0			0			0			0			0			0			0
Bear Spray Containers			0			0			0			0			0			0			0
All Other Metal	2.2	5.2	3	1.8	2.4	0.6			0			0	1.8	2.4	0.6	1.8	2.6	0.8			0
Plastic			5.2			2.2			2.7			12.3			9.2			10.3			0
Plastic Bottles #1	2.2	2.8	0.6			0			0	1.8	3.8	2			0	2.2	2.4	0.2			0
Plastic Bottles #2			0			0	1.8	2	0.2	2.2	2.4	0.2	0	0.2	0.2	2.2	2.3	0.1			0
Stretchy Plastic Film	2.2	4.6	2.4	2.2	2.8	0.6	4.4	6.8	2.4	2.2	3.8	1.6	2.2	4.6	2.4	2.2	4	1.8			0
Styrofoam			0			0			0	4.4	4.5	0.1	1.8	2	0.2	4.4	6	1.6			0
All Other Plastic	1.8	4	2.2	1.8	3.4	1.6	1.8	1.9	0.1	8	16.4	8.4	21.6	28	6.4	8.8	15.4	6.6			0
Paper			19.7			5.9			0.2			12.9			16			11.4			8
Office Paper	1.8	1.9	0.1	1.8	1.9	0.1			0	1.8	1.9	0.1			0	1.8	2	0.2			0
Hardback books			0			0			0			0			0			0			0
Paperback books			0			0			0			0			0			0			0
Corrugated Cardboard and Brown Paper	4.4	14.2	9.8	0	3.8	3.8			0	2.2	5	2.8	3.6	4.6	1	4.4	9	4.6	4.4	12.4	8
Paperboard	4.4	13	8.6	2.2	2.4	0.2			0	4	8.8	4.8	4.4	11	6.6	2.2	4.4	2.2			0
Magazines			0			0			0	4.4	5.6	1.2			0			0			0
Newspaper			0			0			0			0			0	1.8	2	0.2			0
All Other Paper	2.2	3.4	1.2	4	5.8	1.8	1.8	2	0.2	1.8	5.8	4	9	17.4	8.4	4.4	8.6	4.2			0
Other			0			0			0			0.2			0.1			0.1			0
Tetra Pak Cartons			0			0			0	2.2	2.4	0.2	2.2	2.3	0.1	0	0.1	0.1			0
Mattresses			0			0			0			0			0			0			0
Organics			32			31.8			30.6			27.4			16.6			12.4			0
Food Waste, Loose			0	2.2	7	4.8			0	2.2	16.4	14.2	2.2	14.8	12.6	2.2	13.8	11.6			0
Food Waste, Contained			0			0			0	2.2	14.4	12.2	1.8	5.6	3.8	4	4.8	0.8			0
Yard Waste			0			0			0			0	2.2	2.4	0.2			0			0
Untreated Wood	8.8	40.8	32	4.4	31.4	27	4.4	35	30.6	3.6	4.6	1			0			0			0
Manure			0			0			0			0			0			0			0
Ash			0			0			0			0			0			0			0
Sod			0			0			0			0			0			0			0
Hazardous Wastes			0			0			0.6			0			0			0			0
Electronics			0			0			0			0			0			0			0
Alkaline Batteries			0			0			0			0			0			0			0
Lithium Batteries			0			0			0			0			0			0			0
Lead Batteries			0			0			0			0			0			0			0
Other Hazardous Waste			0			0	0	0.6	0.6			0			0			0			0
Compact Fluorescent Lightbulbs			0			0			0			0			0			0			0
Medical Waste			0			0			0			0			0			0			0
Propane Tanks - 5 Gallons or Greater			0			0			0			0			0			0			0
Refrigeration Units			0			0			0			0			0			0			0
Special Wastes			0.2			0.6			0			2.4			0			0.6			0
Textiles	1.8	2	0.2	1.8	2.4	0.6			0	1.8	4.2	2.4			0	1.8	2.4	0.6			0
Automotive Tires			0			0			0			0			0			0			0
Bicycle Tires			0			0			0			0			0			0			0
Carcasses, domestic			0			0			0			0			0			0			0
Carcasses, non-domesticated			0			0			0			0			0			0			0
Construction/Demolition Waste			54.8			176.4			77.4			0			0			0			0
Concrete and Asphalt			0	8.8	185.2	176.4			0			0			0			0			0
Painted/Stained Wood	2.2	2.4	0.2			0			0			0			0			0			0
Treated Wood/Other Wood	2.2	2.8	0.6			0	0	63.8	63.8			0			0			0			0
Drywall	4.4	38.6	34.2			0	3.6	5.2	1.6			0			0			0			0
Rock/Brick			0			0			0			0			0			0			0
C&D Based Scrap Metal	2.2	18.2	16			0			0			0			0			0			0
All other C&D	15	18.8	3.8			0	3.6	15.6	12			0			0			0			0
All Other Waste			34.2			0			0			0.2			0			4.4			137.4
Other	16	49.8	33.8			0			0	2.2	2.3	0.1			0	2.2	6.6	4.4	8.8	127.8	119
Other	2.2	2.6	0.4			0			0	1.8	1.9	0.1			0			0	1.8	20.2	18.4
TOTALS			149.5			218.1			111.5			62.4			42.5			42.7			145.4

Notes:
Data obtained during winter sorting event at the Teton County Transfer Station between 2/28/2022 and 3/4/2022
lbs. = pounds

APPENDIX B1. WINTER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 8			Sample 9			Sample 10			Sample 11			Sample 12			Sample 13			Sample 14		
Date/time:	3/1/2022 8:00			3/1/2022 10:00			3/1/2022 10:30			3/2/2022 12:30			3/1/2022 14:00			3/2/2022 8:00			3/2/2022 8:40		
Hauler info:	West Bank Sanitation			private residential			Rendezvous Mountain Rentals			Teton Trash and Recycling			Teton County Recycling Center			Wind River Builders			Private Hauler		
Generator Source Category:	&D, commercial, and multi-family resident			Residential			Short term rental/residential			Residential and C&D			Recycling center contaminants			Private C&D			Residential and Private C&D		
	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)
Glass			13.6			1.8			14.4			22			0			0			0.8
Glass Food & Beverage Containers	2.2	15.8	13.6	2.2	3.8	1.6	2.2	16.6	14.4	4.4	26.4	22			0			0	2.2	3	0.8
All other glass			0	1.8	2	0.2			0			0			0			0			0
Metal			15.4			1			16.6			16.6			0.2			0			6.4
Aluminum Cans	5.8	10	4.2	3.6	3.8	0.2			0	3.6	6.8	3.2	1.8	2	0.2			0	2.2	3	0.8
Steel/Tin Food Cans	1.8	5.2	3.4	1.8	2	0.2	3.6	4.8	1.2			0			0			0	3.8	6.6	2.8
Aluminum Foil/Pie Plates	1.8	2.6	0.8			0			0	1.8	2.2	0.4			0			0	1.8	2	0.2
Portable Propane/Isobutane Cylinders			0			0			0			0			0			0			0
Bear Spray Containers			0			0			0			0			0			0			0
All Other Metal	1.8	8.8	7	3.6	4.2	0.6	3.6	19	15.4		13	13			0			0	5.8	8.4	2.6
Plastic			70			10.05			25			35.8			9.8			26.6			30.2
Plastic Bottles #1	4.4	10	5.6	1.8	1.9	0.1	3.6	6.6	3	1.8	2.4	0.6	3.6	4	0.4			0	3.6	4.2	0.6
Plastic Bottles #2	3.6	10.2	6.6		0.05	0.05	3.6	6.2	2.6	2.2	4.4	2.2	2.2	3.4	1.2			0			0
Stretchy Plastic Film	12	35.6	23.6	4	6.2	2.2	4	9.4	5.4	8	14.2	6.2	2.2	5	2.8			0	4	7.8	3.8
Styrofoam	4.4	6.2	1.8	1.8	1.9	0.1	4	5	1	11	13.6	2.6	2.2	3	0.8	3.6	3.8	0.2	4	6.8	2.8
All Other Plastic	12	44.4	32.4	4.4	12	7.6	4.4	17.4	13	15	39.2	24.2	6.2	10.8	4.6	11.6	38	26.4	13.2	36.2	23
Paper			75.4			14.45			22.6			36.2			184.2			10.8			16.8
Office Paper	3.6	5.2	1.6	1.8	2	0.2	1.8	2	0.2	1.8	2	0.2	17.2	109.2	92			0	3.6	4	0.4
Hardback books			0			0			0			0			0			0			0
Paperback books			0			0			0			0			0			0			0
Corrugated Cardboard and Brown Paper	11.6	33.8	22.2	2.2	2.6	0.4	4.4	13.4	9	10.8	26.4	15.6	8	27	19			0	4.8	6.8	2
Paperboard	6.6	18.8	12.2	8	14.2	6.2	5.4	9.6	4.2	7.2	12	4.8	12.4	35	22.6			0	11	18.6	7.6
Magazines	0	1.2	1.2			0	2.2	4.8	2.6			0	4.4	11.6	7.2			0			0
Newspaper			0		0.05	0.05	0	0.6	0.6	0	2	2	1.8	3.4	1.6			0			0
All Other Paper	8.8	47	38.2	4	11.6	7.6	4	10	6	4	17.6	13.6	16.4	58.2	41.8	4.4	15.2	10.8	4.4	11.2	6.8
Other			0.8			1.8			0.4			0.6			0.4			0			0.8
Tetra Pak Cartons	1.8	2.6	0.8	1.8	3.6	1.8	1.8	2.2	0.4	3.6	4.2	0.6	1.8	2.2	0.4			0	1.8	2.6	0.8
Mattresses			0			0			0			0			0			0			0
Organics			86			27.4			7.8			31.8			1.8			0			22
Food Waste, Loose	4.4	75	70.6	4.4	31.2	26.8			0	4.4	29.4	25	2.2	4	1.8			0	4.4	24	19.6
Food Waste, Contained	1.8	15.4	13.6			0	1.8	7.2	5.4	1.8	8.6	6.8			0			0	1.8	4.2	2.4
Yard Waste			0	1.8	2.4	0.6			0			0			0			0			0
Untreated Wood	0	1.8	1.8			0			0			0			0			0			0
Manure			0			0			0			0			0			0			0
Ash			0			0	2.2	4.6	2.4			0			0			0			0
Sod			0			0			0			0			0			0			0
Hazardous Wastes			0.6			0			3.4			2.6			0			0			6.05
Electronics	0	0.6	0.6			0	1.8	2.6	0.8			0			0			0	1.8	7.8	6
Alkaline Batteries			0			0	0	0.2	0.2			0			0			0			0
Lithium Batteries			0			0			0			0			0			0			0
Lead Batteries			0			0			0			0			0			0			0
Other Hazardous Waste			0			0	2	4.4	2.4		2.6	2.6			0			0			0
Compact Fluorescent Lightbulbs			0			0			0			0			0			0		0.05	0.05
Medical Waste			0			0			0			0			0			0			0
Propane Tanks - 5 Gallons or Greater			0			0			0			0			0			0			0
Refrigeration Units			0			0			0			0			0			0			0
Special Wastes			10.8			0.1			12.4			19			0.2			0			3
Textiles	1.8	12.6	10.8	2.2	2.3	0.1	4.4	16.8	12.4	5.8	24.8	19	0	0.2	0.2			0	2.2	5.2	3
Automotive Tires			0			0			0			0			0			0			0
Bicycle Tires			0			0			0			0			0			0			0
Carcasses, domestic			0			0			0			0			0			0			0
Carcasses, non-domesticated			0			0			0			0			0			0			0
Construction/Demolition Waste			22.6			0			11.2			122.4			0			272			30.2
Concrete and Asphalt			0			0			0			0			0			0			0
Painted/Stained Wood			0			0			0			0			0	19	203.6	184.6			0
Treated Wood/Other Wood	2.2	24.8	22.6			0	0	6.8	6.8	22	138.8	116.8			0			0	6.2	36.4	30.2
Drywall			0			0			0			0			0	4.4	55.8	51.4			0
Rock/Brick			0			0			0			0			0			0			0
C&D Based Scrap Metal			0			0			0	1.8	7.4	5.6			0	4	13	9			0
All other C&D			0			0	0	4.4	4.4			0			0	3.6	30.6	27			0
All Other Waste			28.6			68.8			6.6			4			9.6			0			2.2
Other	2.2	30.8	28.6	4.4	73.2	68.8	2.2	3	0.8	2.2	6.2	4	3.6	13.2	9.6			0	2.2	4.4	2.2
Other			0			0	2	7.8	5.8			0			0			0			0
TOTALS			323.8			125.4			120.4			291			206.2			309.4			118.45

Notes:
Data obtained during winter sorting event at the Teton County Tra
lbs. = pounds

APPENDIX B1. WINTER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 15			Sample 16			Sample 17			Sample 18			Sample 19			Sample 20			Sample 21		
Date/time:	3/2/2022 10:00			3/2/2022 10:30			3/2/2022 12:30			3/2/2022 13:20			3/2/2022 14:15			3/2/2022 14:30			3/3/2022 8:00		
Hauler info:	Teton Trash Removal			Peak Builders			Private Construction contractor			Private hauler			TTR			Intermountain roofing			Rendezvous Custom Homes		
Generator Source Category:	Commercial and multi-family residential			Private C&D			Private C&D			Commercial			Commercial and C&D			Private C&D			Private C&D		
	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)
Glass			14.6			3			0			0			13.8			0			0.05
Glass Food & Beverage Containers	4.4	19	14.6	2.2	5.2	3			0			0	2.2	16	13.8			0		0.05	0.05
All other glass			0			0			0			0			0			0			0
Metal			31.8			0.85			1.55			0			16.6			3.6			0.65
Aluminum Cans	4.4	8	3.6	2.2	3	0.8			0			0	3.6	9.4	5.8			0	3.6	4.2	0.6
Steel/Tin Food Cans	2.2	6.4	4.2			0			0			0	4	6.2	2.2			0			0
Aluminum Foil/Pie Plates	3.6	4.4	0.8		0.05	0.05			0			0	3.6	4.6	1			0		0.05	0.05
Portable Propane/Isobutane Cylinders			0			0			0			0			0			0			0
Bear Spray Containers			0			0			0			0			0			0			0
All Other Metal	4.4	27.6	23.2			0	1.85	3.4	1.55			0	3.6	11.2	7.6	2	5.6	3.6			0
Plastic			69.6			55.85			0			65			87			21.4			6
Plastic Bottles #1	4.4	7	2.6		0.05	0.05			0			0	4.2	13.2	9	4.4	8.4	4	4.4	5	0.6
Plastic Bottles #2	3.6	9.2	5.6	1.8	2.2	0.4			0			0	8.8	7.4	-1.4	3.6	4	0.4	1.8	2	0.2
Stretchy Plastic Film	8.4	22	13.6	20	53	33			0	12.4	30.6	18.2	8	15.6	7.6	4.4	5	0.6	4.4	6.6	2.2
Styrofoam	4	6	2	15.6	29	13.4			0	12.8	31.8	19	8	15.6	7.6	4	8	4	4	5.8	1.8
All Other Plastic	17.2	63	45.8	9.8	18.8	9			0	5.4	33.2	27.8	20	84.2	64.2	8.4	20.8	12.4	4.4	5.6	1.2
Paper			88.2			36.2			0			115.6			76.2			14.4			21.8
Office Paper	3.6	11.6	8	4.4	4.8	0.4			0			0	4.4	6.8	2.4			0			0
Hardback books			0			0			0			0			0			0			0
Paperback books			0			0			0			0			0			0			0
Corrugated Cardboard and Brown Paper	12.4	40.4	28	8.4	35	26.6			0	0	115.6	115.6	7.2	24.8	17.6	4	18	14	4.4	16.6	12.2
Paperboard	8	16	8	4	5.4	1.4			0			0	8.8	14	5.2			0			0
Magazines	0	1.4	1.4			0			0			0	2.2	5	2.8			0			0
Newspaper	1.8	7.2	5.4			0			0			0	3.6	12.4	8.8	2.2	2.6	0.4			0
All Other Paper	8	45.4	37.4	12.4	20.2	7.8			0			0	8	47.4	39.4			0	7.6	17.2	9.6
Other			2.6			0			0			0			0.4			0			0
Tetra Pak Cartons	3.6	6.2	2.6			0			0			0	1.8	2.2	0.4			0			0
Mattresses			0			0			0			0			0			0			0
Organics			35.8			1.6			1.8			0			36.8			0			0.4
Food Waste, Loose	4.4	29.6	25.2			0			0			0	4.4	25.2	20.8			0	2.2	2.6	0.4
Food Waste, Contained	1.8	11	9.2			0			0			0	3.6	19.6	16			0			0
Yard Waste			0			0			0			0			0			0			0
Untreated Wood	2.2	3.6	1.4	1.8	3.4	1.6	4	5.8	1.8			0			0			0			0
Manure			0			0			0			0			0			0			0
Ash			0			0			0			0			0			0			0
Sod			0			0			0			0			0			0			0
Hazardous Wastes			5.85			0			0			0			0.65			51.4			0
Electronics			0			0			0			0			0		50.2	50.2			0
Alkaline Batteries		0.2	0.2			0			0			0			0			0			0
Lithium Batteries		0.05	0.05			0			0			0			0			0			0
Lead Batteries			0			0			0			0			0			0			0
Other Hazardous Waste	1.8	7.4	5.6			0			0			0		0.6	0.6		1.2	1.2			0
Compact Fluorescent Lightbulbs			0			0			0			0			0			0			0
Medical Waste			0			0			0			0		0.05	0.05			0			0
Propane Tanks - 5 Gallons or Greater			0			0			0			0			0			0			0
Refrigeration Units			0			0			0			0			0			0			0
Special Wastes			9.8			0.6			0			0.6			5			0			0.2
Textiles	2.2	12	9.8	1.8	2.4	0.6			0	4.4	5	0.6	2.2	7.2	5			0		0.2	0.2
Automotive Tires			0			0			0			0			0			0			0
Bicycle Tires			0			0			0			0			0			0			0
Carcasses, domestic			0			0			0			0			0			0			0
Carcasses, non-domesticated			0			0			0			0			0			0			0
Construction/Demolition Waste			0			14.6			423.8			0			37.4			71.4			194.6
Concrete and Asphalt			0			0			0			0			0			0			0
Painted/Stained Wood			0			0	0	89.8	89.8			0			0		4.6	4.6			0
Treated Wood/Other Wood			0			0	0	31.6	31.6			0	8	44	36		49.8	49.8	2.2	11.6	9.4
Drywall			0			0	36.8	339.2	302.4			0			0		9	9	12.4	193	180.6
Rock/Brick			0			0			0			0			0			0			0
C&D Based Scrap Metal			0			0			0			0			0			0	2.2	6.2	4
All other C&D			0	6.2	20.8	14.6			0			0	2.2	3.6	1.4	4	12	8	1.8	2.4	0.6
All Other Waste			11.2			6.2			0			0			50.8			29.6			0
Other	6.6	17.8	11.2	2	8.2	6.2			0			0	3.6	5.8	2.2	4	33.6	29.6			0
Other			0			0			0			0	3.6	52.2	48.6			0			0
TOTALS			269.45			118.9			427.15			181.2			324.65			191.8			223.7

Notes:
Data obtained during winter sorting event at the Teton County Tra
lbs. = pounds

APPENDIX B1. WINTER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 22			Sample 23			Sample 24			Sample 25			Sample 26			Sample 27		
Date/time:	3/3/2022 9:35			3/4/2022 8:00			3/4/2022 9:00			3/4/2022 10:00			3/4/2022 12:00			3/4/2022 12:00		
Hauler info:	West Bank Sanitation			West Bank Sanitation			Bresler Insulation			TTR			Private hauler			West Bank Sanitation		
Generator Source Category:	Commercial, Tourism, Multi-Family Resid			Commercial, C&D, Multi-family residential			Private C&D			Tourism (airport compactor)			Residential			Residential		
	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)	Bin Weight (lbs.)	Gross Weight (lbs.)	Net Weight (lbs.)
Glass			13.2			7.6			0			0.4			0			11.8
Glass Food & Beverage Containers	2.2	15.4	13.2	2.2	9.8	7.6			0		0.4	0.4			0	4.4	16.2	11.8
All other glass			0			0			0			0			0			0
Metal			18.45			8.8			0.05			13.4			2.25			13.7
Aluminum Cans	7.2	16.6	9.4	11	14.6	3.6		0.05	0.05	10.8	19.6	8.8			0	4.4	6.2	1.8
Steel/Tin Food Cans	3.6	6.8	3.2	2	4	2			0		0.6	0.6	1.8	3.8	2			0
Aluminum Foil/Pie Plates	1.8	3.05	1.25	1.8	2.2	0.4			0	1.8	2.8	1	1.8	2	0.2	1.8	2.4	0.6
Portable Propane/Isobutane Cylinders			0			0			0			0			0			0
Bear Spray Containers			0			0			0			0			0			0
All Other Metal	2.2	6.8	4.6	2.2	5	2.8			0	2.2	5.2	3		0.05	0.05	4.4	15.7	11.3
Plastic			77.2			69.8			25			67.2			11.2			48.2
Plastic Bottles #1	10.8	20.8	10	8.8	12	3.2	1.8	2	0.2	14.6	26.8	12.2	2.2	2.6	0.4	4.4	6.6	2.2
Plastic Bottles #2	9.4	18.6	9.2	8	13.6	5.6			0	3.6	5.8	2.2	3.6	4	0.4		0.4	0.4
Stretchy Plastic Film	8	23.6	15.6	8	18	10	16	37	21	8.4	22.2	13.8	4	6.2	2.2	8	15.4	7.4
Styrofoam	4.4	5.8	1.4	4.4	6	1.6			0			0			0	3.6	13	9.4
All Other Plastic	28.8	69.8	41	16	65.4	49.4	5.8	9.6	3.8	29.4	68.4	39	8.8	17	8.2	16.4	45.2	28.8
Paper			77.2			96.8			16.2			88.2			17.5			52.6
Office Paper	3.6	8.8	5.2	5.4	12.4	7			0	2.2	2.8	0.6	1.8	1.9	0.1	4	5.2	1.2
Hardback books			0			0			0			0			0			0
Paperback books			0			0			0			0			0			0
Corrugated Cardboard and Brown Paper	8.4	28.8	20.4	16.4	68.2	51.8	4	19.2	15.2	4.4	9.2	4.8		0.4	0.4	6	17.6	11.6
Paperboard	11.6	25	13.4	10.8	23.4	12.6	3.6	4.2	0.6	3.6	6.8	3.2	8.8	16	7.2	11.6	19.8	8.2
Magazines	2.2	3	0.8			0			0	2.2	19.4	17.2			0		2	2
Newspaper	2.2	4	1.8	1.8	4.6	2.8			0	1.8	8.8	7	2.2	4.8	2.6	3.6	6.8	3.2
All Other Paper	8.4	44	35.6	8	30.6	22.6	1.8	2.2	0.4	12	67.4	55.4	4	11.2	7.2	12	38.4	26.4
Other			1.8			0.4			0			0.6			1.4			1.6
Tetra Pak Cartons	2.2	4	1.8	1.8	2.2	0.4			0	2.2	2.8	0.6	3.6	5	1.4	3.6	5.2	1.6
Mattresses			0			0			0			0			0			0
Organics			72.6			35.2			0.2			49.4			23.4			129.6
Food Waste, Loose	6.6	59.6	53	4.4	35.2	30.8		0.2	0.2	4.4	32.4	28	4.4	21.6	17.2	13.6	90	76.4
Food Waste, Contained	5.4	25	19.6	4	8.4	4.4			0	3.6	25	21.4	1.8	8	6.2	3.6	19	15.4
Yard Waste			0			0			0			0			0			0
Untreated Wood			0			0			0			0			0		0.8	0.8
Manure			0			0			0			0			0			0
Ash			0			0			0			0			0	6.2	43.2	37
Sod			0			0			0			0			0			0
Hazardous Wastes			0.2			0.25			0			0.9			0			1.6
Electronics			0			0			0			0			0			0
Alkaline Batteries		0.2	0.2		0.05	0.05			0		0.3	0.3			0		0.8	0.8
Lithium Batteries			0			0			0			0			0			0
Lead Batteries			0			0			0			0			0			0
Other Hazardous Waste			0			0			0		0.6	0.6			0		0.6	0.6
Compact Fluorescent Lightbulbs			0			0			0			0			0			0
Medical Waste			0		0.2	0.2			0			0			0		0.2	0.2
Propane Tanks - 5 Gallons or Greater			0			0			0			0			0			0
Refrigeration Units			0			0			0			0			0			0
Special Wastes			1.2			2.2			0			3			0.2			5.6
Textiles	2.2	3.4	1.2	2.2	4.4	2.2			0	2.2	5.2	3	2.2	2.4	0.2	2.2	7.8	5.6
Automotive Tires			0			0			0			0			0			0
Bicycle Tires			0			0			0			0			0			0
Carcasses, domestic			0			0			0			0			0			0
Carcasses, non-domesticated			0			0			0			0			0			0
Construction/Demolition Waste			1.6			19.2			4.4			0			0			1.4
Concrete and Asphalt			0			0			0			0			0			0
Painted/Stained Wood			0			0			0			0			0			0
Treated Wood/Other Wood	1.8	3.4	1.6	2.2	21.4	19.2	1.8	3.4	1.6			0			0			0
Drywall			0			0	1.8	2.4	0.6			0			0			0
Rock/Brick			0			0			0			0			0		1.4	1.4
C&D Based Scrap Metal			0			0	3.6	4	0.4			0			0			0
All other C&D			0			0	4	5.8	1.8			0			0			0
All Other Waste			32.8			5.8			60.8			4.4			19.8			12.2
Other	2.2	27.8	25.6	2.2	8	5.8	12.4	31.8	19.4	2.2	6.6	4.4	2.2	22	19.8	4.4	16.6	12.2
Other	2.2	9.4	7.2			0	4.4	45.8	41.4			0			0			0
TOTALS			296.25			246.05			106.65			227.5			75.75			278.3

Notes:
Data obtained during winter sorting event at the Teton County Tra
lbs. = pounds

APPENDIX B2. WINTER WASTE SORTING EVENT DATA, RECYCLING CENTER
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 1			Sample 2			Sample 3		
Date/time:	3/3/2022 13:00			3/3/2022 13:15			3/3/2022 14:15		
Recycling Stream Category	#1 Plastic			#2 plastic			Corrugated Cardboard		
Date of Screening and Baling	3/1/2022			3/1/2022			3/2/2022		
Weight of Final Clean and Baled Recycling Product (lbs.)	1,264			1,292			23,400		
Weight of Contaminants Removed (lbs.)	487			396			1,329		
Contamination Rate (%)	38.5%			30.7%			5.7%		
	Bin Weight (lbs.)	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**
Glass			17.2			3.4			1.4
Glass Food & Beverage Containers	3.6	20.8	17.2	4	7.4	3.4		1.4	1.4
All other glass			0			0			0
Metal			5			1.8			0.4
Aluminum Cans	4.4	8.4	4	2	3	1			0
Steel/Tin Food Cans	1.8	2.4	0.6	1.8	2.6	0.8		0.4	0.4
Aluminum Foil/Pie Plates		0.4	0.4			0			0
Portable Propane/Isobutane Cylinders			0			0			0
Bear Spray Containers			0			0			0
All Other Metal			0			0			0
Plastic			55.4			63.2			5.4
Plastic Bottles #1			0	4	8.4	4.4			0
Plastic Bottles #2			0	7.2	10.8	3.6			0
Stretchy Plastic Film	3.6	4.4	0.8	4	6	2	4	6.8	2.8
Styrofoam		1.4	1.4			0		2.2	2.2
All Other Plastic	72	125.2	53.2	52.4	105.6	53.2	3.6	4	0.4
Paper			0.45			2			97.4
Office Paper			0			0			0
Hardback books			0			0			0
Paperback books			0			0		0.4	0.4
Corrugated Cardboard and Brown Paper		0.05	0.05			0	4	16.6	12.6
Paperboard	1.8	2.2	0.4	1.8	2.2	0.4	16	78	62
Magazines			0			0	1.8	4	2.2
Newspaper			0	1.8	2.4	0.6	1.8	2.2	0.4
All Other Paper			0	3.6	4.6	1	12	31.8	19.8
Other			0.2			1.4			0.2
Tetra Pak Cartons		0.2	0.2	2	3.4	1.4	1.8	2	0.2
Mattresses			0			0			0
Organics			0			0			0
Food Waste, Loose			0			0			0
Food Waste, Contained			0			0			0
Yard Waste			0			0			0
Untreated Wood			0			0			0
Manure			0			0			0
Ash			0			0			0
Sod			0			0			0
Hazardous Wastes			0			0			0
Electronics			0			0			0
Alkaline Batteries			0			0			0
Lithium Batteries			0			0			0
Lead Batteries			0			0			0
Other Hazardous Waste			0			0			0
Compact Fluorescent Lightbulbs			0			0			0
Medical Waste			0			0			0
Propane Tanks - 5 Gallons or Greater			0			0			0
Refrigeration Units			0			0			0
Special Wastes			0			0			0.2
Textiles			0			0		0.2	0.2
Automotive Tires			0			0			0
Bicycle Tires			0			0			0
Carcasses, domestic			0			0			0
Carcasses, non-domesticated			0			0			0
Construction/Demolition Waste			0			0			1.4
Concrete and Asphalt			0			0			0
Painted/Stained Wood			0			0			0
Treated Wood/Other Wood			0			0		1.4	1.4
Drywall			0			0			0
Rock/Brick			0			0			0
C&D Based Scrap Metal			0			0			0
All other C&D			0			0			0
All Other Waste			1.4			0			0
Other:		1.4	1.4			0			0
Other:			0			0			0
TOTALS			79.65			71.8			106.4

Notes:

Data obtained during winter sorting event at Teton County Recycling Center on 3/3/2022

lbs. = pounds

APPENDIX C

SUMMER SORTING EVENT DATA ENTRY SHEETS

APPENDIX C1. SUMMER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 1			Sample 2			Sample 3			Sample 4		
Date/time:	8/1/2022 10:00			8/1/2022 10:15			8/1/2022 11:00			8/1/2022 12:15		
Hauler info:	Residential			Snake River Sporrting Club			West Bank Sanitation			Aud & Di Campground Services		
Generator Source Category:	Residential Single Household			Commercial			Commercial - Smith's Grocery Stor			6 public Campground dumpsters		
	Bin Weight (lbs.)	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**
Glass			17.2			190.4			14.6			9.2
Glass Food & Beverage Containers	2.2	6	3.8	15.8	206.2	190.4	2.2	16.8	14.6	2.2	11.4	9.2
All other glass	2.2	15.6	13.4			0			0			0
Metal			13.4			10.2			1.2			15.8
Aluminum Cans			0	9.8	20	10.2	3.6	4.8	1.2	3.8	9.4	5.6
Steel/Tin Food Cans			0			0			0	6.2	10	3.8
Aluminum Foil/Pie Plates			0			0			0	5.4	9.8	4.4
Portable Propane/Isobutane Cylinders			0			0			0		2	2
Bear Spray Containers			0			0			0			0
All Other Metal	3.6	17	13.4			0			0			0
Plastic			54.6			14.2			19.8			56.6
Plastic Bottles #1			0	3.8	7.4	3.6	4	6.2	2.2	9.8	27.4	17.6
Plastic Bottles #2			0	14.4	25	10.6	4.4	5.8	1.4			0
Stretchy Plastic Film	6	8.6	2.6			0	6	22.2	16.2			0
Styrofoam	4.4	5.2	0.8			0			0	3.6	4.2	0.6
All Other Plastic	10.4	61.6	51.2			0			0	25.4	63.8	38.4
Paper			24.2			0			0			52.4
Office Paper	1.8	5.2	3.4			0			0			0
Hardback books	1.8	6.8	5			0			0			0
Paperback books			0			0			0			0
Corrugated Cardboard and Brown Paper		7.2	7.2			0			0	1.8	2.6	0.8
Paperboard	8	12.8	4.8			0			0	11	19.4	8.4
Magazines			0			0			0		1.4	1.4
Newspaper			0			0			0			0
All Other Paper	5.8	9.6	3.8			0			0	9.8	51.6	41.8
Other			0			0			0			1.4
Tetra Pak Cartons			0			0			0	2.2	3.6	1.4
Mattresses			0			0			0			0
Organics			0			0			131.5			40.8
Food Waste, Loose			0			0	18	96.3	78.3	4.4	35.6	31.2
Food Waste, Contained			0			0	8.8	62	53.2	1.8	11.4	9.6
Yard Waste			0			0			0			0
Untreated Wood			0			0			0			0
Manure			0			0			0			0
Ash			0			0			0			0
			0			0			0			0
Hazardous Wastes			8.4			0			0			0
Electronics	2.2	9	6.8			0			0			0
Alkaline Batteries			0			0			0			0
Lithium Batteries			0			0			0			0
Lead Batteries			0			0			0			0
Other Hazardous Waste			0			0			0			0
Compact Fluorescent Lightbulbs			0			0			0			0
Medical Waste	1.8	3.4	1.6			0			0			0
Propane Tanks - 5 Gallons or Greater			0			0			0			0
Refrigeration Units			0			0			0			0
Special Wastes			115.8			0			0			0.6
Textiles	25.2	141	115.8			0			0		0.6	0.6
Automotive Tires			0			0			0			0
Bicycle Tires			0			0			0			0
Carcasses, domestic			0			0			0			0
Carcasses, non-domesticated			0			0			0			0
Construction/Demolition Waste			14			0			0			0
Concrete and Asphalt			0			0			0			0
Painted/Stained Wood			0			0			0			0
Treated Wood/Other Wood	6	20	14			0			0			0
Drywall			0			0			0			0
Rock/Brick			0			0			0			0
C&D Based Scrap Metal			0			0			0			0
All other C&D			0			0			0			0
All Other Waste			1			0			0			1.6
Other	1.8	2.8	1			0			0	1.8	3.4	1.6
Other			0			0			0			0
	*HANDWARMERS									**Dog Poop		
TOTALS			248.6			214.8			167.1			178.4

Notes:

Data obtained during winter sorting event at the Teton County Transfer Station between 2/28/2022 and 3/4/2022

lbs. = pounds

APPENDIX C1. SUMMER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 5			Sample 6			Sample 7			Sample 8		
Date/time:	8/1/2022 13:30			8/1/2022 14:20			8/2/2022 7:00			8/2/2022 7:15		
Hauler info:	Jones Roofing			Mountain States Express Tour Guides			Flowering Sould Landscaping			Commercial - Yellow Iron Compactor		
Generator Source Category:	C&D Single Residential			Commercial single source			Commercial landscaping from several residences			Residential		
	Bin Weight (lbs.)	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**
Glass			0			2.8			0			4
Glass Food & Beverage Containers			0	2.2	5	2.8			0	2.2	6.2	4
All other glass			0			0			0			0
Metal			0			3.6			0.2			6.2
Aluminum Cans			0	3.8	5.2	1.4			0	3.8	6.8	3
Steel/Tin Food Cans			0			0			0		0.6	0.6
Aluminum Foil/Pie Plates			0	1.8	2.2	0.4			0	1.8	2.4	0.6
Portable Propane/Isobutane Cylinders			0			0			0			0
Bear Spray Containers			0			0			0			0
All Other Metal			0		1.8	1.8		0.2	0.2	1.8	3.8	2
Plastic			0			22.3			48.6			50
Plastic Bottles #1			0			0			0	7.6	22.2	14.6
Plastic Bottles #2			0	3.8	10.6	6.8			0			0
Stretchy Plastic Film			0	3.8	7	3.2			0	6	12.2	6.2
Styrofoam			0	1.8	3.5	1.7			0	4.4	5.2	0.8
All Other Plastic			0	8.2	18.8	10.6	17.6	66.2	48.6	15.8	44.2	28.4
Paper			0			23.2			0.2			32
Office Paper			0			0			0			0
Hardback books			0			0			0			0
Paperback books			0			0			0			0
Corrugated Cardboard and Brown Paper			0		2	2			0	6	10	4
Paperboard			0	12	26.4	14.4			0	8.8	16	7.2
Magazines			0		0.2	0.2			0		0.8	0.8
Newspaper			0			0			0	3.8	5.6	1.8
All Other Paper			0	6	12.6	6.6	1.8	2	0.2	6	24.2	18.2
Other			0			0			0			0.6
Tetra Pak Cartons			0			0			0	1.8	2.4	0.6
Mattresses			0			0			0			0
Organics			0			8.6			0			54.6
Food Waste, Loose			0	2.2	4.4	2.2			0	2.2	18	15.8
Food Waste, Contained			0	3.6	10	6.4			0	3.6	36	32.4
Yard Waste			0			0			0			0
Untreated Wood			0			0			0	3.8	6.8	3
Manure			0			0			0			0
Ash			0			0			0	1.8	5.2	3.4
			0			0			0			0
Hazardous Wastes			0			0			0			0
Electronics			0			0			0			0
Alkaline Batteries			0			0			0			0
Lithium Batteries			0			0			0			0
Lead Batteries			0			0			0			0
Other Hazardous Waste			0			0			0			0
Compact Fluorescent Lightbulbs			0			0			0			0
Medical Waste			0			0			0			0
Propane Tanks - 5 Gallons or Greater			0			0			0			0
Refrigeration Units			0			0			0			0
Special Wastes			0			5			0			2.8
Textiles			0	3.8	8.8	5			0	3.8	6.6	2.8
Automotive Tires			0			0			0			0
Bicycle Tires			0			0			0			0
Carcasses, domestic			0			0			0			0
Carcasses, non-domesticated			0			0			0			0
Construction/Demolition Waste			132.2			0			0			0
Concrete and Asphalt			0			0			0			0
Painted/Stained Wood			0			0			0			0
Treated Wood/Other Wood	49.2	158	108.8			0			0			0
Drywall			0			0			0			0
Rock/Brick			0			0			0			0
C&D Based Scrap Metal			0			0			0			0
All other C&D	12	35.4	23.4			0			0			0
All Other Waste			0			0			0			6.8
Other			0			0			0	2.2	9	6.8
Other			0			0			0			0
										**Diapers		
TOTALS			132.2			65.5			49			157

Notes:
Data obtained during winter sorting event at the Teton County
lbs. = pounds

APPENDIX C1. SUMMER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 9			Sample 10			Sample 11			Sample 12		
Date/time:	8/2/222 08:15			8/2/2022 0:00			8/2/2022 9:30			8/2/2022 10:00		
Hauler info:	Summit Crest construction			Lashcon Construction			Salt River Roofing			TTR Compactor		
Generator Source Category:	C&D Single Site Residential			C&D single residential site			C&D - Single Residential			80% Commercial/20% residential		
	Bin Weight (lbs.)	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**
Glass			0			0			0			35.8
Glass Food & Beverage Containers			0			0			0	4.4	28.4	24
All other glass			0			0			0	1.8	13.6	11.8
Metal			0.1			0			0			11.2
Aluminum Cans		0.1	0.1			0			0	3.8	6.8	3
Steel/Tin Food Cans			0			0			0	1.8	2.4	0.6
Aluminum Foil/Pie Plates			0			0			0	1.8	2.4	0.6
Portable Propane/Isobutane Cylinders			0			0			0			0
Bear Spray Containers			0			0			0			0
All Other Metal			0			0			0	5.8	12.8	7
Plastic			2			0			0			20.2
Plastic Bottles #1			0			0			0		0.6	0.6
Plastic Bottles #2			0			0			0	4.4	12.2	7.8
Stretchy Plastic Film		0.2	0.2			0			0	6	15.4	9.4
Styrofoam	4.4	6.2	1.8			0			0	4.4	6.4	2
All Other Plastic			0			0			0	9.8	10.2	0.4
Paper			10.9			0			0			136.6
Office Paper			0			0			0	3.8	62.4	58.6
Hardback books			0			0			0			0
Paperback books			0			0			0			0
Corrugated Cardboard and Brown Paper	6	16.4	10.4			0			0	6	20.6	14.6
Paperboard		0.1	0.1			0			0	8.8	15.8	7
Magazines			0			0			0	3.8	17.8	14
Newspaper			0			0			0	3.8	17.8	14
All Other Paper	1.8	2.2	0.4			0			0	6	34.4	28.4
Other			0			0			0			0.2
Tetra Pak Cartons			0			0			0	1.8	2	0.2
Mattresses			0			0			0			0
Organics			2			0			0			88.6
Food Waste, Loose	2.2	4.2	2			0			0	8.8	72.2	63.4
Food Waste, Contained			0			0			0	3.6	8	4.4
Yard Waste			0			0			0			0
Untreated Wood			0			0			0	3.6	24.4	20.8
Manure			0			0			0			0
Ash			0			0			0			0
			0			0			0			0
Hazardous Wastes			0			0			0			0
Electronics			0			0			0			0
Alkaline Batteries			0			0			0			0
Lithium Batteries			0			0			0			0
Lead Batteries			0			0			0			0
Other Hazardous Waste			0			0			0			0
Compact Fluorescent Lightbulbs			0			0			0			0
Medical Waste			0			0			0			0
Propane Tanks - 5 Gallons or Greater			0			0			0			0
Refrigeration Units			0			0			0			0
Special Wastes			0			0			0			2.4
Textiles			0			0			0	1.8	4.2	2.4
Automotive Tires			0			0			0			0
Bicycle Tires			0			0			0			0
Carcasses, domestic			0			0			0			0
Carcasses, non-domesticated			0			0			0			0
Construction/Demolition Waste			159.2			152.2			92			6.2
Concrete and Asphalt			0			0			0			0
Painted/Stained Wood			0			0			0			0
Treated Wood/Other Wood	3.8	17	13.2			0	27.2	96	68.8	2.2	8.4	6.2
Drywall	18	158.2	140.2	21.8	133.8	112			0			0
Rock/Brick			0			0			0			0
C&D Based Scrap Metal	3.8	7.4	3.6			0			0			0
All other C&D	1.8	4	2.2	17.6	57.8	40.2	12	35.2	23.2			0
All Other Waste			0			0			0			0
Other			0			0			0			0
Other			0			0			0			0
							* Tar Paper					
TOTALS			174.2			152.2			92			301.2

Notes:
Data obtained during winter sorting event at the Teton County
lbs. = pounds

APPENDIX C1. SUMMER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 13			Sample 14			Sample 15			Sample 16		
Date/time:	8/2/2022 11:40			8/2/2022 12:30			8/2/2022 13:00			8/2/2022 14:15		
Hauler info:	RNIG Construction			Private Residential			National Park Service Compactor South loop (South of Jackson Lake Dam)			Backcountry Builders		
Generator Source Category:	C&D Residential Single Site			Private Residential			30% residential/70% commercial			C&D single residential		
	Bin Weight (lbs.)	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**
Glass			0			10			2.4			0.4
Glass Food & Beverage Containers			0	2.2	12.2	10	2.2	4.6	2.4		0.4	0.4
All other glass			0			0			0			0
Metal			0			2.6			4.6			0.2
Aluminum Cans			0		1.4	1.4	6	9.4	3.4		0.2	0.2
Steel/Tin Food Cans			0			0			0			0
Aluminum Foil/Pie Plates			0	1.6	2.8	1.2			0			0
Portable Propane/Isobutane Cylinders			0			0			0			0
Bear Spray Containers			0			0			0			0
All Other Metal			0			0	3.6	4.8	1.2			0
Plastic			0			10.2			20.5			65.6
Plastic Bottles #1			0			0			0	4.4	7	2.6
Plastic Bottles #2			0	3.8	5.2	1.4	3.8	7.8	4			0
Stretchy Plastic Film			0		0.6	0.6	6	10	4	6	9.8	3.8
Styrofoam			0		8.2	8.2		0.1	0.1	3.8	48.2	44.4
All Other Plastic			0			0	7.6	20	12.4	13.6	28.4	14.8
Paper			0			9.4			20.2			40.1
Office Paper			0			0			0			0
Hardback books			0			0			0			0
Paperback books			0			0			0			0
Corrugated Cardboard and Brown Paper			0		3.2	3.2	4.4	6.2	1.8	3.8	5	1.2
Paperboard			0		0.6	0.6			0	8.2	20	11.8
Magazines			0	4.4	7	2.6		0.4	0.4			0
Newspaper			0	1.8	2.8	1	3.8	5	1.2			0
All Other Paper			0	5.8	7.8	2	9.8	26.6	16.8	19.6	46.7	27.1
Other			0			0			2			0
Tetra Pak Cartons			0			0		2	2			0
Mattresses			0			0			0			0
Organics			0			12.2			32			0.6
Food Waste, Loose			0	2.2	9.4	7.2	4.4	21.2	16.8	2.2	2.8	0.6
Food Waste, Contained			0	2.2	7.2	5	4	19.2	15.2			0
Yard Waste			0			0			0			0
Untreated Wood			0			0			0			0
Manure			0			0			0			0
Ash			0			0			0			0
			0			0			0			0
Hazardous Wastes			0			0			0			0
Electronics			0			0			0			0
Alkaline Batteries			0			0			0			0
Lithium Batteries			0			0			0			0
Lead Batteries			0			0			0			0
Other Hazardous Waste			0			0			0			0
Compact Fluorescent Lightbulbs			0			0			0			0
Medical Waste			0			0			0			0
Propane Tanks - 5 Gallons or Greater			0			0			0			0
Refrigeration Units			0			0			0			0
Special Wastes			0.4			0			0			4.8
Textiles		0.4	0.4			0			0	3.6	8.4	4.8
Automotive Tires			0			0			0			0
Bicycle Tires			0			0			0			0
Carcasses, domestic			0			0			0			0
Carcasses, non-domesticated			0			0			0			0
Construction/Demolition Waste			163			0			0			16.4
Concrete and Asphalt			0			0			0			0
Painted/Stained Wood	3.8	25.6	21.8			0			0			0
Treated Wood/Other Wood	3.8	71.2	67.4			0			0			0
Drywall	3.8	73.6	69.8			0			0	2.2	6.2	4
Rock/Brick			0			0			0			0
C&D Based Scrap Metal		1.4	1.4			0			0	3.6	5.6	2
All other C&D	3.8	6.4	2.6			0			0	1.8	12.2	10.4
All Other Waste			0			0			4			0
Other			0			0	2.2	6.2	4			0
Other			0			0			0			0
TOTALS			163.4			44.4			85.7			128.1

Notes:
Data obtained during winter sorting event at the Teton County
lbs. = pounds

APPENDIX C1. SUMMER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 17			Sample 18			Sample 19			Sample 20		
Date/time:	8/3/2022 7:00			8/3/2022 8:25			8/3/2022 9:00			8/3/2022 10:10		
Hauler info:	Town of Jackson Town Square Public Cans			Star Valley Disposal			307 Imperial Roofing			Spring Creek Ranch room waste		
Generator Source Category:	Public Trash Cans			C&D Single Site Residential			C&D Single Residential			Tourism		
	Bin Weight (lbs.)	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**
Glass			7.2			0			0			6.4
Glass Food & Beverage Containers	2.2	9.4	7.2			0			0	2.2	8.6	6.4
All other glass			0			0			0			0
Metal			3			0			0.2			11.6
Aluminum Cans	3.8	6	2.2			0	2.2	2.4	0.2	5.6	10	4.4
Steel/Tin Food Cans			0			0			0			0
Aluminum Foil/Pie Plates		0.4	0.4			0			0			0
Portable Propane/Isobutane Cylinders		0.4	0.4			0			0			0
Bear Spray Containers			0			0			0			0
All Other Metal			0			0			0	3.8	11	7.2
Plastic			31.8			14			4.4			32.6
Plastic Bottles #1	6	14.2	8.2	1.8	3	1.2			0	6.2	15.4	9.2
Plastic Bottles #2			0			0			0	2.2	3	0.8
Stretchy Plastic Film	7.6	10.2	2.6	1.8	3	1.2	3.8	8.2	4.4	6	13	7
Styrofoam	3.8	4.6	0.8	20.8	31.6	10.8			0	1.8	2	0.2
All Other Plastic	10	30.2	20.2	1.8	2.6	0.8			0	15.8	31.2	15.4
Paper			21.4			9			13.2			42.8
Office Paper			0			0			0		0.4	0.4
Hardback books			0			0			0			0
Paperback books			0			0			0			0
Corrugated Cardboard and Brown Paper	3.8	6	2.2	3.8	12.8	9			0	3.8	12.6	8.8
Paperboard	4.4	5.6	1.2			0		8.6	8.6	11	18.4	7.4
Magazines			0			0			0	2.2	3.8	1.6
Newspaper		0.2	0.2			0			0	2.2	6.2	4
All Other Paper	9.8	27.6	17.8			0	3.8	8.4	4.6	9.8	30.4	20.6
Other			0			0			0			0.2
Tetra Pak Cartons			0			0			0	2.2	2.4	0.2
Mattresses			0			0			0			0
Organics			14.8			103.2			64.5			85
Food Waste, Loose	4.4	14.8	10.4			0		0.1	0.1	4.4	31.4	27
Food Waste, Contained	3.6	8	4.4			0			0	12.8	70.4	57.6
Yard Waste			0			0			0	2.2	2.6	0.4
Untreated Wood			0	10	113.2	103.2	11.6	76	64.4			0
Manure			0			0			0			0
Ash			0			0			0			0
			0			0			0			0
Hazardous Wastes			0			0			0			0
Electronics			0			0			0			0
Alkaline Batteries			0			0			0			0
Lithium Batteries			0			0			0			0
Lead Batteries			0			0			0			0
Other Hazardous Waste			0			0			0			0
Compact Fluorescent Lightbulbs			0			0			0			0
Medical Waste			0			0			0			0
Propane Tanks - 5 Gallons or Greater			0			0			0			0
Refrigeration Units			0			0			0			0
Special Wastes			0			0			0			4.6
Textiles			0			0			0	4.4	9	4.6
Automotive Tires			0			0			0			0
Bicycle Tires			0			0			0			0
Carcasses, domestic			0			0			0			0
Carcasses, non-domesticated			0			0			0			0
Construction/Demolition Waste			0			114.4			155.4			0
Concrete and Asphalt			0			0			0			0
Painted/Stained Wood			0			0			0			0
Treated Wood/Other Wood			0	7.8	108.8	101			0			0
Drywall			0			0			0			0
Rock/Brick			0			0			0			0
C&D Based Scrap Metal			0		0.2	0.2			0			0
All other C&D			0	6	19.2	13.2	24	179.4	155.4			0
All Other Waste			2.9			0			0			3.4
Other	2.2	0.3	-1.9			0			0	1.8	2.2	0.4
Other	2.2	7	4.8			0			0	2.2	5.2	3
	*diapers **dog poop			*PEX and PVC pipe						*soap bar		
TOTALS			81.1			240.6			237.7			186.6

Notes:

Data obtained during winter sorting event at the Teton County

lbs. = pounds

APPENDIX C1. SUMMER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 21			Sample 22			Sample 23			Sample 24		
Date/time:	8/3/2022 11:20			8/3/2022 12:30			8/3/2022 13:20			8/4/2022 7:15		
Hauler info:	TTR			Fireside RV Campground (Moran)			Kudar Hotel			Kelly Construction		
Generator Source Category:	C&D Single Site Residential			Tourism			Toursim			C&D Single Site Residential		
	Bin Weight (lbs.)	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**
Glass			0			10.6			17.6			0
Glass Food & Beverage Containers			0	2.2	12.8	10.6	3.8	21.4	17.6			0
All other glass			0			0			0			0
Metal			0			16.6			6.4			0.2
Aluminum Cans			0	6	9	3	5.6	8.6	3	2.2	2.4	0.2
Steel/Tin Food Cans			0	4.4	4.8	0.4	1.8	3	1.2			0
Aluminum Foil/Pie Plates			0	1.8	2	0.2			0			0
Portable Propane/Isobutane Cylinders			0			0			0			0
Bear Spray Containers			0			0			0			0
All Other Metal			0		13	13		2.2	2.2			0
Plastic			28.2			25			39.5			10.2
Plastic Bottles #1			0	7.6	17.8	10.2	9.8	17.8	8	2.2	2.4	0.2
Plastic Bottles #2			0	3.8	5.2	1.4	2.2	2.4	0.2			0
Stretchy Plastic Film	3.8	8.2	4.4	8.2	11.6	3.4	8.2	19.2	11	3.8	11.2	7.4
Styrofoam	6	9.2	3.2	2.2	3	0.8	4.4	5.1	0.7	4.4	4.6	0.2
All Other Plastic	4	24.6	20.6	8.2	17.4	9.2	13.8	33.4	19.6	2.2	4.6	2.4
Paper			23.2			47.9			41			4.6
Office Paper	1.8	4	2.2		0.1	0.1			0			0
Hardback books			0			0			0			0
Paperback books			0			0			0			0
Corrugated Cardboard and Brown Paper	6	25	19	11.2	22.6	11.4	3.8	10	6.2			0
Paperboard			0	8.8	12	3.2	8.8	17	8.2			0
Magazines			0	3.8	8	4.2	1.8	4.4	2.6			0
Newspaper			0	1.8	2.6	0.8	3.8	6	2.2			0
All Other Paper	8.2	10.2	2	10	38.2	28.2	12	33.8	21.8	6	10.6	4.6
Other			0			0.4			0.8			0
Tetra Pak Cartons			0	1.8	2.2	0.4	1.8	2.6	0.8			0
Mattresses			0			0			0			0
Organics			52.4			40.2			74.4			53.8
Food Waste, Loose			0	6.6	30.8	24.2	8.2	56.6	48.4	2.2	2.4	0.2
Food Waste, Contained			0	3.6	16.8	13.2	6.6	23.2	16.6			0
Yard Waste	12	55.2	43.2			0		9.4	9.4			0
Untreated Wood	3.8	13	9.2			0			0	7.6	61.2	53.6
Manure			0			0			0			0
Ash			0	2.2	5	2.8			0			0
			0			0			0			0
Hazardous Wastes			4.4			0			0			0
Electronics			0			0			0			0
Alkaline Batteries			0			0			0			0
Lithium Batteries			0			0			0			0
Lead Batteries		4.4	4.4			0			0			0
Other Hazardous Waste			0			0			0			0
Compact Fluorescent Lightbulbs			0			0			0			0
Medical Waste			0			0			0			0
Propane Tanks - 5 Gallons or Greater			0			0			0			0
Refrigeration Units			0			0			0			0
Special Wastes			2.6			3.8			2.8			0
Textiles	3.8	6.4	2.6	2.2	6	3.8	2.2	5	2.8			0
Automotive Tires			0			0			0			0
Bicycle Tires			0			0			0			0
Carcasses, domestic			0			0			0			0
Carcasses, non-domesticated			0			0			0			0
Construction/Demolition Waste			108.6			0			0			102.8
Concrete and Asphalt			0			0			0			0
Painted/Stained Wood			0			0			0			0
Treated Wood/Other Wood			0			0			0			0
Drywall	4.4	49.2	44.8			0			0	6	108.4	102.4
Rock/Brick			0			0			0			0
C&D Based Scrap Metal	3.8	35.2	31.4			0			0	1.8	2.2	0.4
All other C&D	4	36.4	32.4			0			0			0
All Other Waste			0			12.6			9.8			0
Other			0	2.2	2.4	0.2	4.4	13.8	9.4			0
Other			0		12.4	12.4		0.4	0.4			0
				dog poo swamp cooler filter media			diapers soap bar					
TOTALS			219.4			157.1			192.3			171.6

Notes:
Data obtained during winter sorting event at the Teton County
lbs. = pounds

APPENDIX C1. SUMMER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 25			Sample 26			Sample 27			Sample 28		
Date/time:	8/4/2022 8:15			8/4/2022 9:00			8/4/2022 10:00			8/5/2022 7:00		
Hauler info:	307 Imperial Roofing			New West Construction			TTR Compactor			West Bank Sanitation Compactor		
Generator Source Category:	C&D Single Site Residential			C&D Single Site Commercial			Commercial			80% Commercial/10%Residential/10 %C&D		
	Bin Weight (lbs.)	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**
Glass			0			0			16			4.8
Glass Food & Beverage Containers			0			0	3.8	19.8	16	2.2	7	4.8
All other glass			0			0			0			0
Metal			0			0.2			12.6			3.2
Aluminum Cans			0	2.2	2.4	0.2	2.2	3.6	1.4	2.2	3.4	1.8
Steel/Tin Food Cans			0			0			0	1.8	3	1.2
Aluminum Foil/Pie Plates			0			0	1.8	2.2	0.4	1.8	2	0.2
Portable Propane/Isobutane Cylinders			0			0			0			0
Bear Spray Containers			0			0			0			0
All Other Metal			0			0	4.4	15.2	10.8			0
Plastic			9.6			3			63.6			45
Plastic Bottles #1			0	2.2	4.4	2.2	3.8	6.8	3	6	16	10
Plastic Bottles #2			0			0	2.2	3.6	1.4		2	2
Stretchy Plastic Film	7.6	11.2	3.6	2.2	2.6	0.4	9.8	18.8	9	9.8	15.6	5.8
Styrofoam			0			0	6.6	8.6	2	1.8	2.2	0.4
All Other Plastic	6	12	6	2.2	2.6	0.4	15.8	64	48.2	11.4	38.2	26.8
Paper			6.2			3.8			156			100.6
Office Paper			0			0	4.4	92.4	88			0
Hardback books			0			0			0			0
Paperback books			0			0			0			0
Corrugated Cardboard and Brown Paper	3.8	10	6.2	3.8	7	3.2	12	38.2	26.2	10.4	34.4	24
Paperboard			0	1.8	2	0.2	4.4	4.8	0.4	4.4	9	4.6
Magazines			0			0			0			0
Newspaper			0			0	3.8	8	4.2	6	14.6	8.6
All Other Paper			0	1.8	2.2	0.4	9.8	47	37.2	15.8	79.2	63.4
Other			0			0			0.2			0
Tetra Pak Cartons			0			0	2.2	2.4	0.2			0
Mattresses			0			0			0			0
Organics			2.8			12.8			27			70.6
Food Waste, Loose			0	2.2	3.4	1.2	4.4	24	19.6	4.2	25	20.8
Food Waste, Contained			0			0	3.6	11	7.4	1.8	33.8	32
Yard Waste			0	3.8	15.4	11.6			0		17.8	17.8
Untreated Wood	2.2	5	2.8			0			0			0
Manure			0			0			0			0
Ash			0			0			0			0
			0			0			0			0
Hazardous Wastes			0			0			2.8			0.4
Electronics			0			0		2.8	2.8			0
Alkaline Batteries			0			0			0		0.4	0.4
Lithium Batteries			0			0			0			0
Lead Batteries			0			0			0			0
Other Hazardous Waste			0			0			0			0
Compact Fluorescent Lightbulbs			0			0			0			0
Medical Waste			0			0			0			0
Propane Tanks - 5 Gallons or Greater			0			0			0			0
Refrigeration Units			0			0			0			0
Special Wastes			0.2			0.1			9.6			9
Textiles		0.2	0.2	1.8	1.9	0.1	3.8	13.4	9.6	3.8	12.8	9
Automotive Tires			0			0			0			0
Bicycle Tires			0			0			0			0
Carcasses, domestic			0			0			0			0
Carcasses, non-domesticated			0			0			0			0
Construction/Demolition Waste			263.6			120.4			4.6			1.4
Concrete and Asphalt	19.6	282	262.4			0			0			0
Painted/Stained Wood			0			0			0			0
Treated Wood/Other Wood			0	6	48.2	42.2	2.2	6.8	4.6	2.2	3.6	1.4
Drywall			0	9.8	72.8	63			0			0
Rock/Brick			0			0			0			0
C&D Based Scrap Metal	2.2	3.4	1.2	6	21.2	15.2			0			0
All other C&D			0			0			0			0
All Other Waste			0			0			0			0.4
Other			0			0			0		0.4	0.4
Other			0			0			0			0
	Asphalt shingles									Diapers		
TOTALS			282.4			140.3			292.4			235.4

Notes:
Data obtained during winter sorting event at the Teton County
lbs. = pounds

APPENDIX C1. SUMMER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 29			Sample 30			Sample 31			Sample 32		
Date/time:	8/5/2022 8:30			8/0/2022 10:00			8/5/2022 10:05			8/5/2022 13:35		
Hauler info:	Teton County ISWR			Private Residential			Private			Private Residential		
Generator Source Category:	Recycling Center Contaminants (Afternoon 8/1-8/4)			Private Residential			Private C&D			Private Residential		
	Bin Weight (lbs.)	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**
Glass			3.6			0			0			11.6
Glass Food & Beverage Containers	2.2	5.8	3.6			0			0	2.2	13.8	11.6
All other glass			0			0			0			0
Metal			18.4			0			0			5.9
Aluminum Cans	3.8	19.6	15.8			0			0	1.8	2	0.2
Steel/Tin Food Cans	1.8	2.4	0.6			0			0			0
Aluminum Foil/Pie Plates	1.8	2.6	0.8			0			0	1.8	1.9	0.1
Portable Propane/Isobutane Cylinders			0			0			0			0
Bear Spray Containers			0			0			0			0
All Other Metal		1.2	1.2			0			0		5.6	5.6
Plastic			55.1			12.8			0.4			18.4
Plastic Bottles #1	7.6	23	15.4			0			0	6	8.4	2.4
Plastic Bottles #2	3.8	8.2	4.4			0			0	3.8	4.2	0.4
Stretchy Plastic Film	6	8.4	2.4	7.8	12.2	4.4			0	6	6.8	0.8
Styrofoam	4	5.3	1.3	14.2	22	7.8			0	6	20.8	14.8
All Other Plastic	15.8	47.4	31.6	1.8	2.4	0.6		0.4	0.4			0
Paper			56.4			5.6			0			8.8
Office Paper	11.4	30.4	19			0			0			0
Hardback books			0			0			0			0
Paperback books			0			0			0			0
Corrugated Cardboard and Brown Paper	6	9.8	3.8	12	17.6	5.6			0	7.6	13.2	5.6
Paperboard	8.8	15.8	7			0			0	5.6	6.6	1
Magazines	4.4	17	12.6			0			0			0
Newspaper	5.8	9.8	4			0			0			0
All Other Paper	6	16	10			0			0	3.6	5.8	2.2
Other			0.2			0			0			0
Tetra Pak Cartons	4.4	4.6	0.2			0			0			0
Mattresses			0			0			0			0
Organics			3.2			0			0			6.6
Food Waste, Loose	4.4	7.6	3.2			0			0	2.2	8.6	6.4
Food Waste, Contained			0			0			0	1.8	2	0.2
Yard Waste			0			0			0			0
Untreated Wood			0			0			0			0
Manure			0			0			0			0
Ash			0			0			0			0
			0			0			0			0
Hazardous Wastes			0			0			2.4			0
Electronics			0			0	1.8	4.2	2.4			0
Alkaline Batteries			0			0			0			0
Lithium Batteries			0			0			0			0
Lead Batteries			0			0			0			0
Other Hazardous Waste			0			0			0			0
Compact Fluorescent Lightbulbs			0			0			0			0
Medical Waste			0			0			0			0
Propane Tanks - 5 Gallons or Greater			0			0			0			0
Refrigeration Units			0			0			0			0
Special Wastes			0.6			0.6			0			0
Textiles		0.6	0.6	4.4	5	0.6			0			0
Automotive Tires			0			0			0			0
Bicycle Tires			0			0			0			0
Carcasses, domestic			0			0			0			0
Carcasses, non-domesticated			0			0			0			0
Construction/Demolition Waste			0			0			308			1.4
Concrete and Asphalt			0			0			0			0
Painted/Stained Wood			0			0			0			0
Treated Wood/Other Wood			0			0	3.8	25.8	22	3.8	5.2	1.4
Drywall			0			0	18	175.2	157.2			0
Rock/Brick			0			0			0			0
C&D Based Scrap Metal			0			0	2.2	3	0.8			0
All other C&D			0			0	6	134	128			0
All Other Waste			106.6			0			0			25.8
Other		106.6	106.6			0			0	3.8	29.6	25.8
Other			0			0			0			0
	Dried paint in container						*Vinyl Plank flooring			Ice Packs		
TOTALS			244.1			19			310.8			78.5

Notes:
Data obtained during winter sorting event at the Teton County
lbs. = pounds

APPENDIX C1. SUMMER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 33			Sample 34		
Date/time:	8/5/2022 12:00			8/5/2022 12:50		
Hauler info:	Private			Pivate		
Generator Source Category:	C&D Private			C&D		
	Bin Weight (lbs.)	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**
Glass			0			0
Glass Food & Beverage Containers			0			0
All other glass			0			0
Metal			0			4.8
Aluminum Cans			0	1.8	2	0.2
Steel/Tin Food Cans			0		0.2	0.2
Aluminum Foil/Pie Plates			0			0
Portable Propane/Isobutane Cylinders			0			0
Bear Spray Containers			0			0
All Other Metal			0	3.8	8.2	4.4
Plastic			2			15
Plastic Bottles #1			0			0
Plastic Bottles #2			0			0
Stretchy Plastic Film	2.2	2.4	0.2			0
Styrofoam			0	6	12.6	6.6
All Other Plastic		1.8	1.8	7.8	16.2	8.4
Paper			1.8			0.6
Office Paper			0			0
Hardback books			0			0
Paperback books			0			0
Corrugated Cardboard and Brown Paper		1.8	1.8		0.4	0.4
Paperboard			0	1.8	2	0.2
Magazines			0			0
Newspaper			0			0
All Other Paper			0			0
Other			0			0
Tetra Pak Cartons			0			0
Mattresses			0			0
Organics			34.2			12.6
Food Waste, Loose			0			0
Food Waste, Contained			0			0
Yard Waste			0			0
Untreated Wood	6	40.2	34.2	4.4	17	12.6
Manure			0			0
Ash			0			0
			0			0
Hazardous Wastes			0.6			0
Electronics	1.8	2.4	0.6			0
Alkaline Batteries			0			0
Lithium Batteries			0			0
Lead Batteries			0			0
Other Hazardous Waste			0			0
Compact Fluorescent Lightbulbs			0			0
Medical Waste			0			0
Propane Tanks - 5 Gallons or Greater			0			0
Refrigeration Units			0			0
Special Wastes			0			0
Textiles			0			0
Automotive Tires			0			0
Bicycle Tires			0			0
Carcasses, domestic			0			0
Carcasses, non-domesticated			0			0
Construction/Demolition Waste			232.8			0.4
Concrete and Asphalt			0			0
Painted/Stained Wood			0			0
Treated Wood/Other Wood	7.6	68.8	61.2			0
Drywall	19.6	187.6	168			0
Rock/Brick			0			0
C&D Based Scrap Metal		3.6	3.6		0.4	0.4
All other C&D			0			0
All Other Waste			0			0
Other			0			0
Other			0			0
TOTALS			271.4			33.4

Notes:
Data obtained during winter sorting event at the Teton County
lbs. = pounds

APPENDIX C2. SUMMER WASTE SORTING EVENT DATA, TRANSFER STATION
WASTE CHARACTERIZATION STUDY
TETON COUNTY, WYOMING

	Sample 1			Sample 2			Sample 3			Sample 4		
Date/time:	8/4/2022 12:00			8/4/2022 13:00			8/4/2022 1:30			8/4/2022 15:00		
Recycling Stream Category	Cardboard			#2 Plastics			#1 Plastics			Aluminum		
Date of Screening and Baling										8/4/2022		
Weight of Final Clean and Baled Recycling Product (lbs.)	34,750			320			618			980		
Weight of Contaminants Removed (lbs.)	1,742			52			162			61		
Contamination Rate (%)	5.0%			16.1%			26.2%			6.2%		
	Bin Weight (lbs.)	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**	**Bin Weight (lbs.)**	**Gross Weight (lbs.)**	**Net Weight (lbs.)**
Glass			2.2			0			0			2.2
Glass Food & Beverage Containers	3.8	6	2.2			0			0		2.2	2.2
All other glass			0			0			0			0
Metal			0.2			0			0.8			51.2
Aluminum Cans		0.2	0.2			0			0	24	71.8	47.8
Steel/Tin Food Cans			0			0			0	3.8	7	3.2
Aluminum Foil/Pie Plates			0			0			0	1.4	1.6	0.2
Portable Propane/Isobutane Cylinders			0			0			0			0
Bear Spray Containers			0			0			0			0
All Other Metal			0			0		0.8	0.8			0
Plastic			24			64.8			58.3			5.2
Plastic Bottles #1	3.8	5.8	2	13.6	24.4	10.8	41.4	84.2	42.8	3.6	5	1.4
Plastic Bottles #2			0	3.8	8.6	4.8		0.4	0.4	3.6	4.6	1
Stretchy Plastic Film			0	6	7.4	1.4	1.4	2.4	1			0
Styrofoam	11.4	22.8	11.4			0			0			0
All Other Plastic	9.8	20.4	10.6	19.6	67.4	47.8	11.4	25.5	14.1	3.8	6.6	2.8
Paper			97.2			1.2			1.2			2
Office Paper			0			0			0			0
Hardback books			0			0			0			0
Paperback books			0			0			0			0
Corrugated Cardboard and Brown Paper	27.8	70	42.2		0.2	0.2	1.4	2.2	0.8			0
Paperboard	15.4	39.6	24.2	3.8	4.4	0.6			0	3.6	4.2	0.6
Magazines			0			0			0			0
Newspaper	6	15.8	9.8			0			0			0
All Other Paper	19.2	40.2	21	1.4	1.8	0.4	3.8	4.2	0.4	3.8	5.2	1.4
Other			0			0.2			0			0.2
Tetra Pak Cartons			0		0.2	0.2			0		0.2	0.2
Mattresses			0			0			0			0
Organics			13.2			0			2.2			0
Food Waste, Loose	3.8	16	12.2			0	1.4	3.6	2.2			0
Food Waste, Contained			0			0			0			0
Yard Waste			0			0			0			0
Untreated Wood		1	1			0			0			0
Manure			0			0			0			0
Ash			0			0			0			0
Sod			0			0			0			0
Hazardous Wastes			0			0			0			0
Electronics			0			0			0			0
Alkaline Batteries			0			0			0			0
Lithium Batteries			0			0			0			0
Lead Batteries			0			0			0			0
Other Hazardous Waste			0			0			0			0
Compact Fluorescent Lightbulbs			0			0			0			0
Medical Waste			0			0			0			0
Propane Tanks - 5 Gallons or Greater			0			0			0			0
Refrigeration Units			0			0			0			0
Special Wastes			26.6			0			0			0
Textiles		26.6	26.6			0			0			0
Automotive Tires			0			0			0			0
Bicycle Tires			0			0			0			0
Carcasses, domestic			0			0			0			0
Carcasses, non-domesticated			0			0			0			0
Construction/Demolition Waste			0			0			0			0
Concrete and Asphalt			0			0			0			0
Painted/Stained Wood			0			0			0			0
Treated Wood/Other Wood			0			0			0			0
Drywall			0			0			0			0
Rock/Brick			0			0			0			0
C&D Based Scrap Metal			0			0			0			0
All other C&D			0			0			0			0
All Other Waste			0			0			0			0
Other:			0			0			0			0
Other:			0			0			0			0
TOTALS			163.4			66.2			62.5			60.8

Notes:

Data obtained during winter sorting event at Teton County Recycling Center on 3/3/2022

lbs. = pounds

APPENDIX D

SECONDARY MARKET MATERIALS DEFINITIONS

ISRI Scrap Specifications Circular 2022

Issued by:
Institute of Scrap Recycling Industries
1325 G. Street, N.W.
Washington, D.C. 20005

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Effective 07/14/2022

HDPE Colored Bottles

Description : Any whole, blow-molded, high-density polyethylene (HDPE) bottle containing the ASTM D7611 "#2, HDPE" resin identification code that is pigmented and opaque, and was generated from a curbside, drop-off, or other public or private recycling collection program. Bottles are defined as containers that have a neck or mouth that is smaller than the base.
All bottles should be free of contents or free flowing liquids and direction should be provided to consumers to empty and rinse containers. While including closures (caps, lids, and rings) on bottles is acceptable, removal of closures is also acceptable. Loose caps and closures should not be added to the bale.

Product : Polyethylene Bottles

Source : Post-consumer material collected primarily from residential sources, may also include some material that has met its intended use from commercial establishments

CHECK WITH YOUR BUYER(S) as to their allowance for:

- HDPE cooking oil bottles
- HDPE motor oil or other automotive fluid bottles
- Non-bottle HDPE containers using fractional melt HDPE resin:
    - Blow molded HDPE jars or cannisters with a mouth similar to the base (e.g., coffee or cleaning wipes containers)
    - PE Squeeze Tubes
    - HDPE Thermoforms

Contamination: Total contamination should not exceed 5% by weight.

ALLOWABLE CONTAMINANTS AT LOW LEVELS : *These contaminants are tolerable at low levels. The following contaminants should not exceed 2% by weight of any of the following "individual" contaminants, unless noted otherwise.*

- Injection molded HDPE (#2) containers
- Any non-HDPE rigid plastic bottle, container, or packaging, including PET (#1), LDPE (#4), PP (#5), PS (#6), Other (#7) and compostable plastic (e.g., PLA and PHA) (2% maximum of all combined)
- Loose paper or cardboard (OCC)
- Liquid residues
- Aluminum cans
- Any item with degradable additives
- Containers which held hazardous materials, such as flammable, corrosive, or reactive products, pesticides, or herbicides
- Any bulky rigid plastic
- Any plastic bags or film
- Any plastic foam
- Other metal, wood, glass
- Batteries
- Electronics scrap, including items with circuit boards or battery packs

- Bio-Medical non-bottle waste/items (e.g., syringes, sharps, gloves, masks
- Rocks, stones, mud, oils, grease

PET Bottles (No PET Thermoforms)

Description : Any whole polyethylene terephthalate (PET) postconsumer bottle or jar with a screw-neck top that contains the ASTM D7611 “#1, PET or PETE” resin identification code and that is clear, transparent green, or transparent light blue. All bottles should be free of contents or free flowing liquids. Closures (caps, lids, rings, and labels) may be left on bottles.

Product : Polyethylene Terephthalate Bottles

Source : Post-consumer material collected primarily from residential sources, may also include some material that has met its intended use from commercial establishments.

PET Bale Grade	Grade A	Grade B	Grade C
Total PET bottle fraction by weight	94% or above	83 - 93%	73 - 82%

“PET fraction” refers to the total weight of PET bottles in a PET bale, inclusive of caps and labels when still attached to PET containers, as a percentage of the total weight of that bale.

There are 10 U.S. states with container deposit laws in place; all include a subset of PET containers. It is assumed that deposit bales will contain a high fraction of PET and that the grading scale above applies to all PET bales, including deposit. However, because the container mix, collection and aggregation process is defined through state statute, deposit bale specifications are not specifically addressed in this document.

CHECK WITH YOUR BUYER(S) as to their allowances for:

- Any other Color PET Containers (including fluorescents and opaques)

Contamination : Total contaminants should not exceed the percentages, by weight, as defined by PET bale grade chart above

ALLOWABLE CONTAMINANTS AT LOW LEVELS : These contaminants are tolerable at low levels. The following contaminants should not exceed 2% by weight of any of the following “individual” contaminants, unless noted otherwise.

- HDPE (#2), LDPE (#4), PP (#5) rigid packaging
- Clear PET (#1) Thermoformed Plastic (e.g., clamshells, bakery trays, covers, deli containers, drink cups)
- Aluminum cans
- Loose paper or cardboard (OCC)
- Liquid residues

CONTAMINANTS NOT ALLOWED : If present, these contaminants may result in rejection

- PVC (#3) in any form
- Chemically incompatible or low temperature melting materials, including PS (#6), PETG, and PLA, as rigid or foam in any product.
- Any #7 plastics, including polycarbonate bottles
- Any non-packaging products
- Any bulky rigid plastics
- Any plastic bags or plastic film
- Any plastic foam
- Any Item containing degradable additives

- Containers which held hazardous materials, such as flammable, corrosive, or reactive products, pesticides, or herbicides, including motor oil bottles
- Other metal, wood, glass
- Batteries
- Bio-medical waste items (e.g., syringes, sharps, gloves, masks) Rocks, stones, mud, oils, and grease

PET Bottles with PET Thermoforms

Description *: Any whole polyethylene terephthalate (PET) postconsumer bottle or jar with a screw-neck top that contains the ASTM D7611 "#1, PET or PETE" resin identification code and that is clear, transparent green, or transparent light blue. All bottles should be free of contents or free flowing liquids. Closures (caps, lids, rings, and labels) may be left on bottles.* ***This specification allows inclusion of PET thermoforms of more than two percent, but not to exceed 10 percent of bale, by weight. PET thermoforms are defined as any whole, extrusion grade, clear polyethylene terephthalate (PET) package labeled with the ASTM D7611 "#1, PET or PETE" resin identification code, including and not limited to egg cartons, baskets, clamshell containers, cups, lids, cake domes, covers, blister pack without paperboard backing, tubs, deli containers, trays and folded PET sheet containers. All thermoform pieces must be optically sorted (as PET).***

Product : Polyethylene Terephthalate Bottles with Thermoforms

Source : Post-consumer materials collected primarily from residential sources, may also include some materials that has met its intended use from commercial establishments.

PET Bale Grade	Grade A	Grade B	Grade C
Total PET bottle fraction by weight	94% or above	83 - 93%	73 - 82%

"PET fraction" refers to the total weight of PET bottles in a PET bale, inclusive of caps and labels when still attached to PET containers, as a percentage of the total weight of that bale.

CHECK WITH YOUR BUYER(S) as to their allowances for:

- Any other Color PET Containers (including fluorescents and opaques)

Contamination : Total contaminants should not exceed the percentages, by weight, as defined by PET bale grade chart above

ALLOWABLE CONTAMINANTS AT LOW LEVELS : These contaminants are tolerable at low levels. The following contaminants should not exceed 2% by weight of any of the following "individual" contaminants, unless noted otherwise.

- HDPE (#2), LDPE (#4), PP (#5) rigid packaging
- Aluminum cans
- Loose paper or cardboard (OCC)
- Liquid residues

CONTAMINANTS NOT ALLOWED : If present, these contaminants may result in rejection.

- PVC (#3) in any form
- Chemically incompatible or low temperature melting materials, including PS (#6), PETG, and PLA, as rigid or foam in any product.
- Any #7 plastics, including polycarbonate bottles
- Any non-packaging products
- Any bulky rigid plastics
- Any plastic bags or plastic film
- Any plastic foam
- Any Item containing degradable additives

- Containers which held hazardous materials, such as flammable, corrosive, or reactive products, pesticides, or herbicides, including motor oil bottles
- Other metal, wood, glass
- Batteries
- Bio-medical waste items (e.g., syringes, sharps, gloves, masks) Rocks, stones, mud, oils, and grease

HDPE Natural Bottles

Description : Any whole, blow-molded, high-density polyethylene (HDPE) bottle containing the ASTM D7611 "#2, HDPE" resin identification code that is unpigmented, and was generated from a curbside, drop-off, or other public or private recycling collection program. Bottles are defined as containers that have a neck or mouth that is smaller than the base.

Product : Polyethylene Bottles

Source : Post-consumer material collected primarily from residential sources, may also include some material that has met its intended use from commercial establishments.

All bottles should be free of contents or free flowing liquids and direction should be provided to encourage consumers to empty and rinse containers. While including closures (caps, lids, and rings) on bottles is acceptable, removal of closures is also acceptable. Loose caps and closures should not be added to the bale.

ITEMS RESULTING IN A DOWNGRADE TO COLORED HDPE BALE : : Inclusion of pigmented or colored HDPE bottles will downgrade a Natural Bottle Bale to a Colored HDPE Bottle Bale.

- Pigmented white and yellow HDPE (#2) milk jugs
- Other pigmented HDPE (#2) bottles and containers

CHECK WITH YOUR BUYER(S) as to their allowances for:

- HDPE Cooking oil bottles

Contamination: Total contamination should not exceed 5% by weight.

ALLOWABLE CONTAMINANTS AT LOW LEVELS : *These contaminants are tolerable at low levels. The following contaminants should not exceed 2% by weight of any of the following "individual" contaminants, unless noted otherwise.*

- Liquid residues
- Loose paper or cardboard (OCC)
- Aluminum cans
- Any other HDPE (#2) rigid plastic
- Any non-HDPE rigid plastic bottle, container, or packaging, including PET (#1), LDPE (#4), PP (#5), PS (#6), Other (#7) and compostable plastic (e.g., PLA and PHA) (2% maximum of all combined)

CONTAMINANTS NOT ALLOWED : *If present, these contaminants may result in rejection.*

- Any item with degradable additives
- Containers which held hazardous materials, such as flammable, corrosive, or reactive products, pesticides, or herbicides
- Any PVC (#3) rigid plastic bottle, container, or packaging
- Any bulky rigid plastic
- Any plastic bags or film
- Any plastic foam
- Other metal, wood, glass
- Batteries
- Electronics scrap, including items with circuit boards or battery packs
- Bio-Medical non-bottle waste/items (e.g., syringes, sharps, gloves, masks)
- Rocks, stones, mud, oils, grease

HPDE Injection Bulky Rigid Plastics

Description : *Any injection grade high density polyethylene (#2 HDPE) rigid plastic, typically found to be wide mouthed containers and/or oversized items generated through a positive sort from curbside, drop-off or other public or private recycling collection program. Examples include carts, crates, buckets, baskets, or other large all injection HDPE items. Small injection molded containers are acceptable. Pallets or other injection molded large items from commercial sources can be included. Metal such as axels and bolts must be removed.* Buckets/pails with metal handles and all HDPE plastic toys without metal rods or screws are acceptable.

Blow molded containers of any size should not be included (e.g., 55-gallon drums or 2 gl syrup containers).

Product : Buckets, Pails, Oversized Rigid Plastics

Source : Post-consumer material collected primarily from residential sources, may also include some material that has met its intended use from commercial establishments.

Contamination: Total contamination should not exceed 5% by weight.

ALLOWABLE CONTAMINANTS AT LOW LEVELS : *These contaminants are tolerable at low levels. The following contaminants should not exceed 2% by weight of any of the following "individual" contaminants, unless noted otherwise.*

- Polypropylene rigid plastic (5% maximum)
- Any other non-HDPE rigid plastic, including PET (#1), PVC (#3), LDPE (#4), PS (#6), Other (#7) and compostable plastic (e.g., PLA and PHA) (4% maximum of all combined)
- Liquid or other residues
- Loose paper or cardboard (OCC)
- Aluminum cans

CONTAMINANTS NOT ALLOWED: *If present, these contaminants may result in rejection.*

- Any item with degradable additives
- Containers which held hazardous materials, such as flammable, corrosive, or reactive products, pesticides, or herbicide
- Any plastic bags or film
- Any plastic foam
- Other metal, wood, glass
- Batteries
- Electronics scrap, including items with circuit boards or battery packs
- Bio-Medical waste/items (e.g., syringes, sharps, gloves, masks) • Rocks, stones, mud, oils, grease

PET Thermoforms

Description *: Any whole, extrusion grade, clear or transparent light blue polyethylene terephthalate (PET) postconsumer package labeled with the ASTM D7611 "#1, PET or PETE" resin identification code, not including bottles and jars, but including and not limited to egg cartons, baskets, clamshell containers, cups, lids, cake domes, covers, blister pack without paperboard backing, tubs, deli containers, trays and folded PET sheet containers. All packages should be free of contents or free flowing liquids. Closures (caps, lids, rings, and labels) may be included.*

All thermoform pieces must be ***optically sorted (as PET)*** *, and no other thermoform shall come from any other sorting stations. (This is specified to prevent lookalike thermoform —PS, PLA, PVC—from being mixed with PET.)*

Product : Polyethylene Terephthalate Thermoform Plastic

Source : : Post-consumer material collected primarily from residential sources, may also include some material that has met its intended use from commercial establishments.

CHECK WITH YOUR BUYER(S) as to their allowances for: transparent green, or any other color (other than light blue).

Contamination : Total contamination should not exceed 6% by weight.

ALLOWABLE CONTAMINANTS AT LOW LEVELS : These contaminants are tolerable at low levels. The following contaminants should not exceed 2% by weight of any of the following "individual" contaminants, unless noted otherwise.

- HDPE (#2), LDPE (#4), PP (#5) rigid packaging
- PS (#6) and Other #7 rigid plastic, including PLA plastic
- Polyethylene Terephthalate Glycol (PETG)
- PVC (3#) – maximum 1%
- Aluminum cans
- Loose paper or cardboard (OCC)
- Liquid residues

CONTAMINANTS NOT ALLOWED *: If present, these contaminants may result in rejection*

- Any non-packaging products
- Any bulky rigid plastics
- Any plastic bags or plastic film
- Any plastic foam
- Items containing degradable additives
- Containers that held hazardous materials, such as flammable, corrosive, or reactive products, pesticides, or herbicides, including motor oil bottles
- Other metal, wood, glass
- Batteries
- Bio-medical waste items (e.g., syringes, sharps, gloves, masks)
- Rocks, stones, mud, oils, and grease

General Non-Source-Specific Categories

PE Clear Film (Grade A)

Description : Any mix of clear or natural polyethylene film, Low-Density Polyethylene (LDPE) or Linear Low-Density Polyethylene (LLDPE), totaling at least 95% clear or natural polyethylene film is acceptable. Films may be coded with ASTM D7611 resin identification code "#4, LDPE/LLDPE." Includes stretch wrap, shrink wrap, and clear, natural bags.

Product : Polyethylene film

Source : Sorted film generated after meeting its intended use from commercial establishments

Contamination : Total contamination should not exceed 5% by weight.

ALLOWABLE CONTAMINANTS AT LOW LEVELS : These contaminants are tolerable at low levels. The following contaminants should not exceed 1% by weight of any of the following "individual" contaminants, unless noted otherwise.

- Clear/natural HDPE (#2) film
- Labels
- Lightly printed film packaging (less than 5% of surface covered in ink)
- Plastic strapping and rubber bands

- Cardboard endcaps
- Moisture residues

CONTAMINANTS NOT ALLOWED : **If present, these contaminants may result in rejection.**

- Colored and heavily printed polyethylene films
- Any non-PE films, metallized films, or multi-material pouches
- PE film packaging exposed to hazardous materials, such as flammable, corrosive or reactive products, pesticides or herbicides
- Silicone coated film
- Film with oxo or bio-degradable additives, PVDC layers, or acrylic coatings
- Any rigid plastic bottle, container or packaging including PET (#1), HDPE (#2), PVC (#3), LDPE/LLDPE (#4), PP (#5), PS (#6), Other (#7) and compostable plastic (e.g., PLA and PHA)
- Any bulky rigid plastic
- Any plastic foam
- Food waste
- Free-flowing liquids
- Loose paper, cardboard (OCC)
- Textiles
- Metal, Wood, Glass
- Batteries
- Electronics scrap, including items with circuit boards or battery packs
- Bio-Medical waste/items (e.g., syringe, sharps, gloves, masks)
- Rocks, stones, mud, oils, grease

General : Refer to the General Information section for additional information

PE Clear Film (Grade B)

Description : Any mix of polyethylene film, Low-Density Polyethylene (LDPE) or Linear LowDensity Polyethylene (LLDPE), totaling at least 80% clear or natural polyethylene film is acceptable. Films may be coded with ASTM D7611 resin identification code “#4, LDPE/LLDPE.” Up to 20% colored and printed polyethylene film is acceptable.

Product : Polyethylene film

Source : Sorted film generated after meeting its intended use from commercial establishments

Contamination : Total contamination should not exceed 10% by weight

ALLOWABLE CONTAMINANTS AT LOW LEVELS : These contaminants are tolerable at low levels. The following contaminants should not exceed 2% by weight of any of the following “individual” contaminants, unless noted otherwise.

- HDPE (#2) film (10% allowable)
- Labels
- Plastic strapping and rubber bands
- Rigid or foam PE (HDPE #2 or LDPE #4)
- Loose paper, cardboard (OCC), including cardboard endcaps
- Moisture residues

CONTAMINANTS NOT ALLOWED: If present, these contaminants may result in rejection.

- Any non-PE films, metallized films, or multi-material pouches
- PE film packaging exposed to hazardous materials, such as flammable, corrosive or reactive products, pesticides or herbicides
- Silicone coated film
- Film with oxo or bio-degradable additives, PVDC layers, or acrylic coatings

- Any rigid plastic bottle, container or packaging including PET (#1), HDPE (#2), PVC (#3), PP (#5), PS (#6), Other (#7) and compostable plastic (e.g. PLA and PHA)
- Any bulky rigid plastic
- Any non-PE plastic foam
- Food waste
- Free-flowing liquids
- Textiles
- Metal, Wood, Glass
- Batteries
- Electronics scrap, including items with circuit boards or battery packs
- Bio-Medical waste/items (e.g. syringe, sharps, gloves, masks)
- Rocks, stones, mud, oils, grease

General : Refer to the General Information section for additional information

PE Film (Grade C)

Description : Any mix of clear/natural, color or printed polyethylene film, Low-Density Polyethylene (LDPE), Linear Low-Density Polyethylene (LLDPE) and/or High-Density Polyethylene (HDPE). Films may be coded with ASTM D7611 resin identification code "#4, LDPE/LLDPE or #2 HDPE". There is a wide variability of what is sold under this specification, which could include a high level of contamination. Buyers and sellers should be very explicit about their requirements and offerings.

Mixed Bulky Rigids

Description : Any large rigid High-Density Polyethylene (HDPE, #2) and/or Polypropylene (PP, #5) plastic bulky item , created through a positive sort from curbside, drop-off or other public or private recycling collection program. Examples include: crates, buckets, baskets, totes, andlawn furniture. Metal such as axels and bolts should be removed. Buckets/pails with metal handles can be included.

Product : Bulky Rigid Plastic

Source : Post-Consumer material created from a positive sort from a curbside, drop-off or other public or private recycling collection program.

Contamination : This bale should not contain mixed #1-7 bottles or containers, toys with metal, drums, jugs (either HMW or 55 gallons) or Polyvinyl Chloride (PVC, #3).

Total allowed - 15% by weight.

- Any plastic items or packaging including Polyethylene Terephthalate (PET, #1), Polyvinyl Chloride (PVC, #3), Polystyrene (PS, #6) #7 Other (4% maximum acceptable) ;
- Metal (2% maximum acceptable);
- Liquid/other residues (2% max. acceptable);
- Wood (2% max);
- Paper/cardboard (2% maximum acceptable) ;
- Any plastic bags, sheets or film (2% max);
- Glass (2% max).

The following items are not allowed at any level (0%allowed) :

- Oils, grease, rocks, mud, dirt;
- PS Foam and any other types of foam;
- Medical and hazardous waste;
- Products with degradable additives;
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides;

- Electronics scrap and items with circuit boards or battery packs;

Polypropylene All Rigid Plastic

Description : Any Polypropylene (PP, #5) whole bottle, container product, generated through a positive sort from curbside, drop off or other public or private recycling collection program. Bulky Polypropylene (PP, #5) are items greater than 5 gallons, (e.g. buckets, crates, waste baskets, toys, and storage bins).

Examples include : prescription bottles, yogurt cups, margarine tubs, ice cream tubs, cold drink cups, microwaveable trays, tofu tubs, dishwasher safe storage containers, hangers, bottle cap enclosures, etc.

Product : Polypropylene Containers

Source : Post-Consumer Material

Contamination : Total contaminants should not exceed 8% by weight

The following levels of contamination are allowed ;

- 2% Maximum acceptable
    - Metal
    - Paper/Cardboard
    - Liquid or other residue
    - High-Density Polyethylene (HDPE, #2)
    - Any plastic container or packaging containing Polyethylene Terephthalate (PET, #1), Polyvinyl Chloride (PVC, #3), Polystyrene (PS, #6), Other (#7)

The following contaminants are not allowed at any level (zero percent allowed) ;

- Plastic bags, sheets, film
- Oil, grease, rocks, dirt
- Wood, glass, electronic scrap
- Medical and hazardous waste
- Products with degradable additives
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides

General : Refer to the General Information section for additional information

1-7 Bottles and ALL Rigid Plastic

Description : Rigid plastic generated in a positive sort from a subside, drop-off, or other public or private recycling program that does not separately sort any plastic bottles. Bales consist of all plastic bottles – no bottles should be removed from the mix prior to baling – and household containers (including thermoform packaging, cups, trays, clamshells, food tubs and pots, and bulky rigid plastic (e.g., drums, crates, buckets, baskets, toys, totes, and lawn furniture).

Product : Bottle and non-bottle containers

Source : Post-Consumer Material

Contamination : Total contaminants should not exceed 5% by weight

- 2% maximum acceptable
    - Paper/cardboard
- 1% maximum acceptable
    - Metal

    - Plastic bags, sheets, film
    - Liquid or other residues

The following contaminants are not allowed at any level (zero percent allowed)

- Wood, glass, electronics scrap
- Oils, grease, rocks, mud, dirt
- Items with circuit boards or battery packs
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides.
- Medical and hazardous waste
- Products with degradable additives

General : Refer to the General Information section for additional information

3-7 Bottles and ALL other Rigid Plastic

Description : Rigid plastic items generated in a positive sort from a curbside, drop-off, or other public or private recycling programs from which the Polyethylene Terephthalate (PET, #1) and High-Density Polyethylene (HDPE, #2) bottles have been removed. Pre-picked plastic consists of non-PET and non-HDPE household bottles and all non bottle containers including thermoform packaging, cups, trays, clamshells, food tubs and pots, and all large rigid plastics, primarily PE and PP (includes plastic crates, carts, buckets, baskets and plastic lawn furniture). Metal, as typically found in toys or bucket handles, should be removed when possible. Plastic items from construction or demolition should not be included in Pre-Picked bales.

Product : Bottle and non-bottle Containers

Source : Post-Consumer material

Contamination : The following levels of contamination are allowed

- 5% Maximum acceptable
    - Metal (2% maximum acceptable)
    - Paper/cardboard (2% maximum acceptable
    - Liquid or other residues (1% maximum acceptable)

The following contaminants are not allowed at any level (zero percent allowed) ;

- Any plastic bags, sheets, or film
- Wood, glass, electronics scrap
- Oils, grease, rocks, mud, dirt
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides.
- Items with circuit boards or battery packs
- Medical and hazardous waste
- Products with degradable additives

General : Refer to the General Information section for additional information

Mixed Paper (PS 54)

Consists of all paper and paperboard of various qualities not limited to the type of fiber content, sorted and processed at a recycling facility.

Prohibitive Materials may not exceed	2%
Outthrows may not exceed	3%

Sorted Residential Papers (PS 56)

Consists of sorted newspapers, mail, magazines, printing and writing papers and other acceptable papers generated from residential programs (such as residential household and apartment collections and drop-off centers) sorted and processed at a recycling facility. Containerboard and brown grades (OCC, Kraft bags, boxboards and Kraft carrier board will be considered as "Outthrows." *Due to some technical questions, a clarification to the language above was made in August 2019.*

Prohibitive Materials may not exceed	2%
Outthrows may not exceed	3%

Old Corrugated Containers (OCC) (PS 11)

Consists of corrugated containers having liners of either test liner or kraft.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	5%

Sorted Office Paper (SOP) (PS 37)

Consists of paper, as typically generated by offices, containing primarily white and colored groundwood-free paper, free of unbleached fiber. May include a small percentage of groundwood computer printout and facsimile paper.

Prohibitive Materials may not exceed	1%
Outthrows plus prohibitives may not exceed	5%

Aseptic Packaging and Gable-Top Cartons (PS 52)

Consists of liquid packaging board containers including empty, used, polyethylene (PE)-coated, printed one-side aseptic and gable-top cartons containing no less than 70% bleached chemical fiber and may contain up to 6% aluminum foil and 24% PE film

Prohibitive Materials may not exceed	2%
Outthrows plus prohibitives may not exceed	5%

COUNCIL WORK PLAN CALENDAR | 2024		
JANUARY	**FEBRUARY**	**MARCH**
TOWN MTGS.	**TOWN MTGS.**	**TOWN MTGS.**
~~Equity Task Force Presentation~~	~~Title 7, Animals~~	~~Equity Task Force Updated Resolution~~
~~Pre-Construction Bid for Stilson~~	~~Censure Ordinances~~	~~Fairgrounds & Rodeo Lease Extension~~
~~Snow King & Willow Stop Sign~~	~~LDR General Update 2023~~	PI List Review (continued to May)
	~~Kelly Place Deed Restriction~~	
JIM	**JIM**	**JIM**
~~Cancelled~~	~~Joint Department Funding Task Force Discussion~~	~~Housing Deptartment Work Plan & Housing Supply Plan~~
		~~Regional Transportation Work Plan~~
APRIL	**MAY**	**JUNE**
TOWN MTGS.	**TOWN MTGS.**	**TOWN MTGS.**
~~Legislative Debrief & Resolutions for WAM~~	~~Gregory Lane Design~~	~~Accessible Housing Policy Upgrades~~
~~Furthering Accessibility @ Town Bldgs. & Sites (scoping)~~	~~Title 15 Updates Building & Construction~~	~~Town & County Joint Revenue Options~~
~~Fire JPA~~	PI List Review (continued to TBD)	~~Moratorium Proposed Process~~
SPECIAL MTG. (April 22)	**JIM**	**JIM**
~~Long Range Planning Work Plan & Indicator Report~~	~~90 Virginian Lane Developer Selection~~	~~90 Virginian Lane Developer Selection~~
~~Joint Alternative Funding Options~~	~~SS4A Vision, Goals, & Leadership Committment~~	~~Joint Alternative Funding Options (2nd Mtg.)~~
	~~Mobility Hub Study & Next Steps~~	
	~~Community Wildfire Protection Plan (WUI)~~	

COUNCIL WORK PLAN CALENDAR | 2024 (CONTINUED)

JULY	AUGUST	SEPTEMBER
TOWN MTGS.	**TOWN MTGS.**	**TOWN MTGS.**
~~Budget & Revenue Strategy~~	~~Moratorium~~	Pay As You Throw Pricing/Alcohol Container Ordinance
~~Final Sustainability Plan~~	~~County Water Quality Plan & Update to Sewer Policies~~	Total Compensation & Benefit Review
~~Rights of Nature Resolution~~	~~Destination Management & Marketing Organization~~	Police Department Staff Retention
~~Fire JPA~~	~~West Jackson Subarea Transportation Plan~~	
~~Equity Task Force Appointments (Special Mtg.)~~		
~~Moratorium~~		
JIM	**JIM**	**JIM**
~~Fire JPA~~	~~Housing Dept. Rules & Regs Issues Identification~~	Housing Department Rules & Regs Clean-Up
~~Joint Revenue Ballot Initiatives~~	~~90 Virginian Lane Update~~	Indicator Report Dashboard

OCTOBER	NOVEMBER	DECEMBER
TOWN MTGS.	**TOWN MTGS.**	**TOWN MTGS.**
Stormwater Management Plan	Legislative Approach Prep	Early Childhood Education Scoping Report
Karns Meadow EA & CUP (evening)	Gregory Lane - Design & Construction	
Title 7, Animals (2nd mtg.)		
Fire & Building Code Updates		
JIM	**JIM**	**JIM**
90 Virginian Lane Development	SS4A Leadership Commitment Adoption & Update	Rec Center 6-Month Operations & Revenue Review
Housing Department Rules & Regs Clean-Up	Housing Department Rules & Regs Adoption	90 Virginian Lane Development
	90 Virginian Lane Development	SPET Follow-Up & Next Steps
	Stilson Transit Center GMP & SPET Use of Funds	

SHIFTS & CHANGES	
~~Furthering Accessibility @ Town Bldgs. & Sites (scoping)~~	~~Moved from March to April~~
~~Community Wildfire Protection Plan~~	~~Added to May JIM at Request of Interim Fire Chief~~
~~Rights of Nature Resolution~~	~~Moved from March to June to July~~
~~Final Sustainability Plan~~	~~Moved from June to July~~
~~Joint Revenue Ballot Initiatives~~	~~Added in July~~
~~Equity Task Force Appointments (Special Mtg.)~~	~~Moved from May to June~~
~~Community Solar~~	~~Moved from June to July & then just a memo~~
~~Budget & Revenue Strategy~~	~~Moved to June after budget, then discussed w/ County~~
~~County Water Quality Plan & Update to Sewer Policies~~	~~Combined & moved from June to August~~
~~Modernizing Mobility for West Jackson Plan~~	~~Moved from June to July then shift to Town mtg. in Aug.~~
Total Comp/Benefit Review/PD Staff Retention	Moved from May to July to September & split into 2 items
Indicator Report Dashboard	Added to September JIM
Regional Transportation CIP	Moved from April to June to November to TBD
Joint Alternative Funding Options	Moved to April JIM
Fire JPA	Removed from March & June, add back in Fall
Stormwater Management Plan	Moved from May to July to September to October
Karns Meadow EA & CUP Preview	Moved from April to July to September to October
PI List Review	Continued to May, then continued to TBD
Fairgrounds & Rodeo Lease Extension	2nd Mtg.?
Cow Pasture 1 & 2 Softball Field Replacement	Moved from July to October to TBD
Moratorium Process	Added in July, August, & September
Stilson Transit Center GMP & SPET Use of Funds	Moved from August JIM to November
90 Virginian Lane Development	Added to October, November, & December JIMs
Gregory Lane Design & Construction	Moved to November
Fire/EMS Level of Service & Expectation Setting	Moved to TBD
SS4A Leadership Commitment Adoption & Update	Moved from October to November JIM
Transportation CIP & Grant Opportunities	Moved from October to January 2025
Dedicated Transportation Revenue Options	Moved from December to March 2025
Early Childhood Education Scoping Report	Added to December
Regional Transportation Needs Assessment	Moved from November to TBD
Town Mobility Overlay	Moved from November to TBD
Cow Pasture 1 & 2 Softball Field Replacement	Removed from October JIM to survey constituents

Joint Meeting Agenda Item Requests			
Submittal / Request Section **October 7, 2024 Joint Meeting**			
#	**Submitter Name**	**Agenda Item**	**Time Needed**
1	April Norton	Virginian Development	120 min
2	April Norton	Housing Department Rules and Regulations Clean Up	consent
3	Jodie/Tyler	Health and Human Services Update	60 min
4	Bruce Abel	START Budget Amendment	consent
Upcoming Joint Meeting Items			
	April Norton	Nov 4 - Housing Dept. Rules & Regs Adoption	consent
	Brian Schilling	Nov 4 - SS4A Leadership Commitment Adoption and Update	45 mins
	Charlotte Frei	Jan 6 2025 - Transportation CIP & Grant Opportunities	45 mins
	Charlotte Frei	March 3 2025- Options for Dedicated Transportation Funding	30 mins
	Steve Ashworth	Dec 2 - Rec Center 6-Month Operations & Revenue Review	30 mins

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October 7, 2024 Regular Town Council Meeting	
INITIAL SR DUE: 9/6 COMPLETED SR DUE: 9/20 FINAL SR DUE: 9/27	
TOPIC	
Announcements & Proclamations	
Domestic Violence Awareness Month	
Fall Clean Up Week	
Employee Introductions	
Name: Dan Stewart	Position: Water Utility Manager
Consent Calendar	
Continuity of Miller Park Use and Operation: Entering Lease with 4-H	
Encroachment Agreement at 105 E. Broadway Ave. (E24-0172)	
Encroachment Agreement at 105 E. Broadway Ave. (E24-0030)	
Disuscussion & Action Items	
Ordinances	
Ordinance N: An Ordinance Granting a Four-Month Extension of the Current CenturyLink Franchise	
Matters from Mayor and Council	
Design Reveiw Committee Reappointments	
Appointment of Alternate Municipal Judges	
Matters from the Town Manager	
Town Manager's Report	
Adjourn	

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