

Kootenai County Solid Waste Department 2022 Waste Analysis Report



Kootenai County Solid Waste Department
3650 N Ramsey Road
Coeur d'Alene, ID 83815
(208) 446-1430



2022 Waste Stream Analysis for Kootenai County Solid Waste

Introduction

The annual report is an important historical record and planning tool. Utilizing historical data, the Solid Waste Department can address current obligations while looking to the demands of the future.

You may view detailed reports and information at either the Idaho Department of Environmental Quality (DEQ) office in Coeur d'Alene, Idaho or in the administration office of the Kootenai County Solid Waste Department.

In 2022, the Solid Waste Department operated remarkably well with continued elevated customer counts and tonnage that we began seeing in 2020 despite staffing challenges. While we saw a decrease in customer site visits at the transfer stations, our tonnage was relatively flat over all with the exception of the change in wood waste and waste collected at our rural sites. A windstorm in January of 2021 brought with it a record-breaking amount of wood waste that impacted our waste stream tonnage. When comparing 2022 to 2021, the reduced tonnage at Ramsey is largely due to the wood waste tonnage being high in the previous year. The Ramsey Transfer Station also diverted all garbage trucks and large loads to the Prairie Transfer Station from June 30 through July 3 while the Ramsey pit was resurfaced.

The Department managed 243,159 tons and served 765,466 customer site visits – a decrease of 5.4% or 43,278 customer visits in one year. In 2022, the landfill managed 214,178 tons of material - an increase of 1.3% or 2,745 tons as compared to 2021.

The Solid Waste Department offers a variety of services and strives to implement best management practices in compliance with ever-changing regulatory requirements. We are committed to provide citizens with affordable and efficient waste disposal.

Summary

This section contains an overview of the solid waste system and some planning tools used to help meet the needs of Kootenai County residents relative to waste disposal.

The Department is an affordable asset to Kootenai County providing financial stability to the County's financial future. This enterprise-funded program is currently debt-free, managing assets appropriately, and maintaining fiscal responsibility for operations, development, equipment, expansion and future landfill closure and post-closure costs.

Kootenai County Solid Waste department consists of the following:

- Fighting Creek Farm Landfill – the active landfill open 6 days per week;
- Prairie Transfer Station – a full-service transfer station open 7 days per week;
- Ramsey Transfer Station – a full-service transfer station open 7 days per week;
- 12 Rural Residential Collection sites located throughout the County; and
- Granite & Ramsey Landfills both closed for waste disposal.

Flexibility is the key to success in managing solid waste and it takes many talents and skills to keep the department running smoothly. When fully staffed, the department has 65 full-time employees and additional seasonal staff for the summer months.

The Department is always researching alternative methods to maximize disposal space, alternative waste management methods, and disposal and management of leachate. In addition, material reuse or recycling is encouraged to reduce the amount of waste sent to the landfill.

Budget

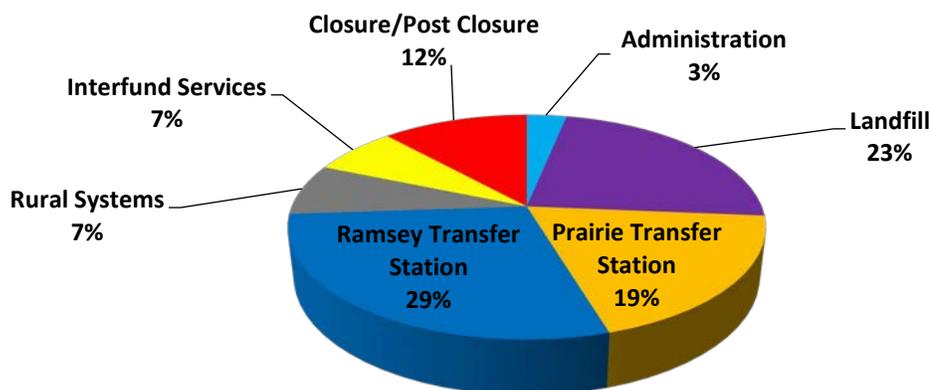
The Solid Waste Department carefully plans activities to provide for the maximum benefit of available funding. As an enterprise fund, the solid waste program operates more like a business than the typical tax-based government entity and does not receive any support from tax dollars. Solid waste dollars are managed in the solid waste fund, which is restricted for solid waste operations, activities, capital improvements, and construction.

Idaho Code §39-7417 requires that financial assurance mechanisms are in place for landfill closure and post-closure expenditures. Kootenai County's policy is to set aside the calculated cost of the depletion of landfill airspace annually. The practice sets aside funds each year for future closure post-closure costs to close and maintain the closed landfill. This fairly allocates future costs to the current year's disposers and reduces the future need to come up with substantial funds for these required actions.

These funds are restricted and used for closure and post-closure expenses only. Each year the County Finance Director provides a letter to Idaho DEQ meeting this financial assurance requirement. As of September 30, 2022, a total of \$14,001,000 has been set aside for closure/post-closure expenditures. See Appendix A-4 for additional information.

For detailed information about the financial records, view the Comprehensive Annual Report prepared by Kootenai County Auditor's office on the County's website at: <https://www.kcgov.us/211/Financial-Reports>

The Department maintains strategic, long-term financial plans and works to finance the required operation and expansion of services within the solid waste system. Expenditures are broken down into the following categories: Administration, Closure/Post Closure funding, Interfund Services (payment to the general fund for services provided by other departments), Landfill, Prairie Transfer Station, Ramsey Transfer Station, and Rural Systems. In 2022, the Department expenditures were \$14,116,298. All salaries necessary to support these activities are contained within the budget categories.



Operational Expenditures

Fighting Creek Farm Landfill

Kootenai County owns and operates a fully permitted municipal solid waste landfill located approximately 16 miles south of Coeur d'Alene, Idaho. The Fighting Creek Farm Landfill includes over 500 acres of land, with approximately 115 acres permitted for active landfill. Recent estimations are that the currently constructed cells reach interim elevation by 2026. The additional cell developments and construction (E3/E4) will extend the landfill life to 2038, depending on waste growth.

The landfill was designed under 40 CFR 258, Federal Subtitle "D" regulations and complies with the Idaho Solid Waste Facilities Act, Idaho Code §39-7400. To meet these requirements, the landfill has been, and will continue to be, constructed with a fully developed liner, leachate collection system, and gas extraction system.

On September 9, 2022 the Department obtained a renewal of the Tier 1, Title V Air Quality Permit and has continuously maintained compliance with this permit. Copies of the semi-annual and annual reports to the EPA are included with the electronic version of this report. (See Appendix A-2)



The landfill is the cornerstone of the solid waste system in Kootenai County. The facility is open 307 days per year providing service 6-days per week (Monday through Saturday). The facility is not open to the public as processing of most waste is completed through the two transfer stations. The removal of recyclable and reusable materials from the waste stream at the transfer stations prior to landfilling is imperative to save landfill space.

The landfill received 214,178 tons of material in 2022 - an increase of 2,712 tons over the previous year. The waste going to the landfill has steadily increased each year since 2011. A life cycle analysis is a planning tool to help understand how well operators are doing in managing and disposing of waste within the landfill. Based on historical data, the overall long-term growth rate of waste to the landfill is 3%. The current life cycle analysis report uses a planning growth factor of 5% based on prior five-year's growth. This results in a planning strategy of design and build of the next landfill expansion in 2023/2024.

Daily operations include placement/compaction of refuse and covering of these materials. Native clay soil is used for intermediate (or longer term) cover, as well as the application of Posi-Shell™ material as an approved ADC (alternative daily cover). ADCs conserve landfill space and generally allow for better landfill gas migration controls and gas recovery within the waste mass.

The original landfill footprint started fill placement in 1993 and reached interim closure elevation in August 2013 with approximately 2,350,597 tons of material in place. Placement of waste in Phase 1 of the East Cell began on August 5, 2013 and then shifted over to Phase 2 on June 14,

2016. Since the opening of the east cell footprint, a total of 1,624,536 tons of waste has been placed.

In 2019 the area between the original landfill footprint and the east cell development was developed into landfill space. This area, referred to as the “corridor” began waste placement on May 27, 2020. With the increased waste growth, the plans are still in place for design/construction of cell E3 in 2023/2024.

Gas System

The landfill has a gas extraction system, which currently includes 170 active landfill gas wells. This extensive gas well and trenching system collects landfill gas and conveys it to a collection point that feeds two operational enclosed flares and a landfill gas to energy facility. This system is regularly monitored and adjusted to ensure compliance. Required reporting for this system is included with the Tier 1, Title V semi-annual and annual reports (See Appendix A-2)

In 1994, installation of the first blower/flare took place and the gas system activated in 1995. Installation of a second enclosed flare took place in 2000. Kootenai County continues to implement landfill-gas control devices well ahead of state and federal requirements.

In March 2012, a landfill gas to energy project with Kootenai Electric Cooperative for the utilization of landfill gas to generate electricity became operational. Since then this facility has generated approximately 139 million kilowatt hours of electricity.



Leachate

Leachate is a liquid by-product that results from the compaction of saturated refuse and/or the migration of natural precipitation through garbage. Under current rules, all landfill leachate must be treated and disposed. Leachate is not characterized as hazardous material, but does contain soluble suspended material that comes from the waste.

Not allowing storm water to contact garbage is the best way to minimize leachate production. In 2018, the department completed construction that consisted of covering approximately 16 acres of landfill with a liner material to minimize leachate production as much as possible. It is anticipated that approximately 6 of these acres of liner are temporary in nature. The remaining 10 acres of liner material may qualify as final cover for the landfill. The installation of this material has the potential of preventing millions of gallons of clean storm water from becoming leachate, thus reducing the quantity of leachate to manage on-site.

The landfill manages leachate in a variety of methods, with ultimate disposal handled one of three ways: recirculation, evaporation, or off-site delivery to a wastewater treatment facility. A total of 4.2 million gallons of leachate was handled through the on-site evaporation process and no leachate was hauled off site. (See Appendix A-7)

The following represents the leachate processed and disposed utilizing the misting system over the last 5 seasons:

- April-October 2018 – 6.6 million gallons
- April-November 2019 – 6.1 million gallons
- April-November 2020 – 5.1 million gallons
- April-November 2021 – 5.4 million gallons
- April-October 2022 – 4.2 million gallons

Groundwater

The landfill operations permit requires a groundwater monitoring system. Nine (9) groundwater monitoring wells are sampled biannually on the property. The location of these monitoring wells are up gradient and down gradient from landfill operations. The positioning of these sampling points allows for comparative analysis to background conditions of natural groundwater. Results enable engineers to discern if any ground water degradation has occurred due to landfill operations.

As part of a community outreach program, sampling of two domestic wells is completed at the same time as the semi-annual sampling events. To date, no landfill related degradation of ground water, at the landfill or the two domestic well sites, have been found. (See Appendix A-6)

Surface Water Monitoring - MSGP

The EPA and Idaho DEQ have established rules for surface water monitoring at the Fighting Creek landfill. Over time, the Department has established an extensive surface water infrastructure to assure any surface water leaving the site is clean.

A series of sedimentation ponds situated throughout the property accept run-off from all the local drainage areas. These ponds function mainly to aid in removing suspended solids. The design of each pond is for a specific retainage period to adequately control sedimentation. Cleaning of these ponds is done as necessary during the summer months, if silt has significantly reduced the holding capacity of water in the pond.



These ponds typically drain through large pre-designed vegetated drainages. This allows for natural filtration and aids in further cleaning the water. Within the drainage areas there also exists a series of rock “finishing dams” designed to slow down the run-off allowing more time for sediment to drop or filter out.

Enhanced wetland structures also help to remove solids and provide a robust microenvironment. These areas positively affect local wildlife. An abundance of ducks and geese migrate to these wetlands each year to nest.

The impact from efforts to maintain such clean water is also evident through sampling results. Typical data shows the surface water leaving this site to consistently be of higher quality than the surrounding receiving drainages. (See Appendix A-8)

Landfill Future Development

The Solid Waste Department regularly reviews/updates its development strategy. Planning for future work, including site development for future material sources for landfill cover, phases 3 and 4 landfill development, and south cell permitting/engineering is necessary and maintains our fiscal accountability.

The landfill property includes an area to the south and west of the original landfill footprint estimated to provide solid waste disposal needs for Kootenai County through 2070.

Closed Landfills

In addition to the landfill at Fighting Creek, the Department is responsible for two closed landfills.

The closed Ramsey landfill is located adjacent to the Ramsey transfer station in Coeur d’Alene, Idaho. The landfill portion of this complex stopped taking waste in 1993 upon the opening of the landfill at Fighting Creek. The Ramsey landfill utilizes an active gas extraction system combined within an impermeable cover. Landfill gas from this landfill is flared onsite. The older portion of this landfill (located on the west side of Ramsey Road) no longer produces measurable quantities of gas. See Appendix A-5 for additional Ramsey Gas System Reporting data.

The closed Granite landfill is located on the northern border of Kootenai County. This facility (shared between Kootenai and Bonner County) stopped accepting waste in the early 1990’s. For many years, this location was far from dwellings. The sale of adjacent property and the establishment of rural residential development prompted the fencing of this property. A passive gas probe system was installed in 2008 to verify the absence of meaningful methane production at this location.

Complete landfill gas reports are available for review at the Idaho DEQ office in Coeur d’Alene or the administration office of the Solid Waste Department.

Customer Statistics – Transfer Stations

The Department is an affordable asset with a positive customer service reputation. The solid waste system in Kootenai County is owned by the citizens and exists solely for their use. A great deal of effort and funds are expended to provide safe and efficient service to citizens while working to deny access when out of county customers attempt to use the facilities.

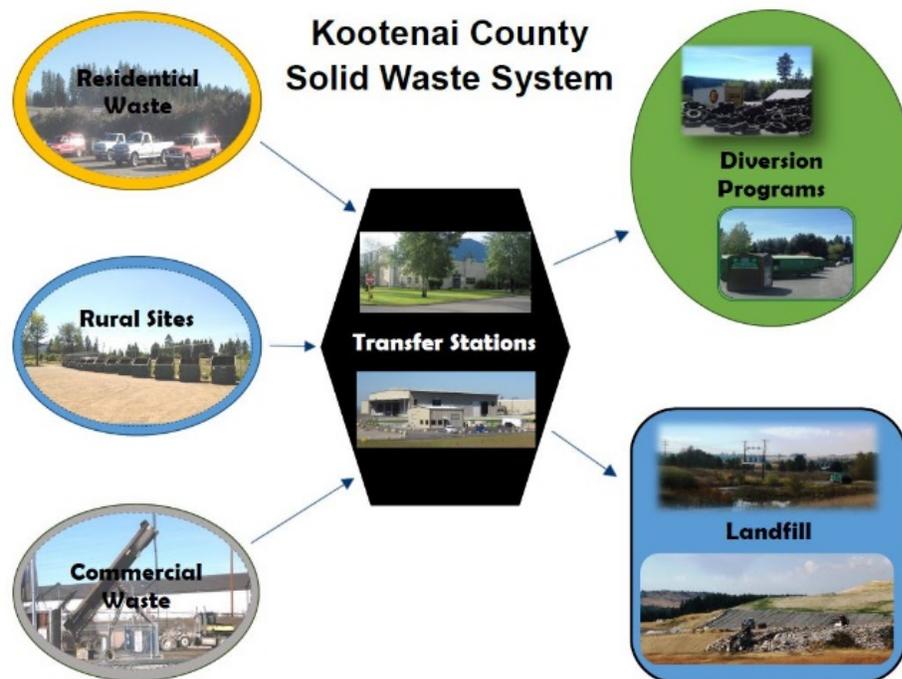
In 2022, a total of 765,466 customer site visits (customers) occurred, a decrease of 5.4% or 43,278 from 2021. This number does not take into account the ten unattended rural sites in the County.

Prairie customer site visits totaled 205,114 in 2022. These figures break down as follows:

- Decrease of 12,802 or 5.9% compared to 2021.
- Average of 570 per day.
- Saturday was the busiest averaging 701 per day.
- Wednesday was the least busy averaging 489 per day.
- Low of 126 customers on November 30, 2022.
- High of 1,145 customers on November 6, 2022.
- Trivia note: From 2009 through 2022, there have been 2,181,564 customer site visits to the Prairie site.

Ramsey customer site visits totaled 354,867 in 2022. These figures break down as follows:

- Decrease of 30,435 or 7.90% compared to 2021.
- Average of 988 per day.
- Saturday was the busiest averaging 1,127 per day.
- Thursday was the least busy averaging 914 per day.
- Low of 236 customers on April 17, 2022.
- High of 2,046 on November 6, 2022.
- Trivia note: Since opening in 1993, there have been 8,053,272 customer site visits to the Ramsey site.



The staffed rural sites at Athol and Chilco saw 205,185 customer site visits in 2022, a decrease of 341 or less than 1% compared to 2021.

See Appendix B for additional charts relating to customer statistics.

Waste Statistics

In 2022, the Department processed 259,195 tons. This represents an increase of 2.7% or 6,725 tons from 2021 for waste coming into the facilities.

Waste shipped to the landfill was 214,178 tons, which is up 1.3% or 2,745 tons from 2021. The landfill received 10,940 loaded trailers from the two transfer stations, which is a decrease from the 11,306 loaded trailers in 2021. Kootenai County has seen a lot of growth in the construction of housing and people moving to the area. There are many things that contribute to the rise of solid waste, but the growth in our area is a factor to consider.

See Appendix C for waste statistics charts.

Prairie Transfer Station

The Prairie site received 93,269 tons of material in 2022. This represents 36% of the waste processed in Kootenai County and an increase of 673 tons or 0.73% from last year*. The measurement of the waste stream from Prairie is the weight of all materials weighed into the facility during the calendar year.

- Average daily tons received was 260 (which is up from 258 last year*).
- Heaviest tonnage day was June 30, 2022 with 766 tons.
- Lowest tonnage day was December 24, 2022 with 31 tons.
- Friday is the highest tonnage day of the week with an average of 348.
- Sunday is the lowest tonnage day with an average of 134.



After processing the waste for recyclables and removal of other materials, the Prairie site shipped 83,241 tons or 4,195 trailer loads of waste to the landfill. From 2009 through 2022, the Prairie site has processed 926,596 tons of material.

Ramsey Transfer Station

The Ramsey site received 142,450 tons of material in 2022. This represents 55% of the waste processed in Kootenai County. It is a decrease of 8,268 tons or 5.8% from last year. The measurement of the waste stream from Ramsey is the weight of all materials entering into the facility during the calendar year.

- Average daily tons received was 397 (down from 420 last year).
- Heaviest tonnage day was May 31, 2022 with 782 tons.
- Lowest tonnage day was December 24, 2022 with 41 tons.
- Thursday is the highest tonnage day of the week with an average of 500.
- Sunday remains the lowest tonnage day with an average of 179.



After processing the waste for recyclables and removal of other materials, the Ramsey site shipped 123,498 tons or 6,745 trailer loads of waste to the landfill. From January 1992 through 2021, the Ramsey site has processed 4,023,876 tons of waste.

Direct Landfill Discharge

In 2022, over 7,400 tons (3% of the waste stream) of material were directly taken to the landfill in an effort to divert waste from the transfer stations from large construction/demolition projects. The contractors utilized the scales at the landfill for measurement and delivered the material to the working face of the landfill. This operational change reduces the number of large loads into the transfer station and provides a rate decrease to the contractor for direct haul to the landfill. These projects are by authorization of the Department only.

See Appendix C for additional charts regarding waste statistics.



Recycling

Kootenai County encourages waste diversion, reduction, reuse and recycling before material becomes part of the solid waste system, but does not mandate or control what is collected outside County operated sites.

A wide variety of reuse, reduction, and recycling programs are in place throughout the area operated by businesses or other entities independent of County programs. Material collected by the County and recycled include, single-stream material (cardboard, newspaper, plastics, and other segregated recyclables), textiles, automotive batteries, scrap metal, used oil, wood waste and other materials.



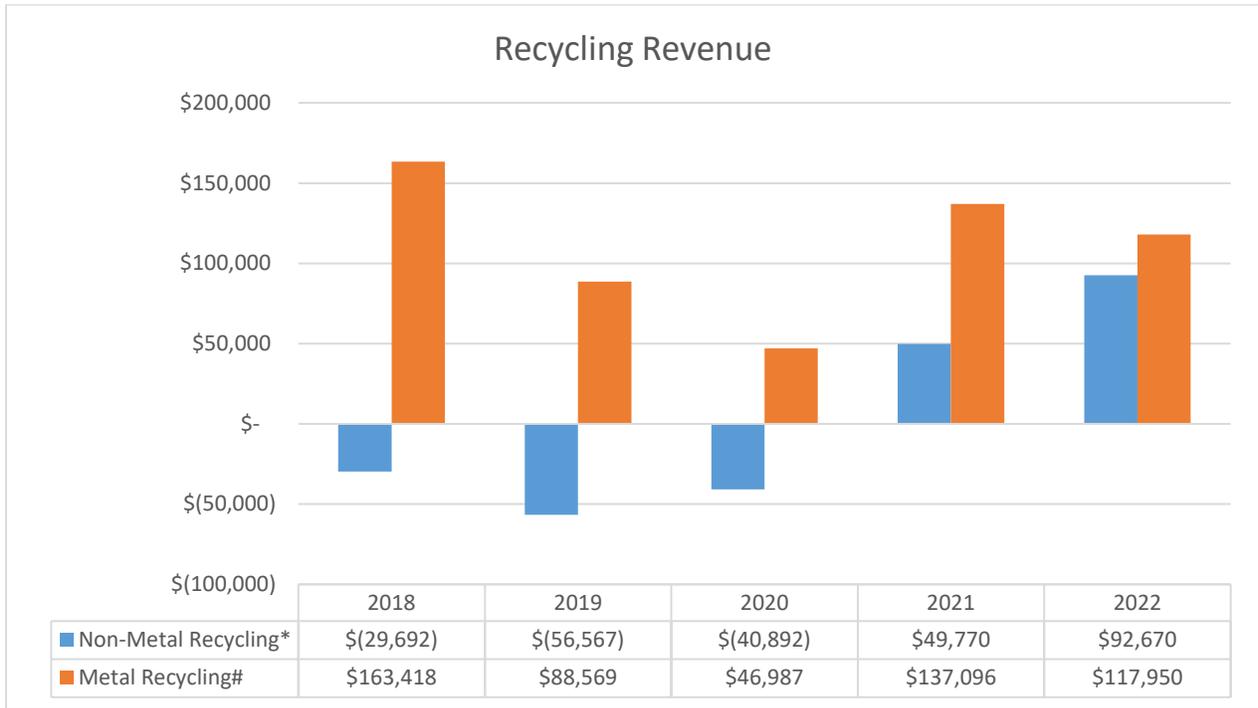
The Department offers recycling drop off stations at both transfer stations and some of the rural residential collection sites. These materials are modified dependent on current markets, challenges with marketing material, and problems with contamination of the recyclables.

There are significant issues facing recycling markets in the United States. The Department remains focused on providing as many opportunities to recycle as fiscally reasonable. Until there are significant changes made, recycling processing costs will continue. Working together with our recycling contractor, the Department has limited these costs, but the recycling markets are extremely volatile and unsteady, and will remain that way for several years.

Recycling can provide an effective means of reducing landfill space; however, it is not a free service. It takes funds to collect, sort, store, transport and manage these materials. If there is no end market for a particular material (i.e. plastics or glass) then these items may be removed from the offered recycling programs.

To help consumers understand the tough decisions made regarding recycling, we are providing revenue information regarding the two main components of the Department's recycling programs: metal and non-metal recycling. The non-metal recycling figure includes revenue for

the product less the processing costs charged by the broker. Non-metal materials consist of corrugated cardboard, mixed paper, mixed plastics, aluminum and tin cans.



In 2021, we made a few small changes that helped with the cost of non-metal recycling and the price of metals increased substantially.

The recycling programs managed by the Department diverted a total of 18,433 tons of material from the landfill in 2022. This includes all materials removed from the waste stream at transfer stations and rural sites. This represents a decrease of 22.6% or 5,385 tons from last year. This decrease is largely due wood recycling. A windstorm in January of 2021 caused a large amount of wood debris to be recycled. See Appendix D for additional data regarding recycling.

Rural Residential Collection System

There are 12 rural residential collection sites spread throughout the county, of which the County owns the property for four. There are two staffed sites in the northern portion of the County and 10 collection sites on the east and west side of Coeur d’Alene lake and in the southern portion of the county. The challenge is to keep this waste stream confined to household waste from Kootenai County residents. Over the years, changes implemented include staffing sites and increasing public awareness for unacceptable material at these sites. Another challenge is to restrict out of county/out of state use and ensure they are used by the citizens who pay for the system.

Rural sites received 16,036 tons of waste in 2022. This represents 6% of the waste processed in Kootenai County. The total waste was 2,006 tons less, or an 11% decrease, than 2021. This change reflects the reduction of illegal disposal of waste being brought to our residential rural sites from out-of-county as well as commercially. Customers removed 269 tons of material by placing items into the recycling bins provided at these sites.

The two staffed northern sites are open the same hours and days as the transfer stations. These sites assisted 205,185 site visits in 2022. This is a decrease of 341 or less than 1% from the total customers reported in 2021. These two staffed sites processed 7,416 tons of waste, which is up 419 tons or 6% from last year.

Ten other collection sites make up the remaining portions of the rural collection system. Waste collected from these other sites equaled 8,620 tons which is a decrease of 22% or 2,426 tons.

The Department focused on site surveillance beginning in 2021 and continued the efforts in 2022. We collaborate with the Kootenai County Sheriff's Office for additional patrolling of the rural sites by funding a full-time officer position. Improvements have also been made to our video surveillance at locations that are not staffed.

As of October 1, 2022, Sunshine Disposal began hauling waste from the rural sites. This change also brought new blue bins to each rural location.



Household Hazardous Waste (HHW)

Both transfer stations operate year-round HHW collection facilities. The Ramsey site is open Wednesdays and Saturdays from 8:00 a.m. to 4:00 p.m. The Prairie site is open on Fridays and Saturdays at the same hours. These facilities accept up to ten (10) gallons from residential customers only. Commercial hazardous waste is not accepted at any County sites.

Most communities offer limited HHW collection (some only a few days per year). The Department offers these services over 200 days per year. Limiting days is necessary as trained and certified technicians are responsible for safe identification, acceptance, material handling, packaging, shipping, etc. to avoid spills, contaminations, injuries, or improper storage of materials.

Only household hazardous waste is accepted. There are restrictions on types and volumes of materials set forth in the Panhandle Health District Critical Materials Regulation/Certification and

the facility operating permit. Transfer stations are Tier II facilities which are permitted to accept municipal solid waste and no industrial or commercial hazardous waste.

The Department processed approximately 191 tons of special waste through the HHW program. See Appendix D for the breakdown of these materials.

All paint is collected in the HHW programs at the transfer stations. Staff sort and separate the paint and set aside latex paint for shipment to the landfill. Landfill staff mix the latex paint with a Posi-shell® material and spray it over the face of the landfill as daily cover. This unique approach provides the department with a cost-effective and environmentally safe alternative cover and reduces expenses for transportation of HHW disposal. This cover system also saves very valuable landfill air space.



A large time component in processing special waste each day is the removal of refrigerants from units (refrigerators, freezers, AC units) brought into the transfer station. The number of units processed by the staff in 2022 was 5,563, which is 257 more units than in 2021. Within the last 5-years, the department has decommissioned almost 25,000 units.



See Appendix E for additional data relating to HHW collection.

Index to Appendix “A” DEQ Reporting Requirements

In May 2009, Idaho Department of Environmental Quality terminated the Conditional Use Permit and Consent Order for the Kootenai County Farm Landfill. DEQ requires that the following reports and documents are included in the department’s annual report each year.

The following is a summary of the information provided to Idaho Department of Environmental Quality (DEQ) and Idaho Panhandle Health District (PHD) with this annual report.

A-1 Inspections and Reports: Annual report for 2021 was submitted to DEQ and PHD in March 2022. On May 10, 2022, Panhandle Health District conducted a Critical Materials inspection at the Ramsey Transfer Station. A 3-5 year landfill inspection was conducted in September of 2022.

A-2 Tier 1 Operating Air Quality Permit: Copies of all Tier 1, Title V Air Quality Permit documents and reports have been provided and can be viewed at the Idaho DEQ office in Coeur d’Alene.

A-3 Closure and Post-Closure Plan: There were no changes or modifications to the Closure Plan in 2022.

A-4 Financial Assurance Plan (FAP): Updated information regarding monies spent and set aside to fund future closure and post-closure requirements per §39-7417 of Idaho Code has been included in the electronic version of this report. A copy of the letter from Kootenai County Finance Director, Brandi Falcon, is included herein.

A-5 Landfill Gas Reporting: Fighting Creek gas system reports were included in the required reporting to the EPA, a copy of which is included in the electronic version of this report. The Ramsey gas system report is included in the electronic version of this annual report.

A-6 Ground Water Summary: The electronic reports and data from bi-annual ground water monitoring as described in the Ground Water Monitoring Plan is included in the electronic version of this report.

A-7 Leachate Report: A summary of the performance of the leachate treatment and disposal system during the preceding calendar year containing the same information as previously reported in the annual leachate report is included in the electronic version of this report.

A-8 Surface Water: The Department complied with the regulations of the EPA regarding MSGP and SWPPP. Copies of these reports have been provided, previously, to DEQ, but are included in the CD accompanying this report to DEQ.

A-9 Plans and Specifications: No construction completed in 2022 required approval of plans and specifications.

Appendix A-1: Inspections and Reports

Below are the inspections and/or reports completed during calendar year 2022:

- a) On March 29, 2022, the department submitted the 2021 Waste Stream Analysis Report to DEQ and Panhandle Health District.
- b) Panhandle Health District conducted a Critical Materials inspection on May 10, 2022 at the Ramsey Transfer Station. A copy of the Compliance Certificate is included herein.
- c) On September 28, 2022, Idaho DEQ and Panhandle Health District conducted a 3-5 year landfill inspection. We haven't received a report with the findings from the inspection as of the time of this report.



REC'D MAY 16 2022

PANHANDLE HEALTH DISTRICT

Healthy People in Healthy Communities

Public Health
Prevent. Promote. Protect.

Panhandle Health District

8500 N. ATLAS ROAD
HAYDEN, IDAHO 83835
<http://phd1.idaho.gov>

May 10, 2022

DOUG GOODWIN
KOOTENAI COUNTY SOLID WASTE RAMSEY TRANSFER
3650 N RAMSEY RD
COEUR D ALENE, ID 83815

RE: *required compliance certificate for current operations at KOOTENAI COUNTY SOLID WASTE RAMSEY TRANSFER*

Dear MR GOODWIN,

Thank you for the time and effort spent on complying with Panhandle Health District's Critical Materials Regulation. The enclosed Critical Materials Compliance Certificate shows that your fixed facility has satisfied the Health District's requirements for storage, use and handling of "critical materials" over the Rathdrum Prairie Aquifer.

Please post your compliance certificate in a conspicuous place.

Please keep in mind that any of the following activities shall require a new application to Panhandle Health District to determine continued compliance with the regulation:

1. Establishing a new use that would qualify as a Fixed Facility.
2. Remodeling, operating changes, or expansion of the Fixed Facility which would modify the type or quantity of Critical Materials used.
3. Changes in the location or method of use, storage, manufacture, or handling of Critical Materials at your Fixed Facility.
4. A change in ownership or addition of new Critical Materials meeting the quantity thresholds established by the Critical Materials Regulation at your Fixed Facility.

Thank you for your cooperation and participation in our Aquifer Protection Program.

Sincerely,

Joshua Riehle
Registered EHS

Encl: CMCC

A-1 (b)

Panhandle Health District
CRITICAL MATERIALS COMPLIANCE CERTIFICATE

Issuance Date 5/10/2022

5/9/2024 Expiration Date

Issued to DOUG GOODWIN
Name

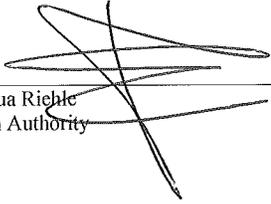
KOOTENAI COUNTY SOLID WASTE RAMSEY TRANSFER
Business Name

C-9215-000-002-A
Parcel Number

3650 N RAMSEY RD
Location

This permit is non-transferable and is the property of the issuing agency and may be revoked for failure to maintain compliance with Section 41.01.01.400 of the Environmental Health Code.

KOOTENAI
County


Joshua Riehl
Health Authority

Appendix A-2: Tier 1 Operating Air Quality Permit

The Department has maintained compliance with the Tier 1, Title V Air Quality Permit. Copies of the semi-annual and annual reports to the EPA are included in the electronic version of this report.

Idaho DEQ approved a new Tier 1 Operating Permit effective September 9, 2022. The permit and reporting documents can be reviewed at the Idaho DEQ office in Coeur d'Alene, Idaho or at the administration office of the Solid Waste Department.

- a) The AQ-C4 for the reporting period of July 1, 2022 to December 31, 2022 is included herein.
- b) The AQ-C1 for the reporting period of July 1, 2021 to June 30, 2022 is included herein.

TIER I SEMIANNUAL REPORT

FORM AQ-C4

FACILITY INFORMATION

Facility/Permittee Name: Kootenai County Farm Landfill
Co-Permittee Name(s): _____
Facility Location: 22089 South Highway 95, Coeur d'Alene, Idaho 83814
AIRS Facility No.: EPA Plant ID: 110028125516 Idaho DEQ: 055-00044
Facility Contact: John Phillips Ph: 208-446-1430 Fax: 208-446-1431

PERMIT AND COMPLIANCE INFORMATION

Tier I Operating Permit No.: T1-2021.0006 Project 62583 Issuance Date: Sept 9, 2022
Tier I Operating Permit No.: _____ Issuance Date: _____
Compliance Reporting Period: From: July 1, 2022 To: Dec 31, 2022
Deviations Reported This Period? Yes No

List of Attachments:

<input checked="" type="checkbox"/> Semiannual Monitoring Table (Form AQ-C5)	No. of Pages: <u>5</u>
<input checked="" type="checkbox"/> Semiannual Deviation Summary Table (Form AQ-C3)	No. of Pages: <u>2</u>
<input checked="" type="checkbox"/> Other: <u>Surface Emission Summary - Sept & Dec 2022</u>	No. of Pages: <u>5</u>
<u>Flare Facility Ledger</u>	No. of Pages: <u>3</u>
<u>Farm Landfill Gas Collection Report</u>	No. of Pages: <u>71</u>
_____	No. of Pages: _____
_____	No. of Pages: _____
_____	No. of Pages: _____

Certification of Truth, Accuracy, and Completeness (by Responsible Official)

I hereby certify that based on information and belief formed after reasonable inquiry, the statements and information contained in this and any attached and/or referenced document(s) are true, accurate, and complete in accordance with IDAPA 58.01.01.123-124.



Responsible Official Signature
John Phillips
Print or Type Responsible Official Name

Director

Responsible Official Title

01/27/2023

Date

Co-Permittee Responsible Official Signature

Print or Type Co-Permittee Responsible Official Name

Co-Permittee Responsible Official Title

Date

TIER I ANNUAL COMPLIANCE CERTIFICATION

FORM AQ-C1

FACILITY INFORMATION

Facility/Permittee Name: Kootenai County Farm Landfill
Co-Permittee Name(s): _____
Facility Location: 22089 South Highway 95
AIRS Facility No.: EPA Plant ID: 110028125516 Idaho DEQ: 055-00044
Facility Contact: John Phillips Ph: 208-446-1441 Fax: _____

PERMIT AND COMPLIANCE INFORMATION

Tier I Operating Permit No.: T1-2015.0038 Issuance Date: October 25, 2016
Tier I Operating Permit No.: _____ Issuance Date: _____
Compliance Reporting Period: From: July 1, 2021 To: June 30, 2022
Is This Intended To Be A Semiannual Report Also? Yes No
Deviations Reported This Period? Yes No

List of Attachments: Annual Compliance Certification Table (Form AQ-C2) No. of Pages: 14
 Semiannual Deviation Summary Table (Form AQ-C3) No. of Pages: 42
 Other: _____ No. of Pages: _____
Flare Facility Ledger No. of Pages: 6
New Collector (Well/Trench) Ledger No. of Pages: 2
Landfill Cover Integrity Evaluation No. of Pages: 6
Farm Landfill Gas Collection Report No. of Pages: 102
_____ No. of Pages: _____

Certification of Truth, Accuracy, and Completeness (by Responsible Official)

I hereby certify that based on information and belief formed after reasonable inquiry, the statements and information contained in this and any attached and/or referenced document(s) are true, accurate, and complete in accordance with IDAPA 58.01.01.123-124.



Responsible Official Signature

Director

Responsible Official Title

07/28/2022

Date

John Phillips

Print or Type Responsible Official Name

Co-Permittee Responsible Official Signature

Co-Permittee Responsible Official Title

Date

Print or Type Co-Permittee Responsible Official Name

Appendix A-3: Kootenai County Farm Landfill Closure and Post-Closure Plan

No changes were made to the Closure and Post-Closure Plan since 2010. The plans are available for inspection at the Idaho DEQ office in Coeur d'Alene and the administration office of the Kootenai County Solid Waste Department.

Appendix A-4: Financial Assurance for Closure and Post-Closure Activities

Enclosed is a letter of Financial Assurance from the Kootenai County Finance Director stating that Kootenai County meets the financial obligations of Closure and Post-Closure for the Fighting Creek Farm Landfill.



Kootenai County Auditor

Jennifer Locke - Clerk

451 Government Way · P.O. Box 9000 · Coeur d'Alene, ID 83816-9000

Phone (208)446-1650 · Fax (208)446-1662

<http://www.kcgov.us/departments/auditor> · Email kcauditor@kcgov.us

March 10, 2023

Idaho Department of Environmental Quality
Attn: Katy Baker-Casile, Engineering Manager
2110 Ironwood Parkway
Coeur d'Alene, ID 83814

RE: Kootenai County Farm Landfill - Closure and Post-Closure Funding

Dear Ms. Baker-Casile;

The financial liability associated with monitoring the closure and post-closure responsibilities, assumed by Kootenai County, is fully funded for the portion of the Kootenai County Farm Landfill (Fighting Creek) that has been depleted to date. The estimated liability at the end of our most recently completed fiscal year is defined and summarized on the attached schedule, which indicates an accrued obligation balance of \$14,001,000.

Additionally, this information will be included in our (Audited) Annual Comprehensive Financial Report for Kootenai County, Idaho for the year ending September 30, 2022. The restricted cash balance for closure and post-closure will be displayed in the Business-type Activities column under the Assets section of the report and will support or exceed the total noted above.

Please contact me for further questions or additional assistance. I can be reached at the address above, or by phone at (208) 446-1665.

Sincerely,

Brandi Falcon Digitally signed by Brandi Falcon
Date: 2023.03.10 12:40:45 -08'00'

Brandi Falcon
Finance Director

cc: Solid Waste
BOCC

Attachment

Appendix A-5 Landfill Gas Reports for Ramsey and Fighting Creek Farm Landfills

The Fighting Creek Farm Landfill is required to report to the EPA twice a year under the Tier 1 annual compliance requirements. Copies of these reports are attached to the electronic version of this report.

The gas system at the old Ramsey Landfill does not fall under the same reporting requirements. The annual gas system report for Ramsey is attached to the electronic version of this report. An excerpt from the report shows below.



835 NORTH POST, SUITE 201 | SPOKANE, WA 99201 | P 509.328.3371

March 29, 2023
Parametrix No. 373-1660-047 (03.02)

John Phillips, Director
Kootenai County Solid Waste Department
3650 N. Ramsey Road
Coeur d'Alene, ID 83815

Re: The Ramsey Road Landfill Gas Control Annual Report for 2022

Dear JP:

This letter is an annual summary of the landfill gas monitoring and landfill gas management activities performed at the Ramsey Road Landfill in 2022. It is specific only to the landfill gas control system. This letter can be forwarded to Idaho Department of Environmental Quality and Panhandle Health District to communicate gas information and evaluations.

The annual letter report includes the follow sections:

- Introduction
- Description of Facilities
- System Monitoring Results
- Conclusions
- Recommendations

INTRODUCTION

The Ramsey Road Landfill is owned by Kootenai County (County) and is located at 3650 N. Ramsey Road, Coeur d'Alene, Idaho 83815. Ramsey Road divides the site into east and west areas. The landfill, which was a municipal solid waste landfill, is now closed. The landfill began accepting waste in 1963 and closed in 1993.

During the summers of 1992 and 1993, a gas control system was installed at the site in both the east and west areas. The gas control system consists of in-refuse wells, perimeter (native soil) wells, horizontal trenches, collection manifold and laterals, condensate traps, and a blower/flare station. Landfill settlement throughout the landfill made it difficult to locate and repair all the pipe failures, resulting in low methane and high oxygen concentrations. Consequently, in December 2002 and January 2003, the buried polyvinyl chloride (PVC) manifold and lateral piping was replaced with high-density polyethylene (HDPE) by the County. In May 2006, four additional shallow gas wells (ER-12 through ER-15) were installed by the County to increase landfill gas collection along the east side to help eliminate methane levels in GP-6 and 7, which are located just outside of the landfill footprint. A down-sized open flare was installed at the blower/flare facility (October 2007) to better handle the low landfill gas stream from the landfill. Two additional gas

Appendix A-6: Ground Water Summary

The bi-annual monitoring requirements for ground water were completed as required in 2022.

The following is an excerpt from the 2021 Ground Water Monitoring Report prepared for Kootenai County Farm Landfill by the Engineering Firm of Parametrix. The full reports are available for review at the Idaho DEQ office in Coeur d'Alene and the administration office of the Solid Waste Department.

Ground water quality results as stated in Sections 2.4 and 2.3.2 of the Summary Report were below primary state or federal groundwater quality criteria.

2.4 Summary and Conclusions

The groundwater quality results for downgradient monitoring wells were below primary state and federal groundwater quality criteria. No VOCs were detected in any of the landfill monitoring wells, except for acetone in M-16 and M-19 during April 2022. Well M-19 is located upgradient of future cells. Acetone is a common laboratory contaminant and is believed to be related to preservative in the sampling vials.

Nitrate concentrations have increased in some wells over the history of monitoring but remain substantially below the groundwater quality criteria. Concentrations in M-9 and M-17 continued to be above the UPL, but the April and October 2022 concentrations in M-16 were below the UPL for the first time since October 2018. Since nitrate concentrations have also shown increases in East Expansion Landfill upgradient well M-15, it is recommended that continued monitoring of nitrate without verification resampling be conducted at these wells.

The April 2022 chloride concentration in well M-16 continued to be above the seasonally adjusted UPL, as previously observed beginning in April 2017, but the October 2022 chloride concentration was below the seasonally adjusted UPL. Overall concentrations in M-16 appear to have stabilized since October 2018, and the 2022 concentrations remained substantially below the secondary MCL of 250 mg/L. Therefore, it is recommended that continued monitoring of chloride without verification resampling be conducted at well M-16.

The October 2022 TOC concentration in well M-16 and the chloride concentration in M-17 were above their respective UPLs. Both these concentrations were substantially below primary State of Idaho or Federal GW quality criteria. The October 2022 TOC concentrations in the upgradient wells were also slightly higher than typically observed. Verification re-sampling will occur in April 2023.

Trends in ammonia concentrations are continuing to be monitored. Concentrations of other leachate indicator parameters in downgradient wells did not show evidence of landfill impacts.

2.3.2 Comparison to Quality Criteria

The groundwater data (Tables A-1 through A-4) were compared to applicable state and federal groundwater quality criteria. Applicable criteria are Federal Maximum Contaminant Levels (MCLs), Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08 et seq.), and Idaho Groundwater Quality Rules (IDAPA 58.01.11).

In the active landfill monitoring wells, the results were all below primary and secondary groundwater quality criteria, except for pH measurements below the lower criteria limit in East Expansion Landfill upgradient well M-15 and downgradient wells M-9, M-16, and M-17 during October 2022. No VOCs were detected except for acetone in M-16 during April 2022. Acetone is a common laboratory contaminant and may be related to the preservative in the sampling vials.

The remaining East Expansion Landfill wells are being sampled to collect background data prior to construction of future cells. The results were all below primary and secondary groundwater quality criteria except for pH measurements below the lower criteria limit in East Expansion Landfill upgradient well M-15 and downgradient well M-19 during October 2022. No VOCs were detected except for acetone in M-19 during April 2022. M-19 is upgradient of future cells, further supporting the origin of the acetone as a contaminant unrelated to the landfill.

Appendix A-7: Kootenai County Farm Landfill Leachate Report

A copy of the report to Idaho DEQ outlining the volume of leachate processed in 2022 and the methods used is attached in the electronic version of this report. In 2022 a total leachate processed was 4,245,847 gallons.



KOOTENAI COUNTY

SOLID WASTE

March 3, 2023

Ms. Katy Baker-Casile, P.E.
%Division of Environmental Quality
2110 Ironwood Parkway
Coeur d'Alene, ID 83814

Re: 2022 Annual Leachate Report – Fighting Creek Farm Landfill

Dear Ms. Baker-Casile,

Attached you will find a spreadsheet that lays out how the Solid Waste Department managed leachate during the 2022 season. The Department processed a total of 4,245,847 gallons of leachate. During the 2022 season we utilized the misting system for processing leachate and no leachate was hauled offsite.

We consult with Drew Norton of the engineering firm, Parametrix, to review the results of our leachate and gas systems. Mr. Norton will continue to look for any inconsistencies or trends appearing from the data collected at the landfill. Leachate quality data will be included within the semiannual and annual groundwater reports.

Please let me know if you have any questions or concerns about this information.

Sincerely,

A handwritten signature in blue ink that reads "Doug Goodwin".

Doug Goodwin
Operations Manager

Appendix A-8: Kootenai County Farm Landfill Surface Water Reporting

The Solid Waste Department complied with the regulations of the EPA regarding the MSGP and SWPPP. Copies of these reports were provided to Idaho DEQ at the time they were submitted. Courtesy copies of the submittals have been included on the CD provided to Idaho DEQ and Idaho Panhandle Health District.

DMR Copy of Record

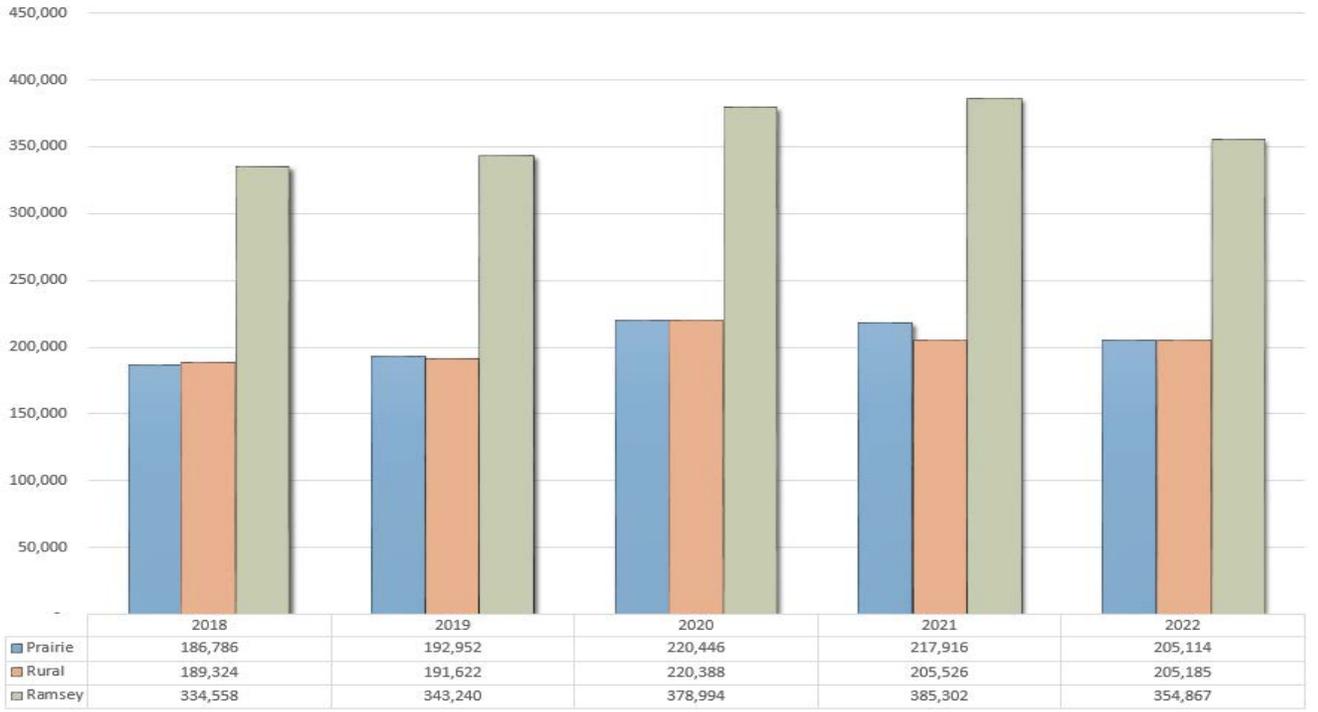
Permit		Permittee: KOOTENAI COUNTY SOLID WASTE		Facility: KOOTENAI COUNTY FIGHTING CREEK FARM LANDFILL														
Permit #: IDR053195	Major: No	Permittee Address: 22089 S. Hwy 95 Coeur D Alene, ID 83814		Facility Location: 22089 S. HWY 95 3850 N. RAMSEY ROAD COEUR D ALENE, ID 83814														
Permitted Feature: SW21 External Outfall		Discharge: SW21-L2 All Landfill, Land App Sites and Open Dumps, except 258.0 Closed: Indicator Monitoring (ph,TSS,COD)																
Report Dates & Status																		
Monitoring Period: From 10/01/22 to 12/31/22		DMR Due Date: 02/28/23		Status: NetDMR Validated														
Considerations for Form Completion																		
Principal Executive Officer																		
First Name: John		Title: Director		Telephone: 208-446-1430														
Last Name: Phillips																		
No Data Indicator (NODI)																		
Form NODI: -																		
Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading			Quality or Concentration			# of Ex.	Frequency of Analysis	Sample Type					
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1				Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3
00400	pH	1 - Effluent Gross	0	--	Sample													
					Permit Req.													
					Value NODI													
00530	Solids, total suspended	1 - Effluent Gross	0	--	Sample													
					Permit Req.													
					Value NODI													
81017	Chemical Oxygen Demand [COD]	1 - Effluent Gross	0	--	Sample													
					Permit Req.													
					Value NODI													
Submission Note																		
If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.																		
Edit Check Errors																		
No errors.																		
Comments																		
Attachments																		
No attachments.																		

Appendix A-9: Plans & Specifications

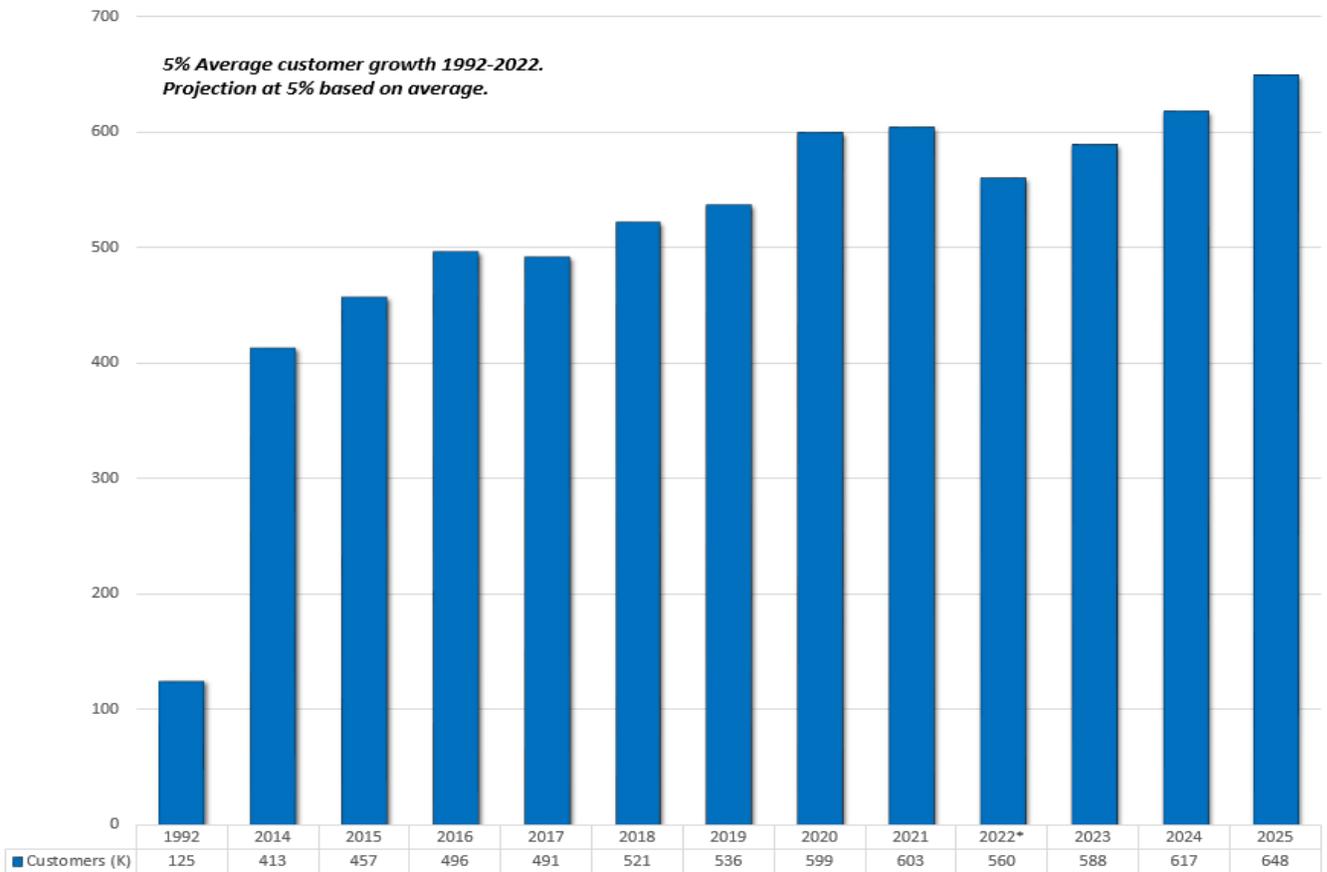
No construction projects or plans completed in 2022 required submittal as part of current permits.

Appendix “B” Customer Statistics

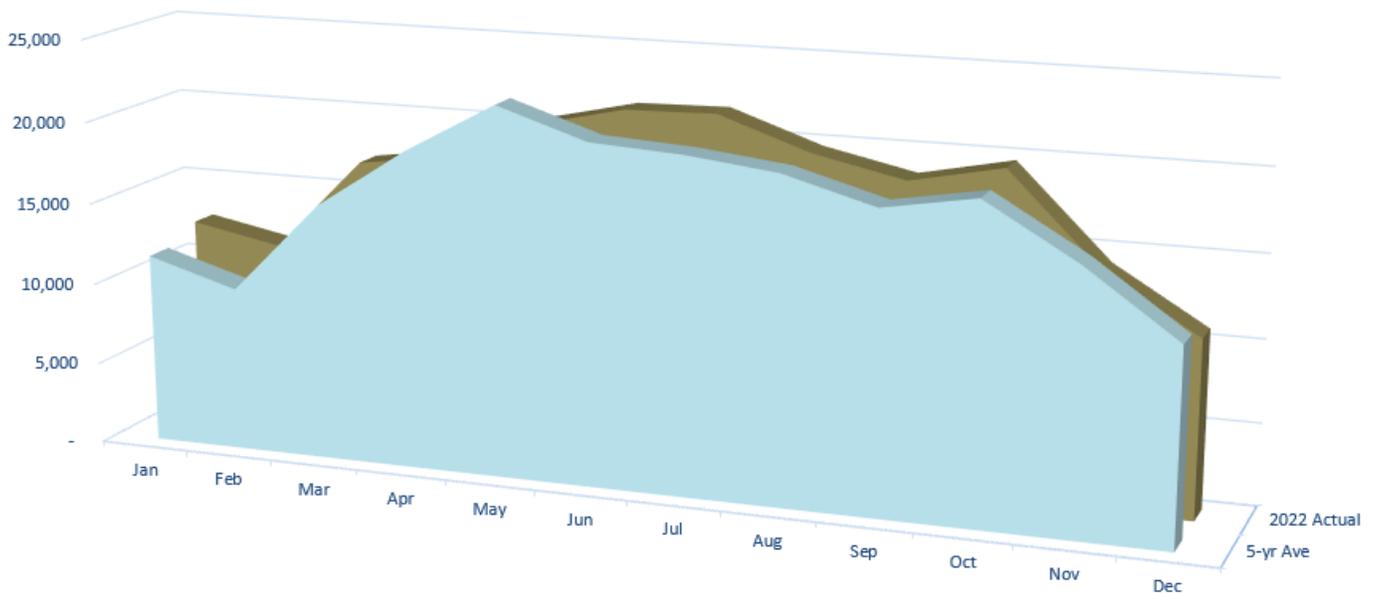
Total Department Customers Total 765,166



Transfer Stations - Customer History

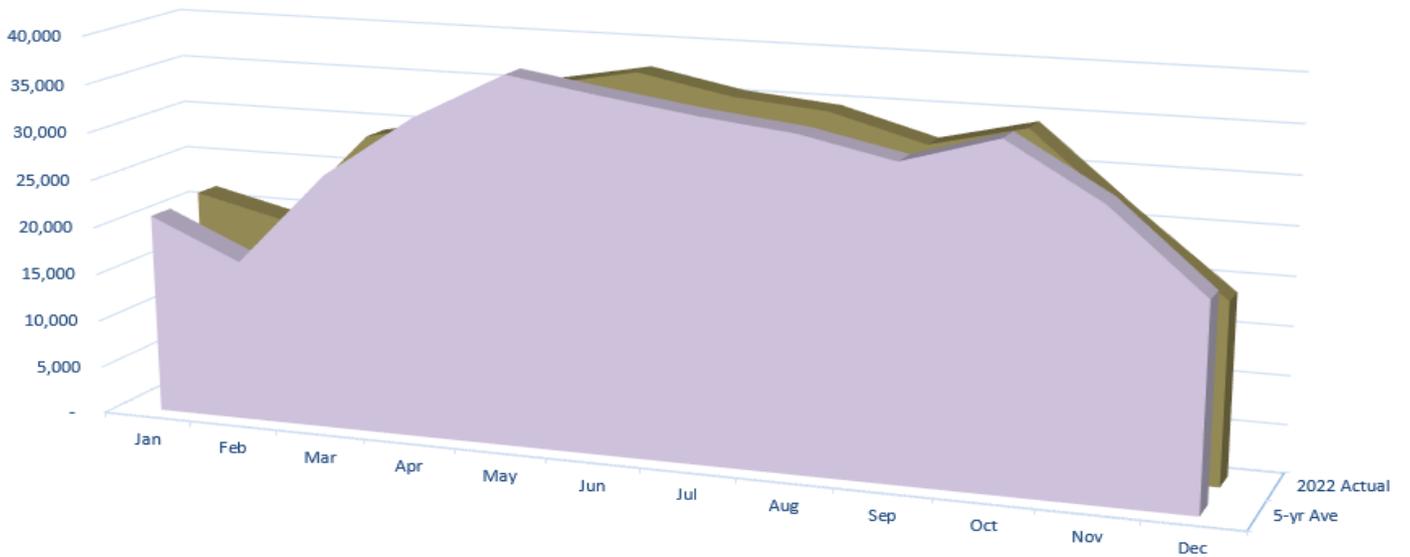


Prairie Monthly Customers 2022 Actual v. 5-Year Average



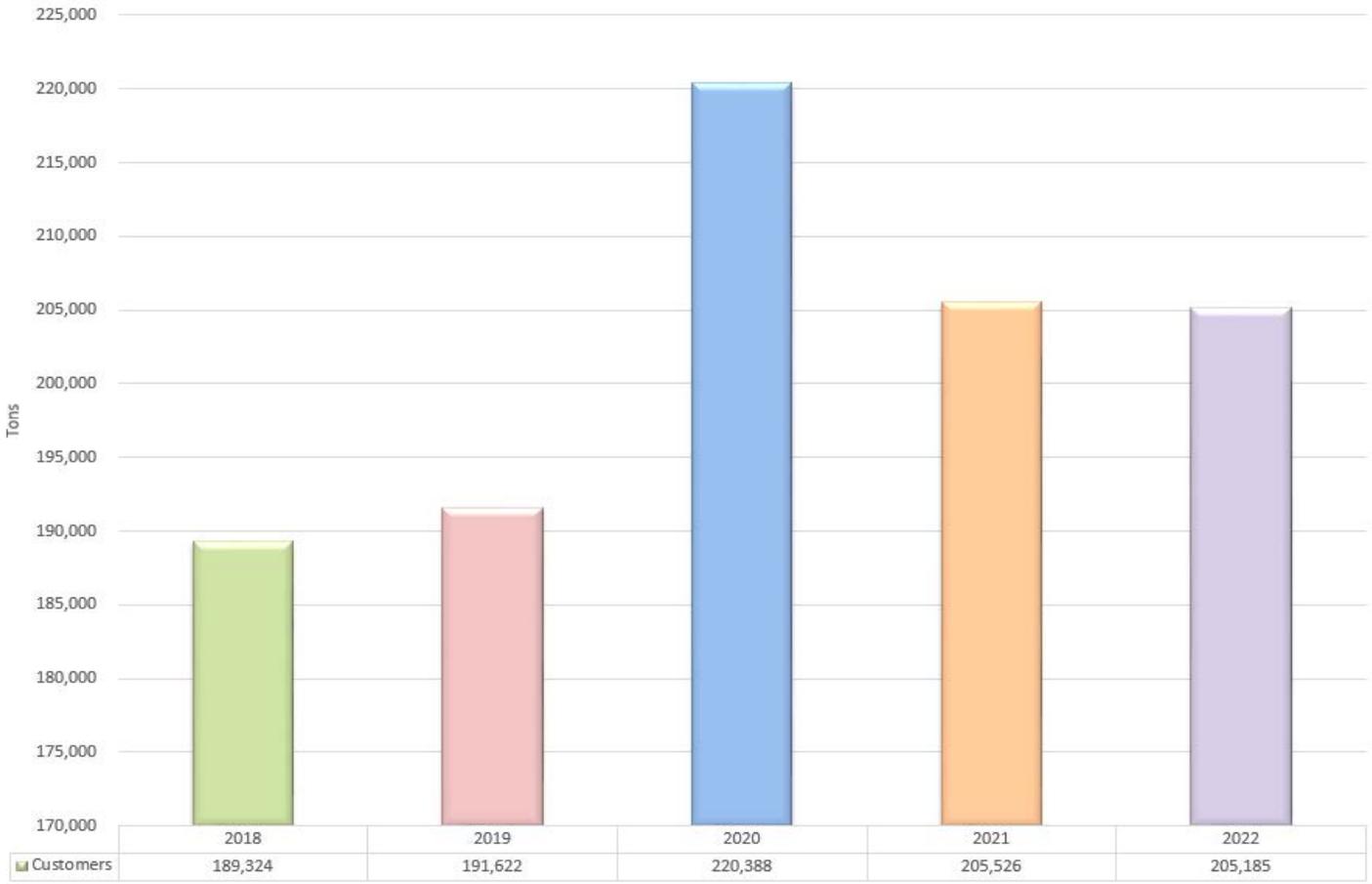
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5-yr Ave	11,611	10,011	15,653	19,329	22,430	20,641	20,318	19,676	18,132	19,110	15,848	11,885
2022 Actual	12,512	11,451	17,100	17,877	20,254	21,501	21,625	19,708	18,511	19,668	14,138	10,769

Ramsey Monthly Customers 2022 Actual v. 5-Year Average

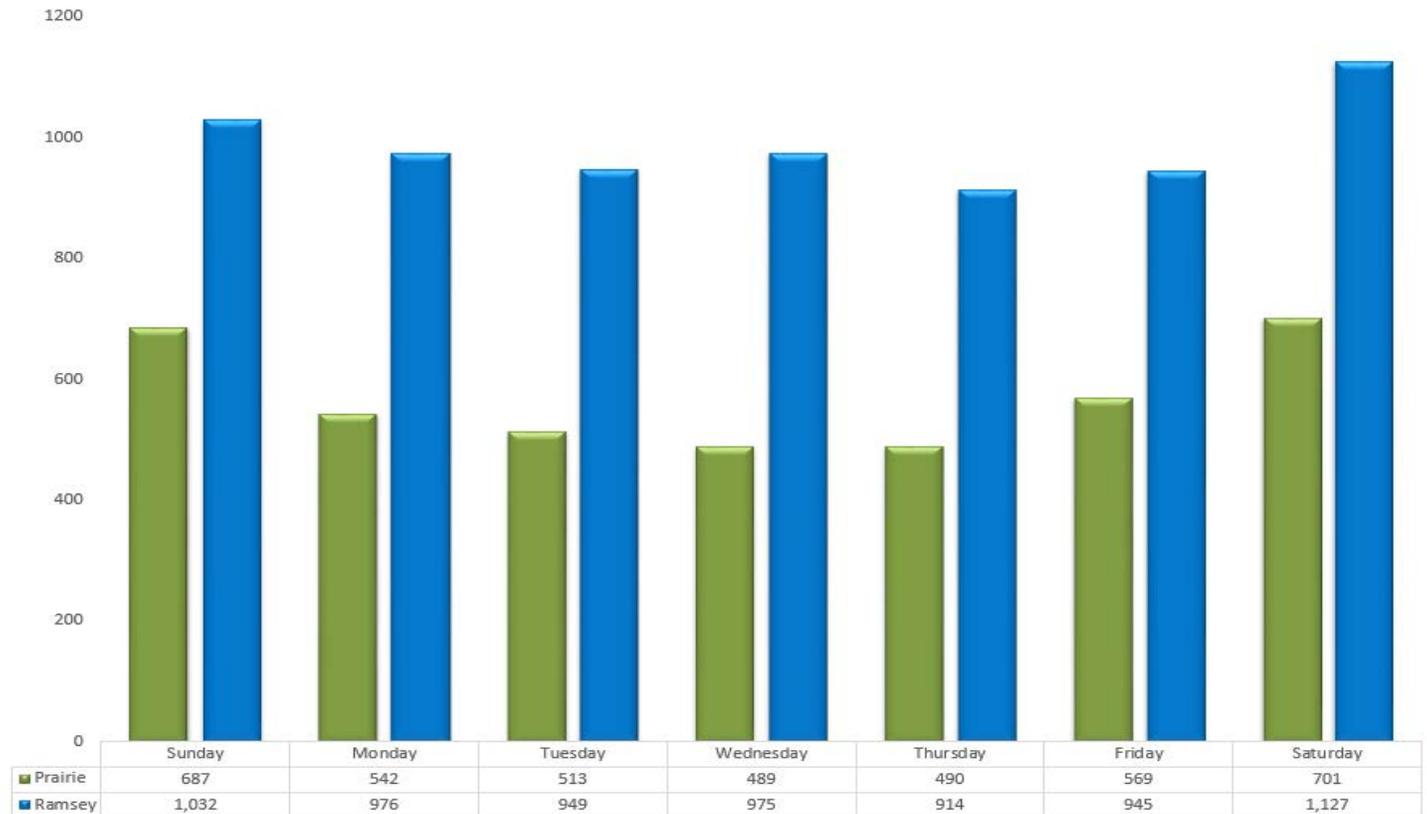


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5-yr Ave	21,007	16,869	26,675	33,205	38,127	36,607	35,222	34,125	32,097	34,966	29,384	21,109
2022 Actual	21,539	19,293	28,925	30,982	35,617	37,363	35,488	34,594	31,947	34,206	26,238	18,675

Rural Staffed Site Customers

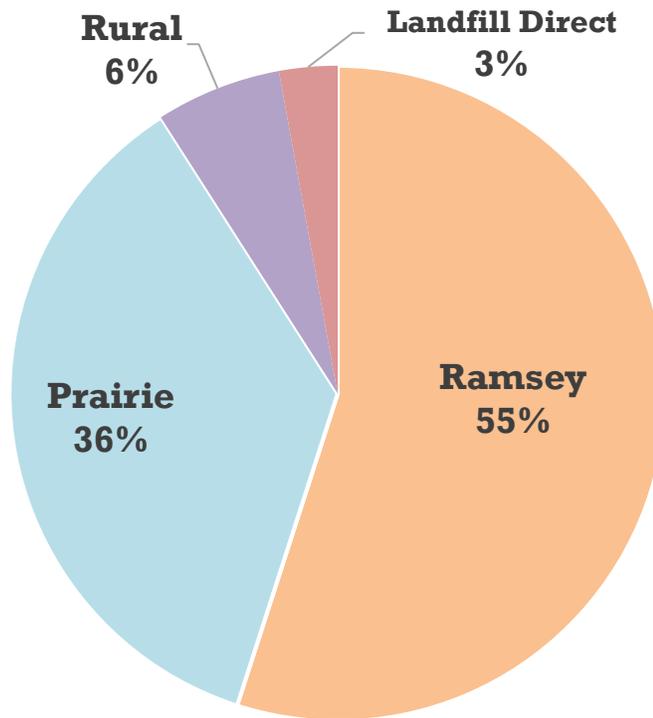


Transfer Station Average Daily Customers

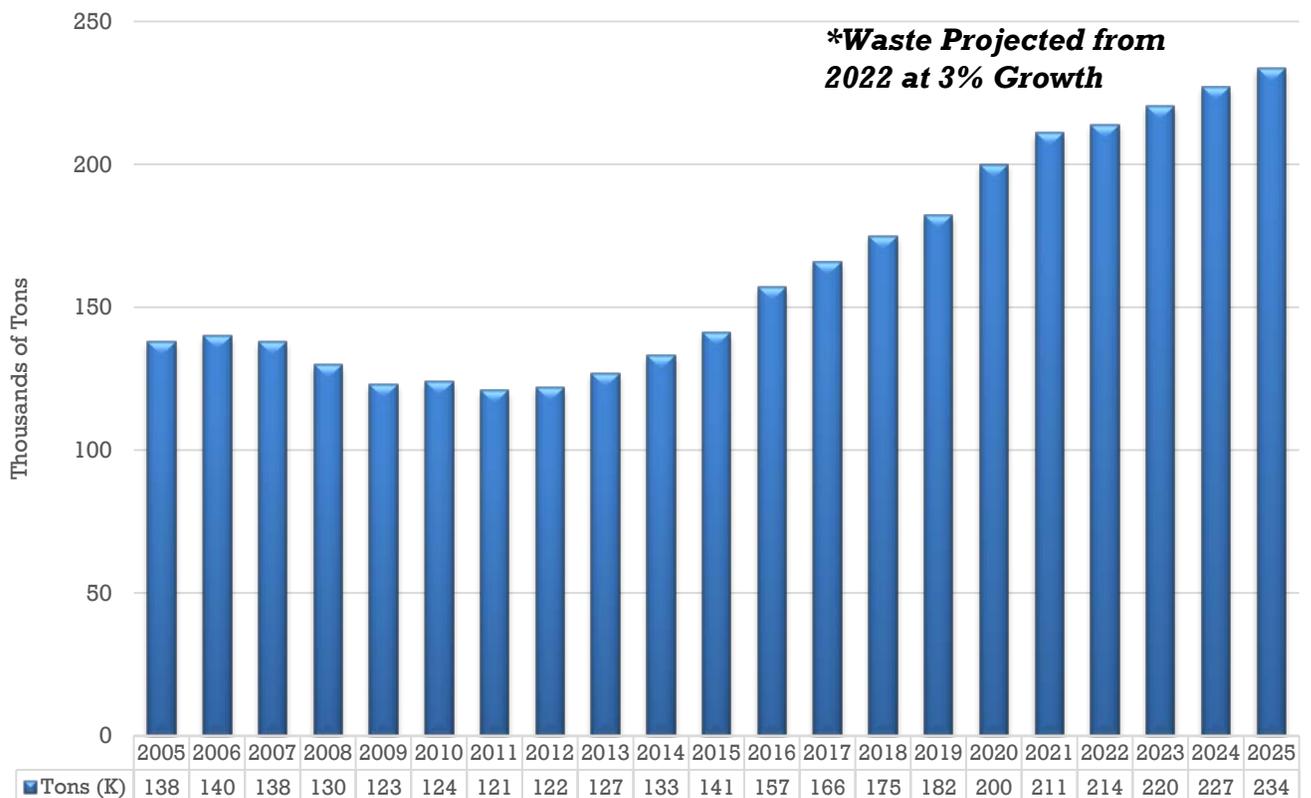


Appendix “C”
Waste Statistics

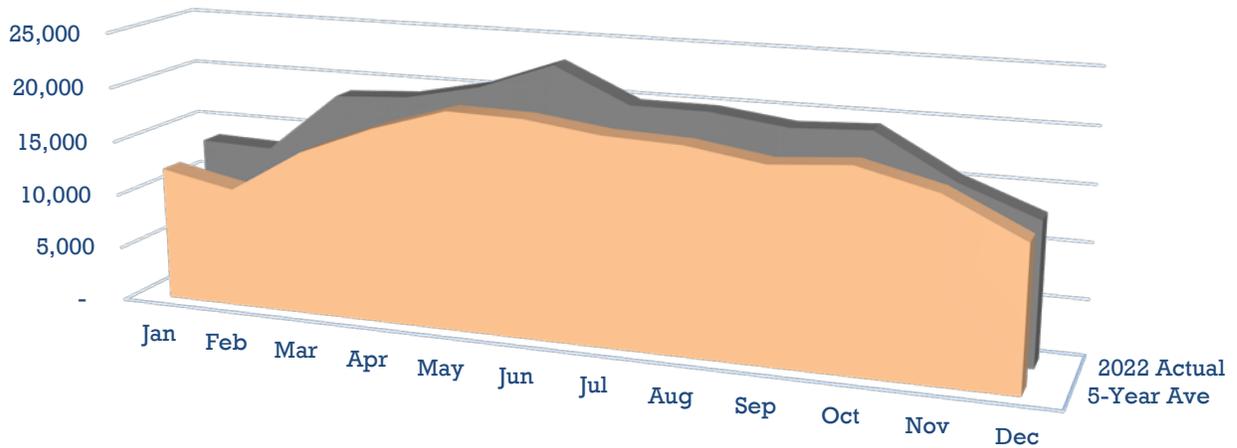
Waste Stream by Location



Landfilled Waste History & Projection*

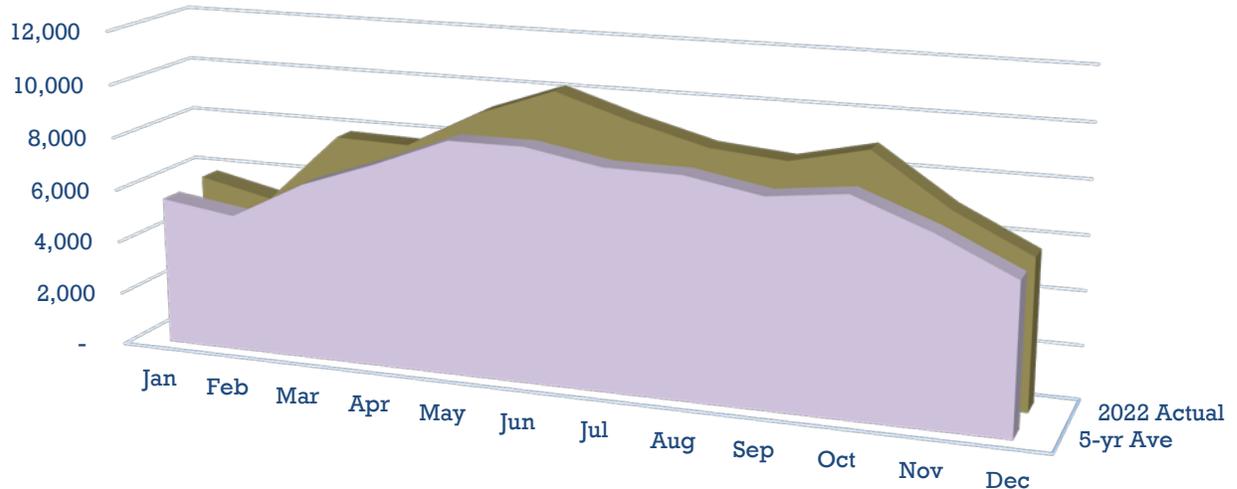


Landfill Monthly Tons 2022 Actual v. 5-Year Average



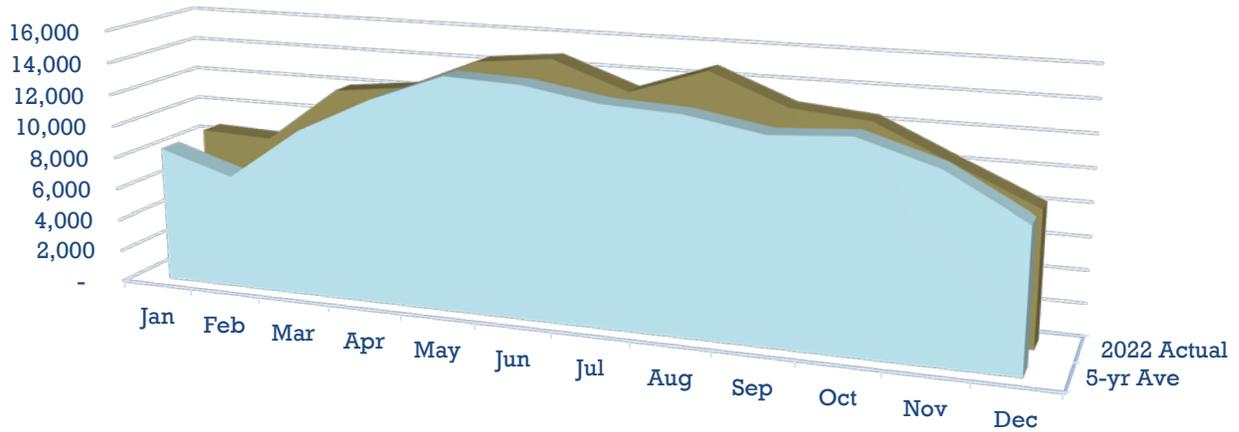
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5-Year Ave	12,272	10,934	14,979	17,661	19,752	19,589	18,699	18,438	17,394	17,931	16,234	12,856
2022 Actual	13,434	13,212	18,707	19,101	20,506	22,981	19,876	19,834	18,964	19,283	15,459	12,821

Prairie Monthly Tons 2022 v. 5-Year Average



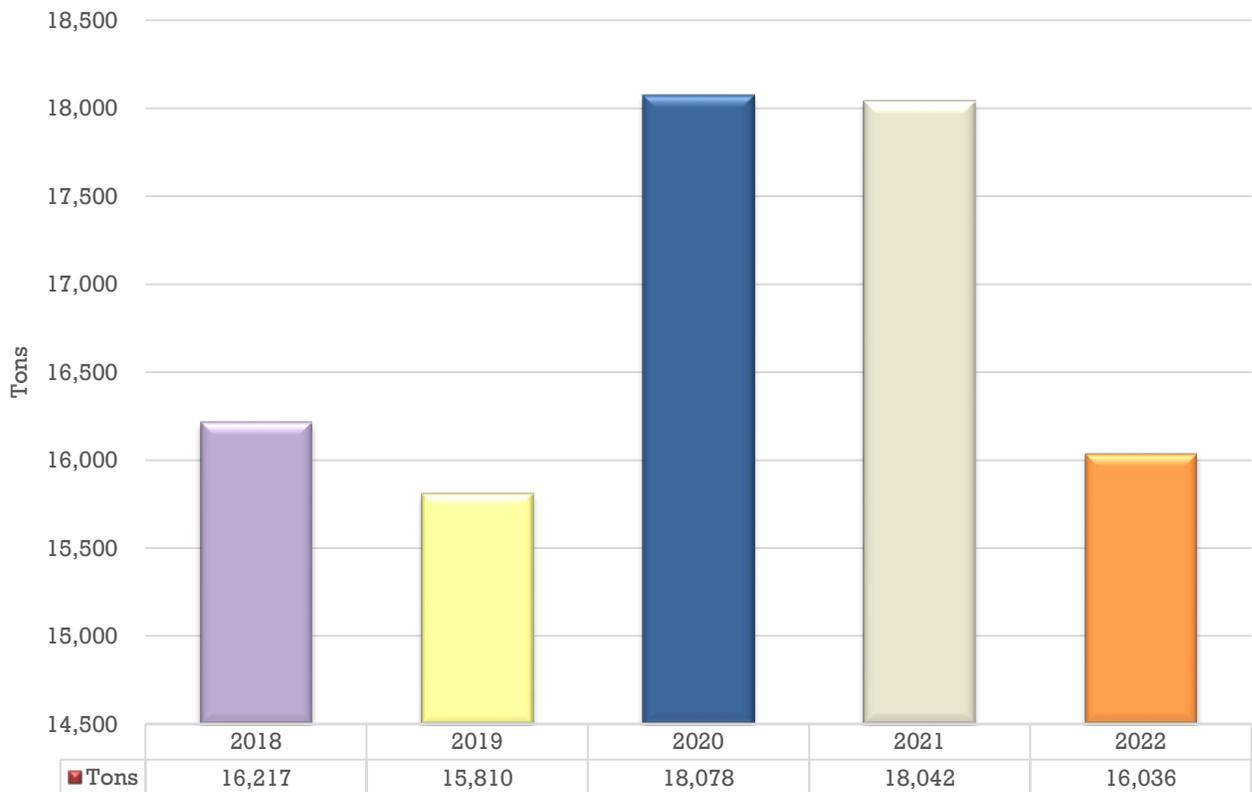
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5-yr Ave	5,583	5,179	6,620	7,608	8,715	8,715	8,210	8,178	7,674	8,007	6,919	5,577
2022 Actual	5,774	5,157	7,783	7,708	9,146	10,158	9,263	8,514	8,266	8,906	6,997	5,598

Ramsey Monthly Tons 2022 Actual v. 5-year Average



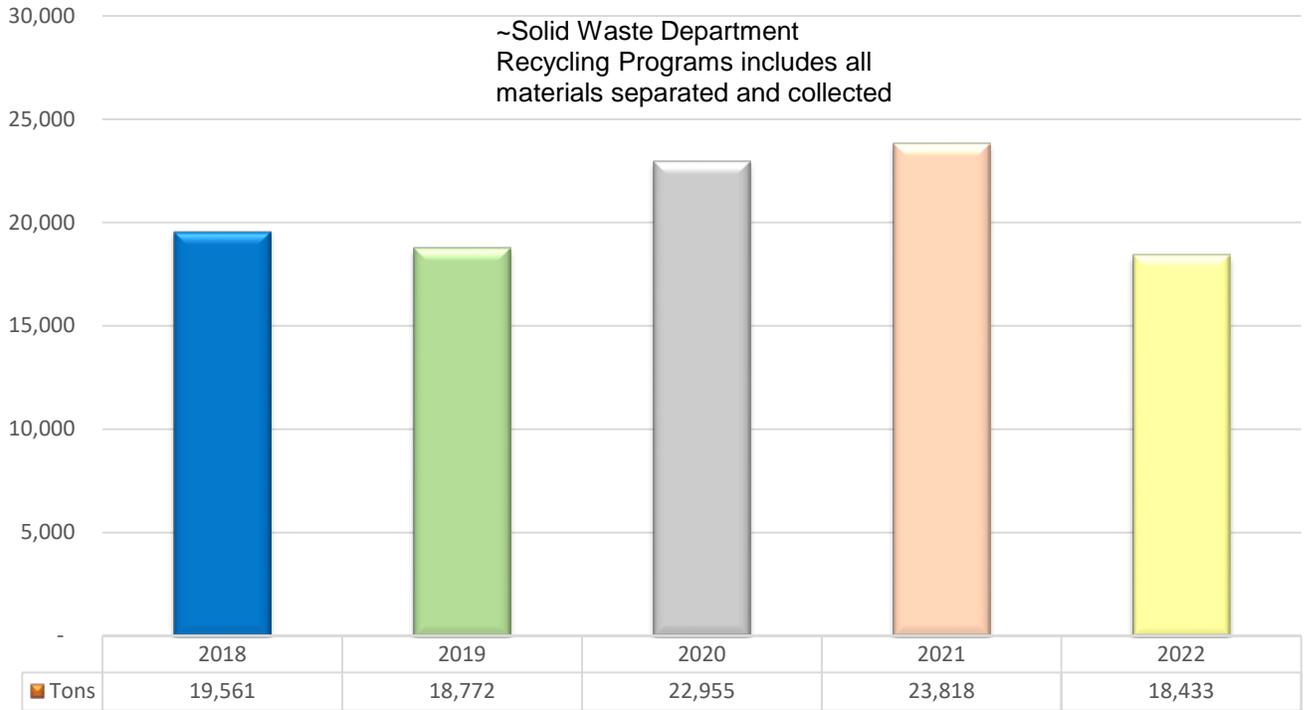
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
■ 5-yr Ave	8,450	7,046	10,348	12,602	14,357	14,164	13,396	13,161	12,354	12,651	11,217	8,601
■ 2022 Actual	8,616	8,439	11,912	12,436	14,375	14,838	13,165	14,770	12,916	12,482	10,304	8,198

Rural Systems Tons 2018 - 2022

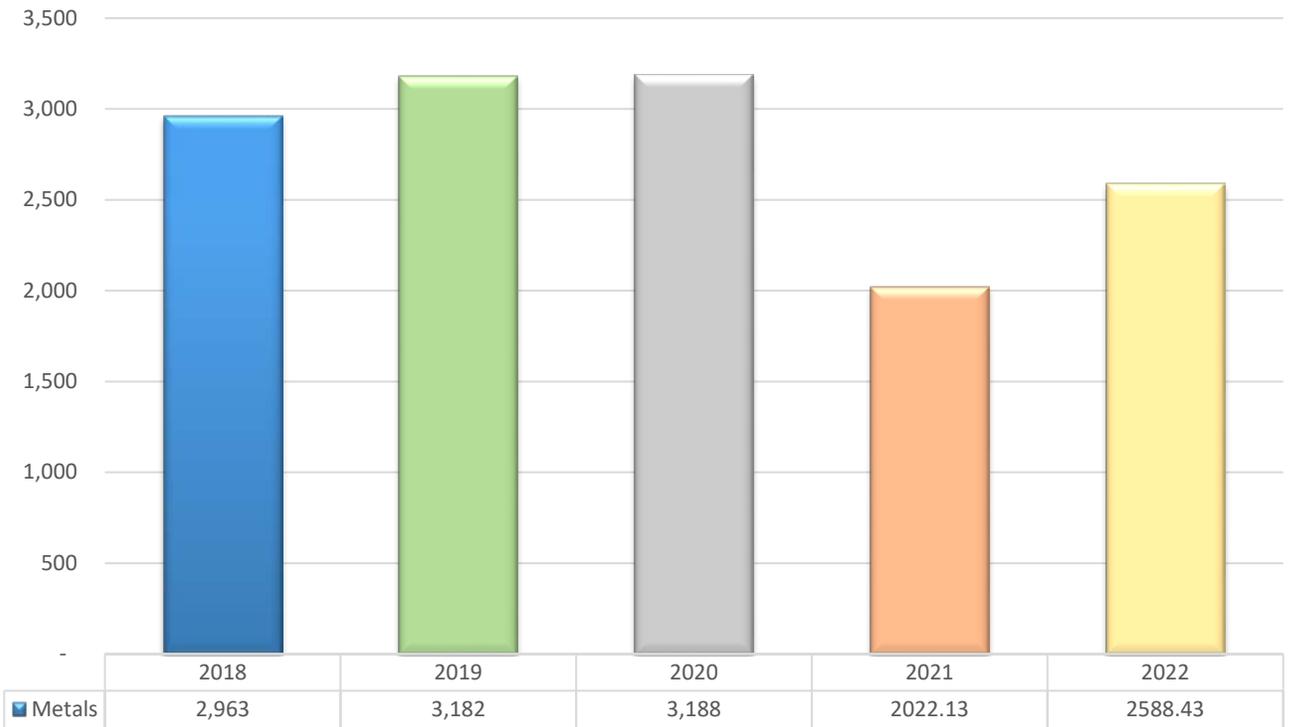


Appendix “D” Recycling

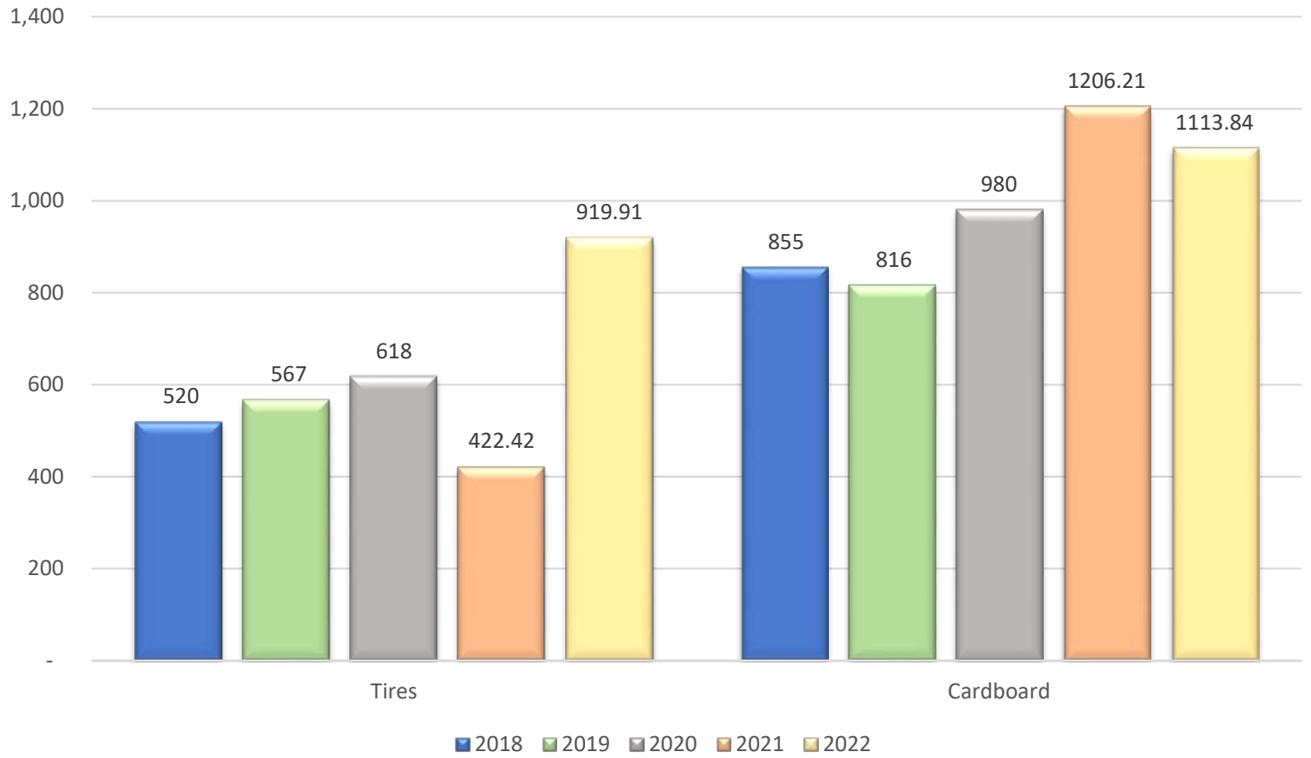
Solid Waste Department Recycling Programs~



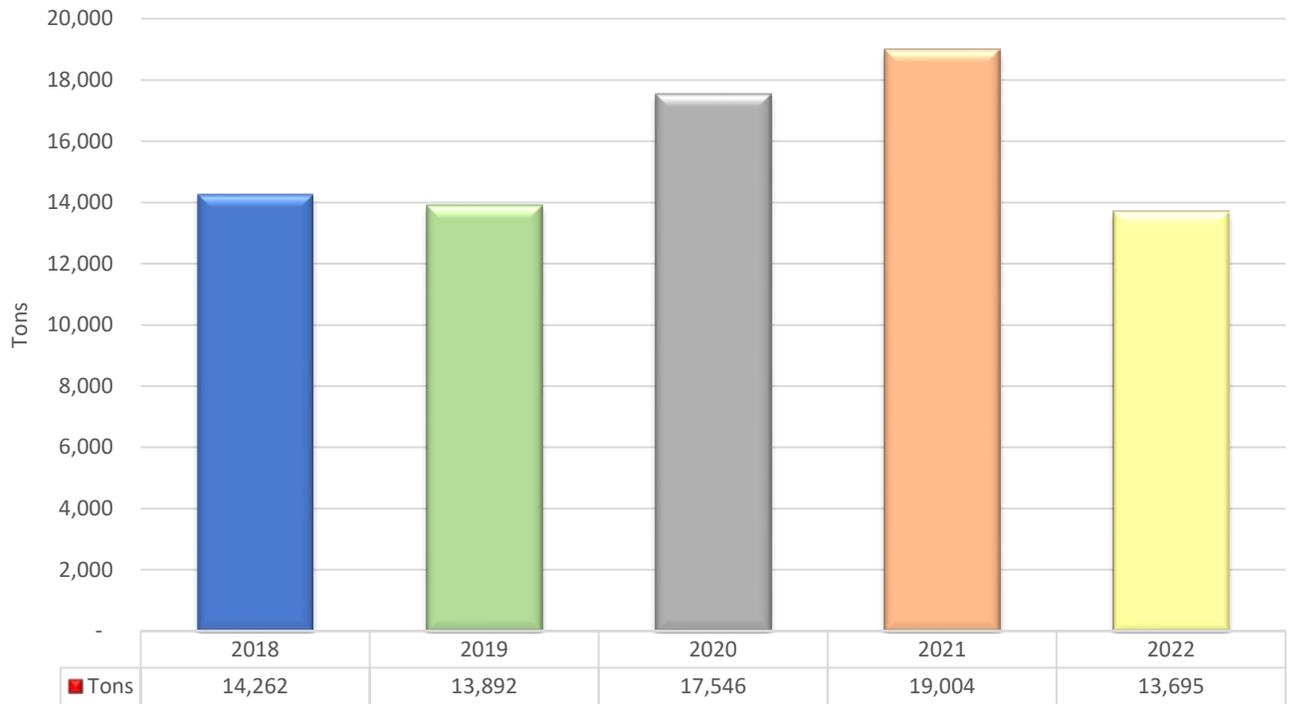
Metals Recycling



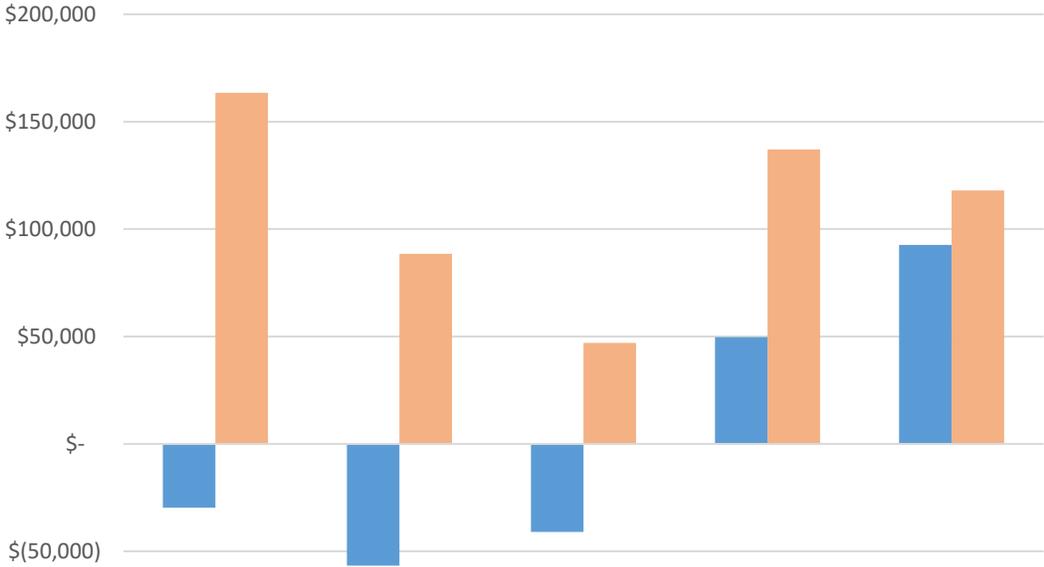
Tires & Cardboard Recycling



Wood Recycling



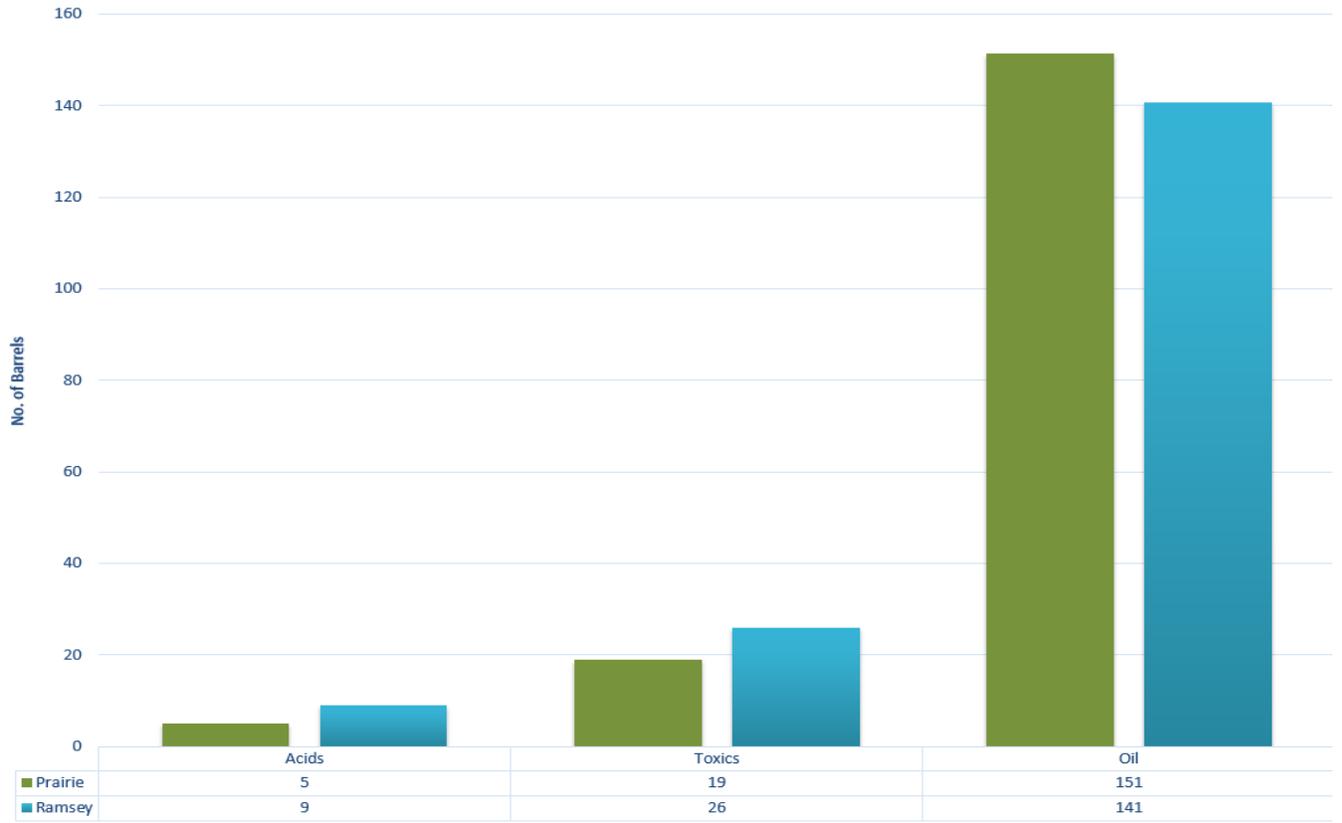
Recycling Revenue



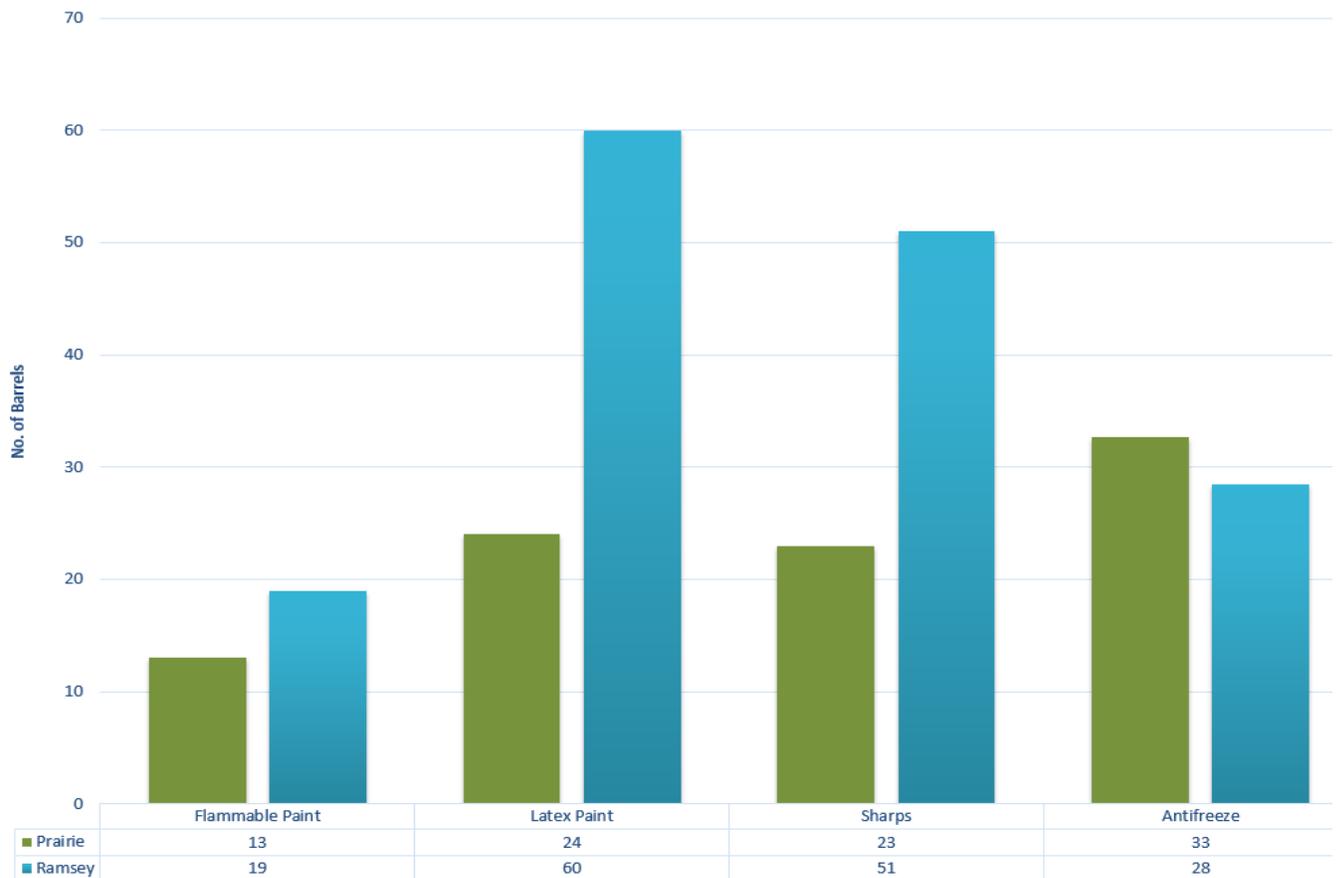
	2018	2019	2020	2021	2022
■ Non-Metal Recycling*	\$(29,692)	\$(56,567)	\$(40,892)	\$49,770	\$92,670
■ Metal Recycling#	\$163,418	\$88,569	\$46,987	\$137,096	\$117,950

Appendix “E”
Household Hazardous Waste (HHW)

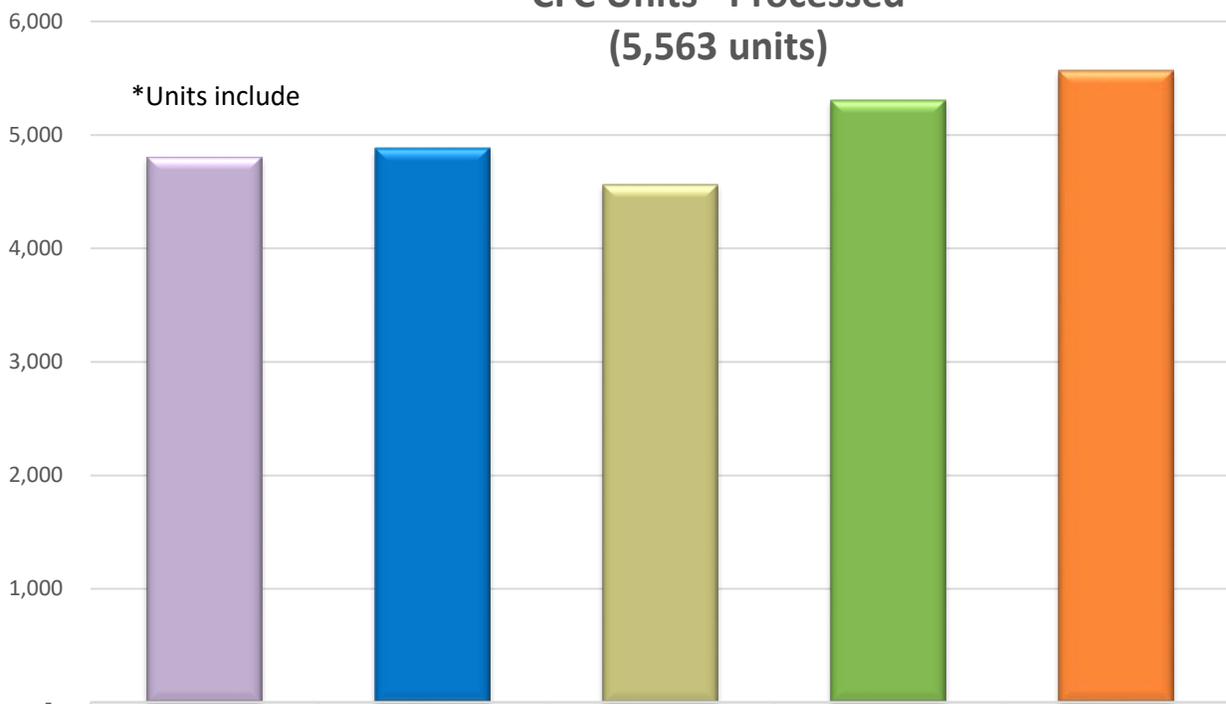
HHW Processed - Acids, Toxics and Oil



HHW Processed - Paint, Sharps and Antifreeze



CFC Units* Processed (5,563 units)



	2018	2019	2020	2021	2022
■ CFC	4,801	4,883	4,562	5,306	5,563

