

KOOTENAI COUNTY SOLID WASTE DEPARTMENT



2014 SOLID WASTE ANALYSIS

KOOTENAI COUNTY SOLID WASTE DEPARTMENT
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KOOTENAI COUNTY

SOLID WASTE

February 5, 2015

I am pleased to present the 2014 Solid Waste Report for Kootenai County. 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.

Detailed reports and information can be viewed at the Idaho DEQ office in Coeur d'Alene or the Administration Office of the Kootenai County Solid Waste Department.

In 2014, the solid waste facilities experienced a jump in overall waste generation and customer counts attributed to the growing local economy.

The transfer facilities and staffed rural sites served 600,325 customers – an increase of 23,856 customers in one year. The landfill realized a 4.6% tonnage increase and managed a total of 132,978 tons.

The County-owned and operated landfill is the cornerstone of the solid waste system and as waste volumes grow, it is critical to carefully plan and implement innovative cost-saving procedures. Although changes are on-going, the key innovative project in 2014 included the construction of a leachate (water that passes through the waste) evaporation system.

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

If you have any questions, please do not hesitate to contact us.

Sincerely,

Cathy Mayer
Solid Waste Director

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Summary

2014 Waste Stream Analysis

This section contains an overview of the Solid Waste System and some of the planning tools used to help meet the needs of Kootenai County residents.

We are committed to provide our citizens with affordable and efficient waste disposal. The Solid Waste Department is an affordable asset to Kootenai County. We provide financial stability to the County in that we generate revenue and are fiscally responsible.

The Solid Waste Department consists of the following:

- Fighting Creek Farm Landfill (open 6 days a week)
- Ramsey Transfer Station (open 7 days a week) and closed landfill
- Granite Landfill (Closed)
- Prairie Transfer Station (open 7 days a week)
- 13 Rural Residential Collection Sites

Flexibility is the key to success. It takes many talents and skills to keep the department running smoothly and successfully. There are a total of 59 full-time employees, with additional seasonal staff for the summer months.

The County owned and operated landfill is the key to this goal. We are always researching alternative methods of disposal and management of leachate. In addition, we seek to discover ways to subsidize recycling programs within Kootenai County.

BUDGET

The Solid Waste Department carefully plans all activities to provide for the maximum benefit of available funding which is critical in today's economy. As an enterprise fund, we operate more like a business than the typical tax based government entity. Solid waste dollars are acquired through fees and kept in a Solid Waste Fund. The Kootenai County Solid Waste Department does not compete for tax dollars. For detailed information about the financial records of the Department, you may view the Comprehensive Annual Report prepared by the Auditor's office on the Kootenai County website:

<http://www.kcgov.us/departments/auditor/financials/downloads.asp>

The Department maintains strategic long-term financial plans and works to finance the required operation and expansion of services within the solid waste system in Kootenai County.

As an enterprise fund, we must pay other County departments for the services they provide to us. In 2014, the Solid Waste Department paid \$670,128 to Kootenai County for services provided by other departments.

Operational budgets are broken down into the following categories. **Please note that construction and capital projects are not included in this chart.** All salaries necessary to support these activities are contained within these budget categories.

ACTIVITY	BUDGET
Administration	\$ 404,394
Ramsey Transfer Station	\$ 2,529,424
Prairie Transfer Station	\$ 1,346,491
Rural System	\$ 869,166
Landfill	\$ 1,823,029
Closure	\$ 470,000
Support Services	\$ 670,128
Total	\$ 8,112,621

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Kootenai County Mission Statement

It is the mission of Kootenai County Government to provide professional service with regard to public safety, essential service, preservation of natural resources and the responsible management of public assets for the common well-being of our citizens.

Vision Statement

An innovative, cost effective government the community can be proud of, committed to a high quality of life and excellence in public service.

Values and Operating Principles

- **Customer Focus**
 - Responsive, Prompt, Compassionate, Quality Service
- **Accountability**
 - Responsible, Cost Effective Use of Public Resources
- **Teamwork**
 - Creative Cooperation
- **Communication**
 - Open and Honest Sharing of Information and Ideas
- **Professionalism**
 - Innovative, Qualified, Honesty, Integrity, Personal Excellence

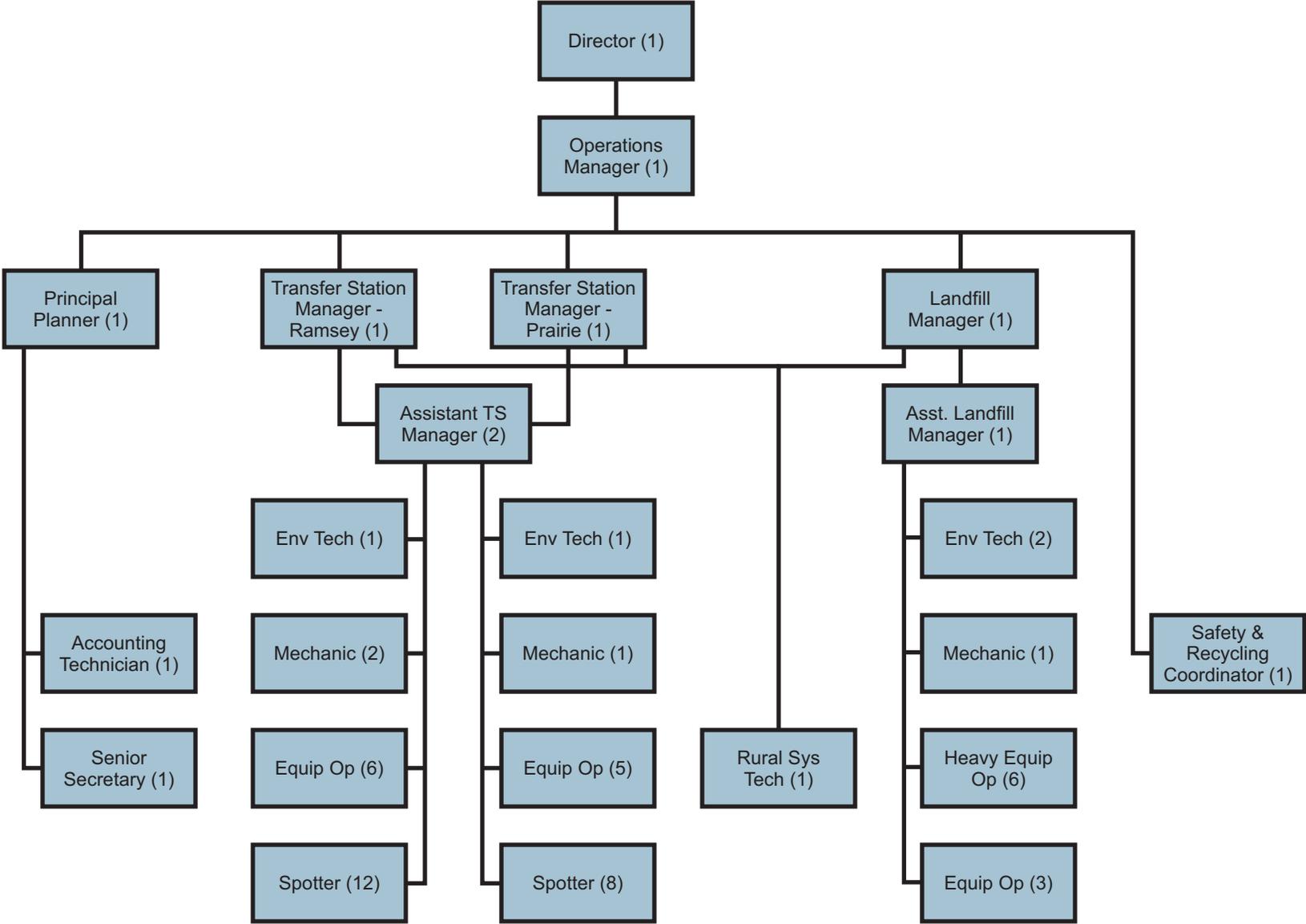


Kootenai County Solid Waste Department Mission Statement

It is the mission of the Kootenai County Solid Waste Department to:

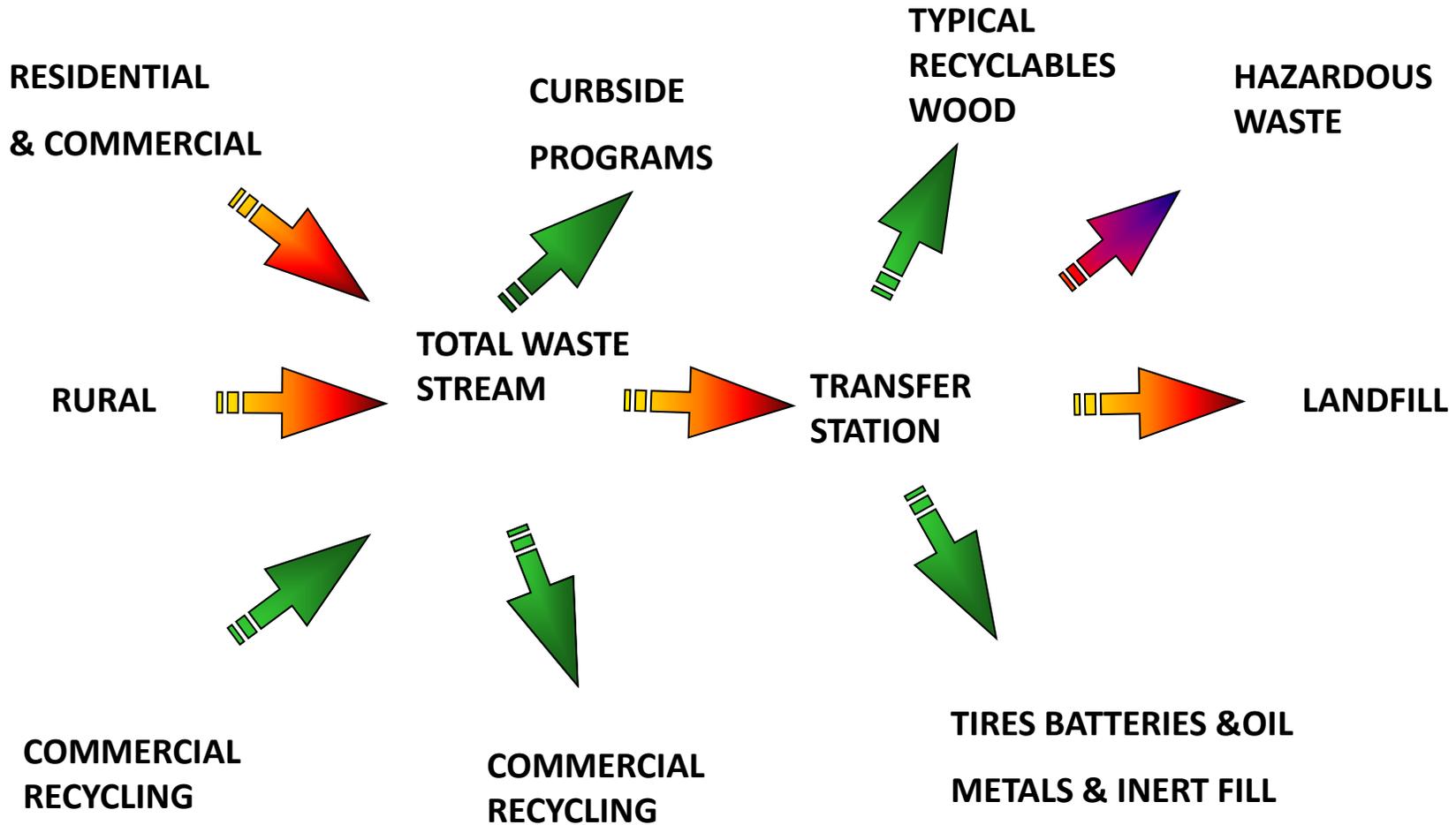
- Protect the public health and well being for all citizens affected directly and indirectly, now and in the future.
- Provide environmentally sound facilities and operations before, during and after dispose of solid waste
- Provide effective and efficient means of solid waste disposal to the citizens of Kootenai County
- Insure the equity of solid waste disposal costs among all citizens

Solid Waste Department



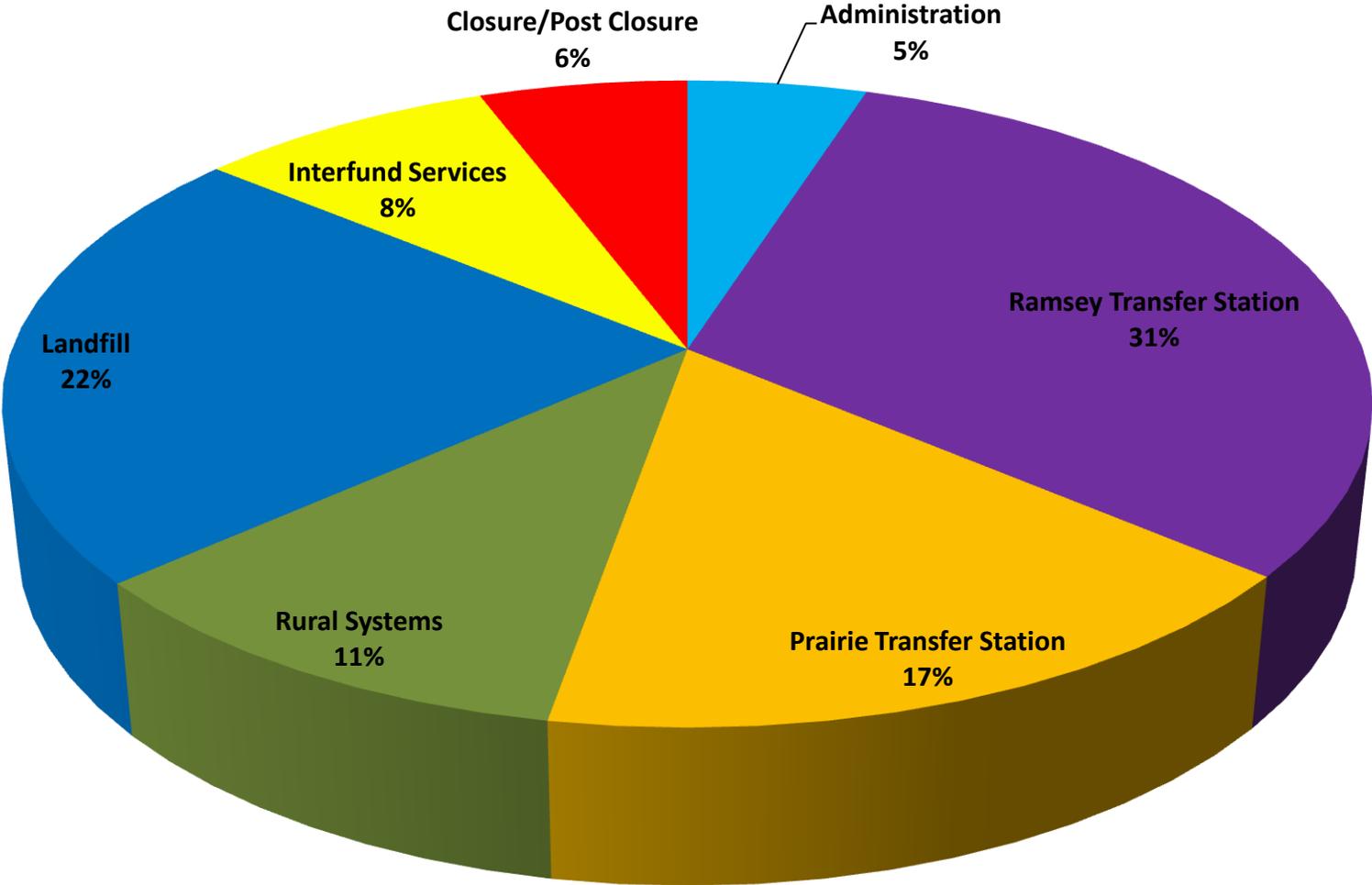
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KOOTENAI COUNTY SOLID WASTE SYSTEM



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Operational Budget



Total Operational Budget
\$8,112,621

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LANDFILL 2014

Kootenai County owns and operates a fully permitted municipal solid waste landfill. The Kootenai County Farm Landfill at Fighting Creek, also referred to as the Fighting Creek Landfill, is located approximately 16 miles south of the city limits of Coeur d' Alene. Over 450 acres are owned by the County with a portion dedicated for landfill. The life cycle of the current permitted area is estimated through 2041.



The landfill was designed under 40 CFR 258, Federal Subtitle 'D' regulations and complies with the Idaho Solid Waste Facilities Act, 39-7400. To meet the above requirements, the landfill has a fully developed liner, leachate collection system and gas extraction system.

The landfill is the cornerstone of the solid waste system in Kootenai County. The landfill operates 6-days a week, Monday through Saturday. The general public must use the Transfer Stations or the rural residential collection locations as waste from individual public loads are not accepted at the landfill. The removal of materials from the waste stream prior to landfill is imperative to save landfill space. The Fighting Creek Landfill received a total of 132,978 tons of material during the calendar year of 2014. This was an increase of 4.6% or 5,889 tons over 2013.

The *Kootenai County Farm Landfill 2011 Life Cycle Update* as prepared by the engineering firm of CH2M Hill states: "The overall effective waste density is 1,384 pounds per cubic yard (lb/cy) from start of filling in 1993 to April 23, 2011. This planning tool document helps us to understand how well we are doing in managing and disposing of waste within the landfill itself. Based on these tools, we have determined that our overall growth rate for planning is 3%. The Life Cycle Update of 2011 estimates that the original footprint

and the East Cell of the Landfill will reach final closure capacity in 2040-2041 – approximately 25 years from now.

In August 2013 the original footprint of the landfill reached interim closure elevation and all operations were shifted to Phase 1 of the East Cell. As of December 31, 2014, over 177,545 tons of waste has been placed in this section of the landfill.

Daily operations include compaction and cover with an alternative daily cover material and clay. An extensive storm water diversion program is in place to minimize the amount of precipitation entering the waste and requiring treatment as leachate.

LEACHATE

Leachate is the liquid that results from the compaction of, and/or the filtering of natural occurring precipitation through garbage. Under current rules, we must treat and dispose of all leachate that is produced at the Fighting Creek Landfill. Leachate is not hazardous but does contain soluble, suspended, and miscible materials that is from the waste.

Leachate has been managed by a variety of methods with disposal by one of three alternatives: recirculation, evaporation or off-site delivery to a waste water treatment facility. Hauling waste to an off-site wastewater facility in Spokane is not an alternative and water disposal MUST be managed onsite. Therefore, in 2014 no leachate was hauled offsite for disposal.

This year landfill staff focused on a solution to leachate management. A misting basin, designed and constructed by County personnel, was constructed. The basin is comprised of a 302' x 538' area lined with 30 mil RPE; pipe system with over 892 spray heads; three 40 HP pumps to transfer leachate from the holding ponds to the basin; water system return to the leachate pond; and electrical upgrades.

The misting system began operation in July, 2014. It is closely monitored and not operated on windy days or during high humidity and/or rainy times. From July 3, 2014 through September 30, 2014, over 5 million gallons of leachate was disposed using this new system.

Permits require us to operate a wastewater treatment facility to process the leachate from the Fighting Creek Landfill. Currently four leachate collection ponds are operational with over 7 million gallons of capacity.



Leachate from the landfill is conveyed to the leachate ponds through a system of gravity feed pipes located in the bottom of the landfill. A lift station will move the leachate from the new east landfill cell to the pond system.

The leachate ponds are aerated through mechanical injection of air into the ponds. This keeps dissolved oxygen levels

high which controls odor and promotes natural evaporation within the ponds.

Evaporation consists of naturally occurring or by mechanically induced means. In the mechanically induced process, leachate is pumped to the evaporator, where it is superheated. As the leachate heats, it gives off water vapor that is then injected into a gas flare where it is destroyed. This process requires the use of methane gas to power the leachate evaporator. In 2014, 1,857,290 gallons were disposed of using this technique. This system was taken offline in September, 2014 in order to turn over all methane gas production to the landfill gas to energy facility.

GAS SYSTEM

The Fighting Creek Landfill has a fully operational gas extraction system, which currently includes over 250 landfill gas wells. This extensive gas well and trench system collects gas and conveys it to a collection point that feeds two operational ground flares, a leachate evaporator and a landfill gas to energy facility. This system is monitored and adjusted weekly to ensure compliance.

The first blower/flare was installed in 1994 and the gas system activated in 1995. A second enclosed flare was installed in 2000.

In March 2012, the Landfill Gas to Energy Project between the Solid Waste Department and Kootenai



Electric Cooperative became operational. Kootenai Electric Cooperative built the facility at a cost of approximately \$7 million. At full production, the facility will produce 3.2 MW of power sufficient to service approximately 2,000 homes. Over 1 million kWh of electricity was generated in November and December 2014 following taking the evaporator offline. It is anticipated that the department will receive over \$60,000 in revenue from the sale of methane gas in 2015.

In addition to the Fighting Creek Farm Landfill, the department is responsible for two closed landfills. The Ramsey Road Landfill is located adjacent to the Ramsey Transfer Station in Coeur d' Alene. The landfill portion of this facility was closed in 1993 upon the opening of the Fighting Creek Landfill. The Ramsey Landfill has a gas extraction system and an impermeable cover as part of the closure action. The gas production from the Ramsey Landfill as well as the old Coeur d' Alene Landfill is processed through the Ramsey Gas System. In 2007, it became necessary to downsize the candle flare at the Ramsey facility because the generation of gas decreased to the point the larger flare could no longer operate efficiently. The gas system under a complex of several baseball fields is now extinct as gas production has ceased.

An older landfill is located on the northern border of Kootenai County (Granite Landfill) that was shared between Kootenai County and Bonner County. This facility ceased taking waste in the 80's. For many years, this location was far from any dwelling. The sale of adjacent property and the establishment of a rural residential development required us to fence this facility. We installed a passive gas probe system on this site in 2008 to verify the absence of meaningful methane production on this site.

Complete gas reports for the Ramsey and Fighting Creek systems are available for review at the Idaho DEQ, Coeur d' Alene Office or the Kootenai County Solid Waste Department.

WATER

There are two water monitoring systems at the Fighting Creek Landfill. These reports provide an extract from each of our water monitoring programs. The full report is maintained on file at the local DEQ Office or at the Solid Waste Department Administrative Office.

SURFACE WATER

The Idaho Department of Environmental Quality has established rules for surface water monitoring at the Fighting Creek Landfill. Over time, an extensive surface water treatment infrastructure has been established to assure that the water leaving the site is clean.



A series of sedimentation ponds have been established throughout the landfill to accept run-off from all of the local drainage areas. These ponds function in pairs to aid in removing suspended solids. Each pond in the set is designed for a minimum of four hours of retention time. The ponds are cleaned during the summer months when it is determined the silt has significantly reduced the holding capacity of water in the pond.

Water leaving the ponds is then conveyed through a large vegetated, biomass drainage that filters the runoff using natural processes. This biomass or vegetative drainage continues to clean the water. Within the drainage there are a series of “finishing dams” working in concert with the vegetative filters to aid in

the cleansing process. The “finishing dams” aid in slowing down the run-off water thus allowing time for the vegetation to filter out sediment.

Enhanced wetland structures also help to remove solids and provide a robust microenvironment that positively affects local wildlife by providing valuable nesting and forage areas as well as other important habitat. We have an abundance of geese and ducks that migrate to our wetlands each year to give birth to their offspring.

The impact from our efforts is the water leaving the site is clean and is consistently of higher quality than the receiving drainages the water flows into.

GROUND WATER

The landfill operating permit requires us to establish and operate a groundwater monitoring system. As part of a community outreach program, we also sample two domestic wells during our semi-annual sampling events.

The original landfill footprint has seven ground water monitoring points. These have been sampled from approximately 1991 until the present. In 2005, there were six additional ground water monitoring wells established to support the new east landfill.

These 13 ground water monitoring wells are sampled twice a year. The location of the wells are both up gradient and down gradient from the landfill portion of the property to allow for a comparative analysis to determine if any ground water degradation has occurred as a result of landfill operations. To date, no degradation to ground water at the landfill or the domestic well sites has been found.



Customer Service 2014

CUSTOMERS

The Kootenai County Solid Waste System is totally owned by the citizens of Kootenai County and exists solely for their use. The Solid Waste Department is an affordable asset to Kootenai County with a positive customer service reputation. We expend a great deal of effort and funds to provide safe and efficient service to citizens while working to deny access when out of county customers attempt to use the facilities.



In 2014, staff assisted a total of 600,325 customers. This is an increase of 23,856 customers from last year. Ramsey Transfer Station served 281,752 customers and Prairie saw 130,981 customers. The staffed rural sites helped 187,592 users. These totals do not take into account the eleven other rural sites that are being used throughout the County.

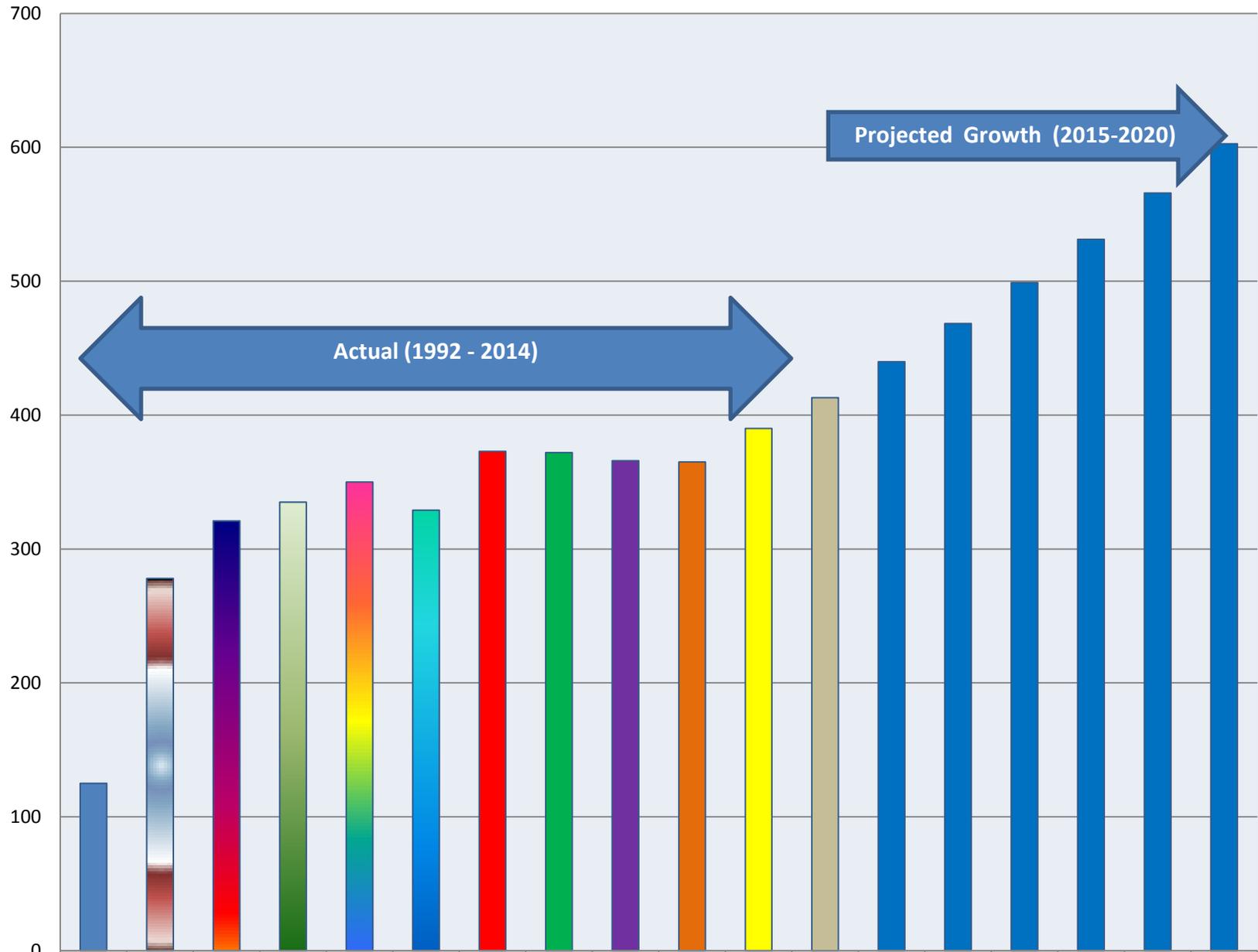
The Ramsey Transfer Station saw an increase in customers served of 14,673 or 5% over last year. The staff assisted an average of 786 customers per day. The busiest customer day was Saturday with an average of 981 customers. The lowest customer day was Thursday with an average of 698 customers. The lowest customer census day was January 29, 2014 with 212 customers. The highest customer count day happened on November 8, 2014 with 1,514 customers. Ramsey saw 9 days during the year where they assisted over 1,300 customers in a 9-hour period. May was the busiest customer month with 31,296 and the lightest customer month was February with 10,847.

The Prairie Transfer Station also saw an increase in customers served of 8,406 or 7% over last year. The staff assisted an average of 366 customers per day. The busiest day of the week was Saturday with an average of 500 customers. The lowest day was Thursday with an average of 294 customers. The lowest customer count happened on January 29, 2014 with 80 customers. The highest customer day occurred on May 17, 2014 with 722 customers. August was the busiest customer month with 14,234, with the lightest month being February with 5,089.

In addition to the two transfer stations, Kootenai County has 13 rural residential collection sites. In October, 2014 the Twin and Garwood sites were permanently closed and the new site at Chilco Road opened. The Chilco and Athol sites in the north are staffed for safety and assistance. The Department will continue to plan and prepare to purchase additional property and staff the rural sites that are provided by Kootenai County and consolidate or expand services in the coming years.



Transfer Stations - Customer History

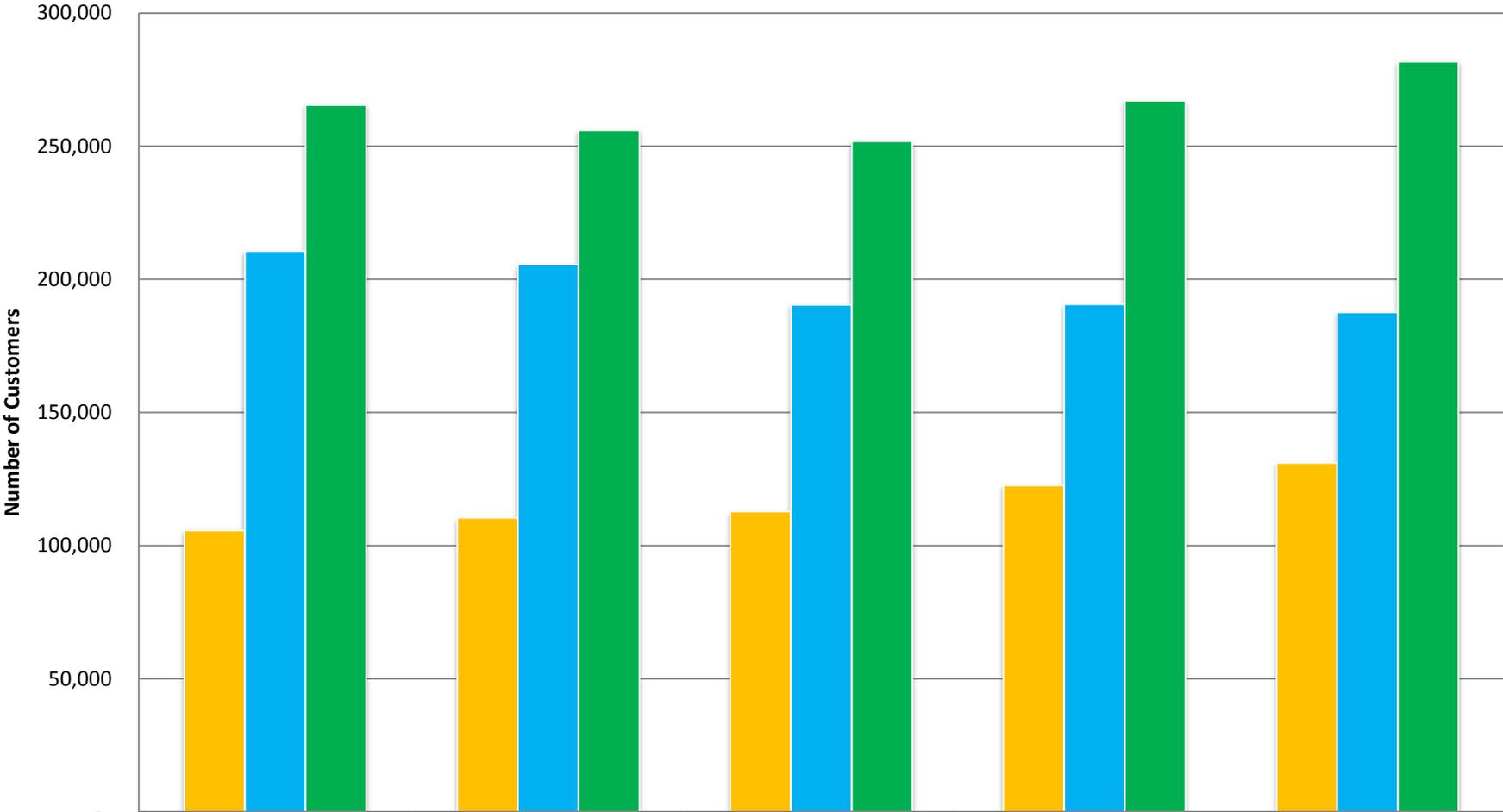


■ Customers (K)

1992	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
125	278	321	335	350	329	373	372	366	365	390	413	440	468	499	531	566	603

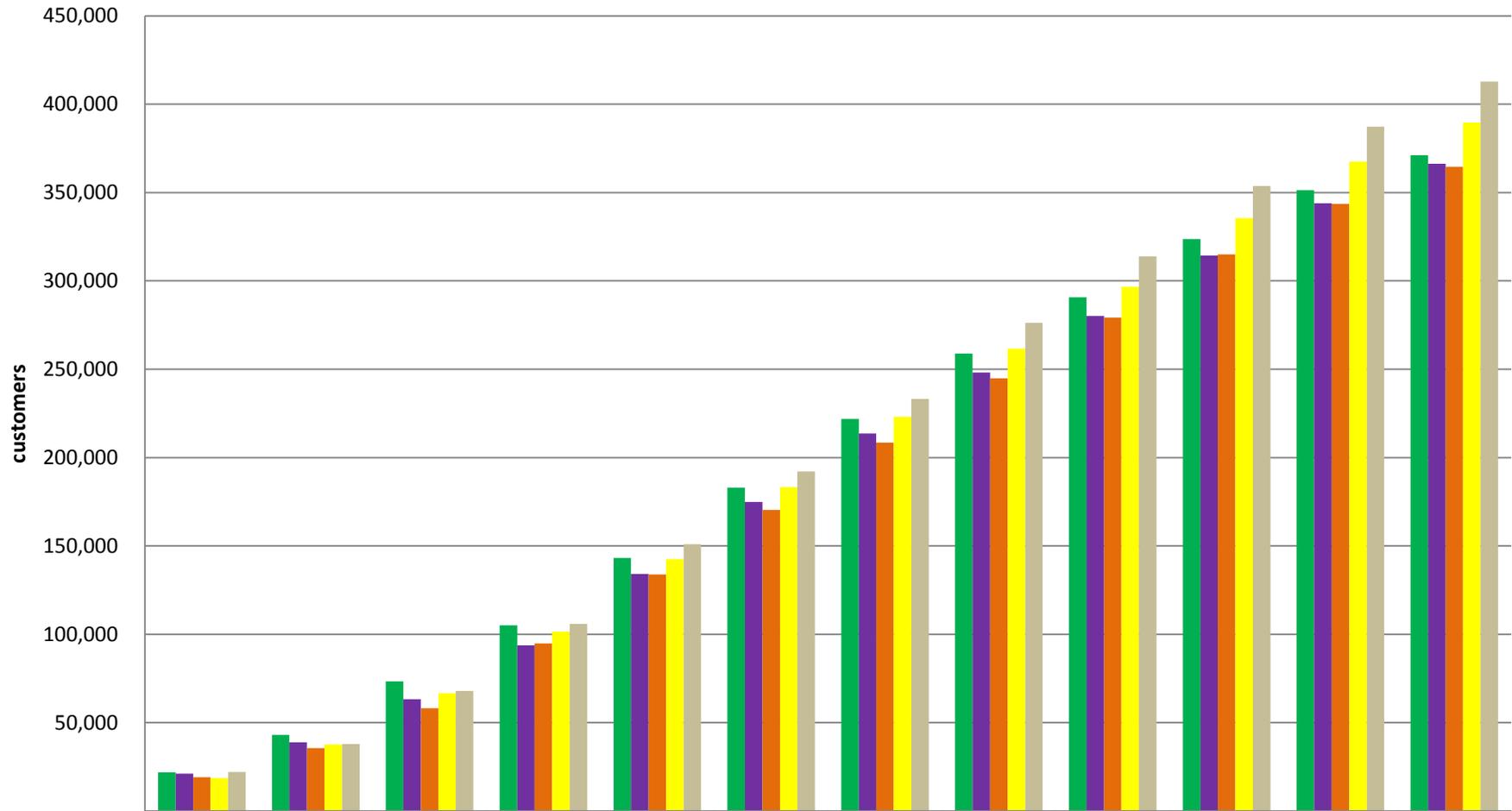
Total Department Customers

Total 600,325



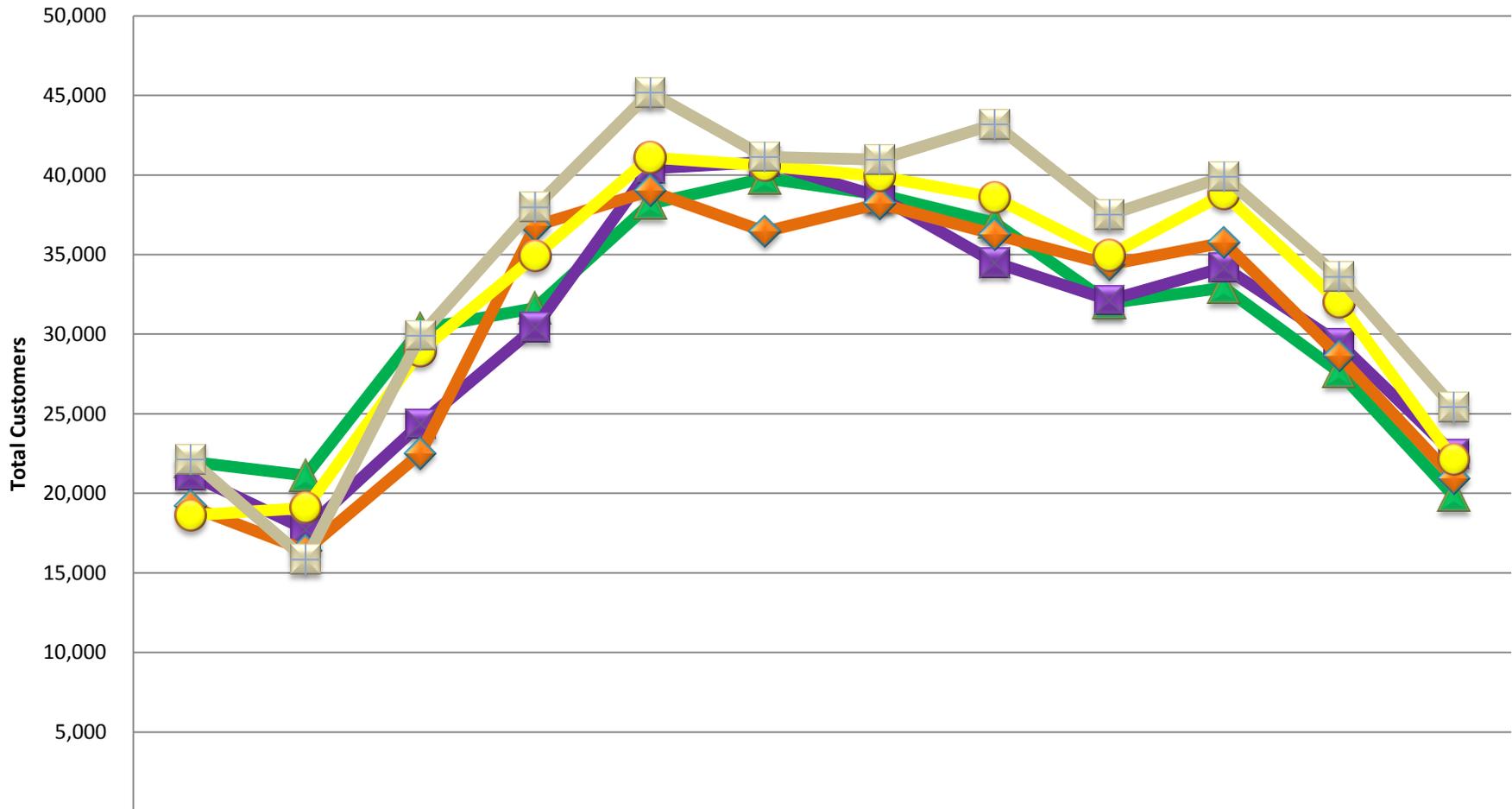
	2010	2011	2012	2013	2014
■ Prairie	105,686	110,405	112,703	122,575	130,981
■ Rural	210,595	205,532	190,423	190,541	187,592
■ Ramsey	265,481	255,910	251,821	267,052	281,752

Monthly Cumulative Customers - Transfer Stations



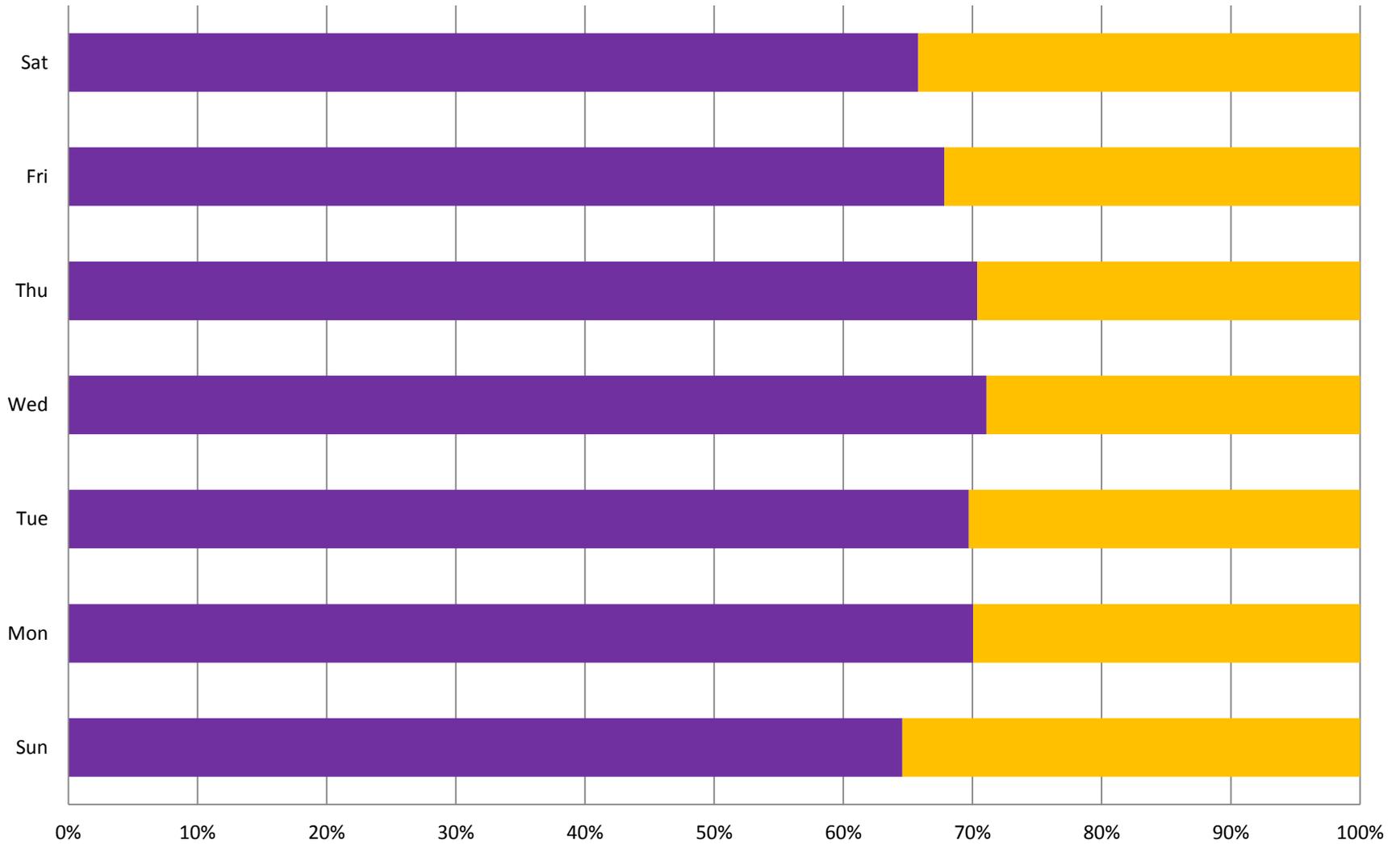
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	21,979	43,105	73,432	105,073	143,260	183,050	221,818	258,827	290,777	323,687	351,325	371,167
2011	21,164	38,903	63,261	93,690	134,107	174,924	213,564	248,068	280,201	314,396	343,838	366,315
2012	19,192	35,609	58,115	94,917	133,921	170,363	208,567	244,843	279,210	314,953	343,584	364,524
2013	18,607	37,689	66,637	101,545	142,649	183,231	223,146	261,736	296,686	335,502	367,514	389,627
2014	22,122	37,959	67,871	105,850	151,031	192,180	233,145	276,333	313,829	353,733	387,332	412,743

Customers by Month - Transfer Stations



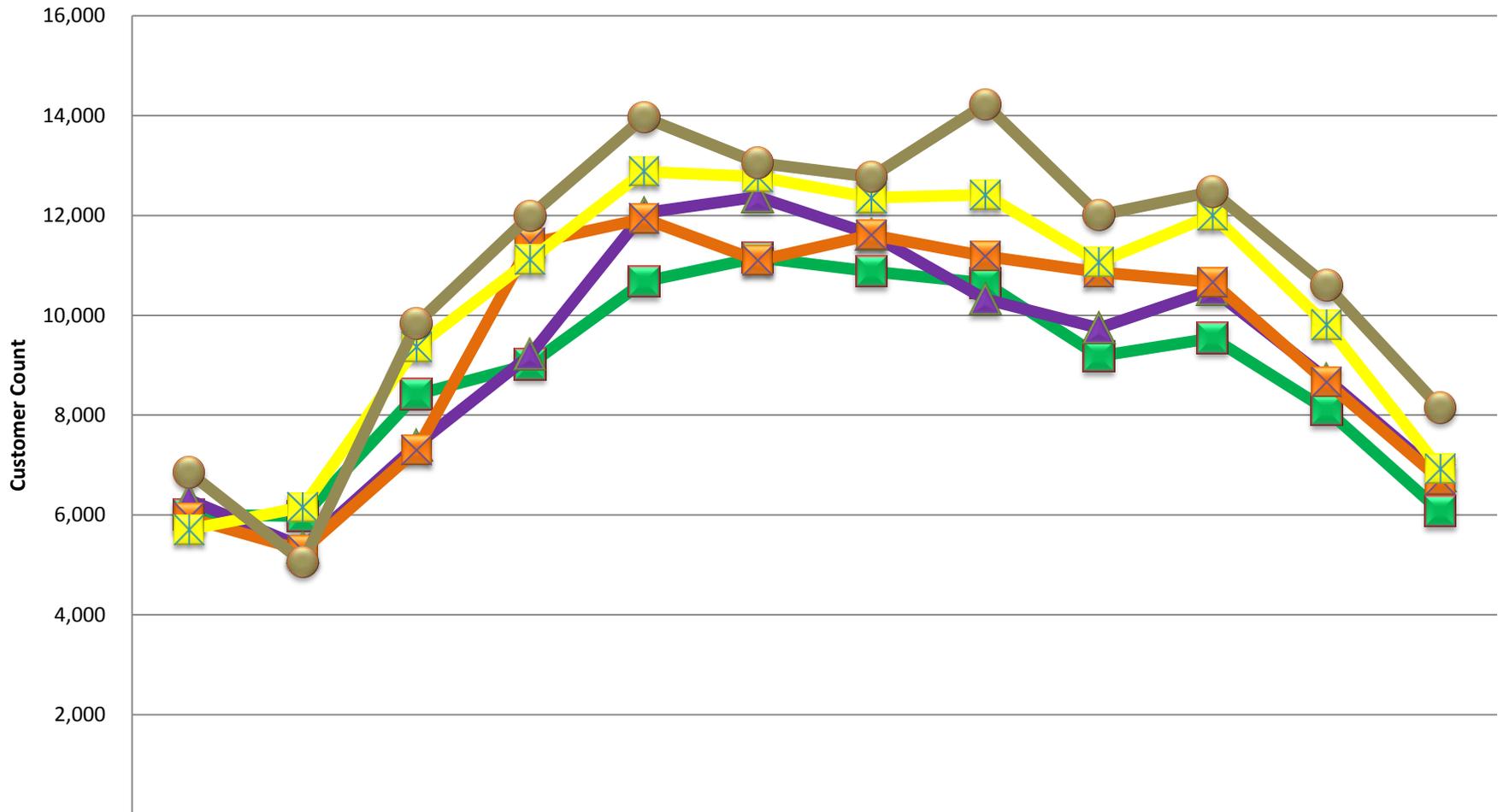
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
▲ 2010	21,979	21,126	30,327	31,641	38,187	39,790	38,768	37,009	31,950	32,910	27,638	19,842
■ 2011	21,164	17,739	24,358	30,429	40,417	40,817	38,640	34,504	32,133	34,195	29,442	22,477
◆ 2012	19,192	16,417	22,506	36,802	39,004	36,442	38,204	36,276	34,367	35,743	28,631	20,940
● 2013	18,607	19,082	28,948	34,908	41,104	40,582	39,915	38,590	34,950	38,816	32,012	22,113
■ 2014	22,122	15,837	29,912	37,979	45,181	41,149	40,965	43,188	37,496	39,904	33,599	25,411

Average Daily Customers - Transfer Stations



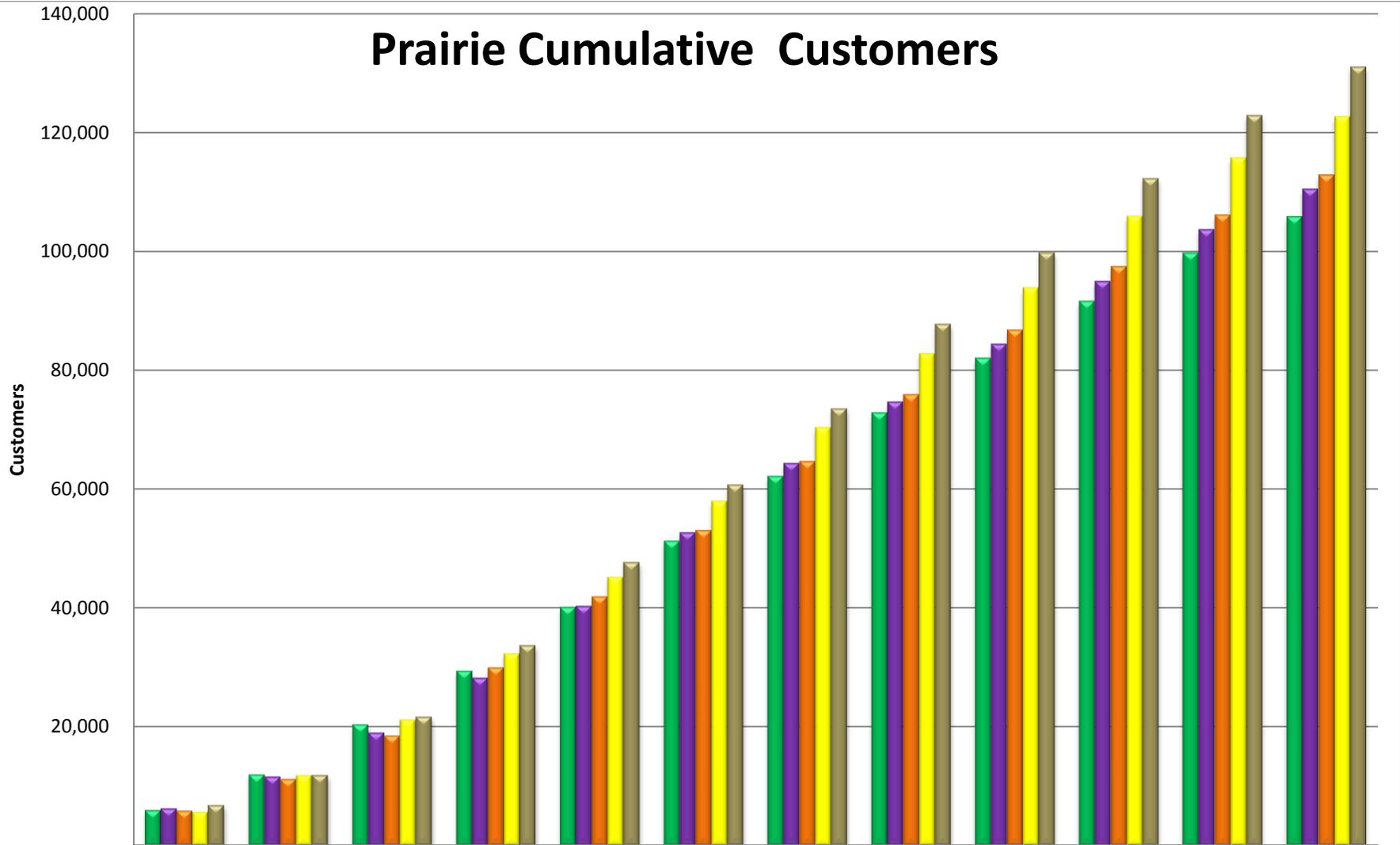
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
■ Ramsey	785	823	732	735	698	744	981
■ Prairie	431	352	318	299	294	353	510

Prairie Customers By Month



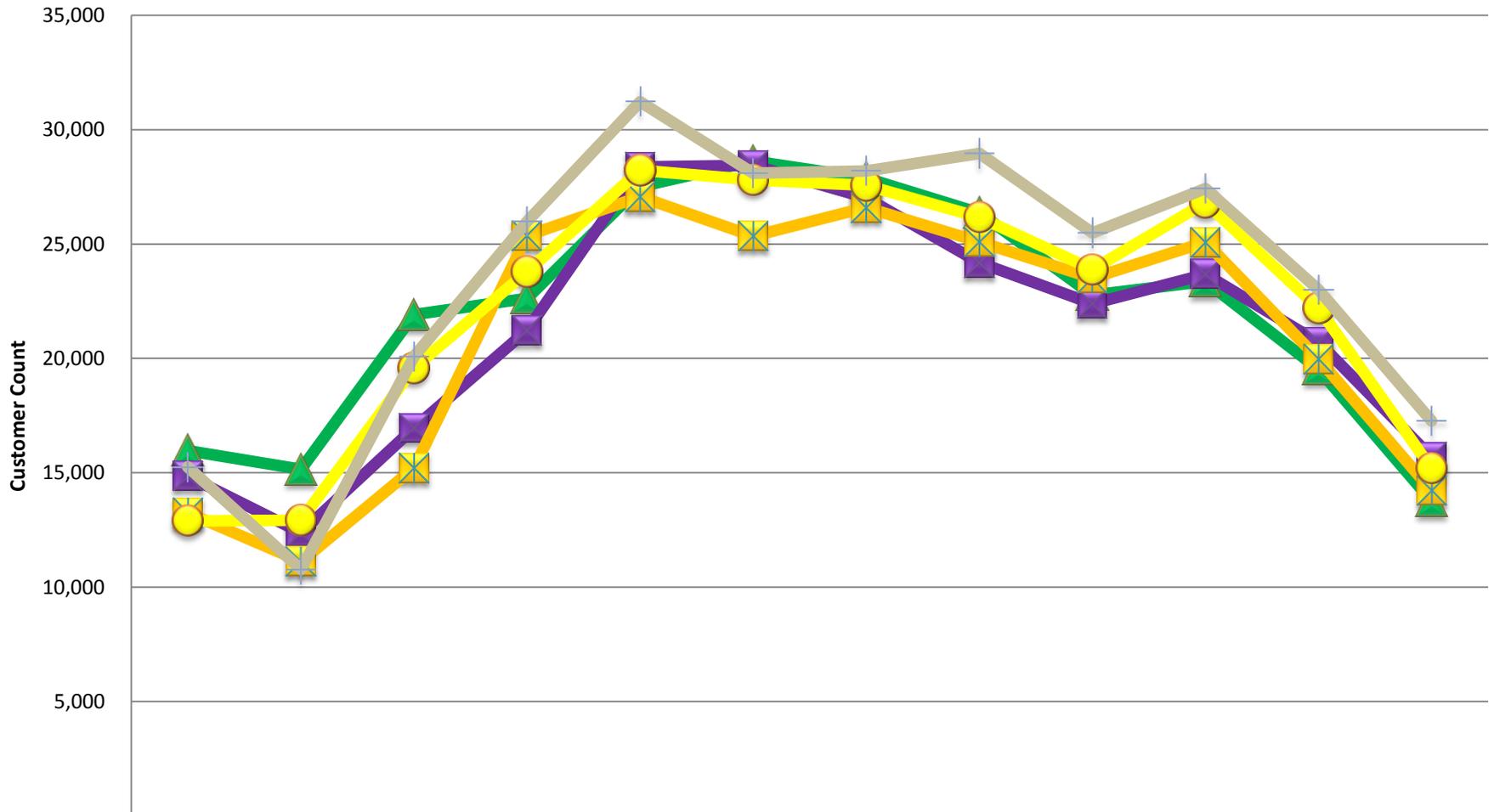
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	6,009	5,977	8,415	9,018	10,678	11,155	10,881	10,646	9,182	9,544	8,107	6,074
2011	6,305	5,354	7,399	9,205	12,049	12,374	11,621	10,321	9,746	10,513	8,730	6,788
2012	5,946	5,293	7,300	11,440	11,936	11,098	11,611	11,185	10,860	10,662	8,660	6,712
2013	5,709	6,156	9,367	11,115	12,879	12,778	12,353	12,414	11,066	12,005	9,810	6,923
2014	6,854	5,060	9,833	11,995	13,962	13,055	12,771	14,223	12,009	12,475	10,598	8,146

Prairie Cumulative Customers



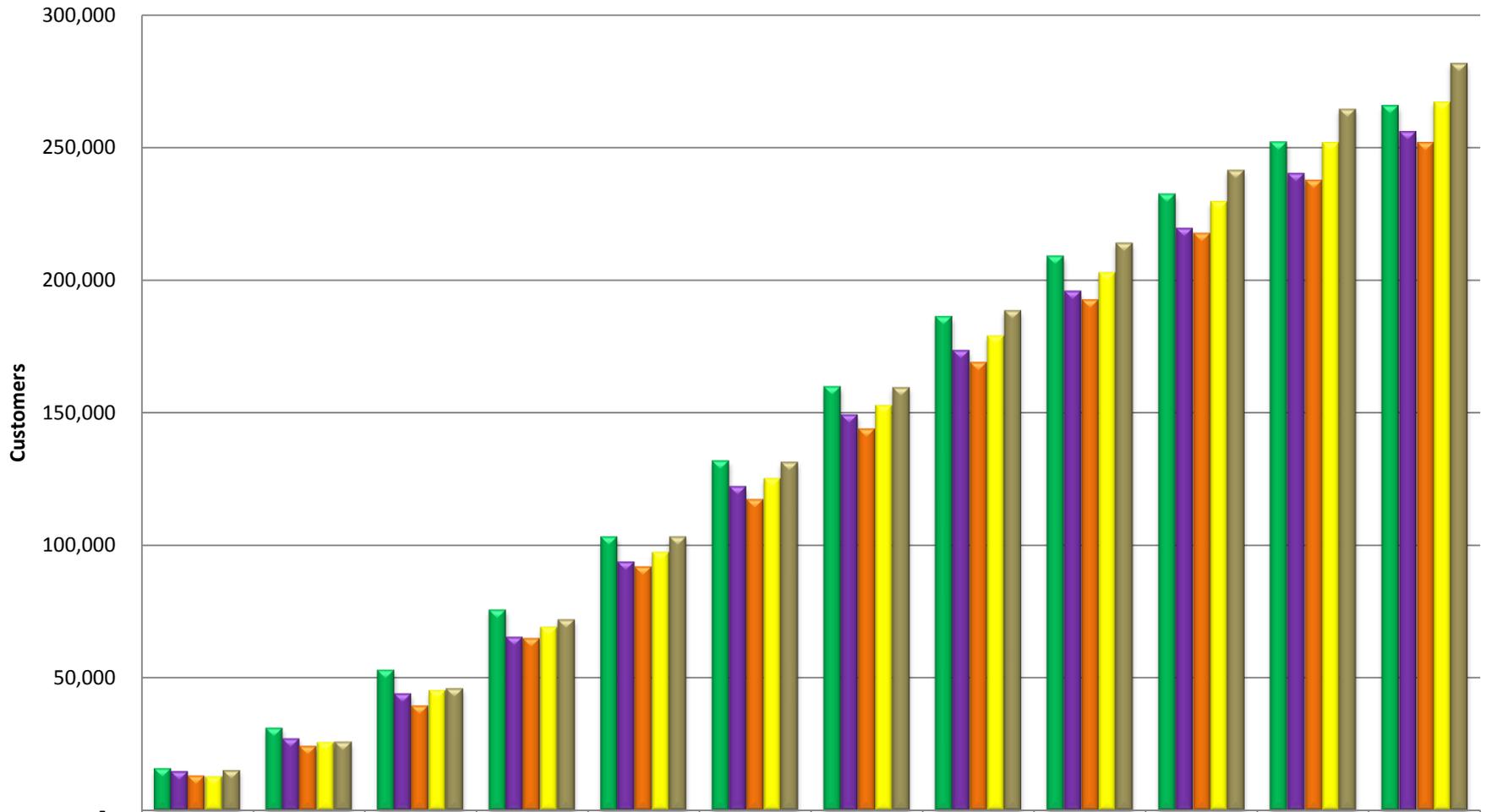
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
■ 2010	6,009	11,986	20,401	29,419	40,097	51,252	62,133	72,779	81,961	91,505	99,612	105,686
■ 2011	6,305	11,659	19,058	28,263	40,312	52,686	64,307	74,628	84,374	94,887	103,617	110,405
■ 2012	5,946	11,239	18,539	29,979	41,915	53,013	64,624	75,809	86,669	97,331	105,991	112,703
■ 2013	5,709	11,865	21,232	32,347	45,226	58,004	70,357	82,771	93,837	105,842	115,652	122,575
■ 2014	6,854	11,914	21,747	33,742	47,704	60,759	73,530	87,753	99,762	112,237	122,835	130,981

Ramsey Customers By Month



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
▲ 2010	15,970	15,149	21,912	22,623	27,509	28,635	27,887	26,363	22,768	23,366	19,531	13,768
■ 2011	14,859	12,385	16,959	21,224	28,368	28,443	27,019	24,183	22,387	23,682	20,712	15,689
■ 2012	13,246	11,124	15,206	25,362	27,068	25,344	26,593	25,091	23,507	25,081	19,971	14,228
● 2013	12,898	12,926	19,581	23,793	28,225	27,804	27,562	26,176	23,884	26,811	22,202	15,190
+ 2014	15,258	10,777	20,079	25,984	31,219	28,094	28,194	28,965	25,487	27,429	23,001	17,265

Ramsey Cumulative Customers



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	15,970	31,119	53,031	75,654	103,163	131,798	159,685	186,048	208,816	232,182	251,713	265,481
2011	14,859	27,244	44,203	65,427	93,795	122,238	149,257	173,440	195,827	219,509	240,221	255,910
2012	13,246	24,370	39,576	64,938	92,006	117,350	143,943	169,034	192,541	217,622	237,593	251,821
2013	12,898	25,824	45,405	69,198	97,423	125,227	152,789	178,965	202,849	229,660	251,862	267,052
2014	15,258	26,035	46,114	72,098	103,317	131,411	159,605	188,570	214,057	241,486	264,487	281,752

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WASTE STREAM 2014

In 2014 the Solid Waste System processed a total of 159,308 tons through the two transfer stations. This represents an increase of 3.9% over the 2013 figures for waste coming into the facilities. We then remove recyclable materials from the waste stream to reduce what goes into the landfill.

Waste shipped to the landfill in 2014 was 132,978 tons, which is up 4.6% from the 2013 figures. We believe the increase in waste is due to the upturn in the economy with additional construction and new business opportunities in Kootenai County. This is evidenced by the charts showing an increase in Construction/Demolition and Inert materials.

According to the EPA report *“Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2012”*, Americans dispose of 4.38 pounds of waste per person per day. Based on the 2014 incoming waste at the transfer stations, Kootenai County residents disposed of 5.97 pounds of waste per person per day. This is higher than the national average. We expect a higher than national **average** due to the high tourism/recreational population fluctuations in our area throughout the year.

A chart is included depicting the waste stream by source. This shows that 60% of the waste through the transfer stations comes from residential use, 32% from commercial activity and 8% from the rural systems. An interesting footnote is that 48% of the residential waste is brought to the transfer station by individual vehicles.

PRAIRIE TRANSFER STATION

The Prairie Transfer Station received 54,407 tons of material in 2014. This represents an increase of 3,002 tons or 5.8% from 2013. The measurement of the Prairie Waste Stream is the weight of all commodities that entered the Prairie Transfer Station during the calendar year.

The average tons received daily was 149. The heaviest tonnage day was June 26, 2014, with 462.19 tons. The lowest tonnage day was March 2, 2014 with 12 tons.

June was the highest month with 5,504 tons received and February the lowest with 2,504 tons received. Friday was the highest average day with 200 tons with Sunday being the lowest average at 73 tons.

RAMSEY TRANSFER STATION

The Ramsey Transfer Station received 104,901 tons of material in 2014. This represents an increase of 3,104 tons or 3% from last year. The measurement of the Ramsey Waste Stream is the weight of all commodities that entered the Ramsey Transfer Station during the calendar year.

The average tons received daily was 284. The heaviest tonnage day was November 21, 2014 with 555.9 tons. (This figure includes 106 tons of leaves from the City of Coeur d'Alene Leaf Drive.) The City of Coeur d'Alene brought in over 1,744 tons of leaves for processing in the month of November.

The lowest tonnage day was February 9, 2014 with 19 tons. May was the highest month with 10,663 tons and February the lowest month with 4,617 tons received. Monday was the highest average day of the week with 362 tons and Sunday is the lowest with 119 tons.

Although Ramsey is the oldest of the transfer stations, it still processes 65% of the waste in Kootenai County.

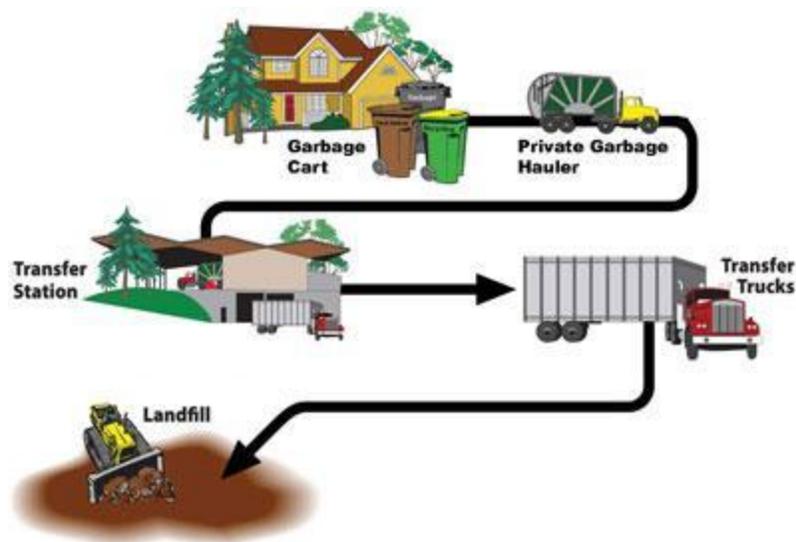
FIGHTING CREEK LANDFILL

We operate a fully permitted and environmentally safe landfill. This facility is the key to keeping customer costs to a minimum. The Fighting Creek Landfill received 132,978 tons of refuse in 2014. This reflects an increase of 5,889 tons or 4.6% of waste placed into the landfill from 2013.

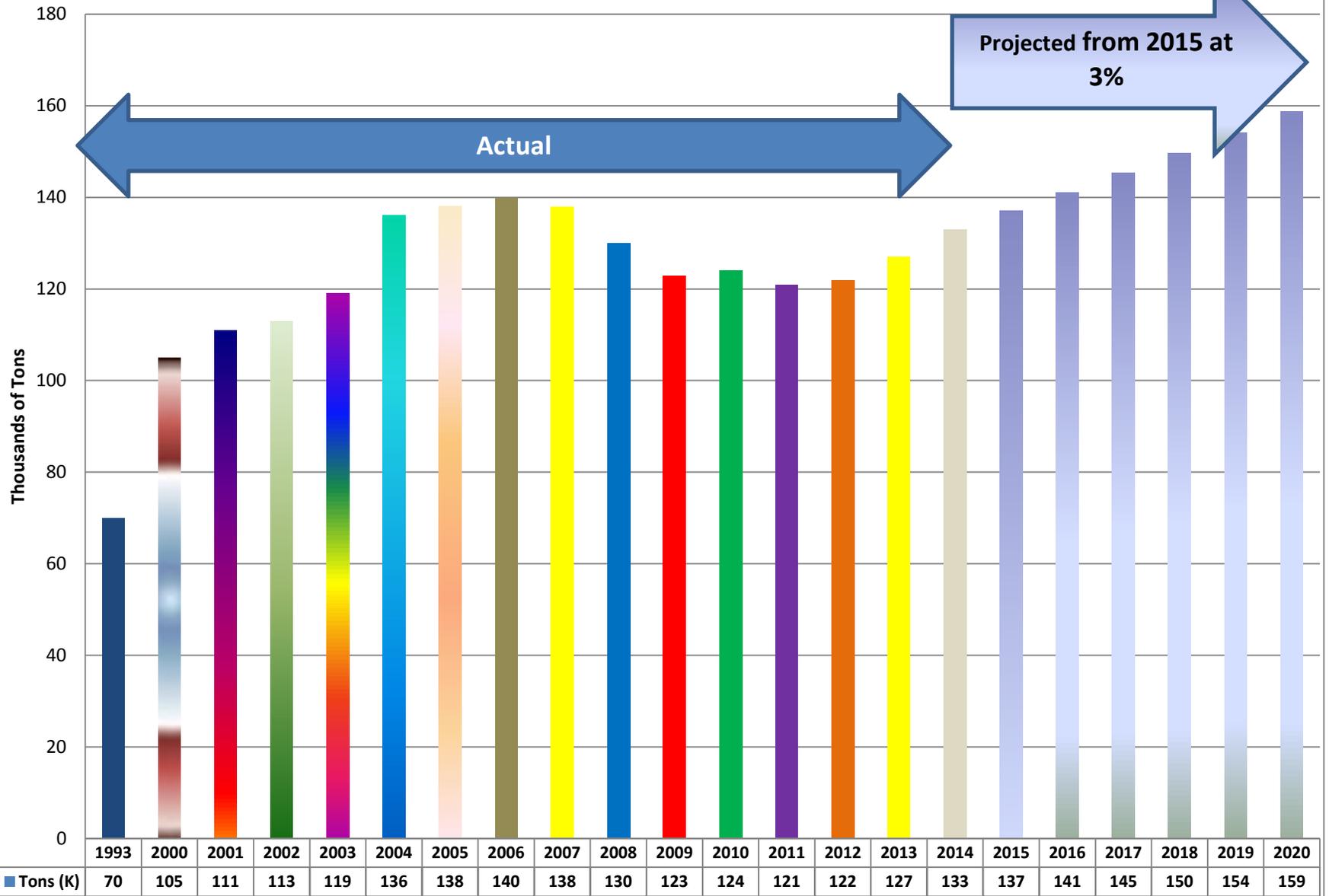
There has been a steady increase in waste going to the landfill for the last 4 years; however, it has not reached the 2007 record of 138,000 tons. The 2011 Life Cycle Analysis used a growth figure of 3% for historic average growth. These figures will be examined further in 2015 when we complete the next landfill analysis.

On August 5, 2013 placement of waste in Phase E1 of the East Cell of the landfill began. As of December 31, 2014, 177,545 tons of waste has been placed into this phase of the landfill.

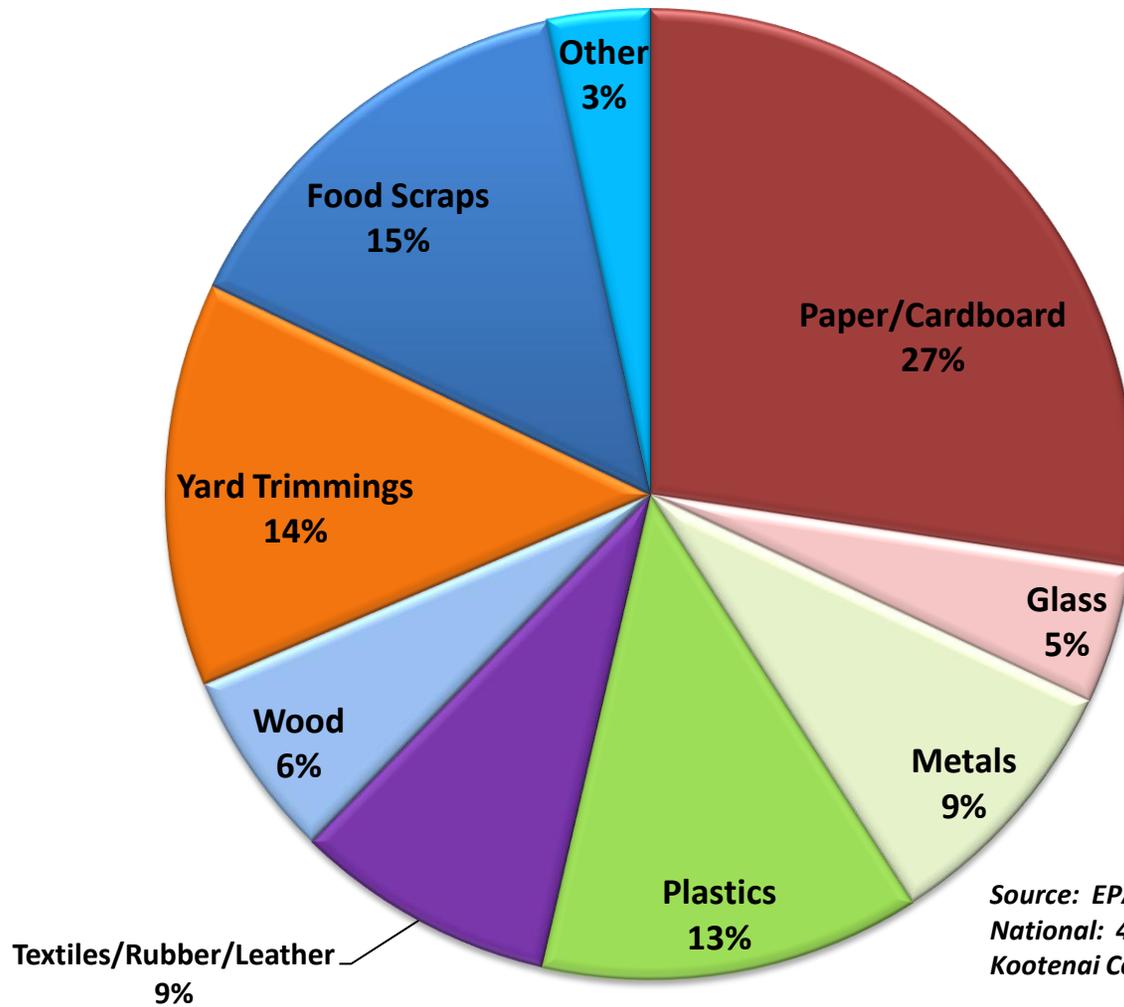
The Solid Waste Department is always looking at ways to decrease the amount of waste placed to extend the life expectancy of the landfill.



Landfilled Waste History & Projection

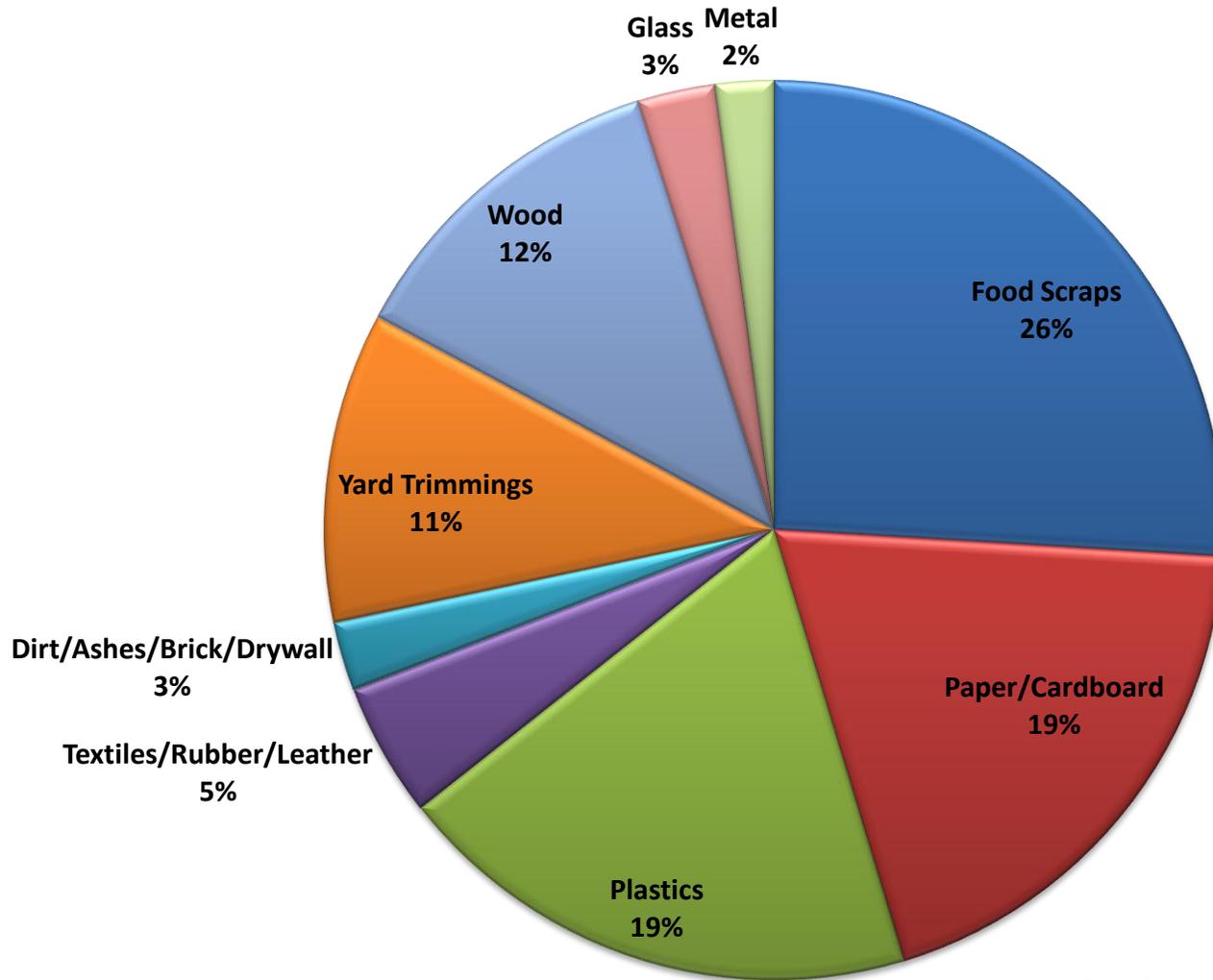


National MSW Composition 2012 - 251 Million Tons Before Recycling



Source: EPA MSW 2012 Facts & Figures
National: 4.38 lbs/person per day
Kootenai County: 5.97 lbs/person per day

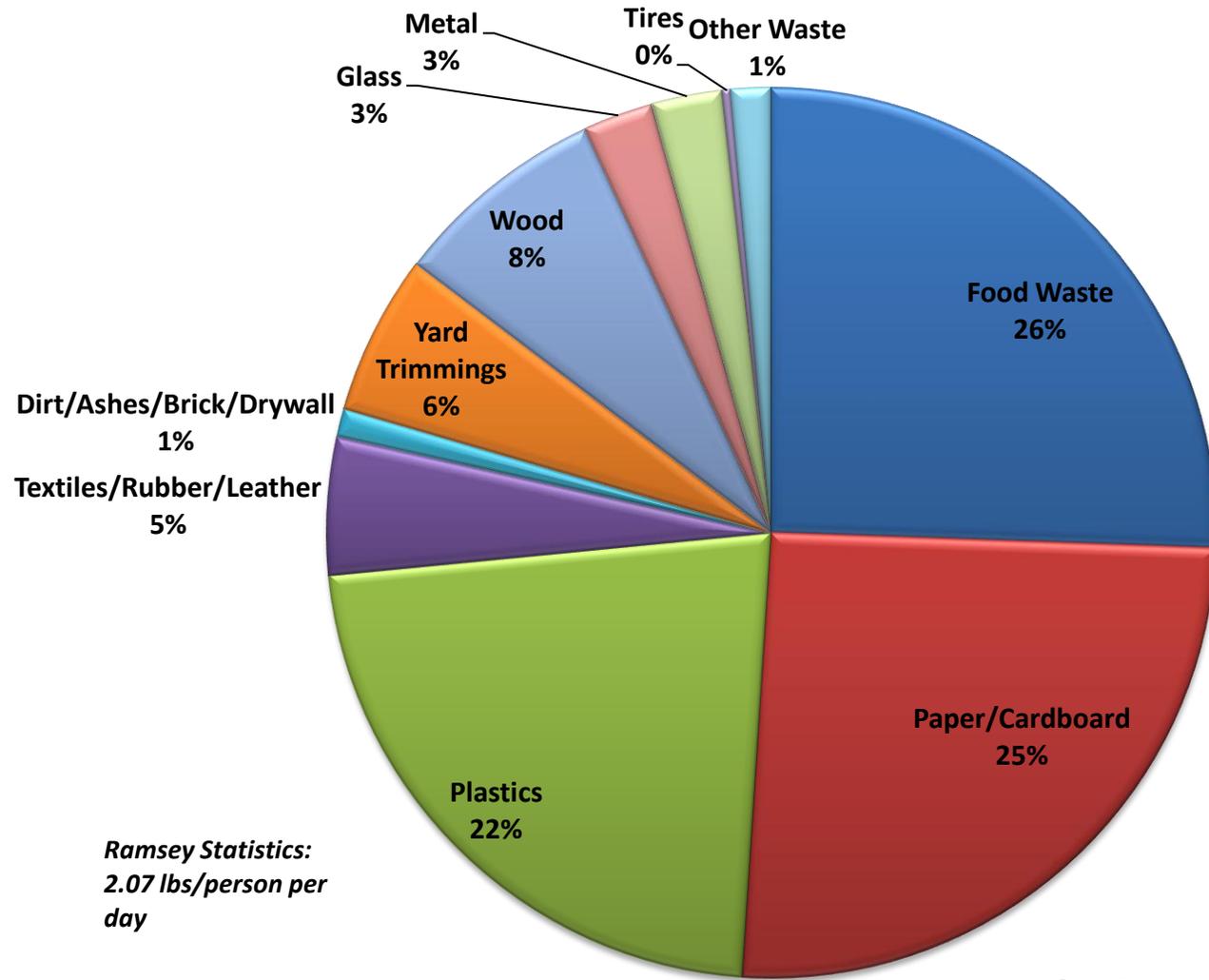
Waste Stream Characterization Prairie Transfer Station



*Prairie Statistics:
2.3 lbs/person per day*

Garbage Truck Loads Only

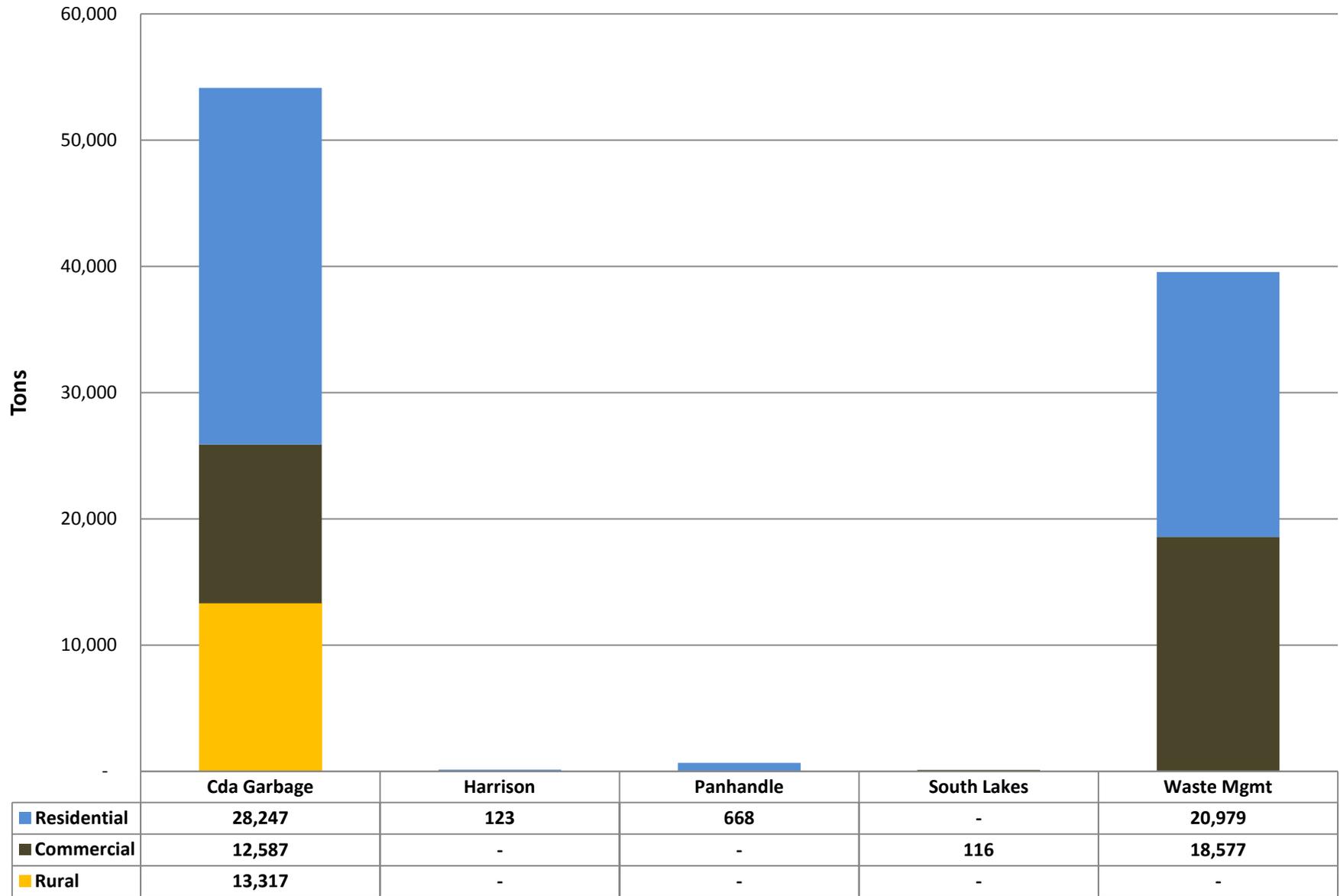
Waste Stream Characterization Ramsey Transfer Station



*Ramsey Statistics:
2.07 lbs/person per
day*

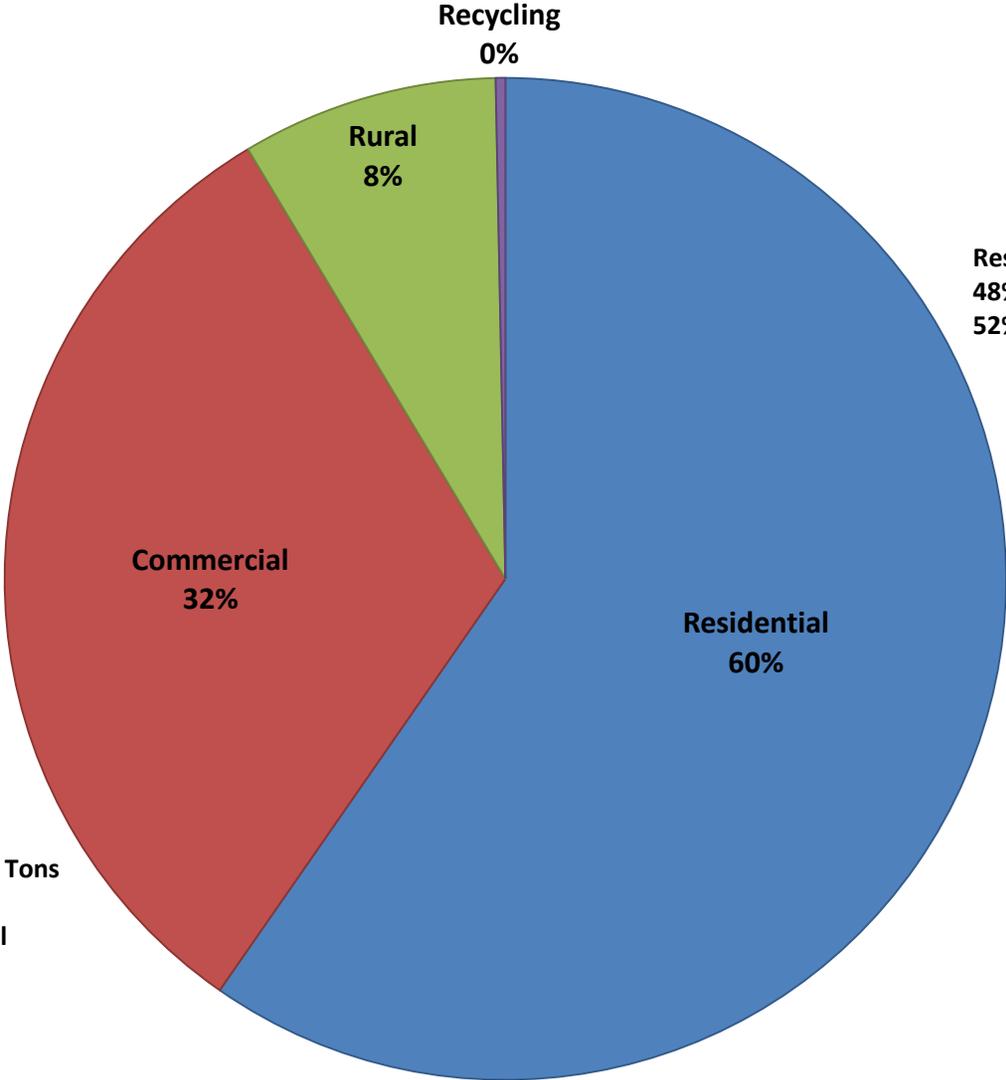
Garbage Truck Loads Only

Breakdown by Hauler



	Cda Garbage	Harrison	Panhandle	South Lakes	Waste Mgmt
Residential	28,247	123	668	-	20,979
Commercial	12,587	-	-	116	18,577
Rural	13,317	-	-	-	-

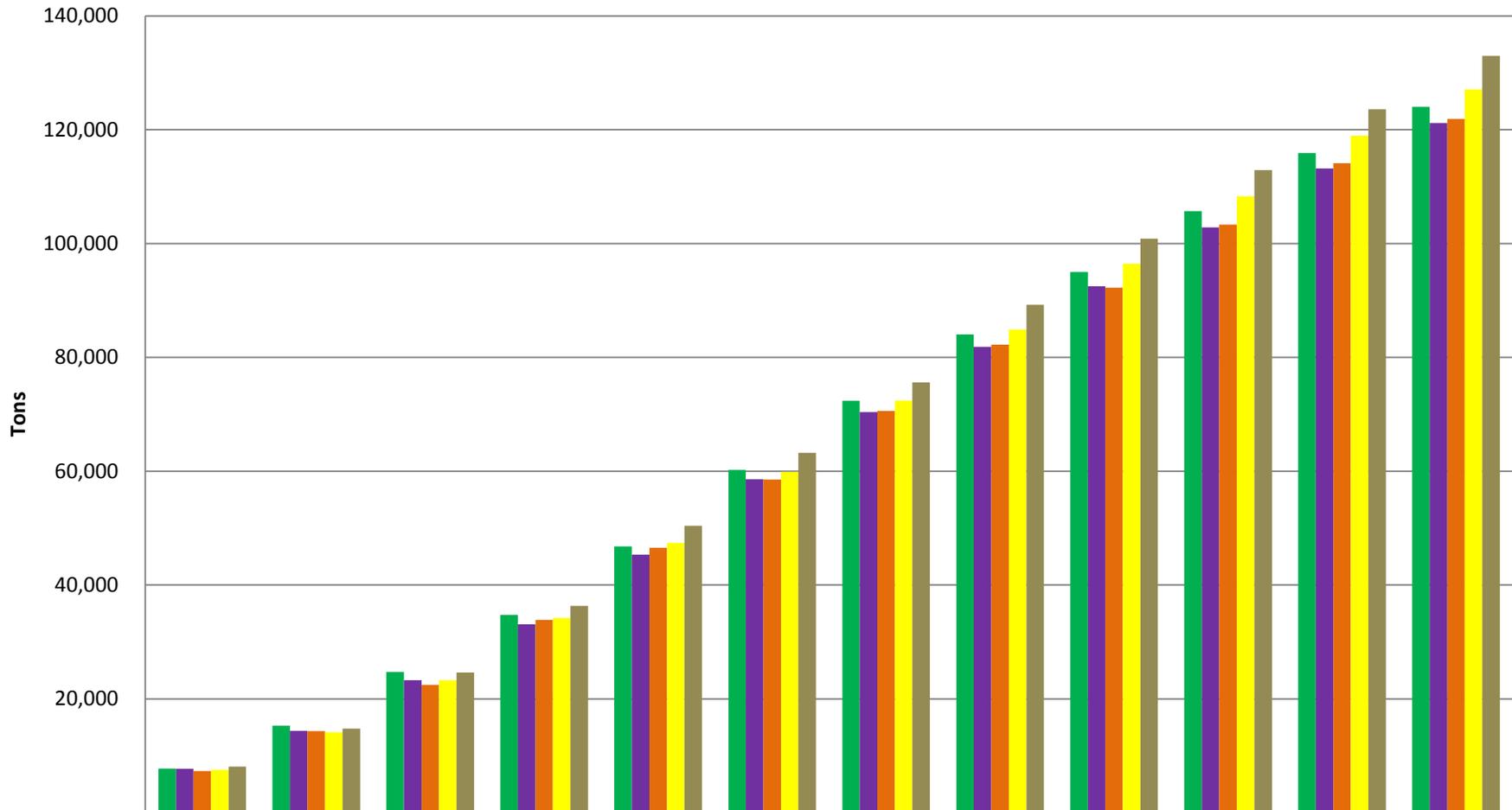
Waste Stream by Source



Residential Breakdown by Tons
48% = self haul
52% = garbage haulers

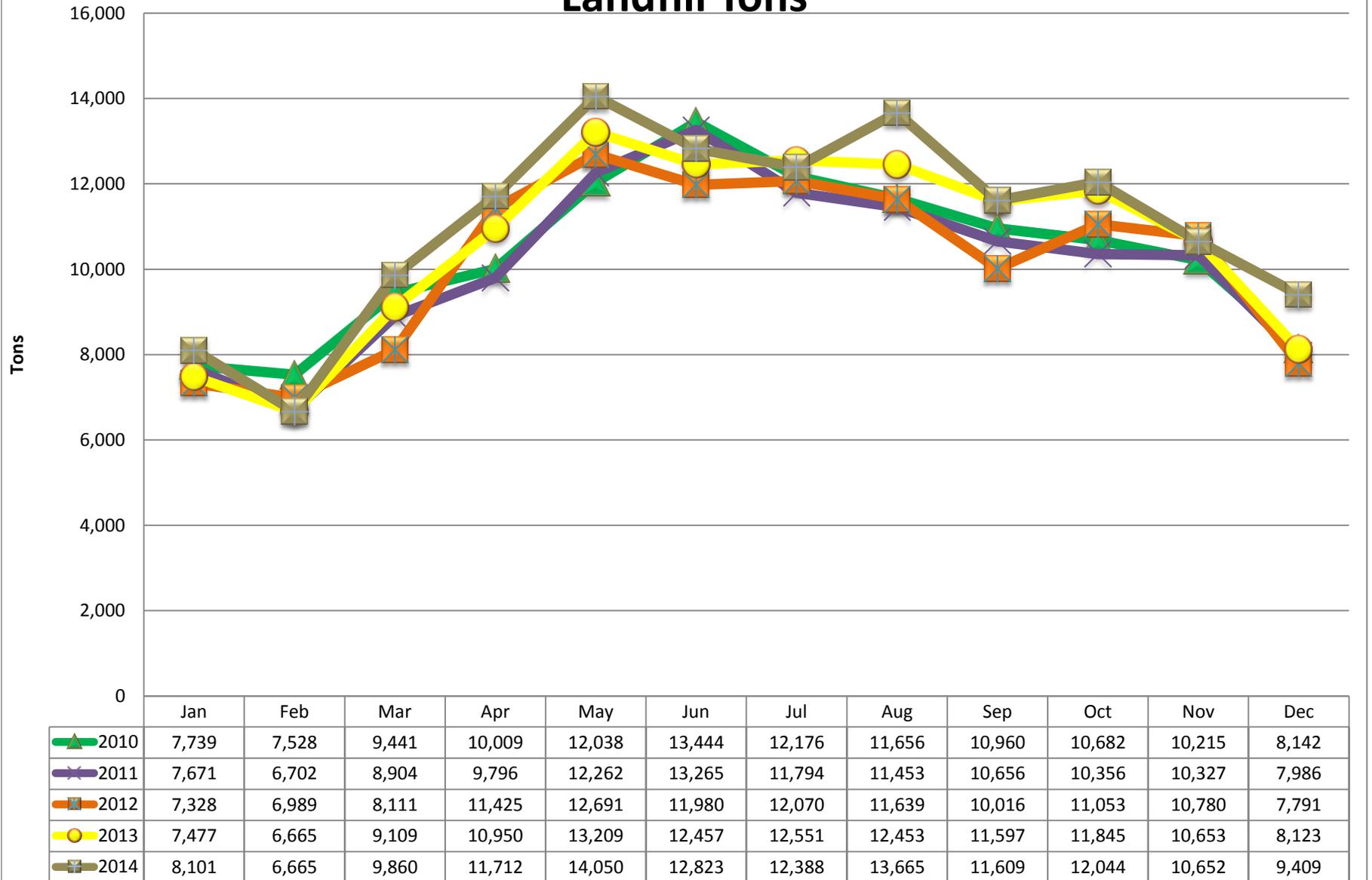
Commercial Breakdown by Tons
61% = garbage haulers
34% = commercial self haul
5% = residential self haul

Total Cumulative Tons - Landfill

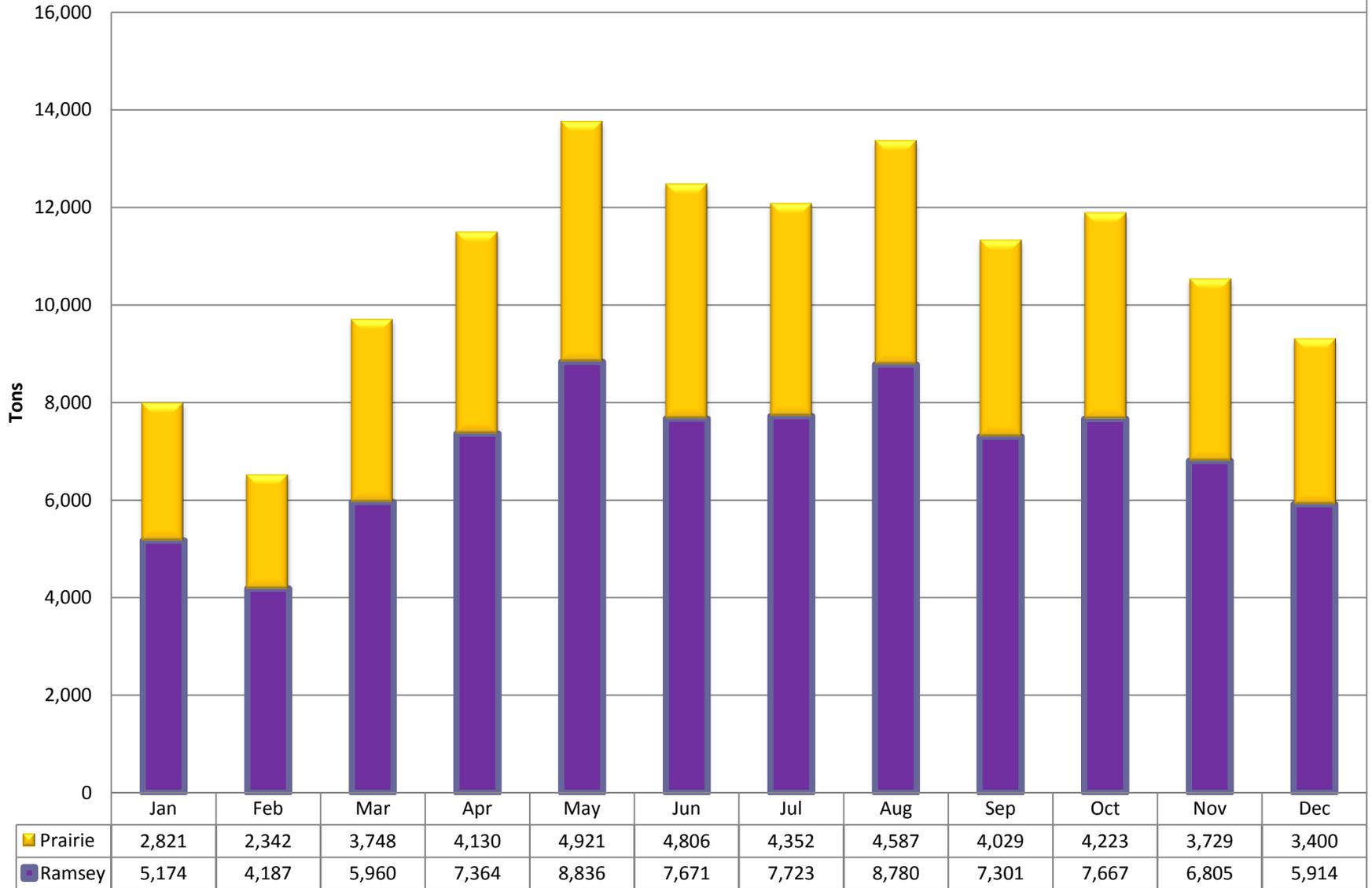


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	7,739	15,267	24,707	34,717	46,755	60,199	72,376	84,032	94,991	105,674	115,889	124,031
2011	7,671	14,373	23,277	33,073	45,335	58,600	70,394	81,847	92,503	102,859	113,186	121,172
2012	7,328	14,317	22,428	33,853	46,544	58,524	70,594	82,233	92,249	103,302	114,082	121,873
2013	7,477	14,142	23,251	34,201	47,410	59,867	72,418	84,871	96,468	108,313	118,966	127,089
2014	8,101	14,766	24,626	36,338	50,389	63,212	75,599	89,264	100,873	112,917	123,570	132,978

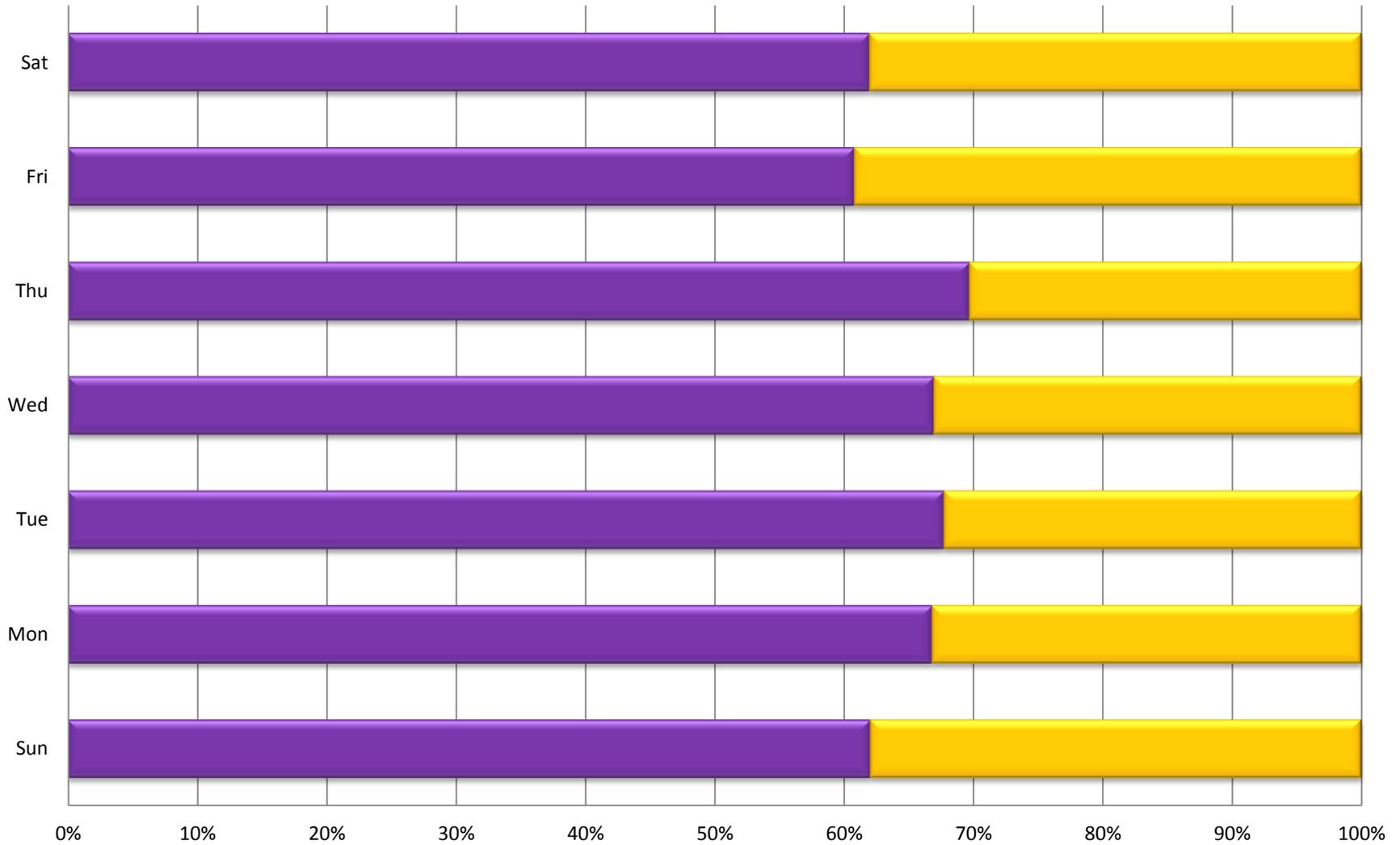
Monthly Landfill Tons



Monthly Waste to Landfill by Transfer Station

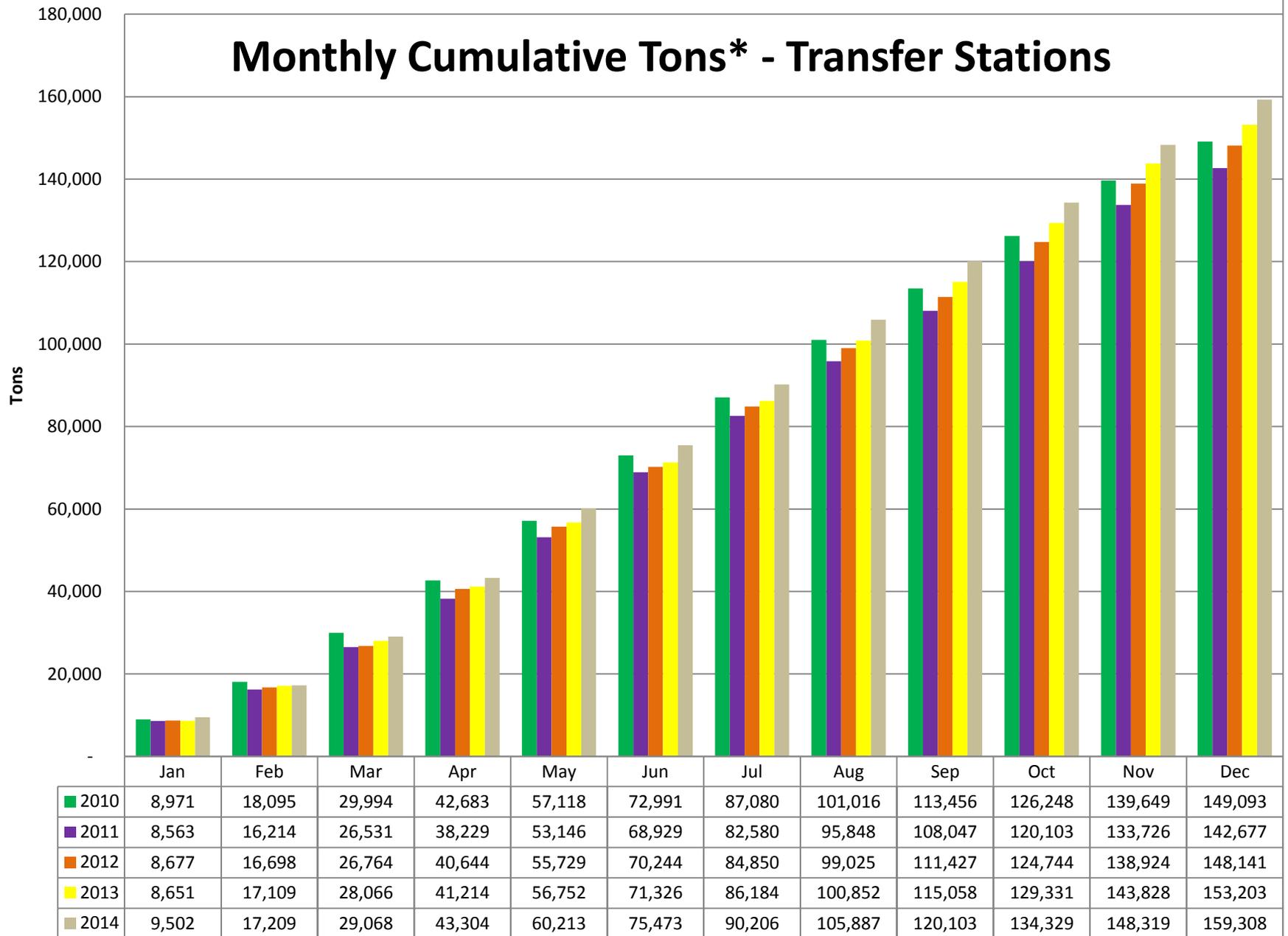


Average Daily Tons - Transfer Stations



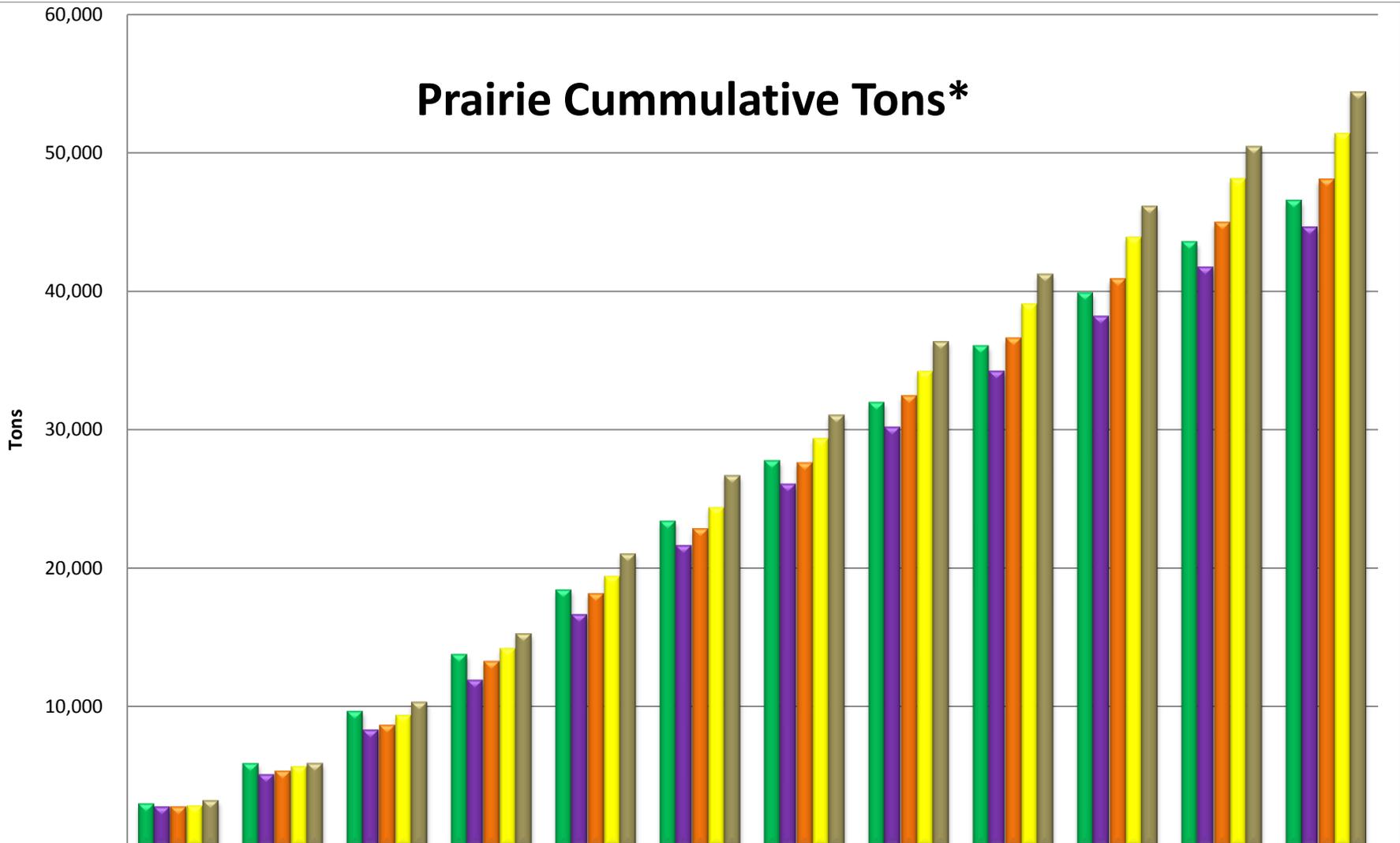
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
■ Ramsey	119	362	346	332	356	310	171
■ Prairie	73	180	165	164	155	200	105

Monthly Cumulative Tons* - Transfer Stations



*Tons In - Before Recycling

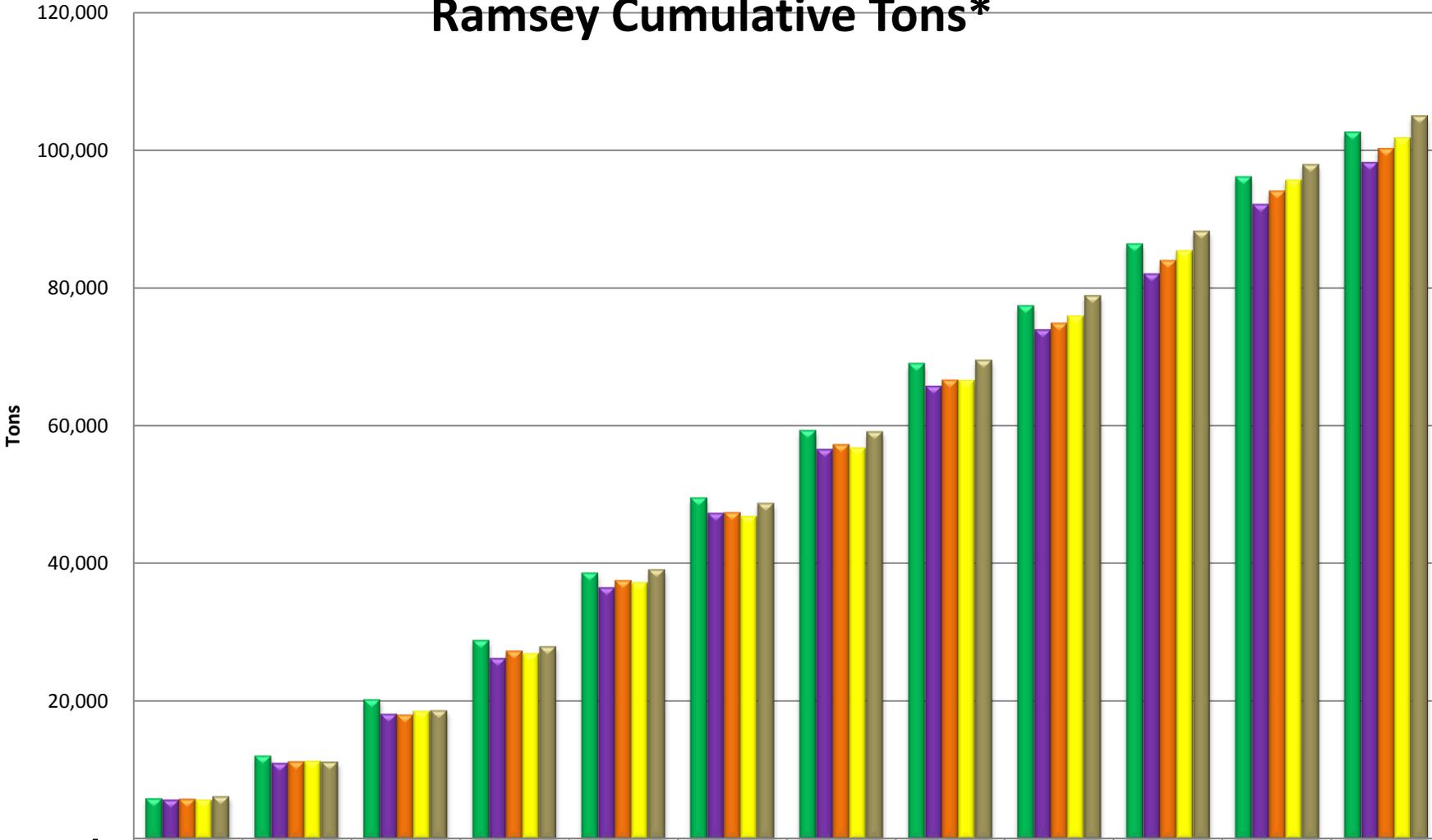
Prairie Cumulative Tons*



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	3,036	5,945	9,695	13,804	18,460	23,419	27,777	31,973	36,052	39,877	43,551	46,536
2011	2,807	5,144	8,351	11,945	16,678	21,652	26,087	30,195	34,214	38,183	41,730	44,603
2012	2,808	5,395	8,707	13,298	18,186	22,847	27,618	32,443	36,598	40,862	44,942	48,039
2013	2,885	5,722	9,429	14,239	19,453	24,421	29,390	34,240	39,099	43,913	48,162	51,405
2014	3,262	5,956	10,379	15,320	21,072	26,725	31,076	36,381	41,253	46,152	50,466	54,407

*Tons In - Before Recycling

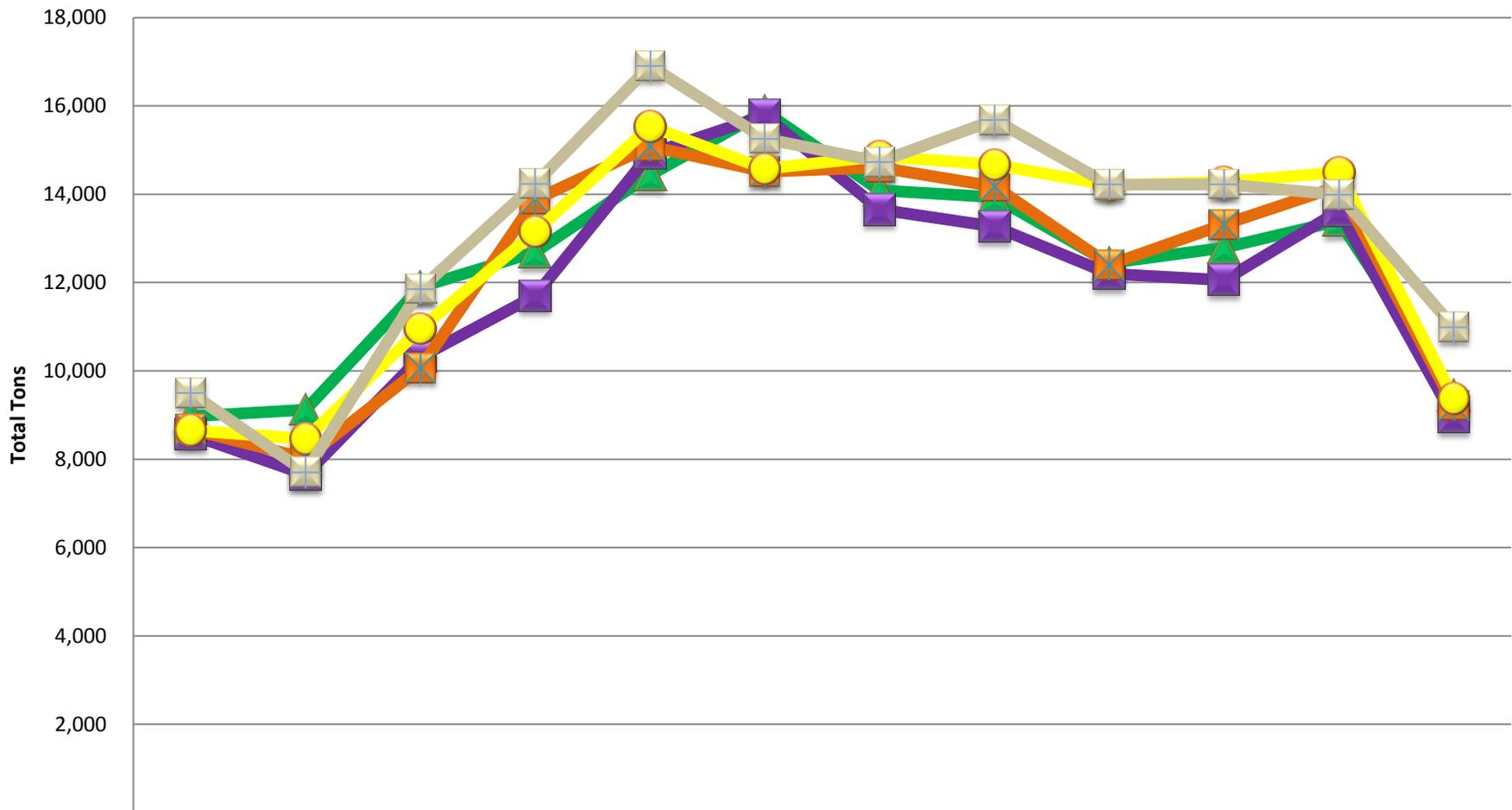
Ramsey Cumulative Tons*



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	5,935	12,150	20,300	28,879	38,658	49,572	59,303	69,044	77,405	86,372	96,100	102,559
2011	5,756	11,070	18,180	26,284	36,468	47,277	56,493	65,653	73,833	81,920	91,996	98,074
2012	5,869	11,303	18,057	27,346	37,543	47,397	57,232	66,582	74,829	83,882	93,982	100,102
2013	5,766	11,388	18,637	26,975	37,297	46,903	56,793	66,610	75,958	85,417	95,666	101,797
2014	6,240	11,253	18,689	27,984	39,142	48,748	59,129	69,506	78,849	88,177	97,853	104,901

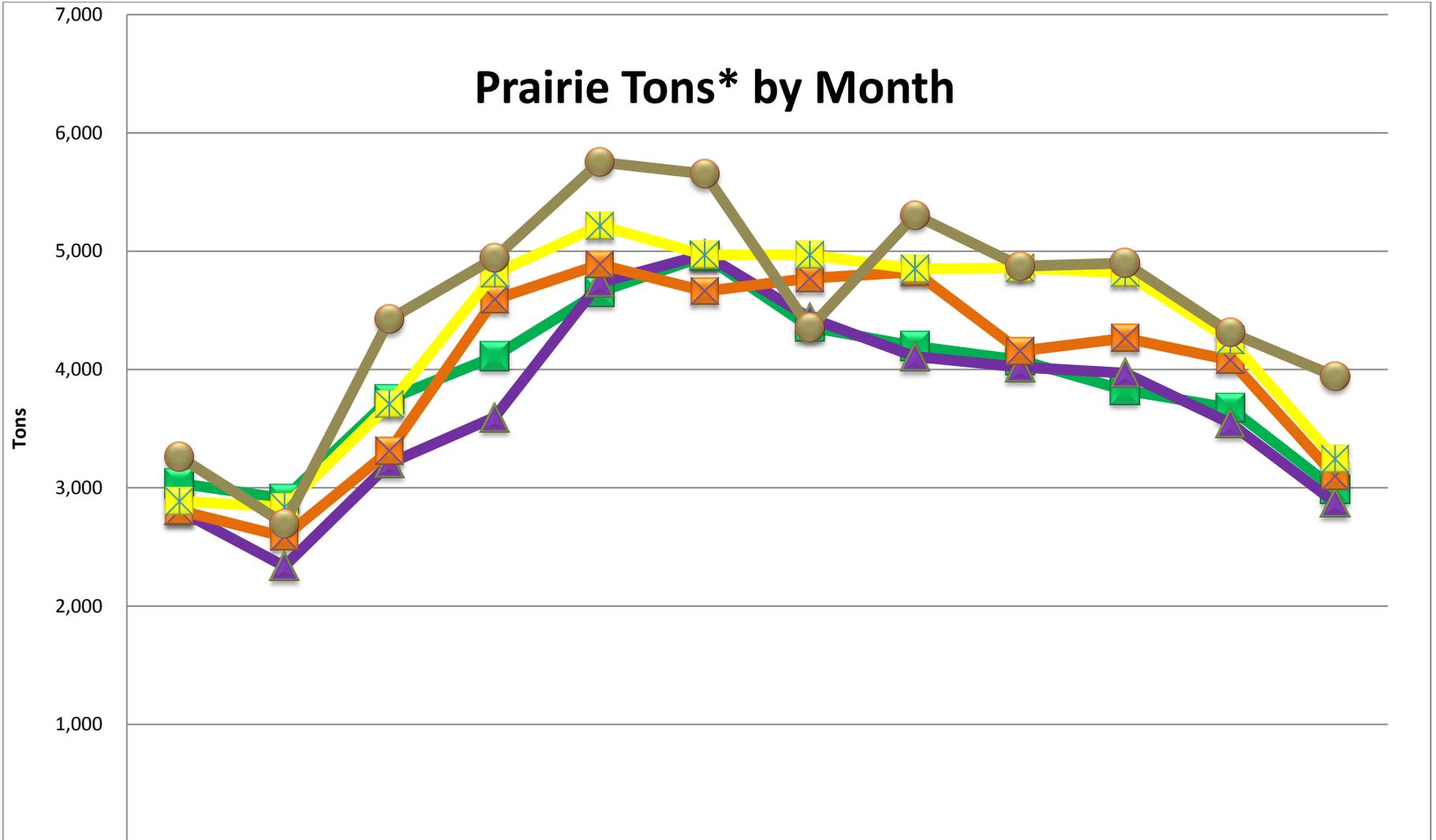
*Tons In - Before Recycling

Tons by Month - Transfer Stations



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
▲ 2010	8,971	9,123	11,900	12,688	14,435	15,873	14,089	13,936	12,440	12,792	13,401	9,444
■ 2011	8,563	7,651	10,317	11,698	14,917	15,783	13,651	13,268	12,199	12,056	13,623	8,951
■ 2012	8,677	8,021	10,066	13,880	15,085	14,515	14,606	14,175	12,402	13,317	14,180	9,217
● 2013	8,651	8,458	10,957	13,148	15,538	14,574	14,858	14,668	14,206	14,273	14,497	9,375
■ 2014	9,502	7,707	11,859	14,236	16,909	15,260	14,733	15,681	14,216	14,226	13,990	10,989

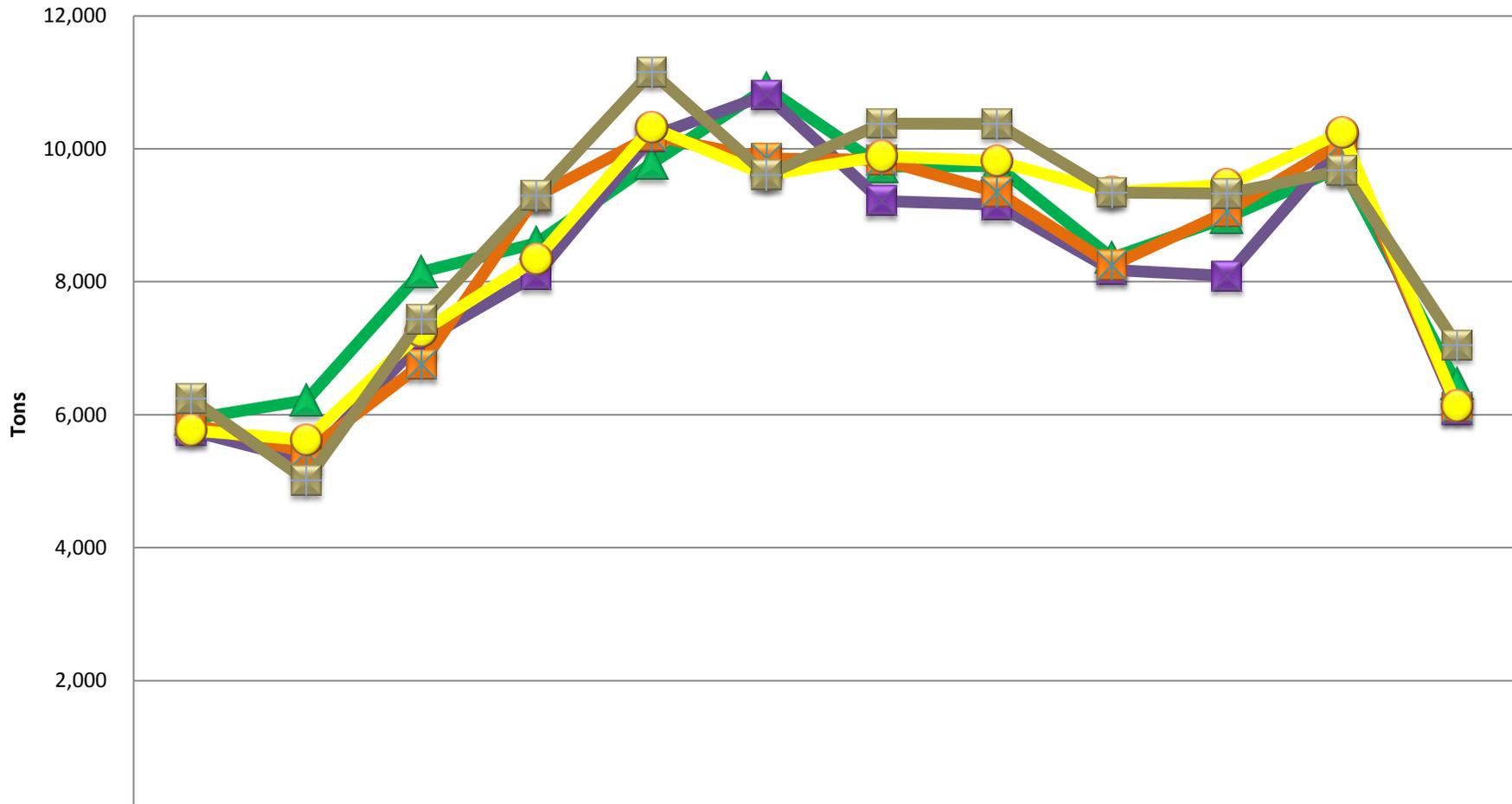
Prairie Tons* by Month



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	3,036	2,909	3,750	4,109	4,656	4,959	4,358	4,196	4,079	3,825	3,674	2,985
2011	2,807	2,337	3,207	3,594	4,733	4,974	4,435	4,108	4,019	3,969	3,547	2,873
2012	2,808	2,587	3,312	4,591	4,888	4,661	4,771	4,825	4,155	4,264	4,080	3,097
2013	2,885	2,837	3,707	4,810	5,215	4,968	4,968	4,851	4,858	4,814	4,249	3,243
2014	3,262	2,694	4,423	4,941	5,751	5,653	4,352	5,304	4,873	4,899	4,314	3,941

*Tons In - Before Recycling

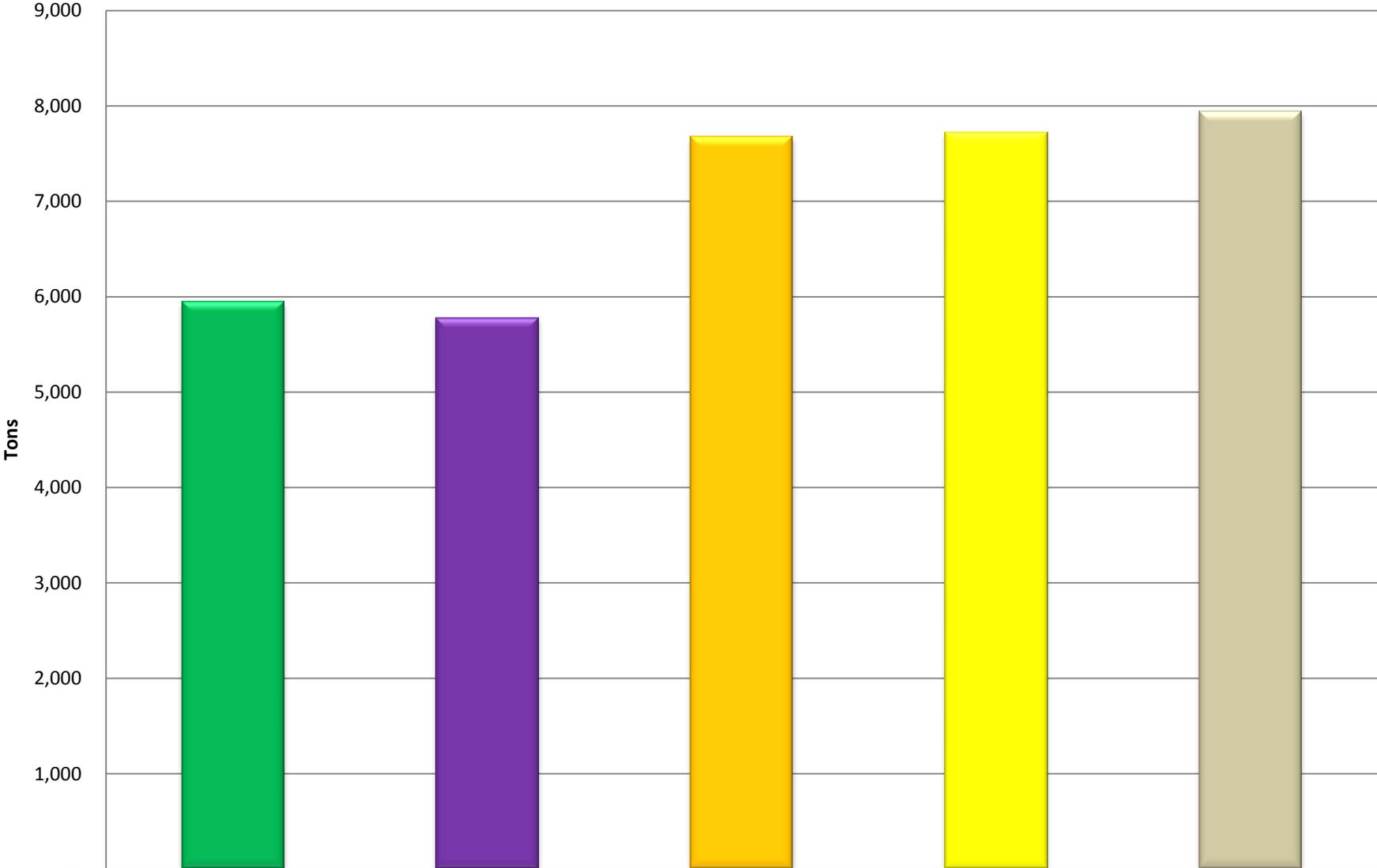
Ramsey Tons* by Month



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	5,935	6,215	8,150	8,579	9,779	10,914	9,731	9,741	8,361	8,967	9,728	6,459
2011	5,756	5,314	7,110	8,104	10,184	10,809	9,216	9,160	8,180	8,087	10,076	6,078
2012	5,869	5,434	6,754	9,289	10,197	9,854	9,835	9,350	8,247	9,053	10,100	6,120
2013	5,766	5,621	7,250	8,338	10,323	9,606	9,890	9,817	9,348	9,459	10,248	6,132
2014	6,240	5,013	7,436	9,295	11,158	9,607	10,381	10,377	9,343	9,327	9,676	7,048

*Tons In - Before Recycling

Yard Debris



■ Tons

2010

2011

2012

2013

2014

5,946

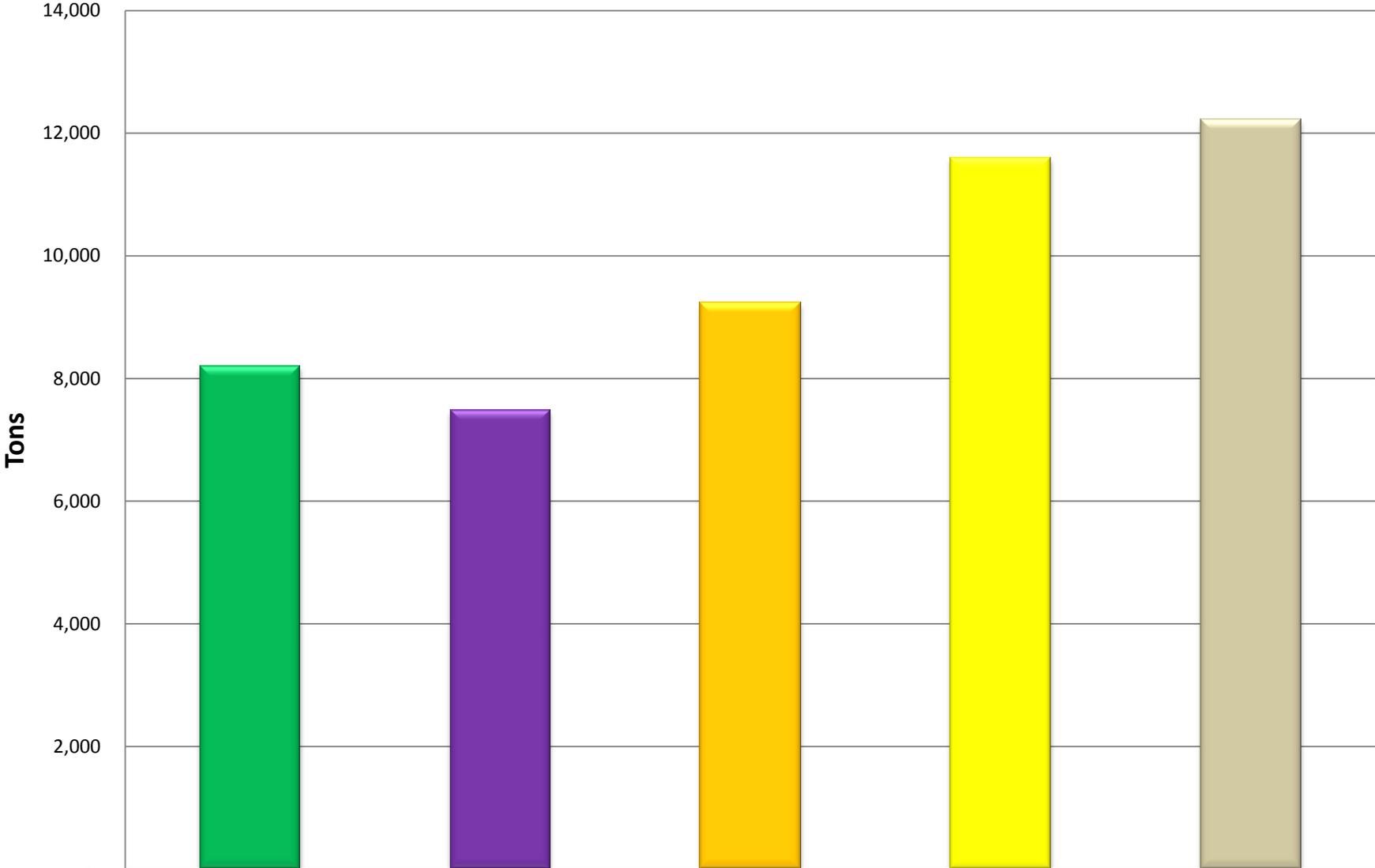
5,778

7,673

7,718

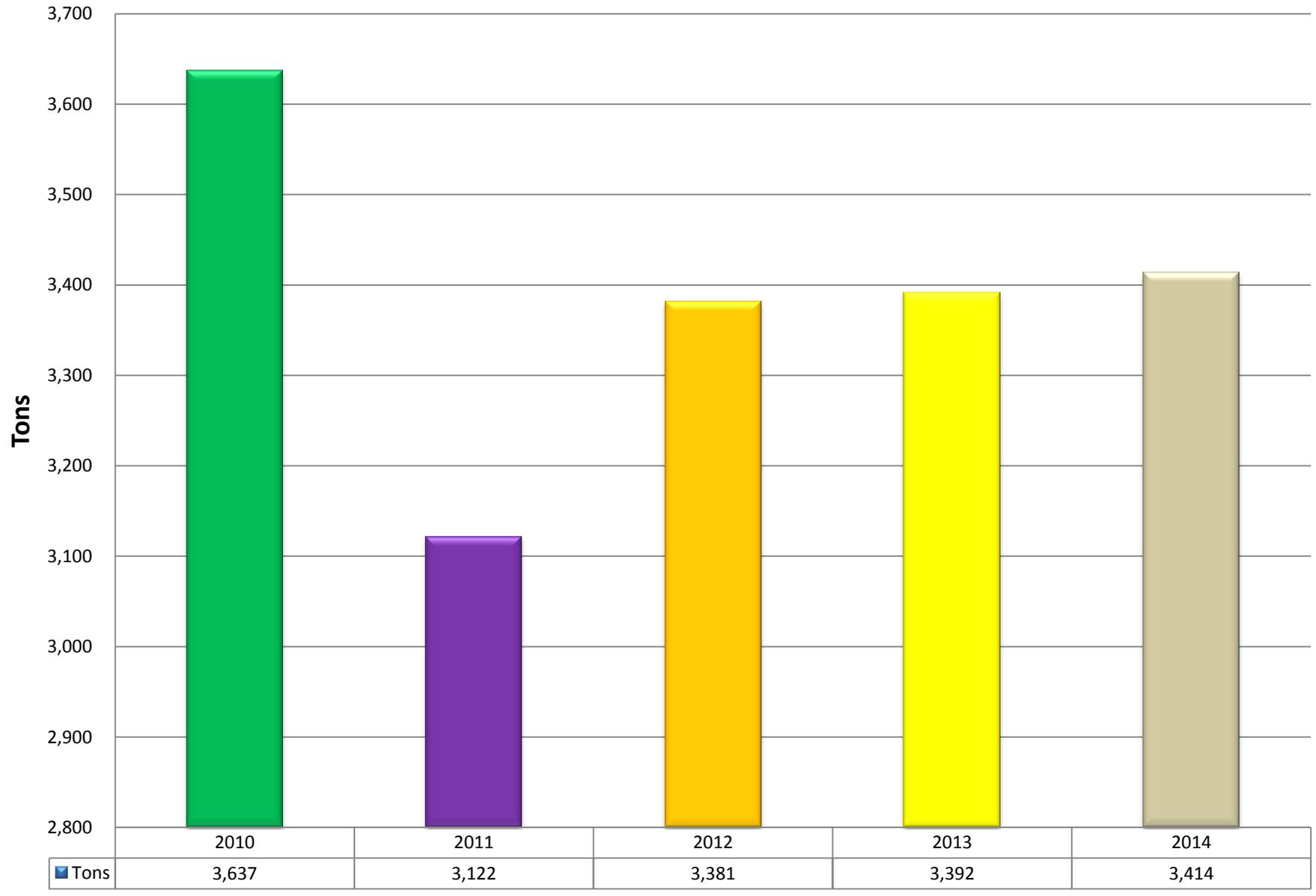
7,940

Demolition Waste*



*Includes Construction/Demolition, Mixed Demolition, and Roofing

Inert Material*



*Inert Material includes Inert Material and Cover Material

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RECYCLING 2014

Recycling is a key to waste diversion. The old adage of “Reduce, Reuse, Recycle” continues to be a basic premise of the integrated solid waste system in Kootenai County. Convenience is a major factor in the success of a recycling program.

The public recycling program consists of the various curbside programs, community recycling bins and recycling at the transfer stations. The public program saw an overall decrease of 1.3% or 248 tons from the 2013 figures. One reason for the decrease in the public recycling figures is curbside recycling figures from Coeur d’Alene Garbage were not received and therefore not included in this report. Another reason may be that several metal and battery recycling businesses have opened and are diverting recyclables from traditional recycling efforts.

The City of Coeur d’Alene’s curbside program saw an increase of 6% or 139 tons in the material recycled. The program services an average of 1,207 customers with a 73% overall participation rate. The City of Post Falls’ curbside program realized a slight decrease of 1% or 18 tons from the 2013 figures. Single stream recycling in Coeur d’Alene, Post Falls, Hayden, Fernan, and other outlying areas has proven to not only be successful but very convenient as well.

The transfer stations offer the largest variety of recycling options. Overall recycling at the transfer stations saw a slight increase of 1.6% or 248 tons. Additional charts in this report in this section outline recycling items in detail.

The table below provides a breakout of Kootenai County’s Recycling efforts. Further detail is provided by the charts in this section.

PROGRAM	2010	2011	2012	2013	2014
Coeur d’ Alene Curbside Recycling	1,024¹	2,037	2,161	2,147	2,286
Post Falls Curbside Recycling	267	454²	972	1,077	1,059
Rural Sites/Community Recycling ⁴	942	753	654	542	472
Other Curbside Recycling		236³	939	194 ⁵	948
Transfer Station Recycling	17,901	15,086	15,066	14,862	15,110
TOTAL	20,134	18,566	19,792	18,822	18,752

¹Single Stream Recycling began in CdA on October 18, 2010

² Single Stream Recycling began in Post Falls on October 1, 2011

³ Single Stream Recycling in Hayden area began June 6, 2011

⁴ These figures include School Recycling and Rural Site/Community Recycling for 2012

⁵ These figures do NOT include Single Stream Recycling in Hayden area which was not provided for 2013.

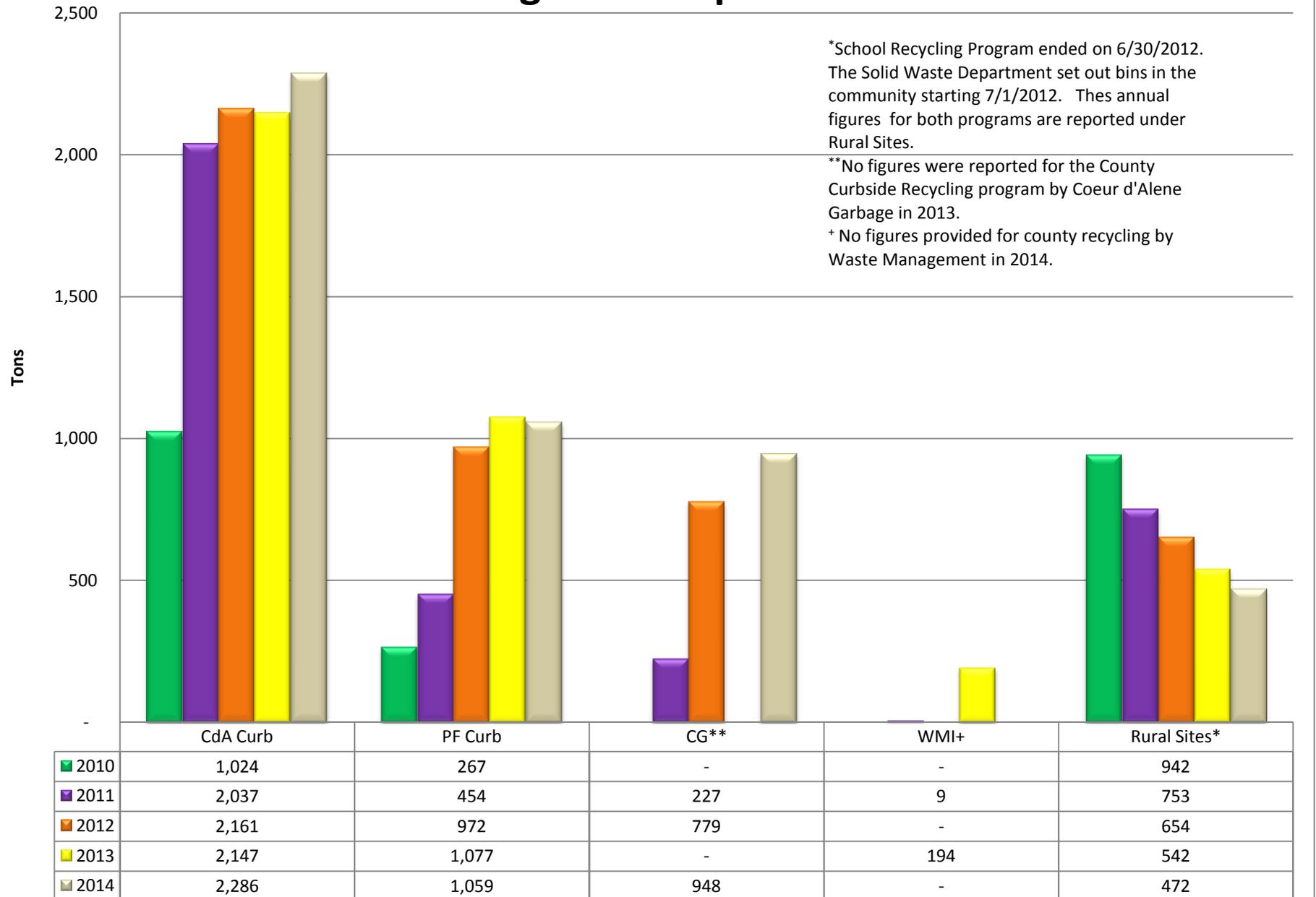
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Kootenai County Public Recycling Program Comparison

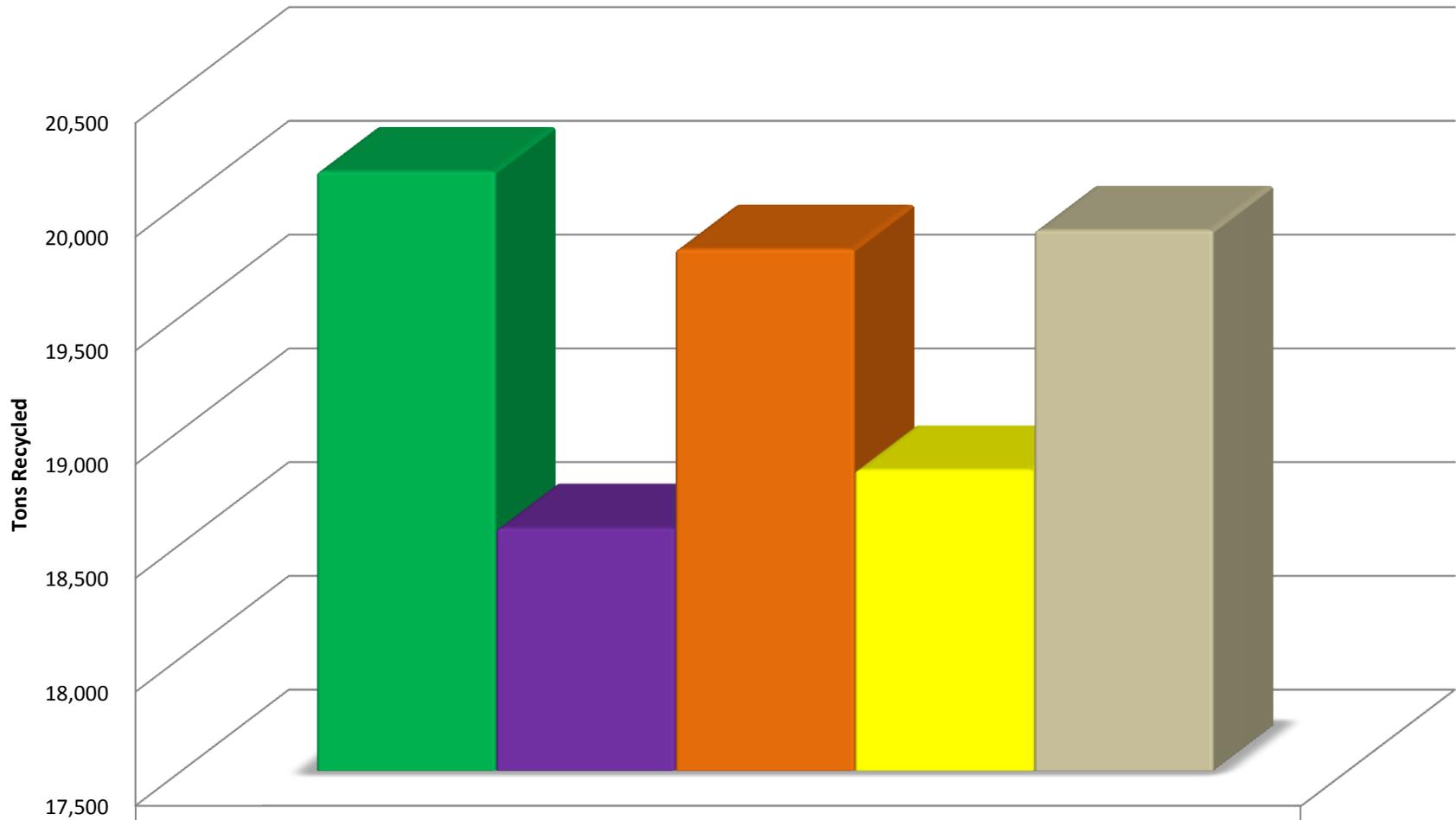
*School Recycling Program ended on 6/30/2012. The Solid Waste Department set out bins in the community starting 7/1/2012. This annual figures for both programs are reported under Rural Sites.

**No figures were reported for the County Curbside Recycling program by Coeur d'Alene Garbage in 2013.

+ No figures provided for county recycling by Waste Management in 2014.

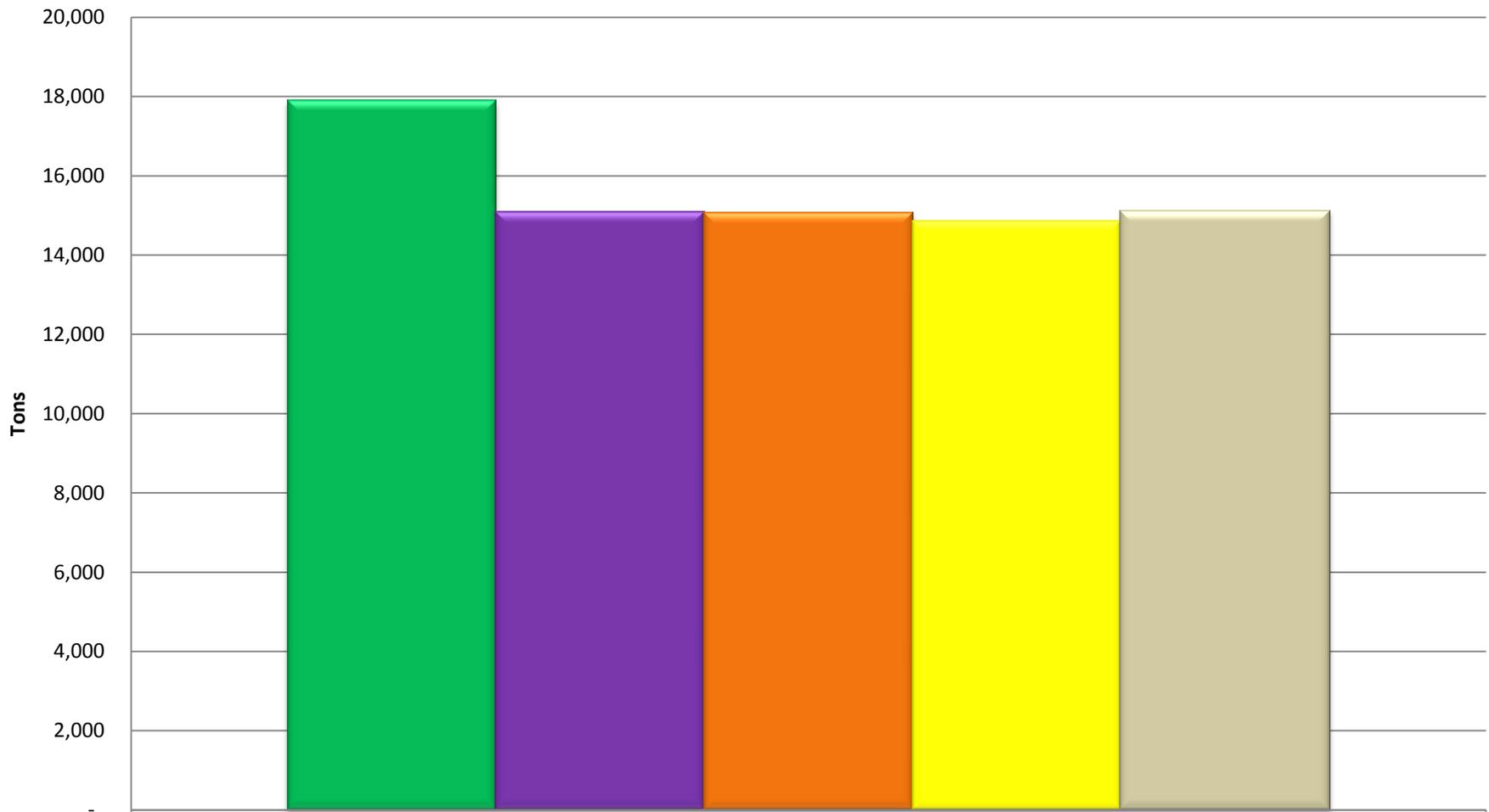


Recycling Programs Annual Comparison



	Program Years
■ 2010	20,134
■ 2011	18,566
■ 2012	19,792
■ 2013	18,822
■ 2014	19,875

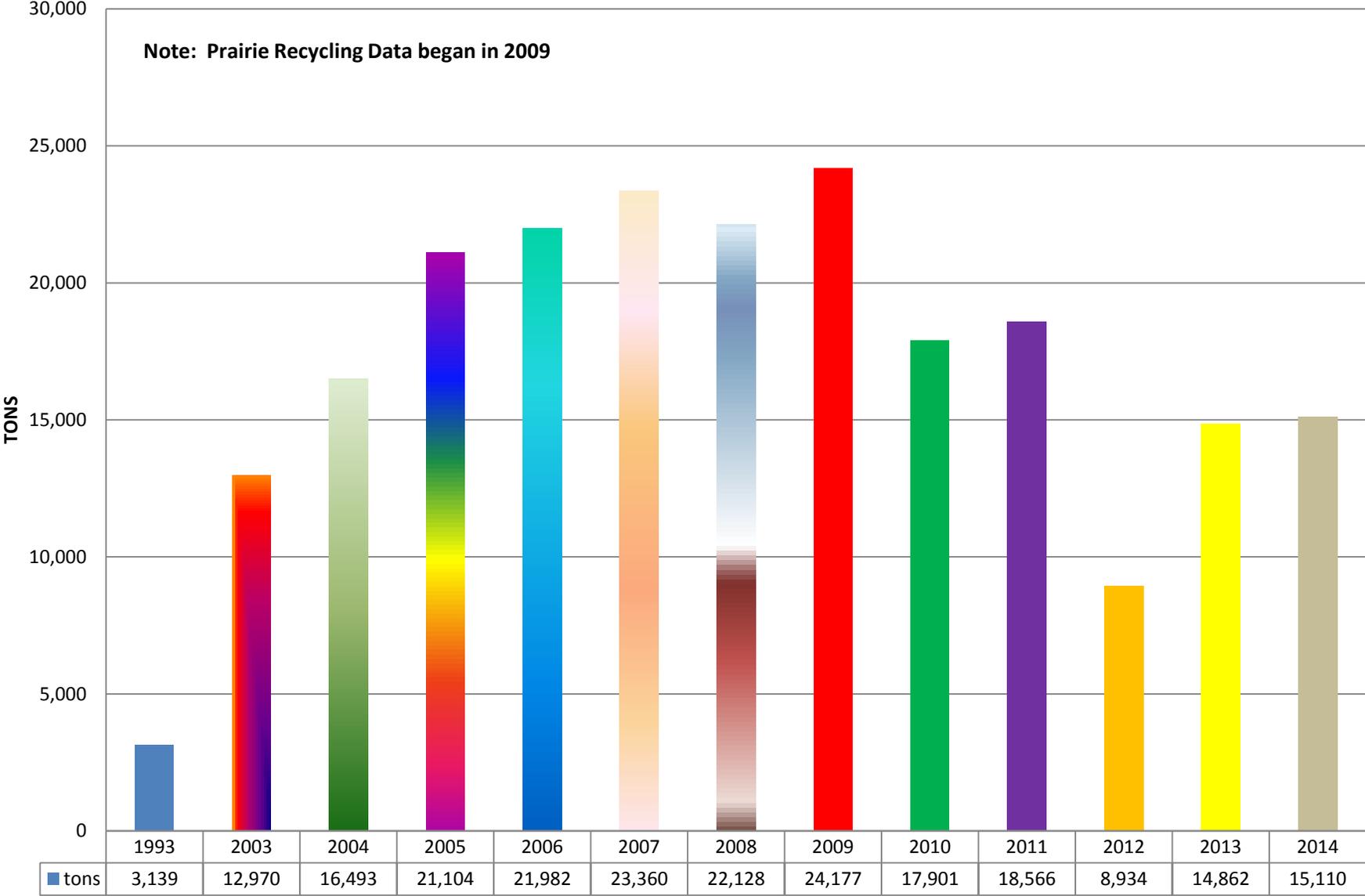
Solid Waste Transfer Station Recycling



	Tons Recycled
2010	17,901
2011	15,086
2012	15,066
2013	14,862
2014	15,110

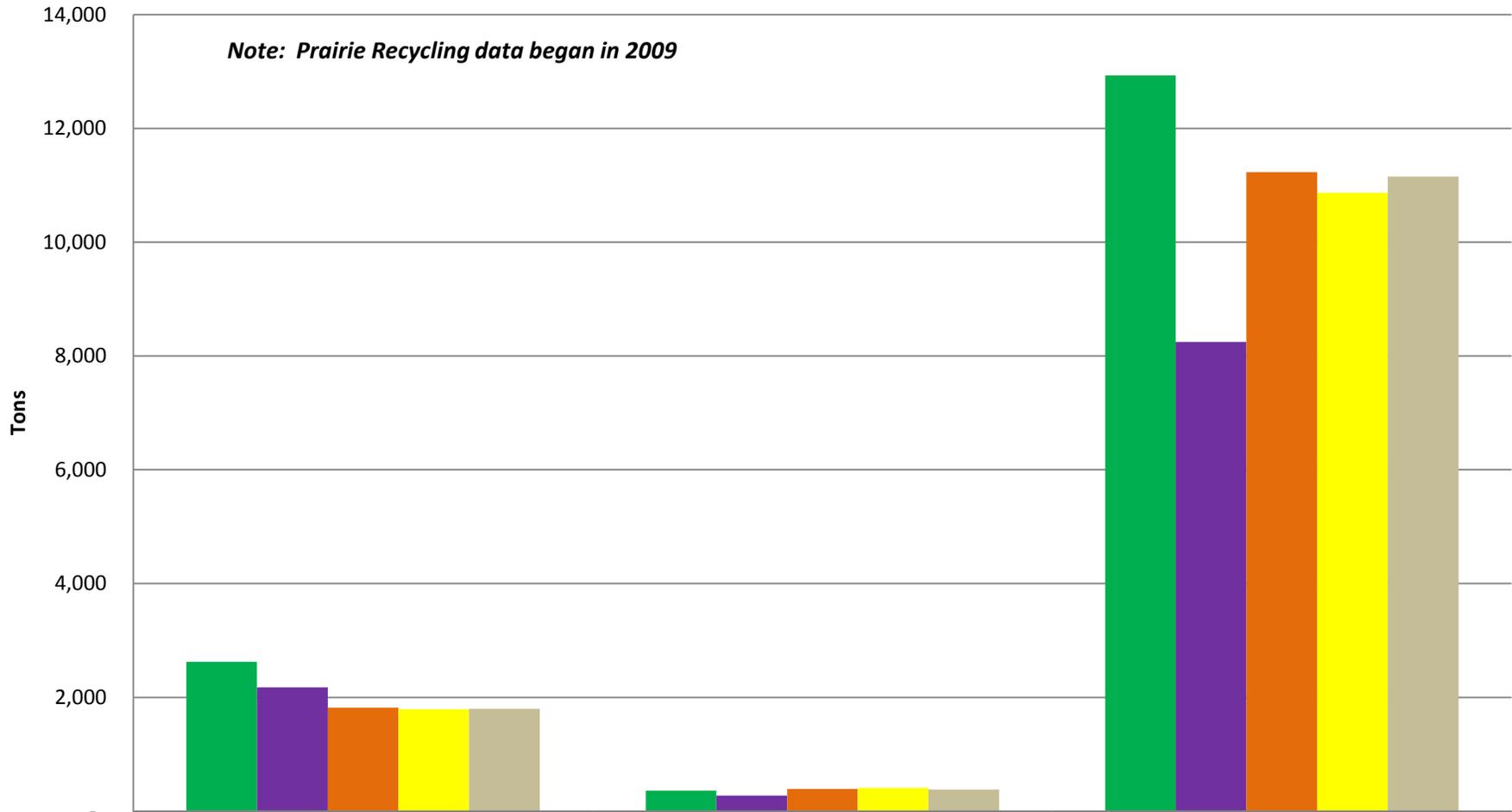
Transfer Station Recycling Annual Comparison

Note: Prairie Recycling Data began in 2009



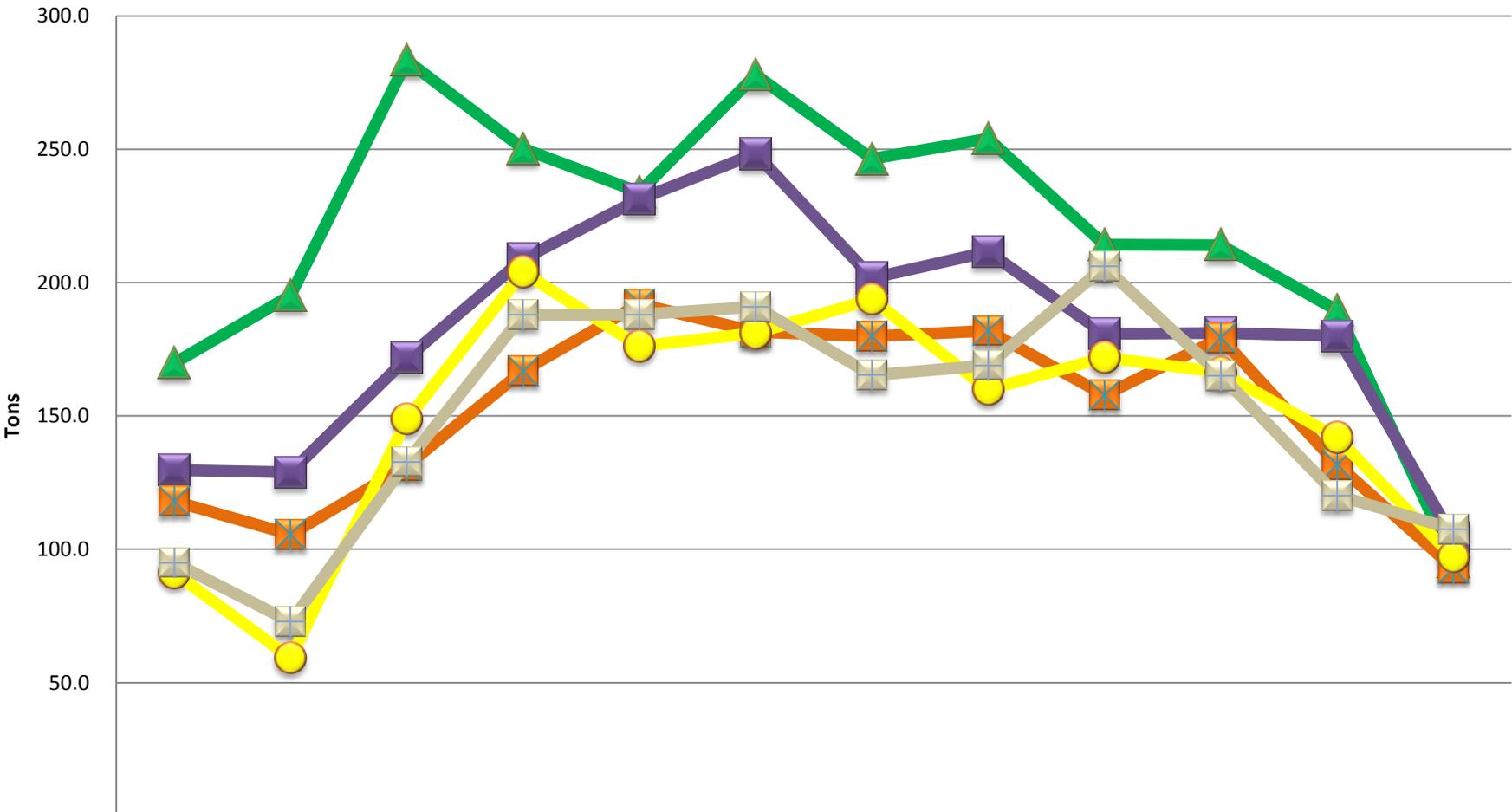
Metals, Tires & Wood Recycling

Note: Prairie Recycling data began in 2009



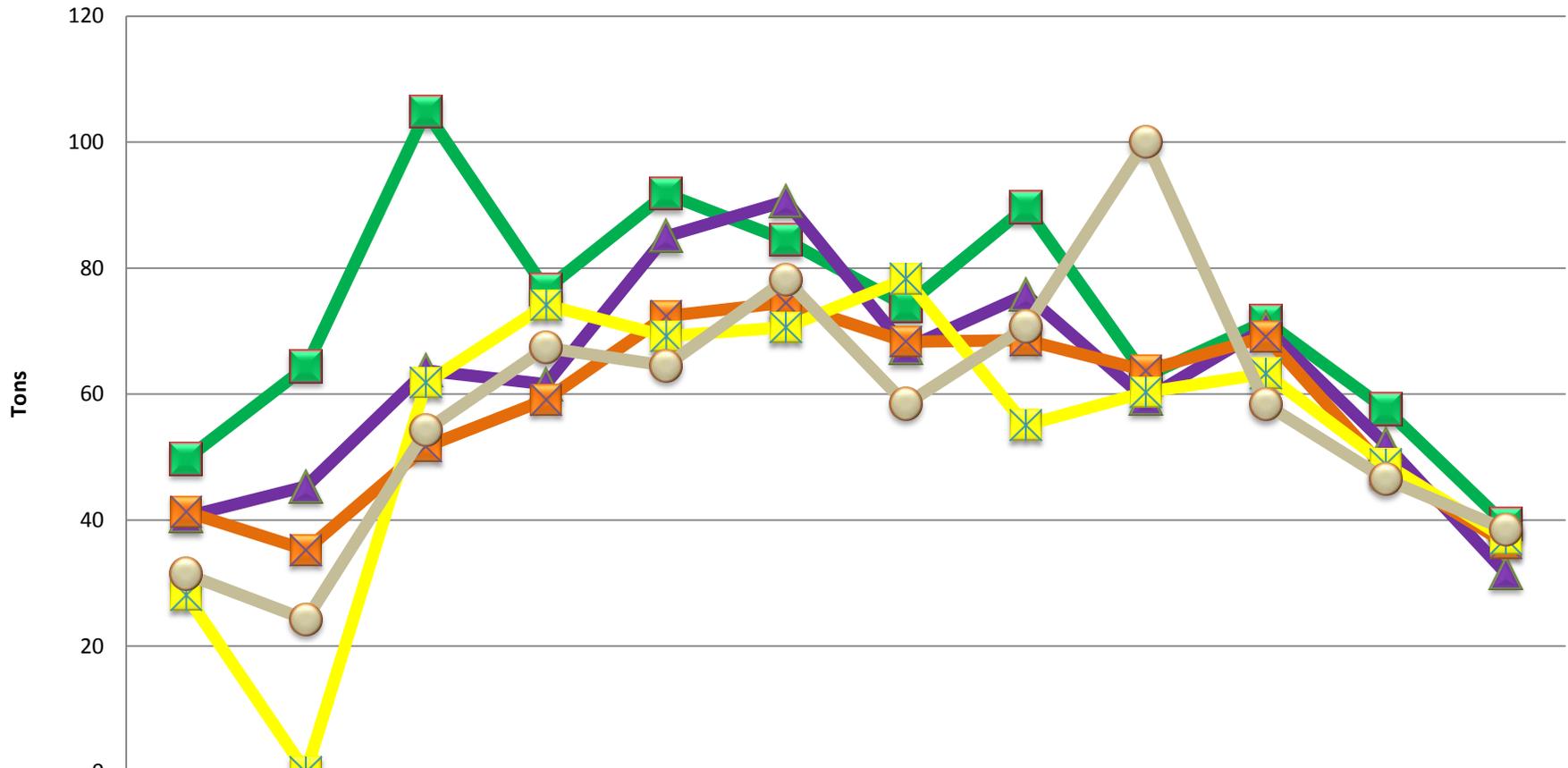
	Loose Metals	Tires	Wood
■ 2010	2,624	361	12,931
■ 2011	2,178	272	8,248
■ 2012	1,819	391	11,233
■ 2013	1,791	408	10,870
■ 2014	1,801	381	11,156

Loose Metals Recycling - Monthly



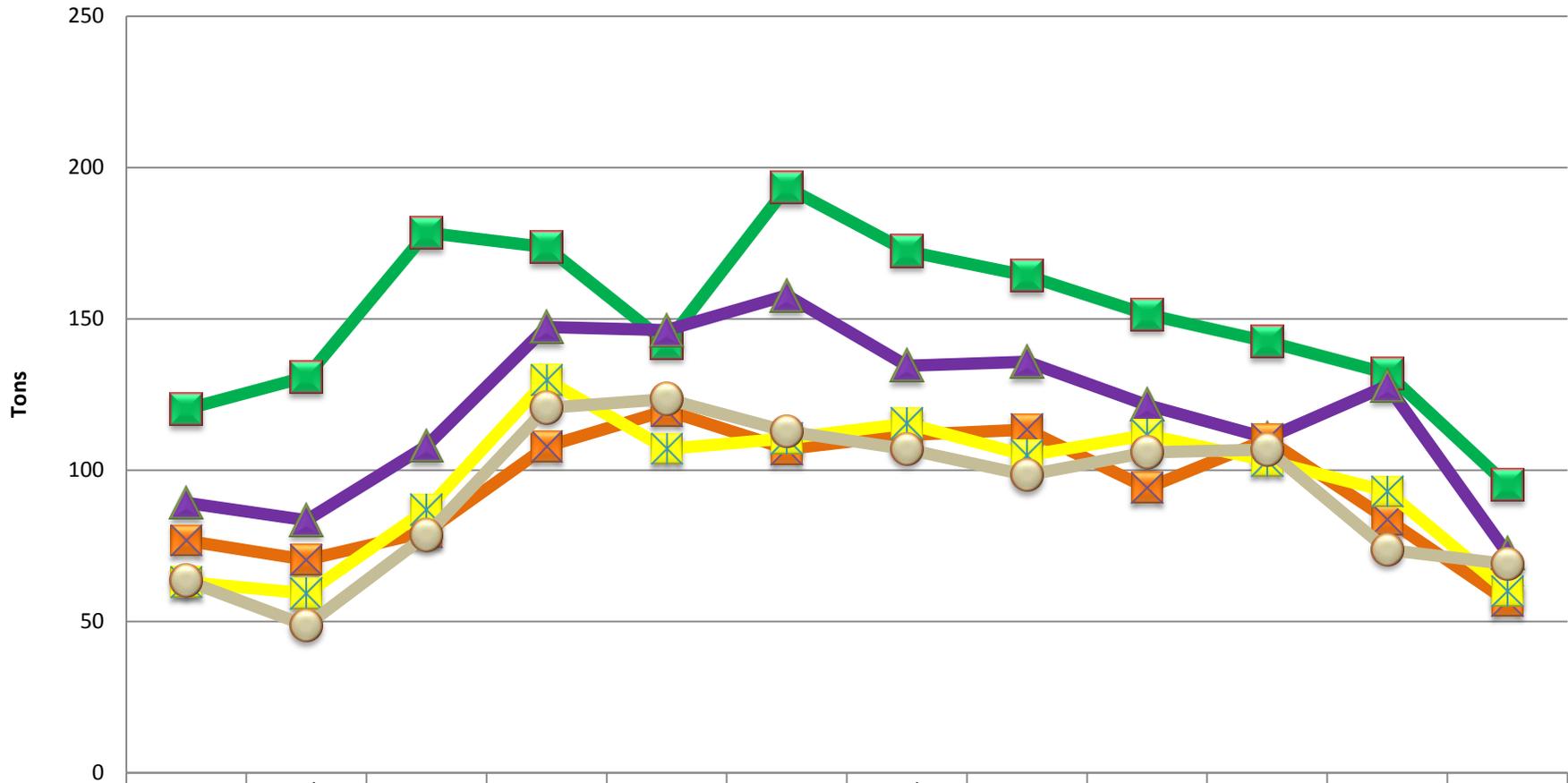
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
▲ 2010	169.8	195.2	283.3	250.2	233.9	277.9	246.4	253.9	214.2	214.1	189.6	95.1
■ 2011	129.7	128.8	171.8	208.9	231.3	248.4	201.8	211.6	180.8	181.2	179.9	104.1
■ 2012	118.0	105.6	131.3	166.9	192.0	181.5	179.9	182.0	157.8	179.3	131.7	93.0
● 2013	91.1	59.3	148.8	203.9	176.2	181.1	193.7	159.9	171.9	166.4	141.8	97.0
■ 2014	94.9	72.8	132.8	187.9	188.0	191.0	165.3	169.0	206.0	165.2	120.2	107.5

Monthly Loose Metals - Prairie (Cumulative Total 693 tons)



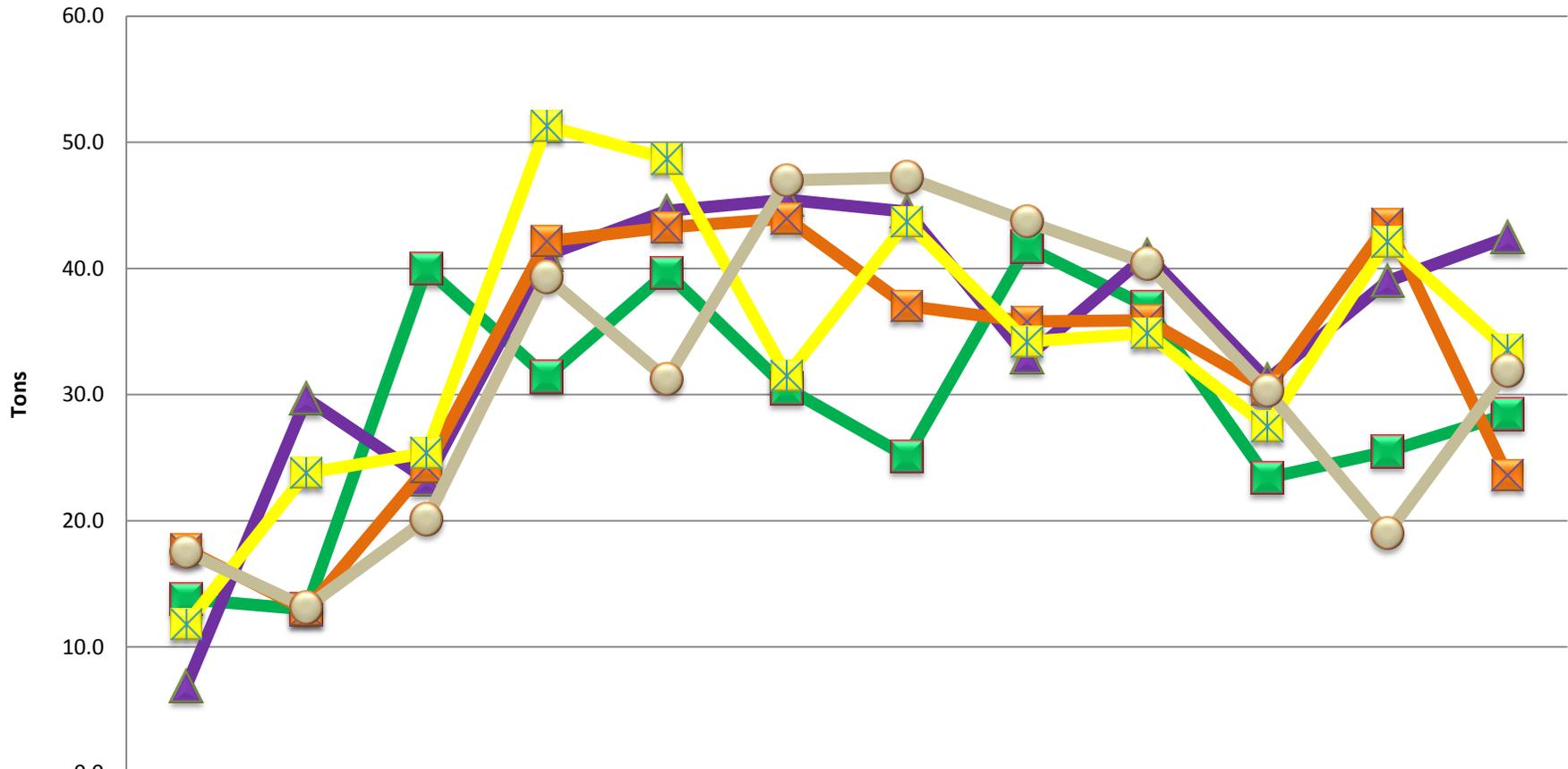
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	50	64	105	77	92	84	74	90	63	72	58	39
2011	41	45	64	62	85	91	67	76	59	71	52	32
2012	41	35	52	59	72	75	68	69	64	69	48	36
2013	28	0	62	74	69	71	78	55	60	63	49	37
2014	31	24	54	67	65	78	58	71	100	58	46	39

Monthly Loose Metals - Ramsey (Cumulative Total 1,108 tons)



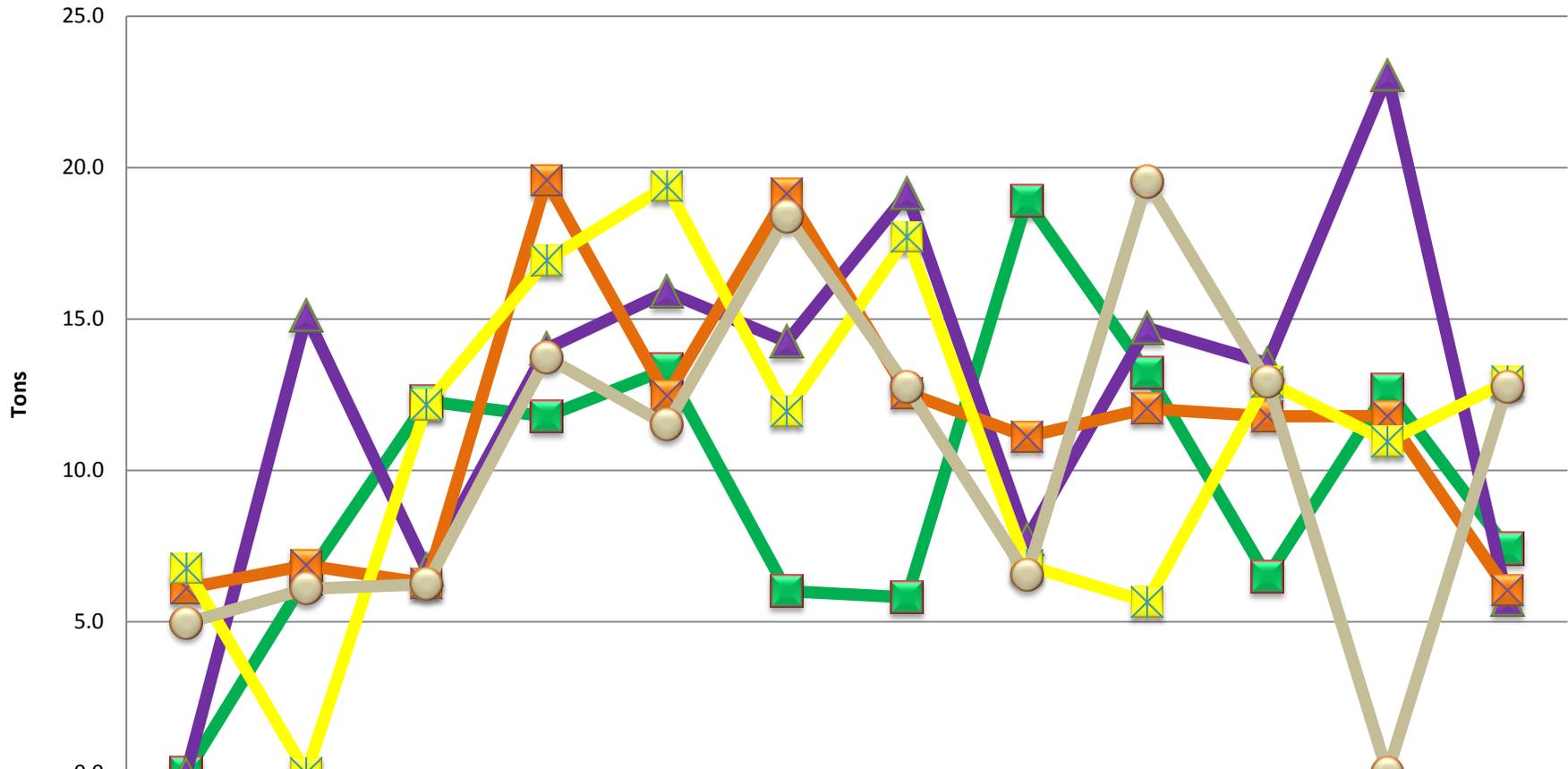
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	120	131	178	174	142	193	172	164	151	143	132	95
2011	89	83	108	147	146	158	134	136	122	111	128	73
2012	77	70	80	108	120	107	112	113	94	110	84	57
2013	63	59	87	130	107	111	115	105	112	103	93	60
2014	64	49	79	121	124	113	107	98	106	107	74	69

Tire Recycling - Totals 2014 (381 tons)



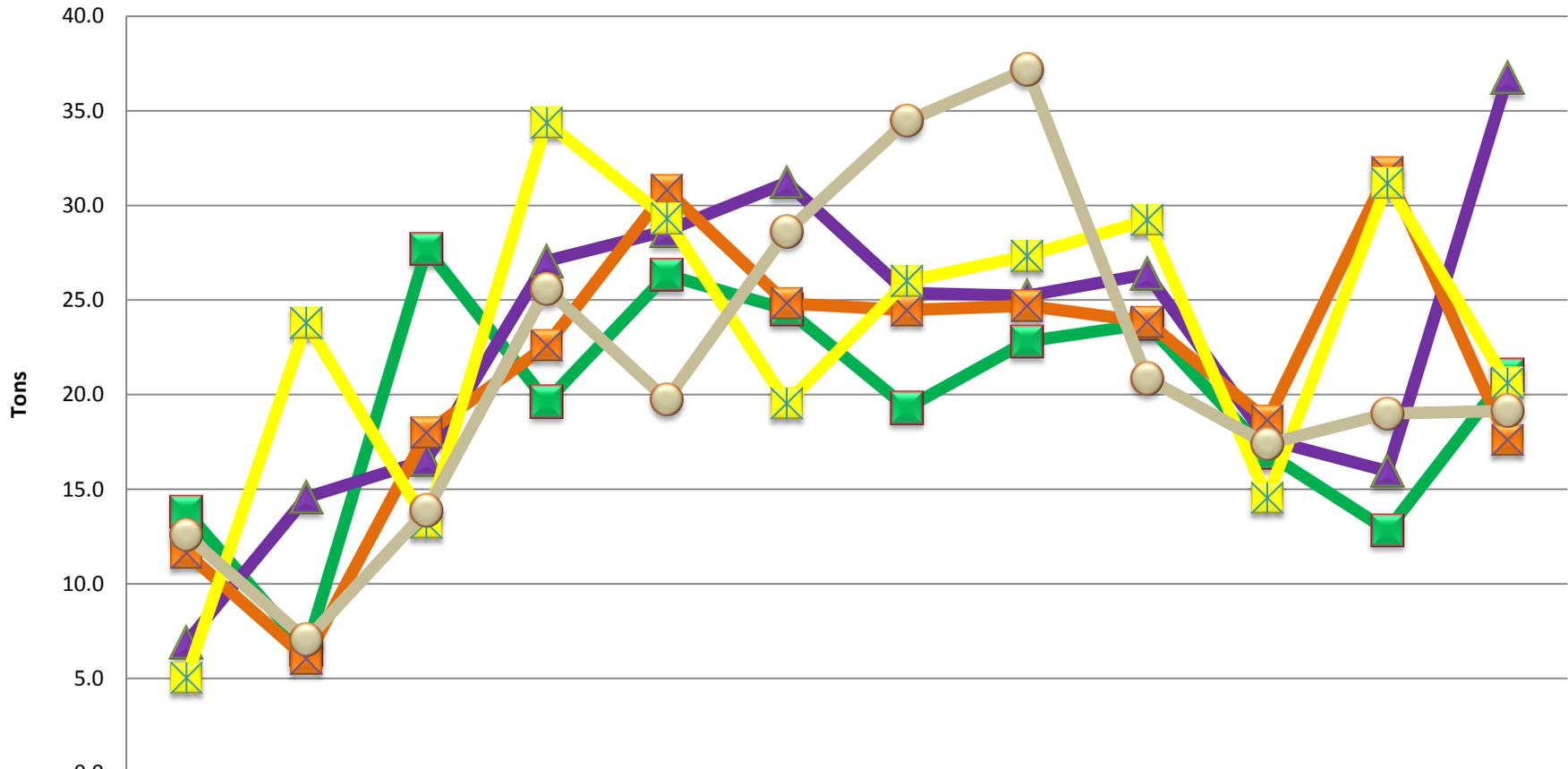
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	13.8	13.0	40.0	31.4	39.7	30.5	25.1	41.7	37.0	23.4	25.5	28.4
2011	6.9	29.7	23.3	41.1	44.6	45.5	44.5	33.0	41.1	31.2	39.0	42.5
2012	17.7	12.9	24.2	42.2	43.3	44.0	37.0	35.8	35.9	30.4	43.6	23.6
2013	11.8	23.8	25.4	51.3	48.7	31.5	43.7	34.2	34.9	27.5	42.1	33.6
2014	17.5	13.1	20.1	39.3	31.2	47.0	47.2	43.7	40.4	30.3	19.0	31.9

Tire Recycling - Prairie 2014 (125 tons)



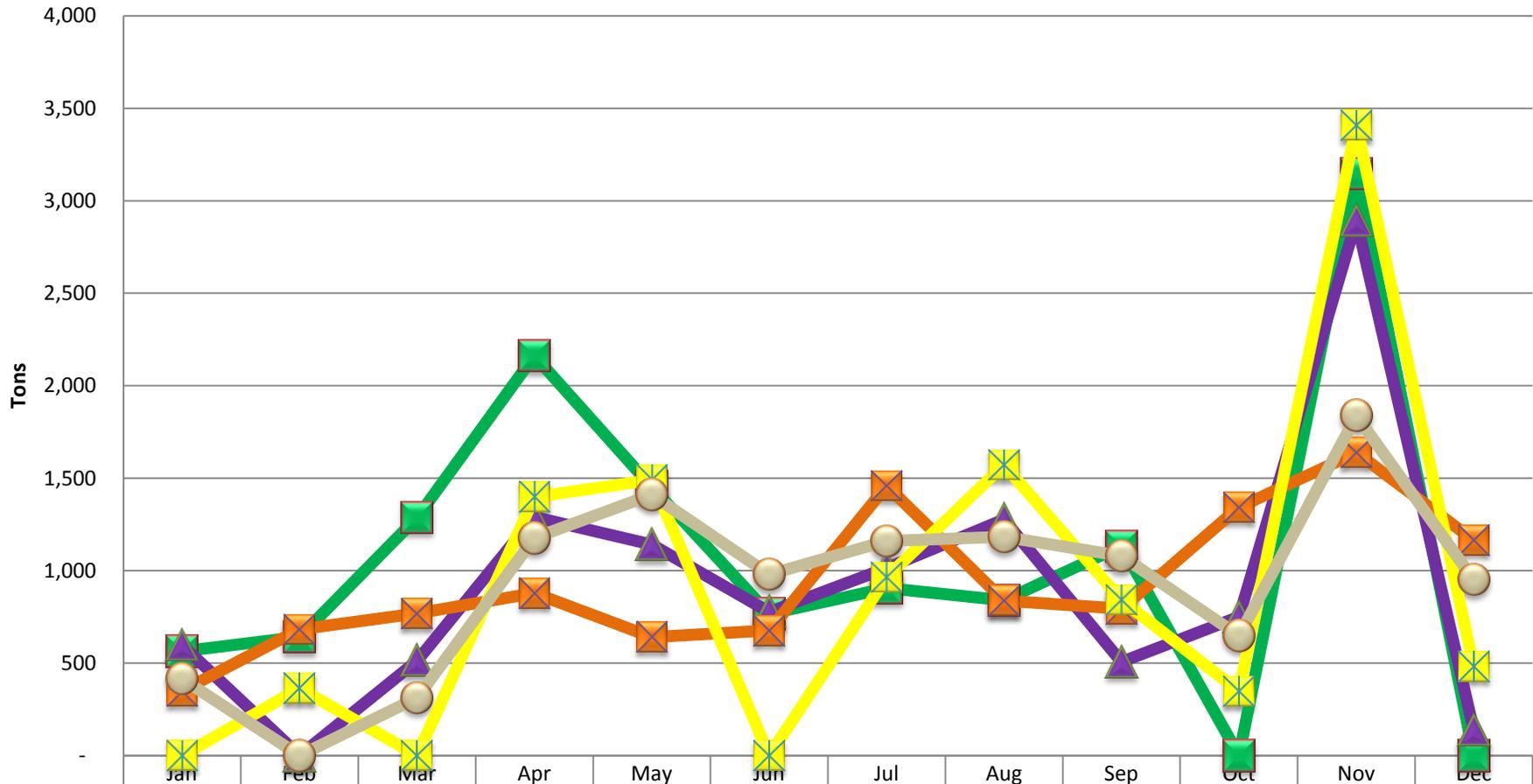
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	0.0	6.4	12.3	11.8	13.3	6.0	5.8	18.9	13.2	6.5	12.7	7.4
2011	0.0	15.1	6.7	14.0	15.9	14.3	19.1	7.7	14.7	13.5	23.0	5.7
2012	6.1	6.9	6.3	19.6	12.5	19.1	12.6	11.1	12.0	11.8	11.8	6.0
2013	6.8	0.0	12.2	16.9	19.4	12.0	17.7	6.9	5.7	12.9	11.0	12.9
2014	4.96	6.09	6.24	13.73	11.5	18.39	12.76	6.54	19.53	12.93	0	12.76

Tire Recycling - Ramsey 2014 (255 tons)



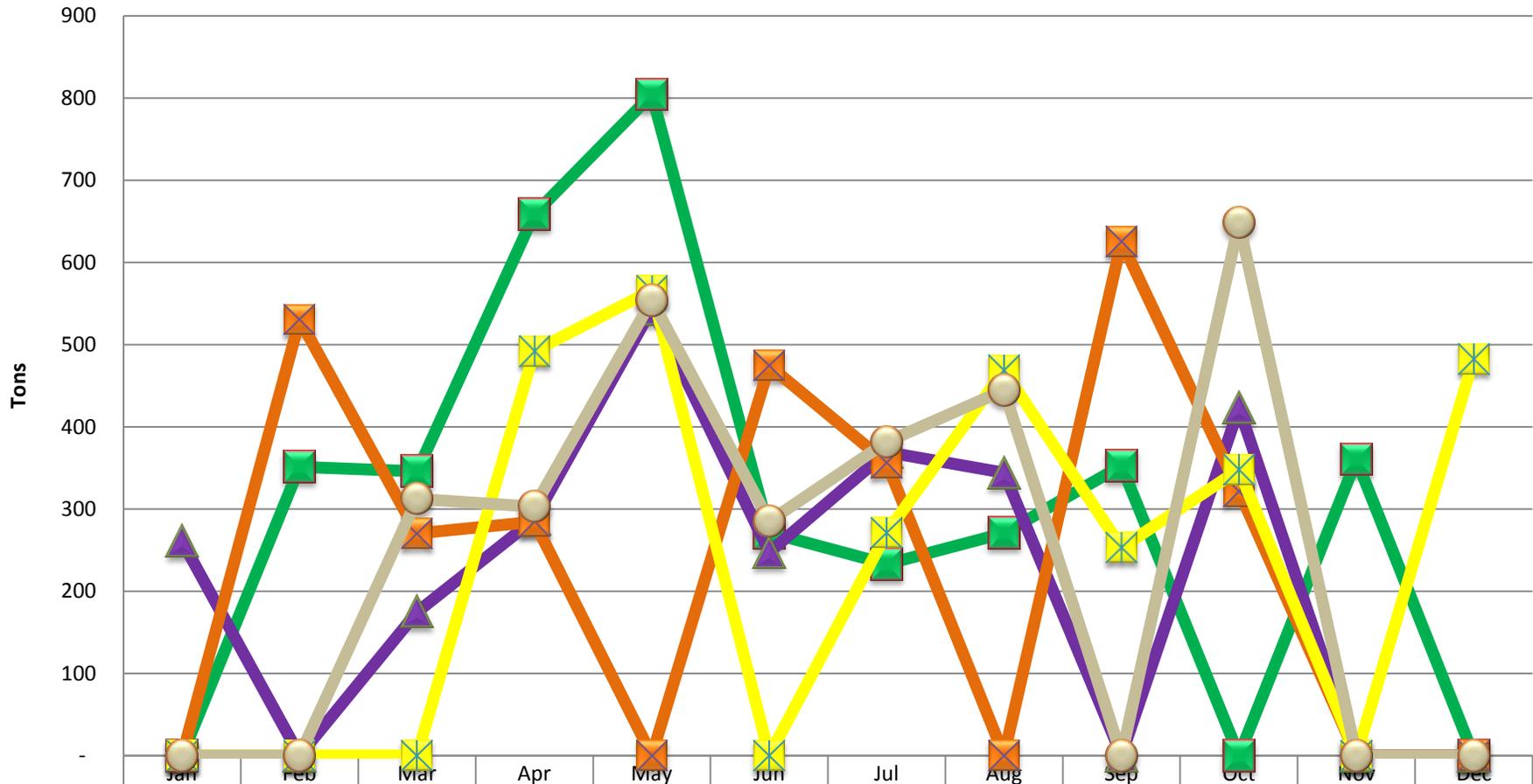
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	13.8	6.5	27.7	19.6	26.3	24.5	19.3	22.8	23.7	16.9	12.8	21.0
2011	6.9	14.6	16.6	27.1	28.7	31.2	25.4	25.2	26.4	17.6	16.0	36.7
2012	11.6	6.1	18.0	22.6	30.8	24.8	24.5	24.7	23.9	18.6	31.8	17.6
2013	5.0	23.8	13.2	34.4	29.3	19.5	26.0	27.3	29.2	14.6	31.2	20.6
2014	12.6	7.0	13.9	25.6	19.7	28.6	34.5	37.2	20.9	17.4	19.0	19.1

Wood Recycling - Totals 2014 (11.156 tons)



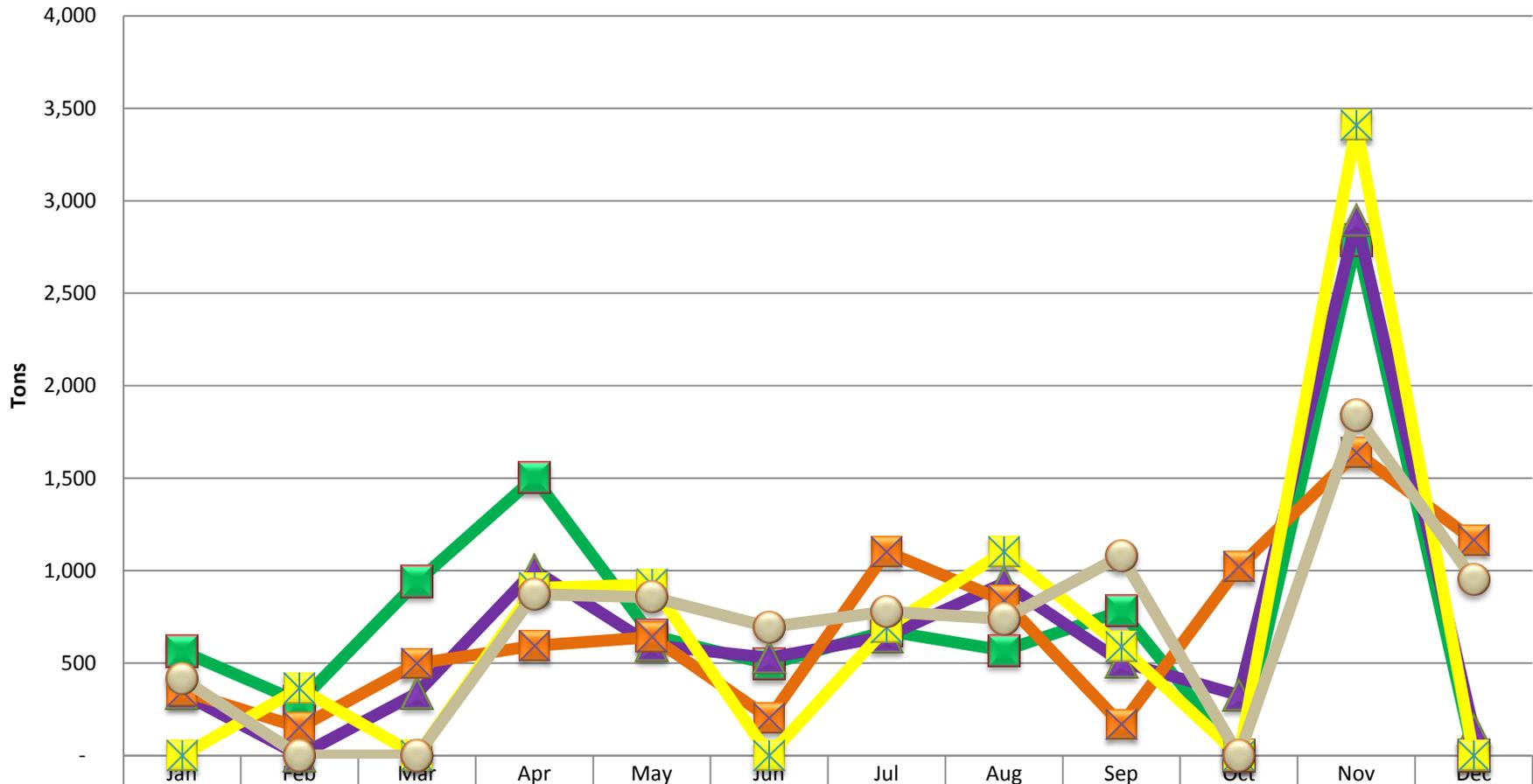
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	564	642	1,287	2,162	1,453	766	906	839	1,133	-	3,148	-
2011	597	-	513	1,290	1,140	777	1,014	1,277	506	751	2,894	138
2012	350	682	768	878	641	677	1,458	838	794	1,343	1,638	1,165
2013	-	364	-	1,399	1,491	-	964	1,571	841	348	3,409	483
2014	415	-	312	1,176	1,411	980	1,160	1,183	1,078	649	1,839	951

Wood Recycling - Prairie Transfer Station 2014 (2,929 tons)



■ 2010	-	351	346	659	804	271	233	271	352	-	360	-
▲ 2011	260	-	175	288	543	248	369	344	-	423	-	-
■ 2012	-	530	270	285	-	474	356	-	626	322	-	-
■ 2013	-	-	-	492	566	-	271	469	253	348	-	483
● 2014	-	-	312	303	554	285	382	445	-	649	-	-

Wood Recycling - Ramsey Transfer Station 2014 (8,226 tons)

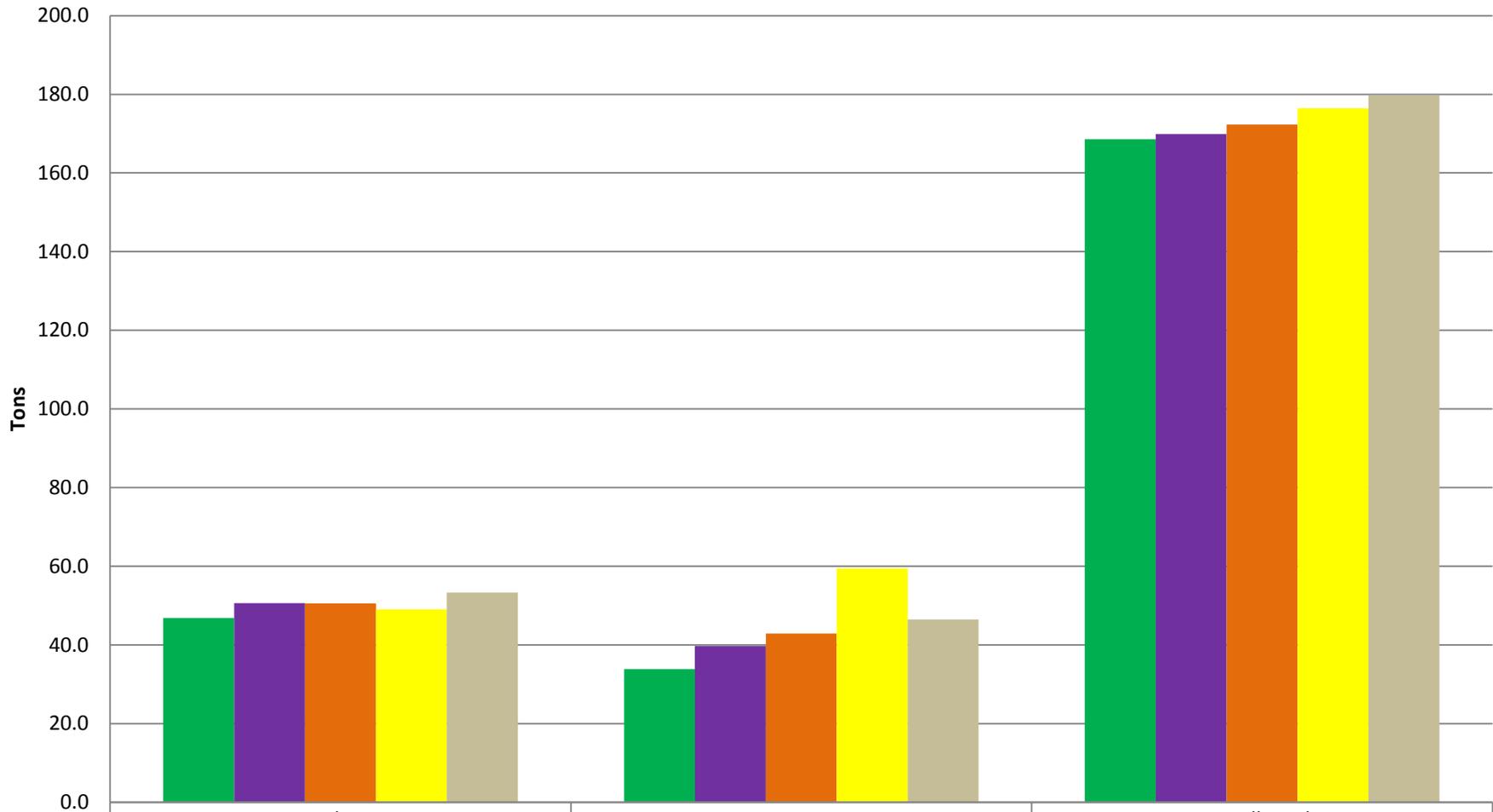


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	564	290	941	1,503	649	495	673	568	781	-	2,787	-
2011	337	-	338	1,002	597	529	645	933	506	328	2,894	138
2012	350	152	498	594	641	202	1,102	838	168	1,021	1,638	1,165
2013	-	364	-	907	925	-	693	1,103	588	-	3,409	-
2014	415	-	-	873	857	695	779	738	1,078	-	1,839	951

Paper Recycling - Totals

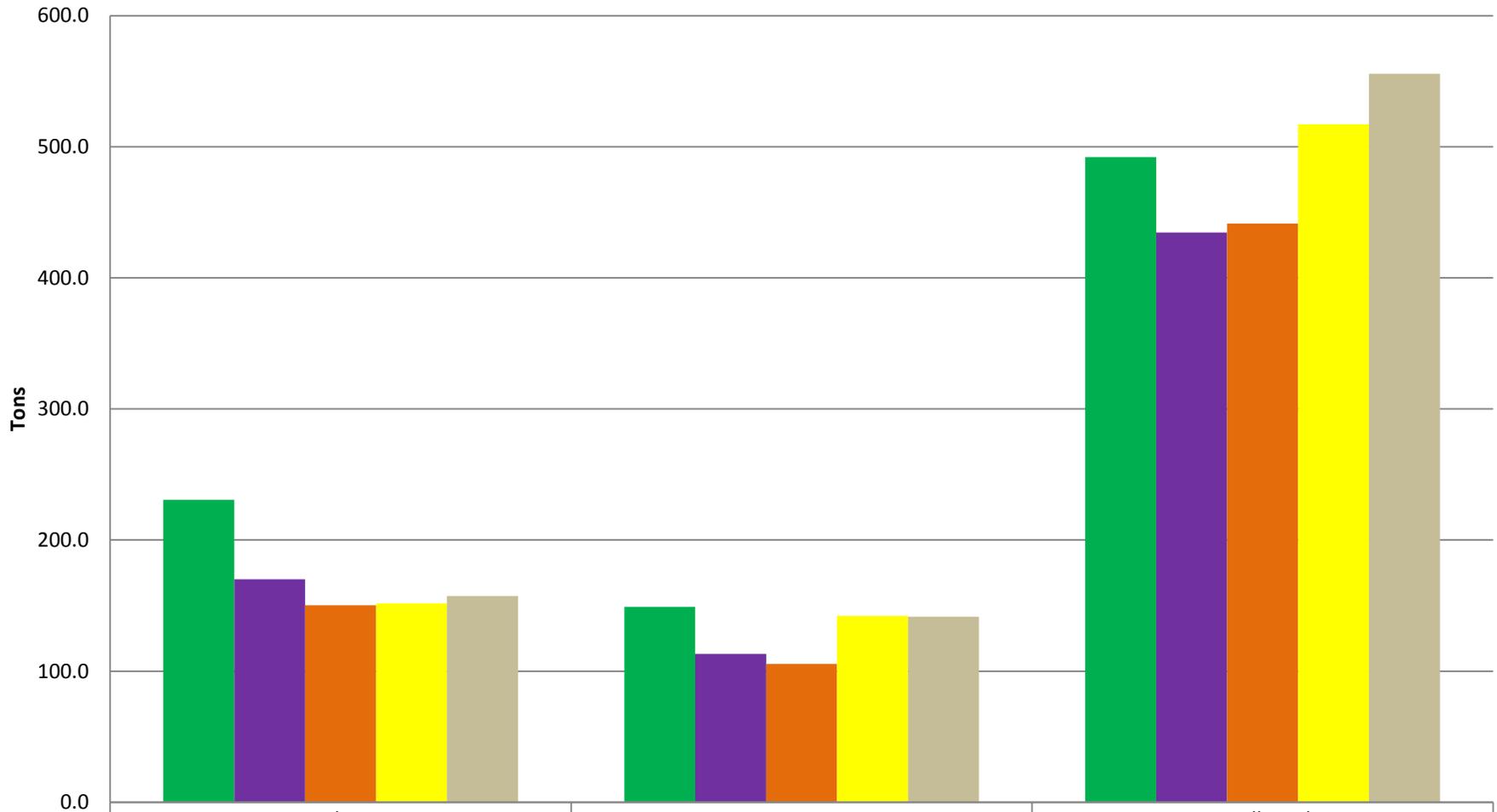


Paper Recycling - Prairie Transfer Station



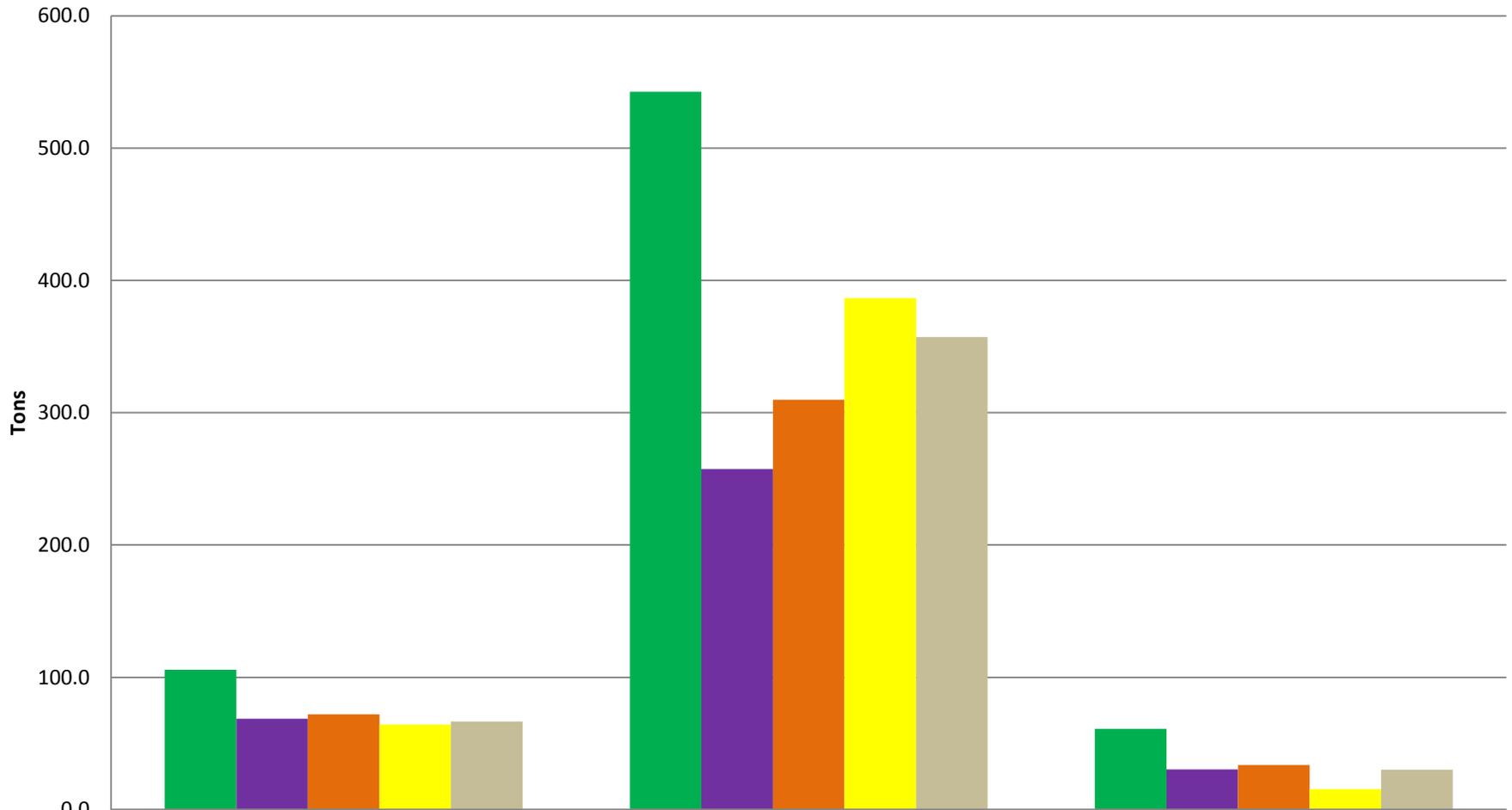
	Mixed Paper	Newspaper	Cardboard
■ 2010	46.9	33.8	168.6
■ 2011	50.6	39.7	169.9
■ 2012	50.5	42.9	172.3
■ 2013	49.1	59.4	176.4
■ 2014	53.3	46.5	179.8

Paper Recycling - Ramsey Transfer Station



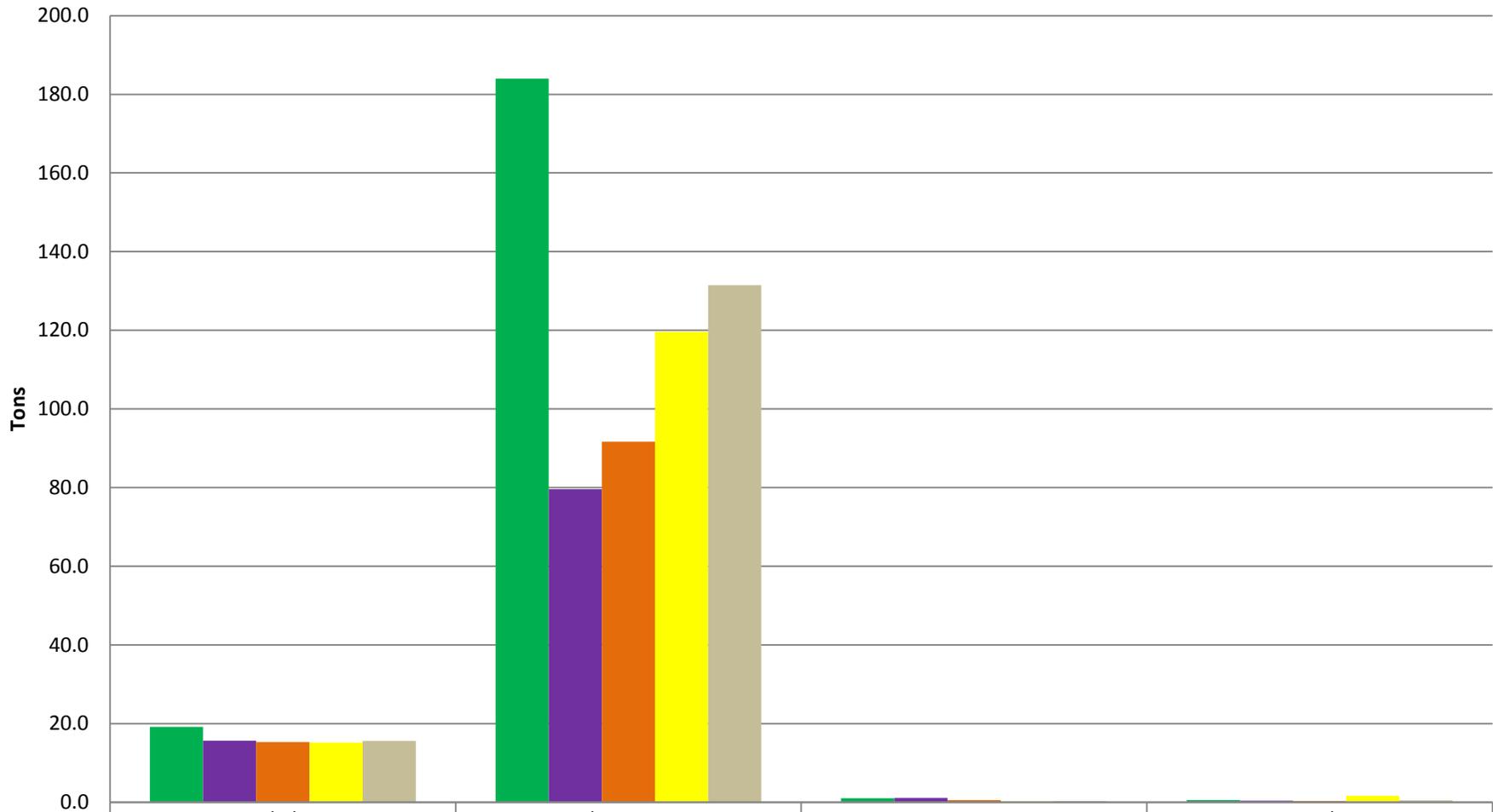
	Mixed Paper	Newspaper	Cardboard
■ 2010	230.7	149.1	492.1
■ 2011	170.0	113.2	434.6
■ 2012	150.1	105.5	441.3
■ 2013	151.7	142.2	517.2
■ 2014	157.3	141.4	555.7

Plastics Recycling Totals



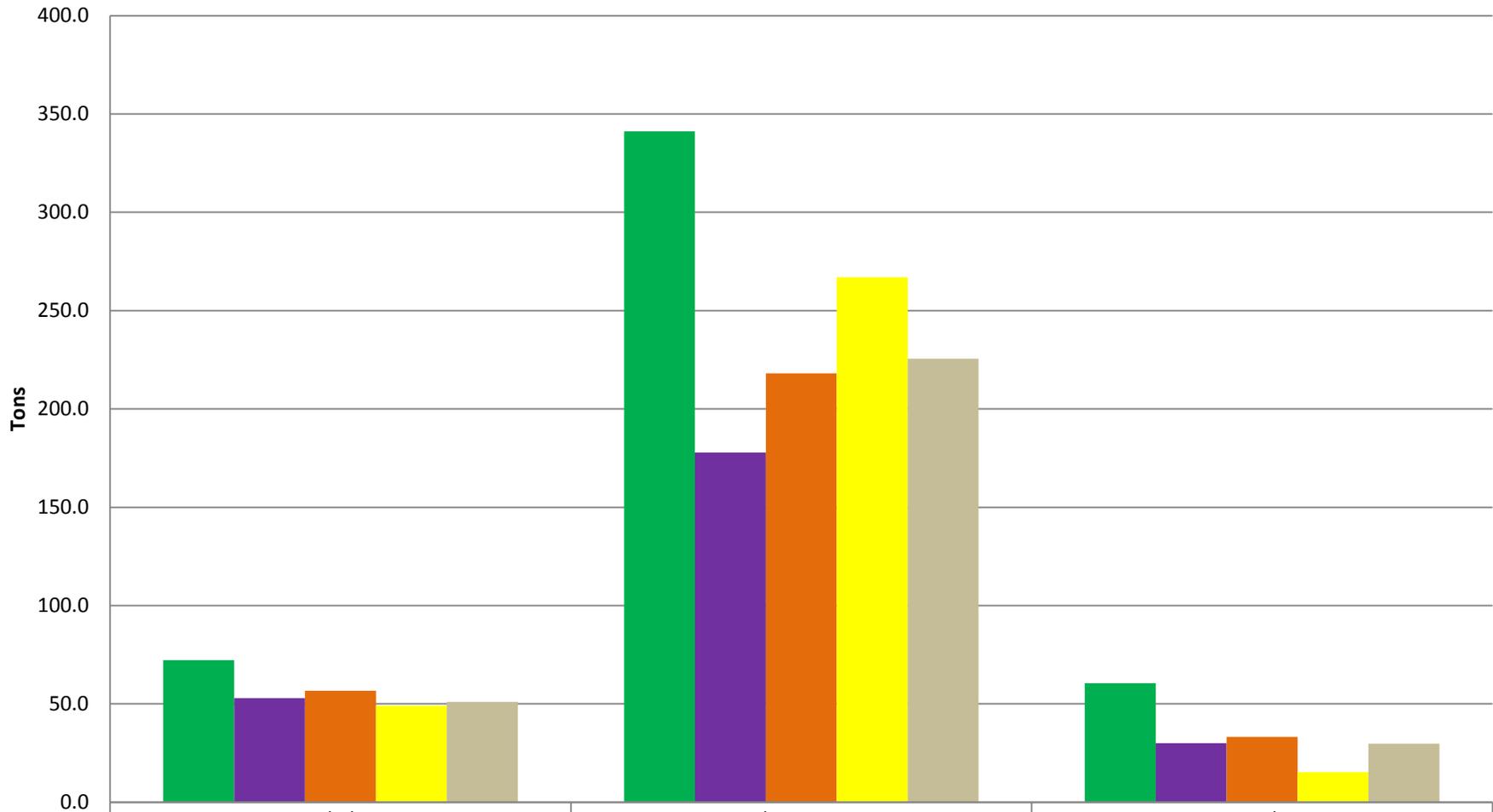
	Mixed Plastics	Electronics	Textiles
■ 2010	105.8	542.6	61.0
■ 2011	68.6	257.3	30.5
■ 2012	72.0	309.8	33.7
■ 2013	64.3	386.6	15.6
■ 2014	66.6	357.1	30.2

Plastics Recycling - Prairie Transfer Station



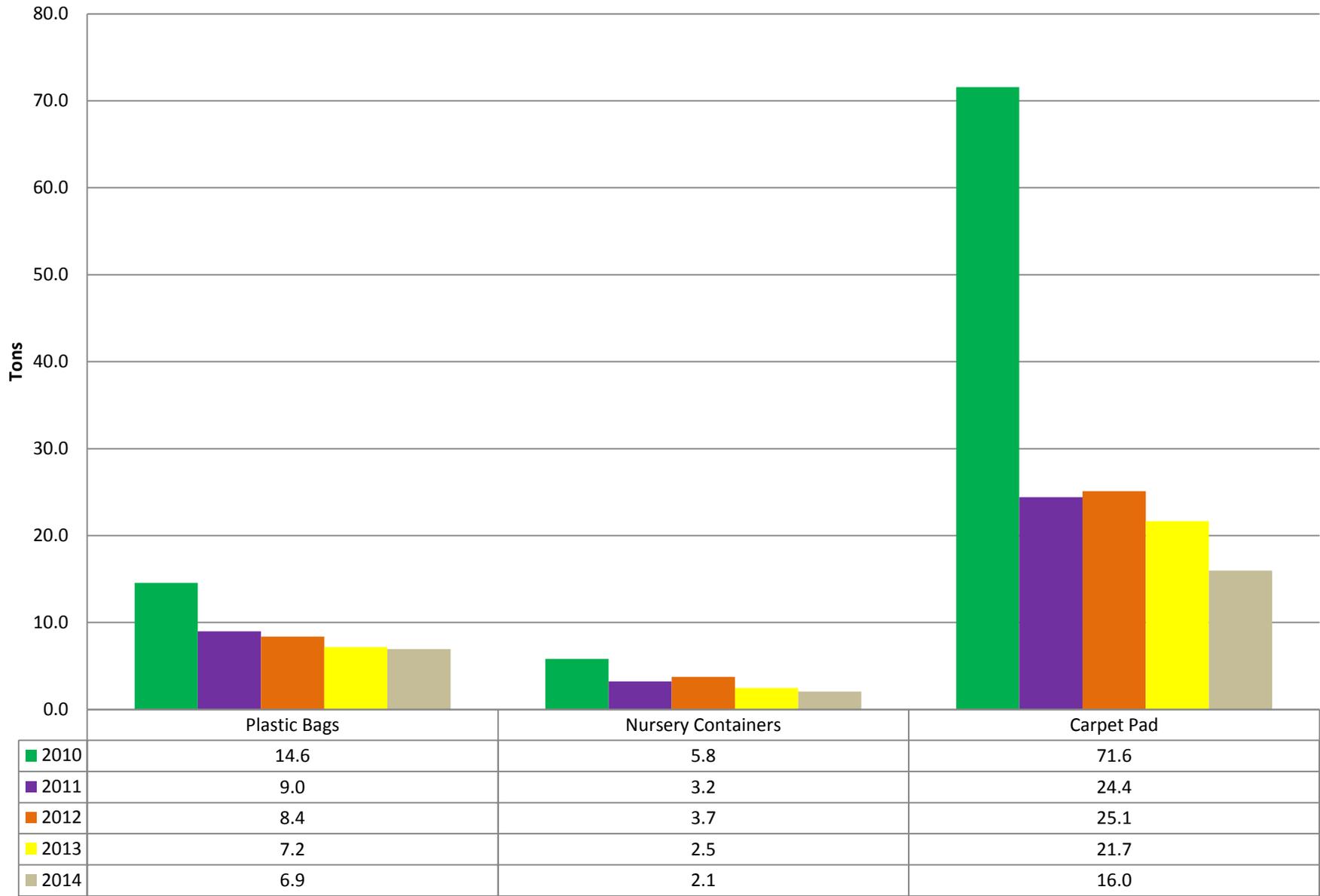
	Mixed Plastics	Electronics	Nursery Containers	Textiles
2010	19.2	184.0	1.0	0.5
2011	15.7	79.6	1.1	0.4
2012	15.3	91.7	0.6	0.3
2013	15.2	119.6	0.2	1.6
2014	15.6	131.5	0.3	0.5

Plastics Recycling - Ramsey Transfer Station



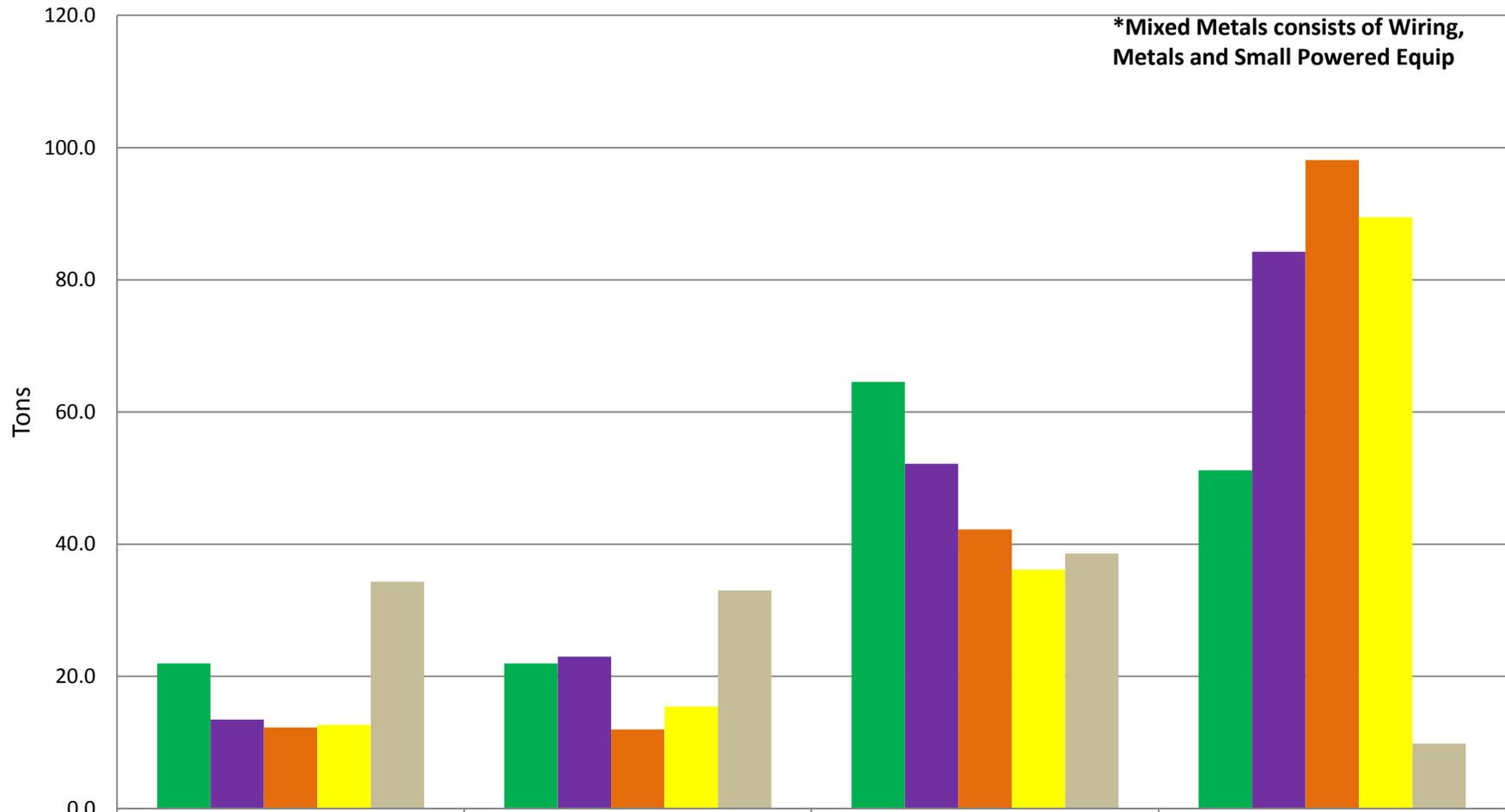
	Mixed Plastics	Electronics	Textiles
■ 2010	72.3	341.2	60.5
■ 2011	52.9	177.8	30.1
■ 2012	56.7	218.1	33.2
■ 2013	49.1	267.0	15.3
■ 2014	51.0	225.6	29.8

Plastics Recycling - Ramsey Transfer Station #2



Mixed Metals Recycling Totals

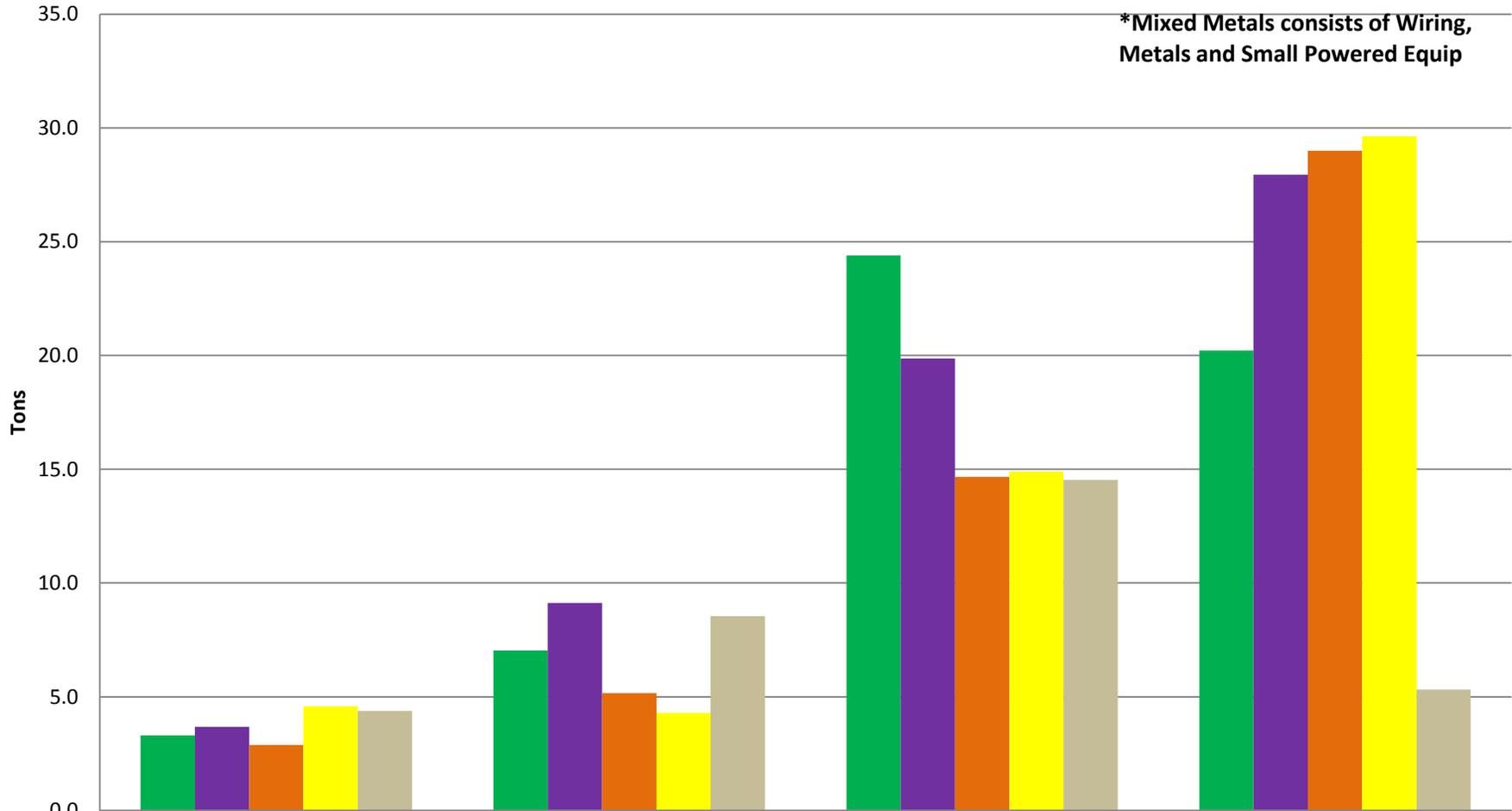
*Mixed Metals consists of Wiring, Metals and Small Powered Equip



	Tin	Aluminum	Batteries	Mixed Metals*
2010	22.0	21.9	64.6	51.2
2011	13.5	23.0	52.2	84.2
2012	12.3	12.0	42.2	98.1
2013	12.7	15.5	36.2	89.5
2014	34.4	33.0	38.6	9.8

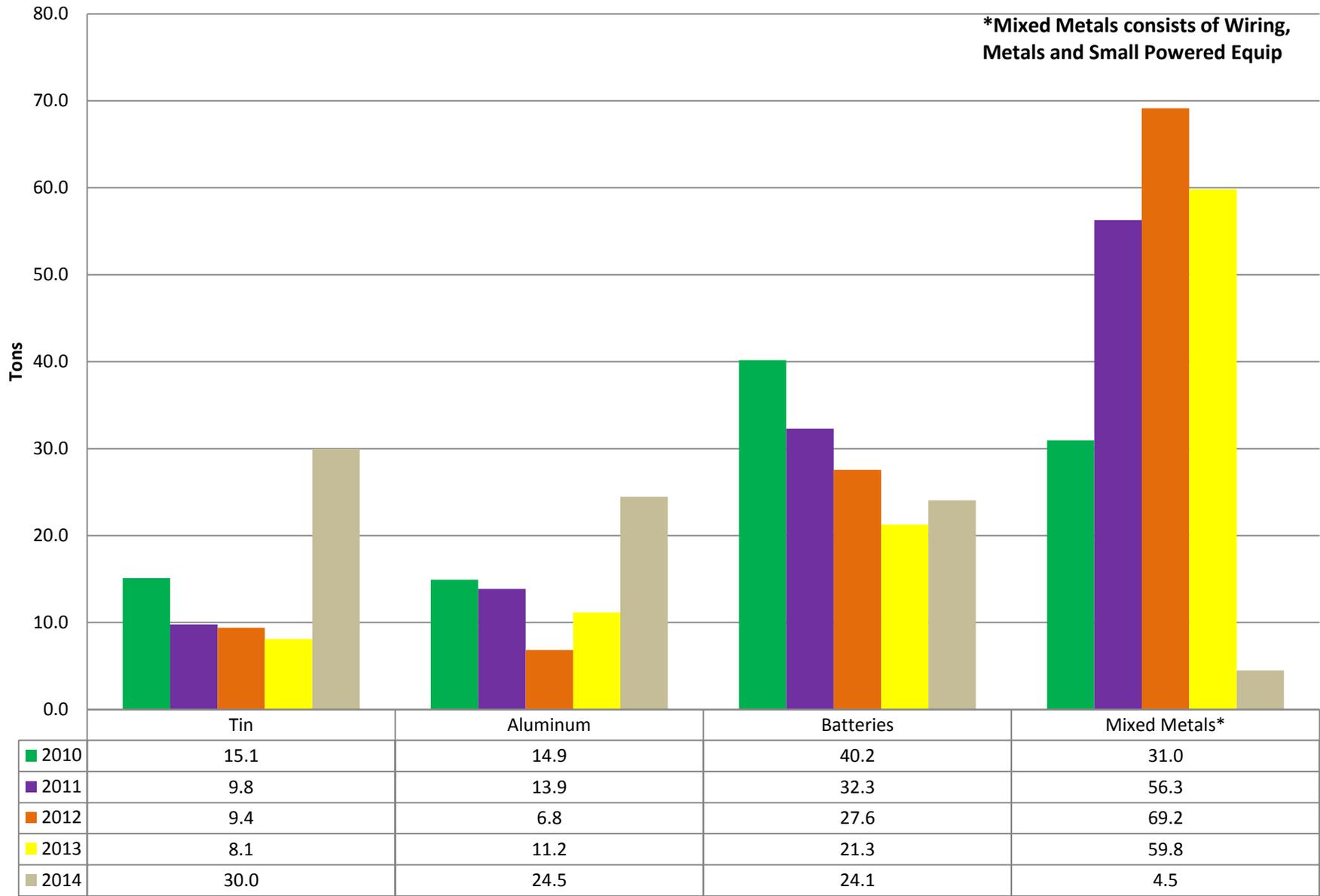
Mixed Metals Recycling - Prairie Transfer Station

*Mixed Metals consists of Wiring, Metals and Small Powered Equip



	Tin	Aluminum	Batteries	Mixed Metals*
■ 2010	3.3	7.0	24.4	20.2
■ 2011	3.7	9.1	19.9	28.0
■ 2012	2.9	5.17	14.7	28.99
■ 2013	4.6	4.3	14.9	29.63
■ 2014	4.4	8.54	14.5	5.3

Mixed Metals Recycling - Ramsey Transfer Station



RURAL RESIDENTIAL COLLECTION SYSTEM 2014

There were significant changes made to the Rural Residential Collection System in 2014. Two long-term collection sites (Garwood and Twin Lakes) were closed on October 1st. The Department constructed a new collection site at the intersection of Chilco and Ramsey Roads in Rathdrum. This facility was designed to handle the combined activity of both the Garwood and Twin Lakes sites. This property is owned and operated by the County and is open 7-days a week.

There are 13 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 11 collection sites on the east and west side of Coeur d' Alene Lake, and in the southern portion of the County. Our challenge is to keep this waste stream confined to residential household waste and Kootenai County residents. Over the years the Department has implemented changes to meet this challenge by staffing sites and increasing public awareness as to what can and cannot be accepted at these sites. Another challenge is out of county/out of state use by these facilities. We do everything possible to ensure that these facilities are used only by the citizens who pay for the system.

The recycling containers located throughout the communities removed 472 tons from the waste stream. These modified single stream containers accept everything in the curbside programs except plastics.

A total of 13,304 tons of garbage was collected from the rural sites in 2014. This is a slight decrease of 182 tons from the 2013 totals.

NORTH RURAL SYSTEM

There were three staffed rural sites (Athol, Garwood, and Twin Lakes) in the northern portion of Kootenai County until October 1, 2014. The Garwood and Twin Lakes sites were then permanently closed and the Chilco site opened. The staffed sites are open the same hours and days as the transfer stations.

The staffed sites in the North assisted a total of 187,592 customers in 2014. This is a decrease of 2,949 customers served in 2013. There was a total of 7,561 tons of waste collected at the north rural sites in 2014, which is 204 tons less than 2013.

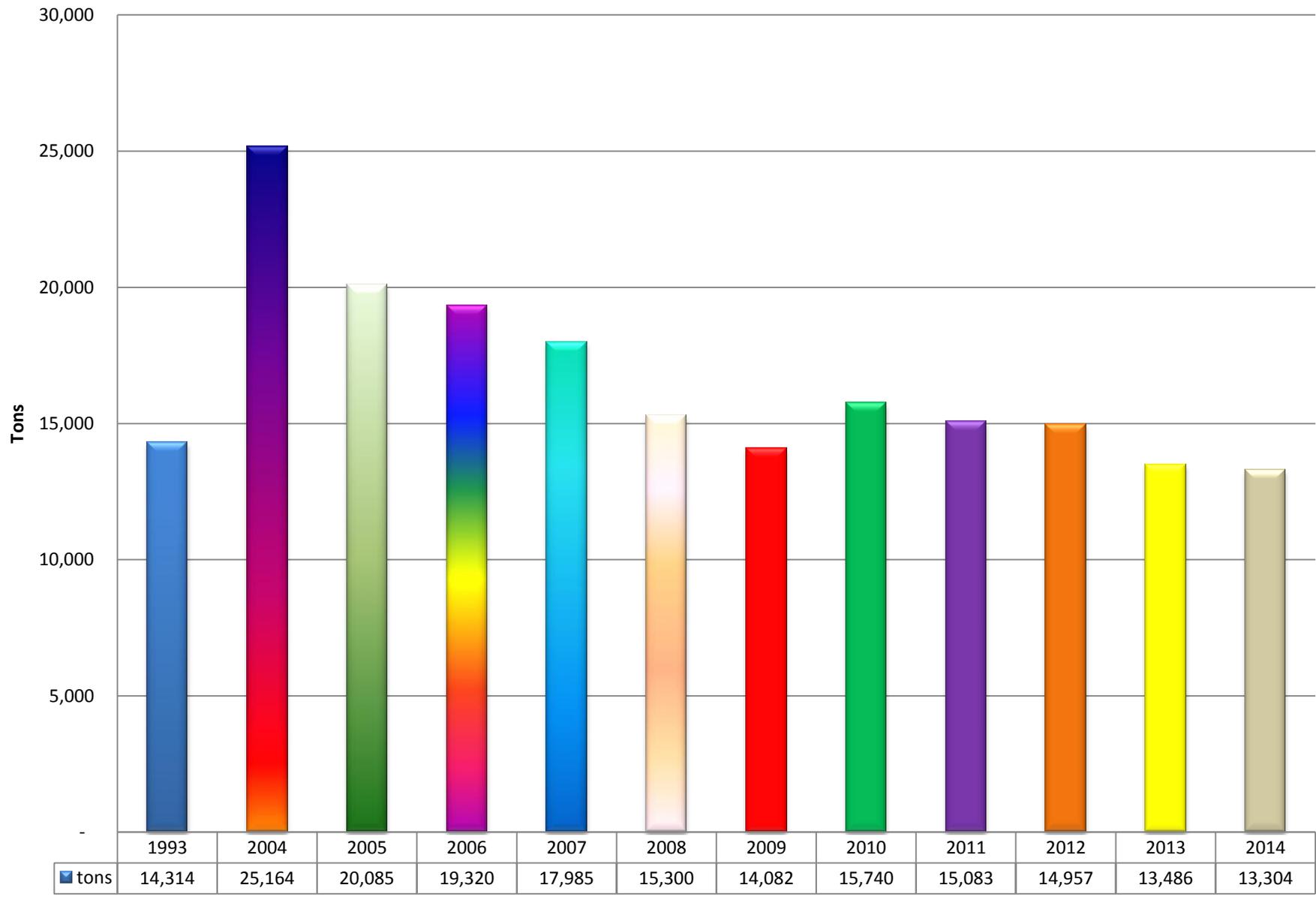
SOUTH RURAL SYSTEM

The south rural routes have two subsets, Harrison and Worley. There was 5,743 tons of garbage collected at these 11 sites which is a slight increase (22 tons) from 2013.

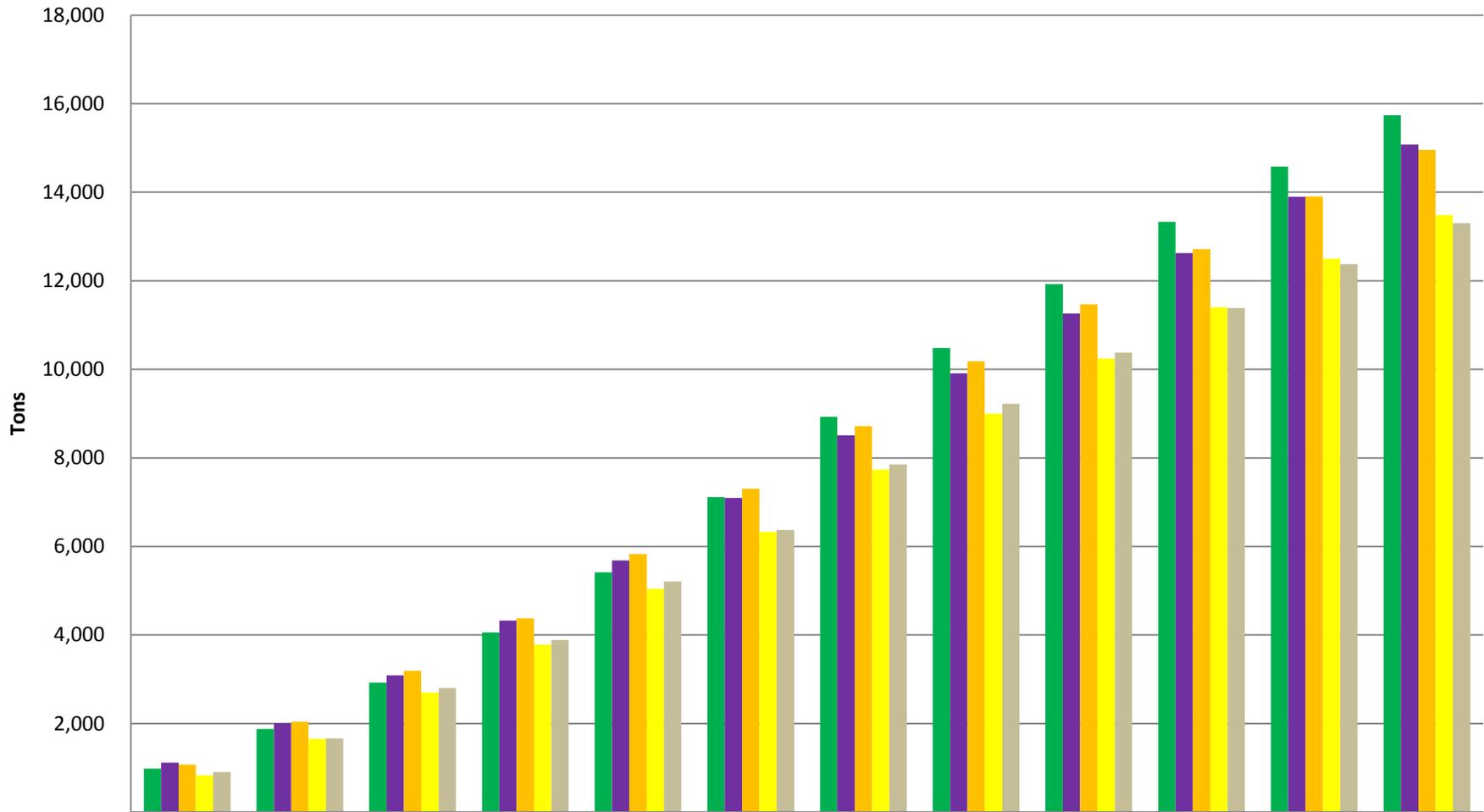
The Harrison Route is on the eastern side of Coeur d' Alene Lake and bounded by Shoshone County to the east and Benewah County to the south. There are eight collection sites on this route. The Worley Route has three collection sites. This route is on the western side of Coeur d' Alene Lake, south of Coeur d' Alene and bounded on the south by Benewah County and Washington on the west.

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Rural Systems Annual Tons Comparison

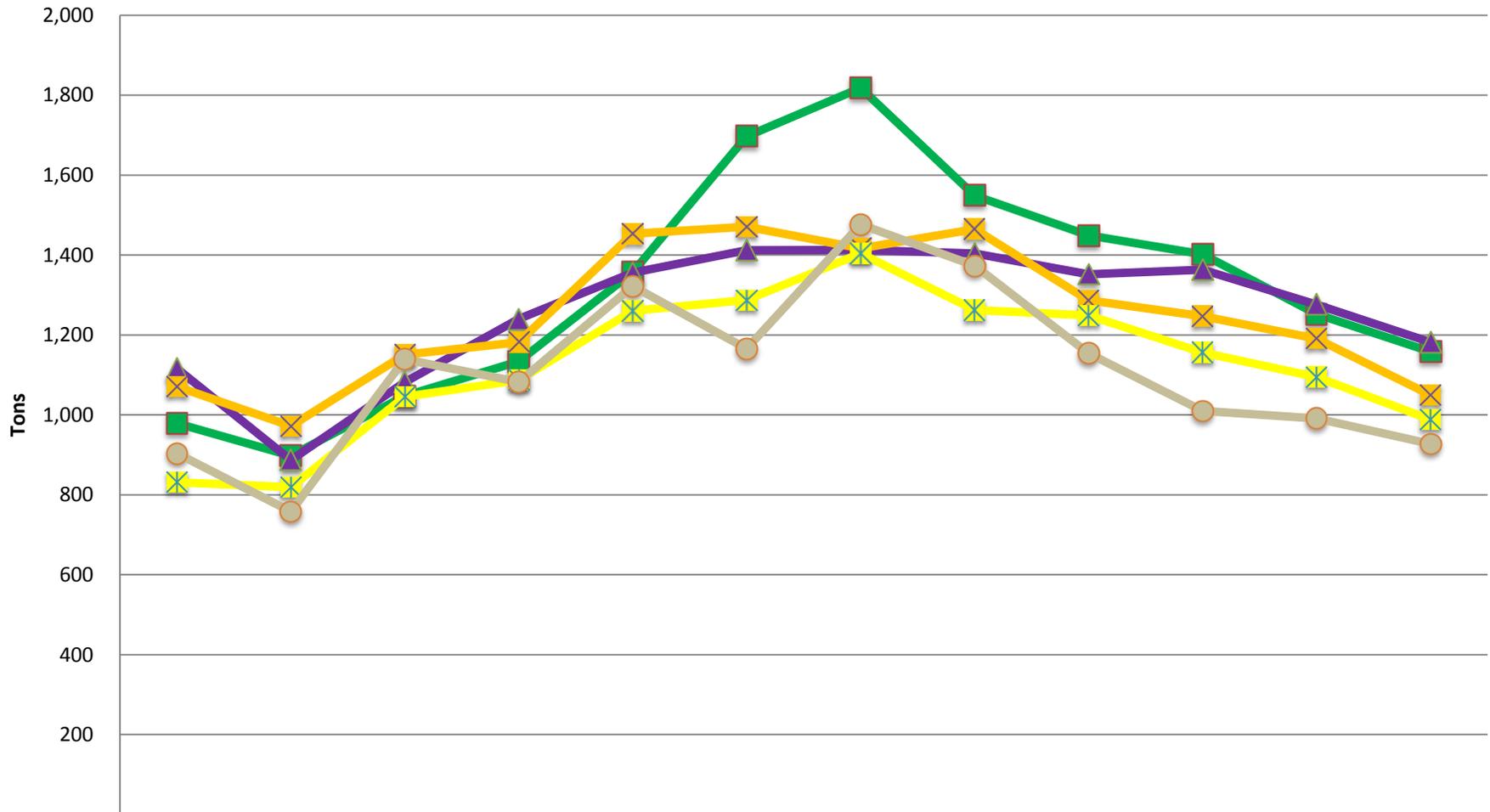


Rural System Cumulative Totals



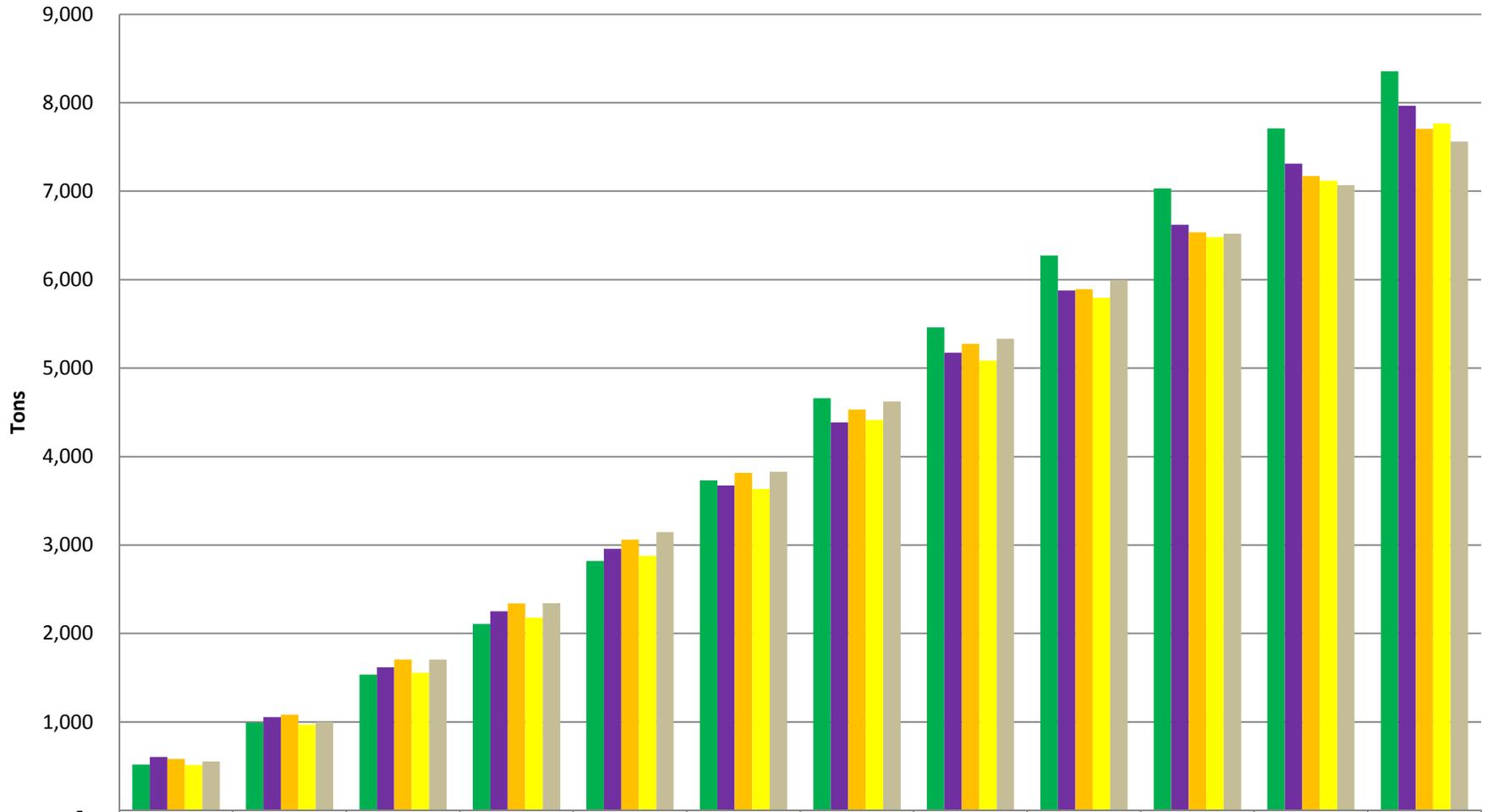
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
■ 2010	979	1,877	2,924	4,058	5,415	7,112	8,930	10,479	11,928	13,330	14,582	15,740
■ 2011	1,116	2,003	3,085	4,325	5,681	7,093	8,506	9,910	11,262	12,625	13,901	15,083
■ 2012	1,071	2,043	3,194	4,376	5,829	7,300	8,717	10,182	11,469	12,716	13,907	14,957
■ 2013	831	1,651	2,696	3,783	5,044	6,331	7,735	8,997	10,246	11,403	12,497	13,486
■ 2014	904	1,662	2,801	3,884	5,206	6,372	7,848	9,221	10,375	11,385	12,377	13,304

Rural Systems Total Tons By Month



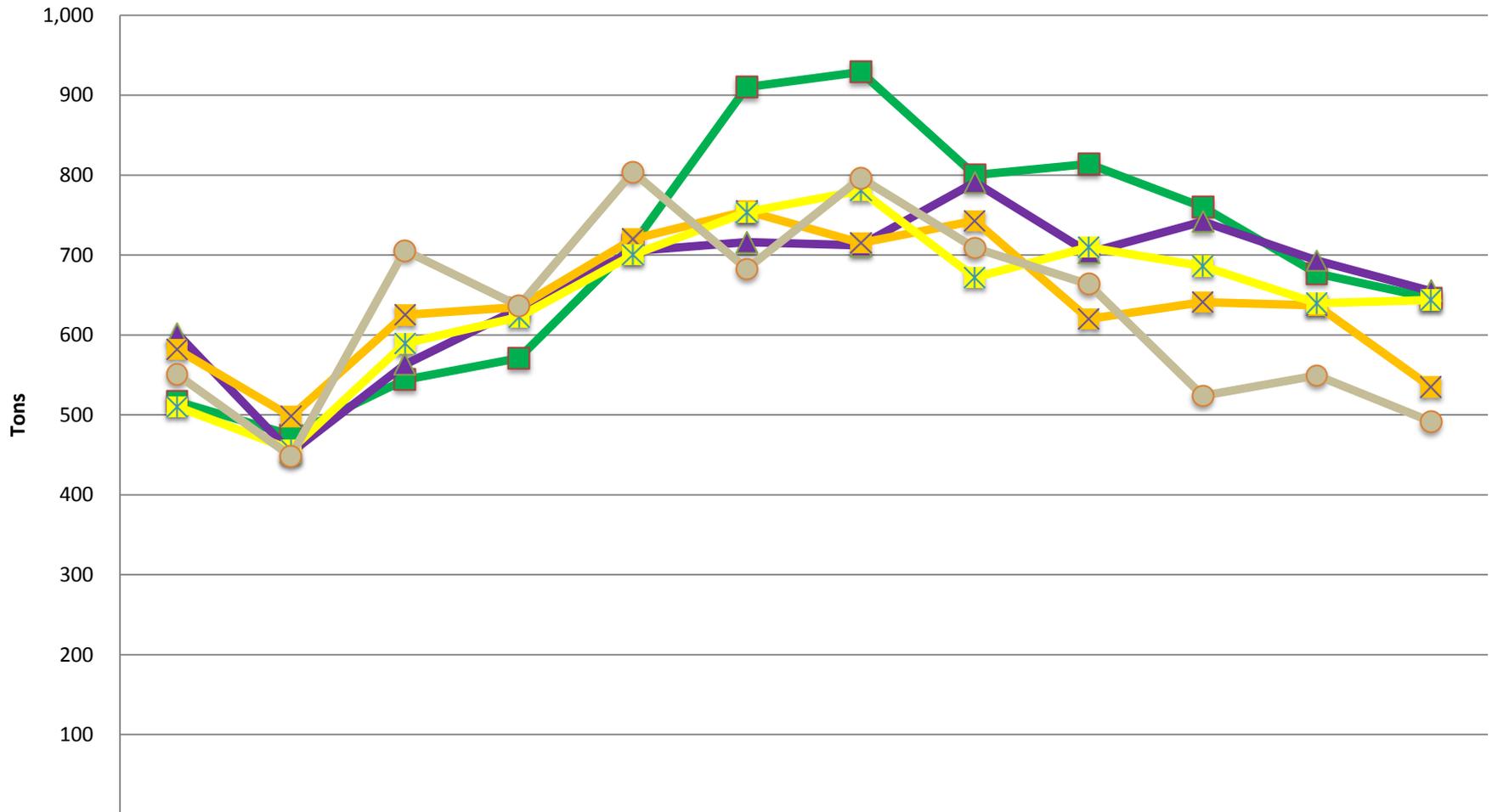
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	979	898	1,047	1,134	1,357	1,697	1,818	1,549	1,449	1,402	1,252	1,158
2011	1,116	887	1,082	1,240	1,356	1,412	1,413	1,404	1,352	1,363	1,276	1,182
2012	1,071	972	1,151	1,182	1,453	1,471	1,417	1,465	1,287	1,247	1,191	1,050
2013	831	819	1,045	1,087	1,260	1,287	1,404	1,262	1,249	1,156	1,095	988
2014	904	758	1,140	1,083	1,322	1,165	1,476	1,373	1,154	1,010	991	927

Rural System North Cumulative Tons



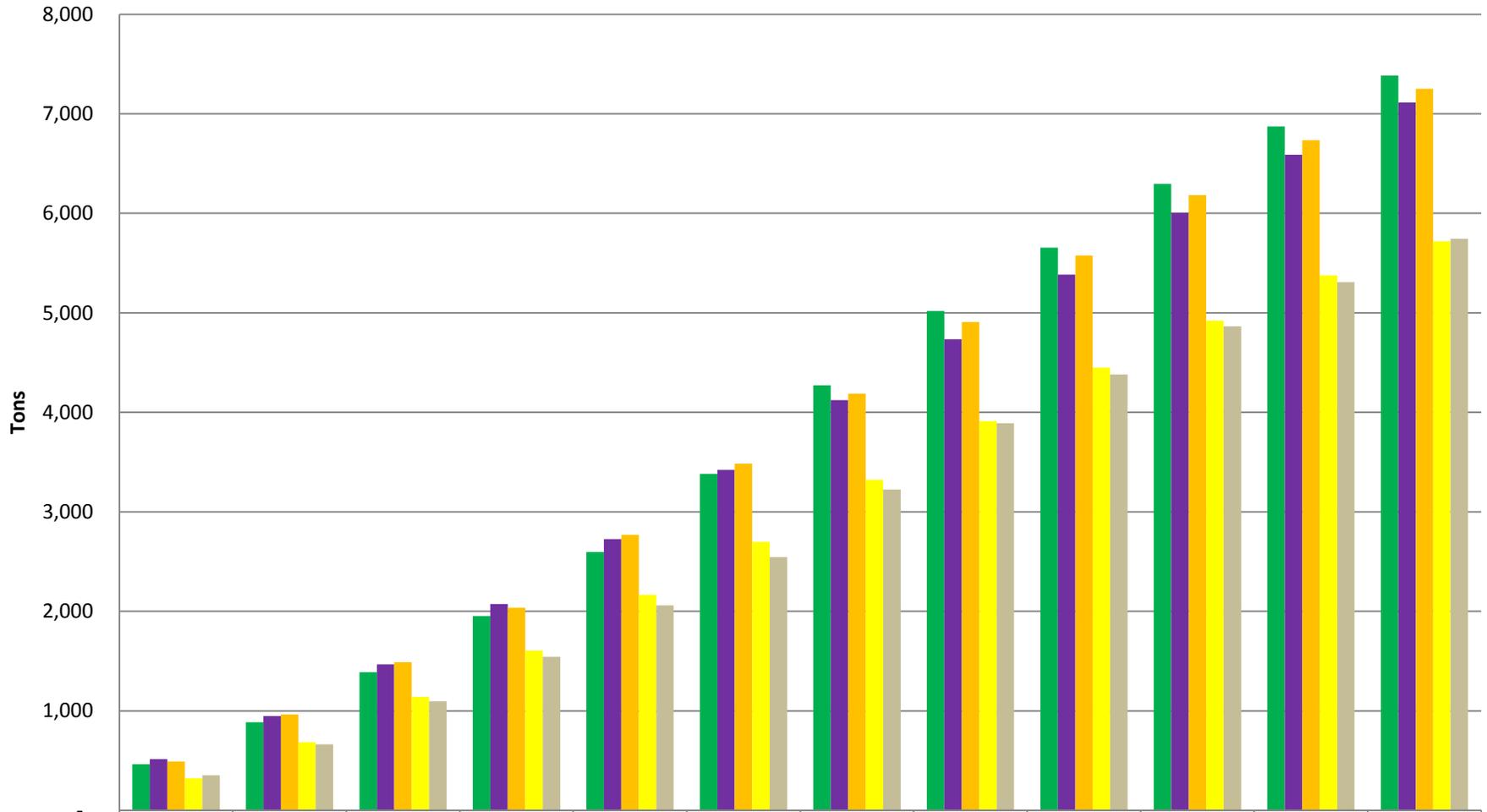
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	517	992	1,536	2,107	2,820	3,730	4,659	5,459	6,273	7,033	7,710	8,356
2011	602	1,055	1,618	2,251	2,956	3,672	4,384	5,175	5,878	6,620	7,313	7,968
2012	582	1,080	1,705	2,340	3,060	3,815	4,530	5,273	5,893	6,534	7,171	7,706
2013	510	967	1,556	2,179	2,879	3,633	4,414	5,086	5,795	6,481	7,121	7,765
2014	551	999	1,705	2,341	3,145	3,827	4,624	5,333	5,996	6,520	7,069	7,561

Rural System North Tons by Month



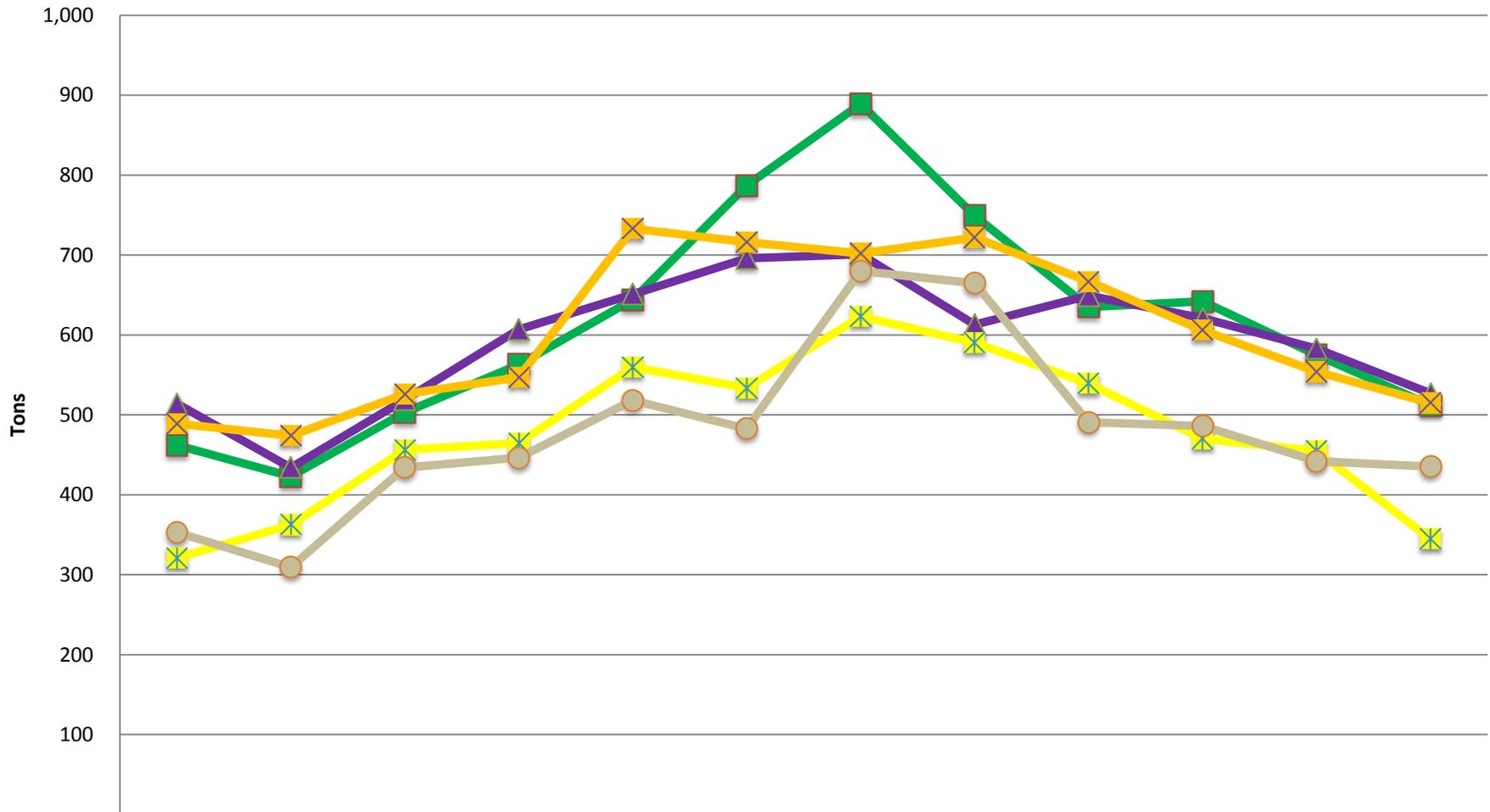
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	517	475	544	571	713	910	929	800	814	760	677	646
2011	602	453	563	633	705	716	712	791	703	742	693	655
2012	582	498	625	635	720	755	715	743	620	641	637	535
2013	510	457	589	623	700	754	781	672	710	686	640	644
2014	551	449	706	636	804	683	796	709	663	524	549	492

Rural System South Cumulative Tons



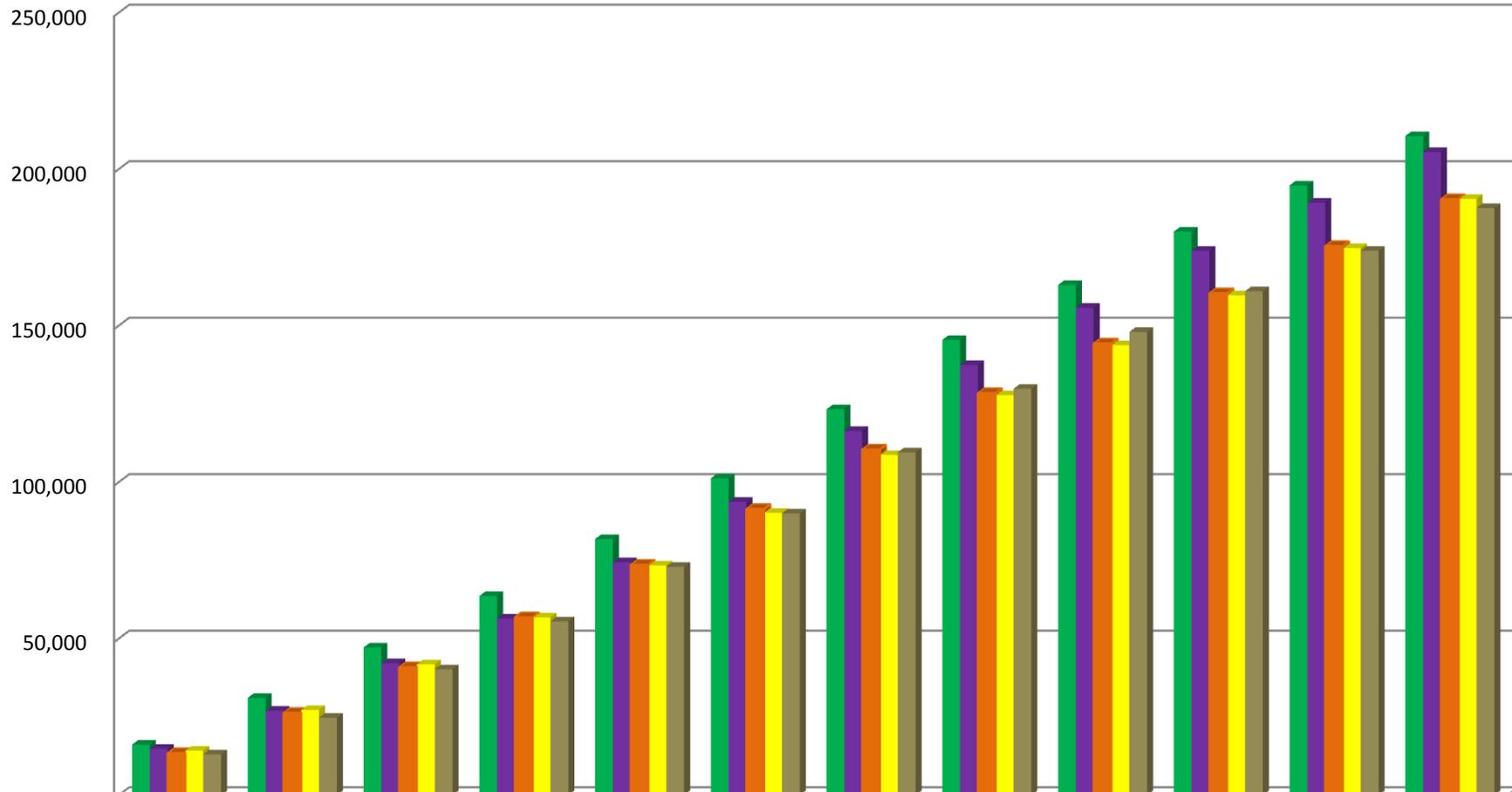
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	462	885	1,388	1,951	2,595	3,382	4,271	5,020	5,655	6,297	6,872	7,384
2011	514	948	1,467	2,074	2,725	3,421	4,122	4,735	5,384	6,005	6,588	7,115
2012	489	963	1,489	2,036	2,769	3,485	4,187	4,909	5,576	6,182	6,736	7,251
2013	321	684	1,140	1,605	2,165	2,698	3,321	3,912	4,451	4,921	5,376	5,721
2014	353	663	1,097	1,543	2,061	2,544	3,224	3,889	4,379	4,865	5,307	5,743

Rural System South Tons by Month



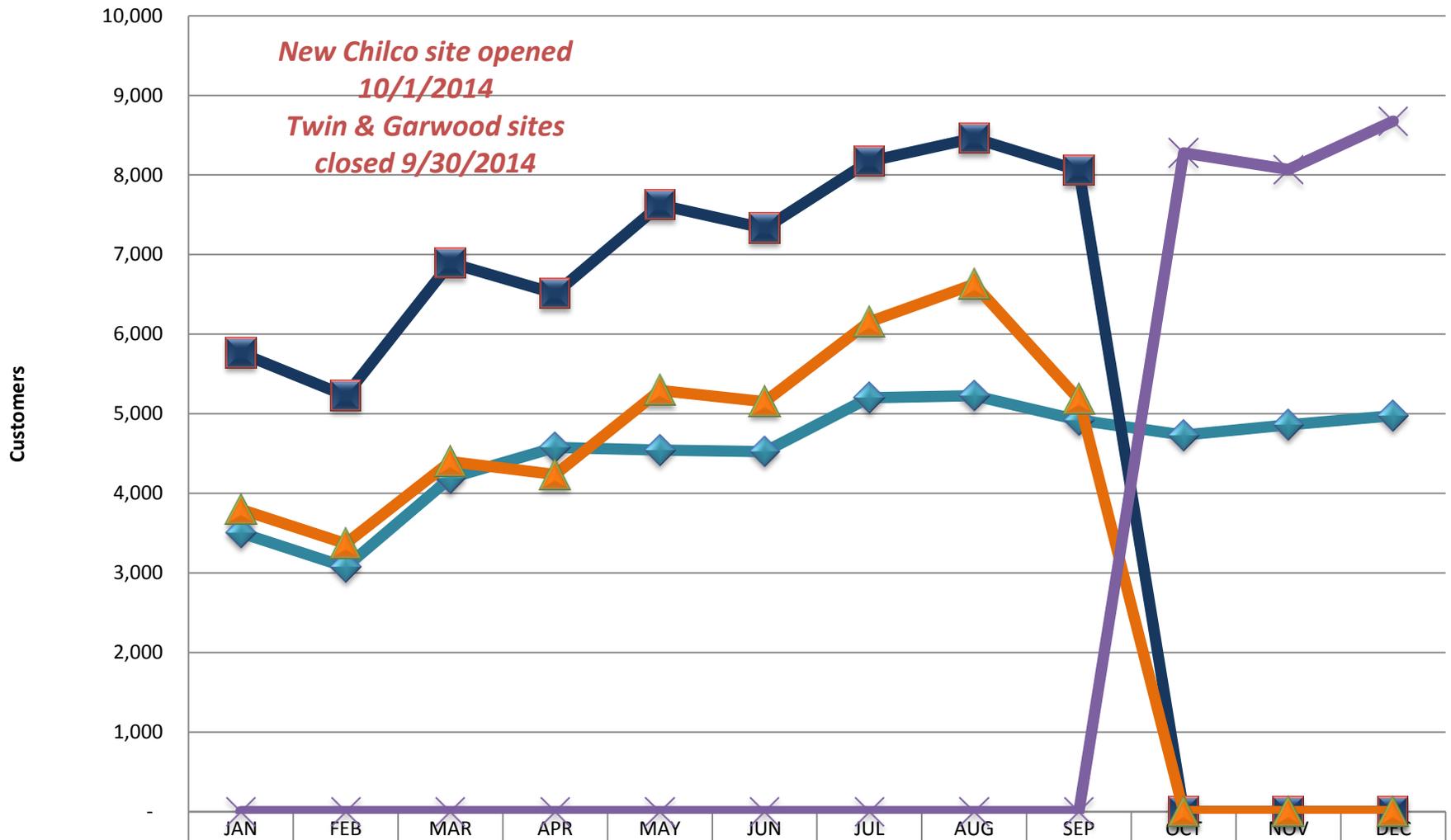
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	462	423	503	563	644	787	889	749	635	642	575	512
2011	514	434	519	607	651	696	701	613	649	621	583	527
2012	489	474	526	547	733	716	702	722	667	606	554	515
2013	321	363	456	465	560	534	623	590	539	470	455	345
2014	353	310	434	446	518	483	680	665	491	486	442	435

Rural Systems Cumulative Customers



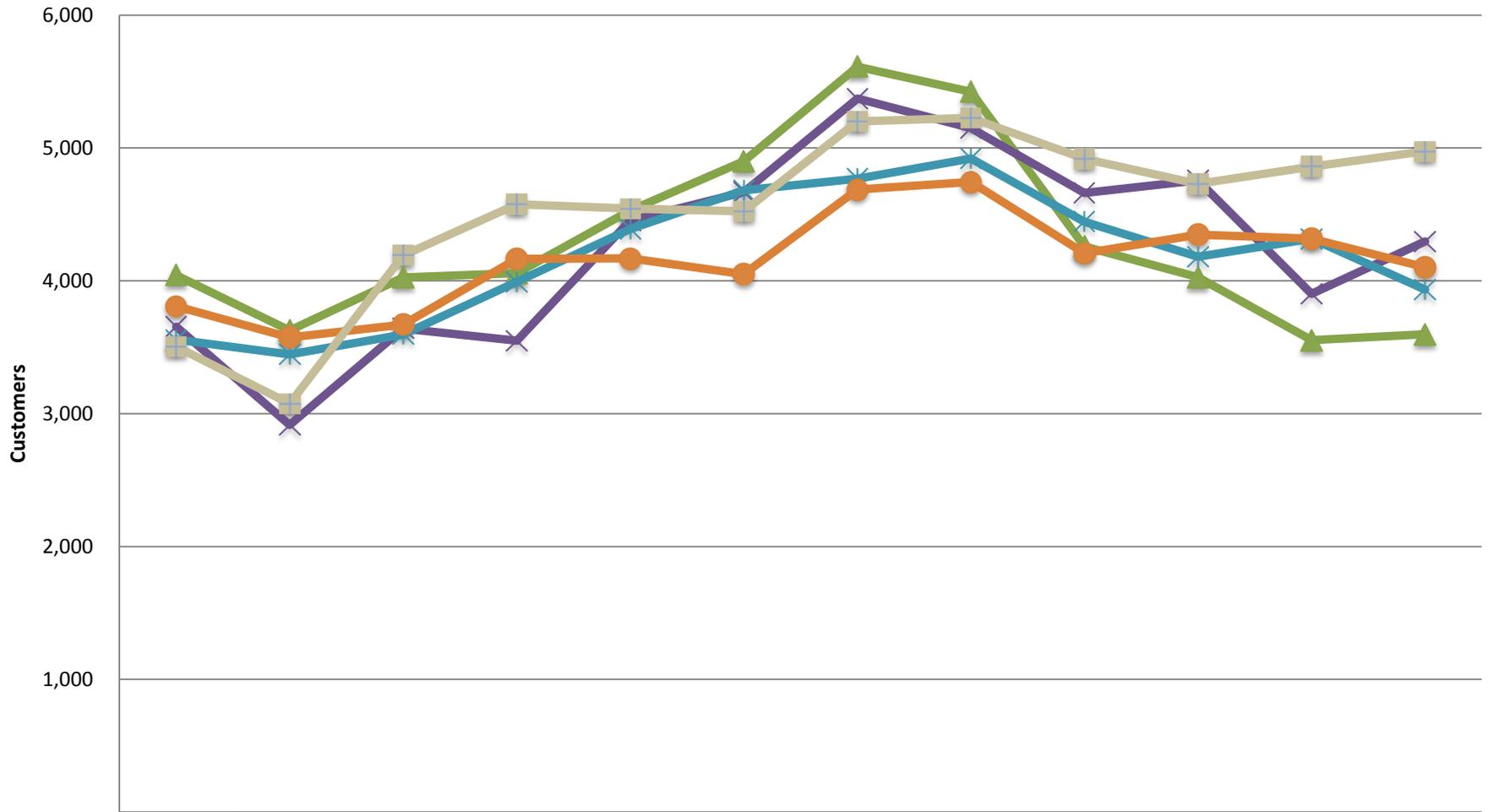
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
■ 2010	16,134	31,112	47,187	63,627	81,831	101,215	123,306	145,455	163,010	180,040	194,814	210,595
■ 2011	14,808	27,027	42,203	56,474	74,471	93,748	116,399	137,418	155,731	173,913	189,315	205,532
■ 2012	13,486	26,311	40,915	56,841	73,646	91,486	110,476	128,489	144,366	160,414	175,487	190,423
■ 2013	14,218	27,242	41,812	56,801	73,407	90,255	108,709	127,815	143,765	159,725	174,782	190,541
■ 2014	13,063	24,732	40,216	55,541	73,002	90,007	109,534	129,848	148,005	161,012	173,941	187,592

North Rural Customer Counts - By Location 2014



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Athol	3,504	3,075	4,192	4,577	4,543	4,524	5,201	5,227	4,919	4,730	4,860	4,975
Garwood	5,762	5,227	6,893	6,512	7,624	7,330	8,171	8,461	8,057	-	-	-
Twin	3,797	3,367	4,399	4,236	5,294	5,151	6,155	6,626	5,181	-	-	-
Chilco (NEW)	-	-	-	-	-	-	-	-	-	8,277	8,069	8,676

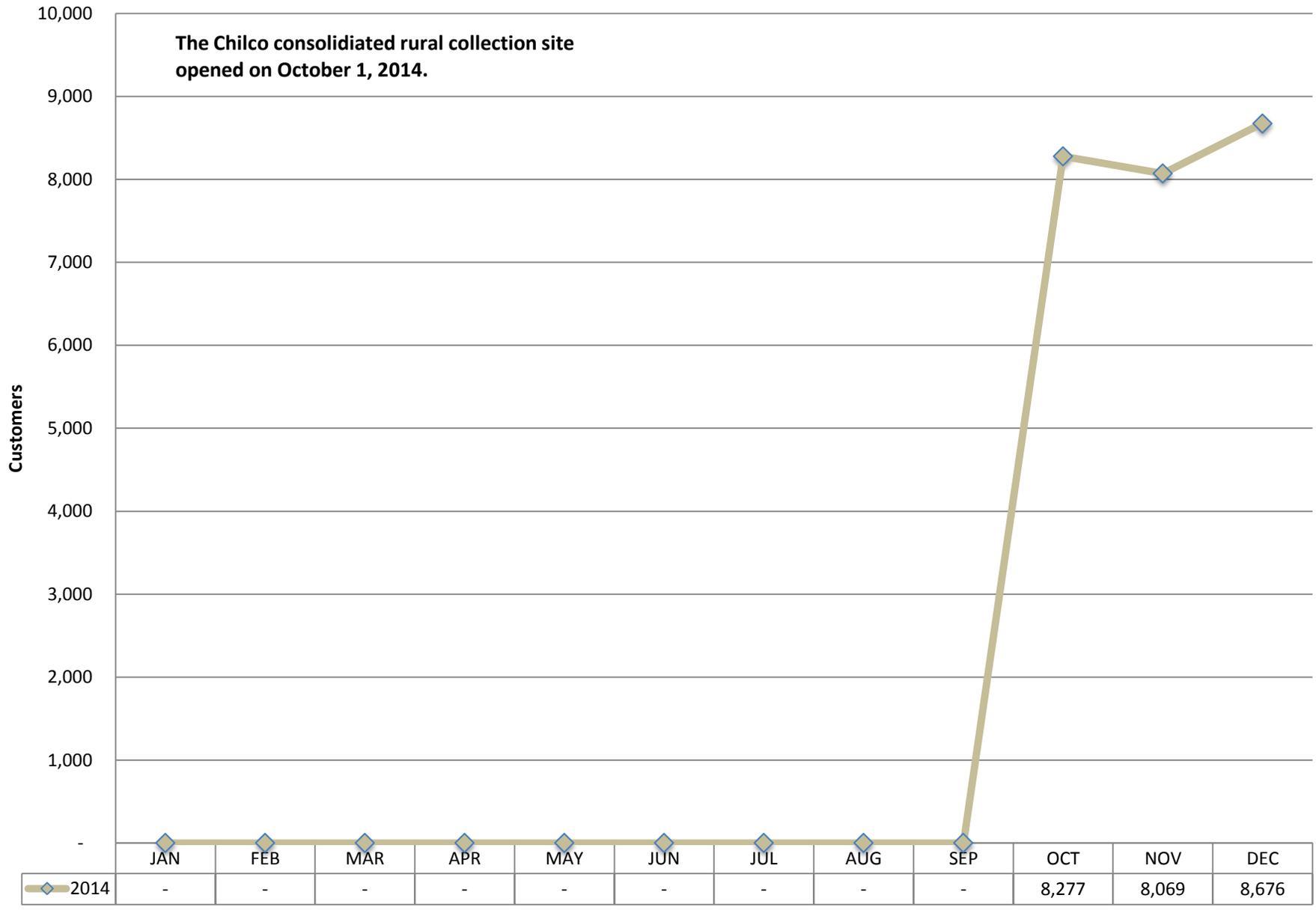
Athol Customers by Month



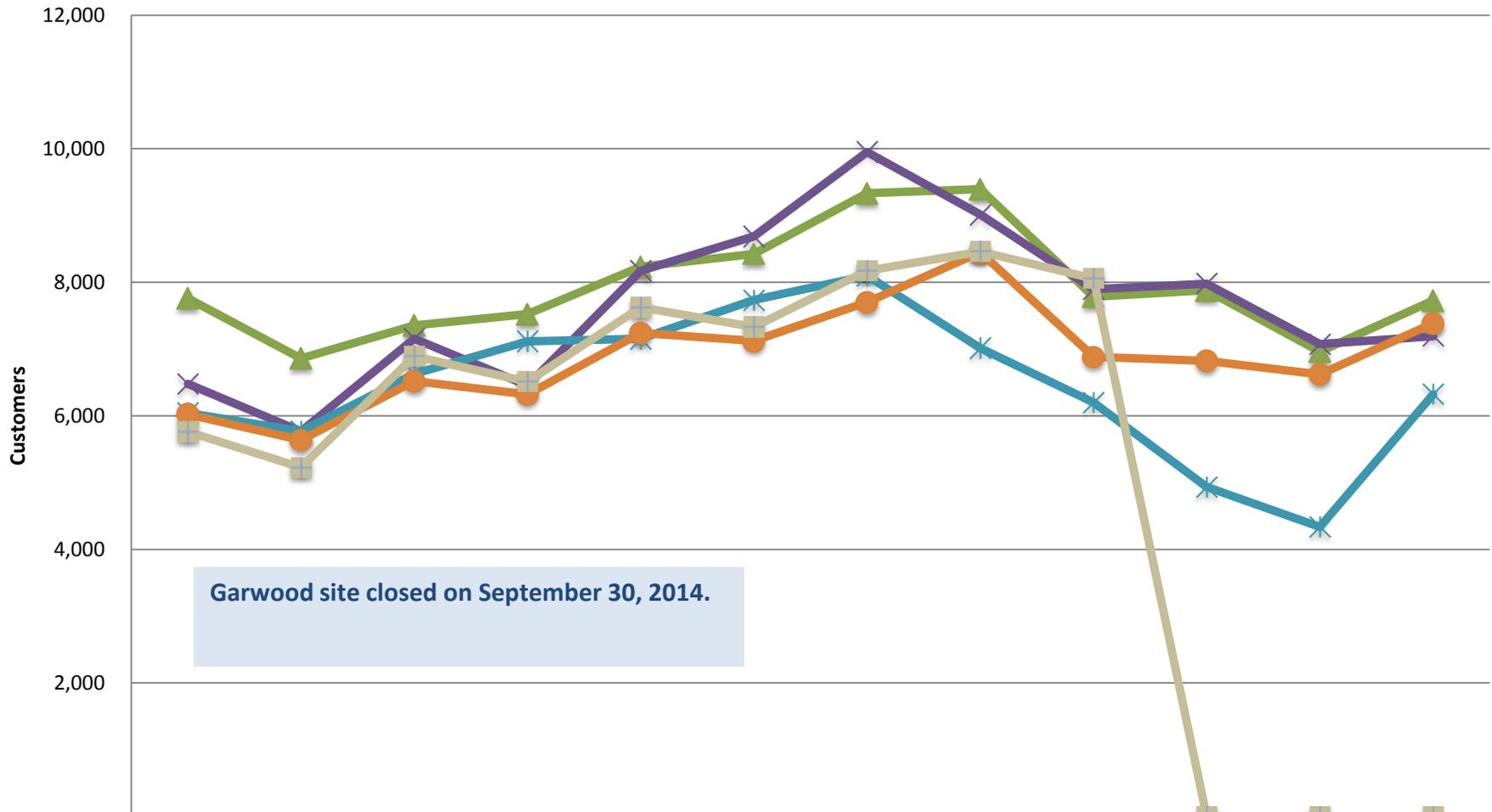
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	4,042	3,626	4,026	4,057	4,530	4,900	5,612	5,424	4,259	4,027	3,553	3,598
2011	3,655	2,916	3,641	3,550	4,454	4,667	5,372	5,150	4,661	4,757	3,901	4,296
2012	3,557	3,446	3,597	3,993	4,391	4,681	4,769	4,921	4,445	4,181	4,317	3,934
2013	3,808	3,574	3,672	4,165	4,169	4,050	4,687	4,744	4,207	4,348	4,318	4,103
2014	3,504	3,075	4,192	4,577	4,543	4,524	5,201	5,227	4,919	4,730	4,860	4,975

Chilco Customers by Month

The Chilco consolidated rural collection site opened on October 1, 2014.



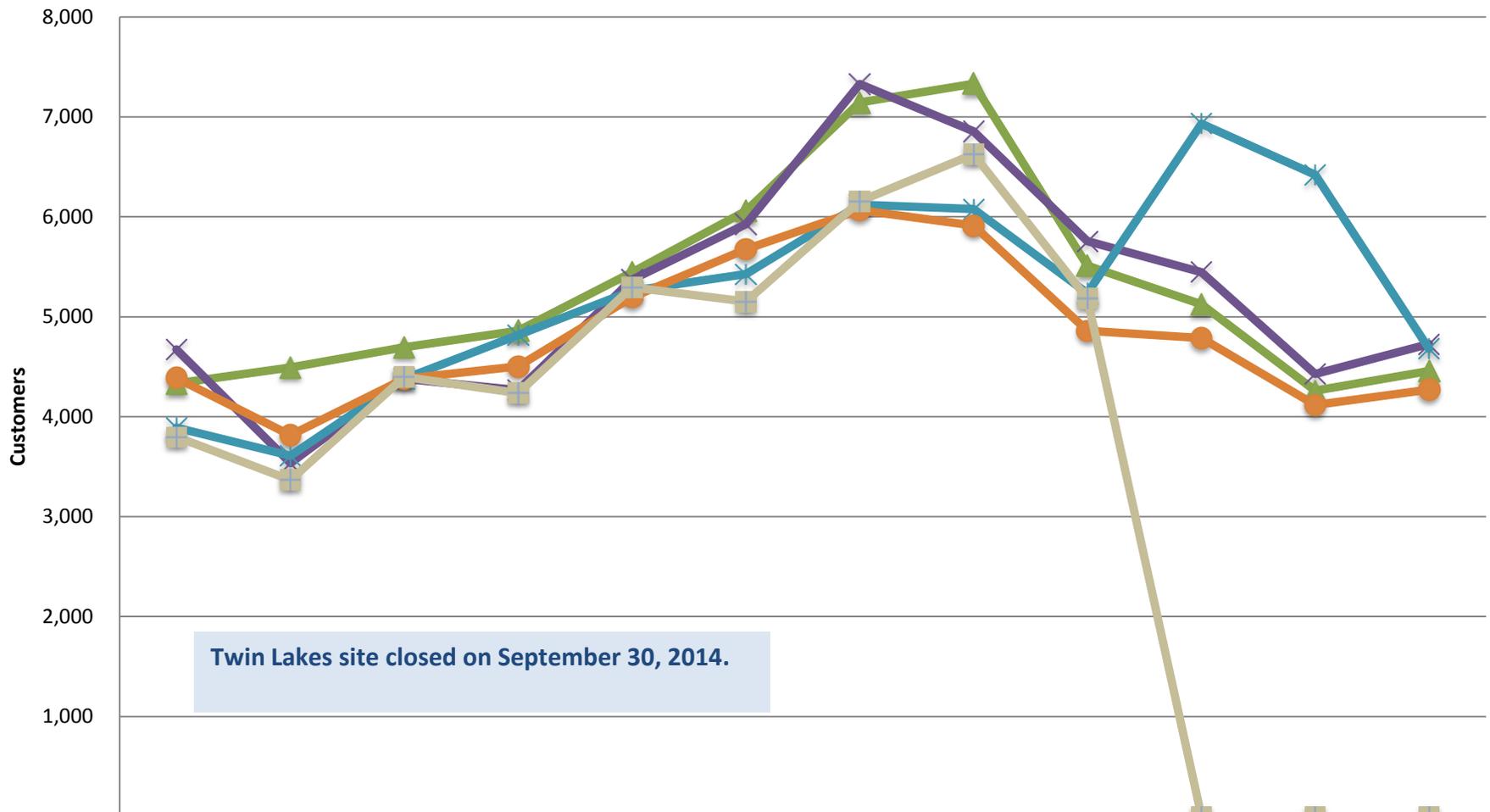
Garwood Customers by Month



Garwood site closed on September 30, 2014.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	7,760	6,859	7,354	7,523	8,232	8,424	9,335	9,394	7,785	7,879	6,962	7,727
2011	6,481	5,767	7,155	6,455	8,174	8,685	9,952	9,014	7,896	7,979	7,073	7,194
2012	6,040	5,770	6,629	7,116	7,154	7,733	8,099	7,015	6,198	4,935	4,336	6,323
2013	6,022	5,635	6,519	6,322	7,242	7,122	7,701	8,450	6,884	6,824	6,623	7,386
2014	5,762	5,227	6,893	6,512	7,624	7,330	8,171	8,461	8,057	-	-	-

Twin Lakes Customers by Month



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	4,332	4,493	4,695	4,860	5,442	6,060	7,144	7,331	5,511	5,124	4,259	4,456
2011	4,672	3,536	4,380	4,266	5,369	5,925	7,327	6,855	5,756	5,446	4,428	4,727
2012	3,889	3,609	4,378	4,817	5,260	5,426	6,122	6,077	5,234	6,932	6,420	4,679
2013	4,388	3,815	4,379	4,502	5,195	5,676	6,066	5,912	4,859	4,788	4,116	4,270
2014	3,797	3,367	4,399	4,236	5,294	5,151	6,155	6,626	5,181	-	-	-

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HOUSEHOLD HAZARDOUS WASTE 2014

The Kootenai County Solid Waste Department operates year-round Household Hazardous Waste (HHW) collection facilities at the Ramsey and Prairie Transfer Stations. The Ramsey (HHW) facility is opened from 8:00 a.m. until 4:00 p.m. Wednesday and Saturday. The Prairie Transfer Station has the same hours of operations but operates on Friday and Saturday. These facilities accept up to five liquid gallons from residential customers. It does not accept any commercial hazardous waste.

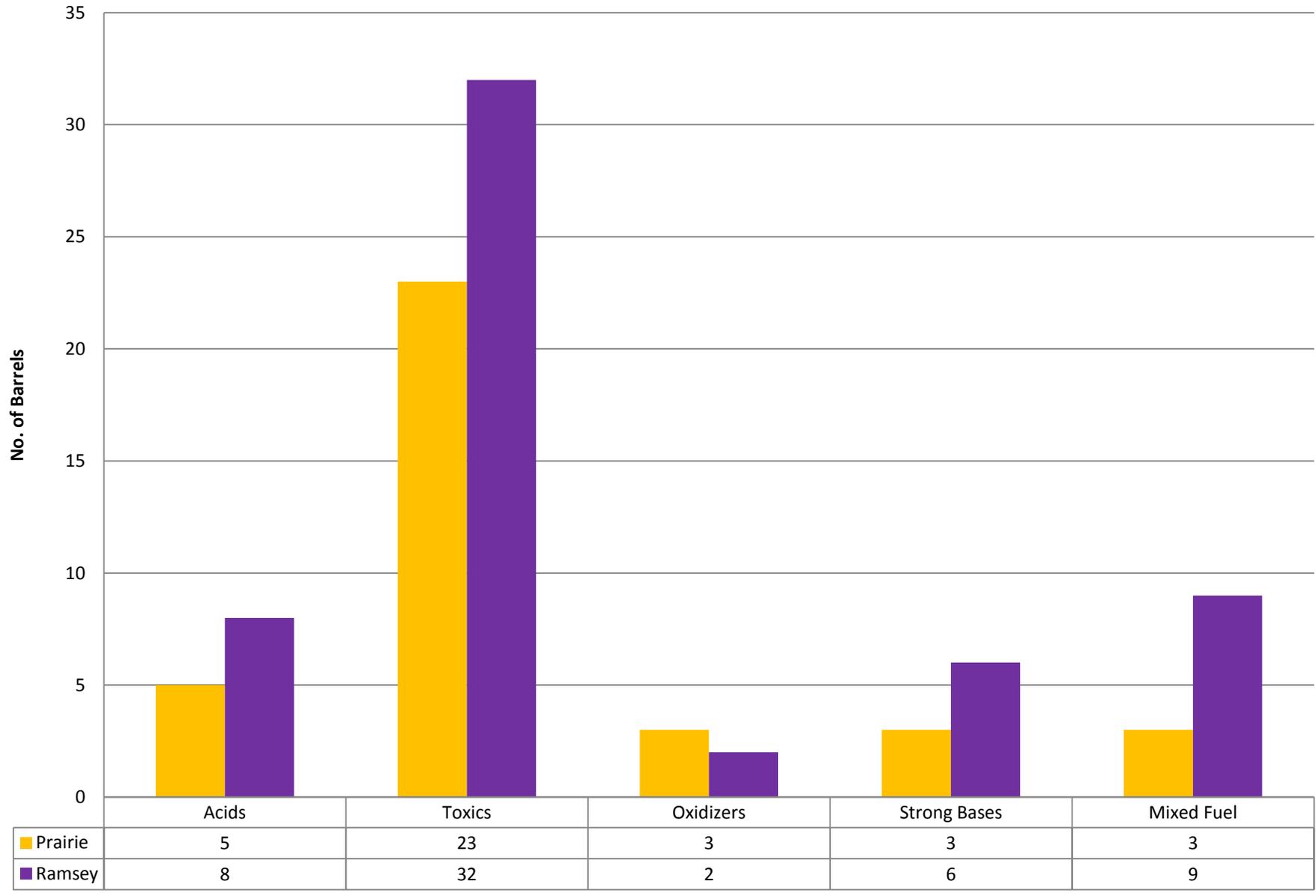
The Household Hazardous Waste Collection Program offers a valuable exchange program which addresses the growing awareness of the problems of household hazardous waste in the environment. If you are willing to sign off on a release of liability form, you may shop at the exchange cart for items such as pesticides, herbicides, paint, and many other household products. We try to ensure that the containers have the product inside as they are labeled, but we are unable to guarantee the product, thus our liability waiver.

The Department continues to use mixed latex paint as an additive to the existing alternative daily cover for the landfill. All paint possible is collected in the Household Hazardous Waste programs at the transfer stations. Staff sorts and separates the paint collected and set aside latex paint for shipment to the landfill. Landfill staff mixes the latex paint with a Posi-Shell® material and sprays it over the working 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 Household Hazardous Waste disposal. This cover system also saves very valuable landfill air space.

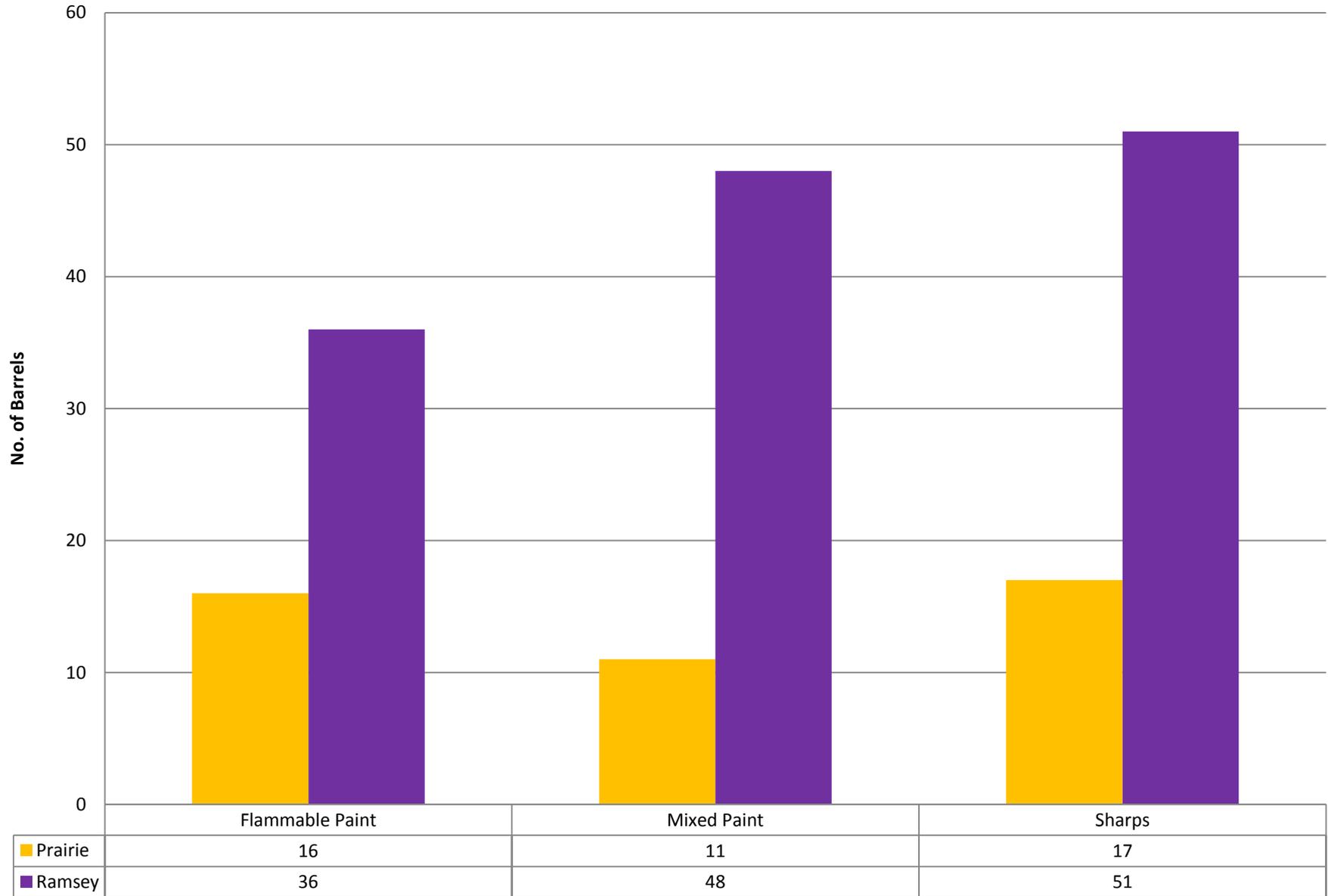
A chart is included demonstrating our program for reuse of used waste oil throughout our facilities. The chart shows the amount of waste oil used in heating maintenance shops at Ramsey, Prairie and Fighting Creek. The excess waste oil brought into the facilities is then shipped out to be reused elsewhere as fuel, asphalt emulsion, and other uses.

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Household Hazardous Waste - Processed

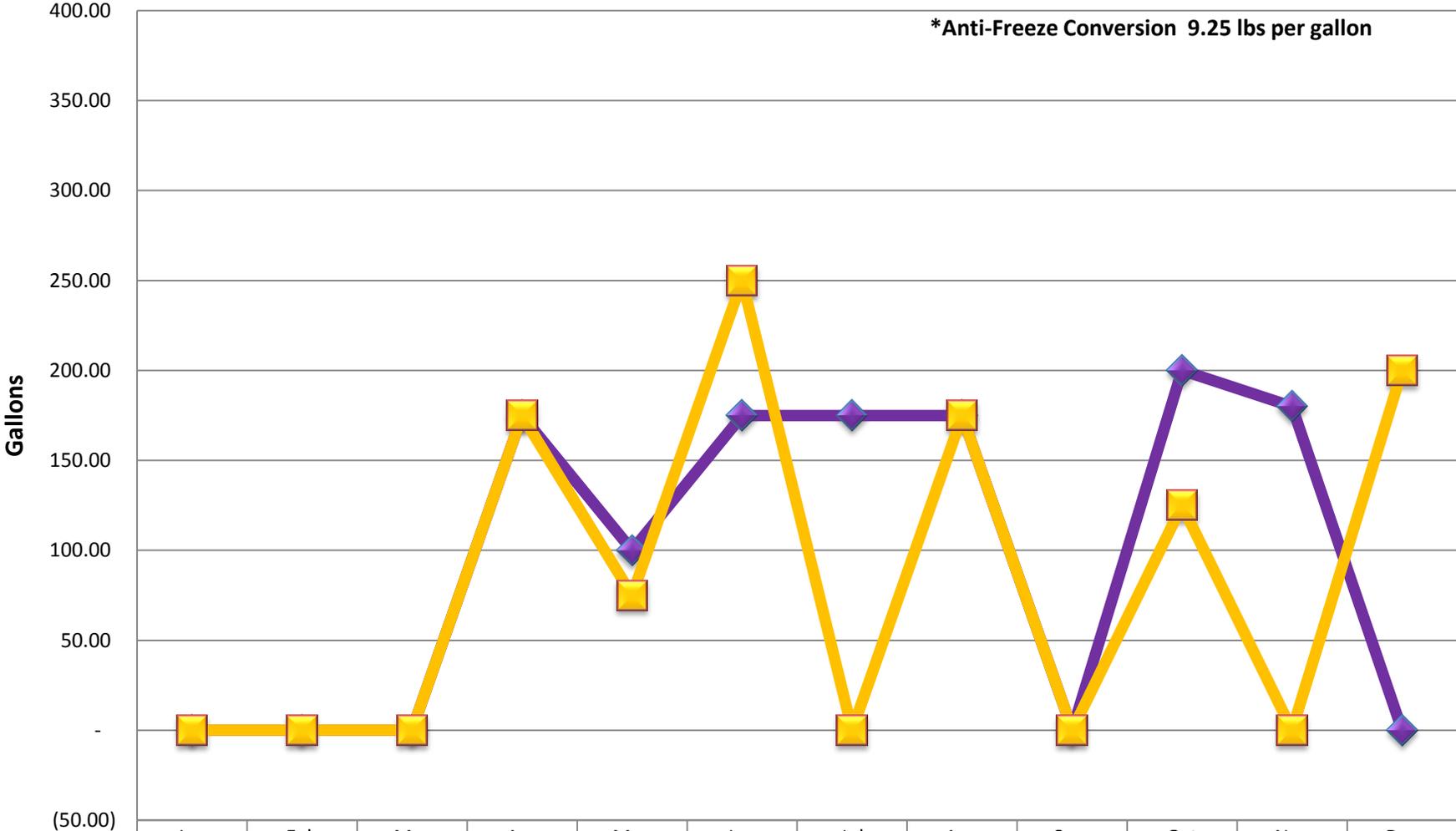


Household Hazardous Waste - Paint/Sharps



Anti-Freeze (10.08 tons*)

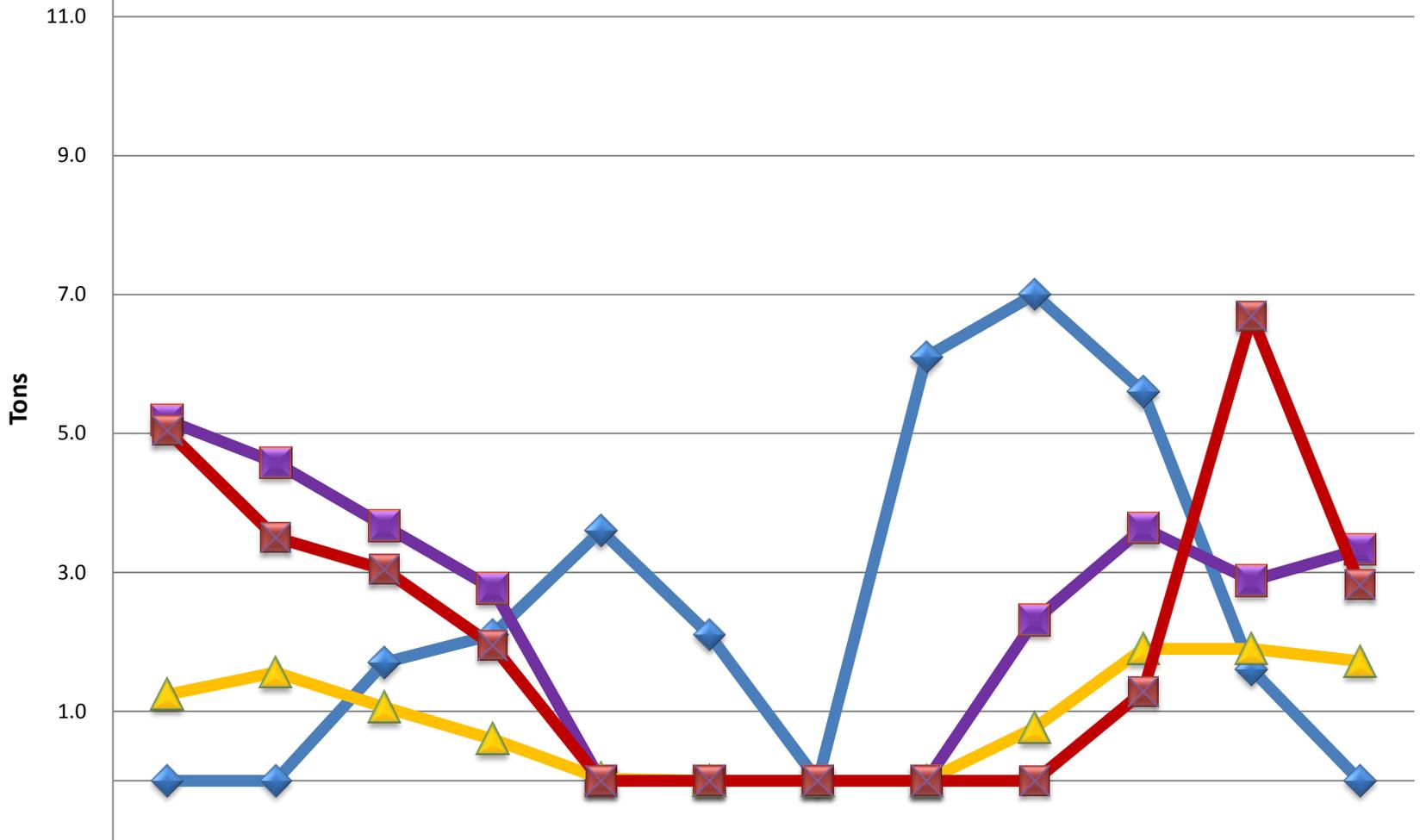
*Anti-Freeze Conversion 9.25 lbs per gallon



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
◆ Ramsey	-	-	-	175.00	100.00	175.00	175.00	175.00	-	200.00	180.00	-
■ Prairie	-	-	-	175.00	75.00	250.00	-	175.00	-	125.00	-	200.00

Used Motor Oil

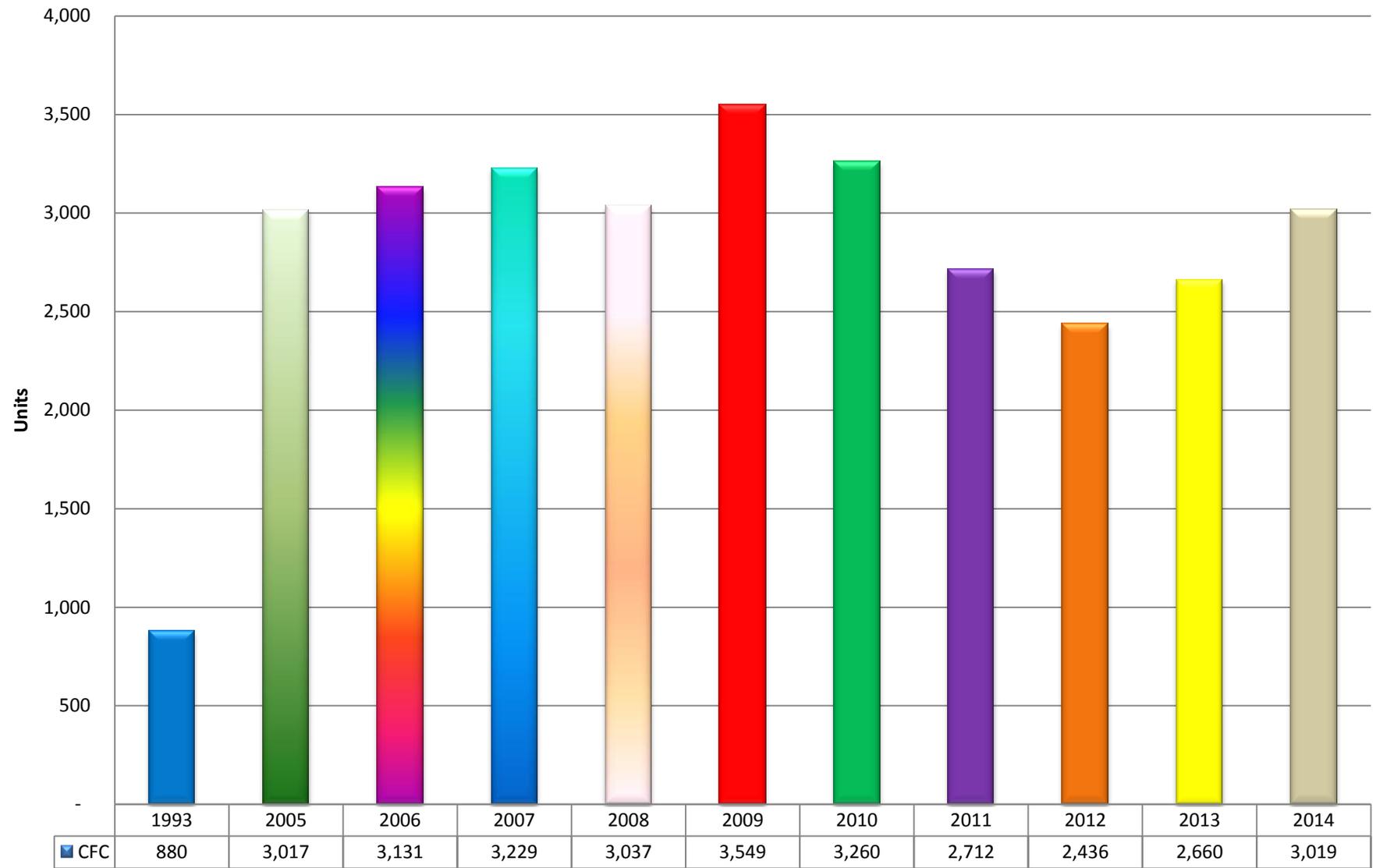
Conversion rate is 8 lbs per Gallon



(1.0)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
◆ Shipped	-	-	1.7	2.1	3.6	2.1	-	6.1	7.0	5.6	1.6	-
■ Ramsey	5.2	4.6	3.7	2.8	-	-	-	-	2.3	3.6	2.9	3.3
▲ Prairie	1.2	1.6	1.1	0.6	0.0	-	-	-	0.8	1.9	1.9	1.7
■ Fighting Creek	5.0	3.5	3.0	2.0	-	-	-	-	-	1.3	6.7	2.8

CFC Units* (3,019 units)



*includes Refrigerators, Freezers, AC Units, etc.

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Department of Environmental Quality Reporting

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

- A. **Inspections and Reports:** The 2014 Waste Stream Analysis is attached hereto and incorporated herein by reference. All required documents relevant to this annual report are included on a CD saved as PDF documents and provided to Idaho Department of Environmental Quality (DEQ) and Idaho Panhandle Health District (PHD) each year.
- B. **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.
- C. **Closure and Post-Closure Plan:** There were no changes or modifications to the Closure Plan in 2014. No update to the Life Cycle Analysis for the Landfill was completed in 2014.
- D. **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 and supporting documents from Kootenai County, Interim Finance Director, Keith Taylor, is attached hereto and incorporated herein by reference. A copy of this same information is included as a PDF document in the electronic version of this report.
- E. **Landfill Gas Reporting:** Fighting Creek gas system reports are included in the Greenhouse Gas Reporting to 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.
- F. **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.
- G. **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.
- H. **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.
- I. **Plans and Specifications:** Construction of a 4th leachate pond began in the summer of 2014. Included with the electronic version of this report are the final construction documents including record drawings.

Inspections and Reports

1. Idaho DEQ approved the 2013 Solid Waste Analysis on January 13, 2015. A copy of said approval is attached hereto and incorporated herein by reference.
2. An inspection of the Fighting Creek Farm Landfill was conducted by DEQ and PHD on May 27, 2014. A letter from DEQ dated 1/20/2015 stated, "As a result of the inspection, we found that the landfill appeared to be managed in compliance with the Idaho Solid Waste Facilities Act." A copy of the approval letter and Inspection checklist are included in the electronic version of this report.
3. On April 24, 2014 Idaho DEQ also conducted a NESHAPs-Subpart M-Asbestos Inspection at the Fighting Creek Farm Landfill. A letter dated May 2, 2014 states that personnel were operating in compliance with 40 CFR 61. A copy of the letter and inspection report is attached hereto and incorporated herein by reference.
4. On April 29, 2014, the Solid Waste Department submitted updated Operations Manuals for the Fighting Creek Farm Landfill, Ramsey Transfer Station and Prairie Transfer Station to both Idaho DEQ and Panhandle Health District. Copies of these operations manuals are available for inspection at Idaho DEQ, Idaho Panhandle Health District and the Solid Waste Administration offices.

Tier 1 Operating Air Quality Permit

- The Department has maintained compliance with the Tier 1, Title V Air Quality Permit with the EPA while also providing copies to Idaho DEQ. Copies of the semi-annual and annual reports to the EPA are included in the electronic version of this report.
- DEQ conducted an air quality inspection at the landfill and issued a report of compliance. Copies of this report are included in the electronic version of this report.

Kootenai County Farm Landfill Closure and Post-Closure Plan

- No changes were made to the Closure and Post-Closure Plan since September 16, 2010. Copies of this report were provided to Idaho DEQ and Idaho Panhandle Health District.
- Complete copies of the Closure and Post Closure plan are available for inspection at Idaho DEQ and the Administration office at Kootenai County Solid Waste.

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

Jim Brannon - 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

January 30, 2015

Idaho Department of Environmental Quality
Attn: Matt Plaisted, Technical Engineer
2110 Ironwood Parkway
Coeur d'Alene, ID 83814

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

Dear Mr. Plaisted;

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 \$7,019,000.

Additionally, this information will be included in our (Audited) Comprehensive Annual Financial Report for Kootenai County, Idaho for the year ending September 30, 2014. 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 446-1669.

Sincerely,

A handwritten signature in blue ink that reads "Keith E. Taylor".

Keith E. Taylor
Interim Finance Director

cc: Solid Waste
BOCC

Attachment

Attachment "D"

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. 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.

Parametrix
ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES

719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104 | P 206.394.3700

January 27, 2015
Parametrix No. 553-1660-037 (02/02)

Cathy Mayer, 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 2014

Dear Cathy:

This letter is an annual summary of the landfill gas monitoring and landfill gas management activities performed at the Ramsey Road Landfill in 2014. It is specific only to the landfill gas control system. This letter can be forwarded to Division of Environmental Quality and Panhandle District Health Department 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 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 landfill. Two additional gas probes (GP-6A and 7A) were installed June 2008 between the landfill and proposed development projects on the east side to monitor potential impacts to human health since there has been evidence of subsurface migration in the past.

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Attachment "E"

Ground Water Summary

- The bi-annual monitoring requirements for ground water were completed as required in 2014.
- The following is an excerpt from the 2014 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 Solid Waste Administration Office.
- Groundwater quality results as stated in Section 2.5 of the Summary Report were below primary state or federal groundwater quality criteria.

Kootenai County Solid Waste Department | January 2015

2-16

G. Table G-2 compares average leachate and maximum upgradient groundwater concentrations over the previous ten years, and presents updated recommendations for parameters to be statistically evaluated in groundwater.

The following constituents had substantially elevated concentrations in leachate (by a factor of greater than 25) compared to upgradient groundwater: specific conductivity, chloride, ammonia, nitrate-nitrite, iron, arsenic, chromium, manganese, antimony, selenium, and TOC. Compared to the previous annual evaluation, the contrast ratios were higher for chromium and selenium and lower for zinc. Therefore, zinc will be eliminated from the list of parameters to be statistically evaluated in 2015. However, chromium and selenium will not be added; heavy metals are not typically considered reliable indicators since they are strongly adsorbed at their usually low concentrations and their mobility is relatively low. Arsenic and antimony will remain on the list for consistency.

UPLs were recalculated for downgradient monitoring wells M-8, M-9, and M-17 by adding the April and October 2014 data to the background data from previous monitoring events. The UPL calculations are presented in Appendix E and will be used to compare the data collected in 2015. Data from April 2014 through October 2014 were used to update the UPLs, except for values that exceeded the revised UPLs (see Tables 2-1 and 2-2) per the procedures in the *Groundwater Monitoring Plan* (Parametrix 2010a). Excluded data were nitrate (April and October 2014) for well M-9, and ammonia for all wells (October 2014).

2.4 Surface Water Quality Results

No surface water samples were collected in 2014 because the station was dry.

2.5 Summary and Conclusions

Groundwater quality results were below primary state or federal groundwater quality criteria. Volatile organic compounds were not detected in any of the landfill wells. Nitrate concentrations have increased in well M-9 over the past few years but remain well below the groundwater quality criteria. 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.

- “Domestic” Water Well Monitoring results as stated in Section 3.2 of the Summary Report indicate that the concentrations of iron and manganese in the Brand well were above secondary state and federal drinking water criteria. These parameters have regularly exceeded water quality criteria during previous sampling events which is a reflection of natural occurrence of these minerals in groundwater. Iron and manganese concentrations in the Shriner well were lower than previously observed.

Kootenai County Farm Landfill Leachate Report

A copy of the report to Idaho DEQ outlining the volume of leachate processed in 2014 and the methods used to process the leachate is attached in the electronic version of this report. The total of 6,938,319 gallons leachate were processed in 2014.



KOOTENAI COUNTY

SOLID WASTE

February 4, 2015

Mr. Matt Plaisted, P.E.
%Division of Environmental Quality
2110 Ironwood Parkway
Coeur d'Alene, ID 83814

Re: 2014 Annual Leachate Report – Fighting Creek Farm Landfill

Dear Mr. Plaisted,

Attached you will find a spreadsheet that lays out how the Solid Waste Department managed leachate during the 2014 season. During the 2014 season, the amount of leachate processed was 6,938,319 gallons.

During this season we used three different methods to control and remove leachate from the landfill. I have listed below the methods and amount(s) of leachate processed.

1. Injection	62,500 gallons	(water truck loads put into drywells on landfill)
2. Misting	5,018,529 gallons	
3. Evaporator	1,857,290 gallons	
Total	6,938,319 gallons	

We continue to consult with Steve Emge of the engineering firm, Parametrix, to review the results of our leachate and gas systems. Mr. Emge 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,


Rick Bishop
Operations Manager

cc: Solid Waste Director;
Eric Ketner, PHD
Steve Emge, Parametrix;

3650 N Ramsey Road • Coeur d'Alene, Idaho 83815
Phone: 208-446-1430 • Fax: 208-446-1432 • Email: kcsww@kccgov.us

Kootenai County Farm Surface Water

The Solid Waste Department complied with the regulations of the EPA regarding 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 with this report.

NPDES Permit Tracking No.:
 IDR05C356

 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460	
Annual Reporting Form	
A. GENERAL INFORMATION	
1. Facility Name:	Kootenai County Farm Landfill
2. NPDES Permit Tracking No.:	IDR05C356
3. Facility Physical Address:	
a. Street:	22089 S. HWY 95
b. City:	Coeur D'Alene
c. State:	ID
d. Zip Code:	83814
4. Lead Inspectors Name:	Rick Bishop
Title:	Operations Manager
Additional Inspectors Name(s):	
Rich Jahns	
John Phillips	
5. Contact Person:	Cathy Mayer
Title:	Director
Phone:	208-446-1444 Ext. E-mail: cmayer@kcgov.us
6. Inspection Date:	06/17/2014
B. GENERAL INSPECTION FINDINGS	
1. As part of this comprehensive site inspection, did you inspect all potential pollutant sources, including areas where industrial activity may be exposed to stormwater?	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If NO, describe why not:	
<p><small>NOTE: Complete Section C of this form for each industrial activity area inspected and included in your SWPPP or as newly identified in B.2 or B.3 below where pollutants may be exposed to stormwater.</small></p>	
2. Did this inspection identify any stormwater or non-stormwater outfalls not previously identified in your SWPPP? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If YES, for each location, describe the sources of those stormwater and non-stormwater discharges and any associated control measures in place:	

Kootenai County Farm Plans & Specifications

Construction of an additional leachate pond (LP4) at the Kootenai County Farm Landfill began in the summer of 2014. This project was completed by the end of the calendar year.

Included with the electronic version of this report are the Engineer's Certification of Construction Conformance to IDEQ for the Kootenai County Farm Landfill – Leachate Pond #4 (LP4), 2014 Construction Project. This report includes record drawings and all other pertinent documentation.



January 9, 2015

Matt Plaisted, P.E.
Environmental Engineer
Department of Environmental Quality
2110 Ironwood Parkway
Coeur d'Alene, Idaho 83814

Subject: Engineer's Certification of Construction Conformance to IDEQ for the Kootenai County Farm Landfill – Leachate Pond #4 (LP4), 2014 Construction Project

Dear Mr. Plaisted:

This letter has been prepared on behalf of the Kootenai County Solid Waste Department. Leachate Pond #4 (LP4) was constructed in 2014 in accordance with IDEQ's approval of the plans and specifications (letter from you to Cathy Mayer dated June 4, 2014).

In accordance with Chapter 39-118 of the Idaho Code, this letter serves as notification to IDEQ that the project is complete and that the project was constructed in 'substantial compliance' with the plans and specifications as approved by IDEQ. Please find enclosed a set of Record Drawings for your files.

Please contact the Kootenai County Solid Waste Department to arrange for your inspection of the project in conformance with Chapter 39-118. Following your inspection, please inform the County of your findings and disposition (approval or non-approval) of the project.

Please also feel free to contact me with any questions (208.383.6259).

Sincerely,

CH2M HILL

A handwritten signature in black ink, appearing to read "TPyle", written over a horizontal line.

Travis Pyle, P.E.
Design/Construction Manager

cc: Cathy Mayer/Kootenai County, cmayer@kcgov.us
Erik Ketner/Panhandle Health District, eketner@phd1.idaho.gov

BO/IDEQ KCFL LP Construction Cert Letter.doc