



COLORADO

Department of Public Health & Environment

**FY2019 Annual Report to the Colorado General
Assembly:**

**Status of the Solid Waste Management Program
in Colorado**

Submitted to the Colorado General Assembly
by the Hazardous Materials and Waste Management Division
Colorado Department of Public Health and Environment
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Subject: The report describes the status of the Solid Waste and Materials Management program and efforts to implement the program at the lowest possible cost without jeopardizing the statutory intent.

Statute: Section 30-20-101.5(3), C.R.S.

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2019 Annual Report to the Colorado General Assembly: Status of the Solid Waste Management Program in Colorado

Introduction

Colorado's Solid Waste and Materials Management program (the program) is responsible for ensuring compliance with laws and regulations concerning the management of solid waste. The authority for this program is in the Colorado Solid Waste Act, 30-20-100.5, *et seq.*, C.R.S. The U.S. Environmental Protection Agency (EPA) has approved Colorado's solid waste management program. With that approval, the authority to implement requirements for management of solid waste in Colorado rests completely with the state.

Primary elements of the program include compliance assistance, compliance monitoring and enforcement, permitting, and materials management and recycling. Each of these program elements is discussed in the following sections.

The program currently regulates the following facilities:

Facility type	Number of facilities
Landfills	77
MSW landfills	56
Construction and demolition debris (C&D) landfills	5
Waste tire monofills	3
Coal combustion ash monofills	8
Other landfills (special wastes, landfarms)	5
Closed landfills	193
Composting facilities	29
Incinerators	4
Recycling facilities	165
Medical waste facilities	6
Solid waste impoundment facilities	132
Commercial exploration and production waste impoundments	12
Waste tire registrants (facilities and haulers)	2,744
Waste grease registrants (facilities and haulers)	80

Colorado law, at 30-20-101.5(3) and 30-20-122, C.R.S., requires that an annual report is submitted to the General Assembly on February 1st of each year. This report must describe the status of the Solid Waste Management program and the efforts of the Colorado Department of Public Health and Environment (CDPHE, the department) to carry out its statutory responsibilities at the lowest possible cost without jeopardizing the intent of the statute. This report is intended to satisfy that statutory requirement.

Accomplishments

Compliance assistance

A goal of the Solid Waste and Materials Management Program is for all regulated facilities to be in, and stay in, compliance with state law and its regulations. The traditional inspection and enforcement program serves as one primary mechanism for reaching that goal. However, compliance assistance is another important method for obtaining and maintaining compliance. The General Assembly recognized the value and importance of compliance assistance in Section 30-20-101.5(2)(f), C.R.S., which states the department is to “establish a preference for compliance assistance with at least 10 percent of the annual budget amount being allocated to compliance assistance efforts.” In FY 2019, the program met that requirement with 14 percent of staff time devoted to compliance assistance.

The program has developed and continues to invest in a broad range of compliance assistance services to help the regulated community manage solid waste appropriately. These compliance assistance services include the following activities:

- A part-time customer assistance and technical assistance phone line (303) 692-3320 and email box. This telephone line is staffed four hours/day during business hours to provide information on common waste management questions and more complex or detailed regulatory guidance. Through this phone line, program technical assistance staff responded directly to 589 calls (37% of all calls received) and 97 emails (31% of all emails received) during FY 2019.
- A wide range of solid waste guidance documents, compliance bulletins and an extensive and informative website (www.colorado.gov/pacific/cdphe/hm) .
- The division maintains an extensive set of guidance information for regulated entities through both print and electronic media. During FY 2019, the Solid Waste Management webpage received 7,743 hits. The “exit rate” for these hits is low - 17%, which means that most visitors to the website found something of interest or value and clicked through to subsequent pages.
- Program inspectors routinely incorporate compliance assistance and pollution prevention into the compliance inspections performed each year. In the past year, program staff have delivered compliance assistance on 154 of the 370 inspections performed, or on 42% of inspections.

Compliance monitoring and enforcement

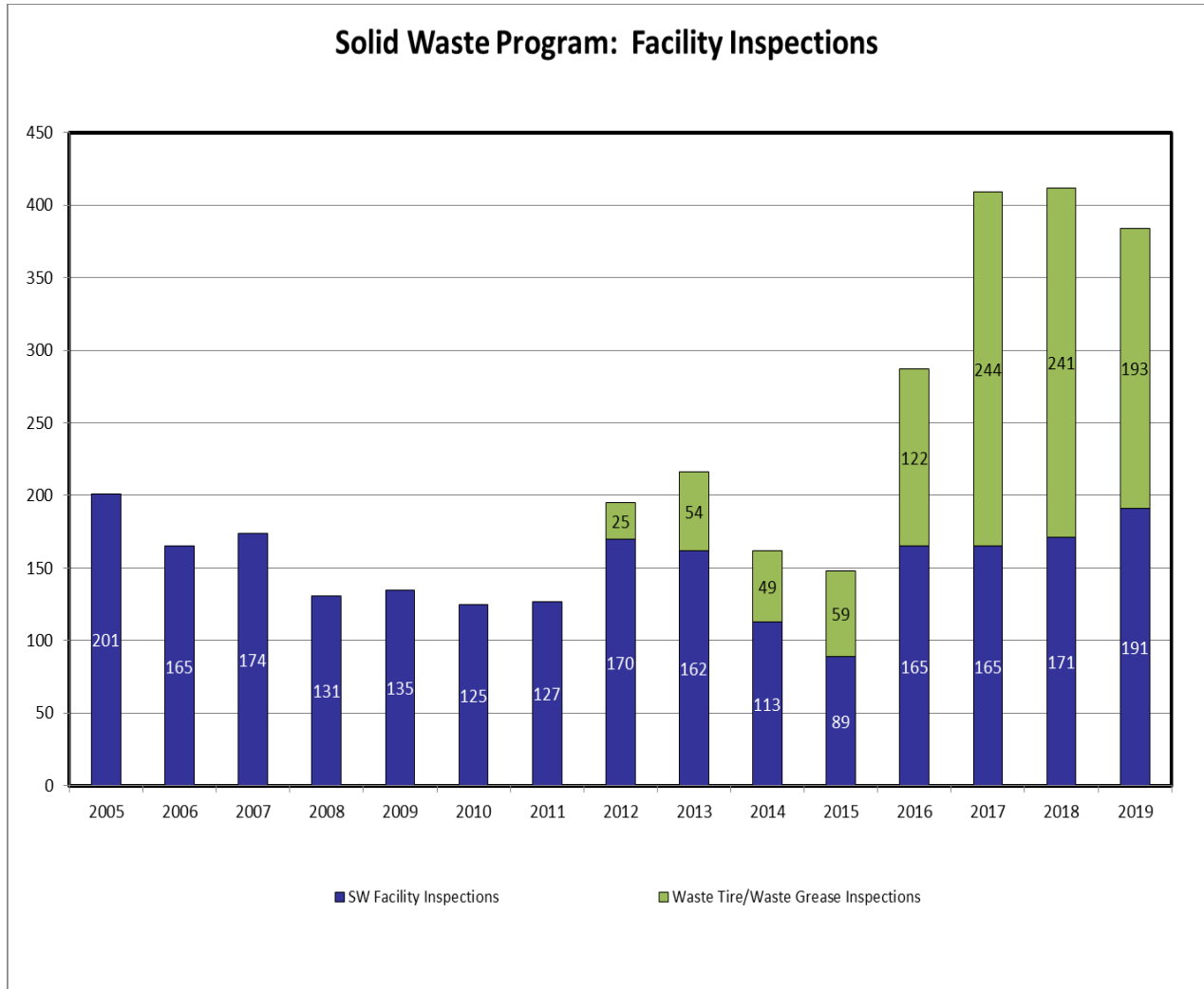
Table 1 presents the numbers and types of inspections performed by program staff.

Table 1

Facility type	Number of inspections
Landfills	56
Composting facilities	13
Medical waste facilities	4
Commercial expl and production waste impoundments	4
Recycling facilities	13
Asbestos in soil sites	10
Beneficial use sites	16
Illegal disposal sites and complaint follow-up	25
Environmental covenant inspections	9
Construction and demolition disposal facilities	5
Other types of facilities (incinerators, closed landfills)	9
Paint stewardship sites	27
Waste tire sites (facilities and haulers)	182
Waste grease sites (facilities and haulers)	11
Total - Inspections performed by program staff	384

Figure 1 presents the 370 inspections performed by program staff along with a comparison to previous years. In 2014 and 2015, the program had several vacancies. Since then, solid waste facility inspections have recovered and the waste tire program has significantly expanded. The performance plans for each inspector define the number of completed inspections needed to achieve an outstanding, satisfactory or unsatisfactory performance rating. In 2019, each solid waste facility inspector performed about 21 inspections and each waste tire inspector performed about 49 inspections.

Figure 1

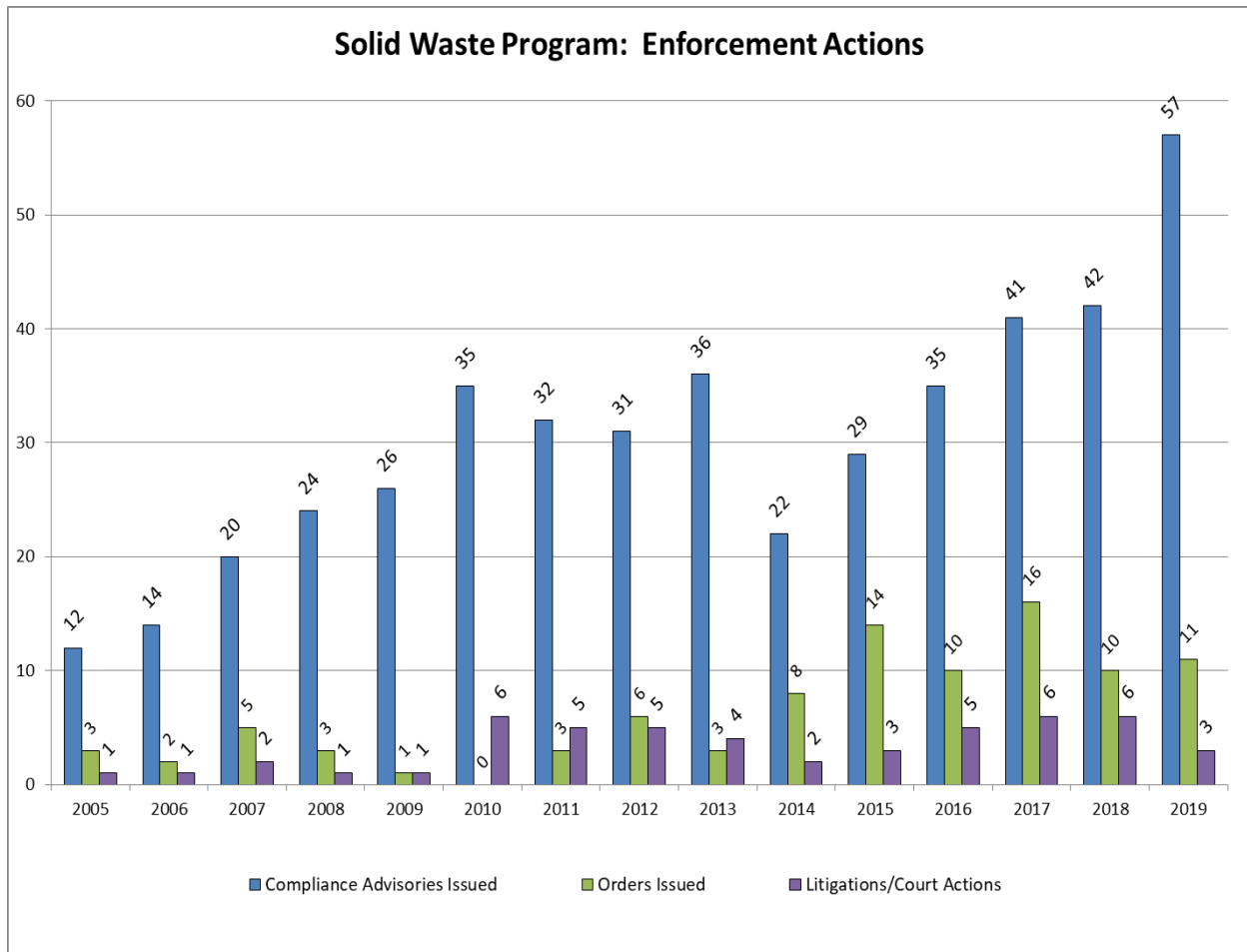


Every inspection carries administrative responsibilities, such as advance planning and preparation, inspection report preparation, tracking return-to-compliance activities at the facility, tracking and preparing needed enforcement documents, and data entry.

The program puts a high priority on complaints and spill reports. In FY 2019, the program received 46 complaints. Of those, 16 were investigated and/or inspected by our staff and 20 were referred to local governments or other agencies. In addition, 125 spill reports were received. We followed-up on 120 of those spills to ensure appropriate cleanup actions were completed, and 5 spills were referred to local governments or other agencies.

Inspections, complaints, and spill follow-ups result in the issuance of formal and informal enforcement actions. Informal actions are called Compliance Advisories, and formal actions include Compliance Orders and civil actions filed in court. Figure 2 presents the number of formal and informal enforcement actions undertaken.

Figure 2



Referring to Figure 2 above, Compliance Advisories were issued within the program’s 90-day guideline 96% of the time, and 72% of 11 Compliance Orders were issued within the program’s 360-day guideline. Of the 11 Compliance Orders shown for 2019 on Figure 2, eight of the orders assessed a total of \$6,400 payable to the Colorado General Fund. The remaining orders assessed no penalties.

Small Landfill Compliance Initiative

Large landfills in Colorado are largely very compliant, but small landfills have had significant compliance problems. Most of the large landfills are operated by large national waste management companies, and the smaller landfills tend to be operated by local governments.

To address the compliance problems at the small landfills, which are all located in rural parts of the state, the program started the Small Landfill Compliance Initiative in 2016. After meeting with all communities operating small landfills, we asked them to make a decision on whether they will upgrade their landfill to a compliant status or close their landfill. After considering these options, 13 of the 19 small landfills in Colorado elected to continue operations and six elected to close. In the 2017 legislative session, the program was awarded \$1.3 million in general fund money to be combined with \$0.3 million of program money to help close the six small landfills, as

well as to install ground water monitoring systems at the 13 small landfills that intend to stay open. In 2018, the program drilled a total of 39 wells at the 13 small landfills intending to stay open.

For the 13 sites remaining open, in FY2019, the program conducted two rounds of sampling at all newly constructed groundwater wells. The results confirmed our understanding of conditions at the three sites with known groundwater contamination and identified contamination at two sites where it had not been previously identified. At two sites, the new groundwater and/or well data allowed prior waivers to be reinstated. At three sites, CDPHE will need to collect more groundwater data through continued monitoring before final waiver determinations can be made. Finally, at one site, it was unclear whether groundwater existed based on observations initially made. That site may need to have two additional wells installed should groundwater prove to be reliably present.

For the six landfills that have elected to close, CDPHE has completed closure activities at five of the sites. The sixth site has elected to close at the end of 2020. At that point, depending on site conditions and the estimated cost of closure, additional funding may need to be explored.

Of the 13 small landfills that want to continue to operate, compliance has improved. Program staff are continuing to follow-up on all outstanding compliance issues at these facilities.

Closed landfill compliance initiative

In FY2018, the program began an initiative to inventory the closed landfills throughout the state and to then, where necessary, get them into compliance with closure and post-closure requirements. In FY2018, a scoping document was drafted with the help of stakeholders that described the goals and scope of the project. In addition, the most complete inventory ever conducted by program staff was completed. While still not fully complete, this inventory is a significant milestone in understanding many aspects of closed landfills. In FY2019, the program refined its inventory of closed landfills and conducted a number of site visits aimed at better defining the scope and logistics of the project. In the coming year, the program will meet with stakeholders to obtain their input on policy aspects of this project.

Permitting

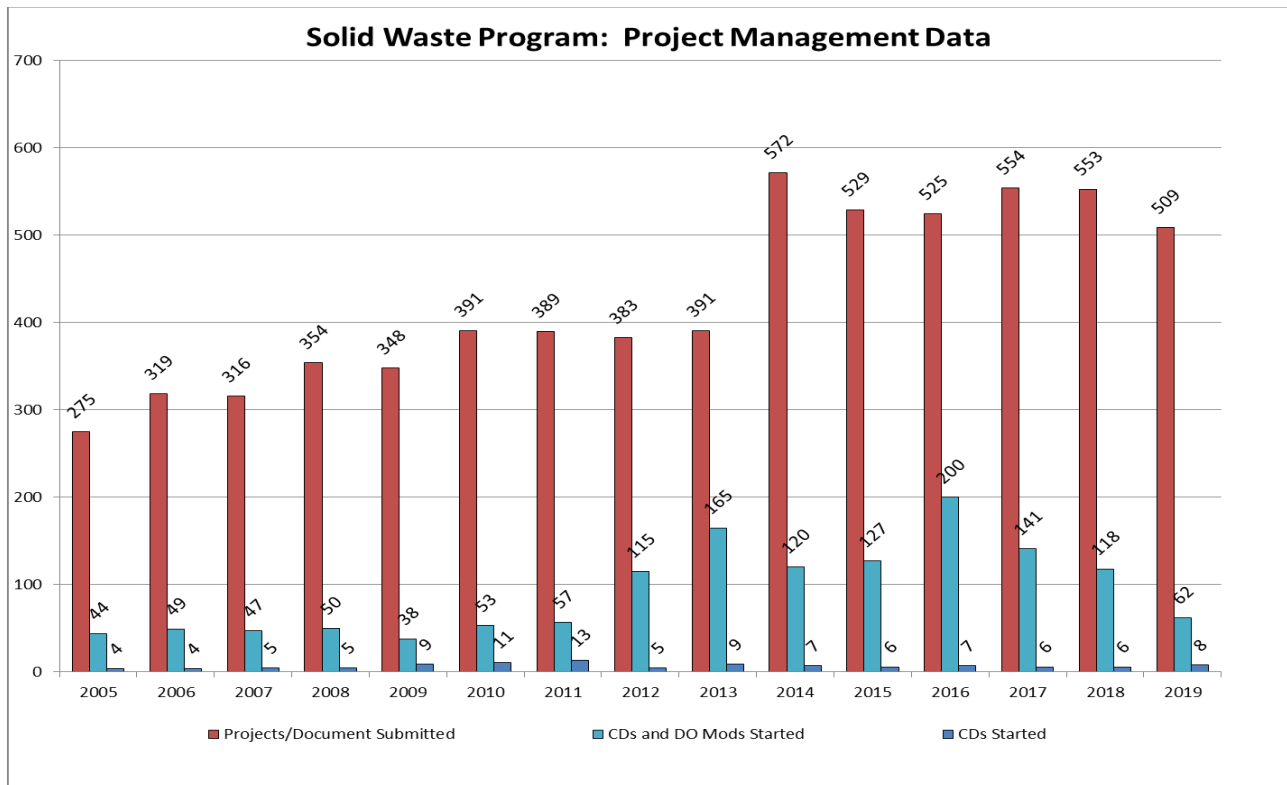
In Colorado, most solid waste disposal sites and facilities need Certificates of Designation (CDs) issued by the local government. At these facilities the deposit and final treatment of solid waste occurs, which includes landfills, incinerators, medical waste treatment facilities, and certain subsets of waste impoundments and composting facilities. However, it does not include recycling facilities, transfer stations, and any facility disposing of their own solid waste generated on their own site.

To obtain a CD, a facility must submit their application to the local government. The local government then refers the application to the program for a technical review to

be sure that the facility can operate safely and in a manner that protects human health and the environment. If the program recommends approval of the application, the local government evaluates whether the proposed facility conforms to local land use plan and zoning restrictions. The local government may approve or disapprove of the application at that point. However, if the program recommends disapproval, then the local government must disapprove of the application.

The portion of the application that the program reviews is called the Engineering Design and Operations Plan (EDOP). Certain facilities that do not require a CD must still get an approved EDOP. Therefore, the program’s “permitted universe” includes all solid waste facilities with EDOPs. This large universe of sites with EDOPs is not static. New facilities are being built and existing facilities are adding new solid waste management units, waste streams and treatment capabilities - all of which needed EDOPs or EDOP modifications to be reviewed and approved. Figure 3 presents the large number of documents being submitted to our staff by this universe of facilities on an annual basis, from 2005 to 2019.

Figure 3



This graph does not show the relative complexity of these documents. The program now differentiates documents submitted by regulated entities for our review and approval into three categories: projects of high, medium and low complexity. While the CD application category is by definition a major project of high complexity, EDOP modifications, for example, can vary from major, to moderate, to minor on the complexity scale. In addition, groundwater monitoring reports can be relatively simple, but new engineering designs for treatment technologies and landfill cells with sophisticated liners and caps can be very complex.

To show our efforts on documents of different complexities, please refer to Figures 4, 5 and 6. These graphs compare FY2016 through FY2019 for three measures:

- the number of days it took for us to begin our review (days in backlog),
- the number of days it took us to finish our review,
- the number of billable hours we charged to the customer for our review.

Figure 4 shows that we improved the backlog for medium and low complexity documents in FY2019, but the backlog for high complexity documents increased. Since there are fewer high complexity projects, those numbers tend to be influenced by project specific factors not attributable to unit-wide trends.

Figure 5 shows that the number of elapsed days during our review has remained relatively constant when viewed over multiple years of data, with some year-to-year fluctuations being expected. As in recent years, the small landfill initiatives once again consumed a great deal of staff time during FY2019. However, the total elapsed days in review fell slightly across all document categories. This reduction is a credit to the diligence and efficiency of the program’s staff.

FIGURE 4

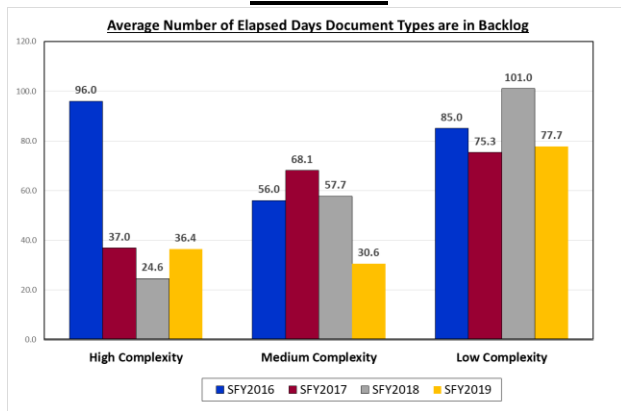


FIGURE 5

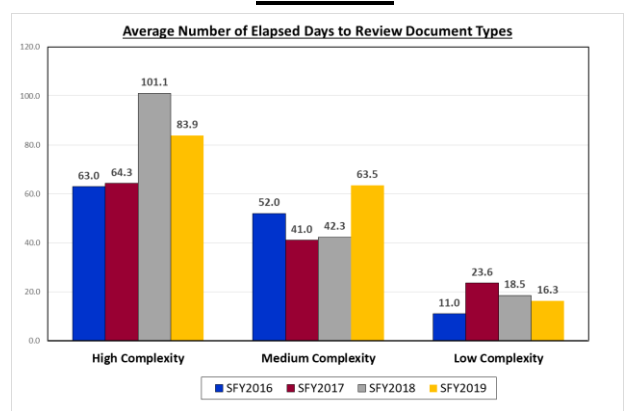
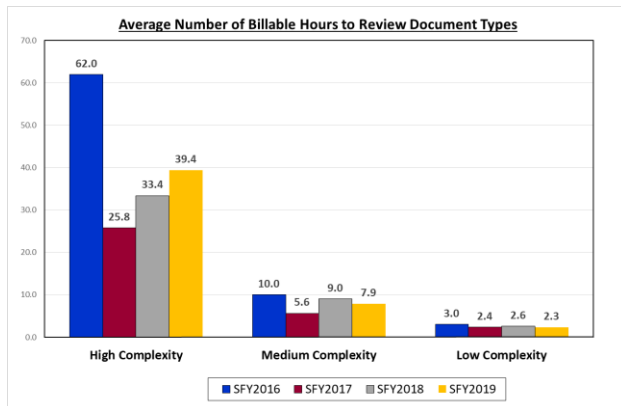


FIGURE 6



Materials management and recycling

Within the program, there are several materials management and recycling programs:

1. Waste tire program,
2. Waste grease program,
3. Beneficial use program,
4. Paint stewardship program, and
5. Recycling and waste diversion analysis for Colorado.

Waste tire program

The waste tire program was subject to numerous administrative changes this past year. With the 2018 conclusion of the Waste Tire End User Fund and end use rebates for tire-derived products, the end use of waste tires in Colorado significantly declined.

To increase the end use of waste tires and reduce storage inventories, the 2019 Colorado General Assembly enacted legislation that will bring back the End User Fund in 2020, by providing rebates for in-state end users and retailers of tire-derived products. This legislation also brings back funding for market development so the department can assist in developing sustainable markets for the end use of waste tires and tire-derived products within Colorado.

During FY2019, waste tire staff conducted 182 waste tire inspections and compliance assistance visits. Of these 18 visits, 106 waste tire generator facilities selling new tires were evaluated for compliance with the requirements for submitting the waste tire fee. Additionally, the program issued 46 compliance advisories (informal enforcement actions) for non-compliance with waste tire laws and regulations.

The Illegal Waste Tire Cleanup Grant program provides funding for the cleanup of illegal or abandoned waste tire sites. In CY2018, the program hit the “one million tire” mark -over one million waste tires in illegal disposal sites have been safely removed from the environment since the inception of the program. The program removed 265,527 passenger tire equivalents in CY2018 alone, reducing environmental risks from tire fires and eliminating prime mosquito breeding grounds, at a cost of \$881,940.00.

Some of the more significant metrics tracked for the waste tire program include Figures 7, 8, and 9.

- Figure 7 shows that in 2018 (2019 data has not yet been tabulated), 81% of waste tires generated in, or imported into, Colorado were either recycled or re-used.
- Figure 8 illustrates the top 10 uses of waste tires with tire-derived fuel and salvaged tires being the top two uses.
- Figure 9 shows that Colorado has been recycling or salvaging close to, or more than, 100% of the waste tires generated in Colorado up until 2018.

It is important to note that the End User Fund was also in existence during these years until it ended in 2018. For a complete explanation of the waste tire program, please

see the 2018 Annual Report to the Colorado legislature located at: www.colorado.gov/pacific/cdphe/swreports

Figure 7

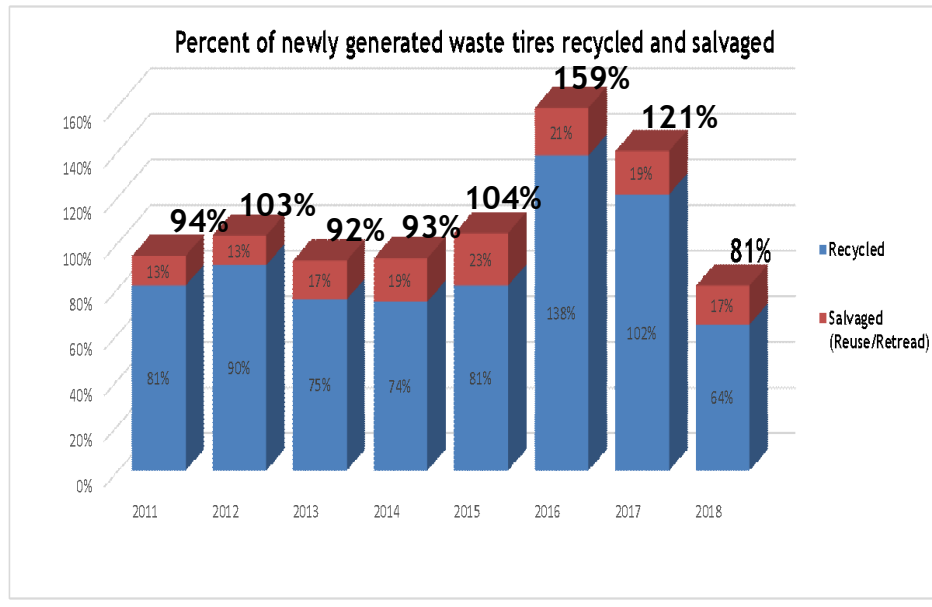


Figure 8

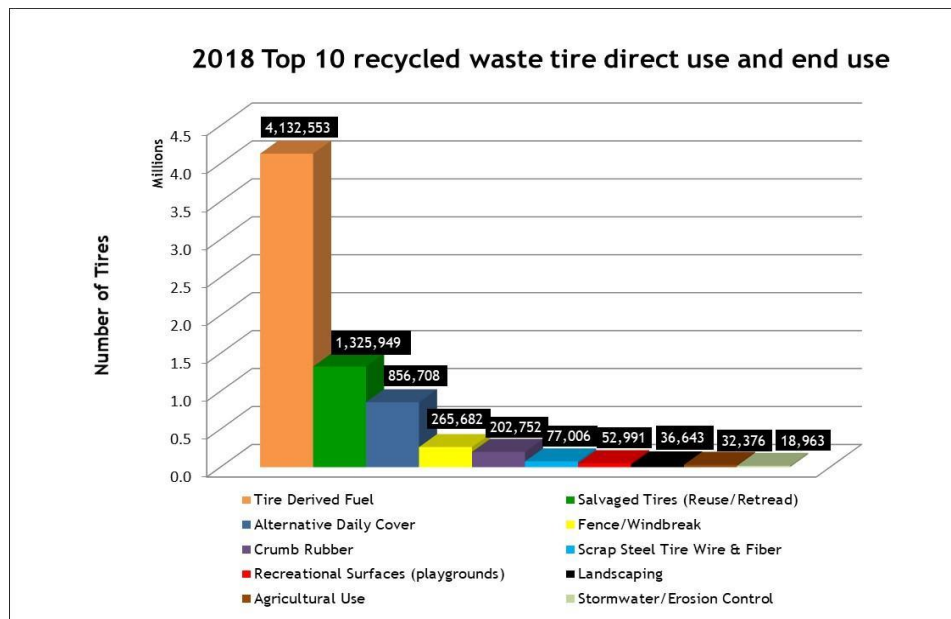
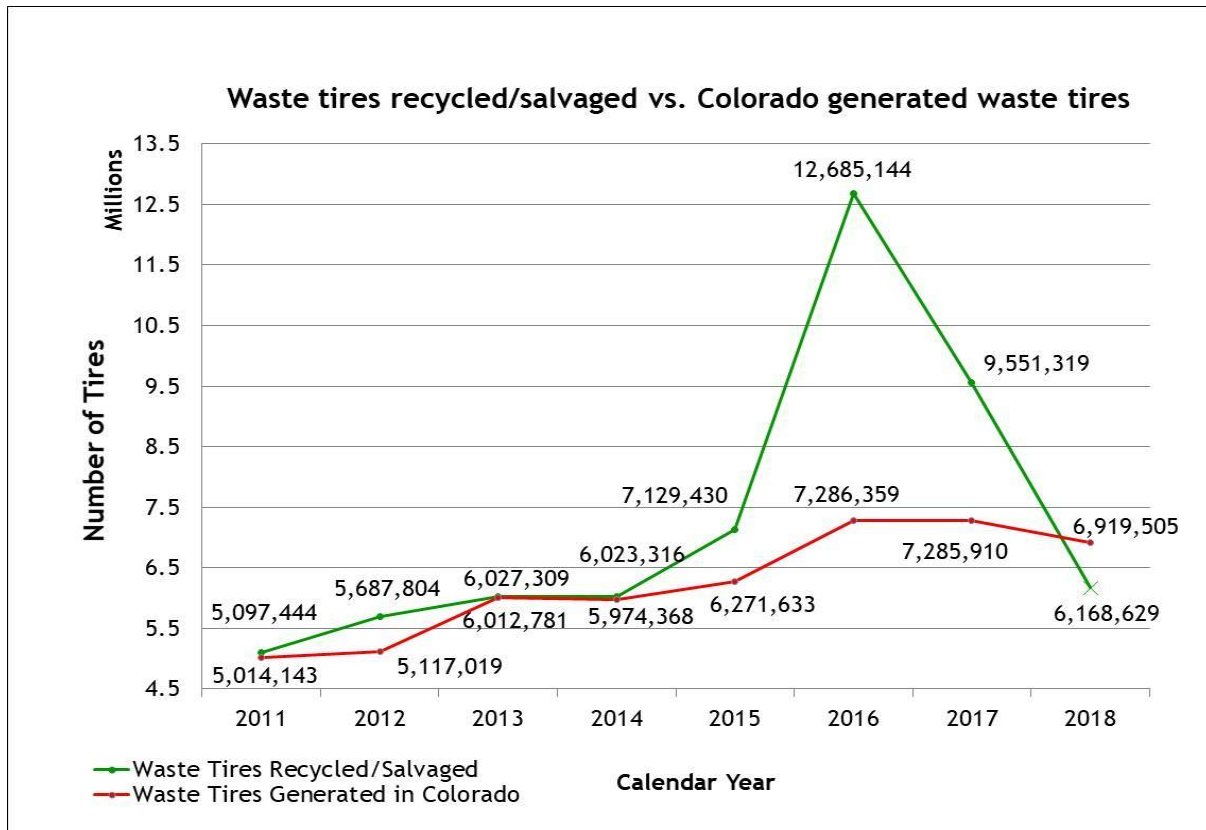


Figure 9



For more information about the waste tire program, visit:
<https://www.colorado.gov/pacific/cdphe/wastetires>

Waste grease program

A total of 64 waste grease transporters and 16 waste grease facilities were registered with the program at the end of CY2019. There are 138 vehicles registered to collect waste grease. CY2018 annual reports show that the program collected 40,076,435 gallons of waste grease in 19,130 loads.

Waste grease program staff performed 11 waste grease transporter and facility compliance inspections and compliance assistance site visits in FY2019. During these inspections, staff provided educational information, answered questions and concerns about the waste grease program and evaluated each operator's compliance status.

In May 2019, waste grease program staff proposed a waste grease fee reduction to the Solid and Hazardous Waste Commission because the fees being collected exceeded the costs to implement the program. The Solid and Hazardous Waste Commission adopted lower fees for registrants that are effective in CY 2020.

For more information about the waste grease program, visit:
<https://www.colorado.gov/pacific/cdphe/wastegrease>

Beneficial use applications

“Beneficial use” of solid waste is the use of waste materials as a substitute for a new products or feedstock material. Examples include the use of wastewaters for irrigation or dust suppression, land application of organic materials with beneficial crop nutrients, and the use of coal ash for cement production. The materials management unit reviewed 20 beneficial use applications in CY2018, resulting in 434,048 tons of solid waste diverted from disposal.

Paint stewardship

In June of 2015, CDPHE’s executive director approved the Architectural Paint Stewardship Program plan for the state of Colorado. PaintCare Inc., a non-profit stewardship organization created by paint manufacturers, drafted the plan as a result of the Architectural Paint Stewardship Act (Section 25-17-4, C.R.S). The plan provides a description of the fees PaintCare will assess on the sale of new architectural paint to help manage unwanted paint. The plan also includes a description of how PaintCare will satisfy the legislative requirements for convenience of paint drop-off locations, the number of paint drop-off locations in highly populated areas and methods for collecting paint in less densely populated areas.

PaintCare contracts with various waste haulers, local household hazardous waste facilities and paint recyclers to arrange the processing of unwanted paint. While PaintCare does not actually process any paint, they are responsible for ensuring that paint recycling and disposal is convenient and free for residents.

PaintCare is responsible for reporting by March 31 each year on their performance for the previous calendar year. The 2018 annual report was submitted late on July 16, along with revised reports for the previous three years. This was due to reporting errors that surfaced while preparing the 2018 report. For more information about the reporting errors see the, “CDPHE report to legislature, 2018” document on the website below.

The program also drafts a report to the legislature annually that summarizes PaintCare’s performance. The 2018 PaintCare report provides the following highlights: In 2018, PaintCare processed 654,476 gallons of unwanted or unusable paint; 73% of the paint collected was latex paint and 27% was oil based paint; and 80% of the latex paint collected was either beneficially used or recycled.

The PaintCare Plan, the 2018 PaintCare annual report and the 2018 report to legislature all offer much more detail and can be found here:

<https://www.colorado.gov/pacific/cdphe/paint-stewardship>

Recycling and materials diversion tracking

The program tracks many aspects of recycling and waste diversion. Figures 10 through 14 show the overall waste generation and waste diversion metrics through CY2018. In 2018, the program improved the data quality and updated the methodology for calculating the municipal solid waste (MSW) diversion rate to more closely align with

nationwide figures for tracking residential and commercial sector recycling rates. Municipal solid waste is defined as residential and commercial solid waste. Because of this change in calculating MSW, some year-over-year data has been omitted from this year’s report to prevent misrepresentation of the current data.

Table 2 presents the overall generation, disposal and diversion of MSW. Waste is either disposed of in Colorado’s landfills, diverted to recycling facilities and composting facilities, or utilized for beneficial reuse and industrial recycling. “Diversion” means that the waste was recycled or composted, but not disposed of at landfill. Overall, the quantity of waste sent for disposal continues to increase while diversion remains relatively flat. Colorado’s MSW diversion rate of 17.2% puts the state below the national average of 34% MSW diversion via recycling and composting. The total diversion rate for Colorado, which includes construction and demolition debris in addition to other industrial materials as well as MSW, was 35% in 2018.

Table 2

2018 MSW		MSW Diversion Rate: 17.2%
MSW category		
MSW disposal (landfill)		5,860,896
MSW diversion (recycling + composting)		1,217,062
MSW generation		7,077,958
2018 diversion totals		Total Diversion Rate: 35.4%
2018 Colorado Totals		
Total diversion (Industrial + MSW diversion)		5,626,116
Total disposal (Industrial waste + MSW)		10,277,506
Total generation		15,903,622

Waste diversion rates and the quantity of waste generated vary throughout the state. As shown in Table 3, the majority of waste is generated in the “Front Range Region,” which includes the Denver metro area with boundaries from Larimer county to Pueblo county. Recycling in rural parts of the state is much more challenging due to lower population density, greater transportation distances and less access to curbside recycling as documented in the regional diversion rates in Table 3.

Table 3

Region	2018 Diversion Rate	2021 Diversion Goals	MSW diversion	MSW disposal	Recycling (tons)	Composting (tons)
Front Range Region	18.0%	32.0%	1,115,814	5,072,893	783,678	332,136
Greater Colorado Region	10.7%	10.0%	94,130	788,003	59,741	34,389
Statewide	17.2%	28.0%	1,217,062	5,860,896	850,537	366,525

Figure 10 shows the total tonnage of waste generated in Colorado in 2018, including the tons of MSW recycled and composted, as well as the tons of industrial waste recycled. The recycling and compost categories are broken down by material type.

Figure 10

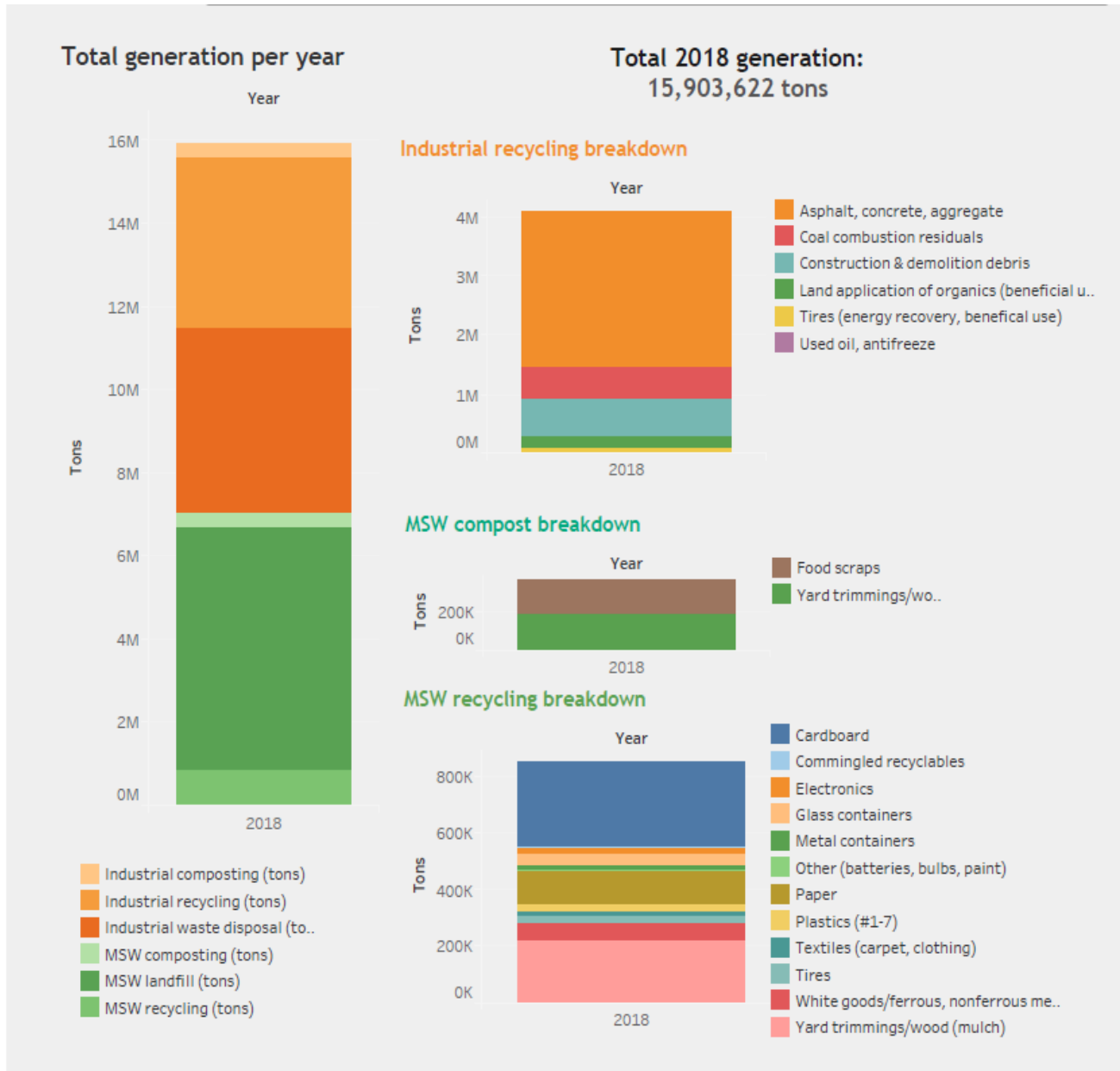


Figure 11 represents the average amount of waste generated in pounds per person per day. The chart provides a comparison to several other states that are similar to Colorado in population and have comparable municipal solid waste data available. While Colorado is generating similar amounts of waste per person, less is being recycled compared with other states. National average data does not align with statewide data, likely due to different data collection methods.

Figure 11

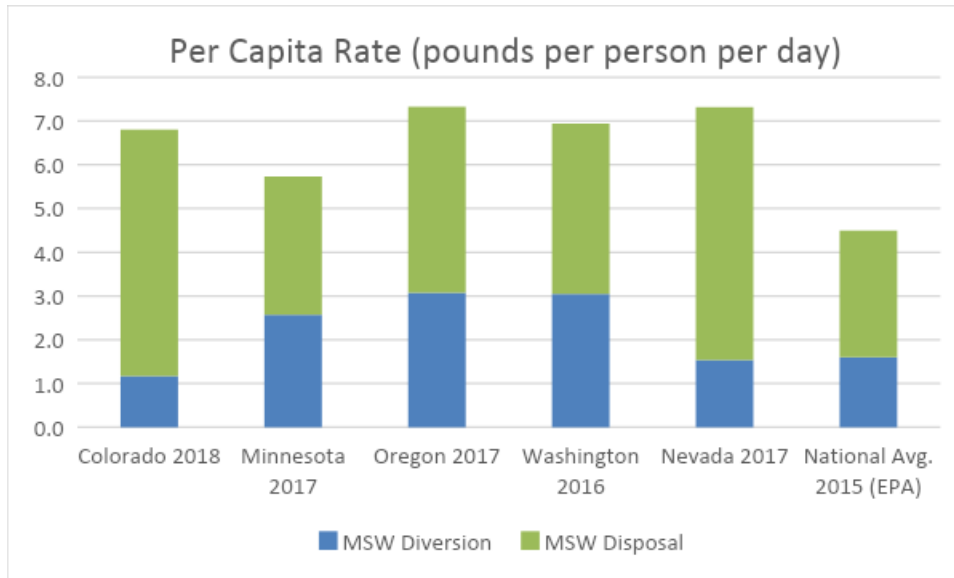


Figure 12 shows the overall composition of diverted materials by weight for 2018. Clearly, organic materials including paper, cardboard, yard waste and compostable materials rank well ahead of all other recyclables like aluminum, glass and plastic. This figure represents municipal solid waste and does not include industrial material diversion.

Figure 12

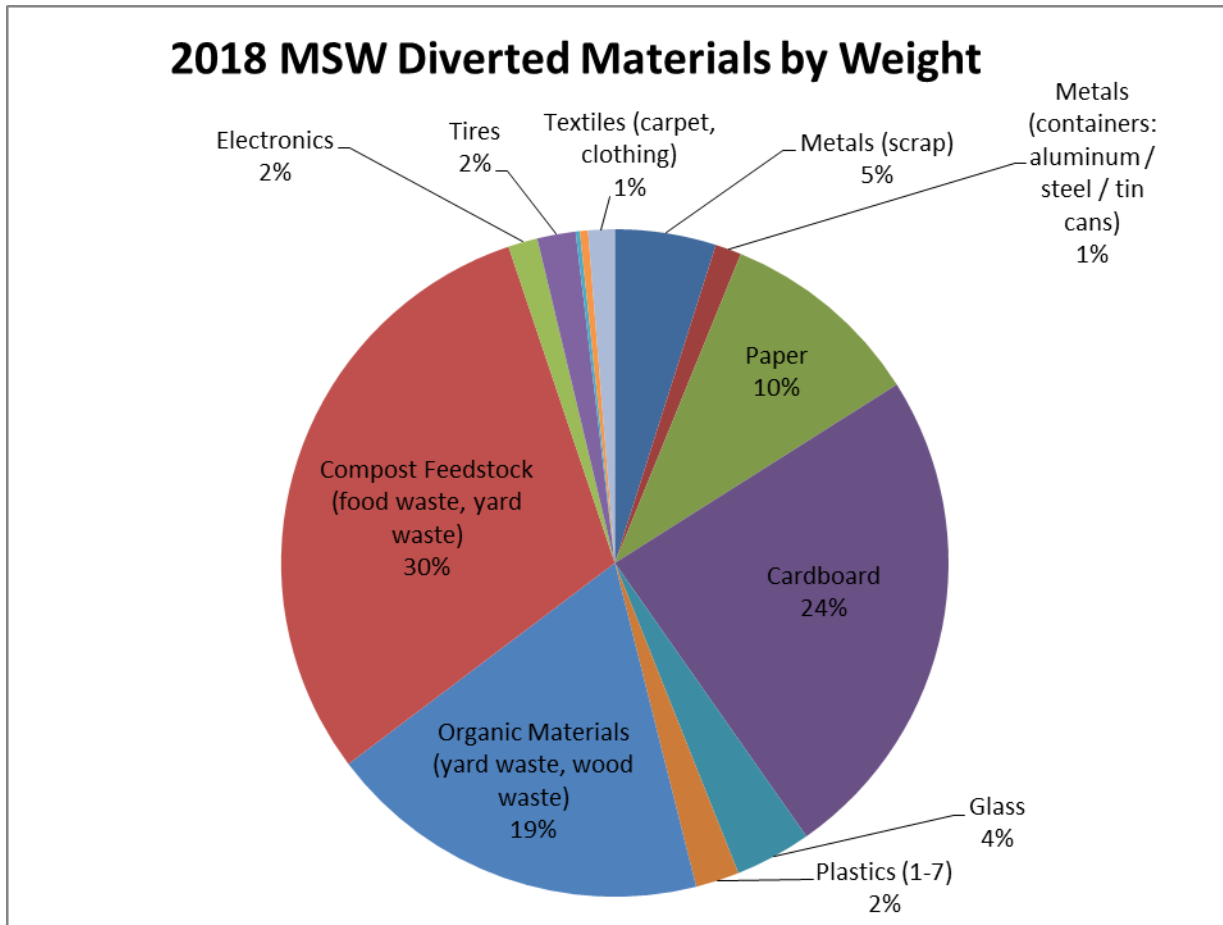


Figure 13 shows the diversion trends of the primary materials diverted from the MSW stream in tons per year. Paper recycling is trending downward due to less use of the material overall, while cardboard recycling is showing a steady increase due to the use of home delivery services by consumers. Organic materials have fluctuated over the last couple of years but the general trend for them is a steady increase in volumes as well.

Figure 13
Material Diversion Trends (Tons per Year)

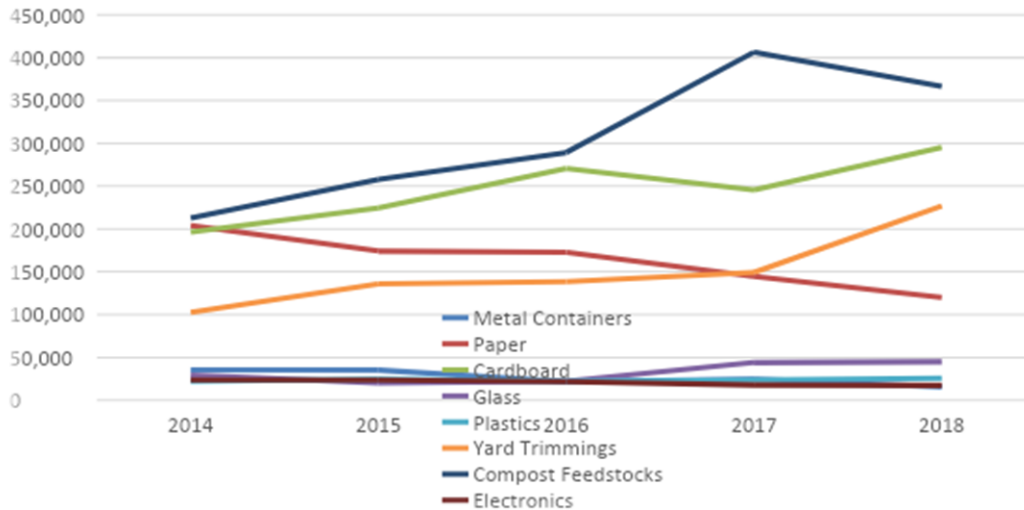


Table 4 shows the annual change in the quantity of municipal solid waste recycled for each type of material. The overall tonnage of MSW diverted increased by 6.5%. The amount of metal, cardboard, glass, plastics, textiles, unsorted recycling and yard waste diverted all increased. The amount of paper, compost feedstocks, electronics, tires, and other/HHW (paint) decreased. Paint recycling decreased due to a correction in the unit of measurement being used at the primary paint recycler. Metal diversion increased due to the inclusion of white goods (metal appliances) in the category this year. Compost feedstocks dropped from a decrease in food waste and green waste received by facilities, while yard waste increased as more mulching operations came online.

Table 4

Material Recycled	2017 Tons	2018 Tons	% Change
Metal (containers + appliances)	24,874	74,984	201.5%
Paper	144,416	120,006	-16.9%
Cardboard	245,345	295,112	20.3%
Glass	43,964	44,965	2.3%
Plastics (1-7)	23,498	25,721	9.5%
Yard waste	149,159	226,893	52.1%
Compost Feedstock	406,472	366,525	-9.8%
Electronics	17,783	17,322	-2.6%
Tires	62,313	22,639	-63.7%
Other/HHW (paint)	15,656	2,498	-84.0%
Unsorted Recycling	2,272	4,758	109.4%
Textiles	6,647	15,642	135.3%
TOTAL	1,142,399	1,217,065	6.5%

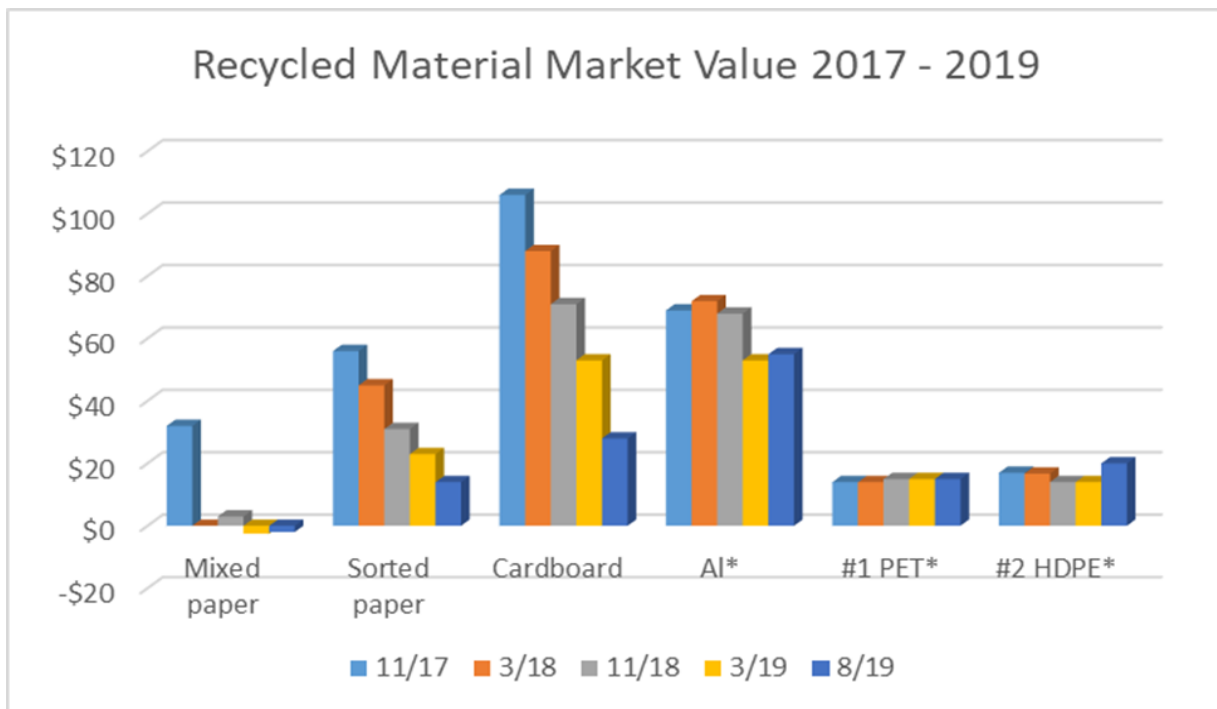
Table 5 displays data on the statewide average of waste composition compared to the national average at landfills. Data for the Colorado average is a result of thirteen landfill waste audits conducted across the state. Table 5 shows that Colorado sends less “recyclable” materials to landfills than the national average, but it sends significantly more “recoverable” material, based on material composition. Recoverable materials include items that can be diverted from landfill disposal but cannot be added to a single stream recycling bin. Recovered materials include items such as clothing/textiles, electronics, do-it-yourself household remodeling debris, batteries and household hazardous waste.

Table 5

Composition of Municipal Solid Waste Disposal at Landfills		
	Colorado Average	National Average
Recyclable	32.4%	46.8%
Compostable	37.1%	37.8%
Recoverable	26.4%	10.9%
Waste	4.2%	4.5%

Colorado experienced a slight increase in the quantity of MSW materials recycled in 2018 despite some significant challenges. In January of 2018, the government of China enacted an import ban on recycled plastic, paper and over two dozen grades of commonly generated recyclable materials. In addition to the ban, China also set new and much more stringent contamination limits on recyclables still eligible for import, primarily cardboard. China's import ban and new contamination limits has led to many recyclers in the U.S. searching for new end markets for recovered materials. As shown in Figure 14, with less capacity for common recyclables, the industry is experiencing a major decrease for most commodity values of recyclables. With the dramatic decline in market values of recyclables in 2018, it is possible that we will see domestic markets start to re-emerge for materials like cardboard and plastics. Until new domestic end markets emerge for recyclable materials, commodity values for recyclable materials are likely to remain low, making the economics of recycling challenging for facility operators and haulers.

Figure 14



Data obtained from Resource Recycling market analysis monthly figures

*Aluminum, PET and HPDE shown in cents per pound. Cardboard and paper value is in dollars per ton.

For more information about recycling and waste management diversion, visit:
<https://www.colorado.gov/pacific/cdphe/2018-colorado-recycling-totals>

Program funding

Funding for the Colorado Solid Waste Management program comes entirely from fees. With the exception of the money appropriated to the Division in 2017 for the small landfill initiative, the program receives no Colorado General Fund money. The program's fee support has five components:

1. the Solid Waste User Fee (SWUF) which is a fee based on the weight or volume of waste disposed of at a landfill, also known as a "tipping fee,"
2. the Hourly Activity Fee assessed for prescribed services rendered to facilities,
3. the Annual Facility Fee which is an annual fee remitted by facilities that are not required to pay the SWUF,
4. the Waste Grease Annual fee charged to all registered waste grease facilities and haulers,
5. the PaintCare program fee which is a flat fee paid by the PaintCare implementing contractor.

In FY2019, the SWUF provided about 83% of the program's funding needs with the other fees covering the remaining 17%.

Figure 15

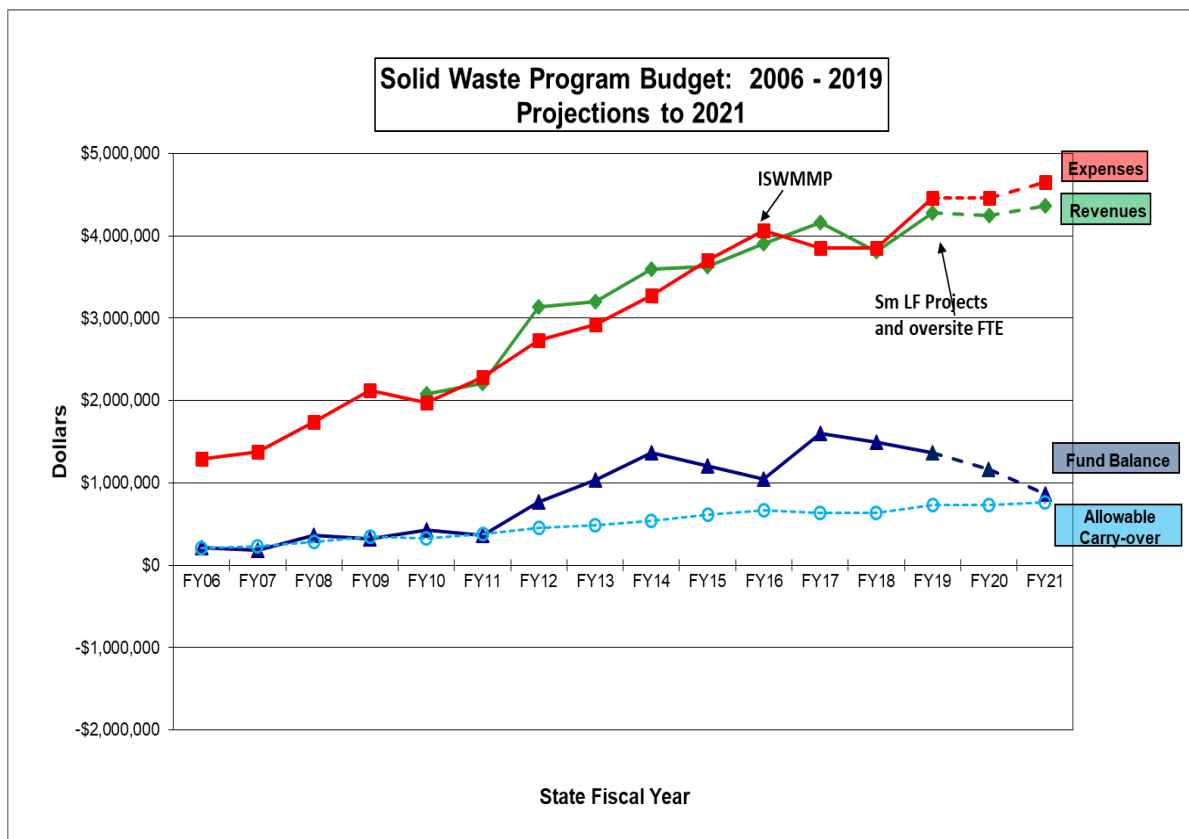


Figure 15 (see above) tracks the revenue, expenditures and fund balance for the Solid Waste program. This graph shows that, if our projections are correct, we will have adequate revenues to fund the program at least through FY2021 at the current fee levels. Figure 15 also shows that the program is striving to balance revenues and

expenditures to bring the fund balance back to allowable carry-over levels (16.5% of the previous year's expenditures.)

It is important to note that staff salaries are the biggest single expense item for the program. Therefore, managing staffing levels is an important part of managing the program's budget. Over the past 10 years, there has been significant program growth, both in terms of the programs we administer and the staff needed to implement those programs. Some of this is the result of a growing, changing and demanding solid waste industry. Other growth can be directly attributed to legislative action that added to our responsibilities. This growth can be seen on Figure 15 starting in FY2007 and continuing through FY2016, where expenses increased significantly as staffing was added to meet workload demands. We believe we are now fully staffed. In FY2019, we added one temporary, full-time employee to oversee the groundwater monitoring well installation program and landfill closure program (a \$1.6 million 2017 decision item) at small landfills.

HB 07-1288 summary of requirements

The program's successes in maintaining efficiency are clearly presented in this report. Significant improvement has occurred and is continuing to occur in an effort to further improve efficiency and reduce costs.

The following table presents a summary of the requirements of HB 07-1288 and the program's efforts and activities to comply with each requirement. This table is intended to augment, but not replace, the presentation of information earlier in this report.

HB07-1288 Statutory requirement - referenced section of the Colorado Revised Statutes (CRS)	Solid Waste Management Program response
30-20-101.5(1)(a) Promote community ethic to reduce or eliminate waste problems.	The program has worked hard on three fronts to accomplish this requirement: 1) our staff make working with, and cooperating with, local governments a high priority; 2) the program places a high priority on investigating citizen complaints; and 3) the program makes itself available through the technical assistance telephone line and technical trainings provided around the state.
30-20-101.5(1)(b) Is credible and accountable to industry and the public	The program seeks to maintain credibility and accountability through 1) a high-volume, high-efficiency prioritized inspection program that maintains compliance and a level playing field; and 2) a high-efficiency permitting program that meets or exceeds its commitments to the regulated community.
30-20-101.5(1)(c) Is innovative and cost-effective	This report presents the program's progress and accomplishments in becoming cost-effective and efficient. It also presents our commitment to, and implementation of, innovative approaches.
30-20-101.5(1)(d) Protects the environmental quality of life for impacted residents per the regulations	Our success in this requirement can be ascertained by considering our success in all of the other aspects of the program.
30-20-101.5(2) Develop, implement and continuously improve policies and procedures for statutory responsibilities at lowest possible costs.	After HB07-1288 passed, the program set up numerous performance goals. This report presents our success in meeting those goals.
30-20-101.5(2)(a) Establish cost-effective level-of-effort guidelines for reviewing submittals, including permit applications and design and operations plans, considering the degree of risk addressed and the complexity of the issues raised.	The program is actively developing these level-of-effort guidelines.
30-20-101.5(2)(b) Establish cost-effective level-of-effort guidelines for performing inspections that focus on major violations of regulatory requirements that pose immediate and significant threat to human health and the environment.	The program has included goals in each inspector's performance plan for the number of inspections expected and for the timeliness of administrative duties associated with each inspection. In addition, the program is developing reporting capabilities for focusing on major violations and requirements that pose a threat to human health and the environment.

30-20-101.5(2)(c) Establish cost-effective level-of-effort guidelines for enforcement activities.	The program has significantly improved the efficiency and cost-effectiveness of enforcement activities over the last several years and we operate under timeliness guidelines established in the program's Enforcement Response policy. However, because of the importance of quality workmanship in enforcement actions, and because each action is very site- and violation-dependent, the program has not established firm level-of-effort guidelines. To meet our timeliness goals, the level of staff effort on any given enforcement action must remain at or below certain metrics.
30-20-101.5(2)(d) Establish schedules for timely completion of department activities including submittal reviews, inspections, and inspection reports.	The program has established timeliness guidelines for these activities and other activities.
30-20-101.5(2)(e) Establish a prioritization methodology for completing activities that focuses on actual risk to human health and the environment.	The body of this report explains how priority schemes are used in setting inspection schedules.
30-20-101.5(2)(f) Establish a preference for compliance assistance with at least 10 percent of the annual budget amount being allocated to compliance assistance efforts.	Earlier in this report, we present the percentage of staff time and budget that is spent on compliance assistance activities (14 percent in FY 2019).
30-20-101.5(2)(g) Establish a preference for alternative dispute resolution mechanisms.	The department previously established this preference. In recent years, the program has not had many disputes.
30-20-101.5(2)(h) Establish a mechanism that continually assesses and provides incentives for further improvements in the program's policies and procedures.	The department and program have vital rewards and recognition programs whereby process improvements or innovative ideas can be, and will be, rewarded.
30-20-101.5(3) Submit an annual report to the General Assembly by February 1 st of each year.	This report is the 11th annual installment of the program's efforts to meet this requirement.
30-20-122(1)(a)(I) Collect information and data on recycling, solid waste, and solid waste diversion including: (I) statewide and regional solid waste stream components including types of materials, quantities of materials, and flow of each material.	This report includes information and data on recycling and waste diversion including: statewide and regional waste stream components including material flow, the proportion of solid waste diverted to calculate a recycling rate, reutilized materials amounts and rates, technical and innovates solid waste management developments, and an inventory of sites performing recycling activities.
30-20-122(1)(a)(II) The proportion of solid waste generated in the state that has been diverted to other uses.	See Table 2.
30-20-122(1)(a)(III) Reutilized materials, amounts, and rates	See Tables 2 and 3.
30-20-122(1)(a)(IV) Technical and innovative solid waste management developments	This report presents how the program has implemented improved technical developments and innovative approaches. The program will continue and expand those efforts.
30-20-122(1)(a)(V) A statewide inventory of sites and facilities performing recycling or other solid waste processing or diversion	These inventories are presented on our website.

30-20-122(1)(a)(VI)The number of jobs created and any other economic impacts resulting from the awarding of recycling resources economic opportunity grants made available pursuant to 25-16.5-106.7, C.R.S.	This information is independently reported to the Colorado Legislature in the Recycling Resources Economic Opportunities Program Annual report prepared by the Sustainability program within the Environmental Health and Sustainability division at CDPHE.
30-20-122(1)(a)(VII) Other data as necessary to further the purposes of Part 1.	This report presents information that goes beyond the statutory requirements.

Conclusion

As discussed in this report, the Hazardous Materials and Waste Management Division has implemented an effective and efficient Solid Waste Management program satisfying the expectations set out in HB07-1288 (Section 30-20-101.5, C.R.S). Efforts continue to improve the Solid Waste Management program.