Comprehensive Solid Waste and Moderate Risk Waste Management Plan for

SPOKANE COUNTY REGIONAL SOLID WASTE SYSTEM

2021 through 2026

Prepared by

GreatWest
ENGINEERING

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1.0 Executive Summary

This Comprehensive Solid Waste and Moderate Risk Waste Management Plan (Plan) outlines strategies for managing solid waste in the Spokane County Regional Solid Waste System (SCRSWS) and has been prepared in accordance with Chapter 70A.205 of the Revised Code of Washington (RCW). Washington state law requires local governments to establish comprehensive programs for "solid waste handling, solid waste recovery and/or recycling which will prevent land, air, and water pollution and conserve the natural, economic, and energy resources of this state" (RCW 70A.205.010). To fulfill this mission, plans like this one articulate the local solid waste programs and facilities necessary to prevent pollution and conserve resources. This Plan is intended to be used as a guidance and decision-making tool by the SCRSWS and can also be used as an educational or reference tool for interested parties who would like to understand how solid waste is managed locally. This Plan is congruent with Spokane County's 2020 Comprehensive Plan update.

Spokane County acknowledges that the land on which we live, work, and play was once the land of the Spokane and Kalispel native peoples. Spokane County recognizes that their physical and cultural removal from these lands has and will continue to impact these communities. We hope to honor the Spokane and Kalispel people through priorities of equitable solid waste services and sound future planning that respect the environmental and cultural aspects of the land.

Municipalities located within a county must fulfill their own solid waste planning responsibilities by preparing their own plan, participating jointly with the County in the planning process, or by authorizing the County or another city to prepare a plan for them as part of the comprehensive county plan. Municipalities must adopt a complete plan through a formal adoption process. In Spokane County, the cities choosing to participate in the County plan are: Airway Heights, Deer Park, Fairfield, Latah, Medical Lake, Millwood, Rockford, Spangle, Spokane, and Waverly. If a city elects to prepare its own plan, it must obtain its own funding and arrange for the disposal of the waste generated within the jurisdiction.

Spokane County is the administrator of the SCRSWS which is comprised of 11 participating jurisdictions and unincorporated Spokane County. A map of member jurisdictions can be found in **Exhibit 1.1.** Member jurisdictions sign interlocal agreements to be part of this Plan with Spokane County for regional services and efficiencies such as but not limited to:

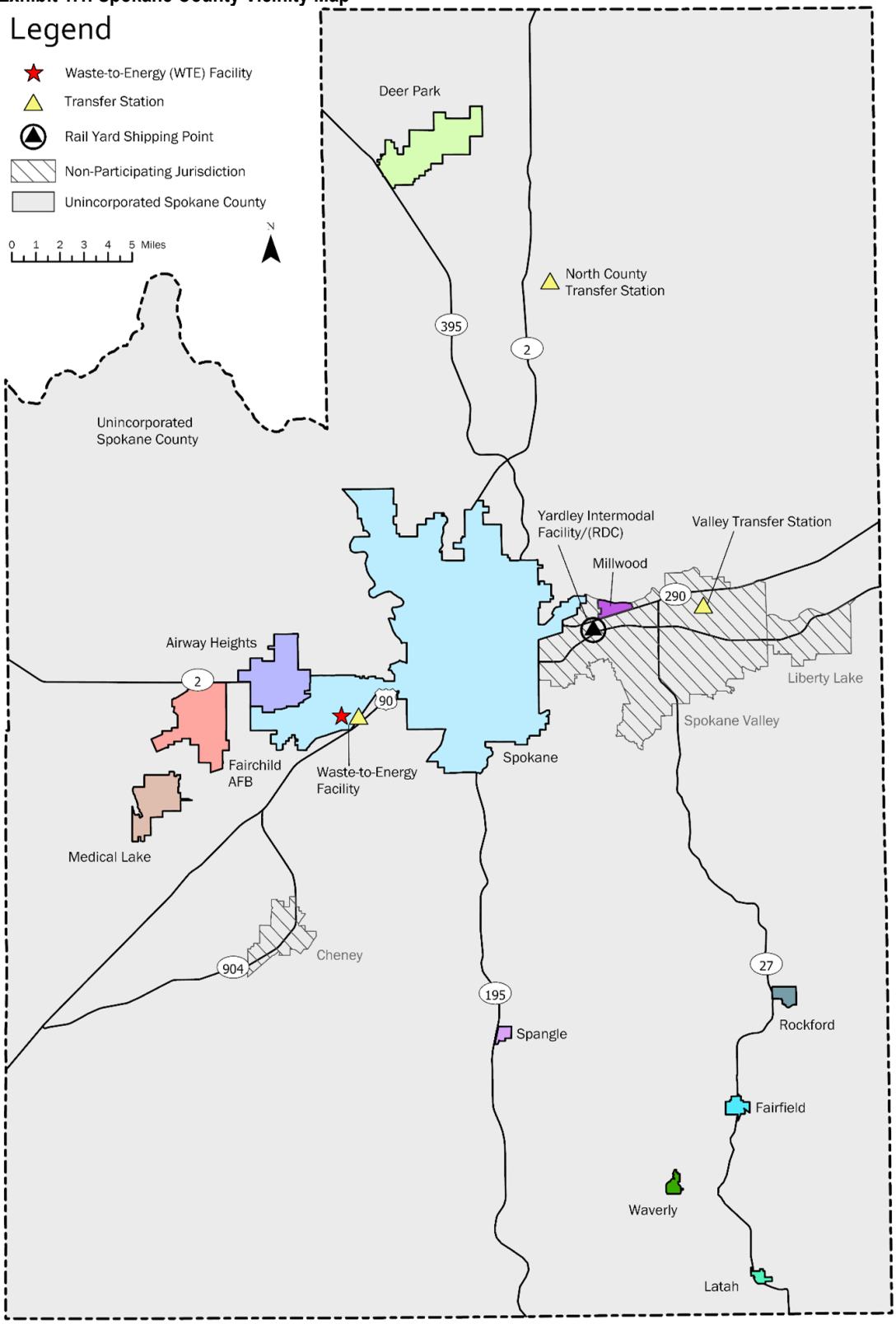
- facilities such as transfer stations that accept garbage, organics, recycling, and household hazardous waste,
- free residential recycling at household hazardous waste drop off services,
- solid waste education to schools, businesses, and community groups,
- solid waste outreach via social media, mailers, and TV/radio ads,
- partnerships with regional non-profits and community groups,
- public and private grant management, and

- comprehensive solid waste planning.

In addition to meeting the requirements of State law and providing regional solid waste efficiencies the overarching objective of this Plan is to support the SCRSWS's vision to

1) provide equitable, affordable, flexible, and fiscally responsible services,
2) leverage and coordinate resources and advocate for waste reduction and sustainable materials management, and
3) strive to protect and enhance the health of our community, environment, and sole source aquifer while accommodating sustainable regional growth.

Exhibit 1.1. Spokane County Vicinity Map



Source: Washington State GIS Database, 2020

1.1 Overview of Plan Contents

This Plan is organized into two parts. Part 1 includes the main body of the Plan, which contains the details of how the SCRSWS will manage solid waste over the 6-year planning period. The second part of the Plan is the appendices, which contain supporting information and technical data.

The main body of the Plan includes the following six sections:

- **Section 2.0 – Program Vision:** SCRSWS's vision of the solid waste program in Spokane County.
- **Section 3.0 – Prioritized Plan Goals:** the eight prioritized goals of the Plan.
- **Section 4.0 – Implementation Plan:** the plan for implementing and funding the prioritized goals and associated actions and capital improvements.
- **Section 5.0 – Solid Waste Facilities and Waste Flow:** the facilities used for management of solid waste, including collection, transport, transfer, and disposal.
- **Section 6.0 – Programs:** SCRSWS's programs for managing solid waste, including reduction and diversion programs along with and outreach and education programs.
- **Section 7.0 – Administration and Enforcement:** the entities involved in solid waste management in Spokane County and their roles and enforcement of the program.

The appendices include:

- **Appendix A – Regulatory Compliance:** the state regulations this Plan update fulfills.
- **Appendix B – Plan Amendments:** the process by which minor Plan amendments will be made.
- **Appendix C – Summary of Waste Characteristics:** breakdowns of the waste stream along with waste trends and projections
- **Appendix D – Goals and Actions:** a full list of goals and actions considered for implementation.
- **Appendix E – Facility Siting:** information about the physical environment of Spokane County and its infrastructure for siting waste management facilities.
- **Appendix F – Jurisdiction Specific Waste Reduction Programs:** waste reduction and diversion programs implemented by the participating jurisdictions.
- **Appendix G – Inventory of Dangerous Waste Generators and Handling Facilities**: list of hazardous waste generators within the participating jurisdictions.
- **Appendix H – Plan Update Process:** the details associated with updating this Plan.
- **Appendix I – Checklists and Forms:** Washington UTC Questionnaire, SEPA Checklist, and associated SEPA Determination on Non-Significance.
- **Appendix J – Solid Waste History:** the history of solid waste management and planning in Spokane County and the closed landfills within Spokane County.
- **Appendix K – References:** references used during this Plan update.
- **Appendix L – Glossary:** acronyms / abbreviations and definitions of key terms used in the Plan.
- **Appendix M – Index:** locations of key terms and ideas within the Plan, created to aid in navigation and use of the Plan.

2.0 Program Vision

Spokane County is a great place to live, learn, work, and play. Our communities are woven into the very fabric of the Inland Northwest. We care about each other and our environment. We have a rich history behind us and a vibrant future ahead of us. To keep our community moving forward, the SCRSWS and interested parties have created a Vision and Guiding Principles to lead us into the future of solid waste management for our County.

SCRSWS VISION STATEMENT AND GUIDING PRINCIPLES

The Spokane County Regional Solid Waste System will provide equitable, affordable, flexible, and fiscally responsible services. We will leverage and coordinate resources and advocate for waste reduction and sustainable materials management. We will strive to protect and enhance the health of our community, environment, and sole source aquifer while accommodating sustainable regional growth. This vision also includes the following guiding principles:

- Foster partnerships and align regional waste services.
- Provide and coordinate solid waste education for the community.
- Cultivate sustainable programs and markets to reduce and reuse waste.
- Encourage the development and use of innovative technology, expert knowledge and scientific research.
- Promote policies and incentives that support system goals.
- Establish and maintain adaptability in programs.

3.0 Goals and Prioritized Recommended Actions

Eight goals were created to assist in achieving the SCRSWS vision and are summarized in this section. Recommended action items were then developed to help reach those goals. All action items were reviewed and ranked according to criteria of importance, cost, and achievability. The highest ranked action items are presented in this section. A complete list of the goals and all recommended actions can be found in **Appendix D**. Depending on circumstances within the next 6 years, any action included in this Plan may be pursued. The eight goals are summarized below.

3.1 Goals

GOAL 1: WASTE REDUCTION FIRST

Continue to promote actions that follow the waste reduction hierarchy of 1) Reduce, 2) Reuse, and 3) Recycle, and ensure that waste reduction is the foremost preferred solution when it comes to solid waste choices.

Although preventing the production of waste upstream is an ultimate desire, it is important to have a goal in place to reduce the amount of waste once materials have been consumed. The waste reduction hierarchy still provides this function with reducing the amount of material that is destined for final disposal.

GOAL 2: EFFICIENT SERVICES

Research, evaluate and implement solid waste services to better serve customers.

SCRSWS facilities are in place to bring a set of core services to County businesses and residents. These services can include providing access to waste disposal, recycling drop-off, household hazardous waste drop-off, organic waste disposal, and education. Providing these essential services to our community should be cost-effective, efficient, and safe.

GOAL 3: ADEQUATE FUNDING

Create a sustainable funding mechanism for SCRSWS comprehensive planning, capital improvements, services and programs, and landfill post-closure activities.

As our community continues to grow and faces new challenges that lie ahead, it is vital that sufficient funding sources for the SCRSWS are available to both continue and grow programs and services. Funding sources can include state funding and other available grants and tip fees. State funding is an important component to fund state-mandated programs.

GOAL 4: SUSTAINABLE MATERIALS MANAGEMENT

Build a new foundation for the future of managing our waste that integrates sustainable materials management.

The concept of "sustainable materials management" is based on impacts that occur over the entire life cycle of materials, from production, to consumption, and finally to disposal. Most of the harm that comes from our materials occurs upstream before they ever become waste. Broad impacts can include climate change and the burden of toxic chemicals. While the SCRSWS generally deals with material end-of-life management, it is within the Vision of the SCRSWS to advocate for sustainable materials management through education and leadership.

GOAL 5: ENFORCEMENT

Continue an enforcement program for proper solid waste disposal practices and other enforceable criteria.

Local regulations under Spokane County Code 8.56 protect our community's health and environment as well as the financial viability of SCRSWS facilities that provide solid waste services. An enforcement program led by the SCRSWS complements community outreach programs to ensure solid waste disposal practices follow local regulations.

GOAL 6: COLLABORATION

Plan for and provide solid waste services and programs in collaboration with state agencies and other organizations.

Work with partners on education, services and programs to achieve a better sense of community.

GOAL 7: SOCIAL EQUITY

Provide equitable solid waste services, opportunities, outreach, and resources for our community.

The SCRSWS will deliver programs and services equitably throughout our community.

GOAL 8: MODERATE RISK WASTE REDUCTION

Emphasize protection of our sole source aquifer and promote stewardship and reduction of solid waste and toxic waste.

While this goal may fit within the concept of Sustainable Materials Management (Goal 4), it will focus on reducing and eliminating toxics within our community and environment. Our region's sole source aquifer is vital to our community and must be protected.

3.2 Prioritized Actions

All recommended actions (see **Appendix D**) were evaluated and prioritized based on the needs of the community in which the SCRSWS serves. Also considered in this assessment were the resources Spokane County has available to accomplish the actions. Each of the prioritized actions is organized in this section according to the goal in which the action supports. Some of these actions are ongoing (as indicated) over multiple plan update periods and will continue to be a priority over the life of this update. Actions are grouped into the following seven different categories:

Education – Communicating with and educating others and promoting programs.

Facilities – Changes to solid waste facilities including transfer stations, landfills, waste collection, and transport.

Equity – Supporting social equity through new or expanded programs and through changes to existing programs and facilities.

Regulations – Primarily driven to comply with regulations.

Partnerships – Developing and fostering partnerships with other agencies.

Finances – Significantly affecting costs of program(s) either directly or through increased staff time.

Research – Performing analyses and information gathering.

One action that is integral to several goals is Spokane County's participation in the Washington Association of County Solid Waste Managers (WACSWM). This professional group facilitates collaboration on solid waste research and ideas, works towards consistent standards, policies, and programs across the state, gives voice to local governments, and evaluates the impact of legislation presented in the State Capitol of Olympia on solid waste programs and services. Because of its broad impact, Spokane County will continue participating in WACSWM for collaboration across the state and to help propel the SCRSWS toward fulfilling its vision.

While WACSWM focuses on statewide action to support local programs, Spokane County will also continue to support local legislation and policies that are important to reduce and divert consumer and producer waste streams.

GOAL 1: WASTE REDUCTION FIRST

Continue to promote actions that follow the waste reduction hierarchy of 1) Reduce, 2) Reuse, and 3) Recycle, and ensure that waste reduction is the foremost preferred solution when it comes to solid waste choices (see Table 3.1).

Table 3.1. Waste Reduction First

No.	Prioritized Action Items	Action Type	Ongoing
1.A.	Develop and promote waste reduction and diversion messages to residents through partnerships with local and regional stakeholders, i.e., The Recycling Task Force, higher education, local haulers, etc.		▲
1.A.i	*Implement a "Stop Wishful-Recycling" media campaign to increase awareness about recycling contamination, what is accepted locally, and curb behavior that contributes to recycling contamination.*		▲
1.A.ii	*Provide comprehensive waste reduction consultation services for member jurisdictions, businesses, agencies, and other organizations within the SCRSWS including but not limited to: waste reduction strategies, supply chain management and sustainable materials management procurement policies, award and recognition programs, reuse and material exchanges, and toxics reduction strategies.*		
1.B.	Pursue local and regional material reuse partnerships and opportunities.		
1.B.i	*Research and evaluate potential outlets for glass recycling opportunities.*		
1.B.ii	*Create circular economy workshop for local businesses*		

GOAL 2: EFFICIENT SERVICES

Research, evaluate and implement solid waste services to better serve customers, where feasible (see Table 3.2).

Table 3.2. Efficient Services

No.	Prioritized Action Items	Action Type	Ongoing
2.A.	Expand the HHW hours of access.		
2.B.	Remove or increase limits of HHW quantities for non-business customers		
2.C.	Evaluate small quantity generator services at SCRSWS-owned facilities.		
2.D.	Evaluate facility capacity and needs for regional growth for both residential and commercial customers with regards to all services and programs.		
2.E.	Maintain and/or increase the safety of transfer stations for those working at the site, regularly or temporarily, and all visitors through implementing traffic safety measures, installing surveillance cameras or other actions.		▲

GOAL 3: ADEQUATE FUNDING

Create a sustainable funding mechanism for SCRSWS comprehensive planning, capital improvements, services and programs, and post closure activities (see Table 3.3).

Table 3.3. Adequate Funding

No.	Prioritized Action Items	Action Type	Ongoing
3.A.	Investigate County-wide finance mechanisms that are equitable to all county residents and that will enable a long-term funding mechanism for SCRSWS-owned closed landfills.		

GOAL 4: SUSTAINABLE MATERIALS MANAGEMENT

Build a new foundation for the future of managing our waste that integrates sustainable materials management (see Table 3.4).

Table 3.4. Sustainable Materials Management

No.	Prioritized Action Items	Action Type	Ongoing
4.A	Support other efforts, legislation, and policies when feasible and beneficial to our local community's economy or health in regard to: life cycle assessment, Zero Waste, Extended Producer Responsibility (EPR), and local industrial symbiosis and circular economy projects and programs.		
4.B	Create a decision-making framework to make informed decisions regarding sustainable materials management composed of elements from: the Center for Sustainable Infrastructure's (CSI) Five Big Goals for 2040, recommendations from research and policies from Washington state solid and hazardous waste plan, Oregon Dept. of Environmental Quality, the EPA's Non-Hazardous Materials and Waste Management Hierarchy, and other sources.		

GOAL 5: ENFORCEMENT

Continue an enforcement program for proper solid waste disposal practices and other enforceable criteria (see Table 3.5).

Table 3.5. Enforcement

No.	Prioritized Action Items	Action Type	Ongoing
5.A.	Create an outreach program for businesses and other waste generators that are participants in the SCRSWS explaining proper disposal practices, locations, and available solid waste programs (e.g., litter removal).		
5.B.	Create a task force on enforcement between the County Sherriff's Dept, Regional Health District, SCRSWS, and others as appropriate.		

GOAL 6: COLLABORATION

Plan for and provide solid waste services and programs in collaboration with state agencies and other organizations (see Table 3.6).

Table 3.6. Collaboration

No.	Prioritized Action Items	Action Type	Ongoing
6.A.	Participate actively within the Washington Association of County Solid Waste Managers (WACSWM) to collaborate on research and ideas, work toward consistent standards, policies and programs across the state, give voice to local governments, and evaluate the impact of legislation presented in Olympia on County solid waste programs and services.		▲
6.B	Develop and promote waste reduction and diversion messages to residents through partnerships with local and regional stakeholders, i.e. The Recycling Task Force, higher education, local haulers, etc.		▲

GOAL 7: SOCIAL EQUITY

Provide equitable solid waste services, opportunities, outreach, and resources for our community (see Table 3.7).

Table 3.7. Social Equity

No.	Prioritized Action Items	Action Type	Ongoing
7.A.	For ANY action within this plan, social equity will be considered before implementation.		▲
7.B.	Determine what the biggest solid waste hurdles are for underserved populations and prioritize education and outreach to help overcome identified hurdles.		
7.B.i	*Establish a "Waste Ambassador" program that trains members within underserved populations to provide waste reduction education and outreach to their community in meaningful and culturally relevant ways.*		
7.B.ii	*Transcreate transfer station flyers into languages used in the Spokane area, such as Spanish, Russian and Ukrainian, and proactively offer flyers to customers.*		
7.C	Evaluate and implement an effective low-income assistance program for solid waste services.		
7.D	Evaluate and implement household hazardous waste collection services for elderly or vetted individuals that cannot access transfer stations.		

GOAL 8: MODERATE RISK WASTE REDUCTION

Emphasize protection of our sole source aquifer and promote stewardship and reduction of solid waste and toxic waste (see Table 3.8)

Table 3.8. Toxic Waste Reduction

No.	Prioritized Action Items	Action Type	Ongoing
8.A.	Provide technical assistance to businesses regarding MRW through consulting or through partnerships with local agencies and organizations such as Local Source Control, the Spokane River Forum's EnviroCertified program and the Spokane Aquifer Joint Board.		
8.B.	Continue efforts to increase public awareness on proper handling and disposal of MRW and use of alternative products through partnerships with local agencies and organizations such as Local Source Control, the Spokane River Forum, and the Spokane Aquifer Joint Board.		▲
8.C	Provide residents with the ability to drop off 5 gallons of used oil per household per operating day, consistent with RCW 70A.224.030.		▲
8.D	All uncontaminated used oil collected at MRW permanent collection sites is sent to be re-refined.		

4.0 Implementation Plan

This Plan includes both a 6-year implementation plan for solid waste handling facilities and programs along with a needs assessment over a 20-year period for solid waste handling facilities (capital improvements plan). These plans are intended to be dynamic and evolving, changing as the overall Plan is used and new data and information become available. The plans will be used as guides to assess opportunities as they arise to support the overarching vision of the SCRSWS.

4.1 6-Year Implementation Plan

Plan goals and associated actions were created and then prioritized as presented in **Section 3.1.** The goals and implementation plan outlining the prioritized recommended actions are included in **Table 4.1** below. Capital improvements for this Plan are shown in **Table 4.2**. Both tables also include the source of funding for each action or improvement (O – Operations Fund, G – Grants, and C – Capital Fund). These capital costs are used along with the operating costs to project solid waste rates for the planning period (see **Section 4.2 - Financing**).

CAPITAL IMPROVEMENT PLAN FOR THE WASTE TO ENERGY FACILITY

The City of Spokane owns and operates the Waste to Energy Facility. Through an interlocal agreement with the City of Spokane, the WTE Facility is a SCRSWS-designated facility, and the majority of waste collected in the system is disposed and incinerated there. The City funds the operations and maintenance of the WTE Facility through tip fees set independently from the County-owned transfer stations.

The WTE Facility is maintained proactively and has a routine maintenance schedule set for the next 6 years at an average estimated cost of $4,000,000 per year. With this preventive maintenance, it is anticipated that the operational life of the WTE Facility will continue for the long term.

Table 4.1. 6-Year Implementation Plan

Goal	Prioritized Action Items	Implementation Year(s)	Funding Source
Waste Reduction 3R's	Develop and promote waste reduction and diversion messages to residents through partnerships with local and regional stakeholders, i.e., The Recycling Task Force, higher education, local haulers, etc.	Ongoing	O, G
	Implement a "Stop Wishful-Recycling" media campaign to increase awareness about recycling contamination, what is accepted locally, and curb behavior that contributes to recycling contamination.	Ongoing	O, G

	Provide comprehensive waste reduction consultation services for member jurisdictions, businesses, agencies, and other organizations within the SCRSWS including but not limited to: waste reduction strategies, supply chain management and sustainable materials management procurement policies, award and recognition programs, reuse and material exchanges, and toxics reduction strategies.	2022 - 2026	G
	Pursue local and regional material reuse partnerships and opportunities.	2022 - 2026	G
	Research and evaluate potential outlets for glass recycling opportunities.	2022 - 2026	O, G
	Create circular economy workshop for local businesses	2022 - 2026	G
Efficient Services	Expand the HHW hours of access.	2022 - 2026	O, G
	Remove or increase limits of HHW quantities for non-business customers	2022 - 2026	O, G
	Evaluate small quantity generator services at SCRSWS-owned facilities.		
	Evaluate facility capacity and needs for regional growth for both residential and commercial customers with regards to all services and programs.	2021	C, G
	Maintain and/or increase the safety of transfer stations for those working at the site, regularly or temporarily, and all visitors through implementing traffic safety measures, installing surveillance cameras or other actions.	Ongoing	C, G
Adequate Funding	Investigate County-wide finance mechanisms that are equitable to all county residents and that will enable a long-term funding mechanism for SCRSWS-owned closed landfills.	Ongoing	O
Sustainable Materials Management	Support other efforts, legislation, and policies when feasible and beneficial to our local community's economy or health in regard to: life cycle assessment, Zero Waste, Extended Producer Responsibility (EPR), and local industrial symbiosis and circular economy projects and programs.	Ongoing	O, G
	Create a decision-making framework to make informed decisions regarding sustainable materials management composed of elements from: the Center for Sustainable Infrastructure's (CSI) Five Big Goals for 2040, recommendations from research and policies from Washington state solid and hazardous waste plan, Oregon Dept. of Environmental Quality, the EPA's Non-Hazardous Materials and Waste Management Hierarchy, and other sources.	2022 - 2026	O
Enforcement	Create an outreach program for businesses and other waste generators that are participants in the SCRSWS explaining proper disposal practices, locations, and available solid waste programs (e.g., litter removal).	2022 - 2026	O, G
	Create a task force on enforcement between the County Sherriff's Dept, Regional Health District, SCRSWS, and others as appropriate.	2022 - 2026	O

Collaboration	Participate actively within the Washington Association of County Solid Waste Managers (WACSWM) to collaborate on research and ideas, work toward consistent standards, policies and programs across the state, give voice to local governments, and evaluate the impact of legislation presented in Olympia on County solid waste programs and services.	Ongoing	O
	Develop and promote waste reduction and diversion messages to residents through partnerships with local and regional stakeholders, i.e. The Recycling Task Force, higher education, local haulers, etc.	Ongoing	O
Social Equity	For ANY action within this plan, social equity will be considered before implementation.	Ongoing	O
	Determine what the biggest solid waste hurdles are for underserved populations and prioritize education and outreach to help overcome identified hurdles.	2022 - 2026	O, G
	Establish a "Waste Ambassador" program that trains members within underserved populations to provide waste reduction education and outreach to their community in meaningful and culturally relevant ways.	2022 - 2026	O, G
	Transcreate transfer station flyers into languages used in the Spokane area, such as Spanish, Russian and Ukrainian, and proactively offer flyers to customers.	2022 - 2026	O, G
	Evaluate and implement an effective low-income assistance program for solid waste services.	2022 - 2026	O, G
	Evaluate and implement household hazardous waste collection services for elderly or vetted individuals that cannot access transfer stations.	2022 - 2026	O, G
Moderate Risk Waste Reduction	Provide technical assistance to businesses regarding MRW through consulting or through partnerships with local agencies and organizations such as Local Source Control, the Spokane River Forum's EnviroCertified program and the Spokane Aquifer Joint Board.	2022 - 2026	O, G
	Continue efforts to increase public awareness on proper handling and disposal of MRW and use of alternative products through partnerships with local agencies and organizations such as Local Source Control, the Spokane River Forum, and the Spokane Aquifer Joint Board.	2022 - 2026	O, G
	Provide residents with the ability to drop off 5 gallons of used oil per household per operating day, consistent with RCW 70A.224.030.	Ongoing	O, G
	All uncontaminated used oil collected at MRW permanent collection sites is sent to be re-refined.	2022 - 2026	O, G

Table 4.2. 6-Year Capital Improvements Plan

Project	Implementation Year	Capital Cost	Funding Source
Replace Scales #1 and #2 at North Transfer Station	2021	$180,000	C
Replace Scale #1 at Valley Transfer Station	2022	$90,000	C
Repair fire suppression systems at transfer stations	2022	$80,000	C
Replace preload compactor at Valley Transfer Station	2023	$1,720,000	C
Replace Scale #2 at Valley Transfer Station	2024	$90,000	C
Repair asphalt at transfer stations	2024	$132,000	C
Replace loading tunnel scales at North Transfer Station	2025	$180,000	C
North Transfer Station Organics Material Capacity Study	2025	$25,000	G
Structural repairs to waste transfer building at North Transfer Station	2026	$197,000	C
Site improvements and new waste transfer building at North Transfer Station	2026	$2,859,000	G, C

4.2 Financing

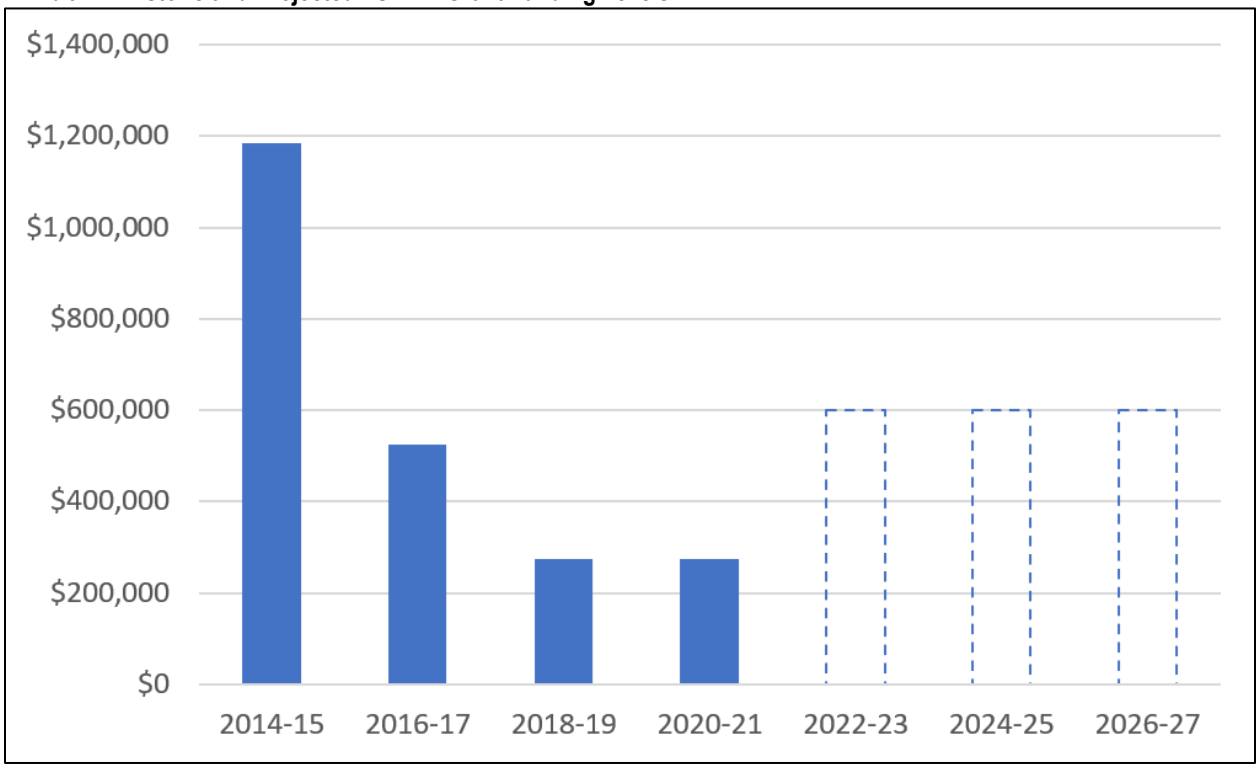
Multiple entities play a role in the financial health of the SCRSWS, including Spokane County, member jurisdictions, the Washington State Utilities and Transportation Commission (WUTC), Ecology, private collection contractors, and legislators. Legislation requires the Implementation Plan contain a means for financing both capital costs and operations expenditures of the proposed solid waste management system for the 6-year planning period. Solid waste programs are funded by the state's Local Solid Waste Financial Assistance funding and tipping fees collected at the transfer stations.

GRANTS

Funding provided by the state's Local Solid Waste Financial Assistance Program (LSWFA) plays a vital role for local SCRSWS solid waste programs and services. The funding is provided on a biennium basis through oversight by the Department of Ecology and distributed to all counties throughout the state. In 2013, statewide LSWFA funding (CPG) was at $28.6 million. By the 2017 biennium, this statewide funding dropped 60% to $10 million and continued at this reduced level until 2021 when a large majority of funding was re-established. Much work has been and will continue to be done as a legislative priority by both the Washington Association of County Solid Waste Managers (WACSWM) and the Department of Ecology to restore the LSWFA program fund to historic levels and beyond. Many of the action or implementation items in this plan are dependent on the future outcome of this financial assistance. As solid waste system costs continue to increase, without restoration of this needed funding, the SCRSWS will have to make decisions to cut programs and services or increase tipping fees.

Exhibit 4.1 shows the history of LSWFA funding as well as what a conservative projection of partial historic fund restoration in the next two upcoming bienniums for this 6-year Plan period would look like.

Exhibit 4.1. Historic and Projected LSWFA Grant Funding Levels

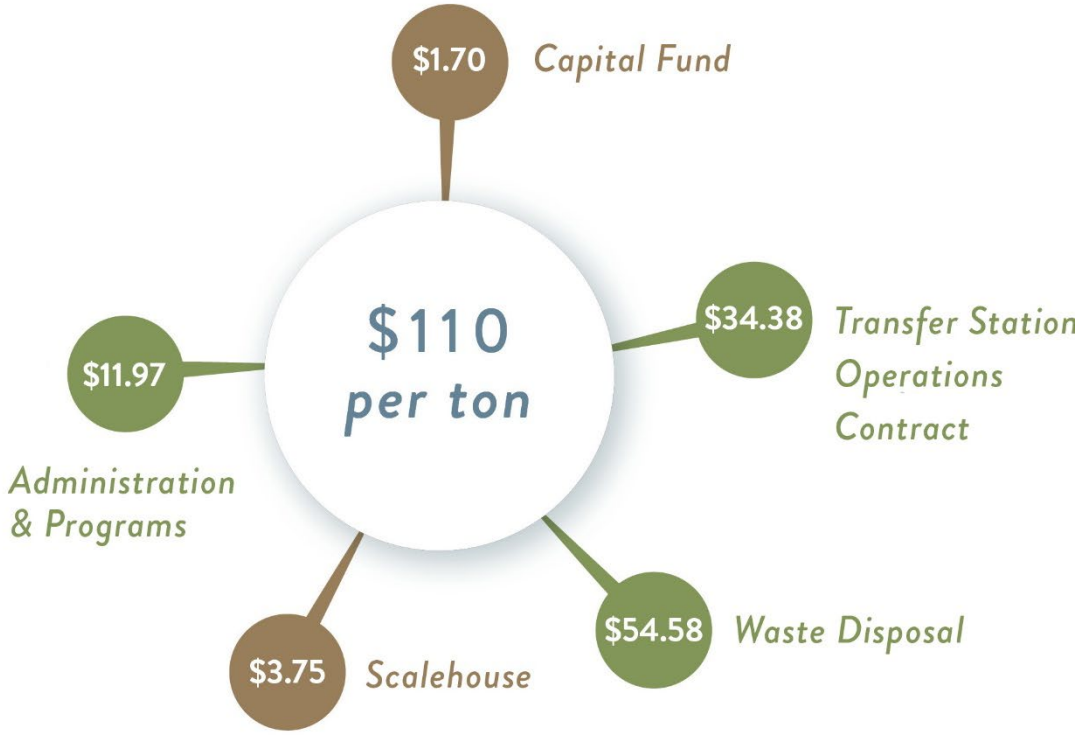


Source: SCRSWS Financial Records, 2020

TIPPING FEES

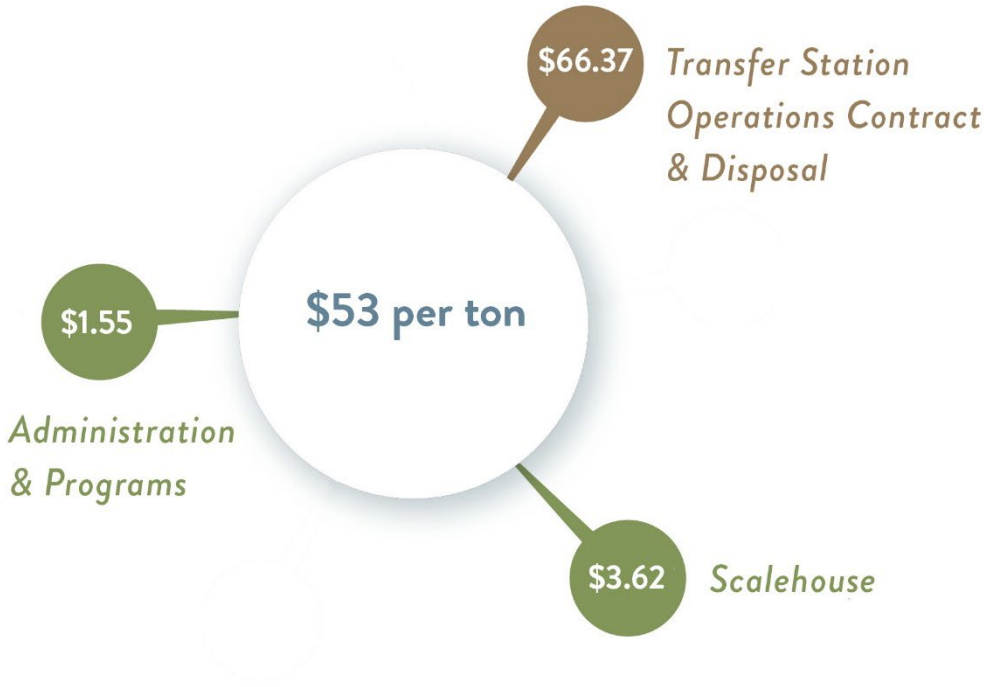
As of January 2021, the tipping fee at both of the SCRSWS transfer stations is $110 per ton for municipal solid waste and $53 a ton for organic waste. A breakdown of services funded by these rates are broken down and shown in **Exhibit 4.2** and **Exhibit 4.3**. The cost of collection and processing of organic waste is supplemented by grant funding and MSW tipping fees, making the total of the rate breakdown higher than the actual tipping fee.

Exhibit 4.2. 2021 Tipping Fee (Rate) Breakdown for MSW



Source: SCRSWS Financial Records, 2020

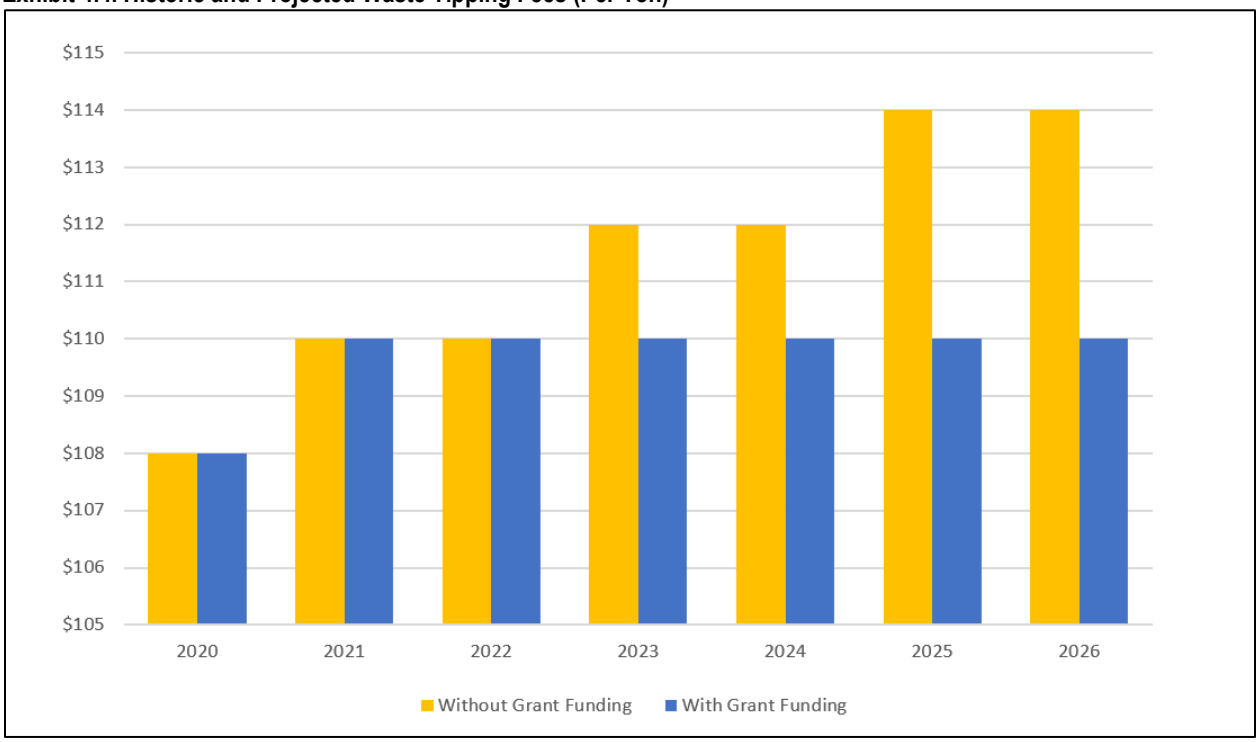
Exhibit 4.3. 2021 Tipping Fee (Rate) Breakdown for Organic Waste



Source: SCRSWS Financial Records, 2020

To offset decreases in LSWFA funding in the recent years while maintaining comparable levels of services to the residents of Spokane County, tipping fees have been increased. If LSWFA program funding levels could be restored to historical levels, along with careful program management and capital planning, tipping fee increases can be minimized and programs will not need to be reduced or eliminated. **Exhibit 4.4** shows the planned rate projections for this 6-year Plan period with and without the restoration of grant funding.

Exhibit 4.4. Historic and Projected Waste Tipping Fees (Per Ton)



Source: SCRSWS Financial Records, 2020

WASHINGTON STATE UTILITES AND TRANSPORTATION COMMISSION

The WUTC establishes collection rates for certificate holders based on a "cost of service" principle whereby rates approximate how much it costs to offer a particular service to a particular customer class. A WUTC cost assessment is required as part of the Plan update. The cost assessment is a comprehensive, system-wide review of the SWMP's costs that considers the cost impact on ratepayers of the plan's recommendations and provides sufficient information to estimate future rate levels over the plan period. See **Appendix I – Checklists and Forms**, for the WUTC cost assessment.

4.3 20-year Capital Improvements Plan

A 20-year plan for projected capital projects for solid waste handling facilities is included in **Table 4.3**. This capital improvements plan (CIP) includes capital expenditures anticipated at this time in 2021 dollars (2021$). Actual project costs, as well as years of expenditures, will vary from those shown based on needs and budgets.

Table 4.3. 20-Year Capital Improvements Plan

Project	Implementation Year	Capital Cost	Funding Source
Replace Scales #1 and #2 at North Transfer Station	2021	$180,000	C
Replace Scale #1 at Valley Transfer Station	2022	$90,000	C
Repair fire suppression systems at transfer stations	2022	$80,000	C
Replace preload compactor at Valley Transfer Station	2023	$1,720,000	C
Replace Scale #2 at Valley Transfer Station	2024	$90,000	C
Repair asphalt at transfer stations	2024	$132,000	C
Replace loading tunnel scales at North Transfer Station	2025	$180,000	C
North Transfer Station Organics Material Capacity Study	2022-2025	$25,000	G
Structural repairs to waste transfer building at North Transfer Station	2026	$197,000	C
Site improvements and new waste transfer building at North Transfer Station	2026	$2,859,000	G, C
Structural repairs to waste transfer building at Valley Transfer Station	2027	$197,000	C
Tipping floor repair/coating at transfer stations	2027	$180,000	C
MRW building improvements at transfer stations	2022-2028	$225,000	G
Replace Scale #3 at transfer stations	2032	$180,000	C
Replace knuckleboom crane at Valley Transfer Station	2035	$286,000	C

5.0 Solid Waste Facilities and Waste Flow

When residents place their waste in a curbside bin or self-haul it to one of the SCRSWS-designated facilities, it is responsibly managed through collection, transport, and disposal. The SCRSWS is successful because of reliable communication and good working relationships between the various parties of the SCRSWS. These include but are not limited to, staff from Spokane County, participating jurisdictions, certificated haulers, transfer and disposal facilities, and transport companies.

The flow of solid waste is broken down into three parts for this section.

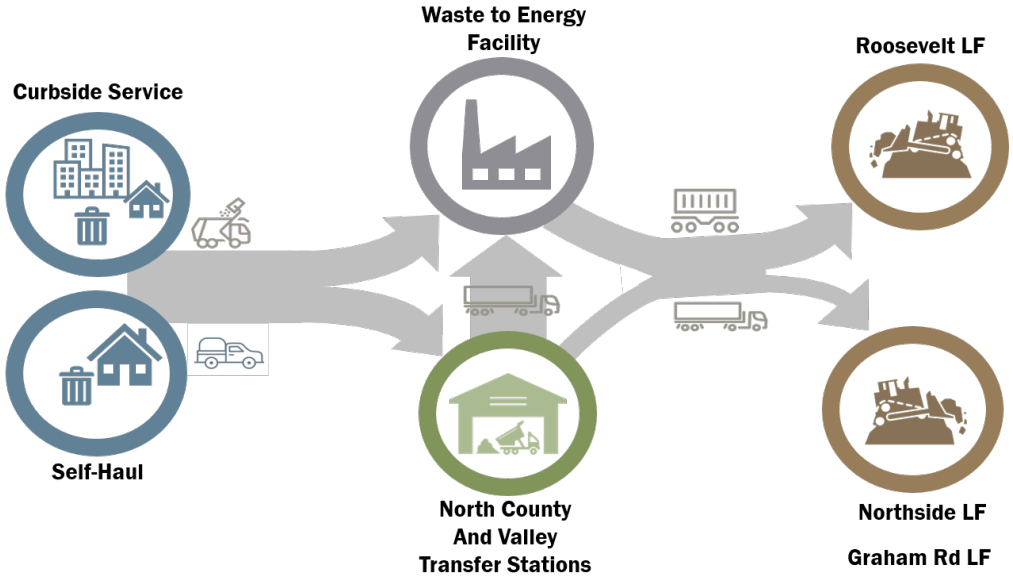
Collection and Transport includes: (1) curbside collection of residential waste; (2) collection of waste from businesses and institutions; and (3) self-haul customers (both residents and businesses) transporting their solid waste to a transfer facility (transfer station or drop box site) or WTE Facility.

Transfer is the movement of consolidated waste from one point to another, which means the transport of waste from a transfer facility (transfer station or drop box site) to a disposal facility (WTE Facility, Northside Landfill, or Roosevelt Landfill). Transfer is done by either transfer trucks or by container (intermodal) cars on rail.

Disposal means the final disposal destination for waste that has been collected/transported and transferred.

Throughout this section tables and charts are color-coded to denote which solid waste category they fall into: Collection and Transport, Transfer, or Disposal. The following graphic (Exhibit 5.1) illustrates a typical flow (from collection to final disposal) that the majority of solid waste within the SCRSWS follows. For information on the flow of diverted materials, see Section 6.0 – Programs.

Exhibit 5.1. SCRSWS Solid Waste Flow



5.1 Collection and Transport

The category of Collection and Transport is divided into commercial and self-haul categories. Commercial services include curbside residential pick up; commercial, industrial, and institutional pick up and drop box pick up. RCW 81.77 gives the WUTC authority to supervise and regulate commercial solid waste collection companies operating in unincorporated areas of the county (Washington State Legislature, 2020). These collectors are issued Certificates of Public Convenience and Necessity by the WUTC. Certificate holders have the exclusive right to collect specified types of solid waste (solid waste, residential recyclables or organics), within their certificated collection service area. Self-hauling of waste includes residents and contractors hauling waste themselves from their businesses or residences.

COMMERCIAL COLLECTION AND TRANSPORT

Collection and transport of waste in Spokane County is split into WUTC-licensed boundaries, as shown in **Exhibit 5.2**, serviced by the following three different WUTC-certified haulers:

Sunshine Disposal, Inc.
11320 W. McFarlane Road
Airway Heights, WA 99001

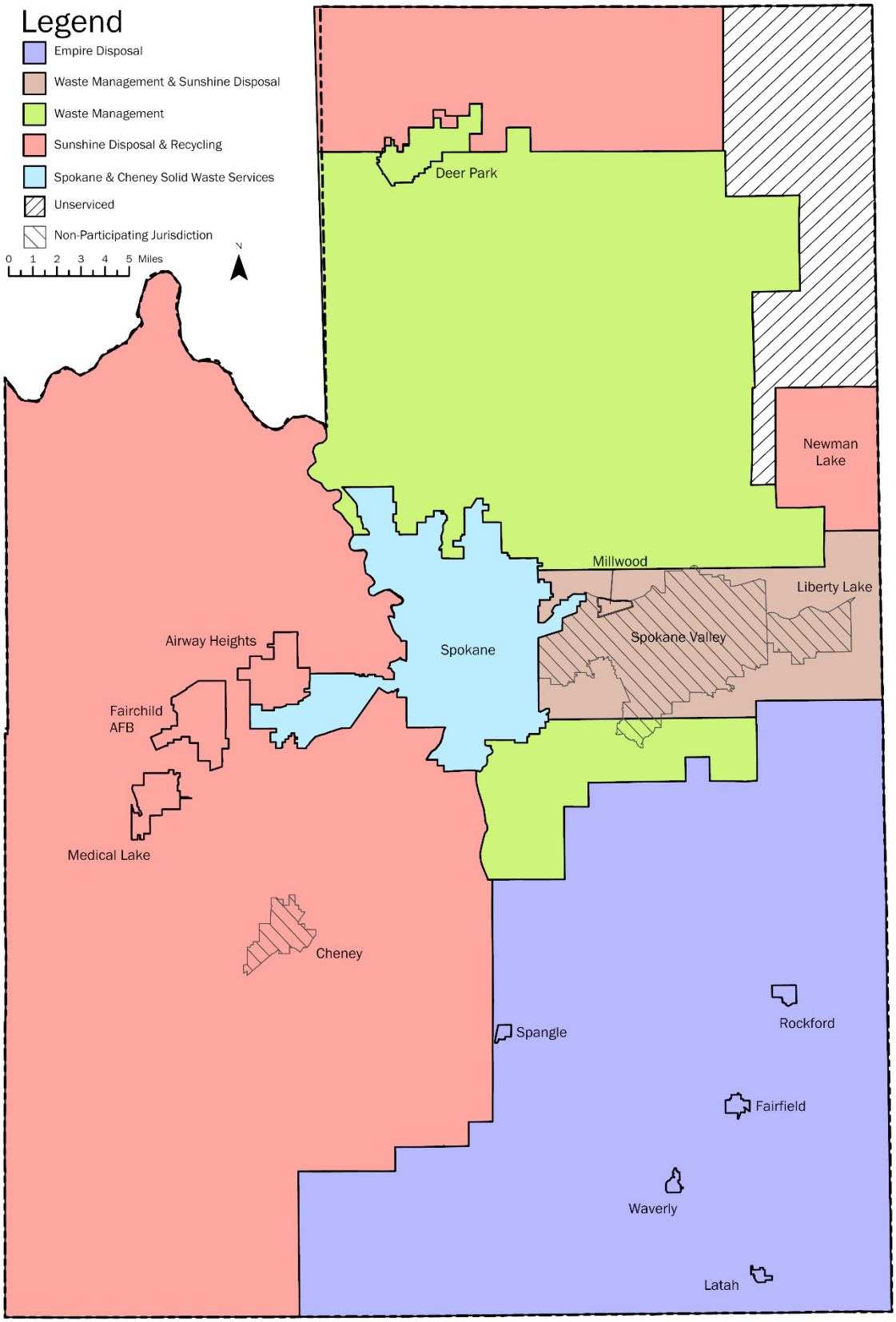
Empire Disposal, Inc.
905 N. Sumner Street
Colfax, WA 99111

Waste Management of Washington, Inc.
11321 E Indiana Rd,
Spokane Valley, WA 99206

Or, by a public hauler that services their jurisdiction:

City of Spokane Solid Waste Services
808 W. Spokane Falls Blvd.
Spokane, WA 99201

Exhibit 5.2. WUTC Waste Hauler Service Areas



Source: WUTC, 2020

Although many jurisdictions utilize the hauler assigned by the WUTC to service their location, they have the option of contracting with any of the three WUTC haulers. **Table 5.1** shows the current service provider for each jurisdiction.

Table 5.1. Member Jurisdictions and their Residential Collection Service Providers

Jurisdiction	Service Provision	MSW Curbside Collection	Collection Company
Airway Heights	Contract	Yes	Waste Management
Deer Park	Contract	Yes	Waste Management
Fairchild AFB	Contract	Yes	Sunshine Disposal
Fairfield	WUTC	Subscription	Empire Disposal
Latah	WUTC	Subscription	Empire Disposal
Medical Lake	Contract	Yes	Sunshine Disposal
Millwood	WUTC	Yes	Waste Management
Rockford	WUTC	Subscription	Empire Disposal
Spangle	WUTC	Subscription	Empire Disposal
Spokane	City owned	Yes	City of Spokane Solid Waste Services
Unincorporated County	WUTC	Subscription	Empire Disposal Sunshine Disposal Waste Management
Waverly	WUTC	Subscription	Empire Disposal

SELF HAUL COLLECTION AND TRANSPORT

Residents and businesses within the SCRSWS can "self-haul" their wastes to SCRSWS-designated transfer or disposal facilities as well as other sites as outlined in this Plan. More information is included in the Transfer section.

5.2 Transfer

Waste transfer involves the hauling of solid waste from a SCRSWS-designated transfer facility to a disposal site.

Spokane County Ordinance No. 14-0879 (see Spokane County Code 8.56) was established to direct the flow of solid waste from unincorporated County and SCRSWS participating jurisdictions to SCRSWS-designated facilities, shown in **Table 5.2** (Spokane County, WA, 2014). Disposal fees paid at SCRSWS-designated facilities help fund solid waste comprehensive planning, facility improvements, and community programs and services such as free residential Household Hazardous Waste Programs, free residential recyclable material drop off, waste reduction events for rural areas and education and outreach for the community.

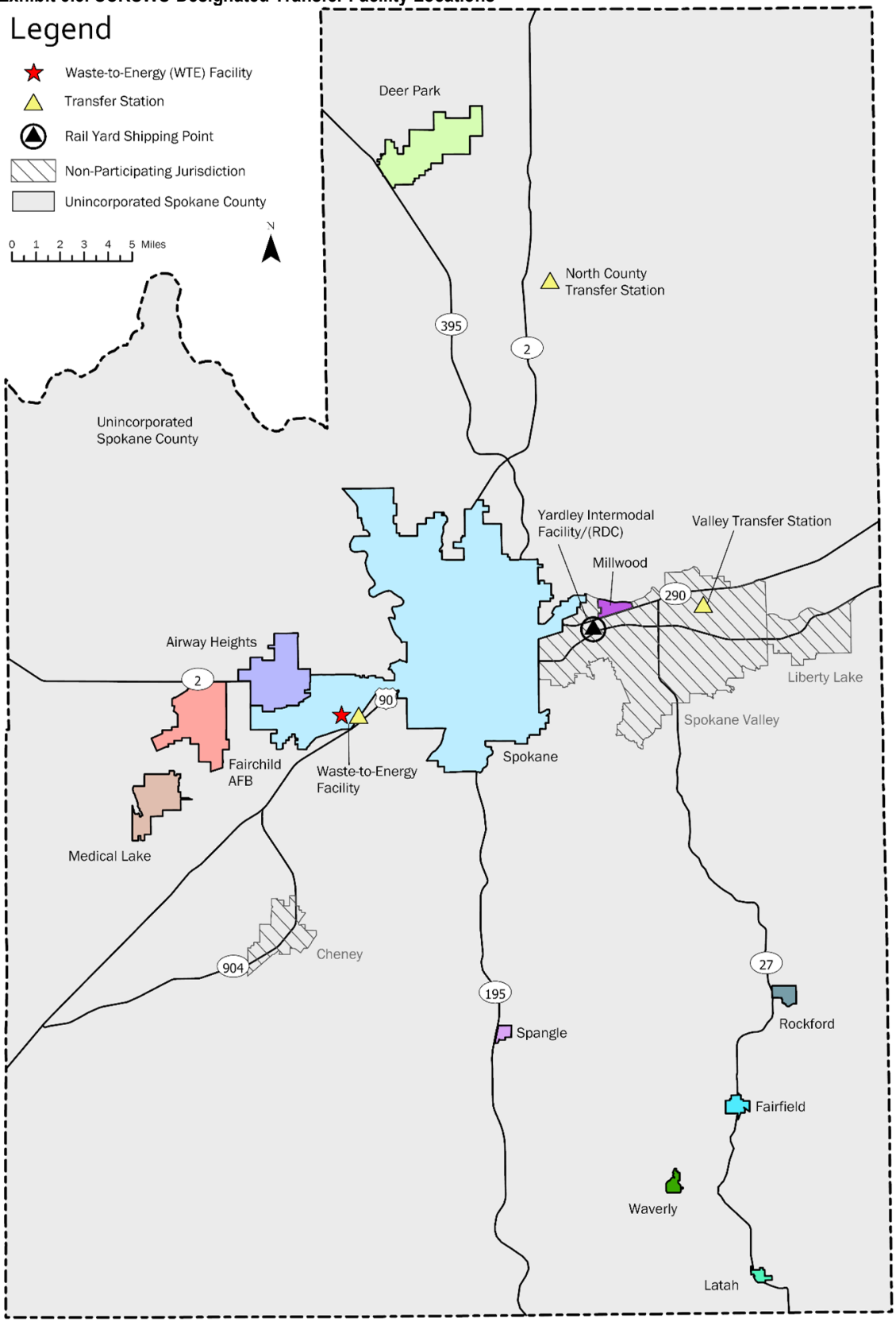
There are three SCRSWS-designated facilities. Spokane County owns two transfer facilities: the North County Transfer Station and the Valley Transfer Station. The WTE facility, owned by the City of Spokane, also has a transfer facility for waste that cannot be incinerated (more

information on the disposal component of the WTE facility is provided in **Section 5.5**). The locations of the SCRSWS-designated facilities are shown on **Exhibit 5.3** and in **Table 5.2**.

Table 5.2. SCRSWS-Designated Solid Waste Transfer Facilities

Facility	Address	Purpose
North County Transfer Station	22123 N Elk Chattaroy Rd, Colbert, WA 9900	Transfer
Valley Transfer Station	3941 N Sullivan Rd, Spokane Valley, WA 99216	Transfer
Waste to Energy Facility	2900 S Geiger Blvd, Spokane, WA 99208	Transfer and Disposal

Exhibit 5.3. SCRSWS-Designated Transfer Facility Locations



Source: Washington State GIS Database, 2020

The three SCRSWS-designated transfer facilities also have areas for dropping off organic waste, recyclables and MRW, with specific features of each facility summarized in **Table 5.3**. The materials are processed through recycling and diversion programs described in **Section 6.0 - Programs**. Hours of operation and further information about each transfer facility can be found online at spokanecounty.org/2013/Regional-Disposal-Locations-Hours-Fees.

Table 5.3. Transfer Facility Features and Waste Transfer Tonnages

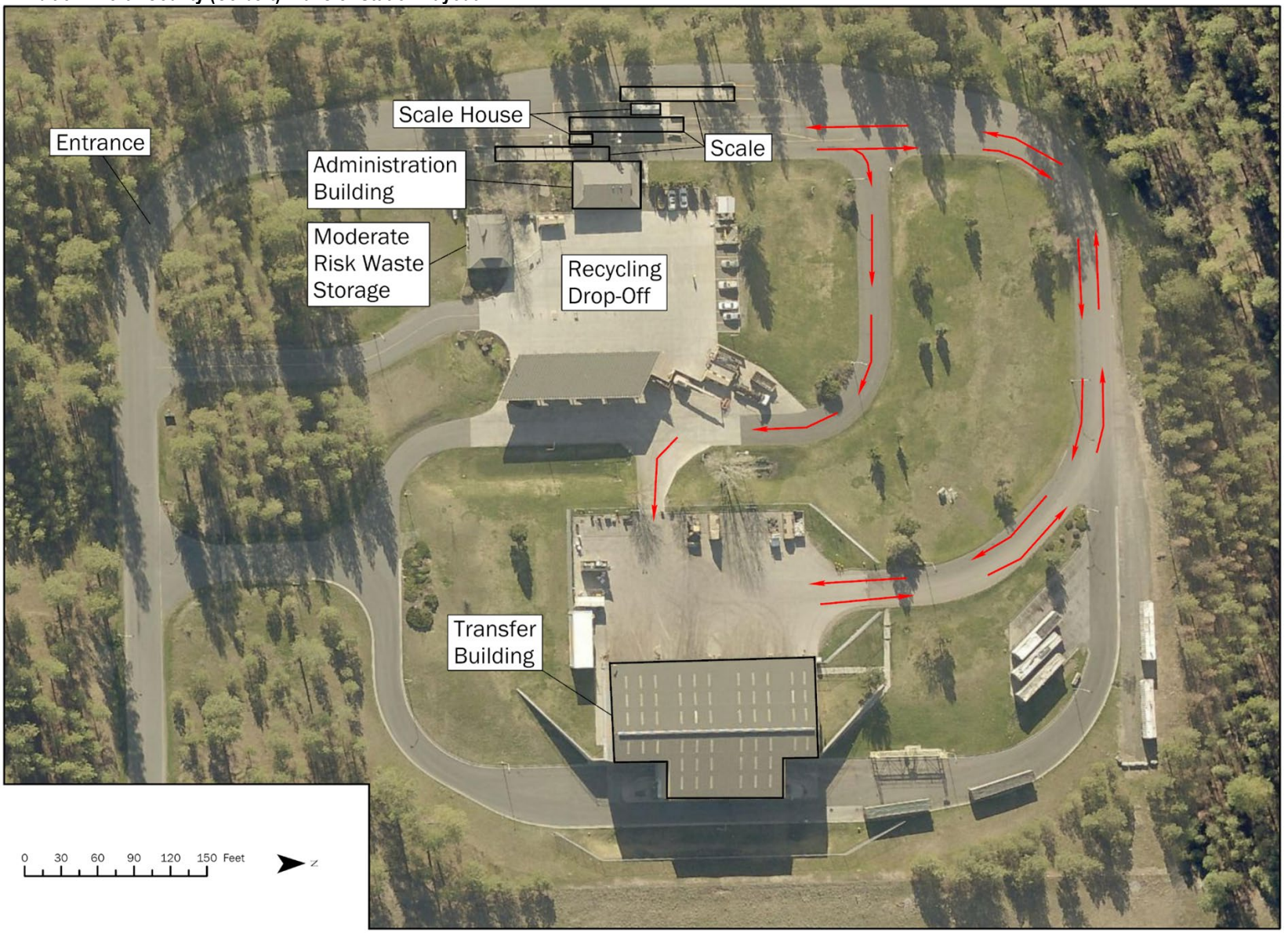
Feature	North County	Valley	WTE Facility
Transfer Building Type	Three-Sided Structure	Three-Sided Structure	Fully Enclosed
Tipping Floor Area	8,600 SF	15,700 SF	70,358 SF[1]
Recycling Area	Yes	Yes	Yes
Organic Waste Area	Yes	Yes	Yes
MRW Facility	Yes	Yes	Yes
White Good Area	Yes	Yes	Yes
Tamper/Grappler Unit	Yes	Yes	Yes
Pre-Load Compactor Unit	No	Yes	No
Loading Tunnel	Yes	Yes	Yes
Commercial Scales	0	0	2
Public Scales	0	0	2
Scale Houses	2	2	3
Mixed Use Scales	3	3	0
2020 Tonnages	70,845	75,520	259,799[1]

[1]The WTE Facility serves as both a transfer site and a disposal facility. The Tipping Floor Area is the square footage of the enclosed WTE drop off building and the pit where waste is mixed and added to the incinerator. The waste tonnage is the amount of waste that is moved from this facility to another facility for disposal (i.e., either the Northside Landfill or Roosevelt Landfill).

SF = Square Feet

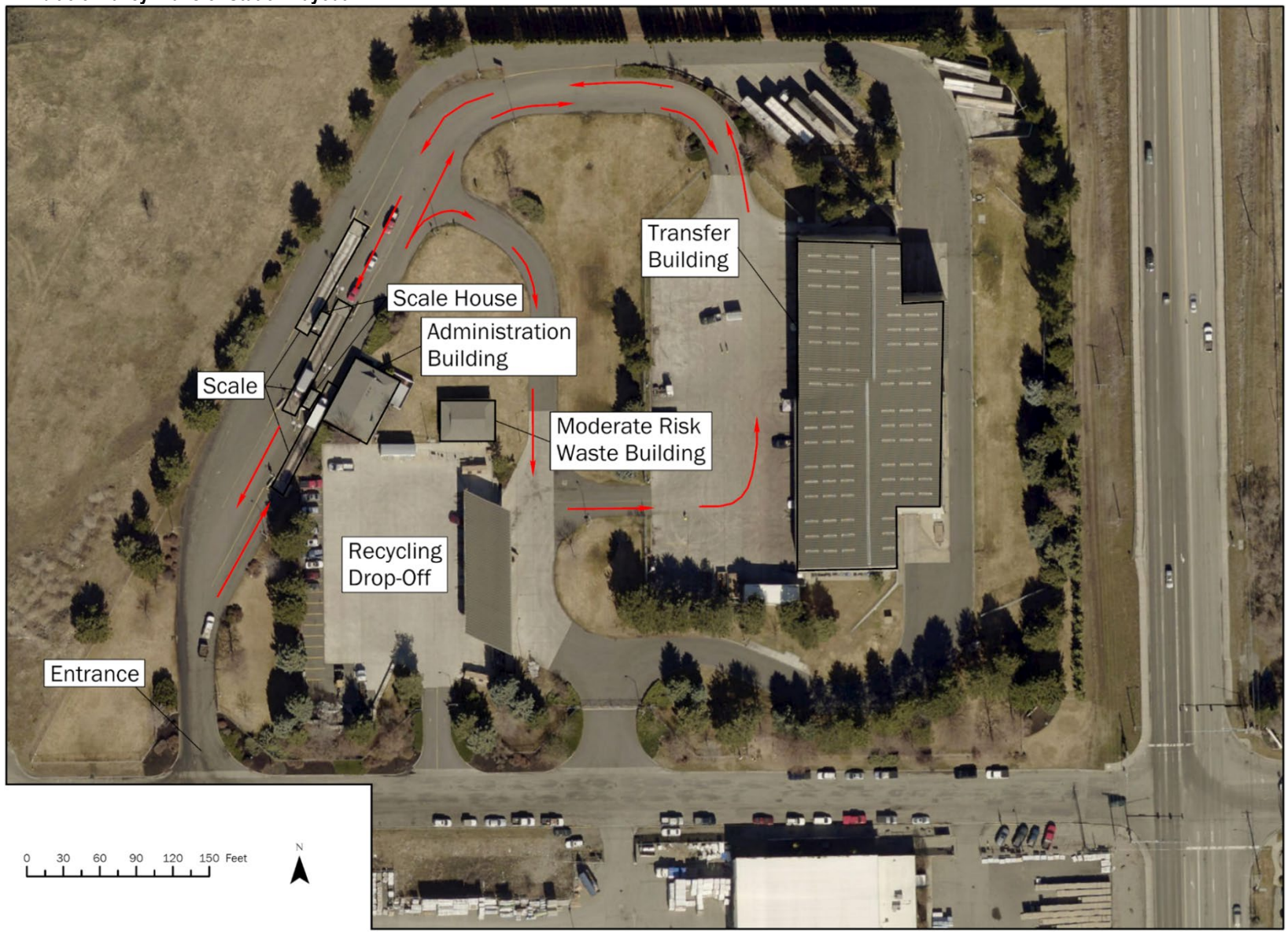
The features of each SCRSWS-designated transfer facility are summarized in Aerial photographic maps of the facilities, shown in **Exhibit 5.4** through **Exhibit 5.6**.

Exhibit 5.4. North County (Colbert) Transfer Station Layout



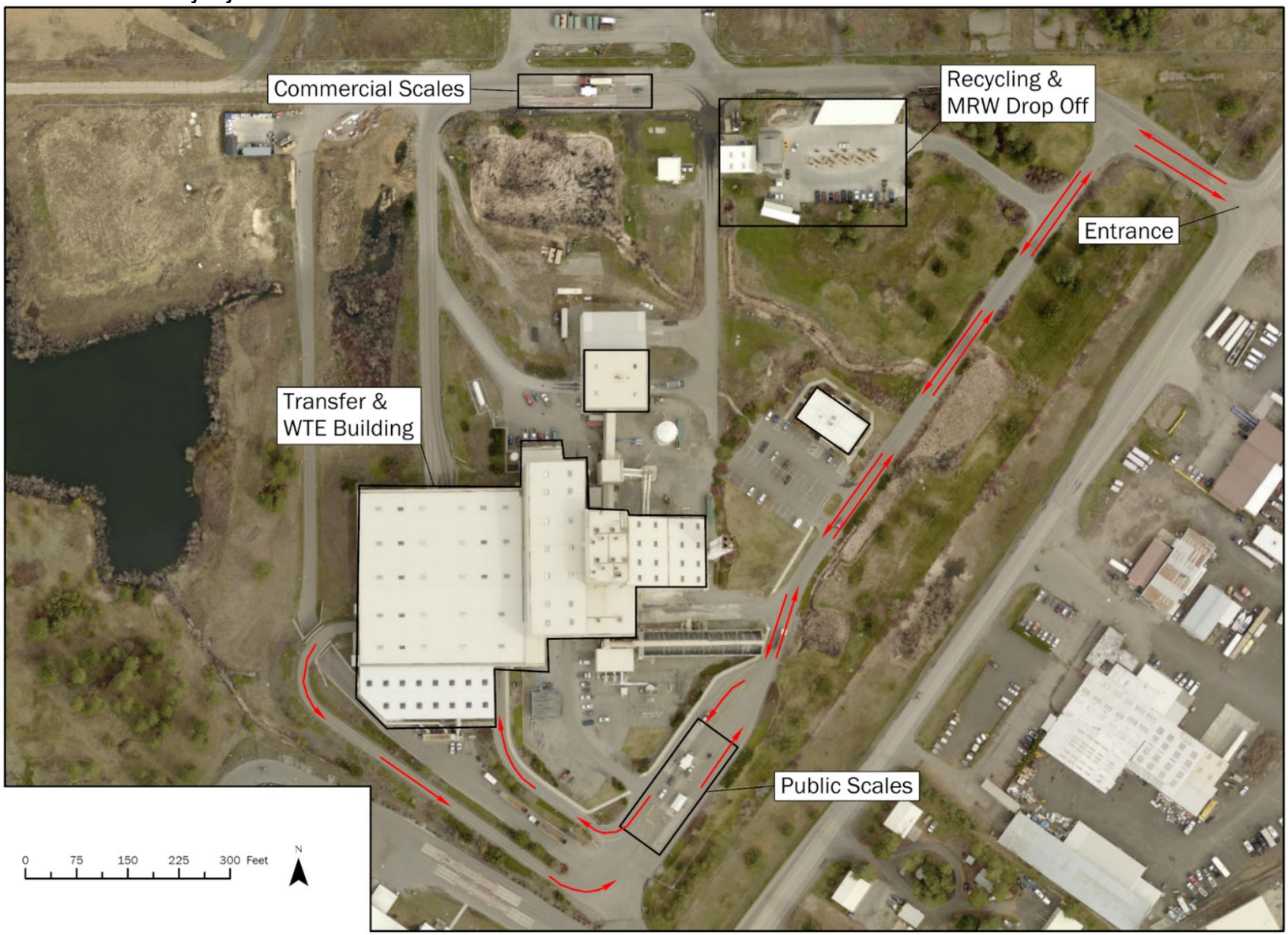
Source: 2020 Washington GIS Database

Exhibit 5.5. Valley Transfer Station Layout



Source: 2020 Washington GIS Database

Exhibit 5.6. WTE Facility Layout



Source: 2020 Washington GIS Database

From each of the three SCRSWS-designated transfer facilities, waste must be hauled to a final disposal destination. The method of transport to disposal sites depends on current conditions of facilities and contractual obligations that are set forth at that point in time.

TRUCK TRANSPORT

At Spokane County transfer facilities, the North County Transfer Station and the Valley Transfer Station, waste is brought by commercial or self-haul vehicles and transported by transfer truck to the WTE Facility or other sites as needed. The WTE facility, owned by the City of Spokane, also has a transfer facility for waste that cannot be incinerated.

INTERMODAL RAIL TRANSPORT

While the WTE Facility is the primary means for waste disposal and receives the largest portion of solid waste from the SCRSWS, there are times when the waste at transfer facilities must be sent to an alternative disposal location (Roosevelt Landfill). The Yardley intermodal railroad facility (see **Exhibit 5.3**) currently provides this service through a City of Spokane contract with Republic Services. Rail containers are loaded with waste at each respective SCRSWS-designated facility and transported via truck to the intermodal facility to be transferred onto a train. The Yardley intermodal facility serves as a method to transport waste under a contract and is not considered a SCRSWS-designated site.

FUTURE TRANSPORT POSSIBILITIES

All future transport possibilities are scenarios or options that could be provided as part of a contractual agreement with disposal and/or transport companies.

West Plains Transload Rail Facility

Construction of a new multi-modal transportation hub has begun in the West Plains Airport Area in Spokane County. This site will include an intermodal rail facility and may have future potential when it comes to solid waste planning. Considerations to be examined when determining site potential include, but are not limited to:

- Current contractual obligations within the SCRSWS
- Arterial access for heavy loads
- Size and dimension of land for container storage and number of containers required
- Ability to use either rail line (BNSF, UP)
- Capacity of rail for future waste increases (including competition with other cargo)
- Frequency of units (waste storage time limitations)
- Amount of track required for containers needed
- Hours of possible operations
- Permits needed by various agencies (Ecology, FAA, etc.)

Long Haul Options

As part of the interlocal agreements with member jurisdictions, the SCRSWS explores the cost-effectiveness of various alternatives for solid waste transport and disposal. Long haul options are continually assessed whenever agreements or contracts are open to the opportunity.

5.3 Disposal

Solid waste can include municipal solid waste (MSW), construction and demolition (C&D) and other non-putrescible and non-burnable materials. Solid waste within the SCRSWS is either hauled from a SCRSWS-designated transfer facility (see **Section 5.2**) or direct hauled to a final disposal site (see **Table 5.4**).

Table 5.4. SCRSWS-Designated Disposal Facilities (as of 2020)

Facility	Address	Purpose
Waste to Energy Facility	2900 S Geiger Blvd, Spokane, WA 99208	Transfer and Disposal
Northside Landfill	7202 N Nine Mile Rd, Spokane, WA 99208	Disposal-limited
Roosevelt Landfill	500 Roosevelt Grade Rd, Roosevelt, WA 99356	Disposal

The WTE Facility is the primary means for waste disposal and receives the largest portion of SCRSWS solid waste. If the facility is not operational due to maintenance activities or if capacity at the WTE facility is exceeded, the waste is currently under contract to be sent to the Roosevelt Landfill.

C&D waste and other similar inert (non-putrescible and non-burnable) material that are unsuitable for incineration at the WTE Facility are transferred to the Roosevelt Landfill or to the Graham Road Recycling and Disposal Facility for disposal. If the WTE Facility and rail transport are both unavailable, MSW can be sent to the Northside Landfill for disposal while C&D and inert material are hauled to the Graham Road Recycling and Disposal Facility.

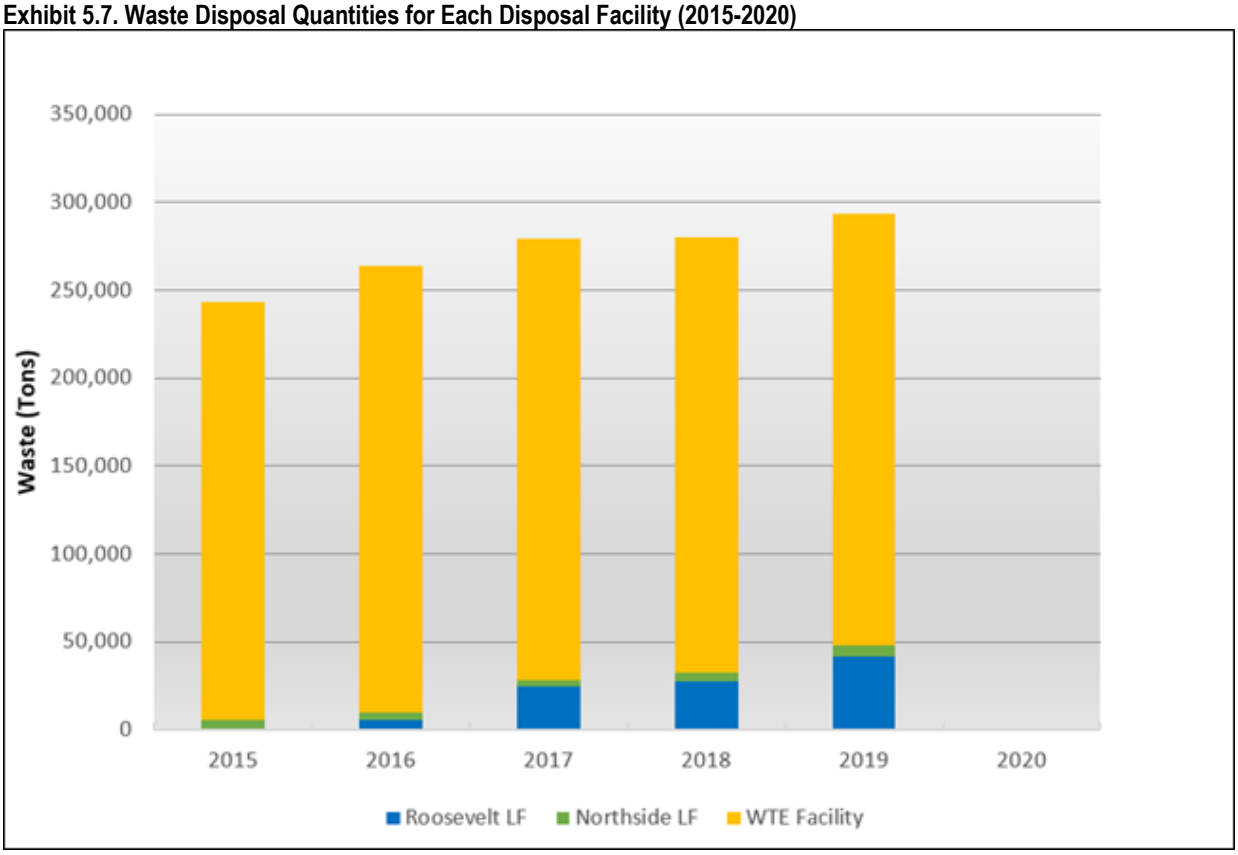
The amount of waste sent to each of the final disposal sites for the last six years is shown in **Table 5.5** and graphically shown in **Exhibit 5.7**. The WTE Facility has a limited processing capacity of approximately 800 tons per operating day. Population and waste generation per capita within Spokane County have continued to climb, resulting in more waste being sent to the Roosevelt Landfill each year.

Table 5.5. Disposal Quantities in Tons for Each Disposal Facility

Year	Roosevelt Landfill	Northside Landfill	WTE Facility
2015	5,055	7,270	230,574
2016	13,340	6,925	246,918
2017	32,848	4,435	240,014
2018	36,628	9,439	242,658
2019	52,136	8,377	235,918
2020	54,023	3,048	240,104

*Tonnages to Roosevelt Landfill do not represent WTE ash quantities. See **Table 5.9**
See **Exhibit 5.7** for a visual representation of the data presented in **Table 5.5**

Exhibit 5.7. Waste Disposal Quantities for Each Disposal Facility (2015-2020)

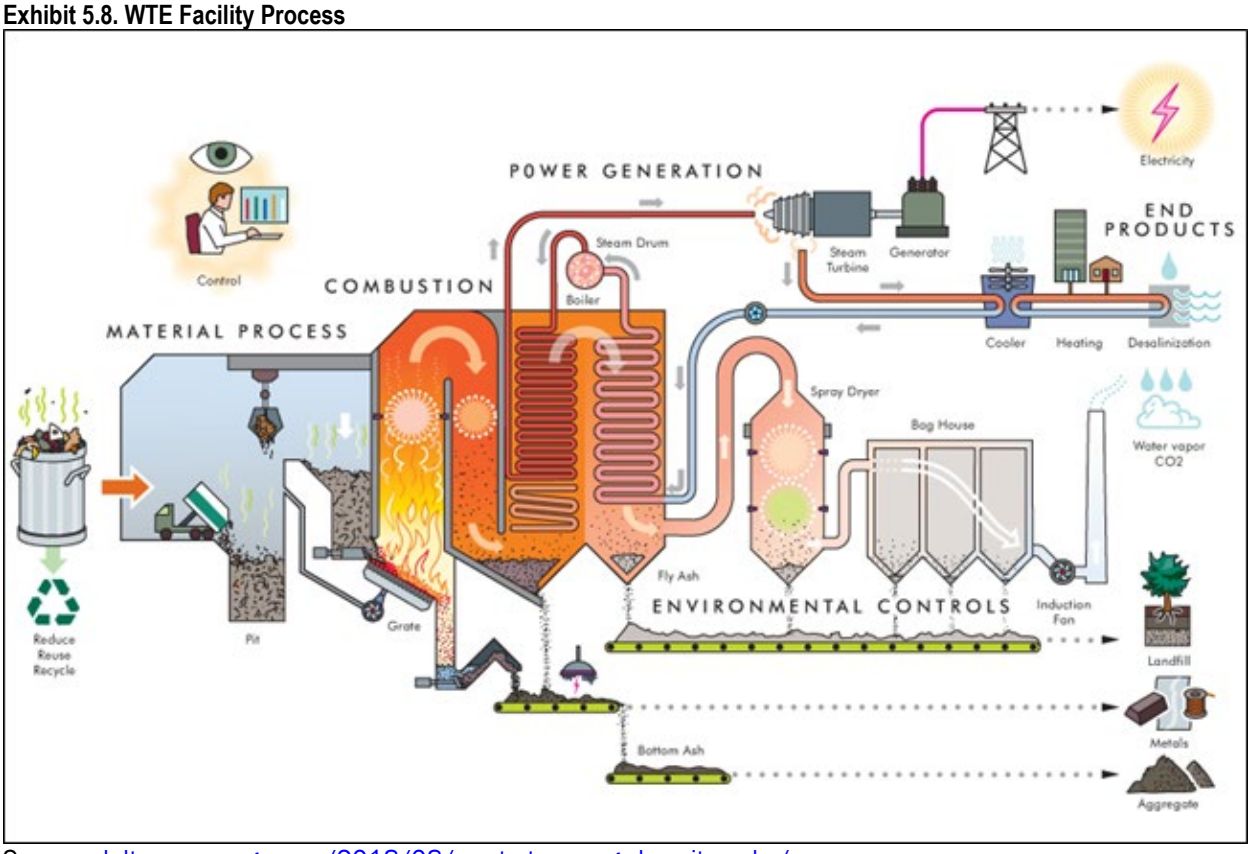


Source: SCRSWS Facility Reports

CITY OF SPOKANE WASTE TO ENERGY (WTE) FACILITY

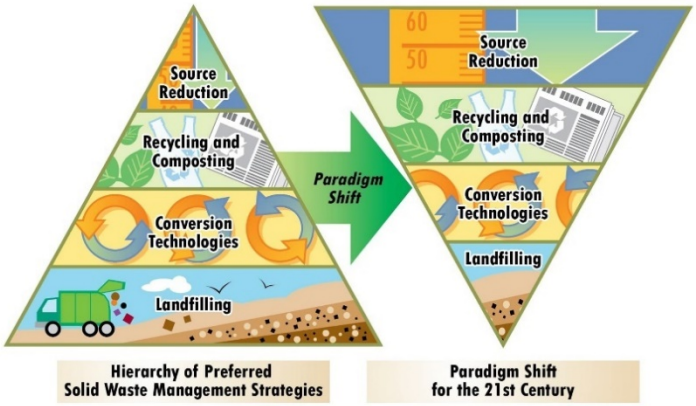
The City of Spokane owns and operates the WTE Facility. The WTE Facility is designed to process waste from mixed residential, commercial, and industrial sources. MSW is incinerated using two 400-ton-per-day "mass-burn" combustion units to generate steam and subsequent electricity by means of a 26-megawatt turbine generator. The facility is designed to produce a net electric output of at least 505 kWh per ton of solid waste processed on an annual average basis. **Exhibit 5.8** provides a visual depiction of how waste is processed, and energy is generated within the facility.

Exhibit 5.8. WTE Facility Process



Source: deltawayenergy.com/2018/08/waste-to-energy-how-it-works/

The WTE Facility is located on a 37-acre site in Spokane County within the Spokane city limits (see **Exhibit 5.2** and **Exhibit 5.6**). This is the primary source for disposal for the SCRSWS. Incineration is a conversion technology which ranks higher on the EPA's hierarchy than landfilling.

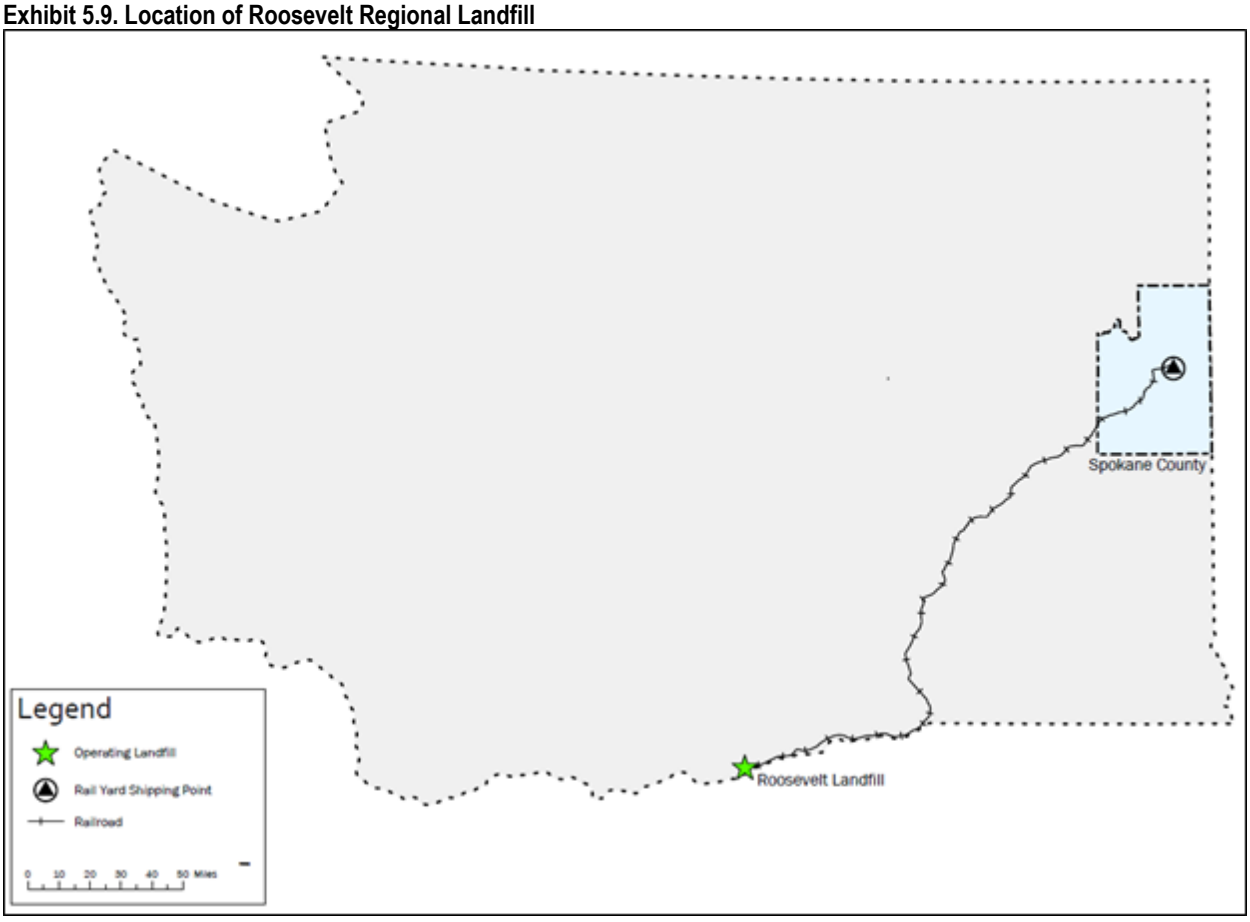


Source: Waste Advantage Magazine, 2014

ROOSEVELT LANDFILL

When the WTE facility is not operational, or when tonnages exceed the capacity of the facility, waste is transferred to the Roosevelt landfill. WTE incinerator ash is also transferred to the Roosevelt landfill where it is mined for metal and disposed of in an ash monofill. The facility is located 200 miles southwest of Spokane County in Klickitat County, Washington (see **Exhibit 5.9**).

Exhibit 5.9. Location of Roosevelt Regional Landfill

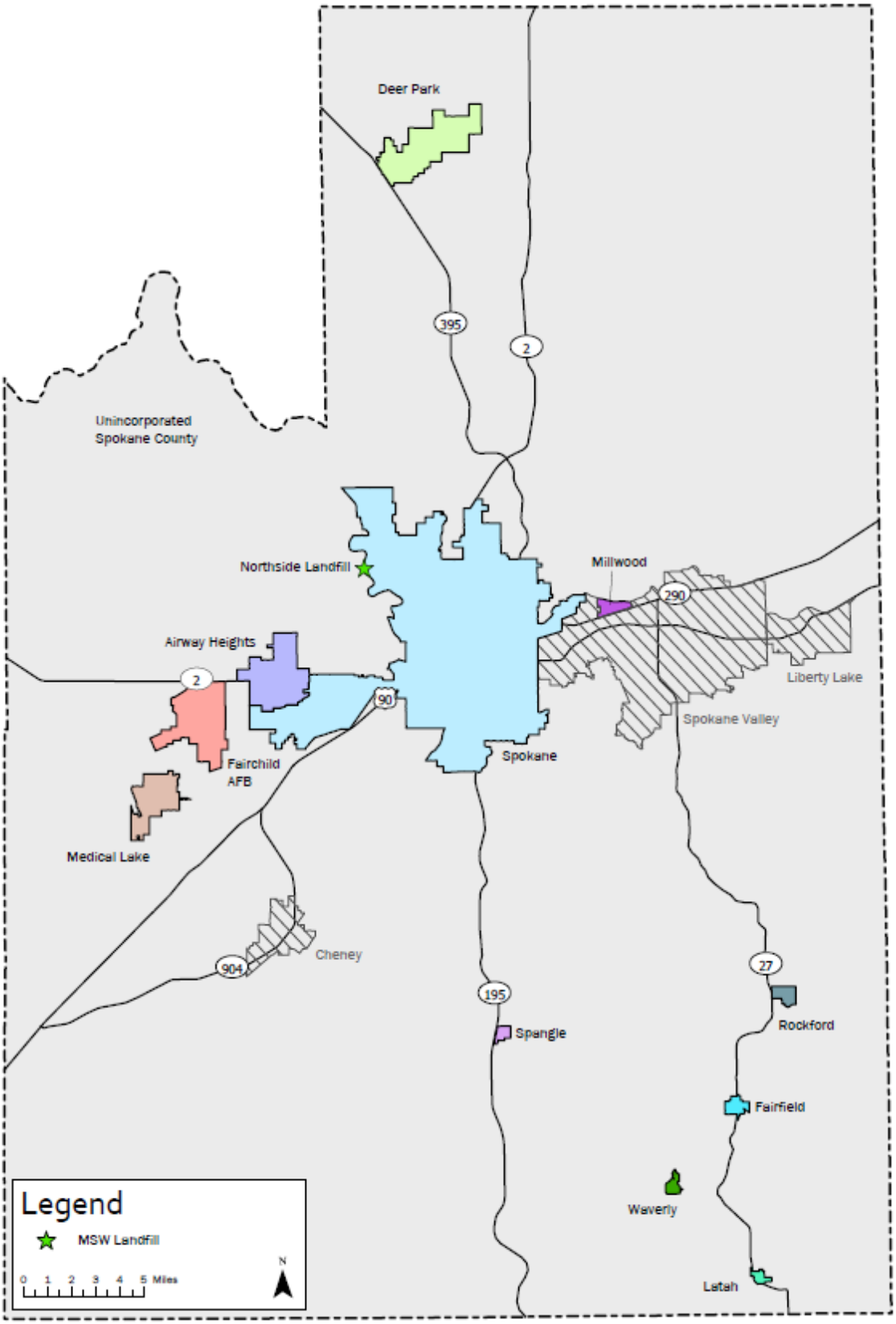


Source: Washington State GIS Database, 2020

NORTHSIDE LANDFILL

The MSW cell constructed at the Northside Landfill is the only operating landfill permitted to receive MSW waste in Spokane County. The availability of an MSW landfill within Spokane County is a requirement of the WTE operating permit issued by the SRHD. The Northside Landfill is owned and operated by the City of Spokane. Currently, only the western lined area (Phase 1) of the MSW cell is used for waste disposal and provides a disposal capacity of 0.5 million cubic yards. The Phase 2 expansion will add an additional 1.0 million cubic yards, bringing the total capacity to approximately 1.5 million cubic yards. The location of the Northside Landfill is shown in **Exhibit 5.10**.

Exhibit 5.10. Location of Northside Landfill



Source: Washington State GIS Database, 2020

CLOSED LANDFILLS

Five landfills in Spokane County are (United States Census Bureau, 2018) closed and are undergoing post-closure activities. These landfills cannot accept any waste. More information on the closed landfills can be found in **Appendix J - SWMP History**.

INERT MATERIAL DISPOSAL FACILITIES

Inert waste may be delivered to SCRSWS-designated disposal sites as well as private disposal sites that operate consistent with respective and current Spokane County Regional Health District solid waste handling permits. Current permitted facilities are listed in **Table 5.6**.

Table 5.6. Permitted Private Inert Material Disposal Facilities (as of 2020)

Facilities	Address	Purpose
Graham Road Landfill	1820 S Graham Rd, Medical Lake, WA 99022	Limited Purpose and Inert Waste Landfill, Recycling, Material Recovery
Busy Bee Landfill	14910 W Craig Rd, Spokane, WA 99224	Inert Waste Landfill
Inland Asphalt	44th and Sands, Spokane WA 99206	Inert Waste Landfill
Interstate Concrete and Asphalt Co.	2691 S Craig Rd, Airway Heights, WA 99001	Inert Waste Landfill
Central Pre-Mix Hayford Facility	11800 W. Sprague	Inert Waste Landfill
Crestline Asphalt and Concrete	8510 N Crestline St	Inert Waste Landfill

The Graham Road Recycling and Disposal Facility is owned by Waste Management of Washington, Inc. The facility is located west of the City of Airway Heights and northwest of Fairchild AFB. The facility is permitted as a Limited Purpose Landfill under Washington State Regulations. The facility also accepts and recycles cardboard, metals, and some plastics. Wood waste is segregated and ground into chips for co-generation. The facility has an estimated remaining capacity of 100+ years.

5.4 Growth and Future Needs

Requirements for future solid waste collection will depend upon population growth rates. Table 5.7. shows the current (2020) population, number of households and population densities for each jurisdiction.

Table 5.7. Estimated Population and Housing Densities for Jurisdictions

Jurisdiction	Land Area (sq. mi.)[1]	Population[2]	Number of Housing Units[3]	Population Density (People per sq. mi.)
Airway Heights	5.63	9,545	2,375	1,695
Deer Park	6.88	4,390	1,618	638
Fairchild AFB[4]	6.53	3,036	1092	465
Fairfield	0.62	625	238	1,008
Latah	0.31	195	75	629
Medical Lake	3.40	5,005	1,922	1,472
Millwood	0.70	1,795	793	2,551
Rockford	0.68	485	213	691
Spangle	0.36	280	99	778
Spokane	69.5	222,000	97,825	3,194
Waverly	0.41	130	126	259
Spokane County Unincorporated	1,686	147,894	103,423	88

[1]Land Area data from the 2010 Census.

[2]2020 Population estimates from Washington's Office of Financial Management.

[3]Housing Unit data from the 2010 Census or 2018 Census estimates.

[4]Fairchild AFB data from Fairchild AFB reports. Number of housing units is 641 homes and 451 dorms.

Table 5.8 shows the 6-year projections for population, the number of housing units, and the projected population density. The largest population and housing unit increases are seen in Airway Heights and Medical Lake.

Table 5.8. 6-Year Projections for Population, Housing Units, and Population Densities

Municipality	6-year Population Growth Rate[1]	Projected Population	6-year Housing Units Growth Rate[1]	Projected Number of Housing Units	Projected Population Density (People per sq. mi.)
Airway Heights	21.5%	12,526	34.6%	3,334	2,225
Deer Park	12.6%	5,144	16.0%	1,919	748
Fairchild AFB	0%	3,036	4.6%	1142	465
Fairfield	14.3%	741	14.2%	277	1,196
Latah	12.7%	224	4.8%	79	722
Medical Lake	19.6%	6,190	32.0%	2,639	1,821
Millwood	5.0%	1,947	1.1%	803	2,781
Rockford	8.3%	543	15.6%	252	798
Spangle	9.5%	317	6.9%	107	879
Spokane	4.1%	234,243	4.3%	102,755	3,370
Waverly	-7.4%	123	1.2%	128	301
Spokane County Unincorporated	7.6%	167,963	9.1%	114,355	100

[1]The 6-year growth rates were calculated using 2010 US Census data (based on growth rates from 2000 – 2010), except for Fairchild AFB which was provided by Fairchild AFB staff.

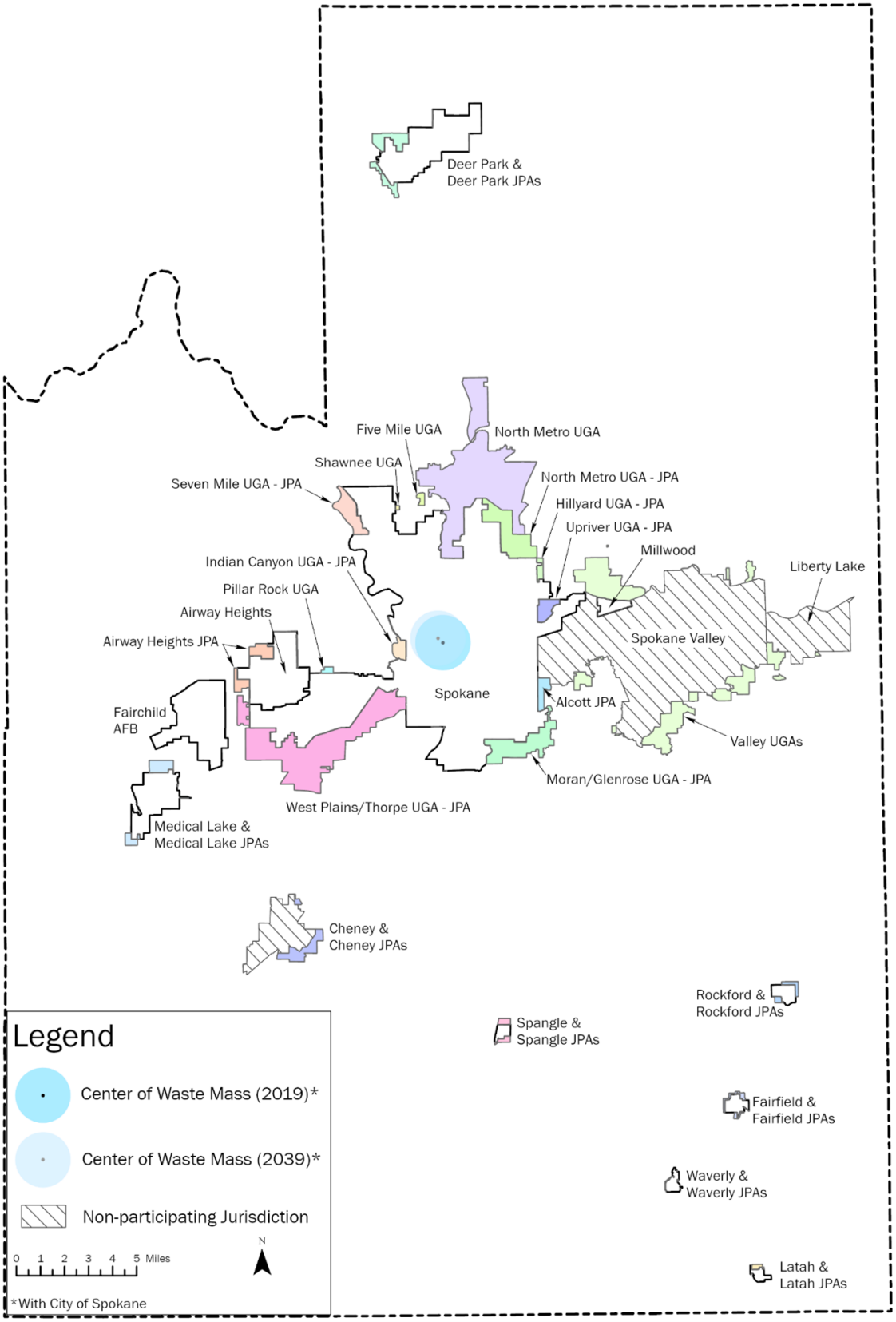
CENTER OF WASTE MASS

As growth in the County continues to increase, the existing transfer stations may require upgrades or expansions, or a completely new transfer station may be needed somewhere else in the County. A center of waste analysis can help with identifying future locations for a new transfer station. The center of mass in physics is the unique point where the weighted relative position of the distributed mass sums to zero. In other words, the distribution of mass is balanced around the center of mass (or sometimes referred to as the centroid).

Exhibit 5.11 shows the center mass for all jurisdictions in the County and the urban growth areas (UGAs) for 2019 and a 20-year projection (2039). As expected, the center is directly over the City of Spokane, due to its central location within the County as well as its waste generation density. The centroid shifts slightly northwest for the 20-year projection with growth expected to occur in the suburbs west and north of the city.

The results of this assessment indicate that the center of waste mass is being supported by the SCRSWS-designated transfer facilities located on the outskirts of the center of mass. A future transfer station would make sense to be located within the main center part of the City of Spokane. However, land use and availability must be considered in this assessment as well as the disposal location. With waste continuing to flow west to the WTE Facility and the Roosevelt Landfill, a reasonable location for a future transfer station would be on the west side of the County.

Exhibit 5.11. Center of Waste Mass (All County Jurisdictions and Urban Growth Areas)



Source: Washington State GIS Database, 2020 | Spokane County Urban Growth

5.5 Miscellaneous Waste Disposal

Miscellaneous waste includes asbestos, incinerator ash from the WTE facility, contaminated soils, biomedical waste and MRW. The quantities of each waste type disposed of from 2015 to 2020 are shown in **Table 5.9**. Data for biomedical waste quantities is not available.

Table 5.9. Miscellaneous Waste Disposal Quantities

Year	Asbestos (Tons)	Ash (Tons)	Contaminated Soils (Tons)	MRW (Tons)
2015	1,552	63,937	1,409	370
2016	1,465	68,892	40,022	343
2017	1,509	64,268	19,659	303
2018	NA	65,445	NA	342
2019	NA	61,539	NA	569
2020	NA	64,060	NA	390

[1]NA = Not Available (data were not available)

MISCELLANEOUS WASTE DISPOSAL LOCATIONS

Asbestos Waste

In Spokane County, the Graham Road Recycling and Disposal Facility is the only landfill that accepts asbestos. The transfer stations and the WTE Facility do not accept or handle asbestos. Much of the asbestos waste that is generated results from demolition and remodeling projects of older homes and buildings in the County.

WTE Facility Ash

Ash is a byproduct of the mass-burn process used at the WTE Facility. Generally, the ash remaining after incineration is about 10 percent of the incoming waste stream by volume. After screening and removing the ferrous metals in the ash, it weighs about 28 percent as much as the incoming waste stream. The ash is loaded into containers and sent by rail to the Roosevelt Landfill for disposal.

Biomedical Waste

Medical treatment and research facilities generate a wide range of special wastes that require specific handling and disposal. Because of the variety of waste streams, several different regulatory agencies at the local, regional, state, and federal levels have regulations pertaining to best management practices while applying their own definitions to waste types. For the purpose of this Plan, biomedical waste is defined as, and is limited to, the types of waste in accordance with RCW 70A.228.010 Biomedical Waste Definitions (Washington State Legislature, 2020).

Biomedical waste, or potentially infectious waste, from facilities in Spokane County is handled and/or treated by one of the following:

- WTE Facility - Potentially infectious household waste is mixed into the MSW stream by residents and small generators and burned with all MSW in the WTE Facility.

- Onsite Treatment - Some facilities have their own infectious waste treatment units that render infectious waste innocuous and then dispose of the treated waste by mixing it in with the facility's solid waste.
- Permitted Haulers - The City of Spokane currently grants a permit to one hauler, Stericycle of Washington, Inc., to collect medical waste and deliver it to a treatment facility.
- Disposal Facilities - Sharps are accepted at the NSLF from commercial generators such as dental offices. Residents may take sharps to the MRW facilities in puncture-resistant containers (not drinking bottles).

Contaminated Soils

Contaminated soils are materials containing contaminants (fuel oil, gasoline, other volatile hydrocarbons, or other hazardous substances) at concentrations that could negatively impact the existing quality of air, waters of the state, soils or sediments, or pose a threat to the health of humans or other living organisms. The Graham Rd. Recycling and Disposal Facility accepts contaminated soils from generators in Spokane County in accordance with the site operating procedures for accepting the material.

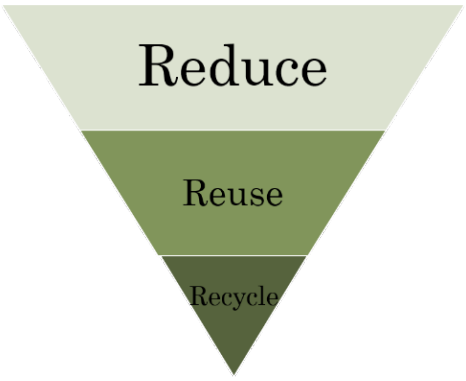
Moderate Risk Waste

MRW is hazardous waste produced in small quantities by households and businesses that are considered Conditionally Exempt Small Quantity Generators (CESQGs). Permanent MRW collection sites are located at the SCRSWS-designated transfer facilities. Residents from participating member jurisdictions can deliver household hazardous waste (HHW) to these facilities. No hazardous waste is accepted from businesses at these sites.

Staff accept, sort, and package HHW dropped off by residents. Certain hazardous materials are placed inside a chemical storage building at each collection site. The storage building is prefabricated and separated into three areas for corrosives, flammables, and poisons. Outside the chemical storage building (but within the covered facility area), waste oil is stored in containers brought by residents, or poured into a larger tank at the WTE MRW site. Drums are used for collection and storage of antifreeze, and auto batteries are stored on a spill-containment pallet. The WTE and County transfer stations contract with MRW transport and disposal vendors to ensure collected MRW is properly disposed. Information about the types of HHW collected at the MRW sites can be found in **Section 6.0 - Programs**.

6.0 Programs

Programs are provided within the SCRSWS to comply with and support waste reduction and diversion efforts. Per RCW 70A.206.005, "waste reduction must become a fundamental strategy of solid waste management" (Washington State Legislature, 2020) Solid waste management plans must consider and plan for waste reduction strategies, along with other requirements (RCW 70A.206.040) (Washington State Legislature, 2020). Current programs fall under the waste hierarchy of reduce, reuse, and recycle, or under other needed services. Outreach and education for these programs are summarized in **Section 6.3**.



6.1 Waste Reduction and Diversion

The state requires local governments to assume primary responsibility for solid waste management and to develop and implement programs with emphasis on waste reduction and recycling. Local solid waste systems have historically relied on the 3 R's of reduce, reuse, and recycle for this purpose. SCRSWS programs to date typically fall under the 3 R's.

REDUCTION

Waste reduction can be defined as reducing initial consumption that creates waste. It can also refer to the reduction of toxics in the community and environment. Even though waste reduction has traditionally been at the top of the waste hierarchy, it has often been overshadowed by the visible and quantifiable nature of recycling. In recent years, there has been a paradigm shift in the waste industry where the waste hierarchy foundation becomes more synergistic in nature and is centered around preventing the impacts from products and services upstream before they become waste. This concept of **sustainable materials management**, while not in current SCRSWS programs, is now part of the Vision and future Goals of this Plan.

The current SCRSWS programs for waste reduction are few when it comes to reducing initial consumption and are mainly focused on keeping toxics out of our environment. Though not solely focused on reduction, all SCRSWS outreach lessons and presentations stress reduction as being the most important of the 3 Rs. Ideas, resources, and tools are available for community use.

DIVERSION (REUSE AND RECYCLING)

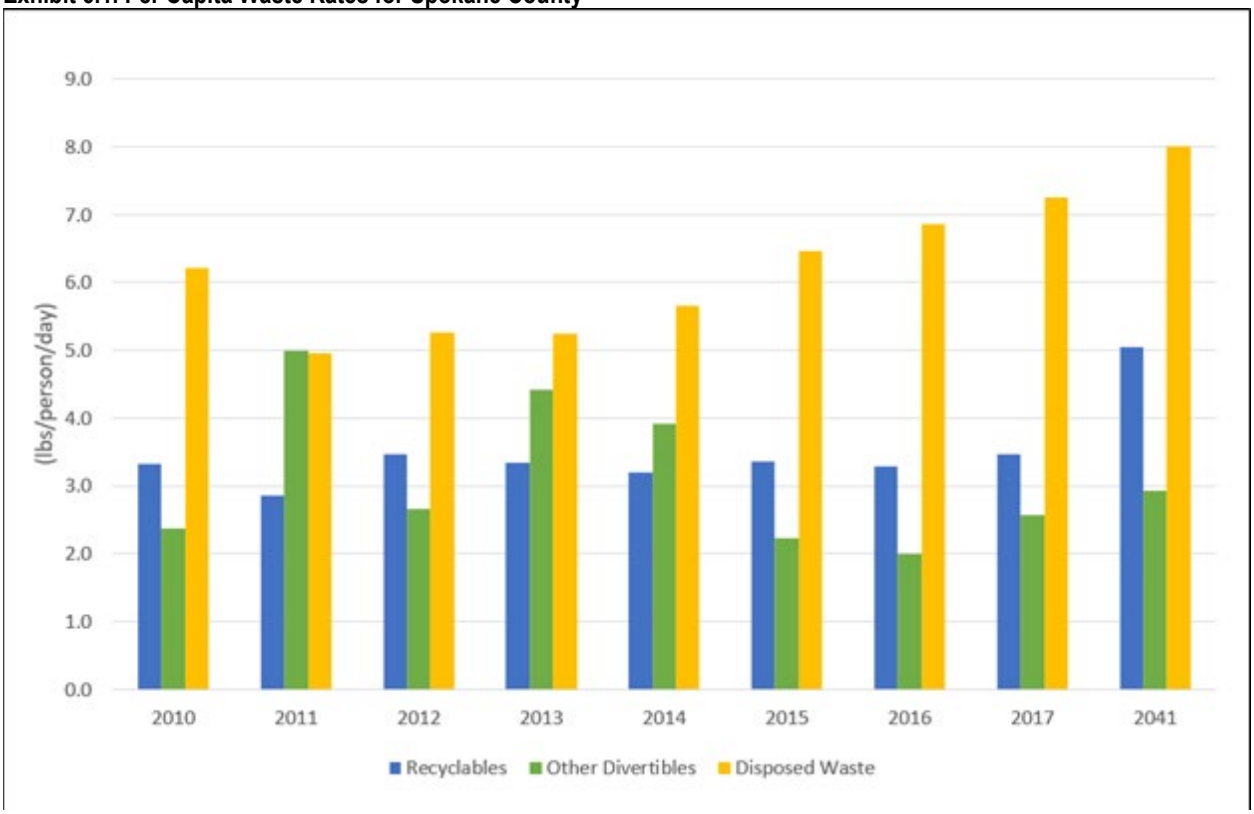
Diversion does not reduce the amount of waste produced, but reduces the amount being disposed of or incinerated by diverting material from disposal sites through reuse and recycling. There are many materials that can be recycled and reused, but not every facility or program within our community can accept all items. Some only accept items periodically, depending upon market demand. At this time, the reuse or recycling of certain materials is not readily

available in Spokane County, because it is not cost effective to collect, transport or find markets for the materials.

6.2 Waste Reduction and Diversion Programs

As referenced in **Appendix C - Waste Characteristics**, **Exhibit C.2** (also inserted below as **Exhibit 6.1**) shows the increasing amount of total wastes generated per person per day in Spokane County. All of these waste types have resource impacts when created, used, and disposed. A sustainable materials management approach would signal that the best way to reduce the impacts associated with these materials is to reduce the amount of total waste generated per person instead of trying to limit impacts through disposal methods.

Exhibit 6.1. Per Capita Waste Rates for Spokane County



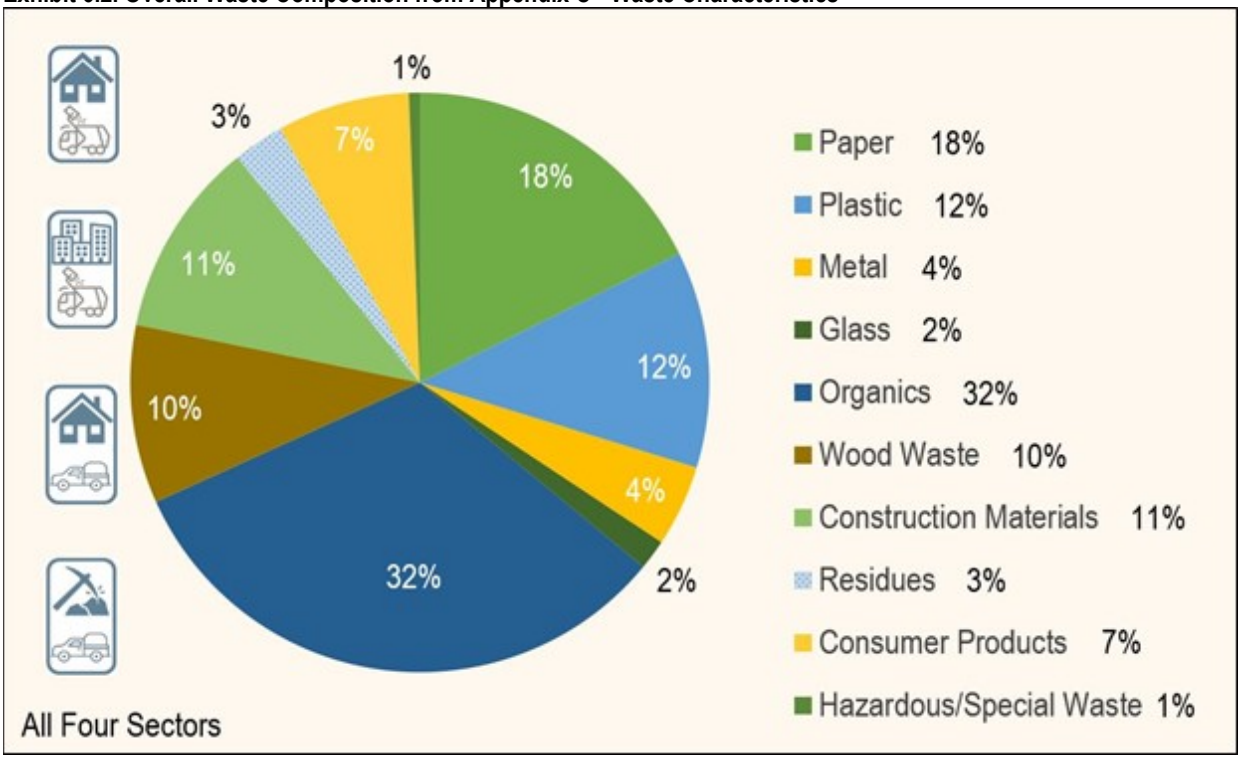
Source: Department of Ecology waste data reports, 2010–2017

When these wastes are generated and used, Spokane County residents and businesses can divert materials through curbside collection programs (where offered) or self-haul them to SCRSWS-designated or private drop-off facilities. Recycling collection services, drop-off facilities, and processing facilities are administered by a variety of entities, including the County, certificated waste haulers, municipal entities, SCRSWS member jurisdictions, and private operators.

The recycling and diversion rates shown in **Exhibit 6.1** are impacted by the national and local recycling markets. Because Spokane County and other counties in eastern Washington are relatively isolated from larger recycling processors, it can be difficult to find consistent and economical markets for commodities such as plastics #3-7 and for glass.

Detailed waste composition graphics are included in **Appendix C - Waste Characteristics**. These graphics and the information they present will be used by the SCRSWS during this planning period to determine where to focus waste reduction and diversion efforts. One example of these graphics is illustrated in **Exhibit 6.2**. This graphic shows the overall composition of discarded waste in the Spokane area, and that there is still much opportunity to reduce and divert materials currently thrown away as garbage. Education and outreach efforts will continue to stress the availability of reuse and recycling opportunities in the community to try and capture these material streams from residents and businesses.

Exhibit 6.2. Overall Waste Composition from Appendix C - Waste Characteristics



Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

Additional information gathered from the Waste Characteristic charts includes:

- Projected recycling and diversion rates are expected to continue to grow.
- Waste disposal is projected to grow at a slightly higher rate than population growth (1.3% versus 1.0% respectively).
- The largest portion of the waste is produced and collected from the commercial sector.
- Organics and paper make up half of the waste disposed in the SCRSWS.
- Of all the residential waste disposed of, almost half is organics.
- Half of all material recycled at the transfer stations is paper products (cardboard, newspaper and mixed paper).
- Recyclable paper makes up 62% of all recyclables left in the garbage.

CURBSIDE COLLECTION

Recyclable Materials

Residents and businesses in unincorporated areas of Spokane County are provided curbside recyclable material collection services through WUTC certificated hauling companies as shown in **Table 6.1**. Incorporated cities, towns, and Fairchild AFB provide recyclable material collection services and programs through either a WUTC certificated hauling company or through a contract with a certificated hauler. More information about regional hauling contractors is found in **Section 5.0 - Solid Waste Facilities and Waste Flow**.

Table 6.1. Member Jurisdictions and their Residential Curbside Recycling Services Providers

Jurisdiction	Recycling Curbside Collection	Organics Curbside Collection	Collection Company
Airway Heights	Yes	Subscription	Waste Management
Deer Park	Yes	Subscription	Waste Management
Fairchild AFB	Yes	Yes	Sunshine Disposal
Fairfield	No	No	Empire Disposal
Latah	No	No	Empire Disposal
Medical Lake	Yes	No	Sunshine Disposal
Millwood	Yes	Subscription	Waste Management
Rockford	No	No	Empire Disposal
Spangle	No	No	Empire Disposal
Spokane	Yes	Subscription	City of Spokane Solid Waste Services
Unincorporated County	Subscription	Subscription	Empire Disposal Sunshine Disposal Waste Management
Waverly	No	No	Empire Disposal

Recyclable Material Handling Facilities

Regardless of the service provider, commingled recyclable materials collected at curbside are transported to the Waste Management-owned and operated Spokane Materials and

Recycling Technology (SMaRT) facility (pictured above), located adjacent to the WTE, where they are separated and processed for markets.

Recycling Service Level Designation

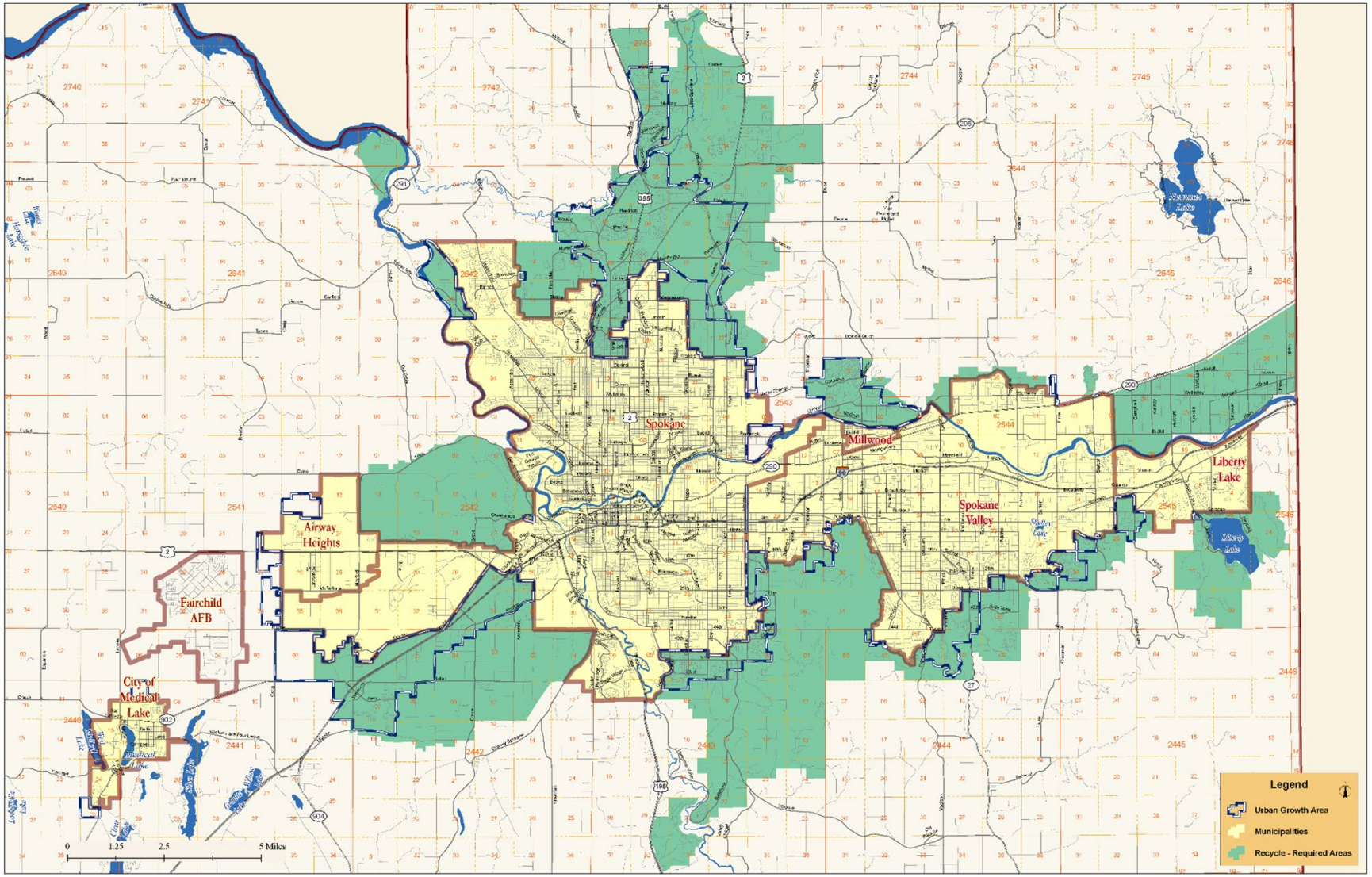
Not all areas in the unincorporated Spokane County have curbside recycling service available. Each county in the state is required to establish "minimum service levels" to provide uniform services that are economically viable within more populated areas of the county (RCW 70A.206.050) (Washington State Legislature, 2020). The minimum service levels for Spokane County are established in Spokane County Code 8.58 and are referred to as Recycling Service Levels (Spokane County, WA, 2011). A service area map designating these areas is presented in Exhibit 6.3.

- When single family residents within this area subscribe to curbside garbage service, they are mandatorily required to pay for recycling curbside service as well, whether they use it or not.
- Multifamily residences in this area are allowed curbside collection on a subscription basis, and therefore it is not mandatory.
- Yard and food waste collection, also known as “Organics Collection” is not currently provided for in the minimum service level for Spokane County.

Changes to the Recycling Service Levels may occur when the board of county commissioners reviews all citizen petitions to redefine the urban areas identified on the service area map in Exhibit 6.3, per County Code 8.58 (Spokane County, WA, 2011).

The County gives discretion to haulers who provide recycling service to commercial, industrial, multifamily and residential customers to halt service if recycling containers become too contaminated and attempts to educate customers have failed. Chapter 70A.205 RCW requires monitoring programs for the collection of source-separated materials from non-residential sources where there is sufficient density to economically sustain a commercial collection program. Spokane County satisfies this requirement by working cooperatively with Ecology and utilizing the data that they collect through the annual recycling survey.

Exhibit 6.3 Designated Mandatory Recycling Service Areas



Source: Spokane County Environmental Services GIS, 2019

The County's Recycling Service Level Ordinance designates recyclable materials, shown in Table 6.2, as either required or optional for curbside collection. Curbside collection service providers do not have to collect items from the optional portion of this list.

Table 6.2. Designated Recyclables

Required Collection
Newspaper (including magazines, catalogs and telephone books)
Cardboard boxes (including brown paper bags)
Aluminum cans
Steel/tin cans
#1 and #2 plastic jugs and beverage containers
Optional Collection
Mixed paper (including office paper, junk mail, cereal boxes, paper cartons and paper bags)
Aluminum foil and food trays
#3 thru #7 plastic containers (including beverage containers, plastic jars and tubs, plastic trays and cups, plastic plant (nursery) pots and plastic pill containers over 4 ounces
Glass bottles and jars (clear and colored)
Household batteries, including rechargeable batteries
Automotive batteries
Cell phones, including batteries and chargers

Member jurisdictions with contracted curbside recyclable material collection typically require mandatory recycling within jurisdictional boundaries.

Rate Incentives for Curbside Garbage Service

Rate incentives, also called Pay as You Throw (PAYT), directly promote diversion by creating rate structures so that residents who throw away more garbage, pay more. Residents are charged prescribed sizes and/or quantity of their waste containers, tonnage, and the costs of frequent hauling. When a customer recycles accepted materials, smaller and/or fewer garbage containers are needed, resulting in lower garbage disposal charges. This monetary incentive rewards the customer for reducing the amount of garbage produced.

Organics

Food scraps, food-soiled paper, and yard debris are collected curbside by the same method as recyclable materials in the "Organics" program. Once collected, these materials are taken to a commercial composting facility, such as Barr-Tech (barr-tech.net), to be made into a soil amendment.

Residential Organics can be picked up in the unincorporated areas of the County, and in cities and other jurisdictions by the same haulers that provide garbage service in those areas.

Commercial Organics services are offered by both Waste Management and Sunshine Disposal, and by City of Spokane Solid Waste Services for those within city limits. The food waste services are mainly used by grocery stores, food banks, organic processors, schools, and other public institutions.

Moderate Risk Waste (MRW)/Household Hazardous Waste (HHW)

Curbside pickup of MRW and HHW is managed through private entities that require scheduled appointments and assessed fees for assistance with their waste. There are mail-in options available as well through private entities. Use the Spokane Waste and Recycle Directory (spokanewastedirectory.org) to identify the most current list of providers.

A summary of all curbside collection services for the SCRSWS is summarized in **Table 6.3.**

Table 6.3. Inventory of Curbside Service for Recyclables and Organics

Services	Airway Heights	Deer Park	Fairchild AFB	Fairfield	Latah	Medical Lake	Millwood	Rockford	Spangle	Spokane	Unincorporated Spokane County[1]	Waverly
Recycling												
Residential Curbside Collection	x	x	x			x	x			x	x	
Commercial Curbside Collection	x	x	x			x	x			x	x	
Organics												
Residential Curbside Collection - Yard and Food	x	x	x			x	x			x	x	
Commercial Curbside Collection - Yard and Food	x	x				x	x			x	x	

[1]Residential Curbside Collection of Recycling and Organics is offered as a subscription-based service in urban areas of Unincorporated Spokane County.

SELF-HAUL DROP OFF

North County and Valley Transfer Stations and the WTE Facility

The three SCRSWS-designated facilities which include the two County transfer stations—North County and Valley, and the City of Spokane WTE Facility (see **Section 5.0 - Solid Waste Facilities and Waste Flow**) provide the following services for all member jurisdictions within the SCRSWS.

Recyclable Materials

Residential drop-off opportunities for recyclable materials are provided for member jurisdictions at SCRSWS-designated facilities. These drop off areas are open during the same hours as the garbage disposal area. The recycling facilities are accessed without crossing the scales, and the materials are accepted free of charge. More information on the composition of recyclable materials collected at the SCRSWS-designated facilities be found in **Appendix C - Waste Characteristics**.

White Goods and Large Appliance Recycling

Appliances and white goods can be dropped off at the three SCRSWS-designated facilities for recycling. The items are directed to the solid waste tipping floor where they are sorted and recycled as scrap metal after the refrigerant is recovered and other hazardous components (mercury switches, capacitors with PCBs) are removed by trained staff. The regular solid waste rate is charged for these white goods and large appliances, because they require special handling.

Organics/Yard Waste

Organics and yard waste (Organics Program) drop off is provided at the SCRSWS-designated facilities for both residential and commercial customers. At each SCRSWS-designated facility, the Organics tipping fee is less than the fee for regular trash which provides a financial incentive for recycling of organics.

Nonprofit Tip Fees

As an incentive for nonprofit businesses to include waste reduction or recycling into their operations, a 35% reduction in the tip fee rate is offered to those with a 501(c)(3) status at the North and Valley transfer stations.

Moderate Risk Waste

Moderate Risk Waste (MRW) is dangerous waste produced in small quantities. Some materials collected through the MRW program can be recycled, such as used oil and paints, while other materials must be properly disposed. Because of the hazards that these materials present, the SCRSWS believes it important to categorize MRW in waste reduction and diversion programs to prevent illegal dumping in the environment or inclusion in MSW disposal.

Residential

When dangerous waste is produced by households it is considered Household Hazardous Waste (HHW). Permanent HHW collection sites are located at the three SCRSWS-designated facilities and are adjacent to the recyclable material drop off areas. These drop off services are free to residents of member jurisdictions. If an agreement is made with a non-participating jurisdiction, that jurisdiction's residents may use the SCRSWS-designated facilities. There are discrepancies when it comes to types and volumes of materials accepted at the three SCRSWS-designated facilities. There are also differences at the sites for the hours and days when materials are accepted. The current accepted material lists and hours/days of operations can be found at spokanecounty.org/4617/Solid-Waste.

Business

Businesses that generate less than 220 pounds of dangerous waste, or less than 2.2 pounds of certain kinds of highly toxic waste in any month are considered Small Quantity Generators (SQGs). Historically, SQGs were able to deliver MRW to the North County and Valley transfer stations by appointment and were charged for this service through a vendor that was onsite. Currently, all SQG's must set up an appointment and meet directly with the MRW disposal company. Businesses can also be medium quantity generators (MQG) and large quantity generators (LQG), depending on the waste generated in a month. A total of 301 active hazardous waste generators in the SCRSWS are identified with an EPA/State identification number. A list of dangerous waste generators and Hazardous Waste Transportation, Storage, Disposal and Recycling Companies within the SCRSWS can be found in **Appendix G**. To receive updated information on generators within the SCRSWS contact the Ecology Eastern Regional Office at (509)-329-3400, or 4601 N. Monroe St., Spokane, WA 99205.

In accordance with RCW 70A.300.370 Spokane County has designated within its zoning code to allow for solid waste and MRW storage and treatment facilities, as shown in **Table 6.4 and Table 6.5**.

Table 6.4. Spokane County Industrial Zones Matrix

Industrial Zones Matrix, from Spokane County Zoning Code 14.614.220	Light Industrial	Heavy Industrial
Industrial		
Commercial composting storage/processing (EPF, LI Zones)	N	CU
Flammable liquid/gas storage	N	P
Utilities/Facilities		
Hazardous waste treatment and storage facilities, off-site	N	L
Hazardous waste treatment and storage facilities, on-site	L	L
Incinerator	CU	CU
Landfill (EPF, LI Zones)	N	CU
Landfill, inert waste disposal facility	N	CU
Solid waste hauler	CU	P
Solid waste recycling/transfer site	L	L

Table 6.5. Spokane County Commercial Zones Matrix

Commercial Zones Matrix, from Spokane County Zoning Code 14.612.220	Neighborhood Commercial	Community Commercial	Regional Commercial	LDA Commercial
Utilities and Facilities				
Incinerator (EPF)	N	N	N	N
Landfill (EPF)	N	N	N	N
Recycling collection center	N	P	P	P
Solid waste recycling/transfer site (EPF, NC, CC Zones)	N	N	CU	CU

Key:

CU - Conditional Use

L - Limited Use

N - Not Permitted

P - Permitted Use

CC - Community Commercial

EPF - Essential Public Facilities

NC - Neighborhood Commercial

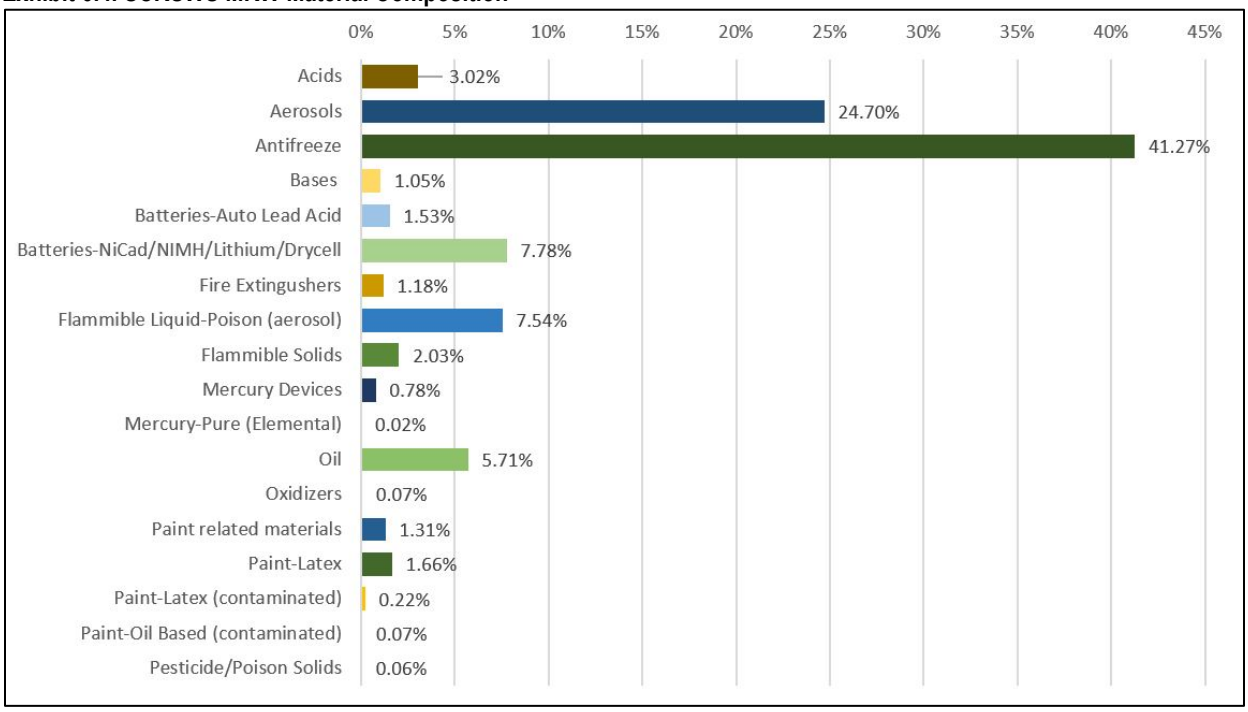
Source: Spokane County Zoning Code, https://www.spokanecounty.org/720/Codes-Ordinances

Spokane County has adopted Code 8.60 – Used Oil Recycling which provides for the enforcement of the sign and container ordinances required by RCW 70A.224.040.

As outlined in **Goal 2: Efficient Services** and in **Goal 8: Moderate Risk Waste Reduction**, the County endeavors to responsibly deal with MRW through education and outreach and technical assistance and by providing residents with the ability to properly dispose of MRW.

HHW is collected, recycled, or properly disposed of at the SCRSWS-designated facilities. The breakdown of the MRW collected can be seen in **Exhibit 6.4**. Almost half of the HHW collected is used antifreeze. These totals are based on 2020 data from collection reports provided by the County and the WTE facility.

Exhibit 6.4. SCRSWS MRW Material Composition



Source: SCRSWS Waste and Recycling Records, 2020

Handling, Reducing, Recycling and Disposing of MRW

To prevent harm to human health and the environment, a primary focus of staff is load screening to assure the safety of the waste stream arriving at the SCRSWS-designated facilities and subsequently to the SCRSWS-designated disposal sites. The load inspection program identifies non-acceptable wastes including but not limited to MRW, such as asbestos, regulated quantities of hazardous waste, infectious waste, large containers, non-processible material, recyclables, large quantities of liquids, contaminated soils, and sludge. If unacceptable wastes such as hazardous waste are discovered through load inspection, an effort is made to identify the sources of the waste, notify responsible parties if possible, and arrange for proper waste disposal. The load screening program also includes an emergency response plan. The plan identifies procedures for response to injuries, fires and explosions, hazardous material spills, and release of toxic gases. Training on emergency response procedures is provided to all facility employees.

At the permanent HHW collection sites, staff accept, sort, and package wastes dropped off by residents of member jurisdictions. Certain hazardous materials are placed inside a chemical storage building at each collection site. The storage building is prefabricated and separated into three compartments for corrosives, flammables, and poisons. Within each compartment, chemicals are stored on shelves, and up to three 55-gallon drums are placed

for lab packing, loose packing, or bulking. Staff are trained to handle MRW through best management practices (BMPs) outlined in RCW 70A.224.030 and provided by Ecology.

Some types of MRW such as electronic waste, mercury-containing lights, pharmaceuticals, and paint are handled through Washington's Product Stewardship Programs. More information about these can be found in Section 6 - PRODUCT STEWARDSHIP PROGRAMS.

The WTE HHW collection site also offers a reuse program where customers can take leftover products, such as paints, stains, pesticides, waxes and cleaners dropped off by others. Products are carefully screened by operations staff and do not include old or unidentifiable products or any restricted or banned pesticides.

Flammable Liquids
Depending on availability of disposal methods, flammable liquids other than motor oil and antifreeze are shipped for fuel blending in cement kilns or are routed to waste to energy facilities for incineration.

Aerosols
Aerosol cans are collected and routed to a facility that punctures the cans, bulks the contents for proper disposal and then recycles the cans.

Batteries
All three SCRSWS HHW collection sites accept batteries. Auto batteries are stored on spill pallets. Staff inspect and tape ends of batteries to prevent sparks or corrosion. Auto and rechargeable batteries are shipped to a battery recycler who breaks down the components to make new batteries. Single-use batteries that do not contain mercury are processed as MSW at the SCRSWS-designated facilities.

Other MRW
Other wastes, such as poisons, corrosives, oxidizers, and aerosols, are lab-packed and shipped to a hazardous waste incinerator.

Oil and Antifreeze
Outside the chemical storage building (but within the covered facility) at the WTE HHW collection site, used oil is stored in an 846-gallon tank and four 55-gallon drums are set up for antifreeze collection. At the North and Valley transfer stations, staff do not pour or combine material and instead loose pack containers of used oil and antifreeze dropped off by residents. There are also numerous business sites throughout the county where residents can drop off used oil and antifreeze. Most of these sites are located at automotive service, repair, or supply stores. The number and location of sites changes frequently and there is not a maintained site list. The County has determined that between the three permanent HHW collection sites and the network of business sites throughout the County that there are adequate facilities to meet local goals of used oil recycling and re-refining.

Motor oil and antifreeze collected at SCRSWS permanent collection sites is re-refined into new oils and coolants in Oregon and Washington. Consistent with Department of Ecology guidelines, HHW collection sites prohibit the disposal of non-household-generated used oil;

limit the amount of used oil deposited to five gallons per household per day; ensure protection against leaks and spills through adherence to strict operational protocols.

MRW Education and Outreach

MRW education is provided to residents of member jurisdictions through a variety of approaches and is integrated into the other waste reduction and recycling education programs discussed in **Section 6.3 - Outreach and Education.** Specific to MRW, education and outreach promotes responsible methods of reducing, handling, recycling, and disposing of wastes, and also highlights the potential hazards to human health and the environment that can result from improper use and disposal/illegal dumping of MRW.

Metals Reclamation Conducted at WTE

Ferrous metals that do not burn during the combustion process at the WTE facility are magnetically removed onsite from the ash and sent to be recycled. This process captures the still-valuable metals from the ash and avoids the added costs of disposing of this material into the ash monofill at the Roosevelt Regional Landfill. Since 2013 a private company has been recovering non-ferrous metals from the ash monofill.

Private Facilities

There are a variety of private recyclable material drop off locations and buy back facilities that serve the county. Some focus on particular commodities while others accept a variety of material types. Many of these local private facilities accept material from both residents and businesses and may include hauling in their commercial services. There are several reclamation facilities as well that also allow for inert waste disposal (see **Section 5.3**).

The facilities, and materials that are accepted by each, change dynamically with market values. The Spokane Waste and Recycle Directory is an excellent tool for finding current drop off locations and buy back facilities. This directory can be found at spokanewastedirectory.org.

Collection Events

The SCRSWS provides collection events for both Organics and HHW when funding is adequate. The collection events are centered in more rural areas where residents are usually required to travel longer distances when transporting their materials to SCRSWS-designated facilities. The City of Spokane offers collection events as part of its Neighborhood Clean Up program, and a jurisdiction can negotiate collection events as part of their contract with their selected solid waste service provider.

MISCELLANEOUS WASTE DIVERSION IN OUR COMMUNITY

Many businesses and organizations within our community are actively involved in diversion of miscellaneous materials from the waste stream. Materials ranging from used cooking oil to those from construction and demolition activities (e.g.: sheetrock, asphalt, concrete) can be diverted by local businesses and reused/recycled. In addition, there are many organizations and businesses that provide the reuse of materials through thrift stores and building supply stores. The Spokane Waste and Recycle Directory is an excellent tool for finding drop off locations and buy back facilities that assist in these diversion efforts, spokanewastedirectory.org.

Other notable diversion efforts for miscellaneous wastes produced within our community are summarized here.

Gypsum

Drywall is made primarily from the mineral gypsum. Drywall can be recycled by separating the paper backing from the gypsum and grinding the gypsum into a powder or turning it into pellets which can be used for various applications. Gypsum can be used as an agricultural additive and can also be remade into recycled drywall. Greenacres Gypsum & Lime is one company within the region that recycles drywall and creates additional products from gypsum.

Wood Waste

Several wood waste recycling businesses serve both private residences and commercial customers, including those in the construction, demolition, and land-clearing industries. They are particularly noteworthy for reducing waste and recycling wood waste. Some wood is burned onsite, used as firewood, ground into mulch, or made into fiber products. Wood waste includes sawdust, chips, shavings, bark, pulp, hog fuel, and log sort yard waste, but it does not include wood pieces or particles containing paint, laminates, bonding agents or chemical preservatives. Wood waste recycling businesses can be found through spokanewastedirectory.org. These businesses are not allowed to accept non-woody yard debris feedstock such as leaves and grass clippings because they are putrescible. All sites charge to accept materials.

Biosolids

Biosolids are the nutrient-rich organic product of wastewater treatment. A beneficial resource, biosolids contain essential plant nutrients and organic matter and are typically recycled as a fertilizer and soil amendments. Biosolids are not processed through the SCRSWS facilities or programs and instead are managed directly by the SCRSWS member jurisdictions that have facilities producing them.

Paper Sludge

Inland Empire Paper Company (IEP) produces approximately 50 dry tons per day of sludge that is produced as a by-product from its paper-making process. The sludge consists primarily of “paper sludge” from wood and paper fiber fines and residuals and removed “bio-solids”. IEP manages the diversion of this material from the waste stream.

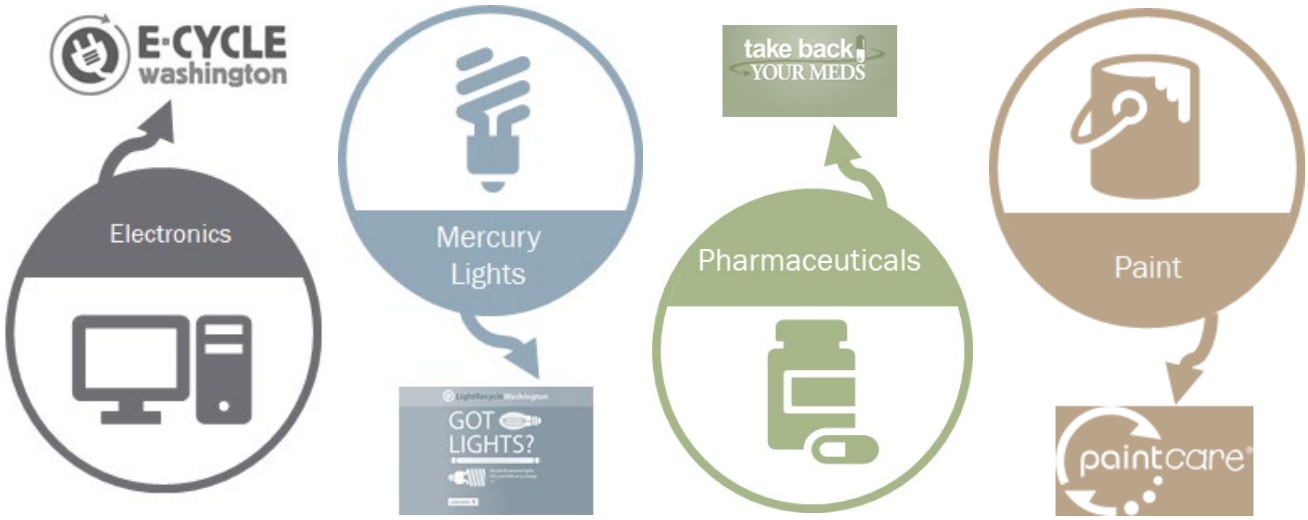
Tires

In 2005, the Waste Tire Removal Account was created and is managed by the Department of Ecology to help clean up illegally discarded tires and to prevent illegal tire dumping. The account has an annual budget of approximately $500,000, funded by a $1 fee charged for each new vehicle tire sold in Washington. Spokane County applies each year to host one or two tire collection events at different locations within the SCRSWS.

PRODUCT STEWARDSHIP PROGRAMS

Product stewardship is an environmental management strategy that directs those involved in the design, production, sale and use of a product to take responsibility for minimizing the product's impact to human health and the natural environment. Extended Producer Responsibility (EPR) is a core principle of product stewardship, where the producer's responsibility for their product extends to the post-consumer management of that product and includes the responsible management of that product and its packaging at the end of its useful life. EPR redirects the financial burden of post-consumer management of products from local government and rate payers to the producers of those products, creating an incentive for producers to design their products for waste reduction and recyclability. These programs are not managed by local governments but can impact them. The SCRSWS is actively engaged in reviewing legislation pertaining to these types of programs through involvement with the Washington Association of County Solid Waste Managers (WACSWM).

Current Product Stewardship Programs in our Community



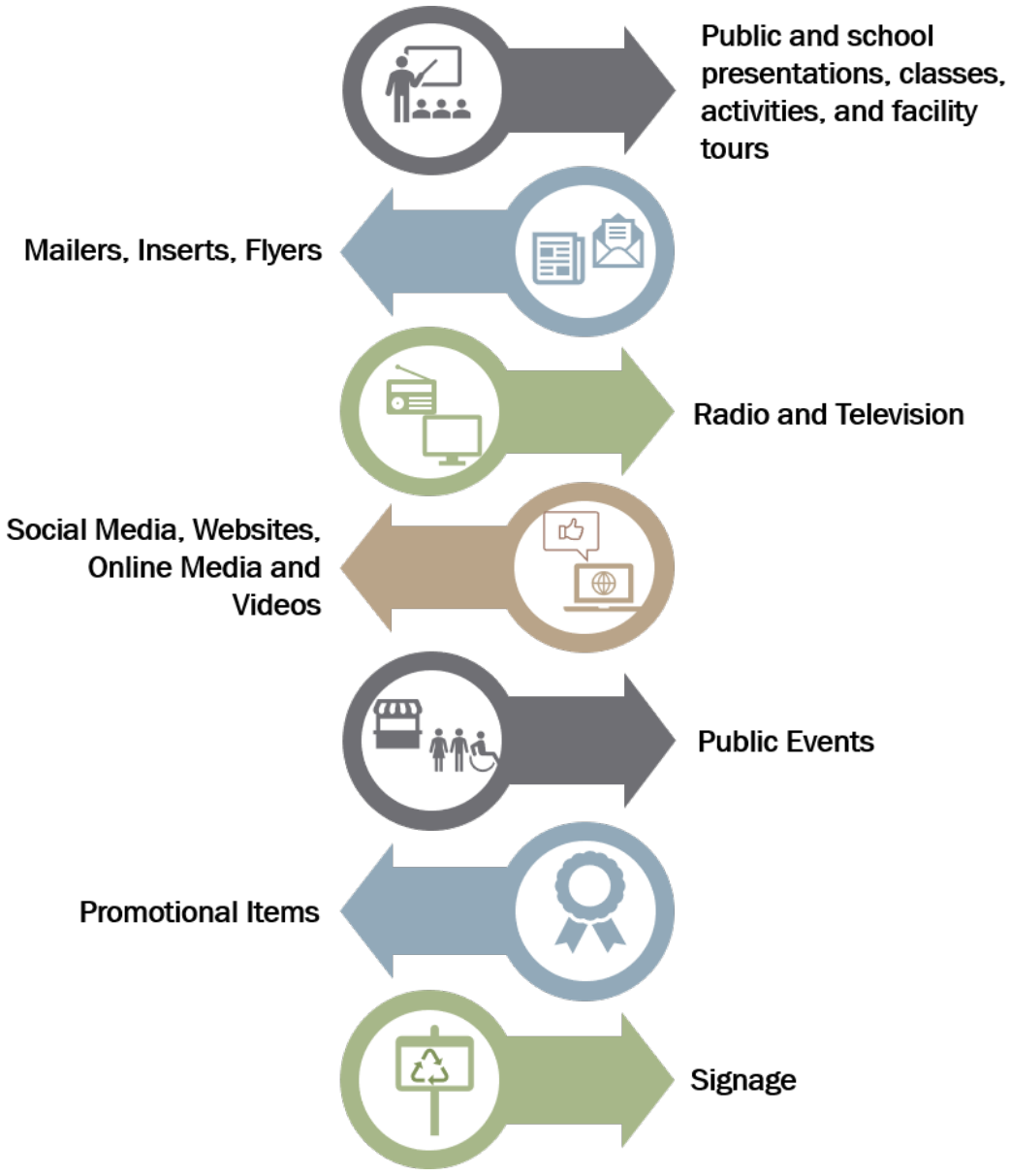
Ecyclewashington.org Lightrecycle.org Takebackyourmeds.org Paintcare.org

6.3 Outreach and Education

Education is critical to implementing new and maintaining current solid waste programs. Without education and outreach, consumer behaviors often inhibit correct and efficient program operations. According to the 2019 State of Curbside report produced by The Recycling Partnership, on average $1.06 per resident is spent on recycling education and outreach programs (The Recycling Partnership, 2020). Though less than half of the solid waste programs in the country have dedicated staff and resources for recycling, those that do demonstrate higher recycling rates with lower contamination.

MATERIALS AND METHODS

The SCRSWS uses many avenues to disseminate information to our local community. The SCRSWS uses multiple forms of communication to reach its customers.



These communication avenues can be stand-alone messages or used in conjunction with any of the programs and services the SCRSWS and its partners provide. Some member jurisdictions have notable waste reduction and recycling programs in addition to what is provided by the SCRSWS. These programs are listed in **Appendix F – Jurisdiction-Specific Programs**.

COLLABORATION

The SCRSWS relies on collaborative efforts with member jurisdictions, agencies, and organizations to combine resources and efforts, as well as create harmonization of messages within our community. These partnerships are a vital part of outreach to our region.

Spokane River Forum

The Spokane River Forum (SRF) is a nonprofit organization within our community that promotes sustaining a healthy environment while meeting the needs of a growing population. SRF manages the Spokane Kootenai Waste and Recycle Directory and the EnviroCertified Program. The SCRSWS partnership with the Spokane River Forum is a crucial component for outreach within our region when it comes to proper disposal and diversion of waste.

Spokane/Kootenai Waste and Recycle Directory

The SCRSWS, along with many other agencies and organizations, sponsors a local waste directory with the objective of keeping our community and environment healthy. The Waste Directory links businesses and residents to over 400 service providers that can take specific types of materials for recycling, reuse, and disposal and is an important part of our community's waste reduction program. (spokanewastedirectory.org)

EnviroCertified Program

Sponsored by the SCRSWS along with many other agencies and organizations, EnviroCertified is a voluntary program offered to local small businesses. The program certifies businesses that have practices and policies in place to properly manage hazardous wastes and conserve resources. SRHD's Local Source Control and Pollution Prevention specialists provide free on-site recommendations for environmental best practices. A unique partnership between agencies and non-profits provides participants with public recognition and advertising.

Eco Team

The Eco Team is a group of employees from Spokane County Solid Waste, Water Resources, Stormwater, and Public Works along with the City of Spokane Solid Waste. The Eco Team was founded on the realization that environmental issues affecting our community transcend departments and working together can increase efficiency and efforts of messages to our community. Together, the Eco Team has championed projects such as the Load Warrior campaign, the Cigarette Litter Prevention Program, and has helped with workshops, education, and outreach.

EnviroKids' Club

EnviroKids' Club is an educational group for children in grades Kindergarten - 6th, who live in Spokane County. Kids team up to explore all parts of the environment: air, water, weather, garbage and recycling, plants and animals, and you and your environment. The Spokane EnviroKids Club is a cooperative program of the following agencies: City of Spokane Solid Waste Department, City of Spokane Water Department, National Weather Service; Spokane Aquifer Joint Board, Spokane Conservation District, Spokane Regional Clean Air Agency, SCRSWS, Spokane County Stormwater Utility, and Spokane County Water Resources.

Event Recycling

Free tools are available to help event planners offer recycling at their local events. Event Recycling provides collection receptacles, supplies, and information necessary to plan environmentally friendly events and meet the Washington State Recycling Laws. Organizations may borrow Clearstream recycling collection containers from the Equipment Lending Library. The recycling containers are designed to collect aluminum cans and plastic bottles. Compost containers allow for collection of food scraps and food-soiled paper. More information on this program can be found at spokanecounty.org/2011/Event-Recycling.

Geiger Litter Crew

The Geiger Work Crew, a program managed by Spokane County Detention Services, helps keep Spokane County clean thanks in part to funding from Ecology's Community Litter Cleanup Program. The SCRSWS partners with the Geiger Work Crew to provide disposal and outreach in return for services for litter pickup within our member jurisdictions and other SCRSWS programs.

Local Source Control/Pollution Prevention -SRHD

The Spokane Regional Health District Local Source Control and Pollution Prevention Program promotes toxic reduction strategies by offering free, hands-on assistance to help businesses and multifamily housing find and resolve potential pollution issues. The SCRSWS partners with the Local Source Control Program by providing outreach materials for distribution through their work. More information can be found at srhd.org/programs-and-services/local-source-control-pollution-prevention.

Master Composters/Recyclers

The Master Composter/Recycler program is a two-fold program that provides education and outreach. It is a six-week course that residents can sign up for to learn about reducing waste through home composting methods and responsible recycling habits. Once students complete the required classes, they are asked to contribute 40 hours of volunteer service to share their knowledge and inform others at community events, fairs, schools, working with online and social media, or working behind the scenes. Their contribution and collaborative work is vital when it comes to community outreach. More information can be found at spokanecounty.org/2024/Master-Composter-Program.

Recycling Task Force

The Recycling Task Force is a collaborative group made up of several organizations and individuals involved in proper recycling outreach and education for Spokane County, including: Waste Management, City of Spokane Solid Waste, Spokane County Solid Waste,

the Washington Department of Ecology, the Spokane Aquifer Joint Board, and others. The Recycling Task Force was created to harmonize the group's "recycle right" messaging to increase program consistency and efficiency, coordinate funding and efforts to optimize results and available resources, utilize diverse members' perspectives to generate consistent and cohesive messaging, work together to develop great content, and showcase what happens at Material Recovery Facilities (MRFs) so residents understand what happens to recycling after it leaves the curb.

6.4 Contamination Reduction and Outreach Plan

The Spokane County Regional Solid Waste System (SCRSWS) Contamination Reduction and Outreach Plan (CROP) responds to requirements in House Bill 1543, which was passed by the Washington State Legislature, signed by Governor Inslee, and took effect July 1, 2019. Per the legislature, the CROP addresses reducing contamination in recycling programs for single-family and multi-family residences, commercial locations and drop boxes.

The SCRSWS CROP is organized to respond to the (a) through (e) requirements of RCW 70A.205.045(10).

REQUIREMENT (A): A LIST OF ACTIONS FOR REDUCING CONTAMINATION IN RECYCLING PROGRAMS FOR SINGLE-FAMILY AND MULTIPLE-FAMILY RESIDENCES, COMMERCIAL LOCATIONS, AND DROP BOXES DEPENDING ON THE JURISDICTIONS SYSTEM COMPONENTS.

The following efforts within Spokane County are focused on preventing recycling contamination.

Spokane Waste and Recycle Directory

The Spokane Waste and Recycle Directory (spokanewastedirectory.org) provides sophisticated search and filter technology for residents and businesses to easily find information on 226 recyclable materials and 427 recycling service providers. In 2020, the directory was visited by 57,246 users.

SCRSWS Education and Outreach

Many of the education and outreach programs provided by Spokane County include waste reduction and recycling contamination reduction messages. More detail on these education and outreach offerings can be found in **Section 6.3 - Outreach and Education**.

SCRSWS Recycling Task Force

The number and diversity of jurisdictions and haulers, services available, and recyclables collected in Spokane County led to creation of the SCRSWS Recycling Task Force (Task Force) in 2019.

Task Force goals are to:

- Share and encourage consistency in accepted recyclable materials and key contaminants lists.

- Harmonize recycling outreach material to provide a consistent message to customers to reduce recycling contamination.
- Utilize diverse members' perspectives to generate consistent, simple, and cohesive messaging regarding acceptable and unacceptable recycling practices.
- Share data collection results regarding costs and key contaminants, including leveraging resources to conduct studies when possible.
- Share enforcement strategies and results.
- Coordinate funding, resources, and efforts to optimize results, minimize customer costs and improve end user marketability.
- Showcase the Material Recovery Facilities (MRFs) so people understand what happens to recycling after it leaves the curb.

The Task Force developed and maintains a google drive with an array of planning documents, outreach calendars, research materials, and print, video, web site and social media resources. Table 6.6 shows Task Force membership.

Table 6.6. Task Force Membership

Name	Organization	Title
Austin Stewart	Spokane County Solid Waste	Water Resources Specialist
Lindsay Chapman	Spokane County Solid Waste	Project Manager
Kris Major	City of Spokane Solid Waste Disposal	Education Coordinator
Tonilee Hanson	Spokane River Forum	Program Director
Steven Gimpel	Washington Dept. of Ecology	Planner/Grants Specialist
Heather Church	Washington Dept. of Ecology	Materials Management Coordinator
Joel Kohlstedt	Waste Management	Recycling Education Project Manager
Tami Haggerty	Waste Management	Education and Outreach Coordinator

Task Force meetings and actions are also informed by member interactions with the Spokane County Solid Waste Advisory Committee (SWAC), elected officials, the Washington Association of County Solid Waste Managers (WACSWM), the Recycling Partnership, recycling haulers, collectors and processors, and organizations representing homeowners, tenants, and multifamily and business interests.

In addition to these regular actions to reduce recycling contamination, there are occasional, funding-dependent activities carried out by Spokane County, haulers, member jurisdictions and local community groups. Examples include but are not limited to:

- Cart tagging
- Utility bill inserts
- Social media campaigns
- Website information and blog posts
- TV and radio ads
- Facility tours

REQUIREMENT (B): A LIST OF KEY CONTAMINANTS IDENTIFIED BY THE JURISDICTION OR IDENTIFIED BY THE DEPARTMENT.

The SCRSWS, with input from the SWAC, Task Force and other stakeholders, identified the following key contaminants, shown on the left side of **Table 6.7**. The right side of **Table 6.7** lists similar contaminants taken from the state CROP, highlighting the similarities in recycling contamination across the state.

Table 6.7. Key Contaminants

SCRSWS Identified Recycling Contaminants	State CROP Identified Contaminants
Plastic bags and film (including bagged recycling and/or garbage)	Plastic bags and film
	Bagged garbage
Tanglers (hoses, wires, Christmas lights, ropes, clothes, etc.)	Tanglers (rope, cords, chains, hoses, etc.)
Food and liquid	Food and liquid
Batteries	
Sharps/Needles	Hypodermic needles
To-go coffee cups and plastic lids	Non-program plastics including clamshells and polystyrene foam
	Shredded paper

The data indicates that Spokane County, like other regions in the state, is challenged by increasing amounts of contamination related to conversion to single-stream recycling, SMaRT Center limitations in being able to effectively remove contaminants, customer confusion, mixed messages in packaging, and negative changes in end user markets related to both price and acceptable contamination rates.

REQUIREMENT (C): A DISCUSSION OF PROBLEM CONTAMINANTS AND THE CONTAMINANTS' IMPACT ON THE COLLECTION SYSTEM.

The reasons for SCRSWS contamination align with The Recycling Partnership survey that found 73% of consumers were unsure about what is recyclable, with millennials being the most unsure.

Inbound contamination is being driven by:

- Confusion about what can be recycled, a situation made more difficult due to:
  - Differences between jurisdiction contracts with haulers regarding what materials are accepted,
  - Zip code areas being served by as many as three different haulers,
  - Complex packaging that exhibits recyclable language or icons but that is not recyclable locally.
- Wishful recycling: the act of putting a non-recyclable item in the recycling stream with the hope it will be recycled.

An automated system of collecting single stream recycling that is very efficient but limits feedback between drivers of recycling trucks and households who place unacceptable materials in curbside carts. Per state guidance, the SCRSWS's CROP focuses on cleaning up inbound contamination from recycling collection programs. Contaminated inbound recyclables create losses through increased operational expenses and lost resale value to end-markets. Impacts and costs to the SCRSWS are consistent with those listed by the state CROP:

- Slowing down the sorting and processing of materials, thus increasing processing costs.
- Reducing the quality and value of commodities separated and sent to end user markets.
- Costly shutdowns.
- Damage to collection, processing, and remanufacturing equipment.
- Injuries to staff collecting and processing recyclables.

REQUIREMENT (D): AN ANALYSIS OF THE COSTS AND OTHER IMPACTS ASSOCIATED WITH CONTAMINANTS TO THE RECYCLING SYSTEM.

A 2019 survey by The Recycling Partnership of seven Washington state MRFs found inbound levels of contamination from commingled recycling collection programs ranging from 5% to 20% by weight. Through discussions with Spokane County haulers contamination rates were thought to vary from 5% to 40%. The City of Spokane had an average percentage of contamination of 13% in early 2020. Audits performed on routes within the SCRSWS in the summer of 2020 as part of a cart tagging project revealed both very low and very high contamination rates spanning 3% to 60% with an average of 26% contamination by weight. In addition, The Recycling Partnership survey found that 71% of the cost of contamination comes from dealing with the following materials:

- Garbage (40%)
- Plastic film and bags (24%)
- Tanglers (7%)

Breaking down the cost of contamination differently, The Recycling Partnership survey found that costs could be attributed as follows:

- Disposal of refuse showing up in the inbound recycling stream (40%)
- Value of recyclables lost (26%)
- Labor to manage contamination (14%)

Within the SCRSWS, the City of Spokane implemented random sampling of recycling trucks at the SMaRT Center MRF and found that:

- In 2018, residuals made up 12.8% of the materials collected in Spokane's curbside recycling program.
- The cost of providing recycling is increasing, largely driven by:
    - The average processing cost per ton of residuals is increasing and the number of tons of residuals is increasing.

- The processing cost per ton of glass is increasing and the number of tons of glass collected is increasing.
- End user markets (particularly for glass, newspaper and mixed paper) are very limited and result in negative cost recovery.

The City concluded there is a need to 1) increase education and enforcement to reduce contamination, and 2) find alternative commodity markets, particularly for glass.

REQUIREMENT (E): AN IMPLEMENTATION SCHEDULE AND DETAILS OF HOW OUTREACH IS TO BE CONDUCTED.

Table 6.8 details outreach to be conducted over a five-year time horizon, recognizing three limiting factors:

1) SCRSWS is a multi-jurisdictional, multi-hauler environment that operates under several contractual agreements. Thus, each jurisdiction and/or hauler, as long as they are in contract compliance, has significant discretion for their operations in the SCRSWS.

2) As specified in other parts of the overall Plan, there are cities within the boundaries of Spokane County that are not member jurisdictions of the SCRSWS. This introduces complications when trying to deliver wide-reaching education and outreach without equitable funding.

3) Funding to implement the CROP is limited to available resources from the SCRSWS, jurisdictions and/or haulers.

There are some CROP activities the SCRSWS, jurisdictions, and haulers will maintain as on-going commitments throughout the Plan period (2021 through 2026). These are indicated as "Ongoing" in the table. These activities may be increased as additional funding and resources become available. Other activities that the SCRSWS would like to implement as additional resources become available are indicated in Table 6.8 as "Resource Dependent."

Table 6.8. CROP Activity Implementation Plan

Harmonization and Alignment:	Ongoing	Resource Dependent
SCRSWS-led Task Force will:		
Continue regularly scheduled meetings.	▲	
Encourage and, as possible, support SCRSWS-wide (single-family, multi-family and commercial) coordinated messaging to reduce key recycling contaminants.	▲	
Maintain a Task Force Google Drive with planning, media and other resources.	▲	
Annually update, if needed, a list of SCRSWS priority recycling contaminants.	▲	
As data is available, assess and communicate the costs and other impacts associated with contaminants to the recycling system.	▲	

SCRSWS Education and Outreach	Ongoing	Resource Dependent
Provide SCRSWS-related updates to the Spokane Waste and Recycle Directory and promote the Directory through various means not limited to County-owned webpages and social media.	▲	
Update transfer station recycling signage when necessary and ensure transfer station recycling staff receive training about accepted recyclables.	▲	
Develop, promote and/or make available consistent waste reduction and recycle right messages to member jurisdictions and haulers for use in billing inserts, brochures, signage, web sites, social media, videos and newsletters.		▲
Support educational tours of recycling, end market, and disposal facilities for the public and schools.		▲
Partner with non-profit organizations, associations and service providers such as environmental groups, realtors and property owners to conduct targeted education, media and social media campaigns.		▲
Work with haulers to implement cart tagging programs that raise awareness about and/or enforce recycling contamination.		▲
Seek additional resources and funding to reduce recycling contamination		▲
SCRSWS Monitoring and Assessment	**Ongoing**	**Resource Dependent**
Analyze recycle directory and other education and outreach data as well as characterization studies to improve education and enforcement efforts.	▲	
Assess contamination reduction trends post education and enforcement efforts, when data is available.		▲
Work with SMaRT Center and transfer station staff to characterize and determine the percent of inbound contamination.		▲
Work with haulers to conduct lid lift audits to characterize contamination streams and routes with highest levels of contamination.		▲

7.0 Administration and Enforcement

The Washington State Solid Waste Management Act, RCW 70A.205, assigns local government the primary responsibility for managing solid waste (Washington State Legislature, 2020). This section describes the administrative structure for solid waste management planning and permitting in the SCRSWS.

7.1 Administration

The SCRSWS is managed by the Spokane County Environmental Services Department. There are a number of different governing jurisdictions who are responsible for administering aspects of solid waste management activities in the County, and whose coordinated activities are important to the success of this program, as shown in Table 7.1.

Table 7.1. Solid Waste Administration in Spokane County

Entity	Administration Role
Spokane County (County)	Administers the SCRSWS and prepares solid waste management plans.
Spokane Regional Health District (SRHD)	Issues permits for solid waste facilities and enforces the rules and regulations promulgated under RCW 70A.205.
Washington State Department of Ecology (Ecology)	Ensures effective solid waste programs exist throughout the state by providing oversight of comprehensive solid waste management plans and through technical assistance.
Washington State Utilities and Transportation Commission (WUTC)	Regulates the collection of solid waste, including curbside collection of residential recyclable materials and provides technical assistance in the preparation and revision of solid waste management plans.
Washington State Department of Agriculture (WSDA)	Regulates apple maggot quarantine zones and the commodities that are transported through those zones, including but not limited to, MSW and organic material.
Private and Public Haulers (Haulers)	Provides residential and commercial solid waste services within designated areas approved by the WUTC.
Solid Waste Advisory Committee (SWAC)	Assists in the development of programs and policies concerning solid waste handling and disposal and reviews and comments on proposed rules, policies, or ordinances prior to their adoption.

7.2 Measurement and Monitoring

Currently, a number of entities are involved in monitoring and measuring solid waste management activities in Spokane County, as shown in Table 7.2.

Table 7.2. Solid Waste Measurement and Monitoring in Spokane County

Entity	Measurement and Monitoring Role
Ecology, WSDA	Reviews this Plan and ensures process/content are consistent with state laws and regulations.
WUTC	Reviews the cost assessment section of this Plan to ensure it provides the information needed to determine impacts the Plan may have on rates of certificated waste collection companies.
County, City of Spokane, SCRSWS	Prepares monthly and annual records of material quantities received at the SCRSWS-designated facilities.
Haulers	Maintain records of waste and recyclables collected from residential and commercial customers in the unincorporated areas of the County and regional cities.
SCRSWS	Maintains records of its waste collection and recycling programs.
SCRSWS, SRHD	Maintains a record of wastes received at solid waste handling facilities in the county. Also monitors illegal dumping in the county.
SCRSWS	Tracks the effectiveness of education and outreach techniques used for waste reduction, recycling and other activities.
SCRSWS	Inspects loads at SCRSWS-designated facilities for non-acceptable MSW waste types such as asbestos, recyclables, HHW, and others.
Spokane County, SCRSWS	Reviews and updates Emergency Response plans for the SCRSWS and trains facility employees on procedures.

7.3 Enforcement Practices

A number of agencies in Spokane County have the responsibility of enforcing solid waste management regulations and programs, including Spokane County, the participating jurisdictions, SRHD, Spokane Clean Air, and the WUTC. A summary of the responsibilities that each agency has for enforcing solid waste regulations and programs follows in **Table 7.3**.

Table 7.3. Solid Waste Enforcement in Spokane County

Entity	Enforcement Role
Spokane County	Implements the Plan and coordinates with other enforcement agencies for activities such as illegal dumping. Enforces flow control and other local solid waste regulations.
Ecology, SRHD	Inspects SCRSWS-designated solid waste facilities and makes recommendations for changes to permits.
Ecology	May review and appeal solid waste facility permits issued by SRHD for conformance to State regulations, Plan, and zoning regulations.
Ecology	Inspects all landfills in Spokane County at least twice annually for compliance with State regulations
SRHD	Investigates complaints of illegal dumping and issues clean up orders in conjunction with the SCRSWS.
Ecology, SRHD	Issues permits and inspects special waste sites such as inert landfills, composting facilities, and biosolid land spreading operations for compliance with State regulations.
Spokane Regional Clean Air Agency	Monitors emission of air contaminants from the WTE Facility, landfills, recycling/transfer facilities, and composting sites.
Spokane Regional Clean Air Agency	Regulates asbestos abatement activities within Spokane County.
Spokane Regional Clean Air Agency	Permits and regulates open burning of organic material in the County, which affects the flow of organic material as a solid waste.
WUTC	Regulates the collection of solid waste in unincorporated areas and in incorporated areas without their own solid waste collection authority by issuing certificates to private collection companies. Uses enforcement mechanisms including fines and the revoking of a private collector's right to collect solid waste.
WUTC	Approves collection rates for private solid waste collection companies in unincorporated areas within Spokane County via the Cost Assessment Guidelines for Local Solid Waste Management Planning.
Ecology	Regulates leachate, surface water and groundwater at solid waste facilities.

7.4 Flow Control

Flow control designates where solid waste is collected and disposed. The purpose of having flow control for solid waste is to "establish a comprehensive county-wide system for solid waste handling and solid waste recovery and/or reclamation which will prevent land, air and water pollution and conserve the natural, economic and energy resources of the county" (Spokane County Code 8.56.010) (Spokane County, WA, 2014). Furthermore, "the County exercises its right to control the disposal of all solid waste generated and collected within the unincorporated areas of its borders and to permit the incorporated municipalities of the county to use system-designated disposal sites when authorized by contract with the county or pursuant to state law" (Spokane County Code 8.56.010) (Spokane County, WA, 2014).

Per the SCRSWS's flow control ordinance, wastes are delivered to the SCRSWS-designated facilities as described in **Section 5.0 – Solid Waste Facilities and Waste Flow**.

7.5 Permitting Facilities

All solid waste facilities are regulated under Chapters 173-350 WAC, 173-351 WAC and 173-304 WAC. The Spokane Regional Health District issues permits for solid waste facilities and periodically inspects facilities to ensure compliance. For more information about the permitting process visit srhd.org/programs-and-services/solid-waste-handling-garbage.

7.6 Litter Clean-up

The SCRSWS partners with the Geiger Work Crew to provide litter pickup within our member jurisdictions. More about this program can be found in **Section 6.3 - Outreach and Education**.

Appendix A

Regulatory Compliance

Chapter 70A.205 RCW The Washington State Solid Waste Management – Waste Reduction and Recycling Act, assigns local government the primary responsibility for managing solid waste (Washington State Legislature, 2020). In 1989, the Washington State Legislature amended this chapter to provide added direction to local governments to incorporate waste reduction and source separation strategies into coordinated systems of solid waste management. The purpose of the chapter is to protect the environment and health of our residents as well as conserve resources in our state.

The purpose and authority for solid waste planning is derived from Chapter 70A.205 RCW (Washington State Legislature, 2020). This chapter contains the regulatory requirements that each plan must encompass. Each of these regulations is listed in Table A.1, along with the section in the Plan for where the regulation is met.

Table A.1. Regulatory Compliance Summary Table

Solid Waste Management Planning Element	Regulation or Ordinance	Section
Review of federal, state, and local regulations and ordinances related to solid waste planning (including relevant impacts on land use planning)	RCW 70A.205.045(3)(a) & RCW 70A.205.045(3)(b)	Appendix A
Inventory of existing solid waste handling facilities, capacities, and deficiencies.	RCW 70A.205.045(1)	Section 5.0
Twenty-year projection of solid waste handling facility needs	RCW 70A.205.045(2)	Section 4.3
Identification and prioritization of waste reduction strategies	RCW 70A.205.045(7)(a)	Section 6.1 & 6.2
Recycling and Waste Diversion – Designation of Recyclable Materials	RCW 70A.205.045(7)(c)	Section 6.1 & 6.2
Recycling and Waste Diversion – Description of Markets	RCW 70A.205.045(7)(c)	Section 6.1
Recycling and Waste Diversion – Review of Waste Generation Trends	RCW 70A.205.045(7)(c)	Appendix C
Recycling and Waste Diversion – Description of Waste Composition	RCW 70A.205.045(7)(c)	Appendix C
Recycling and Waste Diversion – Description of Existing and Future Programs	RCW 70A.205.045(7)(c)	Section 6.2
Recycling and Waste Diversion – Implementation Schedule	RCW 70A.205.045(7)(c)	Section 4.1
Recycling and Waste Diversion – Process for Modifying List	Recommended by Ecology	Section 6.0
Recycling and Waste Diversion – Urban Services	RCW 70A.205.045 (7)(b)(i)	Section 6.2
Recycling and Waste Diversion – Rural Services	RCW 70A.205.045 (7)(b)(i)	Section 6.2
Recycling and Waste Diversion – Non-Residential Monitoring	RCW 70A.205.045 (7)(b)(ii)	Section 6.0
Recycling and Waste Diversion – Organics Management	RCW 70A.205.045 (7)(b)(iii)	Section 6.2
Recycling and Waste Diversion – Education Programs	RCW 70A.205.045 (7)(b)(iv)	Section 6.3
Waste Collection – Urban and Rural Designation	RCW 70A.205.050	Section 6.2
Waste Collection – Description of Service Areas and Needs	RCW 70A.205.045 (5)	Section 6.0
Facility Siting Requirements	RCW 70A.205.110 & RCW 70A.205.045 (9)	Appendix E
Financing Solid Waste Infrastructure and Operations – Six Year Capital Program for Solid Waste Facilities	RCW 70A.205.045 (3)(c)	Section 4.0
Financing Solid Waste Infrastructure and Operations – Funding Strategy	RCW 70A.205.045 (3)(d)	Section 4.2
Surveillance and Control	RCW 70A.205.045 (4)	Section 7.0
Assessment of Plan Costs on Solid Waste Collection (WUTC review)	RCW 70A.205.045 (8)	Appendix I
Contamination Reduction and Outreach Plan	RCW 70A.205.045 (10)	Section 6.4
Transmittal Letter	Required by Ecology	Attached
Interlocal Agreements	Required by Ecology	Forthcoming
Evidence of Public Meeting(s)	Required by Ecology	Appendix H
SWAC Participation	RCW 70A.205.110	Appendix H
Resolution of Plan Adoption from All Jurisdictions	Required by Ecology	Forthcoming
Change log of comments and responses from Ecology and WUTC review	Required by Ecology	Forthcoming
SEPA documentation	Required by Ecology	Appendix I
Waste reduction and recycling programs - Reduce Waste Generated	RCW 70A.205.045 (6)	Section 6.1
Waste reduction and recycling programs - Source Separation Incentives/Mechanisms	RCW 70A.205.045 (6)	Section 6.0
Waste reduction and recycling programs - Recycling Opportunities	RCW 70A.205.045 (6)	Section 6.0
Locally defined amendment process	Recommended by Ecology	Appendix B
Plan supportive of state's solid waste management plan and solid waste priorities	Recommended by Ecology	Goal 4.B
SWAC bylaws	Recommended by Ecology	Appendix H

Appendix B

Plan Amendments

This SWMP is required to be reviewed and revised, if necessary, at least every five years (RCW 70A.205.075) (Washington State Legislature, 2020). Outside of this five-year plan update schedule, the SWMP may require changes or updates. Some changes may alter the plan materially and thus will require the usual submittal and review by Ecology. An example of this type of change would be an increase to the cost of service or decrease to service levels. Often, the changes required are not significant and do not materially change the plan. An example of this type of would be updating the list of designated recyclable materials. When this type of non-significant change to the plan occurs, a formal plan update or revision process will not be completed. Instead, the following will occur to incorporate the change and update the plan:

1. Required change/update is identified.
2. A draft plan is created incorporating the change in track changes.
3. The SWAC is notified of the update requirement and the updated draft is distributed for review.
4. A SWAC meeting will be scheduled (if not already regularly scheduled) and held to discuss and inform SWAC of change.
5. The update process will be recorded in the plan and the plan will be finalized.
6. The finalized plan will be sent to Ecology along with a cover letter describing the change.
7. The finalized plan will be sent to each participating jurisdiction along with a cover letter describing the change.

Appendix C

Summary of Waste Characteristics

C.1 Waste Quantities and Projections

SOURCES OF DATA

To provide a comprehensive representation of waste characteristics for the SCRSWS, several sources of data and information were used for development of the charts and tables in this appendix. Some data sets rely upon information provided by the Department of Ecology, which includes the entire population of the County and not just the jurisdictions associated with the SCRSWS. Other more detailed information is based on an Ecology 2015/2016 waste characterization study conducted at the Waste to Energy Facility (WTE) (State of Washington Department of Ecology, 2018), while other data are taken directly from SCRSWS Facility reports. The sources of data are noted under each chart or table for reference.

WASTE STREAM DEFINITION

Waste materials addressed in this Plan are described using several terms and abbreviations, including municipal solid waste (MSW), construction and demolition waste (C&D)[1], miscellaneous waste, and moderate risk waste (MRW). For the purposes of this Plan, these wastes are defined as follows:

- **MSW (municipal solid waste)** means wastes generated by households and businesses that are commonly delivered to the transfer stations and directly to the WTE Facility for disposal or are recycled/diverted or composted through various means. Included in MSW are small quantities of special wastes and residential MRW, as well as C&D waste delivered in small quantities to the County waste handling facilities.
- **C&D (construction and demolition waste)** include materials delivered to privately operated inert and demolition facilities for recycling/diversion or disposal that is largely inert waste, resulting from construction and demolition activities or land-clearing activities in the County.
- **Miscellaneous waste** includes agricultural waste, asbestos waste, ash from the WTE Facility, biomedical waste, biosolids, contaminated soils, and septic tank waste.
- **MRW (moderate risk waste)** includes hazardous waste produced by households and by businesses and institutions in small quantities below the small quantity generation status thresholds.
- **Diverted wastes** are waste types that are differentiated into recyclables or other divertibles, which are defined as follows:
    - **Recyclables** are materials that are separated for traditional recycling such as paper, plastics, metals, etc.

1 The MSW and C&D quantity estimates exclude ash from the WTE Facility that is currently sent to the Roosevelt Landfill for disposal.

    - **Other Divertibles** are materials that are separated for reuse, composting, land application, or energy recovery that are not categorized as Recyclables, such as wood debris, yard waste, furniture, asphalt and concrete, used oil, etc. This does not include general MSW that is sent to the WTE facility for energy recovery.
- **Disposed waste** is the residual waste thrown away by all customers after materials have been diverted from the waste stream. This is the waste that is ultimately sent to a landfill or the WTE facility.

TRENDS IN MSW GENERATION, RECYCLING AND DISPOSAL RATES

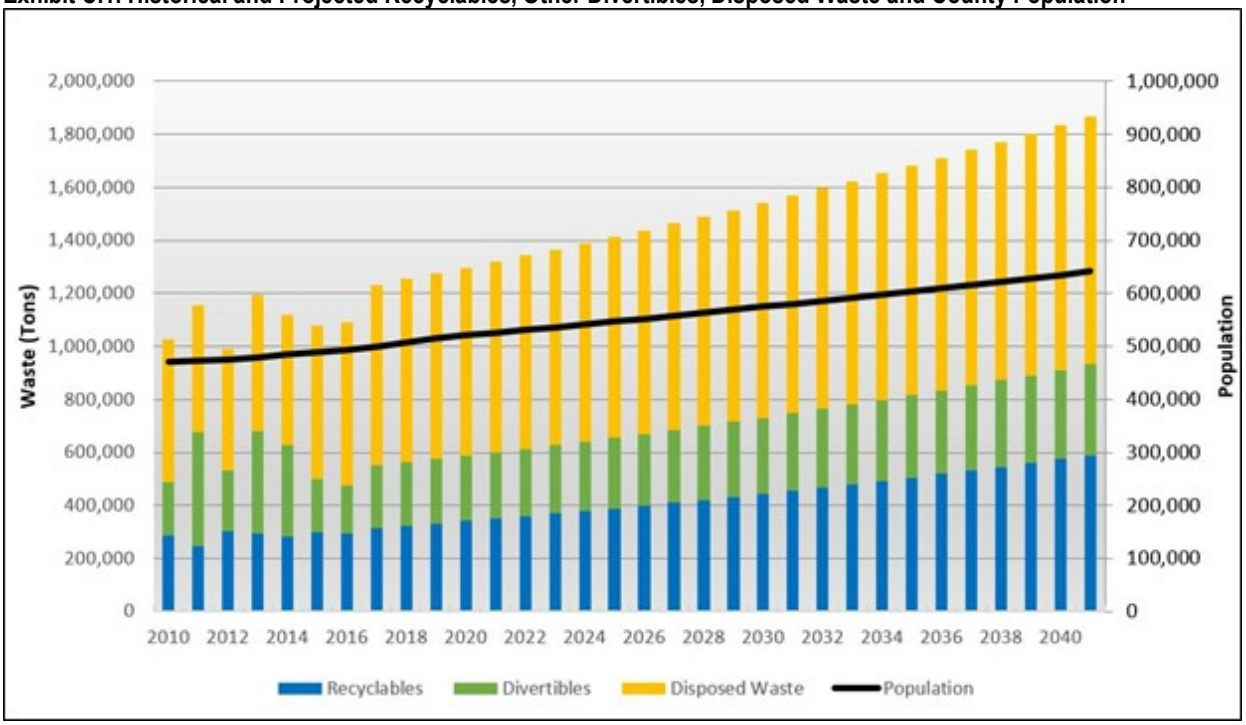
Waste disposal data from the Department of Ecology for the County includes waste totals for all jurisdictions and solid waste handling and disposal that occur within the County, including totals from operations outside of the SCRSWS. The data spans the years 2010 through 2017 and were used to determine trends (percent changes) in waste generation, disposal, recycling, and other diversion. Over this time, waste generation increased an average of 1.7% per year. Using this rate of change, the waste generation for the entire County, as compared to the change in population, was projected for the next 20 years.

The following projection for the next 20 years is shown in **Exhibit C.1** below which includes reported data from 2010 through 2017. Within the reported data from 2010-2017,

- Recycling has increased at an average rate of 2.6% per year,
- Other waste diversion in the County has increased an average of 1.6% per year, and
- Disposal has increased at an average rate of 1.3% per year.

Using these rates of change, recycling, other diversion and waste disposal were projected for the next 20 years along with the County's population. These projections are shown in **Exhibit C.1** along with actual data from 2010 through 2017.

Exhibit C.1. Historical and Projected Recyclables, Other Divertibles, Disposed Waste and County Population



Source: Department of Ecology waste data reports, 2010–2017 & United States Census Bureau, 2020

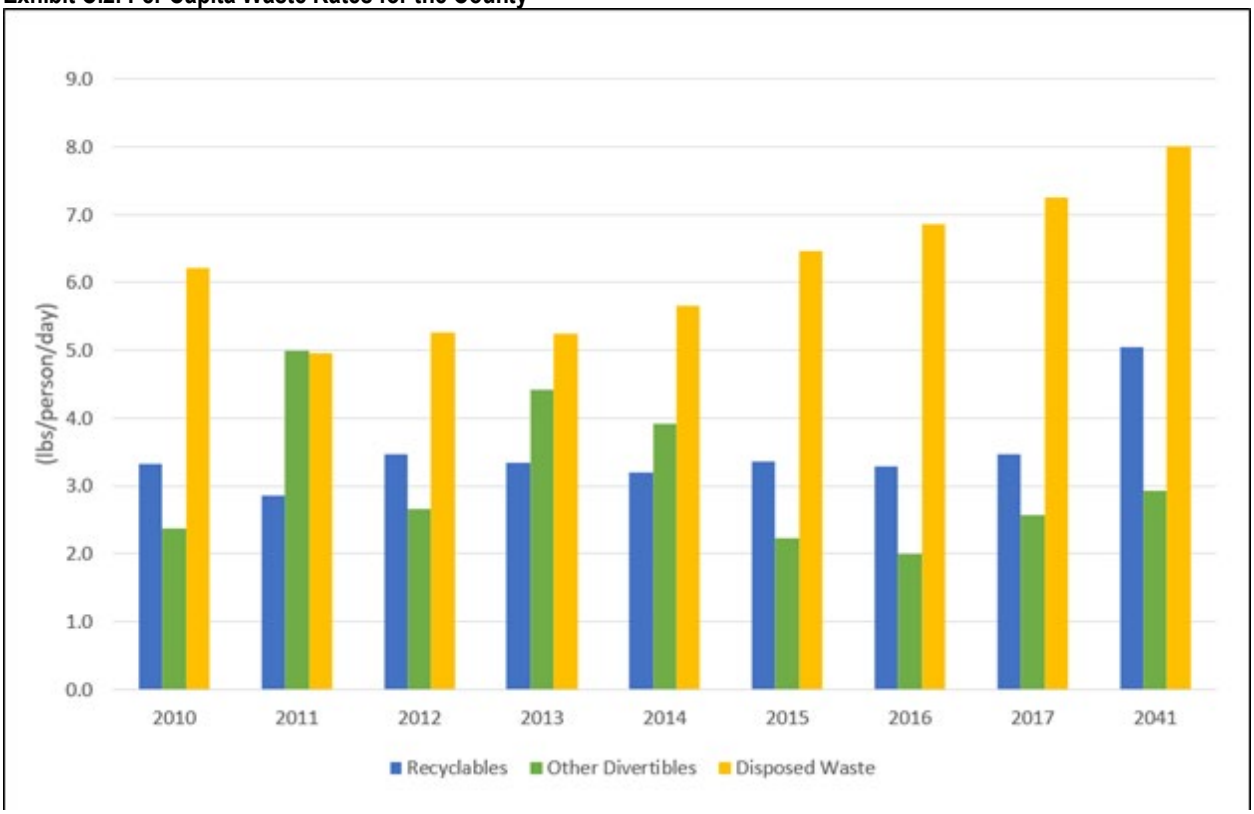
This graph shows:

- Waste disposal and population continue to increase, with the rate of disposal increasing slightly more than the rate of population (1.3%/year versus 1.0%/year, respectively).
- The projected generation rates for recycling and other waste diversion continue to increase at 2.64% and 1.59%/year, respectively.
- According to these projections, the County will generate approximately 920,000 tons of waste in 2041, which is 31% more waste than in 2020. By comparison, the population increase over this same period (2020 – 2041) is projected to increase by 22%.

This data supports the need for programmatic offerings to focus on waste reduction first to counter the amount of waste generated per capita.

Exhibit C.2 shows the per capita disposal, diverted and recycled material quantities for the County from 2010 through 2017 along with the projected 2041 per capita rates in Exhibit C.1.

Exhibit C.2. Per Capita Waste Rates for the County



Source: Department of Ecology waste data reports, 2010–2017

In 2011 through 2013, the per capita disposal rates stayed fairly steady while the recycling rates were at their highest. The recycling rate has continued to remain steady since then, and diversion has decreased while disposal amounts are steadily increasing.

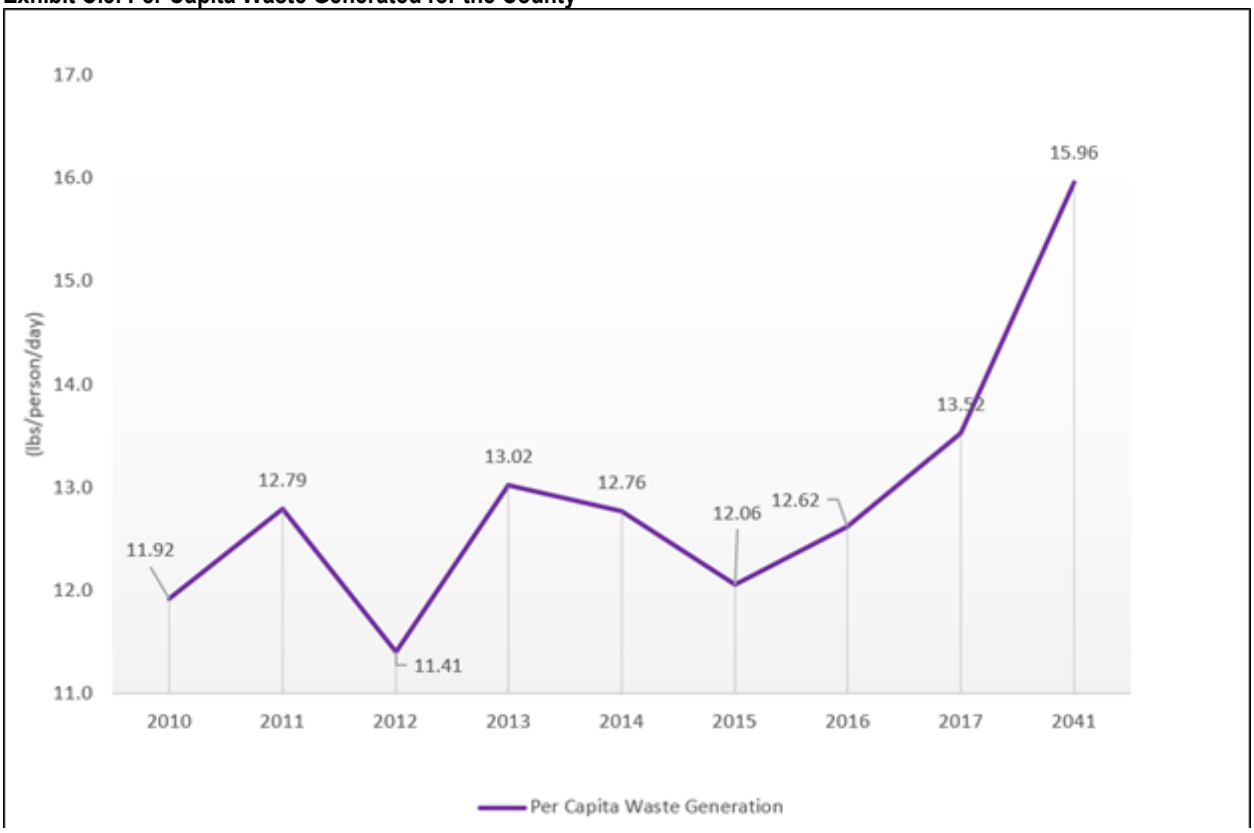
Perhaps more interesting is the decline in other divertibles from 2011 onward and the seemingly inverse relationship with disposed waste which could indicate that some types of diverted wastes are being disposed.

Looking to the future, both diversion and disposal are projected to continue to increase slightly, each by approximately 0.5 pounds/person/day by 2041, while recycling is projected to increase by approximately 1.5 pounds/person/day.

In 2016, the Department of Ecology determined that glass placed in a recycling bin but used for an end purpose within a landfill, such as daily cover or building temporary roads, should not count as recycling. Due to the weight of glass, this had a slightly negative impact to the per capita recycling rate. Despite this, the rate of recycling has stayed fairly constant since 2012.

Exhibit C.3 shows the per capita waste generation for the County. Waste generation includes recyclables, divertibles, and disposed wastes. Overall, generation varies from 11.92 lbs/person/day to 13.52 lbs/person/day over the reported period (2010-2017), with an average of 12.51 lbs/person/day. Similar to the decline in waste disposal in years 2011 through 2013, seen in **Exhibit C.2**, there is a decline in waste generation between 2011 and 2013. However, there is an overall increasing trend in the amount of waste generated and by 2041, waste generation is projected to reach almost 16 pounds/person/day.

Exhibit C.3. Per Capita Waste Generated for the County



Source: Department of Ecology waste data reports, 2010–2017

C.2 Disposed Waste Composition of the SCRSWS

This section provides more insight into the specific types of materials that make up the "disposed" waste category. The data represented in this section originates from the Eastern Washington section of the 2015/2016 Washington Statewide Waste Characterization Study, overseen by the Department of Ecology (State of Washington Department of Ecology, 2018). The Eastern Washington study was conducted at the WTE facility, and therefore, should be representative of the waste produced in the SCRSWS.

WASTE SECTOR DEFINITIONS

For the 2015-16 Waste Characterization Study, waste was separated into four sectors:

- **Commercial** is waste hauled by contracted or municipally operated vehicles in which 80% or more of the waste is from multifamily residences with five or more units, or institutional, commercial, or industrial sources.
- **Residential** is waste hauled by contracted or municipally operated vehicles in which 80% or more of the waste is from single-family and/or multifamily residence with fewer than five units.
- **Self-hauled MSW** is waste hauled by vehicles not operated by a franchise or municipality.
- **Self-hauled C&D (construction and demolition waste)** is waste generated as a result of construction, demolition, or land clearing activities.

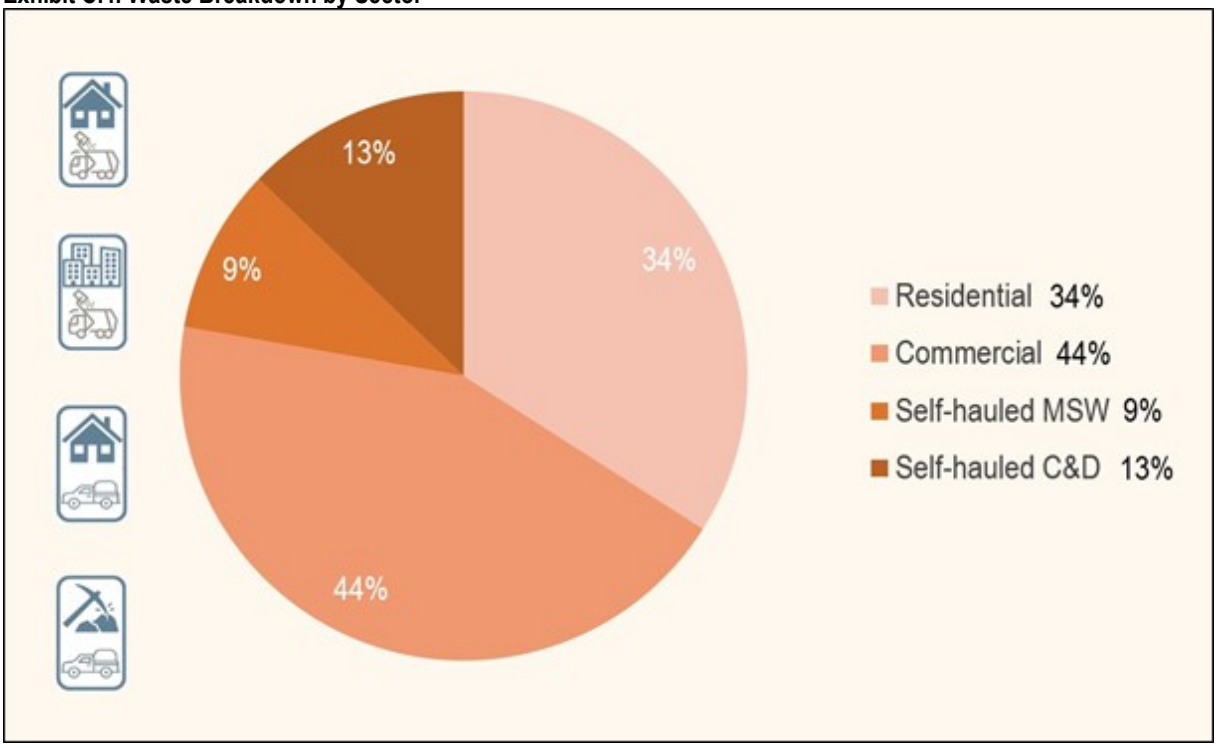
HOW TO READ WASTE SECTOR CHARTS

The charts in this section represent waste composition by weight for each waste type (disposed waste, recyclables, and other divertibles) within each of the sectors listed above. Each chart has four main components: the sector flags, the main chart body and the legend. An example chart with these main component labels is shown below.

COMPOSITION OF DISPOSED WASTE

Disposed waste composition data in **Exhibit C.4** shows the overall breakdown of waste disposed in these sectors and that most waste is disposed through commercial and residential collection.

Exhibit C.4. Waste Breakdown by Sector

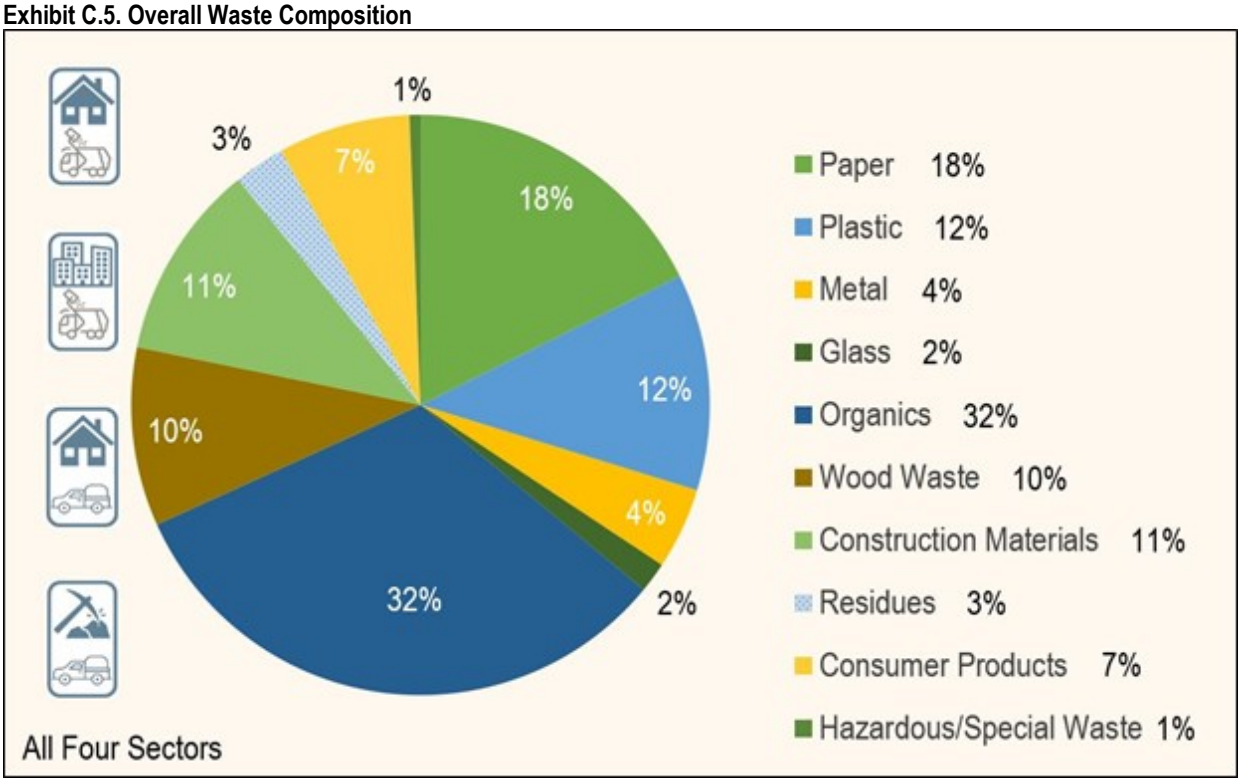


Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

The largest portion of the waste is produced and collected from the commercial sector, followed closely by the waste collected from the residential sector. These results are expected and show that the commercial and curbside collection programs handle most of the waste in the County.

Exhibit C.5 is a breakdown of the different types of wastes that are disposed in all four sectors. Definitions for these material types can be found in Ecology's 2015/16 Waste Characterization study, found at https://fortress.wa.gov/ecy/publications/documents/1607032.pdf.

Exhibit C.5. Overall Waste Composition



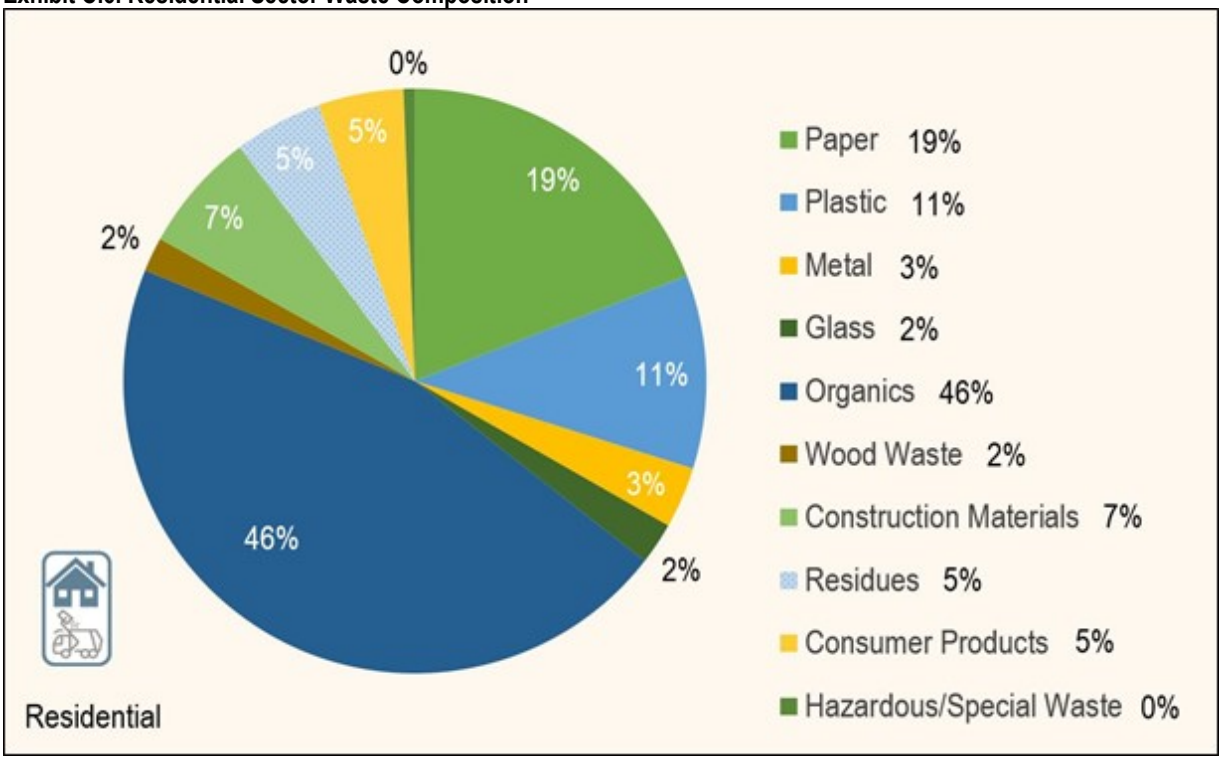
Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

This exhibit shows that organics (32%) and paper (18%) make up half of the waste disposed in the SCRSWS. Both of these waste types are potentially divertible. Given that previous exhibits have shown that waste diversion has remained low compared to recycling, this could be an area of opportunity to increase diversion programs. The following exhibits analyze the different types of wastes that are disposed within each of the individual sectors.

RESIDENTIAL DISPOSED WASTE

The composition of residential disposed waste is shown in **Exhibit C.6**. Almost half of all waste thrown away is organics while another 30% is paper and plastic.

Exhibit C.6. Residential Sector Waste Composition

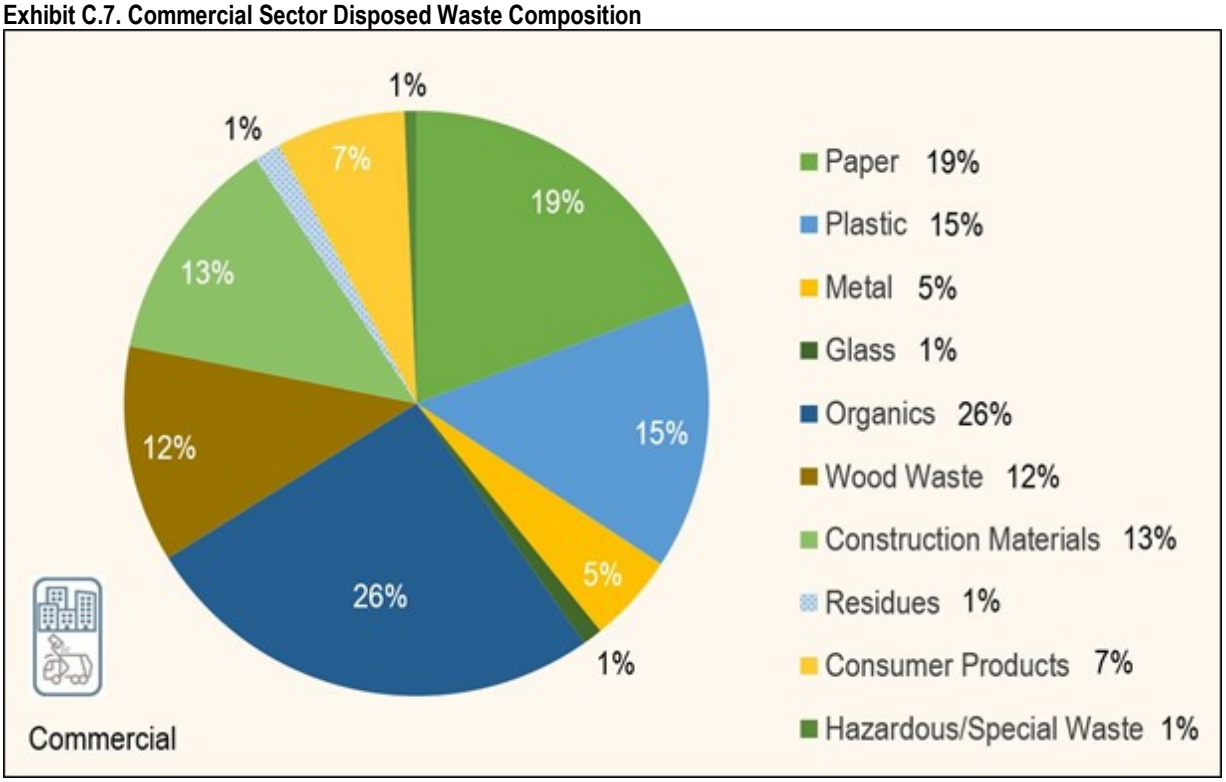


Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

COMMERCIAL DISPOSED WASTE

The composition of commercial disposed waste is shown in **Exhibit C.7**. Like the residential waste sector, the largest component of commercial waste type that is disposed is organics. However, by comparison, the organics in this waste stream are almost half of what is seen in the residential waste. The commercial waste stream contains much more paper and wood wastes as compared to residential waste and similar amounts of paper and plastic.

Exhibit C.7. Commercial Sector Disposed Waste Composition

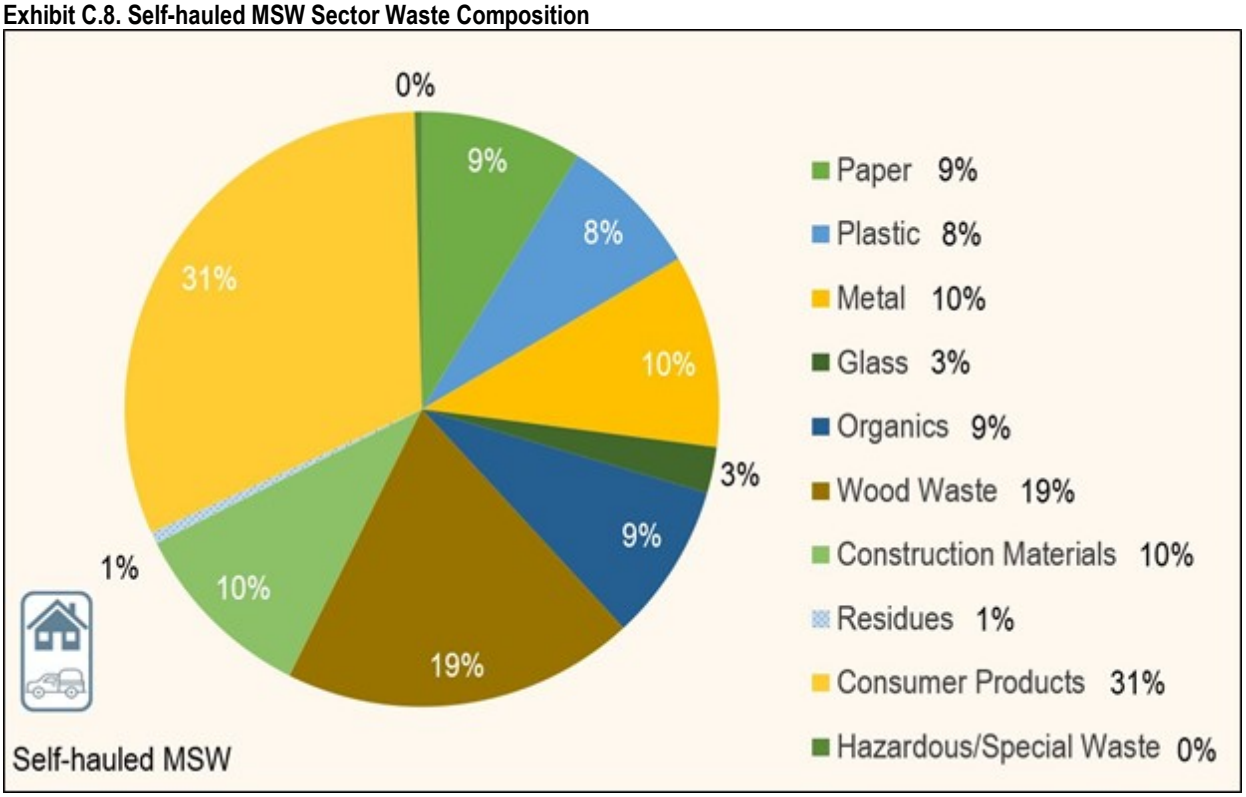


Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

SELF-HAULED MSW DISPOSED WASTE

The composition of self-hauled waste is shown in **Exhibit C.8**. This waste stream is quite different than the two collected waste streams. The largest component of the self-hauled waste is consumer products (furniture, appliances, mattresses, etc.). This sector also contains a large portion of wood waste. High percentages in these two categories are expected as a large portion of self-hauled waste is brought directly to the transfer stations because it is too large to be picked up curbside.

Exhibit C.8. Self-hauled MSW Sector Waste Composition

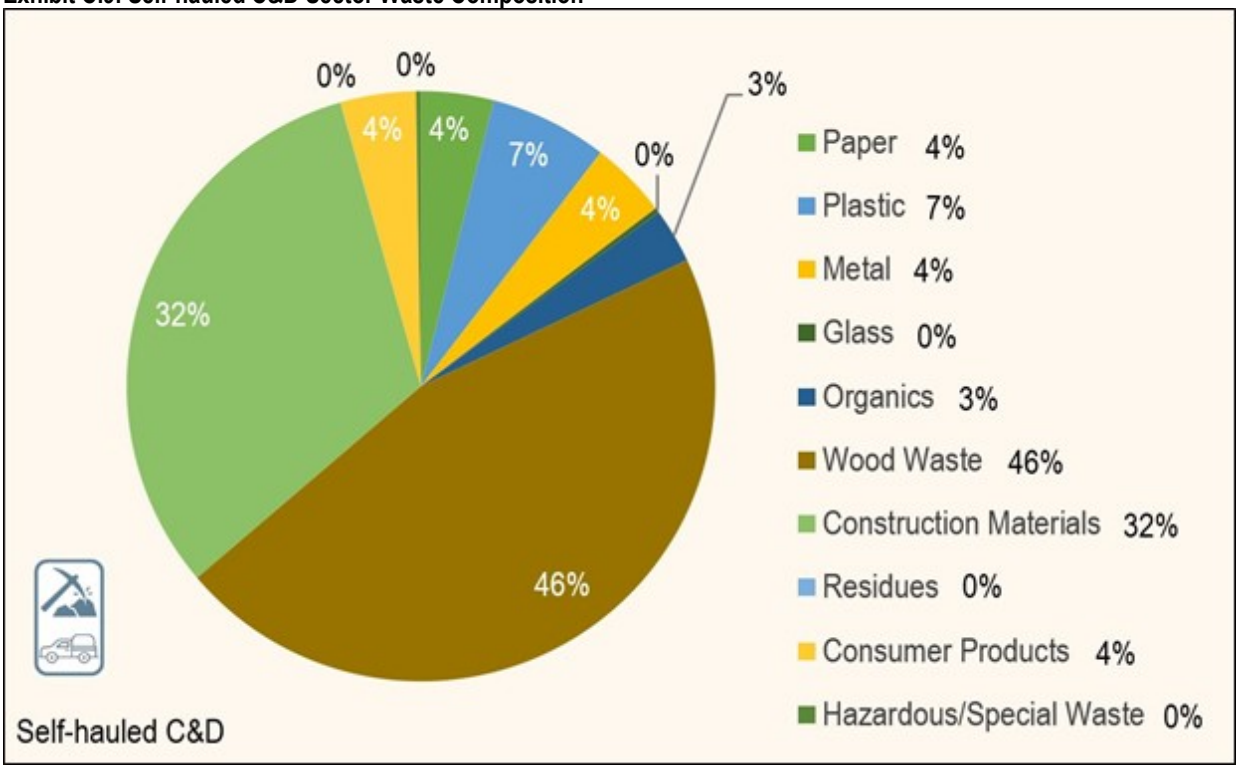


Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

SELF-HAULED C&D DISPOSED WASTE

The composition of self-hauled C&D disposed waste is shown in **Exhibit C.9**. This waste stream is made up primarily of wood waste and construction materials with a total of 78% of waste belonging to these categories.

Exhibit C.9. Self-hauled C&D Sector Waste Composition

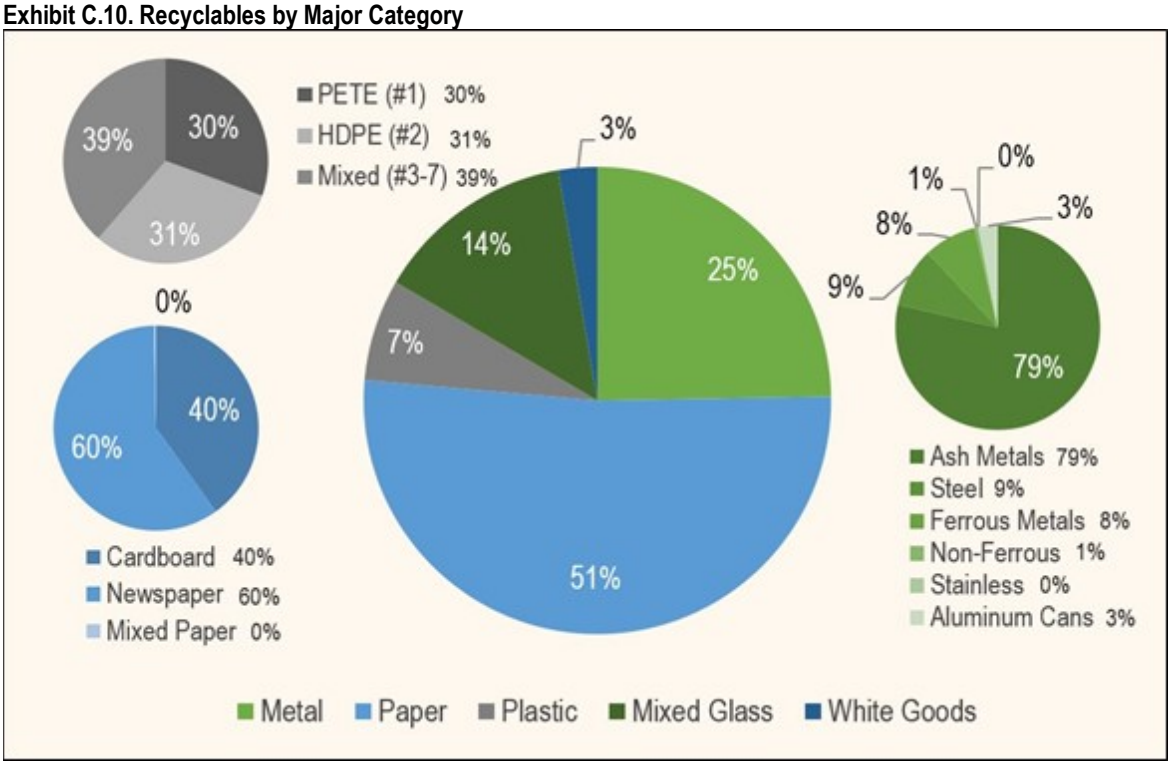


Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

C.3 Recyclables Composition of the SCRSWS

Exhibit C.10 illustrates the composition of public self-hauled recycled materials in the SCRSWS and is based on 2019 recycled material collection reports from the two County-owned transfer stations and the WTE. The composition of recycled materials is separated into major recyclable categories and subcategories (metals, paper, and plastics), as shown in Exhibit C.10. Approximately half of all recycled materials are comprised of paper products (cardboard, newspaper and mixed paper) with a total of 51%.

Exhibit C.10. Recyclables by Major Category



Source: SCRSWS Waste and Recycling Records, 2019

RECYCLABLES LEFT IN THE WASTE STREAM, BY SECTOR

For the charts exploring "recyclables left in the waste stream", data were derived from the Eastern Washington section of the 2015/2016 Washington Statewide Waste Characterization Study, overseen by the Department of Ecology (State of Washington Department of Ecology, 2018). The Eastern Washington study was conducted at the WTE facility, and therefore, should be representative of the waste produced in the SCRSWS.

To better understand and improve recycling programs, it is helpful to consider what is recyclable in the disposed waste stream. Charts were created showing this recyclable material, again broken down by the four waste sectors based on the Eastern Washington data collected as part of the 2015/2016 Washington Statewide Waste Characterization Study (State of Washington Department of Ecology, 2018). Recyclable materials are shown as four major categories. **Table C.1** shows how materials were categorized.

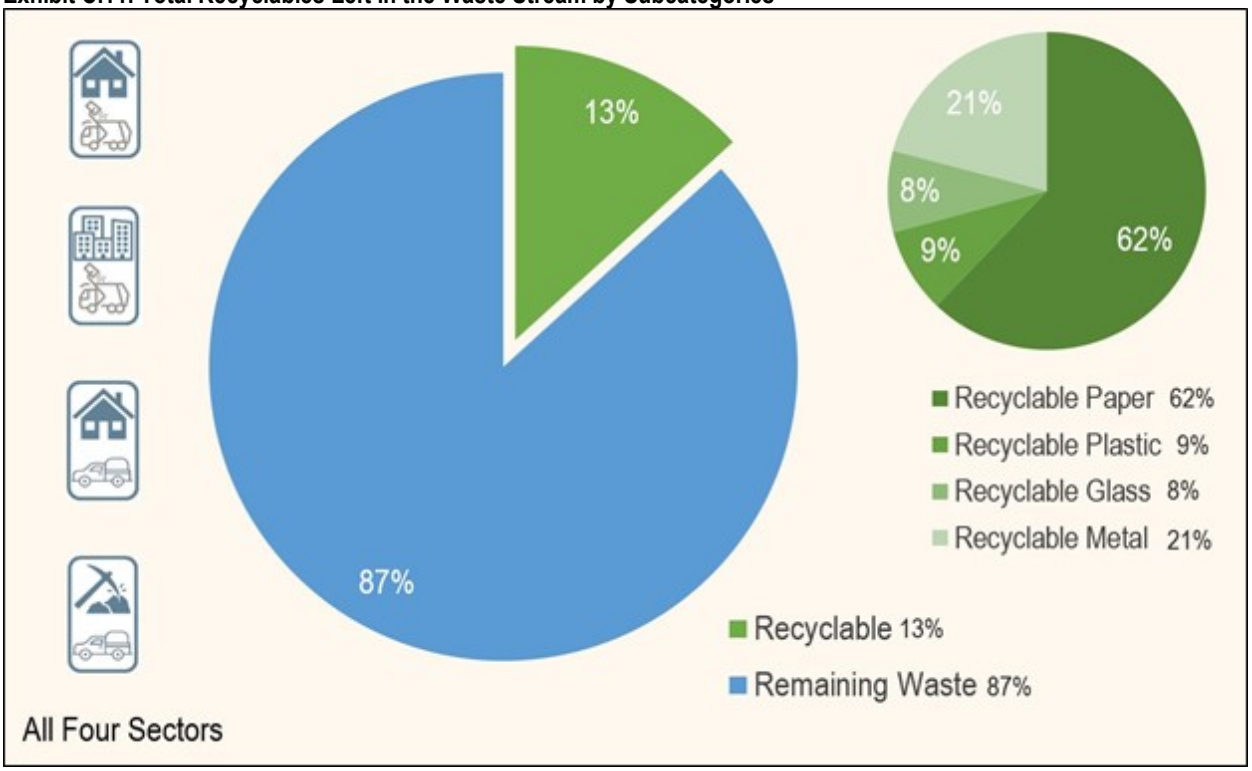
Table C.1. Recyclable Material Categories

Recyclable Paper	Recyclable Plastic	Recyclable Metal
Newspaper Packaging	#1 PETE Plastic Bottles	Aluminum Beverage Cans
Newspaper	#2 HDPE Plastic Natural Bottles	Aluminum Foil/Containers
Cardboard Packaging	#2 HDPE Plastic Colored Bottles	Other Aluminum
Cardboard		Other Nonferrous
Groundwood Paper	**Recyclable Glass**	Food Cans - Tinned
Mixed/Low Grade Paper	Clear Glass Containers	Food Cans - Coated
Magazines	Green Glass Containers	Other Ferrous Metal
High Grade Paper Products	Brown Glass Containers	

Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

Exhibit C.11 shows the recyclables left in the waste stream for all sectors compared to the remaining waste or unrecyclable portion of disposed waste. This remaining waste portion includes other divertibles.

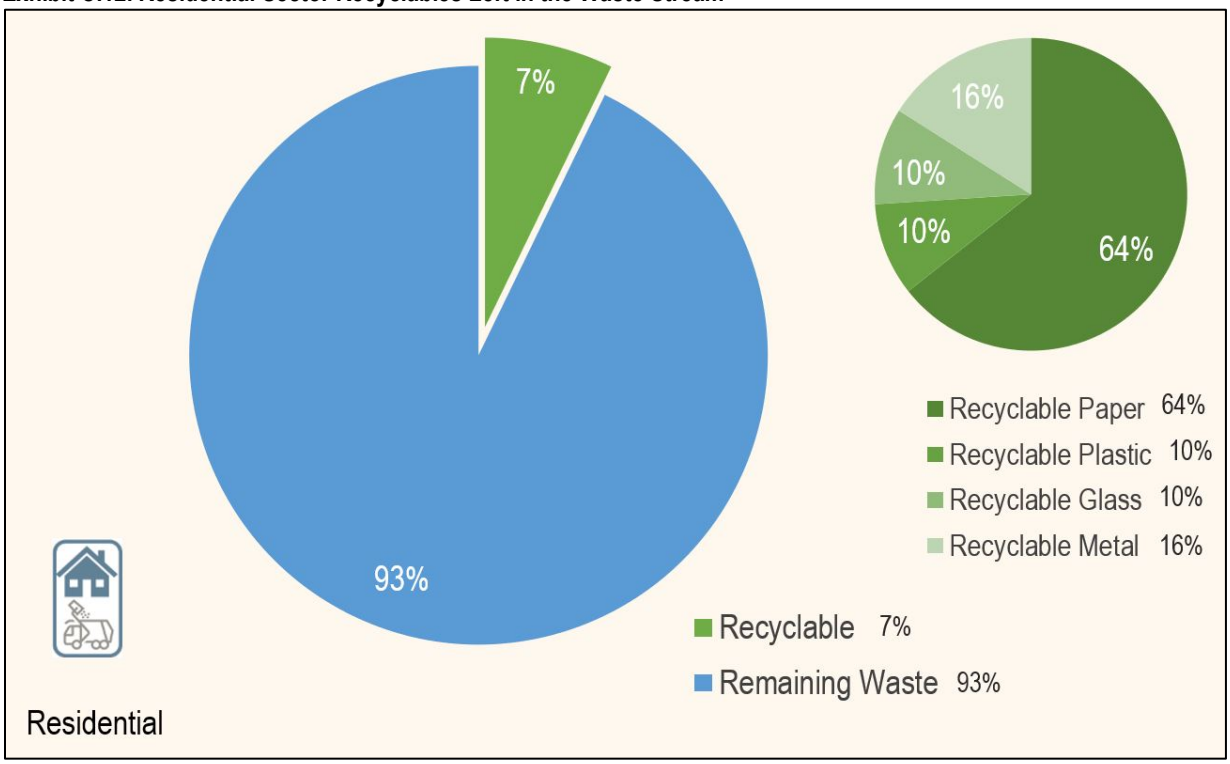
Exhibit C.11. Total Recyclables Left in the Waste Stream by Subcategories



Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

Exhibit C.12 shows the breakdown of the recyclables left in the residential waste stream. The residential sector's waste stream contains the largest amount of recyclable materials compared to the other three sectors. The most prominent portion of the recyclables left in the residential waste stream is paper.

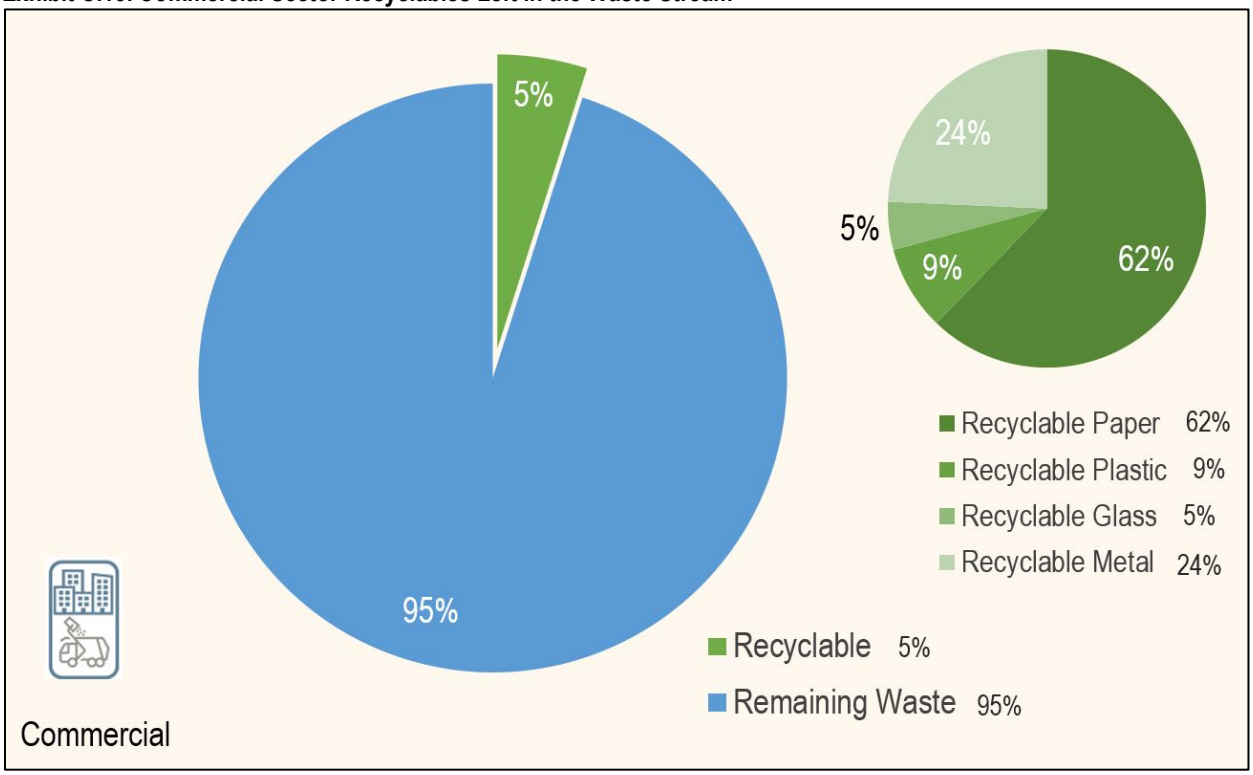
Exhibit C.12. Residential Sector Recyclables Left in the Waste Stream



Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

Exhibit C.13 shows the breakdown of the recyclables left in the commercial waste stream. Like the residential sector, the largest portion of the recyclable material left in the commercial waste stream is paper.

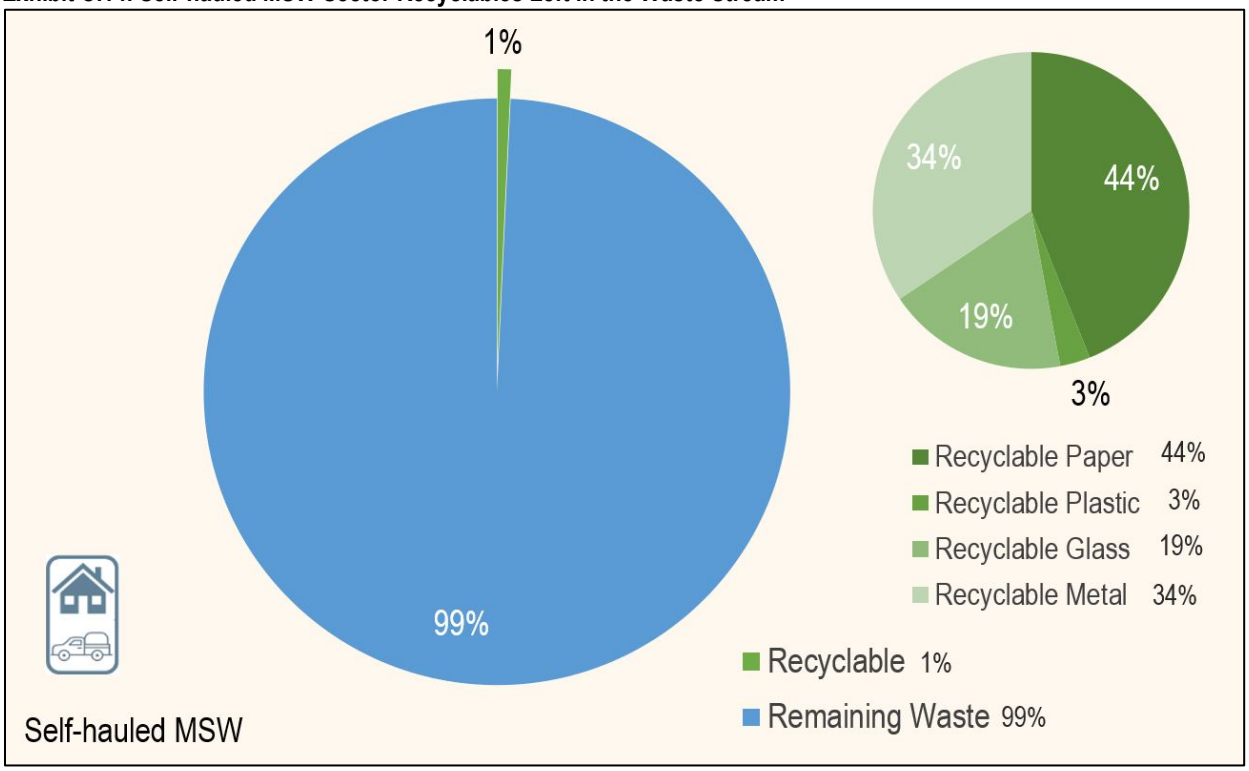
Exhibit C.13. Commercial Sector Recyclables Left in the Waste Stream



Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

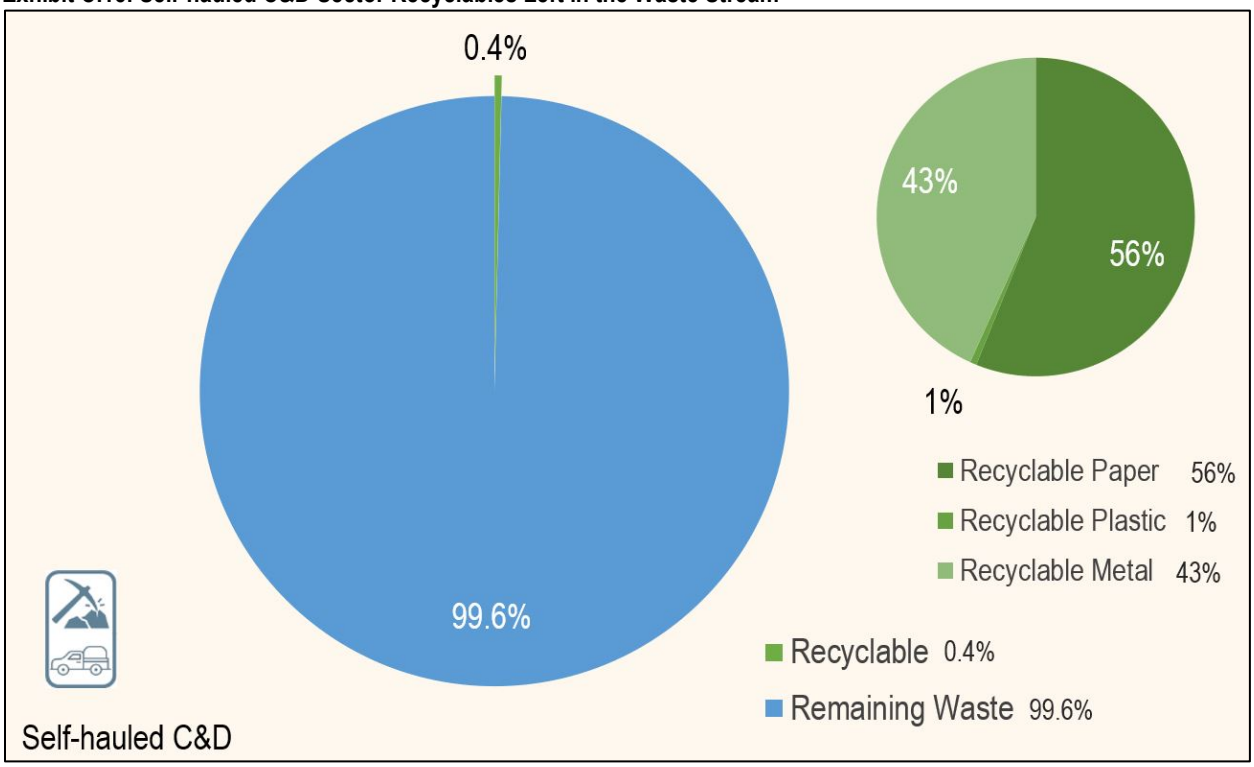
Exhibit C.14 and **Exhibit C.15** show the breakdown of the recyclables left in the waste stream of the Self-hauled MSW sector and the Self-hauled C&D sector. Both sectors contain very little recyclable material. For the material that is recyclable, the majority is paper for both sectors.

Exhibit C.14. Self-hauled MSW Sector Recyclables Left in the Waste Stream



Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

Exhibit C.15. Self-hauled C&D Sector Recyclables Left in the Waste Stream



Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

C.4 Composition of Other Divertibles Left in the Waste Stream of the SCRSWS

As another means to better understand and improve diversion programs, it is helpful to look at what materials are divertible in the disposed waste stream, also known as "other divertibles." For this category, data was derived from the Eastern Washington section of the 2015/2016 Washington Statewide Waste Characterization Study, overseen by the Department of Ecology (State of Washington Department of Ecology, 2018). The Eastern Washington study was conducted at the WTE facility, and therefore, should be representative of the waste produced in the SCRSWS.

Charts were created showing the total amount of other divertibles left in the waste stream and broken down by the four waste sectors. Other divertible materials are shown as five major categories. Table C.2 shows how materials were categorized.

Table C.2. Other Divertible Material Categories

Divertible Paper	Divertible Organics	Divertible Consumer Products
Compostable Paper Packaging	Yard Waste - Leaves & Grass	E-Waste
Compostable Paper Products[1]	Yard Waste - Prunings	Textiles
	Livestock manure	Furniture
Divertible Construction Materials		
Natural Wood	**Divertible Wood Waste**	
Asphalt	Dimensional Lumber	
Concrete	Pallets & Crates	

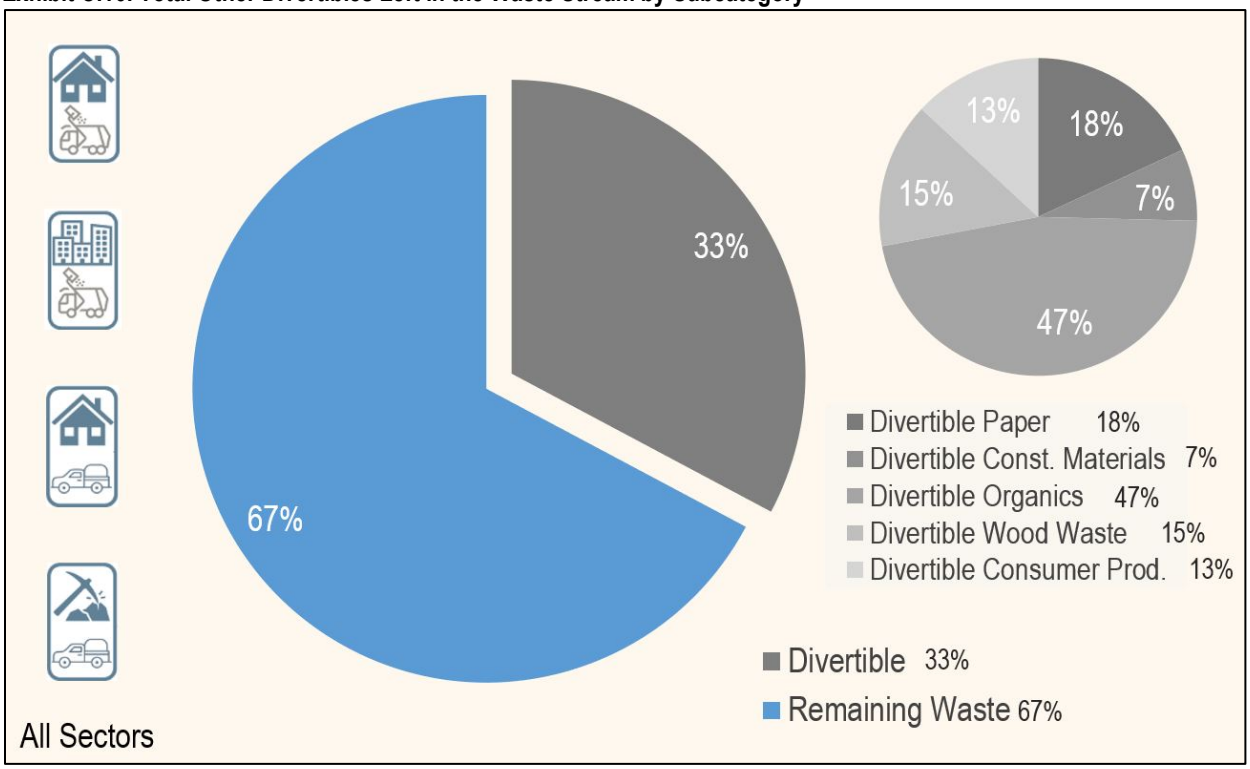
[1]Compostable paper products are "non-packaging papers that can be composted" (Ecology, 2018)

Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

OTHER DIVERTIBLES LEFT IN THE WASTE STREAM BY SECTOR

Exhibit C.16 shows the other divertible material for all sectors compared to the remaining waste or the non-divertible portion. Compared to recyclables left in the waste stream, there is a much larger quantity of material that can be targeted for diversion (13% recyclables compared to 33% other divertibles).

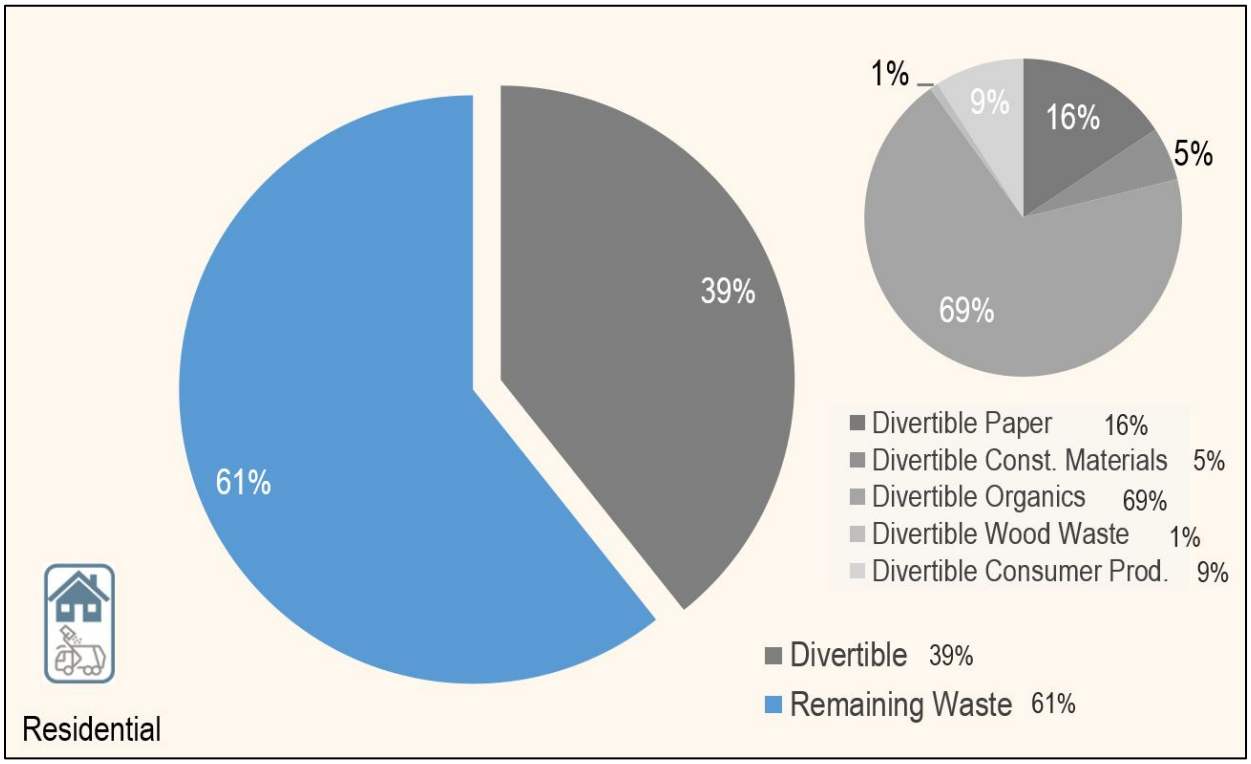
Exhibit C.16. Total Other Divertibles Left in the Waste Stream by Subcategory



Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

Exhibit C.17 shows the breakdown of the other divertibles portion left in the residential waste stream. The residential waste stream sector contains the largest amount of other divertible materials compared to the other three sectors. The largest component by far is organics with yard waste comprising most of the organics.

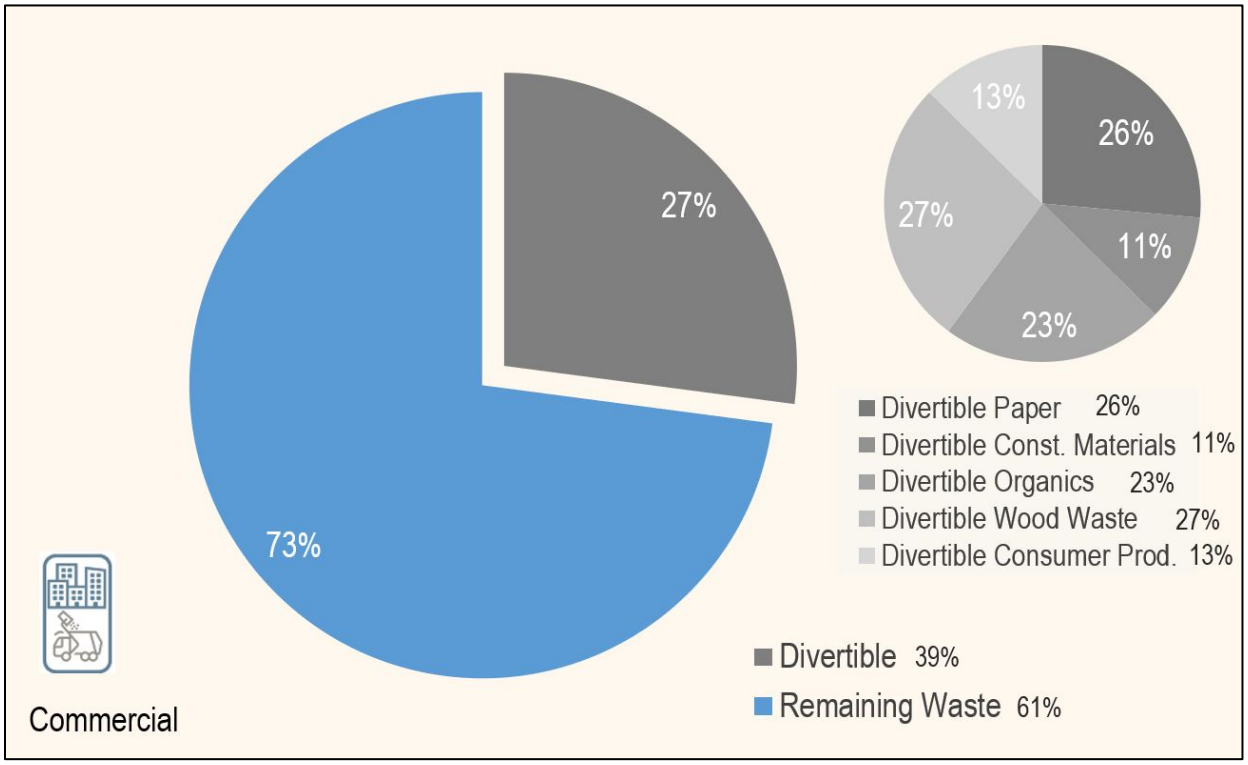
Exhibit C.17. Residential Sector Other Divertibles Left in the Waste Stream



Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

Exhibit C.18 shows the breakdown of the other divertible portion of the commercial waste stream. Unlike the residential sector, the other divertible portion from the commercial sector are spread evenly across all categories.

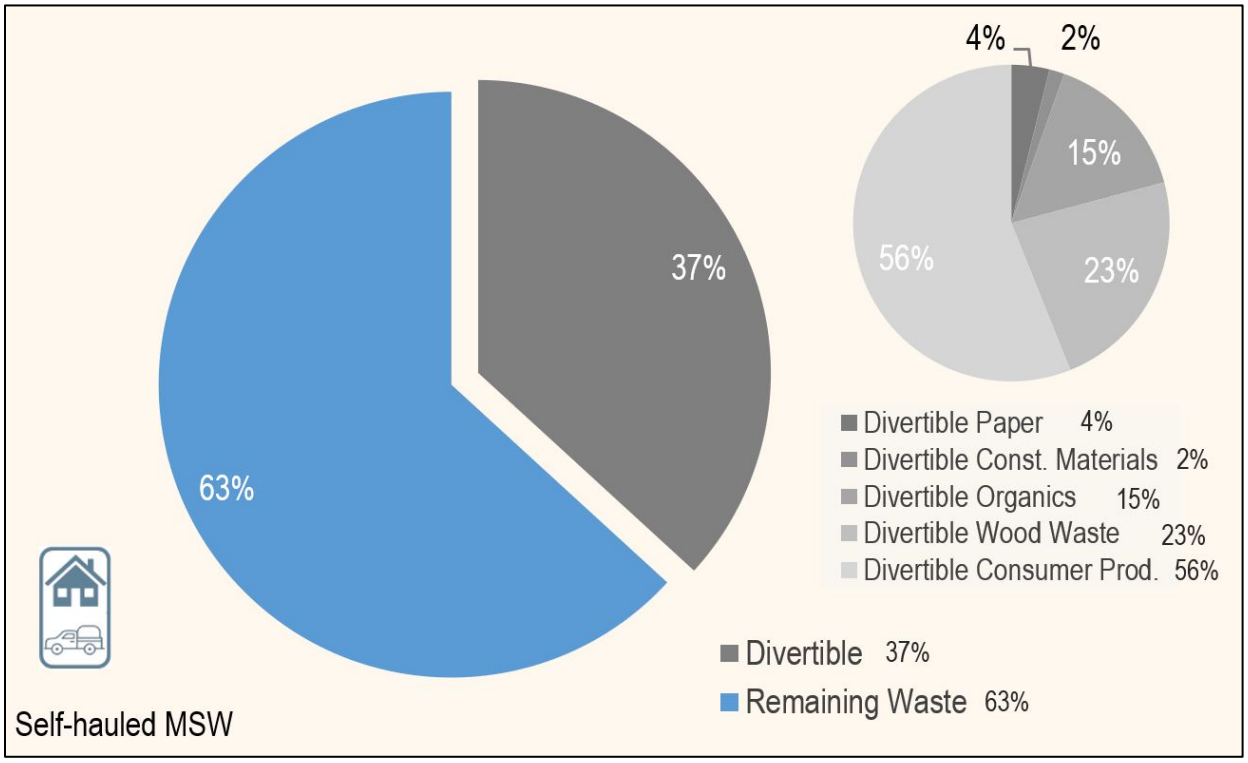
Exhibit C.18. Commercial Sector Other Divertibles Left in the Waste Stream



Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

Exhibit C.19 shows the breakdown of other divertibles left in Self-haul MSW. This sector contains a large percentage of divertible consumer products. Of these products, furniture was the largest product by far.

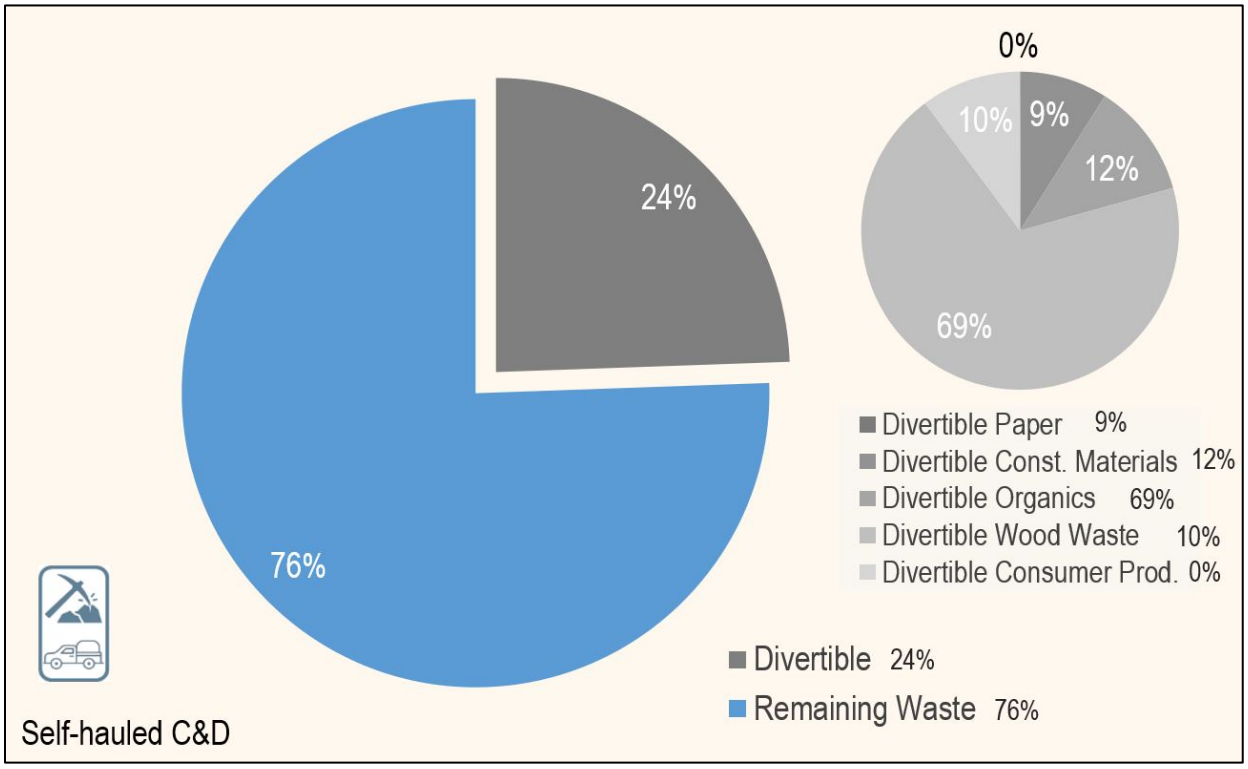
Exhibit C.19. Self-hauled MSW Sector Other Divertibles Left in the Waste Stream



Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

The breakdown of other divertibles in Self-haul C&D is shown in **Exhibit C.20**. The largest component of this sector is divertible wood waste with pallets and crates making up two thirds of this waste.

Exhibit C.20. Self-hauled C&D Divertibles Left in the Waste Stream



Source: Dept of Ecology Waste Characterization Study, 2015/2016 (Ecology, 2018)

Appendix D

Goals and Actions

Goals were created for this Plan with the intent of supporting the Vision of the SCRSWS. A total of eight Goals are summarized below. On the pages following the Goals Summary are tables detailing each Goal and a list of actions the SCRSWS can implement to help reach that Goal. Some of the action items fulfill the needs of more than one goal and are indicated so in red text.

As the SCRSWS implements selected action items, the Vision statement and Guiding Principles will be revisited and used a compass for decision making.

Goals for the SCRSWS are summarized as below:

Goal 1
Continue to promote actions that follow the waste reduction hierarchy of 1) Reduce, 2) Reuse, and 3) Recycle, and ensure that waste reduction is the foremost preferred solution when it comes to solid waste choices.

Goal 2
Research, evaluate and implement solid waste services to better serve customers.

Goal 3
Create a sustainable funding mechanism for SCRSWS comprehensive planning and capital improvements.

Goal 4
Build a new foundation for the future of managing our waste that integrates sustainable materials management.

Goal 5
Continue an enforcement program for flow control, litter, unsecured loads, illegal dumping, nuisances, and other enforceable criteria.

Goal 6
Plan for and provide solid waste services and programs in collaboration and coordination with state agencies and other organizations.

Goal 7
Provide equitable solid waste services, opportunities, outreach, and resources for our community.

Goal 8
Emphasize protection of our sole source aquifer and promote stewardship and reduction of solid waste and toxic waste.

GOAL 1 Waste Reduction First

Continue to promote actions that follow the waste reduction hierarchy of 1) Reduce, 2) Reuse, and 3) Recycle, and ensure that waste reduction is the foremost preferred solution when it comes to solid waste choices.

Action Items	
1.A.	Develop and promote waste reduction and diversion messages to residents through partnerships with local and regional stakeholders, i.e. The Recycling Task Force, higher education, local haulers, etc.
1.A.i	Implement a "Stop Wishful-Recycling" media campaign to increase awareness about recycling contamination, what is accepted locally, and curb behavior that contributes to recycling contamination.
1.A.ii	Provide comprehensive waste reduction consultation services for member jurisdictions, businesses, agencies, and other organizations within the SCRSWS including but not limited to: waste reduction strategies, supply chain management and green procurement policies, award and recognition programs, reuse and material exchanges, and toxics reduction strategies.
1.B.	Pursue local and regional material reuse partnerships and opportunities.
1.B.i	Research and evaluate potential outlets for glass recycling opportunities.
1.B.ii	Create circular economy workshop for local businesses.
1.C.	Use information from solid waste life cycle assessments to change the mindset and behavior of consumers towards the least environmentally impactful choices surrounding solid waste. Share this information through various outreach and education methods.
1.D.	Utilize surveys and other means to measure the effectiveness of education and outreach programs and to identify knowledge and/or behavior gaps for residents, businesses, and other stakeholders.
1.E.	Support prudent legislation and policies that reduce consumer and producer waste streams.

GOAL 1 Waste Reduction First

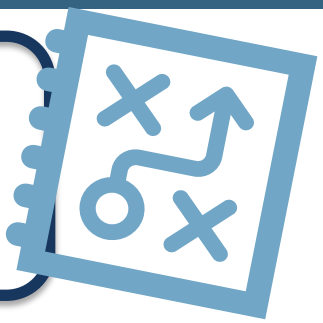
Action Items	
1.F.	Research and evaluate offering a re-use store/park prior to entry into transfer stations to reduce the number of reusable items in the waste stream.
1.G.	Provide education and outreach to residents about organics diversion through methods including, but not limited to, the Master Composter program, public and classroom presentations, social media, websites, radio, and television.
1.H.	Continue to support Event Recycling program for community events.
1.I.	Continue to provide reduced tipping fee rates for organic material at County-owned transfer stations to incentivize organics diversion.
1.J.	Evaluate options and funding for large-scale anaerobic digestion or composting of organic wastes.
1.K.	Evaluate options for the beneficial use of biosolids and monitor funding sources for facilities and increased processing.
1.L.	Regularly evaluate Spokane County demographics to identify the types of education and outreach materials needed by underserved populations within our community. (e.g., Investigate options for call-in translation assistance, evaluate and implement website functions that enable trans-created content and easy access for underserved populations.)
1.M.	Provide education and on-site technical assistance for businesses, including waste reduction strategies, supply chain management and green procurement policies, award and recognition programs, reuse and material exchanges, and toxics reduction strategies.
1.N.	Evaluate applicability of neighborhood drop boxes for commodities not accepted in curbside recycling.
1.O.	Promote current fiber and organics collection options and evaluate how to expand these services to underserved areas.
1.P.	Promote reuse opportunities at existing locations.
1.Q.	Evaluate rural access to waste reduction, reuse, and recycling programs and implement if needed and feasible.
1.R.	Research outlets and uses for recyclable materials in local and regional markets and businesses.
1.S.	Evaluate financial incentives to increase diversion of materials at disposal and transfer facilities.

GOAL 1 Waste Reduction First

Action Items	
1.T.	Consider modifying the service level ordinance to allow rate structures that will incentivize recycling.
1.U.	Encourage expansion of organics collection from both residential areas and large generators.
1.V.	Encourage expansion of multifamily housing waste reduction and recycling programs.
1.W.	Provide education and outreach to single family residents and multifamily housing about waste reduction, reuse, and recycling information through various methods.
1.X.	Consider establishing waste diversion and reduction specifications for County projects or construction.

GOAL 2 Efficient Services

Research, evaluate and implement solid waste services to better serve customers.



Action Items	
2.A.	Expand the HHW hours of access.
2.B.	Remove or increase limits of HHW quantities for non-business customers.
2.C.	Evaluate small quantity generator services at SCRSWS-owned facilities.
2.D.	Evaluate facility capacity and needs for regional growth for both residential and commercial customers with regards to all services and programs.
2.E.	Maintain and/or increase the safety of transfer stations for those working at the site, regularly or temporarily, and all visitors through implementing traffic safety measures, installing surveillance cameras or other actions.
2.F.	Work with regional stakeholders to find sustainable material management solutions for challenging materials, e.g. animal parts, shingles, asbestos.
2.G.	The County and City of Spokane will continue to monitor research and investigate alternatives that utilize the Waste to Energy facility's ash.
2.H.	Create outreach materials on proper handling and disposal of different miscellaneous wastes. This can be done in collaboration with partnering agencies and organizations.
2.I.	The County will continue to coordinate with SRHD in the distribution of educational materials for correct management of medical waste and toxic waste generated by residents.
2.J.	Continue to review current emergency debris response plan and coordinate with appropriate agencies or organizations in the event of implementation.
2.K.	Continue to allow private sector to manage and dispose of paper sludge wastes, contaminated soils, and other such miscellaneous wastes, with emphasis in reduction and recycling when feasible.

GOAL 2 Efficient Services

Action Items	
2.L.	Consider implementing programs to reduce tire waste (e.g., purchasing programs for recycled tire products, consumer information on tire lifecycle costs, etc.).
2.M.	Coordinate tire disposal funding and events when feasible.
2.N.	Expand transfer station hours of access.
2.O.	Consider/evaluate need for construction and demolition (C&D) disposal operation, source separation activities, or separate fees.
2.P.	Add a HHW reuse table.
2.Q.	Evaluate cost-saving measures for administration and operations.
2.R.	Implement separate fees for tires, appliances, mattresses, and other miscellaneous waste streams.
2.S.	Provide assistance in unloading to customers with disabilities upon request.
2.T.	Investigate and implement a waste monitoring program that would measure waste characterization, customer demographics and satisfaction to determine changing customer needs and how the SCRSWS can operate the transfer stations effectively
2.U.	Evaluate methods for modified operations in concurrence with emergency management plans that may decrease accessibility to programs and services
2.V.	Consider purchasing useful promotional items and other incentives to increase awareness about SCRSWS programs and services (e.g., the Load Warrior Campaign).
2.W.	Continue to assess costs and logistics of current disposal practices and impacts on regional economy and community.
2.X.	Assess options for long hauling waste to alternate disposal sites as necessary.
2.Y.	Encourage expansion of organics collection from both residential areas and large generators
2.Z.	Re-evaluate minimum service level ordinance on an annual basis.
2.AA.	Consider the implementation of a solid waste district in densely populated unincorporated areas of Spokane County for mandatory collection.

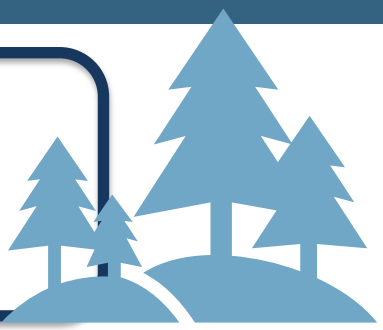
GOAL 3 Adequate Funding

Create a sustainable funding mechanism for SCRSWS comprehensive planning, capital improvements, and post closure activities.

Action Items	
3.A.	Investigate County-wide finance mechanisms that are equitable to all county residents and that will enable an equitable long-term funding mechanism for SCRSWS-owned closed landfills.
3.B.	Create a timeline for equipment replacement at facilities.
3.C.	Budget for sustained services and capital improvements.
3.D.	Support legislation that improves state funding mechanisms with regards to local solid waste programs.
3.E.	Conduct business and programs within the SCRSWS that are fiscally responsible.

GOAL 4 Sustainable Materials Management

Build a new foundation for the future of managing our waste that integrates sustainable materials management.



Action Items	
4.A.	Support efforts, legislation, and policies when feasible and beneficial to our local community's economy or health in regard to: life cycle assessment, Zero Waste, Extended Producer Responsibility (EPR), and local industrial symbiosis and circular economy projects and programs.
4.B.	Create a decision-making framework to make informed decisions regarding sustainable materials management composed of elements from: the Center for Sustainable Infrastructure's (CSI) Five Big Goals for 2040, recommendations from research and policies from Washington state solid and hazardous waste plan, Oregon Dept. of Environmental Quality, the EPA's Non-Hazardous Materials and Waste Management Hierarchy, and other sources.
4.C.	Use information from solid waste life cycle assessments (LCA) to change the mindset and behavior of consumers towards the least environmentally impactful choices surrounding solid waste. Share this information through various outreach and education methods.
4.D.	Calculate and track annual greenhouse gas emissions and other environmental impacts of local operations and disposal to use as a tool for consideration in solid waste management decisions.
4.E.	Create recommendations to reduce impacts on our community and environment and, where feasible, implement recommendations.
4.F.	Ensure that programs, policies, and management decisions are in compliance with regulations and fulfill required regulatory criteria.
4.G.	Support efforts locally for industrial symbiosis and circular economy projects and programs.

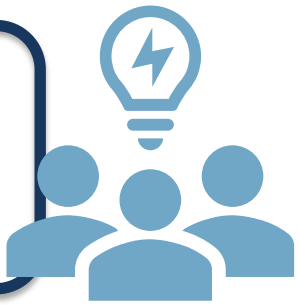
GOAL 5 Enforcement

Continue an enforcement program for flow control, litter, unsecured loads, illegal dumping, nuisances, and other enforceable criteria.

Action Items	
5.A.	Create an outreach program for businesses and other waste generators that are participants in the SCRSWS, explaining proper disposal practices, locations, and available solid waste programs (e.g., litter removal).
5.B.	Create a task force on enforcement between the County Sherriff's Dept, Regional Health District, SCRSWS, and others as appropriate.
5.C.	Share costs between task force members to allocate funding for an enforcement position.
5.D.	Deter illegal dumping through proper signage, neighborhood clean-up days, security cameras, etc.
5.E.	Pursue funding for clean-up events that benefit underserved populations.
5.F.	Work with the member jurisdictions to improve coordination regarding cleanup of illegal dumping sites, education, and prevention programs.
5.G.	Continue focusing litter clean-up crew work within SCRSWS jurisdictions and evaluate avenues to increase the program.
5.H.	Evaluate reduced disposal costs for illegal dump clean-up projects within SCRSWS member jurisdictions.
5.I.	Ensure the SCRSWS is within compliance with local and state regulations.
5.J.	Coordinate with neighboring counties regarding enforcement issues.
5.K.	Evaluate County code and ordinances with regards to solid waste enforcement issues.

GOAL 6 Collaboration

Plan for and provide solid waste services and programs in collaboration with state agencies and other organizations.



Action Items	
6.A.	Participate actively within the Washington Association of County Solid Waste Managers (WACSWM) to collaborate on research and ideas, work toward consistent standards, policies and programs across the state, give voice to local governments, and evaluate the impact of legislation presented in Olympia on County solid waste programs and services.
6.B.	Develop and promote waste reduction and diversion messages to residents through partnerships with local and regional stakeholders, i.e. The Recycling Task Force.
6.C.	Create a brochure and/or video for elected officials that explains how the Spokane County Regional Solid Waste System (SCRSWS) operates and the system's needs and capacities.
6.D.	Provide training for employees and partner organizations so that residents are well informed about SCRSWS services.
6.E.	Continue partnership and funding for Spokane River Forum and the Spokane County Waste Directory.

GOAL 7 Social Equity

Provide equitable solid waste services, opportunities, outreach, and resources for our community.

Action Items	
7.A.	For ANY action within this plan, social equity will be considered before implementation.
7.B.	Determine what the biggest solid waste hurdles are for underserved populations and prioritize education and outreach to help overcome identified hurdles.
7.B.i.	Establish a "Waste Ambassador" program that trains members within underserved populations to provide waste reduction education and outreach to their community in meaningful and culturally relevant ways.
7.B.ii.	Trans-create transfer station flyers into languages used in the Spokane area, such as Spanish, Russian and Ukrainian, and proactively offer flyers to customers.
7.C.	Evaluate and implement an effective low-income assistance program for solid waste services.
7.D.	Evaluate and implement household hazardous waste collection services for elderly or vetted individuals that cannot access transfer stations.
7.E.	Prioritize education and outreach into underserved populations within our community to determine what their biggest hurdles are regarding sustainable materials management and find solutions to overcome identified hurdles
7.F.	Provide training for employees and partner organizations so that residents are well informed about SCRSWS services.
7.G.	Incorporate provisions regarding wages, benefits, workforce diversity and career pathways into public sector solid waste investments, operations contracts, franchises, licenses and other procurement and regulatory instruments.
7.H.	Advocate for multiple sizes of curbside service containers for individuals that struggle with physically maneuvering large carts, e.g. Organics and Recycling carts. Collaborate with stakeholders to provide additional resources to multi-family properties for sustainable materials management.
7.I.	Work with County solid waste employees, Human Resources, and thought leaders to understand what types of equity and social justice training is most appropriate to aid staff in advancing their skills based on their work assignments and current experiences. Identify resources for providing the training and work with County leadership to establish a training schedule.

GOAL 8 Moderate Risk Waste Reduction

Emphasize protection of our sole source aquifer and promote stewardship and reduction of solid waste and toxic waste.

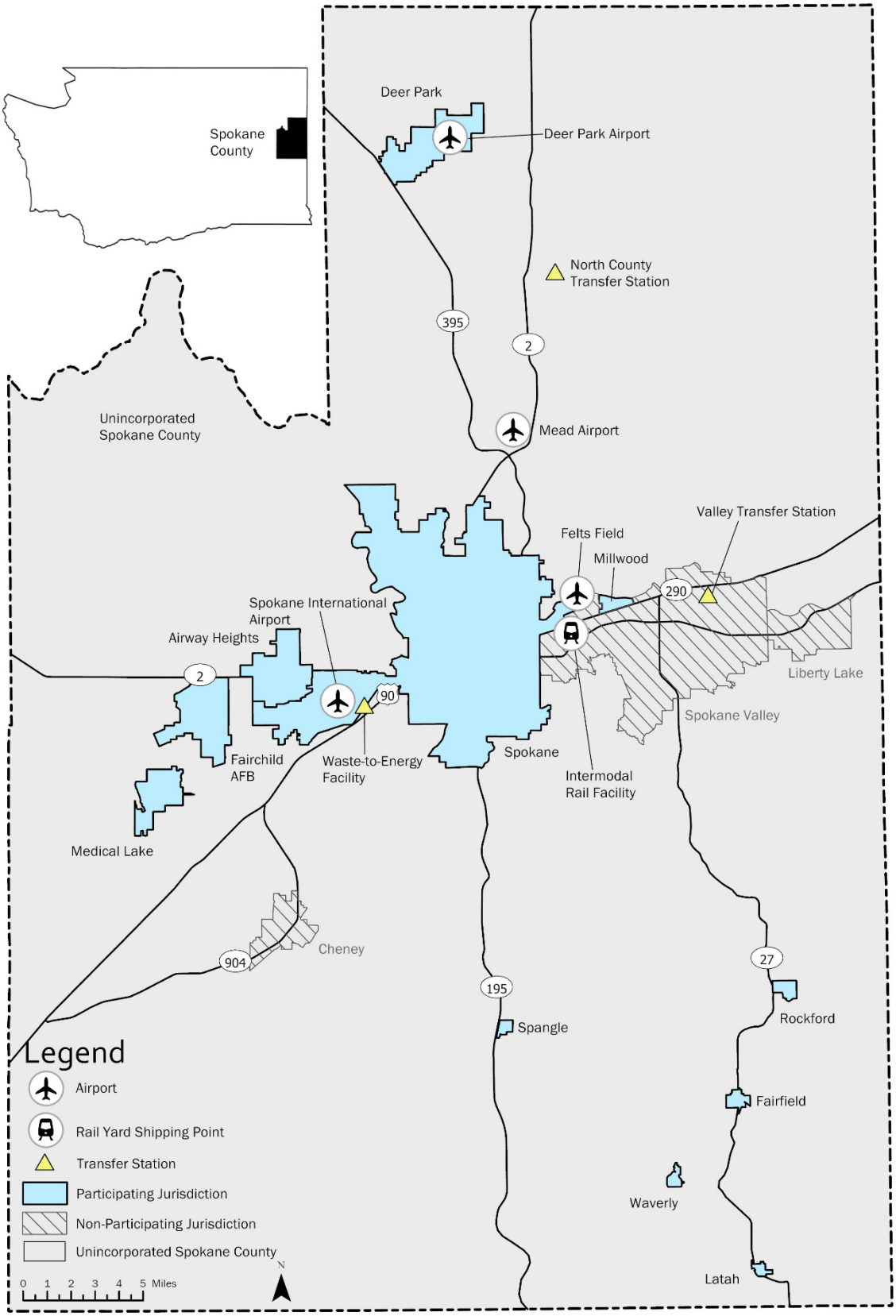
Action Items	
8.A.	Provide technical assistance to businesses regarding MRW through consulting or through partnerships with local agencies and organizations such as Local Source Control, the Spokane River Forum's EnviroCertified program and the Spokane Aquifer Joint Board.
8.B.	Continue efforts to increase public awareness on proper handling and disposal of MRW and use of alternative products through partnerships with local agencies and organizations such as Local Source Control, the Spokane River Forum, and the Spokane Aquifer Joint Board.
8.C.	Provide residents with the ability to drop off 5 gallons of used oil per household per operating day, consistent with RCW 70A.224.030.
8.D.	All uncontaminated used oil collected at MRW permanent collection sites is sent to be re-refined.
8.E.	Offer periodic collection events for residents in rural areas of the County when feasible.
8.F.	Evaluate and implement toxic reduction strategies at the point of purchase by working with consumers and retailers.
8.G.	Continue to collect residential MRW at system facilities.
8.H.	Increase services of MRW at system facilities (hours, quantities, business assistance).
8.I.	Support implemented State product stewardship programs through outreach and education.

Appendix E

Facility Siting

The geographic area of Spokane County covers approximately 1,765 square miles and lies at the northeast corner of the Columbia Plateau (see **Exhibit E.1**). Spokane County is situated midway between Canada to the north and the State of Oregon to the south. Neighboring Washington State counties include Whitman County to the south, Lincoln County to the west, and Stevens and Pend Oreille to the North. The State of Idaho lies to the east. Neighboring Idaho counties include Kootenai and Benewah Counties.

Exhibit E.1. Spokane County Vicinity Map



Source: Washington State GIS Database, 2020

E.1 Topography

The topography of Spokane County ranges from its lowest elevation of 1,534 feet above sea level along the Spokane River to Mount Spokane at 5,878 feet above sea level. The Spokane River, which originates at Lake Coeur d'Alene in Idaho, flows primarily east to west through Spokane County in the wide depression of land that forms the Spokane Valley. A drop of 134 feet in the river, known as the Spokane Falls, marks the beginning of a shift in the river's flow to a northwesterly direction. Another drop of 240 feet occurs at the confluence with the Little Spokane River, where the topography changes to a deep gorge-like valley bordered by prominent cliffs and terraces.

To the north and west of the Valley, there are several mesas that rise 400 to 500 feet above surrounding lands. These mesas range between 2,300 and 2,450 feet above sea level. The northeastern portion of Spokane County is a bedrock highland that includes Mount Spokane and surrounding peaks.

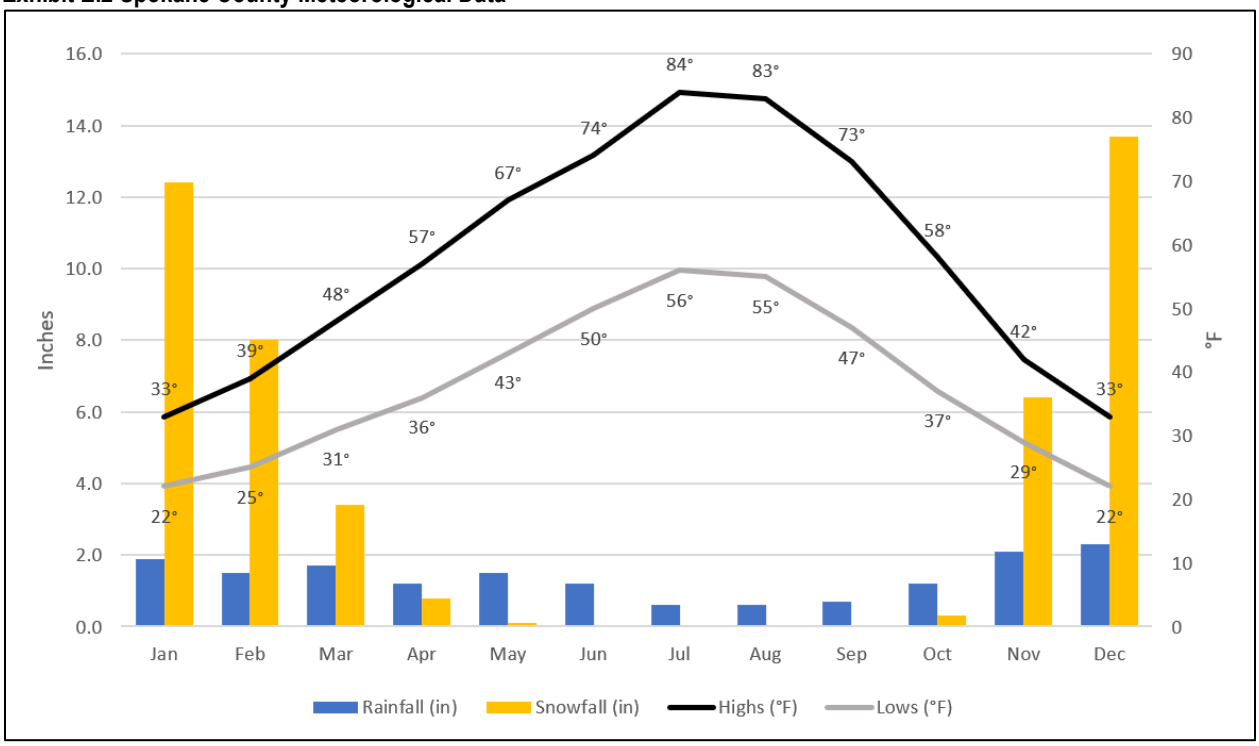
Much of the topography of the southwestern part of Spokane County consists of southwest-trending channels eroded into the basalt plateau, known as the channeled scablands. Topography in the south and southeast consists of relatively flat basalt plateaus. However, various peaks are found in this area, with Mica Peak rising to 5,205 feet above sea level.

E.2 Climate

Spokane County's climate is derived from oceanic, continental, and mountain influences. To the west, the Cascade Mountains limit the movement of cool marine air into the area. The Rocky Mountains to the east and north protect Spokane County from most of the cold air masses that move across Canada in the winter. Summer weather is generally dry, sunny, and warm, with cool nights. Winters are fairly cool, with temperatures often below freezing and limited precipitation.

Average meteorological data compiled from 1981 to 2010 are shown in **Exhibit E.2**. Most of Spokane County's precipitation occurs between October and March. Sub-zero temperatures and disabling snowfalls are not common. Winds are predominately out of the southwest, with an average wind velocity of 8 mph.

Exhibit E.2 Spokane County Meteorological Data



Source: NOAA, 2020

E.3 Air

Because of topographic and climatic conditions, Spokane County can suffer from significant seasonal fine particulate air-pollution problems. Frequent temperature inversions and stable air conditions cause air pollutants to accumulate in the Spokane Valley basin. These conditions are most persistent in fall and winter. Spring and summer inversions are more frequent but shorter in duration. Wood stoves are used widely in Spokane County, and contribute greatly to the air pollution problem. Burning bans are mandated when pollution is trapped in the Spokane Valley and the air quality is deemed impaired by Ecology or Spokane Regional Clean Air Agency (SRCAA). Burning of grass and other agricultural fields are tightly controlled by Ecology and SRCAA--agencies that issue permits on a limited basis because of the detrimental effect on air quality.

The primary source of carbon monoxide (CO) in the atmosphere is gasoline-powered motor vehicles. Other sources include heating and power generation from natural gas and wood heat for residential, commercial, or industrial uses. Topographic conditions restrict the movement of air and pollutants out of the Spokane Valley basin and further complicate the inversion problems. Portions of Spokane County have been designated as non-attainment areas for particulates less than 10 microns in diameter (PM10).

E.4 Water

The surface waters of Spokane County include the Spokane River and its tributaries, in addition to smaller streams and lakes. These lakes are located in the southwestern and central eastern portions of Spokane County. Lakes include Medical Lake in the southwest

quadrant of the county, Newman Lake and Liberty Lake, located near the east central section of Spokane County, and Eloika Lake along the northern border. In all, lakes cover approximately 5,646 acres of Spokane County.

Most surface water in Spokane County is considered unfit for domestic use. The area's lake and pond water quality is adversely affected by the land-locked conditions of most ponds and lakes--human activity along waterbodies, runoff from agricultural fields, and the discharge of sewage effluent. Furthermore, water quality necessary to sustain fish has become a concern for the Spokane River and its tributaries. Heavy metals released by historic mining operations in the Coeur d'Alene Basin persists in Spokane River sediment and poses environmental and health concerns. Groundwater is used for drinking supplies.

There are four distinct groundwater zones present in Spokane County: (1) the Spokane-Rathdrum Zone, (2) the Sand and Gravel Zone, (3) the Basalt Zone, and (4) the Metacomplex Zone. The Spokane-Rathdrum Aquifer was designated as a sole-source of water supply for the Spokane-Coeur d'Alene area by the United States Environmental Protection Agency (EPA) in 1978.

A designation was established for the area within which activities could affect the aquifer water quality. Various cities and the County have implemented land use practices with the purpose of protecting water resources affected by their jurisdictions including the construction of a WTE facility in lieu of any future MSW landfills. Aquifer recharge occurs all along the Spokane River in the eastern Valley where the elevation of the river is above the water surface elevation in the aquifer. There is evidence of aquifer-river interchange downstream from the recharge section to Spokane Falls in the City of Spokane. Because of population growth and increased development, aquifer quality and capacity concerns have developed in the region, making it more difficult to obtain water rights.

E.5 Land Use

The City of Spokane is the second largest city in the state and is a regional transportation, financial, health care, and cultural center for the Inland Northwest (defined to include eastern Washington, northern Idaho, western Montana, northeast Oregon, and southeast British Columbia). The City of Spokane is becoming an area dominated by employment in personal services and government, with a high representation of employment in social services, hospitals, and health. Spokane has evolved into the medical, retail, and services center for the entire Inland Northwest. Both wholesale and retail trades are growing in this area. In addition, technical firms are moving into the area and existing facilities are expanding to accommodate growth in this market.

The County supports other large industries including agriculture, wood products, and tourism. Education also forms a significant part of the county's economic base because of the local universities (Eastern Washington University, Washington State University, Gonzaga University, Whitworth College) and community colleges. The top employment sectors include government agencies, health care services, accommodations, and manufacturing.

The County's primary developed area extends from the City of Spokane metropolitan area to the east along Interstate 90 to the Washington-Idaho border, across the central part of the

County. The major commercial uses in the County are centered in the City of Spokane and spread outward, mainly along Division Street to the north and Sprague Avenue to the east. Industrial uses are primarily found east of the City of Spokane boundaries between Trent and Sprague Avenues.

There are some large industrial developments to the north in the Mead area (closed Kaiser Aluminum site), west in the West Plains area and in the north east area of the City of Spokane. Furthermore, Fairchild Air Force Base employs thousands of people who travel from the base to other areas in Spokane County on State Route 2 and contributes to the economic vitality of the region.

E.6 Transportation

Spokane County's existing transportation system is composed of roadways, public transportation, trucking, air, and rail and bus lines. These modes of transportation accommodate both the movement of goods and personal travel. The county is served by several small-sized airports in addition to larger airports at the Spokane International Airport, in the west portion of Spokane County. Burlington Northern Railroad serves the county and handles all types of commodities; rail passenger service is provided by Amtrak. Greyhound is the largest bus service available. Numerous trucking firms provide inter- and intra-state hauling services. No ship or barge facilities are available because of the county's inland location.

Appendix F

Jurisdiction Specific Waste Reduction Programs

Some member jurisdictions offer waste reduction programs to their residents that are in addition to those provided by the SCRSWS, or at the SCRSWS-designated facilities, or are additional to the solid waste services provided in contracts between a city and a private hauler. The most common programs are outlined in Table F.1.

Table F.1. Common Waste Reduction Programs Offered by Jurisdictions

Programs	Airway Heights	Deer Park	Fairchild AFB[1]	Fairfield	Latah	Medical Lake	Millwood	Rockford	Spangle	Spokane[2]	Waverly
Utility Bill Inserts: Print & Stuff Envelopes		x		x	x					x	x
Utility Bill Inserts: Stuff Envelopes Only						x					
Organics: Seasonal Dumpster Provided by Jurisdiction						x					
Organics: Fall Leaf Collection							x				
Organics: Chipping Events[3]				x	x						
Organics: Compost Facility								x			
Recycling: Source Separated Dumpsters Provided by Jurisdictions			x								
Recycling: Comingled Dumpsters Provided by Jurisdiction[4]				x	x						x

[1]More information about FAFB's programs can be found in section F.1

[2]More information about the City of Spokane's programs can be found in section F.2

[3]Chipping events for Fairfield, Latah and Waverly are outlined in a cost-share agreement with Spokane County due to the cities' distance from SCRSWS-designated facilities.

[4]Comingled dumpsters for Fairfield, Latah and Waverly are outlined in a cost-share agreement with Spokane County due to the cities' distance from SCRSWS-designated facilities.

F.1 Fairchild Air Force Base

FACILITIES

Recycling Center

Fairchild Air Force Base (Fairchild) operates a Recycling Center, which has the equipment necessary to process and store materials recycled on base. The Recycling Center has a drop-off area open 7 days a week, 24 hours a day, and is available for use by all individuals that have access to the base. Customers are asked to separate their recyclables and place them in the appropriate containers. The base recycling contractor collects, transports, processes, and stores recyclable materials from all non-residential areas on the base until they are sold to private recycling centers.

Items currently accepted at the Recycling Center include:

- Cardboard
- Newspaper
- Magazines and catalogs
- Paper products
- Certain plastic bottles and jugs
- Steel and aluminum cans

WASTE REDUCTION PROGRAMS

Recycling Collection Program

Fairchild Air Force Base has a comprehensive recycling program that includes collection from residential areas and central collection points within non-residential areas. Under housing privatization, the privatization contractor is responsible for the collection of refuse, recycling, and yard waste in accordance with their lease agreement and all applicable regulations. A variety of containers for recyclable materials (desk side containers, cardboard cages, containers for paper, cans, plastic, etc.) are located at all Fairchild offices and shops (including office buildings, industrial areas, dormitory housing, food service areas, medical facilities, and recreation areas). Recyclable materials are generated by Department of Defense (DoD) employees, contractors, associate organizations, and anyone else with base access. Each office and shop is responsible for placing bagged recycled materials at their building's designated central collection point(s). The Recycling Center contractor performs weekly or as-needed pick-up of the materials from these central collection points and transports them to the Recycling Center for processing. Other materials (e.g., scrap metal, Commissary and Base Exchange cardboard, tires, etc.) are collected through various base organizations.

Park and Event Recycling

Fairchild has outdoor recycling units at several locations throughout the base including parks, baseball fields, and the "FAMCAMP" recreational vehicle park area. For major picnics and events, portable recycling containers are used to supplement the permanent outdoor containers.

Operational Programs

At Fairchild Air Force Base, source reduction is encouraged through a wide variety of venues and educational efforts targeted to base personnel.

Operational Programs include:

- The Department of Defense reuse and reutilization program which ensures all serviceable equipment, materials and other items are reused to the maximum extent possible
- A moving box reuse/exchange program
- Pallet reuse
- Operation of a thrift shop and "Airman's Attic" used by military personnel
- Commissary food donations to local food banks.
- Grasscycling
- Construction and demolition recycling to the maximum extent possible by C&D contractors and in-house C&D projects

Educational Programs

Fairchild offers many recycling education and outreach programs targeted to base personnel that include, but are not limited to: periodic articles in the base electronic newsletter, a variety of briefings to facility managers, unit environmental coordinators, and base leadership, distribution of an environmental brochure to all base employees, recycling brochures made available to all base organizations, monthly briefings to all new employees to the base, informational booths set up at various base and community functions, and other miscellaneous programs.

MONITORING AND MEASUREMENT

Fairchild Air Force Base maintains records of its waste collection and recycling programs.

F.2 City of Spokane

The City of Spokane provides an integrated waste reduction outreach program for its residents and businesses that focuses on four main areas: school and youth education, public outreach, coalitions with other entities, and business and institution education and consultation. Spokane solid waste education staff provides waste reduction and recycling education programs in partnership with the SCRSWS as well as other environmental entities in Spokane County. The City of Spokane also has a Public Infrastructure, Environment, and Sustainability Committee, of which a Sustainability Action Subcommittee hosts a workgroup dedicated to exploring efficiencies in managing waste and recycling.

SCHOOL AND YOUTH EDUCATION

Public and Private Schools

Since 1989, Spokane has sponsored waste reduction assembly and classroom programs for the K-16 school population. The programs are accompanied by student take-home pieces and teacher curriculum materials. Solid Waste Educators also work with local schools and with the Educational Service District 101 to provide waste and energy-related continuing education to teachers through workshops and conferences.

Other Youth Activities

In addition to classroom presentations and support of all school programs that promote waste reduction, reuse, and recycling, presentations are given to Boy and Girl Scouts, Campfire USA, Ecology Youth Corps, childcare programs, church youth groups, homeschool groups, and other youth venues that operate within the City of Spokane. Furthermore, the City of Spokane's educational tour program at the WTE Facility is available for interested teachers and groups. The tour program emphasizes waste reduction and recycling and includes related curriculum materials aligned to Washington State Learning Standards to help teachers integrate waste reduction lessons into their curriculum.

PUBLIC OUTREACH

Printed Materials

The City's Solid Waste Department produces numerous informational brochures of its own and distributes waste reduction information at Spokane City Hall and other Spokane municipal facilities such as Spokane public libraries and community centers. Information is also made available at public events such as neighborhood block parties and in utility bill inserts. The contents of the brochures cover general waste reduction, reuse, and recycling activities, mulching, composting, curbside recycling, use of County facilities, HHW, plastics recycling, and private drop-off recycling opportunities.

Solid Waste Website

The City of Spokane maintains a solid waste homepage (my.spokanecity.org/solidwaste/) that is updated regularly to provide current information about City of Spokane waste reduction services, facilities, events, and opportunities.

COALITIONS WITH OTHER ENTITIES

The city of Spokane's Solid Waste Department is involved in many programs with other government and business entities promoting waste reduction and sustainable lifestyle choices. Additional to the partners already listed in the Programs section, the City of Spokane works with the entities and/or programs described below.

Eastern Washington Regional Science and Engineering Fair

EWRSEF is attended by middle and high school students selected to share their research projects through oral presentations and posters (ewrsef.org). Spokane works in partnership with other local agencies such as Spokane Clean Air, Spokane County Water Quality Program, WA Deptartment of Ecology, Spokane County Conservation District, Educational Services District 101, and the National Weather Service. Regional educators are encouraged to incorporate environmental education into their curriculums by involving their students in this competitive event. Business sponsors are solicited to donate cash rewards for student presentations and school science departments.

EarthGen

EarthGen is a statewide program that supports schools in achieving their sustainability goals through curriculum, resources and recognition. The City of Spokane supports the organization and its local teacher development efforts, especially its certification program dealing with waste reduction and recycling. Learn more at earthgenwa.org.

BUSINESS AND INSTITUTIONAL EDUCATION

The City of Spokane's Solid Waste Department provides waste consultations to businesses upon request. Consultations usually include an assessment of opportunities to reduce waste, increase recycling, and "right-size" dumpsters to avoid unnecessary disposal costs. In-house educational services are also offered to help staff with container placement, signage and staff messaging.

NEIGHBORHOOD CLEAN UPS

The City of Spokane provides semi-annual clean up opportunities to each of its twenty-nine neighborhoods. These opportunities take the form of either neighborhood drop off events for large bulky wastes, organics, recycling and HHW, or dump passes which allow the resident to dispose one load of waste at the WTE Facility for free.

SUPPORT OF LOCAL EVENTS

The City of Spokane Solid Waste Department assists local events with their disposal needs. Large community events like Hoopfest and Bloomsday receive personalized disposal and waste reduction assistance to encourage events to be as low waste producing as possible and to be a model for other events to emulate. The Spokane River Clean-Up and community clean up days have also been supported by the solid waste department.

Appendix G

Inventory of Dangerous Waste Generators and Handling Facilities

Table G.1. Dangerous Waste Generators in Spokane County

RCRA #	Name	Last Report	Last Gen Status	City
WAR000000323	Airway Heights Corrections Center	2018	LQG	Airway Heights
WAH000031840	Wal Mart Supercenter 4394	2019	XQG	Airway Heights
WAH000048828	Exotic Metals Forming Co LLC	2018	MQG	Airway Heights
WAD988480604	Garco Building Systems	2015	SQG	Airway Heights
WAH000033794	Spokane Cnty Motorsports Park	2018	XQG	Airway Heights
WAR000000992	US AF Craig Road landfill	2018	XQG	Airway Heights
WAD980986780	Spokane Galvanizing Inc	2018	XQG	Airway Heights
WAD988515706	Metals Fabrication Co Inc	2018	XQG	Airway Heights
WAH000017962	WA AGR Spokane 2	2018	XQG	Colbert
WAH000042095	Northwest Steel Fab Inc Deer Park	2018	XQG	Deer Park
WAH000053177	Union Pacific Railroad Freeman	2018	XQG	Freeman
WAH000055705	Central Valley School District	2018	SQG	Greenacres
WAH000024446	WA DOT SR 395	2016	XQG	Mead
WAD000065508	Mead Custodial Trust	2018	LQG	Mead
WA6891406336	US DOE BPA Bell Maintenance HQ	2018	SQG	Mead
WAD988478996	Northwest Pipeline Corp Mead	2018	XQG	Mead
WAH000048794	Pull N Save Inc	2018	LQG	Mead
WAH000053733	West Company	2018	SQG	Medical Lake
WAD988479044	Northwest Pipeline Corp Medical Lake	2018	XQG	Medical Lake
WAH000052778	WM of WA Inc Medical Lake	2018	MQG	Medical Lake
WAH000032656	Albertsons 246	2018	MQG	Millwood
WAH000038530	Williams Northwest Pipeline GP Newman La	2018	XQG	Newman Lake
WAD988506515	Avista Corp Nine Mile Falls	2018	SQG	Nine Mile Falls
WA0000636787	Affordable Custom Cabinets	2018	SQG	Otis Orchards
WAH000048818	A and I Distributors Otis Orchard	2015	XQG	Otis Orchards
WAR000008938	Daves Auto Body & Glass Inc	2018	XQG	Rockford
WAD022480610	Freeman School District 358	2018	XQG	Rockford
WAD027679117	Gas Transmission NW Station 6	2018	SQG	Rosalia
WAH000023416	WA AGR Spokane 3	2016	MQG	Spangle
WAD988494787	Spokane Cnty Spangle Shop	2018	XQG	Spangle
WAH000030095	HD Supply Utilities Ltd HG3302	2015	LQG	Spokane
WAH000047498	Spokane City of Waste Management	2015	XQG	Spokane
WAH000015214	Spokane City 9th & Pine Water Tank	2015	XQG	Spokane
WA0000100297	Cosco Marking Inc	2015	LQG	Spokane
WAD009071135	Melcher Manufacturing Co Inc	2015	XQG	Spokane
WAH000047387	Global Metal Technologies	2016	XQG	Spokane
WAD060041209	Iron Goat LLC	2015	XQG	Spokane
WAD988498879	Western Trailer	2015	LQG	Spokane
WAD009069717	Spokane Industries	2018	SQG	Spokane

WAD981761638	ANA LABORATORIES	2018	SQG	Spokane
WAD988501094	Ross Printing Co	2018	MQG	Spokane
WAD988503322	Sonderen Packaging	2018	XQG	Spokane
WAD009066879	Cowles Publishing Co Spokane	2018	SQG	Spokane
WAD053060398	RA Pearson Co	2016	XQG	Spokane
WAD981763733	Spokane Transit Authority	2018	SQG	Spokane
WAH000024987	Fluid Design Products Inc	2018	SQG	Spokane
WAH000053400	Ulricks Transmission	2018	SQG	Spokane
WAH000052573	Powdertech Spokane	2018	XQG	Spokane
WAH000051677	Keystone Automotive Ops Inc Spokane	2018	SQG	Spokane
WAD988482493	SWI Safeway Whse Spokane	2018	LQG	Spokane
WAH000037385	Oil Analysis Lab Inc	2018	SQG	Spokane
WAH000048438	Northwest Tank Lines Inc	2018	MQG	Spokane
WA0000073056	River City Body & Paint	2018	XQG	Spokane
WAD981772056	Becker Buick Body Shop	2018	XQG	Spokane
WAR000001032	Lowes HIW 206	2015	SQG	Spokane
WAH000047281	Vermeer Rocky Mountain Inc	2015	XQG	Spokane
WAD010202836	Overall Laundry Services Inc	2015	XQG	Spokane
WAD988522983	Haskins Steel Co	2015	XQG	Spokane
WAH000048850	707 Partners LLC Spokane	2016	XQG	Spokane
WAD988484325	Spokane City Normandie	2015	LQG	Spokane
WAD988484333	Spokane City Foothills	2015	XQG	Spokane
WAH000049777	Spokane City Engineering Services	2015	SQG	Spokane
WAD167373232	Waste Mgmt of WA Transfer Facility	2015	LQG	Spokane
WAD027518844	Pacific Power Products Spokane	2015	XQG	Spokane
WA0000275404	Key Tronic EMS	2016	XQG	Spokane
WAH000020156	USARMY Reserve Center MANN HALL	2016	XQG	Spokane
WAH000044656	Teck American Inc Spokane	2015	XQG	Spokane
WAH000008813	Rite Aid 5307	2015	LQG	Spokane
WAH000052963	Spokane City of Riverside Ave	2015	SQG	Spokane
WAH000052917	City of Spokane Division St	2017	XQG	Spokane
WAH000052909	City of Spokane Riverside Ave	2017	XQG	Spokane
WAH000047274	Brooks Life Science Systems	2017	XQG	Spokane
WAH000049932	Ardelis Concrete	2016	SQG	Spokane
WAH000053252	Shofer Enterprises LLC	2015	LQG	Spokane
WAH000037303	Global Metal Technologies	2017	LQG	Spokane
WAH000050471	515 Spokane PARTNERS LLC	2016	XQG	Spokane
WAH000049494	Meidling Family Co Inc	2016	XQG	Spokane
WAT540011244	Qwest Corporation W00949	2016	XQG	Spokane
WAD118969633	Careful Cleaners	2017	XQG	Spokane
WAH000046919	Rite Aid #6709	2017	XQG	Spokane
WAH000052703	City of Spokane 5th Ave	2017	SQG	Spokane
WAD988514188	Eds Premier Auto Body	2018	XQG	Spokane
WAD980724371	WA DOT Eastern Region Mayfair	2018	SQG	Spokane
WAD009060906	Central Pre Mix Prestress Co	2018	SQG	Spokane
WAR000000463	Spokane Regional Waste To Energy Facilit	2018	XQG	Spokane
WAH000051544	Aspen Dental Spokane	2018	LQG	Spokane
WAH000009720	Penske Truck Leasing Co LP Mallon	2018	SQG	Spokane

WA0000026641	Custom Painting Inc	2018	MQG	Spokane
WAD048440424	Key Tronic Corp Spokane Industrial Park	2018	XQG	Spokane
WAH000050488	Swift Transportation Corp Spokane	2018	XQG	Spokane
WAH000001677	Sterling International Inc	2018	XQG	Spokane
WAD981768112	City East Auto Body Ctr	2018	SQG	Spokane
WAD027495019	ABC Office Equipment Co Inc	2018	SQG	Spokane
WAH000053673	Carbase Inc	2018	LQG	Spokane
WAD988473088	Hanson Industries Inc Spokane	2018	XQG	Spokane
WAH000038286	Oil Analysis Lab Inc Lee St N	2018	SQG	Spokane
WAH000017541	Sears Roebuck & Co 1029	2018	SQG	Spokane
WAD988497996	Kmart 4147	2018	SQG	Spokane
WAH000012682	Home Depot 4714	2018	XQG	Spokane
WAD000801001	Phillips 66 Co Parkwater Terminal	2018	LQG	Spokane
WAD009236811	Univar USA Inc	2018	LQG	Spokane
WA0001013218	Rite Aid 5302	2018	LQG	Spokane
WAH000040122	Rite Aid #5303	2018	SQG	Spokane
WAH000040138	Rite Aid #5304	2018	SQG	Spokane
WAH000049651	Rite Aid 5307	2018	SQG	Spokane
WAH000039956	Rite Aid #5308	2018	SQG	Spokane
WAH000039815	Rite Aid #5311	2018	SQG	Spokane
WAH000040154	Rite Aid #5312	2018	SQG	Spokane
WAH000039807	Rite Aid #5313	2018	SQG	Spokane
WAH000039942	Rite Aid #6553	2018	SQG	Spokane
WAH000042586	Macys Northtown	2018	SQG	Spokane
WAH000012609	Costco Wholesale 670	2018	MQG	Spokane
WAH000055075	Costco Wholesale 1298	2018	MQG	Spokane
WAD980983860	WA Community Colleges of Spokane SCC	2018	MQG	Spokane
WAD079246161	Spokane FALLS COMMUNITY COLLEGE	2018	MQG	Spokane
WA0000569541	Whitworth College	2018	MQG	Spokane
WAR000003855	Costco Wholesale 66	2018	MQG	Spokane
WAH000011098	Wal Mart 2865	2018	MQG	Spokane
WAH000017012	Wal Mart Store 2549	2018	MQG	Spokane
WAR000005876	I90 Express Finishing Inc	2018	XQG	Spokane
WAH000013425	Barton Collision Center	2019	MQG	Spokane
WAD027496983	Barton Fiat 1002 W	2015	MQG	Spokane
WAD027496983	Barton Fiat 1002 W	2015	XQG	Spokane
WAR000004887	Garco Construction Inc	2015	XQG	Spokane
WA0000113803	Spokane Metal Finishing	2016	SQG	Spokane
WA0000113787	Graham Construction & Managment INC	2016	LQG	Spokane
WAH000041595	West Marine 00177	2016	XQG	Spokane
WAH000037611	Evoqua Water Technologies LLC	2017	SQG	Spokane
WAH000054862	Highwood Global LP	2016	SQG	Spokane
WAH000037469	Associated Painters Inc	2018	SQG	Spokane
WAH000052142	Cataldo Square LLC	2018	LQG	Spokane
WAH000023967	TSA Spokane International	2018	XQG	Spokane
WA0000472720	American West Chrome Inc	2018	MQG	Spokane
WAH000010553	WA WSU Spokane Riverpoint Campus	2018	XQG	Spokane
WAD982657140	Opportunity Body Shop Inc	2018	SQG	Spokane

WA6141500094	NIOSH Spokane Research Lab	2018	SQG	Spokane
WAD000875450	Spokane City Adv Wastewater Treatment	2018	SQG	Spokane
WAH000003186	Avista Corp	2018	MQG	Spokane
WAR000004994	Avista Corp Dollar Rd	2018	XQG	Spokane
WAH000001982	Hi Rel Laboratories Inc N Freya	2018	SQG	Spokane
WAD009062332	Hotstart Inc Spokane	2018	SQG	Spokane
WAH000054571	Nordstrom Inc 009	2018	SQG	Spokane
WAD009067281	Kaiser Aluminum Washington	2018	MQG	Spokane
WAD988495867	Shamrock Machining Inc	2018	MQG	Spokane
WAD007943764	Avista Corp Spokane Service Center	2018	XQG	Spokane
WAD056053820	Brenntag Pacific Inc	2018	LQG	Spokane
WAH000038588	Univar USA Inc Spokane	2018	XQG	Spokane
WAH000051516	Oak Harbor Freight Lines Spokane	2018	XQG	Spokane
WAD054655691	Union Pacific Railroad Spokane Sprague	2018	SQG	Spokane
WAD988476677	Fabrication & Truck Equipment Inc	2018	MQG	Spokane
WAH000036875	Arc Electric & Lighting	2018	SQG	Spokane
WAH000046028	Safeway Store 1242	2018	SQG	Spokane
WAR000000331	Scollards Cleaners Hatch St	2018	SQG	Spokane
WAH000046091	Safeway Store 1299	2018	XQG	Spokane
WAH000030358	XPO Logistics Freight Inc	2018	SQG	Spokane
WAD027514579	Pacific Hide & Fur Depot Inc	2018	MQG	Spokane
WAD980834261	Sunshine Disposal Inc	2018	XQG	Spokane
WAH000046180	Safeway Store 1473	2018	MQG	Spokane
WA0001013192	Safeway Store 1494	2018	SQG	Spokane
WAD988477923	WA AGR Spokane 1	2018	SQG	Spokane
WAD988513081	Power City Electric Inc	2018	XQG	Spokane
WAD075231951	Northwest Pipeline GP Spokane Dist	2018	XQG	Spokane
WAD988506481	Lawton Printing	2018	XQG	Spokane
WA0000016188	Community Colleges of Spokane Felts Fiel	2018	XQG	Spokane
WAD980514541	COLBERT LANDFILL	2018	XQG	Spokane
WAH000030136	Core and Main LP	2018	XQG	Spokane
WAD008811960	NA Degerstrom Inc	2018	SQG	Spokane
WAH000030344	Horizon Air Industries	2018	XQG	Spokane
WAD088721477	Pathology Associates Medical Laboratorie	2018	SQG	Spokane
WAD988501656	Northwest Sandblast & Paint LLC	2018	MQG	Spokane
WAH000003764	UPS Geiger Field	2018	SQG	Spokane
WAH000015347	USPS Spokane P&DC	2018	SQG	Spokane
WAH000037946	Miller Paint Co Inc Spokane 3rd St	2018	XQG	Spokane
WAH000040300	Miller Paint Company Inc	2018	XQG	Spokane
WAH000027954	Target Store 0636	2018	XQG	Spokane
WAD027500487	UPS Freight Spokane	2018	MQG	Spokane
WAH000025348	Western States Asphalt LLC	2018	SQG	Spokane
WA0001006139	Western States Asphalt LLC	2018	XQG	Spokane
WAH000042120	Waste Management Spokane Material	2018	XQG	Spokane
WAH000047047	Target Store T2857	2018	XQG	Spokane
WA0000979583	Miller Paint Company- North Spokane	2018	LQG	Spokane
WAH000054466	NRC Environmental Services Inc	2018	XQG	Spokane
WAD048439137	Spalding Auto Parts Inc	2018	XQG	Spokane

WAH000035806	SHERWIN WILLIAMS 8258	2018	SQG	Spokane
WAD988484499	FedEx Freight Inc Spokane	2018	SQG	Spokane
WAH000027912	Target Store 0915	2018	MQG	Spokane
WAD027501162	Custom Body Co	2018	LQG	Spokane
WAH000025850	Kaiser Aluminum Washington	2018	SQG	Spokane
WAH000006940	Goodrich Corporation Carbon Products	2018	SQG	Spokane
WAH000025114	Albertsons 0258	2018	LQG	Spokane
WAH000031444	WA WSU Insitute of Shock Physics	2018	SQG	Spokane
WAH000011528	Restoration Plating	2018	SQG	Spokane
WAD067545798	Sacred Heart Medical Center	2018	SQG	Spokane
WAH000025160	Road Products Inc	2018	MQG	Spokane
WAD027497379	ABRA Auto Body	2018	XQG	Spokane
WAH000005108	Cummins Inc	2018	SQG	Spokane
WAH000018234	Pyrotek Inc	2018	SQG	Spokane
WAD980976518	Spokane Public School Dist 81	2018	XQG	Spokane
WAH000012641	Home Depot 4719	2018	MQG	Spokane
WAH000032671	Albertsons 206	2018	MQG	Spokane
WAD086247491	Hollister-Stier Laboratories LLC	2018	SQG	Spokane
WAD988468823	Sherwin Williams Automotive	2018	LQG	Spokane
WAH000054506	Pathology Assoc Medical Lab	2018	SQG	Spokane
WAD981761612	United Parcel Service Spokane	2018	XQG	Spokane
WAH000030446	Albertsons 265	2018	LQG	Spokane
WAH000032593	Albertsons 268	2018	SQG	Spokane
WAD988486841	Norcan	2018	SQG	Spokane
WAD981761356	Spokane Cnty Parks Dept Maint Shop	2018	SQG	Spokane
WAD981761331	Spokane Cnty Central Shop	2018	XQG	Spokane
WAD981761398	Spokane Cnty Flora Shop	2018	XQG	Spokane
WAD981761349	Spokane Cnty Geiger Shop	2018	XQG	Spokane
WAD981761406	Spokane Cnty Old Corral Shop	2018	XQG	Spokane
WAD070967245	Phillips 66 Co North Spokane Terminal	2018	XQG	Spokane
WAD000801019	Yellowstone Pipeline Co Geiger	2018	LQG	Spokane
WAD000801027	Yellowstone Pipeline Co Fairchild	2018	XQG	Spokane
WAH000047551	Yellowstone Pipe Line Co Hillyard	2018	XQG	Spokane
WAR000008706	MACKAY MANUFACTURING INC	2018	XQG	Spokane
WA9571924647	US AF FAIRCHILD AFB	2018	XQG	Spokane
WAH000025990	Saia Motor Freight Spill	2018	LQG	Spokane
WAD153812797	MultiCare Deaconess Hospital	2018	XQG	Spokane
WAR000011072	Par Hawaii Inc Cenex Zip Trip	2018	LQG	Spokane
WAH000045088	Safeway Store 1799	2018	SQG	Spokane
WAD988488235	Central Pre Mix Sullivan Rd	2018	SQG	Spokane
WAH000025242	Safety Kleen Systems Inc New Bldg	2018	XQG	Spokane
WAD009068578	Travis Pattern	2018	MQG	Spokane
WAH000011585	Oil Re Refining Company Inc Spokane	2018	XQG	Spokane
WAH000037470	Evergreen Pharmaceutical LLC	2018	SQG	Spokane
WAR000009209	Qwest Corporation W00191	2018	LQG	Spokane
WAH000005884	Qwest Corporation W00345	2018	XQG	Spokane
WAH000054880	Hos and Boz LLC	2018	XQG	Spokane
WAD010197044	Gonzaga Preparatory School	2018	XQG	Spokane

WAD010188779	Holy Family Hospital	2018	XQG	Spokane
WAH000031432	US Wax & Polymer Inc	2018	MQG	Spokane
WAD980835425	BNSF Railway Company Spokane	2018	LQG	Spokane
WAD000642041	Tesoro Logistice Operations LLC Spokane	2018	MQG	Spokane
WAH000030608	EWU River Point Dental Hygiene	2018	XQG	Spokane
WAH000030608	EWU River Point Dental Hygiene	2018	LQG	Spokane
WAD988506366	Big Sky Industrial	2018	SQG	Spokane
WAD988493722	Novation Inc	2018	XQG	Spokane
WAD982658767	Spokane Cnty Boiler Plant	2018	LQG	Spokane
WAD102864188	Fleet Painting	2018	SQG	Spokane
WAD980976450	Fiberglass Technology Industries	2018	MQG	Spokane
WAH000051721	Arctic Lighting & Electric LLC	2018	LQG	Spokane
WAH000052544	Helena Chemical Co Spokane	2018	MQG	Spokane
WAD000064642	Honeywell Electronic Materials Inc	2018	XQG	Spokane
WAD980984892	Qwest Corporation W00780	2018	LQG	Spokane
WAD001865450	General Electric Co	2018	XQG	Spokane
WAH000021826	Spur Industries Inc	2018		Spokane
WAH000045318	Safeway Store 3248	2018	LQG	Spokane
WAD001718972	Sherwin Williams Spokane	2018	SQG	Spokane
WAH000025974	Lloyd Industries	2018	LQG	Spokane
WAD085804375	Kemira Water Solutions Inc	2018	XQG	Spokane
WAH000024086	Proto MFG	2018	MQG	Spokane
WAD009063827	Inland Empire Plating Eastern Rd	2018	MQG	Spokane
WAH000050769	Lowes Home Centers LLC 3045	2018	MQG	Spokane
WAH000015883	Safety Kleen Systems 3808 N Sullivan	2018	LQG	Spokane
WAH000046386	Safeway Store 3255	2018	XQG	Spokane
WAD988491312	Lowes Home Centers LLC 0172	2018	SQG	Spokane
WAD980988349	Western States Equip Co Spokane Truck Sh	2018	MQG	Spokane
WAD102890522	Darigold Inc	2018	SQG	Spokane
WAH000021382	Brooklyn Iron Works Inc	2018	SQG	Spokane
WAH000037172	AmSan	2018	MQG	Spokane
WAD009065145	Wagstaff Inc	2018	XQG	Spokane
WAD046564258	Western States Equipment Co Spokane Main	2018	MQG	Spokane
WAH000053941	Galaxy Compound Semiconductors Inc.	2018	SQG	Spokane
WAD988483863	Alliance Machine Systems International L	2018	MQG	Spokane
WAH000046354	SAFEWAY STORE 342	2018	LQG	Spokane
WAD119497394	Safeway Spokane Truck Stop	2018	SQG	Spokane
WAH000029685	WA AGR Spokane 4	2018	XQG	Spokane
WAD058614496	Spokane International Airport	2018	LQG	Spokane
WAD027511484	Market Equipment Co Inc	2018	XQG	Spokane
WAD988474730	FedEx Express GEGA	2018	XQG	Spokane
WAD988496642	FedEx Express GEGR	2018	MQG	Spokane
WAD009069279	Inland Empire Paper	2018	SQG	Spokane
WAH000038808	Albertsons #242	2018	SQG	Spokane
WAH000032642	Albertsons 240	2018	XQG	Spokane
WAH000019166	Able Clean Up Tech Inc	2018	XQG	Spokane
WAH000018838	Able Clean up Technologies Inc	2018	SQG	Spokane

WAH000048062	Unicep Packaging LLC Spokane	2018	XQG	Spokane
WA5360000090	US Veterans Affairs Dept Medical Center	2018	SQG	Spokane
WAH000051142	Applied Industrial Technologies	2018	SQG	Spokane
WAD079265732	Gonzaga University	2018	MQG	Spokane
WAD988506416	Divine Corp 38th 02	2018	LQG	Spokane
WAD982657900	Triumph Composite Systems Inc	2018	XQG	Spokane
WAH000047263	National Coatings & Supplies Spokane	2018	LQG	Spokane
WAH000052648	Watts Automotive	2018	XQG	Spokane
WAD988513644	Intermountain Fabricators Inc	2018	XQG	Spokane
WAD064029168	KN Electric Motors Inc	2018	XQG	Spokane
WAD988511101	Acme Machine Works	2018	XQG	Spokane
WAH000024373	HD Supply Construction Supply Ltd WC0047	2018	XQG	Spokane
WAD988506440	Divine Corp 3rd 23	2018	LQG	Spokane
WAD988506408	Divine Corp Pines 10	2018	XQG	Spokane
WAD988506424	Divine Corp Wellesley 05	2018	XQG	Spokane
WAH000047724	CATERPILLAR LOGISTICS INC	2018	SQG	Spokane
WAD000641779	EXXON MOBIL Spokane TERMINAL	2018	SQG	Spokane
WAH000056065	Sharp Line Industries Inc	2018	XQG	Spokane
WAH000056105	Stanley Service Center	2018	MQG	Spokane
WAD117356386	Bulk Service Transport Inc Spokane	2018	MQG	Spokane
WAD000641548	Holly Energy Partners	2018	SQG	Spokane
WAH000042774	Steelco NW Distributors Transporter	2015	LQG	Valleyford
WAH000006619	Wal Mart Store 2539	2018	MQG	Verdale
WAD057532954	Wilbur Ellis Company Waverly	2018	XQG	Waverly

LQG = Large Quantity Generator
MQG = Middle Quantity Generator
SQG = Small Quantity Generator
XQG = Generated Haz Waste in the past - but not in most recent reporting period

Table G.2. Spokane County Hazardous Waste Transportation, Storage, Disposal, and Recycling

TSDR ID	TSDR Name
WAD020257945	Burlington Environmental LLC Tacoma Plan
WAD991281767	Burlington Environmental LLC Tacoma Tran
ORD089452353	CHEMICAL WASTE MANAGEMENT OF THE NW
NED981723513	CLEAN HARBORS ENVIRONMENTAL SERVICES INC
UTD991301748	CLEAN HARBORS GRASSY MOUNTAIN, LLC.
WAD058367152	Emerald Services Inc Airport Way
WAD981769110	Emerald Services Inc Alexander Ave
WAD009492877	Emerald Services, Inc
TXD000838896	Veolia ES Technical Solutions
TND981920119	VLS - Armor
CCN24117	Waste Management

Appendix H

Plan Update Process

The 2021 Plan update process began by solicitating and hiring a consultant (Great West Engineering) to complete the update as a planning team with SCRSWS staff. Once a consultant was chosen, the update process was initiated with a SWAC meeting. During the SWAC meeting, a planning subcommittee was formed to work as part of the planning team throughout the update process. SWAC membership represents citizens, business, the waste management industry, local elected public officials, and public interest groups and is shown in **Table H.1**. Because some SWAC members' terms expired during the Plan update process, both recent and current SWAC members are shown in **Table H.1**. This table also indicates which SWAC members comprised the planning subcommittee.

Table H.1. SWAC and Subcommittee Members

SWAC Member	Representing	Plan Subcommittee
Josh Kerns	Spokane County	No
Karen Stratton	City of Spokane	No
Shaun Culler	City of Millwood	Yes
Kevin Anderson	City of Airway Heights	No
Rebecca Johnson	City of Spangle	No
Philip Small	Agriculture Interest	No
Matthew Pederson	Waste Industry	Yes
Erik Makinson	Recycling Industry	No
Bruce Williams	Health District	No
Tonilee Hanson	Public Interest	Yes
Eric Cultum	Business	No
Kimberly Kreber	Citizen At Large District #1	No
Isaiah Paine	Citizen At Large District #1	No
Andy Hoye	Citizen At Large District #2	Yes
Suzanne Tresko	Citizen At Large District #3	Yes

The subcommittee met with the planning team as needed for the duration of the plan update process. The subcommittee then reported back to the SWAC on the progress of the plan update. Overall, the subcommittee met eight times during the process. The dates of these meetings as well as the SWAC meetings are shown in **Table H.2**. and the notes from the SWAC meeting at which the Plan was approved are provided in **Section H.1**.

Table H.2. Meeting Dates

Meeting	Date
January SWAC Meeting	January 15, 2020
Subcommittee Meeting #1	February 6, 2020
Subcommittee Meeting #2	March 3, 2020
March SWAC Meeting	March 18, 2020
Subcommittee Meeting #3	April 22, 2020
May SWAC Meeting	May 20, 2020
Subcommittee Meeting #4	June 24, 2020
July SWAC Meeting	July 15, 2020
September SWAC Meeting	September 16, 2020
Subcommittee Meeting #5	September 30, 2020
November SWAC Meeting	November 18, 2020
Subcommittee Meeting #6	December 1, 2020
January SWAC Meeting	January 20, 2021
Subcommittee Meeting #7	February 10, 2021
Subcommittee Meeting #8	February 23, 2021
March SWAC Meeting	March 17, 2021

The first step after forming the full project team was to hold a vision setting workshop where the team worked in unison to determine the priorities of the SCRSWS and develop a vision statement based on those priorities. The vision statement was then used as a guiding principle for the Plan. The next step in the update process included a complete reorganization of the Plan. The goal for the plan reorganization was to create a plan that was useable and easily referenced. After the initial reorganization, a review meeting was held with Ecology to discuss the reorganization and the forthcoming plan update process.

The update continued with an iterative process of revising each of the plan sections, updating and reformatting information, taking to the SWAC subcommittee for review, and then incorporating comments and finalizing sections. A financial toolkit was created to associate costs to programs and capital improvements and was then used to prioritize goals and create the implementation plan. Upon completion of the draft Plan, a second meeting was held with Ecology to review the completeness of the Plan prior to submitting. Upon submittal of the Plan to, and review by Ecology, comments were addressed, and the plan was revised to incorporate Ecology's comments. The Ecology comments and associated responses are provided in **Section H.2**.

Throughout the update process, the SCRSWS worked to involve the public through outreach by:

- Inviting members of the public to the subcommittee meetings which were accessible via virtual platforms
- Providing Plan updates in a SWMP newsletter
- Posting Plan updates, Subcommittee meeting notes and current working documents to the County SWMP website
- Providing a draft of the Plan to local industry stakeholders for their review and comment.

H.1 Subcommittee Meeting Notes

H.2 Ecology Comments and Responses

Appendix I

Checklists and Forms

I.1 SEPA Checklist

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background

1. Name of proposed project, if applicable:

Spokane County Solid Waste and Moderate Risk Waste Management Plan (Abbreviated as "Plan" in the following responses.)

2. Name of applicant: **Spokane County**

3. Address and phone number of applicant and contact person:

Deb Geiger, Regional Solid Waste Manager
Spokane County
1026 West Broadway
Spokane, WA 99260
(509) 477-7281

4. Date checklist prepared: **December 22, 2020**

5. Agency requesting checklist: **Spokane County**

6. Proposed timing or schedule (including phasing, if applicable):

Draft Final Plan submitted to Ecology in July/August 2021
Final Plan submitted to Ecology in November/December 2021

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

State law requires that the Plan be reviewed every five years and updated if necessary.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

No environmental information has been, or will be prepared, as part of this Plan update.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

There are no applications/proposals pending which would affect adoption of the Plan update.

10. List any government approvals or permits that will be needed for your proposal, if known.

Approvals are required from the Spokane County Board of Commissioners, participating jurisdictions in the County, Washington State Department of

Ecology, and Washington Utilities and Transportation Commission. All facilities (solid waste and moderate risk waste) require a permit from the Spokane County Health District.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The Spokane County Solid Waste Management Plan documents existing waste management policies and handling methods. It establishes a waste management framework that will guide Spokane County in the years to come. The Plan updates the County's previous Spokane County Solid Waste Management Plan (2015).

In compliance with the Washington State solid waste management priorities, the strategies recommended for waste collection, handling, and management priorities are to be implemented in the following order: Waste Reduction; Recycling/Diversion; Energy recovery/ incineration or landfill disposal of separated and mixed wastes, respectively.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The plan includes all unincorporated areas of Spokane County, the cities of Airway Heights, Deer Park, Fairfield, Latah, Medical Lake, Millwood, Rockford, Spangle, Spokane, and Waverly, and Fairchild Air Force Base.

B. Environmental Elements

1. *Earth*

a. General description of the site:

Flat, rolling, hilly, steep slopes, mountainous, other _____

The geographic area of Spokane County covers approximately 1,765 square miles and lies at the northeast corner of the Columbia Plateau. Spokane County borders the State of Idaho on the east and is situated midway between Canada to the north and the State of Oregon to the south.

The topography of Spokane County ranges from its lowest elevation of 1,534 feet above sea level along the Spokane River to Mount Spokane at 5,878 feet above sea level. The Spokane River, which originates at Lake Coeur d'Alene in Idaho, flows primarily east to west through Spokane County and occupies the wide depression of land that forms the Spokane Valley. A drop of 134 feet in the river,

known as the Spokane Falls, marks the beginning of a shift in the river's flow to a northwesterly direction. Another drop of 240 feet occurs at the confluence with the Little Spokane River, where the topography changes to a deep gorge-like valley bordered by prominent cliffs and terraces.

To the north and west of the Valley, there are several mesas that rise 400 to 500 feet above surrounding lands. These mesas range between 2,300 and 2,450 feet above sea level. The northeastern portion of Spokane County is a bedrock highland that includes Mount Spokane and surrounding peaks.

Much of the topography of the southwestern part of Spokane County consists of southwest-trending channels eroded into the basalt plateau, known as the channeled scablands. Topography in the south and southeast consists of relatively flat basalt plateaus. However, various peaks are found in this area, with Mica Peak rising to 5,205 feet above sea level.

b. What is the steepest slope on the site (approximate percent slope)? **N/A**

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat,
muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. **N/A**

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. **N/A**

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. **N/A**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. **N/A**

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? **N/A**

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: **N/A**

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

There will be some emissions to the air from existing landfills, transfer stations, the Waste to Energy (WTE) facility, and from motor vehicles transporting solid

waste. These sources are expected to be only a small percentage of total air emissions generated in the county. The primary source of carbon monoxide (CO) in the atmosphere is gasoline-powered motor vehicles. Other sources include heating and power generation from natural gas and wood heat for residential, commercial, or industrial uses.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. **Unknown.**

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Emissions from the existing landfills and WTE are controlled and regulated. The closed portion of the Northside Landfill has a landfill gas collection and treatment (system construction completed November 1992). The active portion of the Northside Landfill has an existing Air Operating Permit. The three closed County-owned landfills all have gas collection systems. The Colbert landfill collects and treats the gas with activated carbon units. The Mica landfill collects and flares landfill gas. The Greenacres landfill does not produce enough gas to keep a flare lit, and instead gas is blown through a biofilter before emitting into the atmosphere.

WTE facility emissions, including those from the boiler units and fugitive emissions, are regulated through the facility's Title V Air Operating permit, Notice of Construction (NOC) permit issued by the Spokane Regional Clean Air Agency (SRCAA), and the Prevention of Significant Deterioration (PSD) permit issued by Ecology. The permits require continuous emission monitors, monthly reporting, and annual stack tests. The monitors provide data on oxygen (O2), carbon dioxide (CO2), nitrogen oxides (NOx), sulfur dioxides (SO2), temperature, and opacity every 15 seconds. These data are compiled into the monthly report. Testing is performed to demonstrate compliance with the System's Title V Air Operating permit and NOC permit. The facility is in compliance with all permits. Portions of Spokane County have been designated as non-attainment areas for particulates less than 10 microns in diameter (PM10).

3. Water

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The surface waters of Spokane County include the Spokane River and its tributaries, in addition to smaller streams and lakes. These lakes are located in the southwestern and central eastern portions of Spokane County. Popular recreational area lakes include Medical Lake in the southwest quadrant of the county, Newman Lake and Liberty Lake, located near the east central section of Spokane County, and Eloika Lake along the northern border. In all, lakes cover approximately 5,646 acres of Spokane County.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

All existing solid waste facilities are located 200 feet or more from described surface waters.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. **N/A**

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. **N/A**

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. **N/A**

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. **N/A**

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. **N/A**

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

The Southside Landfill has a 750 gal septic tank to serve an on-site residential trailer. The Northside Landfill has a 1,000 gal septic tank to serve a scale house and two maintenance buildings. The Colbert landfill has a 1,000 gal septic tank to serve a small administrative building. Greenacres has a 1,500 gal holding tank and Mica landfill has a 3,000 gal holding tank to serve their respective maintenance buildings.

The Northside and Valley transfer stations each have a 1,000 gal holding tank to serve the administration buildings.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The existing solid waste facilities have runoff control and stormwater management programs in place.

2) Could waste materials enter ground or surface waters? If so, generally describe. **No.**

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. **No.**

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

Control systems are in place to prevent waste materials from impacting surface, ground or runoff water at transfer stations and at closed and operating landfills in the County.

4. Plants

a. Check the types of vegetation found on the site:

____deciduous tree: alder, maple, aspen, other
____evergreen tree: fir, cedar, pine, other
____shrubs
____grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

Does not apply. The Plan encompasses all of Spokane County.

b. What kind and amount of vegetation will be removed or altered? **N/A**

c. List threatened and endangered species known to be on or near the site. **N/A**

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: **N/A**

e. List all noxious weeds and invasive species known to be on or near the site. **N/A**

5. Animals

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Does not apply. The Plan encompasses all of Spokane County.

b. List any threatened and endangered species known to be on or near the site. **N/A**

c. Is the site part of a migration route? If so, explain. **N/A**

d. Proposed measures to preserve or enhance wildlife, if any: **N/A**

e. List any invasive animal species known to be on or near the site. **N/A**

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. **N/A**

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. ***No.***

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

The WTE facility conserves energy by using solid waste as a fuel to generate electricity, reducing the use of other sources of energy.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

The Plan incorporates the County's Moderate Risk Waste Management Plan, and the used oil recycling element. The Plan includes a comprehensive program for household and business education and technical assistance, moderate risk waste (MRW) collection, and disposal. The County's two fixed facilities and the City of Spokane's facility receive all types of household hazardous waste (HHW). Radioactive wastes (except smoke detectors) are excluded, along with explosives and critically unstable materials.

1) Describe any known or possible contamination at the site from present or past uses. **Not known.**

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

Does not apply. The Plan documents waste management policies and handling methods. It does not include project development or design. Any future waste handling facility design or development would be separate from the Plan and would address this concern.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Under guidance of the Plan, MRW is segregated at collection facilities by type of waste (i.e. corrosives, poisons, etc.) and are handled in accordance with state regulations. MRW is stored on double containment systems to ensure no site contamination occurs.

4) Describe special emergency services that might be required.

Emergency alarm systems are present at the facilities. If necessary, County fire and emergency services are available.

5) Proposed measures to reduce or control environmental health hazards, if any:

The facilities have Spill Prevention and control plans, emergency response plans, and health and safety programs.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? **N/A**

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Does not apply. Existing facilities comply with noise regulations.

3) Proposed measures to reduce or control noise impacts, if any: **N/A**

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. **N/A**

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands

have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

Does not apply. The Plan documents waste management policies and handling methods. It does not include project development or design. Any future facilities that are constructed for the management and handling of solid waste and moderate risk waste will address this concern.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: **N/A**

c. Describe any structures on the site. **N/A**

d. Will any structures be demolished? If so, what? **N/A**

e. What is the current zoning classification of the site? **N/A**

f. What is the current comprehensive plan designation of the site? **N/A**

g. If applicable, what is the current shoreline master program designation of the site? **N/A**

h. Has any part of the site been classified as a critical area by the city or county? If so, specify. **N/A**

i. Approximately how many people would reside or work in the completed project? **N/A**

j. Approximately how many people would the completed project displace? **N/A**

k. Proposed measures to avoid or reduce displacement impacts, if any: **N/A**

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: **N/A**

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any: **N/A**

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. **N/A**

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. **N/A**

c. Proposed measures to reduce or control housing impacts, if any: **N/A**

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? **N/A**

b. What views in the immediate vicinity would be altered or obstructed? **N/A**

c. Proposed measures to reduce or control aesthetic impacts, if any: **N/A**

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? **N/A**

b. Could light or glare from the finished project be a safety hazard or interfere with views? **N/A**

c. What existing off-site sources of light or glare may affect your proposal? **N/A**

d. Proposed measures to reduce or control light and glare impacts, if any: **N/A**

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity? **N/A**

b. Would the proposed project displace any existing recreational uses? If so, describe. **N/A**

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: **N/A**

13. Historic and cultural preservation

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe. **N/A**

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. **N/A**

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. **N/A**

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. **N/A**

14. Transportation

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. **N/A**

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? **N/A**

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? **N/A**

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). **N/A**

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. **N/A**

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates? **N/A**

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. **N/A**

h. Proposed measures to reduce or control transportation impacts, if any: **N/A**

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. **N/A**

b. Proposed measures to reduce or control direct impacts on public services, if any. **N/A**

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

Does not apply. The Plan encompasses all of Spokane County Regional Solid Waste System.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. **N/A**

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Kevin Cooke

Name of signee **Kevin Cooke, P.E.**

Position and Agency/Organization **Director, Environmental Services Department, Spokane County**

Date Submitted: 7-28-21

D. Supplemental sheet for nonproject actions

(**IT IS NOT NECESSARY** to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment. When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

The Plan will not have an adverse impact to water or air; will not increase the production, storage or release of toxic or hazardous substances or the production of noise. The continued implementation of the Plan will result in decreased discharges to the environment as a result of management strategies developed to prevent problems caused by solid waste. The Plan provides for the continued designation of solid waste from the entire County (incorporated and unincorporated areas). This system provides for the proper disposal of solid waste, programs for waste reduction, reuse and recycling.

Proposed measures to avoid or reduce such increases are: **N/A**

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Continued implementation of the Plan will result in improved quality of habitat for plant and animal species in the county by reducing pollution to lakes and streams and

contamination of groundwater through proper management, disposal, source reductions and recycling of solid waste. Continued implementation of the Plan will also decrease pollution problems in surface and groundwater, which will result in improved environmental quality for plants, animals, fish, and marine life.

Proposed measures to protect or conserve plants, animals, fish, or marine life are: **N/A**

3. How would the proposal be likely to deplete energy or natural resources?
Implementing the Plan's waste management priorities of waste reduction, reuse and recycling will result in conservation of energy and natural resources through avoiding the production of waste followed by recycling and reuse of products, such as used glass, paper, aluminum, metals, and plastics.

When garbage must be properly disposed, the use of the EPA's preferred waste hierarchy of energy recovery before landfilling through the Waste to Energy Facility lessens the use of natural resources for energy generation.

Proposed measures to protect or conserve energy and natural resources are:
The following goals are included in the Plan:

- **Continue to promote actions that follow the waste reduction hierarchy of 1) Reduce, 2) Reuse, and 3) Recycle, and ensure that waste reduction is the foremost preferred solution when it comes to solid waste choices.**
- **Begin building a new foundation for the future of managing our waste that integrates sustainable materials management.**
- **Create an enforcement program for proper solid waste disposal practices and other enforceable criteria.**
- **Emphasize protection of our sole source aquifer and promote stewardship of solid waste and toxic waste reduction.**

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?
Continued implementation of the Plan will enhance these areas by providing education to the public who use these areas to properly manage and dispose of solid and hazardous waste. This system provides for the proper disposal of solid waste, programs for recycling, reuse, and waste reduction.

Proposed measures to protect such resources or to avoid or reduce impacts are: **N/A**

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

The Plan does not result in land and shoreline use that would be incompatible with existing plans.

Proposed measures to avoid or reduce shoreline and land use impacts are: **N/A**

6. How would the proposal be likely to increase demands on transportation or public services and utilities?
   The Plan will not increase demands on transportation or public services or utilities.

   Proposed measures to reduce or respond to such demand(s) are: **N/A**

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.
   The Plan conforms to all applicable local, state, and federal regulations. All future solid waste handling facilities will conform will all applicable local, state, and federal regulations, and SEPA review.

I.2 SEPA Determination of Non-Significance

DETERMINATION OF NON-SIGNIFICANCE

WAC 197-11-970 and Section 11.10.230(3) Spokane Environmental Ordinance
SPOKANE COUNTY PUBLIC WORKS DEPARTMENT
1026 W Broadway Av, Spokane, WA 99260-0170

PROPOSAL: Spokane County Solid Waste and Moderate Risk Waste Management Plan

DESCRIPTION OF PROPOSAL: The Spokane County Solid Waste and Moderate Risk Waste Management Plan documents existing waste management policies and handling methods. It establishes a waste management framework that will guide Spokane County for the next five years. The Plan updates the previous Spokane County Solid Waste and Moderate Risk Waste Management Plan (2015).

APPLICANT: Spokane County **PHONE:** (509) 477-3604

CONTACT: Deb Geiger **PHONE:** (509) 477-7281

LOCATION OF PROPOSAL: The plan includes all unincorporated areas of Spokane County, the cities of Airway Heights, Deer Park, Fairfield, Latah, Medical Lake, Millwood, Rockford, Spangle, Spokane, and Waverly, and Fairchild Air Force Base.

LEAD AGENCY: Spokane County

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

DETERMINATION:

☐ There is no comment period for this DNS.

☒ This DNS is issued using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS.

☐ This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below. Comments must be submitted by_____

DATE: 7-28-21 **SIGNATURE:** Kevin Cooke

Please Print or Type:

Proponent: Kevin R. Cooke P.E., Spokane County Address: 1026 West Broadway Avenue, 4th Floor

Title: Director, Environmental Services Dept. Spokane, WA 99260

Phone: 509-477-3604

Person completing form (if different from proponent): Deb Geiger, Spokane County Address: 1026 West Broadway Avenue, 4th Floor

Title: Regional Solid Waste Manager Spokane, WA 99260

APPEAL OF THIS DETERMINATION may be made to the Spokane County Hearing Examiner at the Public Works Department, 1026 West Broadway Avenue, Spokane, WA 99260, no later than fourteen (14) calendar days after the date of this determination. The appeal shall be made by completing and signing the appeal form and remitting the appropriate appeal fee. The appellant shall be prepared to make specific legal and factual objections.

This DNS was submitted to the Department of Ecology through the online Statewide SEPA Register.

I.3 WUTC Forms

WUTC Cost Assessment Questionnaire

Plan Prepared for: Spokane County

Prepared by: FCS GROUP, Matt Hobson, Project Manager

Contact Telephone: 425-615-6056

Date: April 27, 2021

Definitions

The planning period throughout the cost assessment questionnaire refers to 2021 to 2026. Spokane County's fiscal year coincides with the calendar year (January to December).

Demographics

The population forecast for the planning period is based on the 2017 update of the 2010-2040 population forecast (medium series) published by the State of Washington, Office of Financial Management. The share of the County population within the planning area is based on the 2019 population estimate (76.8 percent).

Demographics	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
County Population	525,589	530,835	536,135	541,487	546,892	552,352
Percent Change from Prior Year		1.00%	1.00%	1.00%	1.00%	1.00%
County Population Under Jurisdiction	403,627	407,656	411,725	415,835	419,987	424,179
Percent Change from Prior Year		1.00%	1.00%	1.00%	1.00%	1.00%

Waste Stream Generation

Waste generation for year one of the planning period is generally based on actual per capita waste generation rates from 2017 applied to the planning area population estimate (see table above). Years two to six are based on the following per capita generation rates applied to the planning area population estimates described in the Demographics section.

- Mixed municipal solid waste: 4.20 to 4.24 pounds per capita per day
- Recycling: 3.72 to 3.96 pounds per capita per day
- Divertables: 2.62 to 2.68 pounds per capita per day

Waste Generation (in tons)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mixed Municipal Solid Waste	308,611	312,467	316,371	321,202	324,326	328,378
Recyclables	269,353	276,454	283,743	292,021	298,901	306,781
Divertables	191,697	194,743	197,837	201,531	204,173	207,417

Recyclable Material Forecast

The County does not recyclable tonnage by commodity.

System Component Costs

Generally, the solid waste system costs included in the cost assessment are funded from solid waste tipping fees assessed at County transfer stations, an Ecology grant, and other non-rate revenue (e.g., interest earnings).

Waste Reduction Programs

Programs are provided within the SCRSWS to comply with and support waste reduction and diversion efforts. Per RCW 70A.205.005, "waste reduction must become a fundamental strategy of solid waste management." Solid waste management plans must consider and plan for waste reduction strategies, along with other requirements (RCW 70A.205.040). Current programs fall under the waste hierarchy of reduce, reuse, and recycle, or under other needed services. Waste reduction program expenses are based on 2020 actual expenses and annual inflationary adjustments.

Existing waste reduction programs are listed below. Additional detail is provided in Section 5 of the plan.

- "Pay As You Throw" collection rates.
- Education and Outreach
  - Public and school presentations, classes, activities, and facility tours
  - Mailers, inserts, and flyers
  - Radio and television
  - Social media, websites, online media, and videos
  - Public events
  - Promotional items
  - Signage
- Spokane County EcoTeam
- Backyard Composting
- EnviroCertified Program
- EnviroKids' Club
- Master Composters/Recyclers

Recycling Collection Programs

Residents and businesses in unincorporated areas of Spokane County are provided curbside recyclable material collection services through WUTC certificated hauling companies. A forecast of customers and tonnage for each hauler is itemized below:

Recycling Collection Programs	Year 1	Year 3	Year 6
WUTC-Regulated Haulers			
Empire Disposal, Inc (G-75)			
Residential			
Customers	-	-	-
Tonnage Collected	-	-	-
Commercial			
Customers	4	4	4
Tonnage Collected	18	19	20
Sunshine Disposal, Inc (G-199)			
Residential			
Customers	2,550	2,700	2,800
Tonnage Collected	460	480	510
Commercial			
Customers		Not Provided	
Tonnage Collected			
Waste Management of Washington, Inc (G-237)			
Residential			
Customers	26,042	26,563	27,094
Tonnage Collected	19,506	19,896	20,294
Commercial			
Customers	225	230	234
Tonnage Collected	12,603	12,855	13,112

Incorporated cities, towns, and Fairchild AFB provide recyclable material collection services and programs through either a WUTC certificated hauling company or through a contract with a certificated hauler. See Table 5.3 for an inventory of recycling services provided in unincorporated areas of the County as well as in cities and towns.

The County also provides sorted collection of recyclables at the North and Valley transfer stations. Other recycling programs provided by the County include white goods and large appliance recycling and event recycling.

Organics Collection Programs

Curbside residential organics collection is provided as a subscription service in some cities and towns as well as in unincorporated areas of the County. Waste Management and Sunshine Disposal also provide commercial organics collection, which is mainly provided to grocery stores, food banks, organic processors, schools, and other public institutions. A forecast of customers and tonnage for each hauler is itemized in the following table:

Organics Collection Programs	Year 1	Year 3	Year 6
WUTC-Regulated Haulers			
Sunshine Disposal, Inc (G-199)			
Residential			
Customers	630	660	690
Tonnage Collected	290	300	315
Commercial			
Customers		Not Provided	
Tonnage Collected			
Waste Management of Washington, Inc (G-237)			
Residential			
Customers	12,687	12,941	13,200
Tonnage Collected	31,466	32,095	32,737
Commercial			
Customers	19	19	20
Tonnage Collected	1,809	1,845	1,882

See Table 5.3 for an inventory of organics collection services provided in unincorporated areas of the County as well as in cities and towns.

The County collects "Clean Green" material at the North and Valley transfer stations. The Clean Green material is delivered to the County from area solid waste collection haulers and self-haulers.

Annual expenses for the County-operated recycling and organics programs are based on 2020 actual expenses, forecasted Clean Green tons, and annual inflationary adjustments.

Solid Waste Collection Programs

Solid waste collection is provided to residents, businesses, and institutions within the County by several UTC-regulated solid waste collection companies and the City of Spokane. A forecast of customers and tonnage for each hauler is itemized below:

Solid Waste Collection Programs	Year 1	Year 3	Year 6
WUTC-Regulated Haulers			
Empire Disposal, Inc (G-75)			
Residential			
Customers	1,688	1,738	1,793
Tonnage Collected	1,876	1,931	1,992
Commercial			
Customers	143	145	147
Tonnage Collected	243	247	250
Sunshine Disposal, Inc (G-199)			
Residential			
Customers	-	-	-
Tonnage Collected	-	-	-
Commercial			
Customers	12	14	18
Tonnage Collected	41	48	62
Ada-Lin Waste Systems (G-104)			
Residential			
Customers	485	504	535
Tonnage Collected	390	406	430
Commercial			
Customers	5	6	7
Tonnage Collected	13	15	18
Torre Refuse & Recycling (G-260)			
Residential			
Customers	7,637	8,095	8,581
Tonnage Collected	7,654	8,113	8,600
Commercial			
Customers	969	1,027	1,089
Tonnage Collected	12,853	13,624	14,442
Waste Management of Washington, Inc (G-237)			
Residential			
Customers	30,921	31,771	32,669
Tonnage Collected	26,893	27,632	28,413
Commercial			
Customers	1,149	1,181	1,214
Tonnage Collected	14,927	15,337	15,771
Other Haulers			
City of Spokane			
Customers	68,784	69,471	70,164
Tonnage Collected	164,088	165,729	168,386

Energy Recovery and Incineration (ER&I) Programs

Solid waste collected within the planning area is transported to the City of Spokane Waste to Energy Facility located at 2900 South Geiger Blvd. The facility is owned and operated by the City of Spokane.

The facility processed 312,830 tons in 2020 based on data provided by the City of Spokane. While there is no permitted maximum capacity, the available capacity is 800 tons per day. The City projects the average daily throughout to remain at 800 tons per day throughout the planning period. Ash and other waste that bypasses the facility is estimated at 141,261 tons in the first year, increasing to 163,761 by the sixth year. Operating and capital costs for the waste to energy facility over the planning period are based on projected contract rates assessed to the County by the City of Spokane and the disposal tonnage forecast. The table below summarizes the key operating statistics for the facility for the first, third, and sixth year of the planning period.

Energy Recovery & Incineration	Year 1	Year 3	Year 6
Average Daily Throughput (Tons per Day)	800	800	800
Ash/Bypass Waste (tons)	141,261	149,864	163,761
Operating and Capital Costs	$ 6,207,870	$ 6,653,112	$ 7,274,603

Land Disposal Program

The contract waste to energy rate assessed to the County by the City of Spokane includes the cost to transport ash and bypass waste to the Roosevelt Landfill.

Administration

County administrative costs include a pro-rated portion of salary and benefit expenses for the solid waste manager, staff assistant, and two project managers. Non-labor expenses include billing, contract auditing and accounting services, information technology support, legal and permitting expenses, taxes, and County-assessed indirect expenses. Administration expenses are forecast over the planning period based on 2020 actual expenses and annual inflationary adjustments.

Other Programs: Transfer Station Operations and Maintenance

The operating, maintenance, and capital expenses for the North and Valley transfer stations comprise the largest share of County solid waste system expenses. The two stations are owned by Spokane County. The County staffs the scale houses and Waste Connections operates the transfer and transportation functions of the transfer stations. Scale house operating expenses are forecast over the planning period based on 2020 actual expenses and an annual inflationary adjustment of 1.65 percent. Contract operating expenses are based on existing service contract terms and forecasted disposal tons and Clean Green tons. Contract operating expenses are projected to increase between 3.21 percent to 3.44 percent over the planning period.

System Costs

Total annual system costs range from $15.1 million in Year 1 to $17.6 million in Year 6. Operating expenses are forecast to increase from $14.4 million in Year 1 to $16.9 million in Year 6. Annual existing debt service is forecast at $0.4 million. The County's financial plan assumes a new $1.7 million long-term debt issue in Year 3 to replace a solid waste pre-load compactor – annual new debt service is projected at $0.1 million beginning in Year 4. Annual capital equipment replacement funding is estimated at $0.25 million over the planning period. Total system costs over the planning period are itemized in the following table.

System Component Costs	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Operating Expenses						
Waste Reduction	$ 75,657	$ 76,957	$ 78,279	$ 79,623	$ 80,991	$ 82,383
Recycling	2,494,943	2,594,080	2,687,554	2,783,604	2,883,562	2,987,374
Energy Recovery & Incineration	6,207,870	6,458,484	6,653,112	6,854,505	7,061,629	7,274,603
Administration	1,236,328	1,257,717	1,277,269	1,297,138	1,317,328	1,337,846
Other: Transfer Stations	4,432,041	4,592,678	4,744,959	4,901,313	5,063,753	5,232,198
Existing Debt Service	379,100	378,600	377,600	376,100	374,100	376,600
New Debt Service	-	-	17,200	107,726	106,821	105,916
Capital/Equipment Replacement Funding	250,000	250,000	250,000	250,000	250,000	250,000
Total Expenses	$15,075,940	$15,608,515	$16,085,972	$16,650,009	$17,138,185	$17,646,920

Funding Mechanisms

System component costs are generally funded through tipping and transaction fees assessed at the transfer stations, an Ecology grant, interest earnings, and interfund transfers. A revenue requirement analysis was developed to compare operating and capital expenses to revenues at existing tipping fees over the planning period.

Tipping fee revenue at existing rates are projected to generate $15.4 to $16.3 million in annual revenue over the planning period. Other revenue sources are projected to generate $0.4 million in year 1 and then $0.5 million from year 2 to year 6.

Funding Mechanisms	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Total Expenses	$15,075,940	$15,608,515	$16,085,972	$16,650,009	$17,138,185	$17,646,920
Tipping fee revenues at existing rates	$15,437,216	$15,726,361	$15,873,825	$16,022,764	$16,173,192	$16,325,124
Other revenue	361,793	503,254	503,254	503,254	503,254	503,254
Total Revenue	$15,799,009	$16,229,615	$16,377,079	$16,526,018	$16,676,446	$16,828,378

The following tables outline planning-level estimates of the tipping fees at the North and Valley transfer stations as well as tipping fee revenue over the planning period. Tipping fee revenues only include the revenue generated from tipping fees -- the County also generates revenue from minimum fee transactions for MSW and Clean Green that are brought to the stations from self-haulers.

Tipping and Transaction Fees	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
MSW Tipping Fee ($ per ton)	$110.00	$110.00	$110.00	$110.00	$110.00	$110.00
MSW Minimum Fee	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00
Clean Green Tipping Fee ($ per ton)	$53.00	$53.00	$53.00	$53.00	$53.00	$53.00
Clean Green Minimum Fee	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00
Environmental Program Fee ($ per ticket)	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00

Tipping Fee Revenues	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
MSW Tipping Fee ($ per ton)	$110.00	$110.00	$110.00	$110.00	$110.00	$110.00
multiplied: Tipping fee tons	105,908	108,162	109,311	110,473	111,645	112,830
MSW Tipping Fee Revenue	$11,649,842	$11,897,797	$12,024,254	$12,151,976	$12,280,974	$12,411,263
Clean Green Tipping Fee ($ per ton)	$53.00	$53.00	$53.00	$53.00	$53.00	$53.00
multiplied: Tipping fee tons	36,674	37,451	37,847	38,248	38,652	39,060
Clean Green Tipping Fee Revenue	$ 1,943,707	$ 1,984,898	$ 2,005,905	$ 2,027,122	$ 2,048,551	$ 2,070,195
Environmental Program Fee	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00
multiplied: transfer station tickets	248,515	248,515	248,515	248,515	248,515	248,515
Environmental Program Fee Revenue	$ 497,030	$ 497,030	$ 497,030	$ 497,030	$ 497,030	$ 497,030
Total Tipping Fee Revenue	$14,090,580	$14,379,725	$14,527,189	$14,676,128	$14,826,556	$14,978,488

Surplus Funds

Spokane County maintains a 90-day minimum operating reserve and a minimum capital fund reserve of $100,000.

Appendix J

Solid Waste History

J.1 Regional Solid Waste System History

In 1988, an interlocal agreement between Spokane County and the City of Spokane formed the Spokane Regional Solid Waste System (SRSWS). The purpose of this partnership was to operate disposal, recycling, and MRW facilities, provide for effective implementation of regional solid waste policies, and to develop solutions to regional and solid waste management needs. At that time, the SRSWS, administered by the City of Spokane, was directed to perform regional planning and operations functions through that 1988 agreement as well as additional interlocal agreements and amendments between Spokane County and the City of Spokane and each of the other regional cities and Fairchild Air Force Base. In 2001 and 2003, respectively, two additional cities (City of Liberty Lake and City of Spokane Valley) incorporated. These new cities also signed solid waste management interlocal agreements with the City of Spokane and Spokane County. These interlocal agreements assigned the SRSWS to conduct solid waste disposal, and planning activities for these jurisdictions.

The City of Spokane was responsible for operating facilities and making all operational and administrative decisions, except for the following major decisions which were required to be made with agreement between the City of Spokane and Spokane County:

- An expansion of the SRSWS's service territory to include use of the SRSWS by persons or interests outside of Spokane County.
- Any discretionary modification of the SRSWS costing more than $1,000,000.
- Major changes in the WTE Facility construction contract of more than $1,000,000 or increases in annual operating costs of more than 5 percent.
- Changes in the tipping fees other than those necessary to fulfill the bonding of the WTE Facility or to cover landfill closure costs.
- Siting and selection of any publicly owned transfer stations.
- Adoption and implementation of a County-wide solid waste reduction, recycling, litter control, or dangerous waste disposal program.
- Siting and selection of any regional landfill used for solid waste.
- The adoption, development, and implementation of a County-wide dangerous waste disposal program.

This interlocal agreement between Spokane County and the City of Spokane, and the agreements with the member jurisdictions, were set to expire on November 16th, 2014.

On February 11, 2014, Spokane County and the City of Spokane entered into a new interlocal agreement transferring ownership of the North County and Valley transfer stations to Spokane County. It also transferred the administration and management of the solid waste system to Spokane County. The City of Spokane retained ownership of the Waste to Energy (WTE) facility and Northside Landfill (NSLF). As part of the agreement, the County directs the waste delivered to the transfer stations to the WTE facility for incineration. This

agreement was for seven years beginning November 17, 2014, and was amended to provide a reduction in disposal costs in return for extending the agreement to use the WTE and the City's contract for disposal through Republic Services to September 1, 2022.

In November 2014, administration for the SRSWS fell under the jurisdiction of the Spokane County Department of Environmental Services and the system name was modified to the Spokane County Regional Solid Waste System.

J.2 Solid Waste Management Plan History

The Spokane County Solid Waste Management Plan is a living document. It is updated periodically, in response to changing conditions, programs, and technologies. Recommended actions/goals are set during the updating of the SWMP, in an effort to keep progressing.

1971 AND 1984 SPOKANE COUNTY SOLID WASTE MANAGEMENT PLANS

In 1971, Spokane County developed its first SWMP for the county.

The 1984 Spokane County Solid Waste Management Plan (Parametrix, 1984) update was prepared by Spokane County to address changes in regulations, technology, and public awareness and to guide program development. Plan recommendations led to the development and implementation of waste reduction and recycling programs and a WTE Facility, conducting a siting study for a new regional landfill, and forming an intergovernmental agency to manage solid waste issues.

1991 SPOKANE COUNTY MODERATE RISK WASTE MANAGEMENT PLAN

The 1991 Spokane County Moderate Risk Waste Management Plan (MRW Plan) (Parametrix, 1991) was developed and was the System's first comprehensive planning effort designed to improve the management of MRW in Spokane County. The MRW Plan was developed to protect the natural resources and public health in Spokane County by eliminating the discharge of moderate-risk wastes into solid waste and energy recovery systems, wastewater treatment systems, and into the environment through indiscriminate disposal. The MRW Plan was developed with significant direction and input from the SWAC, regional cities, numerous local and state agencies, and the general public.

The 1991 MRW Plan highlighted seven key areas with recommendations for improving MRW management in Spokane County:

- MRW education
- MRW collection
- MRW education for businesses
- MRW collection for businesses
- Health and safety
- Compliance and enforcement
- Program evaluation

1992 SPOKANE COUNTY COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

The 1992 Spokane County Solid Waste Management Plan (Parametrix, 1992) update was built on the planning framework established in the 1984 Plan and was prepared in accordance with the new planning requirements outlined in the state planning guidelines established in 1990.

The 1992 Plan key issues included:

- Significant increase in waste diverted from disposal
- Selection of a vendor for yard waste processing
- Development of long-term plans for disposal of non-processible waste, bypass, and ash from the WTE Facility
- Documented the status of landfill closures in the county
- Documented plans for construction of the Colbert and Valley Transfer Stations
- Recommended a coordinated approach to illegal dumping between the Spokane Regional Health District (SRHD) and the SCRSWS

1998 SPOKANE COUNTY COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

The 1998 Spokane County Comprehensive Solid Waste Management Plan (Parametrix, 1998) updated the 1984 plan, building upon, and adding to, key programs at the time which included:

- A comprehensive review of waste reduction and recycling opportunities in the county that showed a significant increase in materials that were diverted from disposal
- Promotion of grass recycling by sponsoring the participation of 50 local households in the Toro Mulch Mowing program
- A catastrophic waste management plan
- A long-term plan for disposal of non-processible waste, bypass, and ash from the WTE Facility
- Documentation of the status of landfill closures in the county
- Documentation of plans for the upgrade the Colbert Transfer Station, addition of a third scale and second scalehouse, and the expansion of the facility
- Support for coordinated approach to illegal dumping between the SRHD and the SRSWS

1998 MODERATE RISK WASTE MANAGEMENT PLAN

The Moderate Risk Waste Management Plan (Parametrix, 1998) update was fully integrated into the 1998 Comprehensive SWMP, and was not a separate, stand-alone document. The 1998 MRW Plan specifically addressed the Used Oil Recycling Act concerning needs for collection and recycling of used motor oil produced by residential “do-it-yourselfers” – individuals who change the oil in their own vehicles. The Act required that plans establish appropriate goals for improving collection, recycling, and re-refining of used oil, for educating citizens, and for meeting reporting requirements.

2009 SOLID WASTE MANAGEMENT PLAN

The 2009 Plan update was prepared under the direction of the SCRSWS. Guidance and recommendations were provided by representatives from regional cities and the County, the Spokane Regional Solid Waste Liaison Board (Liaison Board), the SWAC, the Stakeholder Input Committee (SIC), and the general public. Ecology provided additional guidance during the planning process.

The timing of the 2009 Plan was unique because recommendations had to satisfy regional bond obligations as well as explore foundations for new solid waste management opportunities after those bonds were retired. Funding to close non-compliant landfills and construct new and compliant solid waste, recycling, and MRW facilities was acquired through a grant from the Washington State Department of Ecology (Ecology) and municipal bonds. SCRSWS facilities and programs were designed to serve the needs of residents and businesses countywide, but the City of Spokane was responsible for repayment of the bonds, which retired in 2011. The 2009 Plan supported both near-term needs related to the current regional responsibilities, and longer-term recommendations to develop foundations for new opportunities in solid waste management.

2015 SOLID WASTE MANAGEMENT PLAN

The 2015 Plan update (SCS Engineers, 2015) was prepared under the direction of the SCRSWS with input and guidance provided by the SWAC. The Plan focused on the following key issues:

- Consider variable tipping fees on specific wastes, such as construction and demolition waste and other WTE applicable wastes, such as tires or other non-burnables
- Reevaluate curbside recycling collection within existing service areas based on material types
- Evaluate existing recycling goals and methods
- Evaluate markets for recyclables, including viability of glass and 3-7 plastics, and current economics associated with continuing to process these materials
- Evaluate material recovery facilities (MRFs) and material separation methods
- Evaluate new technologies
- Review and evaluate system administration and management
- Illegal disposal (tires, roadside dumps, enforcement challenges)
- Food waste composting
- Construction/Demolition and Inert wastes
- Sustainable financing mechanism
- HHW
- Outreach and Education priorities

Based on these issues, specific goals and objectives for the Plan were developed for managing solid waste in Spokane County. These goals and objectives were prioritized into an implementation plan. After writing the 2015 Spokane County Solid Waste Management Plan, however, funding to the Spokane County Solid Waste Division was greatly reduced. As

a result, many of the recommendations from that Plan were not able to be realized. The status of the recommendations from the 2015 Plan are included in **Table J.1**.

Table J.1. 2015 Plan Status of Goals and Objectives

#	Subcategory	2015 Recommended Action	2020 Status
Section 4. Source Reduction			
1	Education and Outreach	Expand and coordinate existing education efforts. The County will collaborate with other organizations, including the Spokane River Forum, to tailor educational messages and identify outreach opportunities.	This occurred many times and is still occurring today.
2	Education and Outreach	Community based social marketing. The County will enhance their existing education efforts by using community based social marketing techniques.	Social media marketing used through the County's Facebook and the Master Composter Recycler's Facebook and other social media accounts. Spokane River Forum also uses social media to educate residents about proper waste disposal.
3	Residential Waste Reduction	The County will promote toxic reduction strategies at the point of purchase by working with consumers and retailers. The County will promote backyard composting through community-based social marketing techniques and will continue the Master Composter/Recycler (MC/R) Program.	Staff to interface with consumers and retailers is lacking at point of purchase. The MC/R program has been continued and has a strong social media presence.
4	Residential Waste Reduction	The County will conduct an assessment of the impact of banning single-use plastic bags.	The staff to conduct this assessment is lacking.
5	Commercial Waste Reduction	Provide education and on-site technical assistance for businesses, including supply chain management and green procurement policies, award and recognition programs, reuse and material exchanges, and toxics reduction strategies.	Staff to provide business technical assistance is lacking. The Spokane River Forum's EnviroCertified Program is supported. Several businesses have emerged within Spokane County that provide this sort of technical assistance to businesses on waste reduction. Haulers also provide right-size dumpster consultations upon request.
6	Self-Haul Waste Reduction	The County will promote on-site separation of construction materials for reuse and material exchange, green building practices, and use of re-sale stores for durable goods.	Non-burnables are separated from regular MSW. No material exchange exists outside of a small for-profit venture. Re-sale stores are listed in the Spokane River Forum Waste Directory, which is an online directory of vendors that accept specific wastes.
Section 5. Recycling			
1	Residential and Commercial Recycling and Organics	The County will use community based social marketing techniques to promote recycling and composting.	Social media marketing used through the County's Facebook and the Master Composter Recycler's Facebook and other social media accounts. Spokane River Forum also uses social media to educate residents about proper disposal.
2	Residential Recycling	The County will establish a committee to evaluate the design, cost, and logistics of a rural area recycling drop-off program.	The rural towns of Fairfield, Latah, and Waverly provide roll off recycling dumpsters to their residents as part of a cost-share agreement with Spokane County. Beyond these efforts, the rural town and County staff to dedicate to this work is lacking.

#	Subcategory	2015 Recommended Action	2020 Status
3	Residential Recycling and Organics	County staff will establish a committee to evaluate the design, cost, and logistics of rural curbside recycling and yard debris collection programs.	The minimum service level boundary was expanded in 2018 to accommodate a larger area of curbside recycling and yard debris collection programs through Waste Management and Sunshine. Beyond working with the haulers to cost-effectively offer these services, the County does not have the staff to dedicate to this work.
4	Multi-Family Residential Recycling	The County will improve its MF recycling rates with community based social marketing techniques, including asking for commitments, prompting actions, and creating norms.	Through a Revenue Sharing Agreement with Waste Management, the County has reached out to multi-family establishments to assist with education and outreach, provide individual unit bins, and technical consultation for business owners.
5	Residential Recycling	The County will support aggressive Pay As You Throw (PAYT) rate structures in unincorporated areas by lobbying the rate-making bodies of the service providers in their region and advertising the savings associated with diversion.	The haulers for unincorporated County offer PAYT rate structures.
6	Residential Recycling and Organics	The County will promote current fiber and organics collection options and evaluate how to expand these services to rural areas.	Curbside organics collection (Clean Green) is promoted as an option through the MC/R program and social media. In rural areas without curbside service, the County's transfer stations accept food waste in the Clean Green drop off area. Clean Green is subsidized through MSW tipping rates to provide incentive to residents to separate their waste.
7	Residential and Commercial Recycling	The County will ensure the availability of recycling containers for cardboard, wood, and metals at all its recycling and disposal sites.	Wood that is untreated is accepted in the Clean Green area. Treated wood is accepted as garbage and goes to the WTE for incineration and electricity generation. Cardboard and metal recycling containers are available at all TSs.
8	Residential and Commercial Recycling	The County will use financial incentives to increase diversion of materials at disposal and transfer facilities.	Free disposal of all recyclables at TSs is offered, and the Clean Green rate is about half of the cost of MSW. Both recycling and Clean Green are subsidized through MSW tipping fees.
9	Self-Haul Recycling	The County will assess local markets for recycling shingles.	The staff capacity to assess this opportunity is currently unavailable.
10	Organics	To ensure successful recycling of organics into the future, the County will assess the current and future supply and permitted processing capacity at the Barr Tech compost facility, and other facilities as available.	Barr Tech periodically updates the County on processing capacity. Currently Barr Tech has room to expand and are welcoming uncontaminated food waste.
11	Organics	The County will establish a committee to evaluate the feasibility of offering collection for food waste and animal manure and identify potential partners.	The staff capacity to assess this opportunity is currently unavailable.

#	Subcategory	2015 Recommended Action	2020 Status
12	Organics	Local establishments will be encouraged, through educational efforts, to follow the food waste hierarchy when possible.	The County partnered with the Regional Health District in 2018 to create a flyer that would be handed out to restaurants through health inspectors that demonstrates the benefits and feasibility of food share/donation programs. A contributing partner in this endeavor was Feed Spokane, who provides transportation from donated food to food banks, soup kitchens and other donation facilities. The County pursued and received a grant in 2017-18 to work with rural school districts and part of this grant was to educate cafeterias on food waste and waste reduction practices within the cafeteria environment.
13	Organics	The County will assess on-site composting systems both for public institutions, such as schools, and will also promote on-site composting to food-waste generating businesses.	The staff capacity to assess this opportunity is currently unavailable.
Section 6. Collection			
1	N/A	Consider modifying the service level ordinance to allow rate structures that will incentivize recycling.	In 2018 the County updated its minimum service level boundary which required curbside trash customers to receive (and pay for) a recycling bin.
2	N/A	Consider implementing a collection district in densely populated areas of County unincorporated area for mandatory collection.	Before the County updated the minimum service level boundary, the County discussed the option of setting up collection districts and the most beneficial method was to expand the boundary with mandatory recycling.
3	N/A	Encourage certificated haulers to expand commercial recycling services and types of materials collected.	In County code several recyclable items are listed as required with suggested optional items that can be collected in curbside and commercial programs. The County will not encourage certificated haulers to collect items for which there is no market which would contribute to recycling contamination. Haulers and waste consulting businesses have increased commercial recycling services without County influence.
4	N/A	Encourage the expansion of organic materials collection from large generators.	Haulers and waste consulting businesses have taken on this opportunity without County influence.
Section 7. Transfer System			
1	N/A	Assess the need for additional transfer station or disposal options as necessary to accommodate for growth or change in operations. The County has seen steady growth over the last 5 years but that growth has not exceeded capacity at the transfer stations. The County works closely with the City of Spokane to ensure disposal options are available during maintenance shutdowns of the WTE plant.	The County has explored financial and economic costs (system impacts) for long haul disposal to other sites.
2	N/A	Identify potential sites to be used for emergency staging and debris storage sites as a result of natural disasters.	Disaster debris planning began in 2017 and is ongoing in 2020 to identify solutions and solidify contracts for land, trucks, and other considerations for natural disaster clean ups.

#	Subcategory	2015 Recommended Action	2020 Status
3	N/A	Promote reuse opportunities at existing locations.	Although scavenging is forbidden at transfer stations due to safety reasons, through the Waste Directory numerous businesses are listed where residents can take their reusable goods, e.g., Goodwill, Habitat for Humanity Reuse store, and others.
Section 8. Energy Recovery/Incineration			
1	N/A	The County will evaluate whether to continue to send waste to the WTE facility or to opt out of the agreement, giving the City a one-year notice that it does not intend to send waste to the WTE facility after year three.	The County continues to send waste to the WTE facility.
Section 9. Landfill Disposal			
1	N/A	The County will regularly review their post-closure plan and obligations to ensure adequate funding for closed landfills.	The County revised its long-term liability costs in 2017, saving substantial costs. The County is currently investigating alternatives for continued funding of its closed landfills but has yet to determine a solution that is equitable to all County residents.
2	N/A	The County and SWAC will monitor developments in alternative processing technologies and discuss the potential for application in the county.	When presented with the opportunity to discuss alternative processing technologies, the County always listens and is open to possibilities.
3	N/A	The County will assess options for long hauling of MSW out of the county as may be necessary.	The County has done this.
Section 10. Miscellaneous Wastes			
1	Agricultural Waste	The County will continue development of emergency response plans regarding agricultural waste.	Agricultural waste is included in the Disaster Debris Emergency Response Plan currently being worked on.
2	Asbestos Waste	The County will provide information to homeowners on proper identification, handling and disposal methods.	Homeowners that call into the Recycling Hotline are given info on proper identification, handling, and disposal. The County partners with the Spokane Waste Directory to disperse information as well.
3	Asbestos Waste	The County will work with the Spokane Regional Clean Air Agency (Spokane Clean Air) to develop outreach and education strategies.	The staff capacity to assess this opportunity is currently unavailable.
4	WTE Ash	The County and City of Spokane will continue to monitor research and investigate alternatives for ash utilization.	The City continues to monitor opportunities.
5	Biomedical Waste	The County will continue to coordinate with SRHD in the distribution of educational materials for correct management of medical waste generated by residents.	The County continues to do this.
6	Biomedical Waste	The County will continue to plan and coordinate with the appropriate federal, state, and local agencies regarding emergency response plans involving human or animal diseases.	Human and animal diseases are included in the Emergency Response Plan
7	Biosolids	The County will continue to monitor opportunities for increased beneficial use of biosolids, and funding sources for facilities and increased processing.	The County has continued to monitor opportunities while working closely with County wastewater staff.

#	Subcategory	2015 Recommended Action	2020 Status
8	Contaminated Soils	Continue to allow the private sector to manage and dispose of contaminated soils in permitted facilities.	This is allowed with documentation of the type of contamination, administered through the Health District.
9	Paper Sludge	Continue to allow the private sector to appropriately manage and dispose of its paper sludge wastes, with emphasis on reduction and recycling.	This is allowed and administered through the Health District.
10	Tires	The County and cities will implement purchasing programs for recycled tire products as practicable.	The County does not have the staff capacity to pursue this opportunity.
11	Tires	The County will continue to promote and implement programs to reduce tire waste.	In 2018 and 2019 the County applied for and received Dept. of Ecology grants to host tire collection events for residents in Spokane County. One-day events in Millwood, Latah, Fairfield, Deer Park, and Airway Heights have been held, which are open to surrounding area residents as well. The County does not have staff capacity to pursue point of sale programs.
12	Tires	The County will provide to consumers information on tire maintenance, tire repair, and lifecycle costs to encourage purchase of longer-life tires.	The County does not have staff capacity to pursue this type of education and outreach.
Section 11. Construction, Demolition, Landclearing, and Inert Waste			
1	N/A	The County will continue to provide waste reduction and recovery outreach and education materials for construction, demolition, landclearing and inert waste (CDL/I).	The County does not have staff capacity to provide this type of education and outreach.
2	N/A	The County will consider establishing waste diversion specifications for County projects.	The County does not have staff capacity to pursue this opportunity.
3	N/A	The County will provide information on recycled content building materials to contractors and member jurisdictions for use in municipal projects.	The County does not have staff capacity to pursue this opportunity.
4	N/A	The County will consider requiring diversion of construction and demolition materials from residential and commercial projects in the County.	The County does not have staff capacity to pursue this opportunity.
5	N/A	The County will consider the implementation of economic incentives to stimulate markets for CDL/I recovery.	The County does not have staff capacity to pursue this opportunity.
6	N/A	The County will evaluate the feasibility of developing CDL/I recovery capacity at the County transfer stations.	The County does not have staff capacity to pursue this opportunity.
Section 12. Moderate Risk Waste			
1	Education and Outreach	The County will continue existing education and outreach efforts on proper handling, disposal, and use of alternative products.	The County does not have staff capacity to pursue this opportunity.
2	Education and Outreach	The County will expand HHW outreach in K-12 classrooms using school resources available from Ecology and Washington Toxics Coalition.	The County does not have staff capacity to pursue this opportunity.

#	Subcategory	2015 Recommended Action	2020 Status
3	HHW Collection	The County will consider offering periodic collection events for residents in rural areas of the County.	With grant funds, the County offered two HHW collection events in rural towns, Fairfield and Deer Park, in 2019. Both had poor turnout despite being advertised through County and local means. The cost to offer collection events outside of the transfer stations is cost-prohibitive without grant funds.
4	HHW Collection	The County will consider offering on-call services for senior citizens and physically challenged individuals.	The County is financially unable to support such a program at this time.
5	HHW Collection	The County will continue to collect HHW at the transfer stations, and HHW will be collected at the WTE facility.	The County is doing this.
6	Business Technical Assistance	The County will provide technical assistance to businesses through the County website, and at the transfer stations.	The County refers businesses to the EnviroCertified program, and to call their haulers if they would like technical assistance. The transfer stations do not provide technical assistance to businesses.
7	Business Technical Assistance	The County will make available to businesses information on purchasing re-refined lubricating oil and will assess the availability of its use in County vehicles.	The County does not have staff capacity to pursue this opportunity.
8	Product Stewardship	The County will support State product stewardship programs through outreach and education to businesses and residents.	The County supports Northwest Product Stewardship as well as other programs through the advocacy performed by the Washington Association of County Solid Waste Managers (WACSWM). Furthermore, the County has provided text and images for bill inserts in participating jurisdictions with the subject matter about the e-cycle and light cycle Washington programs.
Section 13. Administration and Enforcement			
1	Enforcement	The County will coordinate enforcement activities with the member jurisdictions to attain maximum impact without duplication.	The Health District is tasked with solid waste enforcement. They work directly with the affected parties to solve solid waste problems. To reduce enforcement needs, the County produced a Load Warrior campaign that it began in spring 2017 to help prevent litter on roadways. Implementation of an uncovered load fee began in earnest in January 2020 at the transfer stations for any vehicle entering the transfer station with an uncovered load.
2	Administration	The County will work with the member jurisdictions to improve coordination regarding cleanup of illegal dumping sites, education, and prevention programs.	The Health District is tasked with solid waste enforcement, including cleanup of illegal dumping sites. The County has developed a close relationship with the Geiger Prison Litter Crew, who performs the actual clean-up of roadways and illegal homeless dump sites. Through this partnership in 2017 the County began to market out to community groups a “Team Up to Clean Up” program where concerned citizens can gather a group of volunteers to clean up a trail/roadside/ or other area and the Geiger Litter Crew will pick up the trash bags from the clean-up, and the County gives the Geiger litter crew free disposal of that litter at the transfer stations.

J.3 History of Landfills in Spokane County

Six closed landfills are located within Spokane County. Three of the landfills are owned by Spokane County and two are owned by the City of Spokane. All City and County-owned landfills are undergoing post-closure activities. All closed landfills are located in unincorporated areas of the County. These landfills are shown in **Table J.2** along with their closure date.

Table JI.2. Landfills within Spokane County

Landfill	Status	Owner	Date Waste Delivery Ceased	Years that site has been in Post-Closure
Colbert Landfill	Closed	Spokane County	Operations – Oct. 1986; Covered 1996	+30
Greenacres Landfill	Closed	Spokane County	Operations – 1972; Covered 1998	+40
Mica Landfill	Closed	Spokane County	Operations – Dec. 1991; Covered – 1994	+30
NSLF (old landfill portion)	Closed	City of Spokane	Operations – Dec. 1991; Covered – 1992	+30
Southside Landfill	Closed	City of Spokane	Operations – 1987; Covered – 1988	+30
Marshall Landfill	Partially Closed	Private (defunct)	Operations – Dec. 1991; Interim Cover 1991	+30

COLBERT LANDFILL

The Colbert Landfill is located approximately 2.5 miles north of Colbert, Washington, and approximately 15 miles north of Spokane, Washington. The closed landfill is surrounded primarily by rural residential development and open lands. The area south of the site contains forested lands, open fields, and a few residential homes. The Spokane County Recycling Center and Transfer Station is located immediately west of the site's groundwater treatment facility. There are residences located within the footprint of the groundwater plume in all directions around the landfill.

The landfill operated from 1968 to 1986. During a 5-year period between 1975 and 1980, the landfill accepted spent solvents and other chemical waste that were subsequently poured into open tranches to mix with the soil or ordinary municipal refuse already in the trench. The solvents typically included 1,1,1-trichloroethane (TCA); methyl ethyl ketone (MEK); poly thinner; enamel thinner; toluene; paint remover; and primer wastes.

In 1980, EPA, Washington State Department of Ecology (Ecology), and the Spokane County Utilities Department conducted an investigation into public complaints about disposal practices by initiating a groundwater sampling study of nearby domestic water wells. Groundwater samples collected from 20 domestic wells contained contaminants at

concentrations above drinking water standards that were, in part, traced to the spent solvents disposed of at the landfill.

Following domestic well sampling, a Remedial Investigation/Feasibility Study (RI/FS) was completed and EPA issued a Record of Decision (ROD) in 1987, which selected a remedy based on the results of the RI/FS. The selected remedy included a pump and treat (P&T) system for groundwater, landfill closure and post-closure components for source control, plus institutional controls and an alternate water supply to impacted residents. Additional site characterization and investigation was completed in 1990 as part of the Phase I engineering assessment (Landau Associates 1991) to collect additional information needed to initiate the final design of the P&T system.

Construction of the P&T system was completed in 1994 The P&T system operated successfully for 20 years. In 2014, an EPA recommended shut-down test was initiated to determine if the facility was continuing to add any significant benefit to the cleanup.

The programs currently in place include a Shut-Down Test (lower aquifer) for the pump and treat system; and upper aquifer compliance groundwater monitoring (includes 1,4-dioxane monitoring and Minimum Functional Standards (MFS) monitoring of the upper aquifer); residential well monitoring (includes both upper and lower aquifers); supplemental sampling (includes both upper and lower aquifers); and landfill cover maintenance and monitoring.

GREENACRES LANDFILL

The Greenacres Landfill was used as a dump site as early as the 1940s. In 1951, the property was deeded to the Greenacres Township for use as a municipal dump. Upon dissolution of the township governmental structure in 1967, the responsibility for operating and regulating the site passed to Spokane County in 1968. Spokane County owns the landfill and was responsible for landfill operations until the site was closed in 1972.

During routine monitoring in 1978, Ecology discovered contaminants in a residential well located 600 feet downgradient of the landfill. In 1983, as a result of the contamination found at the well, the site was nominated for Superfund eligibility. The Greenacres Landfill was placed on the National Priorities List. (NPL) in 1984 by the EPA.

In 1988, the County initiated a RI/FS. The RI was completed in 1989 and the FS in 1991. The final FS contained two different points of view. This is an uncommon occurrence, and because of the disagreement on the necessity for compliance with certain regulations, both Ecology and Spokane County's points of view were included in the final FS.

In 1994, Ecology issued an Enforcement Order requiring the County to monitor the groundwater for a number of indicator parameters over a 3-year period. At the end of the 3 years, a statistical analysis was performed to determine if the groundwater data met the "No Further Action" criteria outlined in the Enforcement Order. The data did not meet these criteria, and an RA involving the construction of an impermeable landfill cover and associated components was required.

The landfill cover system construction was completed in 1998. Other components include a landfill gas treatment system and a stormwater collection system. The site also incorporated a long-term groundwater monitoring program that is currently ongoing.

MICA LANDFILL

The Mica Landfill was an MSW landfill owned by Spokane County and operated from 1972 to late 1991. From 1974 to 1987, Kaiser disposed of aluminum slag, known as black dross, at Mica. In 1984, a dangerous waste permit application was submitted to Ecology for disposal of black dross at the landfill.

In 1981, the EPA sampled the original Mica monitoring well and a domestic well located one-half mile to the south of the landfill. A chlorinated solvent, 1,1,1-Trichloroethane, was detected in both wells. In response, Spokane County initiated a three-phase assessment of the potential groundwater contamination. EPA conducted a preliminary assessment in 1984; and in 1985, Mica Landfill was added to the NPL.

In 1988, Ecology and Spokane County entered into a Consent Decree obligating the County to perform an RI/FS. The RI was completed and approved in 1992. As a result of the findings in the RI, Spokane County agreed to place a dangerous waste cover on the landfill as part of an Interim Action (IA) clause of the Model Toxics Control Act (MTCA). Cover system construction began in early 1994 and was completed in July 1995. The landfill cover system includes leachate and gas collection systems and stormwater controls.

Under the IA agreement, the landfill was monitored for a period of 5 years after completion of the cover system construction. At the end of the 5-year period (ending in 2000), Ecology reviewed the monitoring data collected at the landfill to evaluate cover performance and establish groundwater compliance criteria. Based on this review, Ecology approved a Final Cleanup Action Plan in 2001 that incorporates the same components as the IA and includes a landfill cover system, leachate and gas collection systems, stormwater controls, institutional controls, standard maintenance, and operations, and a long-term groundwater monitoring program.

NORTHSIDE LANDFILL - CLOSED PORTION

The Northside Landfill (NSLF), owned by the City of Spokane, is a 345-acre site in the northwest corner of the City of Spokane. The site became the area's primary refuse dump in about 1931. During the 1930s and into the 1940s, the northeast portion of the site was an open dump where the refuse was burned. A refuse incinerator was constructed in the 1940s, but open burning continued at the site into the late 1950s. Between 1962 and 1973, landfilling began in the central area of the site using land-spreading techniques. In 1973, trench filling began in the landfill area adjacent to Nine Mile Road.

In the early 1980s, hydrogeological investigations revealed the presence of volatile organic compounds (VOCs) in offsite groundwater samples taken from residential wells located northwest of the landfill. The City of Spokane immediately supplied the residences with bottled water and approved the extension of municipal water to the area.

On October 15, 1984, the EPA proposed the NSLF for inclusion on the NPL, which designates the site as a priority cleanup site. The site was formally placed on the NPL on

June 10, 1986. In February 1986, Ecology and the City of Spokane signed an agreement for the NSLF site. Based on that report, dry cleaning sludge and wastewater treatment plant skimmings were identified as potential sources of chemical contamination in the landfill waste.

The City conducted an RI and submitted a draft RI report in October 1986; a draft FS report was submitted in early 1987. In this report, the City of Spokane evaluated various alternatives for addressing contamination problems in three areas: contaminated refuse, treatment plant skimmings, and groundwater.

After reviewing the draft FS, EPA and Ecology asked the City of Spokane to install additional monitoring wells. These wells were required to help characterize the extent of the contamination plume in the aquifer. The City and Ecology were unable to come to an agreement on the proposed wells, and Ecology requested that EPA take lead agency status for the project. Subsequently, EPA signed a consent order with the City of Spokane on March 16, 1988, to complete the wells and undertake future remedial actions. On January 23, 1991, the U.S. District Court formally signed the NSLF Consent Decree.

The NSLF stopped receiving wastes by December 31, 1991, in accordance with the Consent Decree. Landfill closure activities were initiated with the development of the Closure and Future Operations Plan for the NSLF (CH2M HILL, 1991). Closure activities that have been completed at the site include:

- Groundwater extraction and treatment (system construction completed April 1992).
- Landfill gas collection and treatment (system construction completed November 1992)
- Onsite sewer relocation, operation, and maintenance (system construction completed December 1992)
- Construction of a cover system for the old 150-acre landfill area in accordance with the MFS (WAC 173-304) (system construction completed November 1992).
- Surface water drainage control and infiltration system (system construction completed November 1992)
- Groundwater monitoring (ongoing)

In 1993, the Washington State Professional Engineers Association gave the Outstanding Civil Engineering Achievement Award of Merit to the NSLF Closure Project.

The City of Spokane continues to perform gas extraction, gas sampling, cover system maintenance and water monitoring on the site during the post-closure period. The groundwater extraction and treatment system functioned until indicator VOC parameters monitored in groundwater wells fell below the threshold criteria established in the Consent Decree. In December 2012, Ecology approved beginning the two-year shutdown period to demonstrate whether the clean-up goals had been met. The two-year period was successful, and in September 2020, EPA removed the landfill from the NPL. Operation and maintenance of the landfill gas collection control system; maintenance of the landfill cover; and groundwater monitoring will continue to be required and EPA will review site data every five years to ensure the groundwater continues to meet the clean-up goals. In 2020, the City

began a project to refurbish the landfill infrastructure to carry it through the post closure period.

SOUTHSIDE LANDFILL

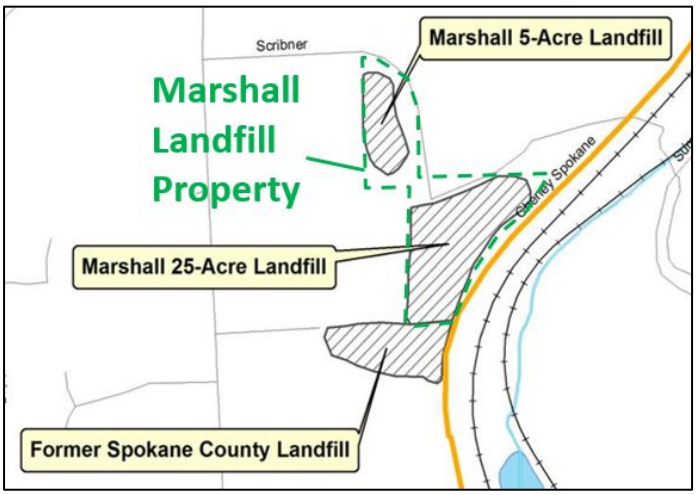
This closed landfill contains approximately 72 acres, is over 30 years old, and was part of the Moran Township disposal site prior to 1960. The Southside Landfill stopped accepting waste on July 21, 1987. During 1988, the site was closed in compliance with Washington State landfill closure requirements (WAC 173-304). The final cover system consists of a landfill gas collection and treatment system, a geomembrane cover [60-mil High Density Polyurethane (HDPE)], drainage and vegetation layers, and stormwater control berms and ditches.

The site is secured around its entire perimeter, with no public access. Operations include erosion control, grading control and repair, maintenance, site security, operation of a landfill gas flare station, internal and external methane control, cap maintenance, and ongoing gas and groundwater monitoring.

In 2020, the City began a project to refurbish the landfill infrastructure to carry it through the post closure period.

MARSHALL LANDFILL

The Marshall Landfill is privately owned and was privately operated. The landfill is located eight miles southwest of the City of Spokane, about 0.5-mile west of the unincorporated town of Marshall. The landfill consists of four primary historic land use areas, including:



- The Main Landfill: approximately 25 acres, this landfill operated from 1970 to 1990. After the landfill was closed, it was covered with sand. It is located within the south-central portion of the Site.
- The Five-Acre Landfill: approximately 200 feet northwest of the Main Landfill and about 5 acres in size, this waste disposal area is located within the northwest portion of the Site. Waste was disposed within the Five-Acre Landfill during the period from 1980 through 1984. After it was closed, it was capped with 2 feet of compacted clay.
- The Gravel Pit: This area is currently operated as a gravel pit by Action Materials and is north of the Main Landfill and east of the Five-Acre Landfill.
- The Former Spokane County Landfill: This property was operated by Spokane County as a daily-burn landfill from the 1950s until 1970 and is located adjacent to the southern boundary of the Main Landfill.

Prior to closure, the Marshall Landfill received MSW and demolition debris from the Cities of Cheney, Spangle, Medical Lake, and Airway Heights, as well as from southwest portions of Spokane County, at a rate that exceeded 20,000 cubic yards per month. Waste disposed at the Marshall Landfill site included oily wastewater, latex paint, caustic soda solution, used oil, sludge, perchloroethylene (PCE) contaminated soil, and more.

The Marshall Landfill accepted solid waste from 1970 to December 1991, when its existing variance from the SRHD expired. It was granted a limited variance in 1992 from the SRHD to allow for closure. However, the landfill never operated under the 1992 variance, and closure has not been completed. The company that operated the Marshall Landfill was financially insolvent when operations ceased, and the landfill was never officially closed. The Remedial Investigation/Feasibility Study was completed in 2018, and the Washington Department of Ecology is currently developing the Cleanup Action Plan (CAP) for the Marshall Landfill site.

Appendix K

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Appendix L

Glossary

3 Rs	Reduce, Reuse Recycle
AFB	Airforce Base
BMP	Best Management Practice
BNSF	Burlington Northern Santa Fe
C&D	Construction and Demolition
CAP	Cleanup Action Plan
CDL/I	Construction, Demolition, Land clearing and Inert Waste
CESQGs	Conditionally Exempt Small Quantity Generators
CIP	Capital improvements plan
CLCP	Community Litter Cleanup Programs
CO	Carbon Monoxide
CPI	Consumer Price Index
CROP	Contamination reduction and Outreach Plan
CSI	Center for Sustainable Infrastructure
DEQ	Department of Environmental Quality
DNS	Determination of non-significance
DoD	Department of Defense
e.g.	Exempli Gratia
Ecology	Washington state Department of Ecology
EPA	Environmental Protection Agency
EPR	Extended Producer Responsibility
EWRSEF	Eastern Washington Regional Science and Engineering Fair
FAA	Federal Aviation Administration
FAFB	Fairchild Air Force Base
HDPE	High Density Polyurethane
HHW	Household Hazardous Waste
i.e.	Id Est
IA	Interim Action
IEP	Inland Empire Paper Company
ILA	Interlocal Agreement
LSWFA	Local Solid Waste Financial Assistance
MEK	Methyl Ethyl Ketone
MFS	Minimum Functional Standards
mil	One Thousandth of an Inch
MRF	Material Recovery Facility
MRW	Moderate Risk Waste

MRW Plan	Moderate Risk Waste Management Plan
MSW	Municipal Solid Waste
MTCA	Model Toxics Control Act
NPL	National Priorities List
NSLF	Northside Landfill
OFM	Washington State Office of Financial Management
P&T	Pump and Treat
PAYT	Pay As You Throw
PCE	Perchloroethylene
PETE	Polyethylene Terephthalate
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SCRSWS	Spokane County Regional Solid Waste System
SEPA	State Environmental Policy Act
SF	Square Foot
SIC	Stakeholder Input Committee
SMaRT	Spokane Materials and Recycling Technology
SRCAA	Spokane Regional Clean Air Agency
SRF	Spokane River Forum
SRHD	Spokane Regional Health District
SWAC	Solid Waste Advisory Committee
TCA	Trichloroethane
UGA	Urban Growth Area
UP	Union Pacific
VOC	Volatile Organic Compound
WACSWM	Washington Association of County Solid Waste Managers
WDOE	Washington Department of Ecology
WSDA	Washington State Department of Agriculture
WTE	Waste to Energy
WUTC	Washington State Utilities and Transportation, Commission

Actions (Plan): Detailed plan outlining actions needed to reach one or more goals.

Aquifer: A body of permeable rock which can contain or transmit groundwater.

Beneficial Use: According to Chapter 173-350 WAC, includes the use of solid waste as an effective substitute for natural or commercial products, or as a soil amendment, in a manner that does not pose a threat to human health or the environment and when approved in accordance with Chapters 173-250-200 or 173-350-230 WAC. The use of solid waste as fill or avoidance of processing or disposal cost alone, does not constitute beneficial use.

Biomedical Waste: (1) animal waste, (2) biosafety level 4 disease waste, (3) cultures and stocks, (4) human blood and blood products, (5) pathological waste, (6) sharps waste

Biosolids: The nutrient rich organic product of wastewater treatment.

C&D (construction and demolition waste): Materials delivered to privately operated inert and demolition facilities for recycling/diversion or disposal that is largely inert waste, resulting from construction and demolition activities or land-clearing activities in the County.

Circular Economy: An economic system aimed at eliminating waste and the continual use of resources

Closed Landfill: A landfill in which solid waste is no longer being placed.

Cogeneration: The generation of electricity and other energy jointly.

Collection and transport (Waste): includes: (1) curbside collection of residential waste; (2) collection of waste from businesses and institutions; and (3) self-haul customers (both residents and businesses) transporting their solid waste to a transfer facility (transfer station or drop box site) or WTE Facility

Comingled-Recycling: System in which all paper fibers, plastics, metals, and other containers are mixed in a collection truck, instead of being sorted by the depositor into separate commodities.

Commercial Collection/Transport (Waste): Commercial services include curbside residential pick up; commercial, industrial, and institutional pick up and drop box pick up.

Commercial: Waste hauled by contracted or municipally operated vehicles in which 80% or more of the waste is from multifamily residences with five or more units, or institutional, commercial, or industrial sources.

Compost: Controlled biological decomposition of organic material.

Contaminated Soils: Soils which contain harmful substances but are not designated as dangerous wastes.

Corrosive: Tending to cause corrosion.

Contaminated Soils: Contaminated soils are materials containing contaminants (fuel oil, gasoline, other volatile hydrocarbons, or other hazardous substances) at concentrations that could

negatively impact the existing quality of air, waters of the state, soils or sediments, or pose a threat to the health of humans or other living organisms.

Dangerous Wastes: Solid waste designated as dangerous waste by the Department of Ecology under Chapter 173-303 WAC.

Disposal (waste): The final disposal destination for waste that has been collected/transported and transferred.

Disposed waste: The residual waste thrown away by all customers after materials have been diverted from the waste stream. This is the waste that is ultimately sent to a landfill or the WTE facility.

Diversion (Waste): Diversion does not reduce the amount of waste produced, but reduces the amount being disposed of or incinerated by diverting material from disposal sites through reuse and recycling.

Diverted wastes: Waste types such as recyclables, yard waste, concrete and used oil that can be recycled, reused, or composted to reduce the amount of waste sent for disposal.

Electronic Waste (E-waste): Electronics that contain hazardous materials.

Energy Recovery: Recovery of energy in a useable form from mass burning of refuse.

EnviroCertified Program: A program that recognizes environmentally responsible business practices.

Flammable: Easily set on fire.

Flow Control: Authority to direct solid wastes to specific facilities

Goals (Plan): The end towards which effort is directed.

Grasscycling: Leaving grass clippings on the lawn rather than collecting them to provide nutrients and reduce the need for fertilizer.

Groundwater: Part of a subsurface water that is in the zone of saturation.

Gypsum: A mineral that makes up drywall

Hog Fuel: Woody materials that have been ground to a smaller size for use as a fuel.

Household Hazardous Waste: Also known as Moderate Risk Waste; it is dangerous waste that is produced by households

Impermeable: Not allowing fluid to pass through.

Incineration: Reducing of volume of solid waste by using controlled flame combustion.

Incorporated: To be contained as part of a whole; included.

Inert Waste: Waste which is neither chemically nor biologically reactive and will not decompose or only very slowly.

Intermodal Facility: Facility operated for the purpose of transporting closed containers of waste.

Leachate: Water that has percolated through solid waste and leached out some of the constituents.

Limited Purpose (Landfill): A landfill that is not an inert waste landfill and receives or has received only solid wastes designated as nonhazardous and are not municipal solid wastes.

Material Recovery Facility: Facility that collects and processes single source recycling.

Member Jurisdiction: A city/town that participates in the Spokane County Regional Solid Waste System

Miscellaneous (waste): Asbestos, incinerator ash from the WTE facility, contaminated soils, biomedical waste and MRW

Miscellaneous waste: Includes agricultural waste, asbestos waste, ash from the WTE Facility, biomedical waste, biosolids, contaminated soils, and septic tank waste.

Moderate Risk Waste: Also known as Household Hazardous Waste; it is dangerous waste that is produced by households

Monofil: Landfills that are intended to be used for only one type of waste.

MRW (moderate risk waste): Includes hazardous waste produced by households and by businesses and institutions in small quantities below the small quantity generation status thresholds.

MSW (municipal solid waste): Wastes generated by households and businesses that are commonly delivered to the transfer stations and directly to the WTE Facility for disposal or are recycled/diverted or composted through various means. Included in MSW are small quantities of special wastes and residential MRW, as well as C&D waste delivered in small quantities to the County waste handling facilities.

Non-processible Waste: Solid waste that is delivered to and accepted at the facility, but is not processable due to it's character, size, or composition.

Organics: Relating to or derived from living matter.

Other Divertible: Materials that are separated for reuse, composting, land application, or energy recovery that are not categorized as Recyclables, such as wood debris, yard waste, furniture, asphalt and concrete, used oil, etc. This does not include general MSW that is sent to the WTE facility for energy recovery.

Poison: A substance that is capable of causing the illness or death of a living organism when introduced or absorbed.

Post-closure: A period of time after a landfill has been closed when the landfill site must demonstrate its environmental safety and/or stability.

Product Stewardship: An environmental management strategy that directs those involved in the design, production, sale and use of a product to take responsibility for minimizing the product's impact to human health and the natural environment.

Putrescible: Liable to decay.

Recyclables: Materials that are separated for traditional recycling such as paper, plastics, metals, etc.

Recycling: The action or process of converting waste into reusable material.

Reduction (Waste): Waste reduction can be defined as reducing initial consumption that creates waste. It can also refer to the reduction of toxics in the community and environment.

Residential: Waste hauled by contracted or municipally operated vehicles in which 80% or more of the waste is from single-family and/or multifamily residence with fewer than five units.

Reuse (Waste): Products or components that are used again for the same or another purpose for which they were conceived.

Self Haul Transport (Waste): Residents and contractors hauling waste themselves from their businesses or residences.

Self-hauled C&D (construction and demolition waste): Residents and contractors hauling waste generated from construction, demolition, or land clearing activities.

Self-hauled MSW: Residents and contractors hauling waste in vehicles not operated by a franchise or jurisdiction.

Sharps: Needles, syringes, and similar items.

Small Quantity Generators: Businesses that generate less than 220 pounds of dangerous waste, or less than 2.2 pounds of certain kinds of highly toxic waste in any month.

Sustainable materials management: A systematic approach to using and reusing materials more productively over their entire lifecycles.

Sustainable: Meeting the needs of the present without compromising the ability of future generations to meet their needs.

Tip Fee: A fee paid to dispose of waste at a disposal or transfer facility.

Transfer (waste): The movement of consolidated waste from one point to another; the transport of waste from a transfer facility (transfer station or drop box site) to a disposal facility.

Transfer Station: A facility utilized to consolidate loads of several waste collection deliveries into a single larger vehicle or container for shipment to an ultimate disposal site.

Unincorporated: To not be contained as part of a whole; excluded; the area of Spokane County not incorporated in cities and towns.

Vision Statement: A description of the long-term objective of an organization.

Wastewater Treatment Plant Skimmings: Floating matter such as oil, fat, and grease that remain on the surface of the wastewater.

White Goods: Discarded refrigerators, ranges, water heaters, freezers, and other similar domestic appliances.

Wishful-recycling: The placing of mixed and nonrecyclable objects in the recycling bin.

Wood Waste: Wood waste includes sawdust, chips, shavings, bark, pulp, hog fuel, and log sort yard waste, but it does not include wood pieces or particles containing paint, laminates, bonding agents or chemical preservatives

Zero Waste: Principles focused on waste prevention that encourages the redesign of resource life cycles so that all products are reused.

Appendix M

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