2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan
Preliminary Draft

Prepared for
Okanogan County

February 2018

Prepared by
Parametrix

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APPENDICES

ACRONYMS AND ABBREVIATIONS

BMPs	best management practices
Board	Okanogan County Board of Commissioners
CCT	The Confederated Tribes of the Colville Reservation
CEPs	covered electronic products
CFCs	chlorofluorocarbons
CFL	compact fluorescent light
CFR	Code of Federal Regulations
COLA	cost of living adjustment
County	Okanogan County
Ecology	Washington State Department of Ecology
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
EPR	extended product responsibility
ESHB	Engrossed Substitute House Bill
FEMA	Federal Emergency Management Agency
GMA	Growth Management Act
HHW	household hazardous wastes
HWMA	Hazardous Waste Management Act
LSWFA	Local Solid Waste Financial Assistance
LTCA	Local Toxics Control Account
MFS	Minimum Functional Standards
MHW	municipal hazardous waste
MRF	material recovery facility
MRW	moderate risk waste
MSW	municipal solid waste
MTCA	Model Toxics Control Act
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NPDES	National Pollutant Discharge Elimination System

ACRONYMS AND ABBREVIATIONS (CONTINUED)

OCPH	Okanogan County Public Health
OFM	Office of Financial Management
PCS	petroleum-contaminated soil
RAC	Recycle Advisory Committee
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
RPA	recycling potential assessment
SARA	Superfund Amendments and Reauthorization Act of 1986
SEPA	State Environmental Policy Act
SQGs	small quantity generators
SWAC	Solid Waste Advisory Committee
USC	United States Code
WAC	Washington Administrative Code
WGA	Waste Generation Area
WUTC	Washington Utilities and Transportation Commission

EXECUTIVE SUMMARY

This 2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan (hereafter the Plan) recommends strategies to manage solid waste and moderate risk waste generated in Okanogan County including the communities of Brewster, Conconully, Okanogan, Omak, Oroville, Pateros, Riverside, Tonasket, Twisp, and Winthrop. Table ES-1 describes the recommended strategies in managing solid waste in Okanogan County. The primary purpose of the Plan is to develop recommended waste management strategies through the period of 2018 to 2023, and to ensure that there is sufficient capacity for the next 20 years (through 2038). Table ES-1 describes the recommendations developed through careful consideration of Okanogan County's Solid Waste Advisory Committee (SWAC), which comprises representatives from various stakeholders within the County.

Table ES-1. 2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan Recommendations

Recommendations	
Waste Prevention	
Recommendation 3-1—Annual Work Plan.	Review annual progress toward waste prevention and recycling goals based on progress and grant funding availability, which will be administered by the SWAC and the County. Develop an annual work plan to implement waste prevention programs. The work plan will review options for working with various community partners to promote waste prevention and recycling within Okanogan County.
Recommendation 3-2—Waste Monitoring.	Develop a tracking system to annually monitor and evaluate waste generation throughout the planning area. The tracking system would be used to determine progress toward waste prevention and recycling goals, as well as identify potential areas of concern regarding illegal disposal or export.
Recommendation 3-3—Master Composter/Recycler Programs.	Work with local agencies, such as cooperative extensions or other partners, to design and implement Master Composter and Master Recycler programs for training volunteers as community resources.
Recommendation 3-4—Financial Incentives.	Review periodically to assess the potential for additional financial incentives for waste prevention and recycling. The SWAC will provide recommendations to the County, Cities, and CCT for potential programs and policies.
Recycling	
Recommendation 4-1—Recycling Potential Assessment (RPA).	Perform, if needed, an RPA during the planning period to determine potential adjustments in County recycling programs. The results of each assessment will be reviewed with the SWAC to determine how to best implement recommended programs or adjustments in the range of materials recycled by the County.
Recommendation 4-2—Additional Recycling Sites.	Work to develop additional partnerships for expanded recycling drop-off sites in under-served areas of the County. Expanded drop-off sites could include either permanent or mobile drop-off programs.
Recommendation 4-3—Optional Source-Separated or Commingled Recycling.	Encourage Cities with adequate densities and access to recycling processing facilities to implement source-separated or commingled recycling collection. The County will further investigate these opportunities.
Recommendation 4-4—Commercial Recycling.	Review the County's recycling processing capacity to determine whether additional commercial materials can be handled at the Central Landfill recycling facility. If capacity is available, the County will encourage local

Table ES-1. 2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan Recommendations (continued)

	Recommendations
	haulers to provide expanded cardboard, and possibly office pack, collection to area businesses and institutions.
Recommendation 4-5—Private Sector.	Continue to support and encourage the private sector to provide hauling services for source-separated or co-mingled recyclables to out-of-county processors and markets such as Spokane or the Puget Sound area.
Recommendation 4-6—Recycling Funding.	Maintain a recycle facility to the level funded by Ecology. The County may use tipping fees and explore alternative funding opportunities to operate the current County recycle center. The County will continue to support the private sector and CCT, as opportunities arise.
Recommendation 4-7—Market Development.	Research and recommend purchase of recycled-content products (e.g., copy paper, tissue paper, construction materials) to the extent practicable and consistent with other purchasing objectives. This task will be conducted by the County, Cities, and CCT.
Organic Materials	
Recommendation 5-1—Economically Feasible Opportunities.	Continue to investigate economically feasible opportunities for organic materials management, and keep the SWAC informed of any new processes that might be beneficial.
Recommendation 5-2 —Support Compost Facility Development by Others.	Continue to support other entities initiating compost facility development, either public or private. The County will provide input to the understanding of feed stocks (e.g., agricultural, DNR Firewise activities), impact on collection, landfill life, facility siting, and funding mechanisms.
Recommendation 5-3—Community Education.	Educate residents about ways to cut down on food waste before it is generated through provisions such as links to EPA resources on County and OCPH websites, or introducing the topic through community events or other public formats.
Recommendation 5-4—Non-Residential Organics Education.	Educate non-residential generators of organic waste about ways to reduce food waste (e.g., donation of non-perishable and unspoiled perishables to food banks, or conversion to animal feed).
Recommendation 5-5—Community Engagement Opportunities.	Support demonstration gardens in at least one of its parks and other locations to educate residents about the benefits of yard debris composting or vermicomposting. The County could offer support through promotions (e.g., advertisement), or staff time when available.
Recommendation 5-6—Vermicomposting.	Encourage vermicomposting projects. Home composting of food waste should be encouraged through public education on the proper methods for vermicomposting or incorporation into compost bins.
Collection	
Recommendation 6-1—Minimum Container Sizes and Residential Service Levels.	Review existing contracts and city codes to ensure that appropriate garbage service levels and incentives are available to residents and businesses that produce relatively low volumes of waste. The cities should perform this task. Minimum service levels such as 20-gallon mini-cans, single 32-gallon containers or once-per-month collection will be considered and implemented where appropriate. The County will work with WUTC-certificated haulers to expand service level options that encourage waste prevention and recycling. During this planning period, the County does not expect to increase staff hours or expenditures for minimum container sizes and residential service levels.
Recommendation 6-2—Incentive Rate Structures.	Consider potential incentive rate structures when negotiating or bidding contracts for cities or filing WUTC rates. The cities and haulers are

Table ES-1. 2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan Recommendations (continued)

	Recommendations
	responsible for this task. Incentive rates will be implemented, where feasible, to support waste reduction and recycling goals. During this planning period, the County does not expect to increase staff hours or expenditures for incentive rate structures.
Recommendation 6-3—Private Roads.	Work with customers to encourage appropriate road maintenance to minimize damage and wear to roads and trucks. The haulers will be responsible for this task. When private roads are inadequate, haulers will collect garbage on the nearest public road. During this planning period, the County does not expect to increase staff hours or expenditures for private roads.
Transfer	
Recommendation 7-1—Continue the Existing Transfer System.	Continue to operate the Bridgeport, Ellisforde, and Twisp transfer stations. The County and SWAC will continue to review alternative funding options, including variable tipping fees at the transfer stations and Central Landfill. Tipping fees are currently uniform at all facilities Countywide, but will be changed in the future. Within the 6-year planning period, the County will evaluate the efficacy of variable tipping fees, and other types of rate adjustments, and may implement a new fee schedule accordingly. During this planning period, the County does not expect to increase transfer station staff hours or expenditures beyond inflationary and disposal rate (tonnage) increases, unless determined to be necessary for safety or operational purposes.
Recommendation 7-2—Evaluate Additional Transfer Station	Evaluate the potential costs and revenues associated with operating an additional facility if Elmer City and Coulee Dam petition to re-enter the Okanogan County solid waste system, or if operating an additional or replacement facility to serve other populations is considered feasible. The County will operate an additional transfer station only if net revenues meet or exceed the capital and operating costs of the additional facility. During this plan period, no staff hours or expenses will be incurred for evaluating an additional transfer station.
Recommendation 7-3—Non-County Facilities.	Allow private, municipal, and tribal transfer stations with the following provisos: 1) they meet all land use, health district, and other agency permitting requirements; 2) they do not detract from the financial viability of the County transfer system; and 3) all collected MSW is delivered to the Central Landfill or other facility designated by the County. During this plan period, no staff hours or expenses will be incurred for non-County facilities.
Landfill Disposal	
Recommendation 8-1—Continue Post-Closure Monitoring.	Continue post-closure monitoring of the closed Okanogan, and Pateros landfills.
Recommendation 8-2—Continue Near-Term Operation of Central Landfill.	Continue to operate the Central Landfill as the sole disposal facility within the planning area. The County will comply with the Conditional Use Permits and landfill Plan of Operations, as either is amended from time to time, and report annual progress to the SWAC. During this planning period, the County does not expect to increase staff hours or expenditures beyond inflationary and disposal rate increases.
Recommendation 8-3—Waste Import.	Consider importing waste from neighboring counties if it is in the County's interest to do so. The importation of MSW from Chelan, Douglas, Grant, or Ferry Counties will be specifically permitted without a Plan amendment, provided that such import is allowed under the Central Landfill's Conditional Use Permit and Operating Permits, as revised from time to

Table ES-1. 2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan Recommendations (continued)

	Recommendations
	time. In the event that importation appears desirable, the County will review specific costs and benefits with the SWAC. During this planning period, no staff hours or expenses will be incurred for waste import.
Recommendation 8-4—Waste Export.	Consider a transfer station for waste export if the County determines that waste export is advisable once Central Landfill Cell #3 is filled. The Central Landfill or an alternative site can be used as an export transfer station. County MSW will then be transported and disposed at an out-of-county landfill. This Plan specifically allows the export of waste from a future County transfer facility, if that disposal method is chosen. If waste export is chosen as a future disposal method, the existing Central Landfill may be retained as an inactive but not fully closed facility to provide local backup to the export arrangement. Existing waste export by Couse's Sanitation to Ferry County and other export from areas of the Colville Reservation will continue to be permitted, subject to interlocal agreement with the destination county, unless the County located an additional transfer station in the eastern portion of the County. A Plan amendment would be required. During this planning period, no staff hours or expenses will be incurred for waste export.
Recommendation 8-5—Future Disposal.	Conduct a comparison of disposal costs at the Central Landfill with an alternative operation of a transfer and export system to other regional landfills 2 years prior to the expected filling of Cell #4A. The comparison will be brought before the SWAC for review. If waste export appears to meet cost, reliability, management control, and other County and SWAC objectives, the County may choose to proceed with a Request for Proposals to determine actual system costs. The County would then either proceed with negotiations to contract a waste export system or develop Cell #4B at the Central Landfill. During this planning period, no staff hours or expenses will be incurred for future disposal.
Recommendation 8-6—Landfill Expansion.	Continue landfill development and operation at the Central Landfill under this Plan. The County will begin operation of Cell #3 in 2018, with projected operational capacity through 2021. This Plan recommends that the County develop Cell #4A and Cell #4B in the 2020s, with projected capacity through 2032. Subsequently, this Plan recommends that the County prepare to develop Cell #5, located to the north and northeast of prior cells, to provide capacity through the remainder of the 20-year planning period (2018 to 2037) and beyond.
Special Waste	
Recommendation 9-1—Construction and Demolition Materials.	Determine whether additional diversion alternatives are feasible for managing construction and demolition materials such as concrete, asphalt, and clean wood, to the extent practicable, given the available cell and storage space and staffing. The County will be supported in this effort by the SWAC.
Recommendation 9-2—PCS Acceptance and Remediation.	Continue to enhance monitoring of contaminated soil deliveries at the Central Landfill to ensure that maximum contamination levels are not exceeded for material directly used as landfill cover. The County will investigate the feasibility of establishing a PCS remediation area at the Central Landfill. If feasible and cost effective, the County will develop a remediation site, with the remediated soil used as landfill cover.
Recommendation 9-3—Medical Waste.	Monitor periodically incoming solid waste at transfer stations and the Central Landfill to determine the presence of infectious waste. If significant quantities are observed, the source will be determined and the County will

Table ES-1. 2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan Recommendations (continued)

	Recommendations
	inform the generator of the need to handle infectious waste separately to limit worker exposure to infectious wastes and sharp objects. If continuing quantities of infectious waste are noted in incoming solid waste, the County will work with local health care and professional organizations to provide notification of proper disposal methods for infectious waste. The County will investigate the feasibility of accepting infectious waste at transfer stations and will implement if cost effective.
Recommendation 9-4—Tire Management.	Investigate periodically alternative tire management methods to determine whether additional in-county reuse or recycling might be possible. If feasible and cost effective, the County will support in-county tire reuse and recycling alternatives.
Recommendation 9-5—White Goods.	Investigate the financial and operational impacts of offering discounts, City-sponsored collection events, amnesty days, or other methods to divert white goods from illegal dumping or improper accumulation. If feasible, the County (and Cities) will proceed with recycling incentives for white goods.
Recommendation 9-6—Asbestos.	Monitor periodically incoming solid waste at transfer stations and the Central Landfill to determine the presence of asbestos. If significant quantities are observed, the source will be determined (if possible) and the County will inform the generator of the need to handle asbestos separately to limit the exposure of workers and other solid waste site users to asbestos fibers.
Recommendation 9-7—Asbestos.	Provide educational materials through the County and City building departments to support the required use of the Notification of Demolition and Renovation form by building permit applicants. The Okanogan County Building Department will be the repository for the completed forms.
Recommendation 9-8—Multi-Hazard Plan Update.	Update the Multi-Hazard Mitigation Plan to discuss debris management and disposal.
Moderate Risk Waste	
Recommendation 10-1—Continue MRW Facility at Central Landfill and Twisp Transfer Station/ Consider Expanding the Program.	Continue to provide a MRW facility at the Central Landfill, the Twisp Transfer Station, or successor disposal facility. The County's MRW facility will be open at least one day per week and the Twisp Transfer Station will be open bi-weekly or monthly depending on the season. Both facilities will accept materials from households and conditionally exempt SQGs. The facilities may be open additional days, as staffing and funding allow. Collected materials will be reused or shipped via regulated haulers to treatment, recycling, or disposal facilities. The County will consider expanding to other areas of the County based on need.
Recommendation 10-2—MRW Promotion and Education.	Continue to provide MRW reduction, recycling, and disposal promotion and education as part of the County's overall solid waste program. Promotion and education programs will be tailored to address specific topics and reminders on a rotating basis throughout the planning period. Examples of topics include MRW facility availability and acceptance policies, proper motor oil management, battery recycling, and electronics reuse and recycling.
Recommendation 10-3—MRW Reuse.	Investigate the legal and operational issues related to providing a reuse area at the MRW facility for appropriate materials. If feasible, the County will allow the reuse of certain MRW materials such as automotive products and household chemicals. Extremely hazardous wastes and banned materials (DDT, penta preservatives, etc.) will not be allowed for reuse and will be disposed as MRW.

Table ES-1. 2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan Recommendations (continued)

	Recommendations
Recommendation 10-4—Lead Acid Battery Recycling.	Work with the jurisdictional health department to determine the feasibility of accepting lead acid batteries at transfer stations. If it does not increase cost of operations, the County will accept lead acid batteries at transfer stations.
Recommendation 10-5—Electronics Recycling.	Investigate the feasibility of accepting e-waste at the Central Landfill, or additional sites or special collection days in the central and eastern parts of the county. If feasible, EPR cost recovery fund will be secured to cover the costs of recycling the components.
Recommendation 10-6—Business Technical Assistance.	Continue to refer Okanogan County SQG business owners to Ecology's technical assistance for businesses program.
Administration and Enforcement	
Recommendation 11-1—Cities Participation.	Continue to be part of the Okanogan County solid waste management system and maintain compliance with the provisions of interlocal agreements. This applies to all cities within the planning area–Brewster, Conconully, Okanogan, Omak, Oroville, Pateros, Riverside, Tonasket, Twisp, and Winthrop.
Recommendation 11-2—City Management.	Continue to manage their solid waste collection programs and municipal ordinances. The County may provide technical assistance workshops to member cities as interest, staff time, and funding allow.
Recommendation 11-3—The Okanogan County Public Health's Role.	Continue to enforce solid waste handling practices throughout the County. This effort will be implemented by OCPH's Environmental Health Division. These activities include monitoring and permitting solid waste disposal facilities and transfer stations. When local concerns dictate, the OCPH will adopt local regulations for solid waste management facilities.
Recommendation 11-4—The Okanogan County Solid Waste Advisory Committee's Role.	Continue to review and provide comment on County policies and programs related to solid waste management, including reviewing periodic recycling potential assessments, disposal option planning, and a periodic review of this Plan. County staff will provide support to the SWAC, as appropriate.
Recommendation 11-5—Public Works Department Coordination and Management.	Continue to provide coordination and management of the County solid waste management system. These activities include post-closure monitoring at former landfills, operation of transfer stations and the Central Landfill, the implementation of County ordinances (including Collection and Disposal Districts, if enacted), waste prevention and recycling programs, and MRW programs.
Recommendation 11-6—System Funding.	Continue to use disposal tipping fees to fund the solid waste system to the extent practical and consider adjusting tipping fees on a regular basis in accordance with true operational costs. The County will consider and implement Disposal and Collection Districts or other funding mechanisms if future events result in a need to reduce tipping fees and recapture lost revenue through direct taxation of parcels or collection services.

1. INTRODUCTION AND REVIEW

Okanogan County (County) solid waste planning and development has progressed through several significant stages over the past 36 years. Regulatory requirements and shifting public attitudes have led to increasingly intensive management of wastes during this period. This 2018 update of the 2012 Comprehensive Solid Waste and Moderate Risk Waste Management Plan (2012 Plan) will provide the next step in continuing to meet the waste management needs of the diverse population and extensive geographical setting of Okanogan County (Okanogan County 2012). As a result of previous planning processes, Okanogan County has progressed from uncontrolled solid waste dumping to the development of regional transfer stations and a central landfill, as well as steadily increasing levels of diversion through waste reduction and recycling, including improved handling of moderate risk waste. This 2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan (the Plan):

- Identifies goals and strategies for improved waste reduction, recycling, waste disposal, and moderate risk and hazardous waste management
- Reviews the existing waste management system and provides recommendations for program improvements during the planning period
- Addresses key decisions that will need to be made during the planning period and establishes an orderly process for making those decisions
- Recommends collaboration among various entities that have influence over solid waste management in Okanogan County, including the Okanogan County Board of Commissioners, Public Health, Board of Health, and the Public Works Department staff; Confederated Tribes of the Colville Reservation (CCT); and various non-profit and for-profit organizations.

The Plan is the result of intensive work by Okanogan County's Solid Waste Advisory Committee (SWAC), which comprises representatives from the various stakeholders within the County. These stakeholders include representatives from the County's incorporated municipalities, CCT, waste hauling industry, local businesses, and the public at large. Additionally, coordination with County and Cities/Towns staff, adjacent counties, and the Washington State Department of Ecology (Ecology) has also assisted in developing a plan that is compatible and supports regional efforts.

Public participation by municipalities, stakeholders, and citizens was solicited at several points through the Plan development process. Public involvement is discussed further in Section 1.9.3 of this chapter.

1.1 Plan Development

The Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Solid Waste Disposal Act Amendments of 1980 (42 United States Code [USC] 6901-6987), is the primary body of federal legislation dealing with solid waste and hazardous waste. State authority for managing dangerous waste also comes from RCRA (1980) and the state Hazardous Waste Management Act, Chapter 70.105, Revised Code of Washington (RCW), 1976. In order to comply with RCRA, states are required to develop a state comprehensive solid waste management program, which in turn is used by authorities of local, state, and regional agencies for their solid waste management.

RCW 70.95.020 allocates the principal responsibility of solid waste management to local government, with counties having responsibility for planning and solid waste disposal. Every 5 years, a plan must include 20-year projections, a cost assessment, and a State Environmental Policy Act (SEPA) checklist. The plan must comply with Washington Administrative Code (WAC) chapters 173-304 and 173-351, which includes the Minimum Functional Standards (MFS) for solid waste handling.

State responsibilities include:

- Oversight over the development of local solid waste management plans, including review of plans during the plan preparation process
- Technical assistance in relation to waste reduction and management efforts for local governments and industry
- Formulation of state programs to decrease waste stream volumes at landfills
- Ensure solid waste activities meet state Department of Agriculture guidelines for the control and quarantine of apple maggots

The last update to state guidelines occurred in 2010 when the Ecology revised the Guidelines for Development of Local Comprehensive Solid Waste Management Plans and Plan Revisions to help standardize solid waste management plan preparation (Ecology 2010a).

Under RCW 70.95.080, Cities or Towns may:

1. Submit a separate plan to their respective county
2. Permit county formulation of a city-wide plan to be included in the encompassing County plan
3. Authorize management of incorporated and unincorporated areas under a single County plan

The Washington Utilities and Transportation Commission (WUTC) regulates utility and transportation rates (81.77 RCW). The WUTC has principal responsibility for review of a cost assessment to accompany the Plan.

The preliminary draft Plan underwent a 30-day public review. Public meetings were held to identify issues and propose alternatives. Upon public revision, Ecology performed a 120-day review to ensure compliance with state laws and regulations. During this time, the WUTC had a 45-day timeframe to review the proposed cost estimate. In response to amendments to the apple maggot quarantine in 2016, the Department of Agriculture also had a 45-day review period to ensure compliance under RCW 70.95.095.

1.2 Plan Purposes and Functions

The primary purpose of the Plan is to develop recommended waste management strategies through the period of 2018 to 2023, and to ensure that there is sufficient capacity for the next 20 years (through 2038).

Specific goals of the Plan are to:

- Adopt concise statements of goals and objectives
- Provide information on statutes and regulations, current local waste management practices, and applicable alternatives
- Develop estimated capital and operating costs for the recommended system
- Schedule necessary steps to create legislative, financial, and physical elements of the recommended system
- Provide legal authority under state law for the Okanogan County Health District and others to issue facility permits and provide statutory regulation
- Provide an approved plan to maintain eligibility for state and other grant assistance

1.3 Goals and Objectives

This Plan continues and expands the goals and objectives adopted by the previous 2012 Plan update. During the Plan's development, the Solid Waste Advisory Committee (SWAC) reviewed the existing goals and objectives, and recommended to retain the majority of the 2012 provisions, with some revisions. The County's overarching goal is to develop an integrated solid waste management system, which influences individual waste generation practices while providing for necessary and economically efficient waste management services that minimize environmental impacts and protect human health.

The waste management system shall be based on the following objectives and policies:

- Promote waste reduction and recycling programs (including management of household hazardous waste) to reduce waste generation and associated handling and disposal requirements while minimizing costs
- Support appropriate state and local legislation and practices that reduce waste generation and/or enhance recycling opportunities
- Support source separation programs such as composting, construction waste reuse, and single stream recycling
- Continue development of the existing solid waste handling system to provide needed services and to ensure conformance with state and local regulations
- Make use of private sector capabilities as service providers, when appropriate and cost effective, to accomplish some operating aspects of the program
- Coordinate with other jurisdictions to maximize public service coverage and efficiency
- Maintain and improve the monitoring of waste generation and disposal activities
- Support improvement of the solid waste management system
- Enforce applicable regulations

These objectives and policies were established to guide the consideration and development of recommendations throughout the chapters that deal with various waste management system elements.

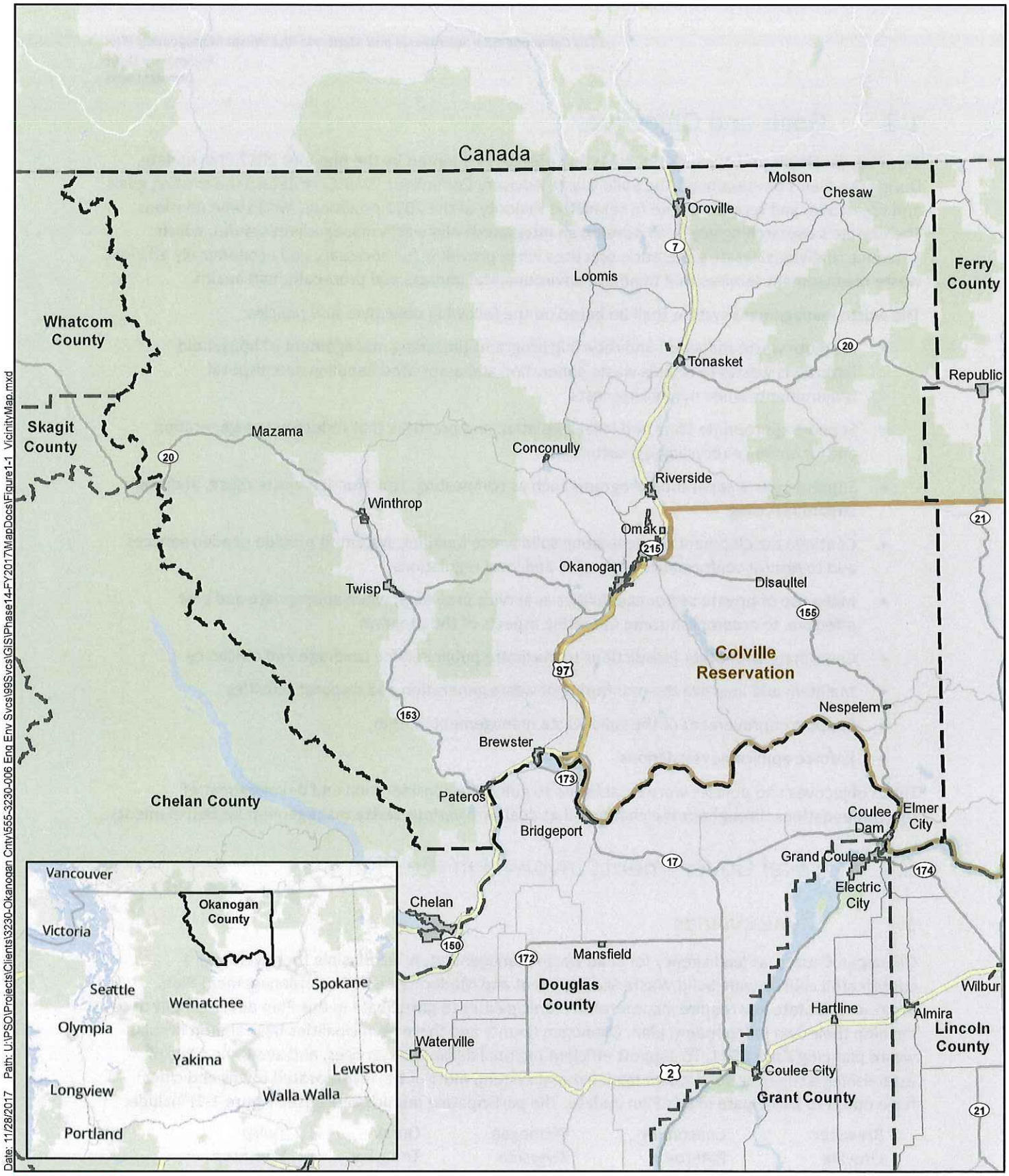
1.4 Local Governments Involved in the Plan

1.4.1 Municipalities

Okanogan County, as lead agency for solid waste management, is responsible for developing a coordinated county-wide Solid Waste Management and Moderate Risk Waste Management Plan. Provisions of state law require incorporated municipalities to participate in this Plan development or to develop their own independent plan. Okanogan County and these municipalities have shared in solid waste planning since 1971. To support efficient regional delivery of services, and avoid the costs of establishing a separate solid waste management system, most of the incorporated towns and cities[1] have opted to participate in this Plan update. The participating municipalities (see Figure 1-1) include:

Brewster	Conconully	Okanogan	Omak	Twisp
Oroville	Pateros	Riverside	Tonasket	Winthrop

[1] Hereafter the document broadly uses the term "cities" to include both incorporated cities and towns.



Date: 11/28/2017 Path: U:\PSO\Projects\Clients\3230-Okanogan Cnty\555-3230-006 Enq Env Svcs\99Svcs\GIS\Phase14-FY2017\MapDocs\Figure1-1 VicinityMap.mxd

Parametrix

Source: © Mapbox, © OpenStreetMap, State of Washington

Okanogan County
City Boundary
Tribal Boundary

0 5 10 20 Miles

Figure 1-1. Vicinity Map
Okanogan County
Solid Waste Master Plan

Okanogan County, WA

During the preliminary stages of research and preparation, the majority of the municipalities within Okanogan County elected to be part of the County's Plan. Because of geographic constraints and existing alternative arrangements, Coulee Dam and Elmer City did not participate in this Plan, and instead will continue to use facilities in Grant County pursuant to Grant County's Plan.

Participating municipalities adopted this Plan through their formal legislative process. Interlocal agreements were executed to support Plan recommendations (copies of interlocal agreements are provided in Appendix A). In accordance with this Plan and the supporting interlocal agreements, solid waste collected within participating municipalities and by WUTC-certificated haulers serving unincorporated areas shall be taken to an Okanogan County transfer station or landfill, unless otherwise provided by interlocal agreement with neighboring counties.

Incorporated cities and towns have the authority to:

- Enact ordinances governing waste handling within their jurisdictions.
- Contract for waste and recyclable collection services.
- Enter into interlocal agreements with other jurisdictions, provided that those ordinances and agreements comply with this Plan and the supporting interlocal agreements between the Cities and the County.

The municipalities' options are discussed more fully under the specific waste handling and recycling elements of this Plan.

1.4.2 The Confederated Tribes of the Colville Reservation

The CCT participated in the planning process via SWAC membership. Okanogan County serves the western portion and Ferry County serves the eastern portion of the Colville Reservation. The CCT operate a collection and drop-box transfer system that serves residents and businesses on the Colville Reservation. The Okanogan County portion of the Reservation uses the County's Central Landfill. The CCT maintain jurisdiction through their Solid Waste Comprehensive Management Plan, over waste management regulations, practices, and financing within the Reservation boundary. The cities of Nespelem, Elmer City, and portions of Omak and Okanogan, Okanogan County, and Coulee Dam are within the boundaries of the Colville Reservation. Tribal boundaries are shown on Figure 1-1.

1.4.3 Adjacent Counties

Okanogan County has cooperative interactions with adjacent counties to provide waste handling facilities and manage overlapping jurisdictions of the WUTC-certificated waste haulers. The following review outlines these existing relationships. Figure 1-1 shows the adjacent counties.

Douglas County

Okanogan County owns a drop-box transfer station near the area of Bridgeport Bar in Douglas County, located at the site of the now closed Bridgeport Bar landfill. Okanogan and Douglas Counties closed the landfill and Okanogan County constructed the transfer facility on land owned by Okanogan County with assistance from Douglas County. The site is administered and operated by Okanogan County. Since January 1994, waste has been transferred to the Central Landfill. Residents and commercial haulers in the Columbia River region of northern Douglas County and southwestern Okanogan County use the Bridgeport Bar transfer station.

Chelan County

The WUTC-certificated waste hauler operating in the unincorporated areas of southwest Okanogan County holds a certificate for an area that includes parts of Chelan, Douglas, and Okanogan Counties. No other interaction with Chelan County has evolved, because the population centers are widely separated and no official interest in joint action has resulted from contact between the counties' legislative authorities.

Grant County

As noted in Section 1.4.1, Grant County provides solid waste planning and disposal for Coulee Dam and Elmer City, which, in turn, did not participate in this Plan.

1.5 Okanogan County Waste Management Programs and Responsibilities

Okanogan County provides for solid waste management and disposal through the legislative and contractual powers of the Okanogan County Board of Commissioners. The Okanogan County Public Health (OCPH) provides monitoring and enforcement of state and county laws and regulations on waste management. The administrative aspects of the solid waste programs are assigned to various County departments.

A brief outline of departmental programs and responsibilities is presented in this section and general requirements of state laws and regulations that are met by these activities. These topics are described below in greater detail in the relevant chapters.

1.5.1 Okanogan County Board of Commissioners

The Okanogan County Board of Commissioners (the Board) is the County's legislative authority for all aspects of the solid waste program, except for collection and regulatory aspects handled by Public Health. The Board receives recommendations from County departments, the SWAC, and the public about programs, budgets, and ordinances. Board decisions are supported by information provided by departmental staff, developed through the environmental review process; recommendations of the SWAC; and citizen comments at public hearings or meetings.

1.5.2 Okanogan County Public Health

The OCPH is the jurisdictional health agency that has the responsibility to enforce the provisions of state law through local health ordinances and policies. The Board of Health, which is composed of the three County Commissioners and representatives from the Cities, provides legislative oversight of OCPH.

The OCPH staff reviews and issues solid waste facility permits, monitors operations, and enforces regulations concerning facility operations in accordance with the state-mandated Minimum Functional Standards for Solid Waste Handling and subsequent rules (see WAC 173-304, WAC 173-350, and WAC 173-351). These regulations establish minimum performance standards for the proper handling of all solid waste materials, and identify those functions necessary to ensure effective solid waste handling programs at both the state and local level.

OCPH staff also enforces state and local regulations concerning public waste disposal practices and illegal dumping. OCPH is an active participant in the planning process, sitting in as non-voting, technical advisors to the SWAC.

1.5.3 Okanogan Public Works Department

The Public Works Department has been assigned overall responsibility for planning, development, operation, and administration of the solid waste program in the County. The Public Works Department carries out these assignments by accomplishing the tasks outlined in Table 1-1 for waste reduction, recycling, and disposal functions.

Table 1-1. Okanogan County Public Works Solid Waste Functions

Task	Assignment
Planning	Lead agency to develop this Solid Waste Management and Moderate Risk Waste Management Plan
Budgeting	Prepares annual capital and operating budget; ensures sufficient reserves
Development	Prepares engineering and construction documents; administers bidding and contracting, and construction inspection
Operations	Operates County solid waste facilities, including the Central Landfill, transfer stations, moderate risk waste facility, and recycling center
Financing	Performs rate studies as needed to recover costs; secures grant funding as available
Administration	Maintains records on system operations; ensures regulatory compliance
Legislative	Drafts solid waste ordinances and policies for Board review and adoption

1.5.4 Okanogan County Office of Planning and Development

The Okanogan County Office of Planning and Development is responsible for implementing and administering County-adopted plans and regulations, and is the lead agency for ensuring compliance with SEPA at appropriate facilities. All proposed solid waste development projects are reviewed under SEPA and are processed by this agency.

1.5.5 Okanogan County Prosecutor

The County Prosecutor's Office serves as legal counsel for the Board and County departments, providing legal advice, and statute interpretation and representation during contractual disputes. The Prosecutor's role is to bring legal action against persons charged with violating state or local laws. As such, violations concerning illegal dumping or other illegal waste handling practices must be brought to the Prosecutor by the OCPH staff or the Sheriff's office.

1.6 County and Municipal Responsibilities for a Coordinated Solid Waste System

Development and operation of a county-wide solid waste management system depends on cooperative interactions between the participating incorporated municipalities and Okanogan County. This cooperative relationship is defined through:

- Interlocal agreements between the individual municipalities and Okanogan County that were formulated and adopted during Plan adoption (see Appendix A).
- Participation through municipal representatives from the SWAC.
- Participation in adopting the OCPH Solid Waste Handling Ordinance provisions.

It is through these mechanisms that Okanogan County, acting as lead agency and on behalf of the municipalities, provides solid waste facilities and programs.

It is Okanogan County's responsibility to lead planning efforts, make provisions for construction and operation of the system's components, adopt budgets, set disposal fees, and maintain permits for operating facilities. These actions are taken pursuant to the adopted Plan, and many are subject to review and recommendations by the SWAC, and citizen review and comments at public hearings.

Municipalities, as participants in the county-wide system, support the adopted Plan by entering into interlocal agreements with the County. These interlocal agreements require the Cities to adopt the Plan and the County will provide regional solid waste facilities. Wastes generated by municipalities and directed to these regional County facilities comprise the majority of the disposal system's funding. Disposal fees, along with a limited amount of state matching grants, provide funds for debt retirement, capital improvements, and operational costs.

Okanogan County is also responsible for developing and operating county-wide recycling and waste reduction elements of the Plan. These programs are dependent upon the financial support primarily from disposal fees, occasional state grants and revenues from materials sales.

1.7 Relationship to Other Plans

This 2018 update to the Plan is the sixth successive Comprehensive Solid Waste Plan for Okanogan County. The history of this Plan is described in Section 1.8 of this chapter, and its relationship to other County comprehensive plans is outlined below.

1.7.1 Comprehensive Land Use Plan

The Growth Management Act (GMA) of 1990 requires the County and its incorporated Cities to prepare comprehensive plans. Section 15 of the GMA requires local governments to identify land for public purposes, which can include landfills.

The County's zoning code (Title 17A) and subdivision code (Title 16) are based on policies adopted in the comprehensive plan. Land use provisions in the plan govern land use decisions, which may affect the siting of waste management facilities. The comprehensive land use plan was adopted in 1964, with later amendments for portions of the Methow Valley in 1976 and 2000. In 2014, the County updated the comprehensive land use plan, which was adopted by resolution (Resolution 119-2014) on December 22, 2014 (Okanogan County 2014a).

1.7.2 Multi-Hazard Mitigation Plan

Local multi-hazard mitigation planning is required by the Federal Emergency Management Agency (FEMA) and Washington Military Department, Emergency Management Division. As described in the Okanogan Multi-Hazard Mitigation Plan, events that have the potential to increase the generation of solid waste includes flood, earthquake, landslide, severe weather, and wildland fire. Debris burning, an alternative for handling of solid waste in rural areas, is described as a major cause of wildland fires. In turn, removal of debris is identified as a financial implication following these natural disasters (Okanagan County 2014b). Future updates to the Multi-Hazard Mitigation Plan may include an expanded description of solid waste management measures the County could implement to enhance post-event response.

1.7.3 Economic Development Strategies of the Confederated Tribes of the Colville Reservation

The Confederated Tribes of the Colville Indian Reservation 2012-2016 Community Economic Development Strategies plan specifies the need to grow their recycling program in light of the success of the existing program, the potential for recycling expansion, and the need to reduce metal scraps and junk cars on the Colville Reservation. The plan recommends adapting the existing program into a buy-back center, and developing a recycling program akin to operations in larger cities (e.g., curbside pickups). Another economic development strategy identified in the plan includes the development of a regional solid waste transfer station that would include recycling (CCT 2012).

1.7.4 Other Plans

Other plans within Okanogan County address recreation and trails, road development, wildlife, groundwater quality, regulated shoreline, and open space. These plans have little relationship to waste management issues due to their limited geographical coverage, but would be referred to when relevant in any feasibility study or SEPA document prepared for the proposed facilities.

1.8 Solid Waste Planning History in Okanogan County

In 1969, state legislation granted counties primary authority for the planning and regulation of solid waste handling and disposal. Okanogan County developed its initial plan in 1971, with an addendum in 1976. The plan was completely updated in 1984, and again updated in 1993. The significant elements of each plan and the record of completion are described below.

1.8.1 1971 Solid Waste Plan

The major recommendation from the 1971 Solid Waste Plan was to close several local dumps, establish eight regional drop-box transfer stations, and develop a central sanitary landfill at Omak. In addition, the County would operate a system of 68 publicly owned and operated waste container sites. Funding for development and operation would have come through the formation of a county-wide solid waste management district.

Other recommendations included forming a Public Works Department, appointing a Utilities Director within the Department, and assigning the OCPH as the authority responsible for enforcing waste management ordinances.

Because of the high cost of developing and operating the extensive drop-box transfer and rural collection box system, the plan was never implemented as presented. Collection of wastes was left to the individual, either to subscribe to a collection service or to haul wastes to an authorized landfill. A Public Works Department under the County Roads Engineer was formed to develop a solid waste disposal system, among many other projects.

1.8.2 1976 Addendum

The 1976 adopted revisions included leaving the collection of wastes to WUTC-certificated haulers, closure of the local dumps used by 11 small towns and unincorporated communities, and upgrading the existing dumps to sanitary landfill classification at Ellisforde, Omak, Twisp, Pateros, Riverside, Bridgeport, and Loomis. Provisions for acquiring new landfill sites at Ellisforde, Omak/Okanogan, and

Twisp were included in the plan. Establishment of a permit system and enforcement by the OCPH were again recommended.

The acquisition and development of new landfills at Okanogan and Ellisforde proceeded as planned. The Bridgeport Bar and Twisp disposal sites were upgraded to landfills. Sporadic improvements in covering, burning reduction, and automotive hulk accumulation were made at most of the smaller sites. By the time of the 1984 Plan update, the sites at Brewster and Riverside were closed. The leased site at Twisp continued to operate due to lack of community acceptance of a replacement landfill site.

1.8.3 1984 Plan Update

Major recommendations from the 1984 Plan update included:

- Closing landfills at Twisp and Bridgeport Bar, and replacing them with drop-box transfer stations
- Relocating and replacing the landfill serving the Omak/Okanogan area and designating it as the disposal site for wastes from the transfer stations at Twisp, Bridgeport Bar, and Ellisforde
- Closing the landfill at Ellisforde and installing a transfer station
- Closing and restoring roadside dumping areas
- Starting discussions with the CCT to establish a cooperative waste management agreement for joint use of a disposal site to serve the eastern portion of the Colville Reservation
- Working with certificated haulers to establish collection service in areas not currently served
- Locating waste bins at County recreation sites and working cooperatively with the Game Department for service at state recreation access points

Program development recommendations included:

- Revising the County solid waste ordinance to conform with recently adopted state regulations, and to address several local needs
- Establishing a staff position in the OCPH, with duties that include developing information on hazardous waste; developing an emergency response plan; and surveying generators to determine the need for a transfer or storage facility for hazardous wastes
- Deputizing OCPH staff to make them capable to directly cite persons for illegal dumping and littering
- Reviewing landfill disposal sites' compliance with current regulations at Loomis, Pateros, and Nespelem
- Enhancing recycling opportunities by providing facilities for collecting and storing materials at disposal sites; by distributing information materials; and by requesting proposals from the private sector for public/private recycling operations
- Reviewing potential markets for an energy/resource recovery system

Administrative action recommendations included:

- Developing interlocal agreements with Omak/Okanogan, Douglas County, and the CCT
- Continuing funding of the system by user fees
- Establishing consistent data reporting
- Distributing public information

Most significant aspects of the 1984 Plan update recommendations were implemented or have continued forward as planned activities. These aspects included:

- The Twisp, Bridgeport Bar, and Ellisforde landfills were replaced with transfer stations.
- The Okanogan landfill was closed and a Central Landfill site was developed.
- Many roadside dumping areas were closed and restored.
- Disposal sites at Pateros and Loomis were closed, and collection services were extended to the Molson/Chesaw area.
- Use of the Okanogan County Landfill by the CCT was established in conjunction with tribal operation of their existing collection and transfer system

Recommendations concerning hazardous waste were implemented statewide by Ecology and at the local level by development of the 1993 Moderate Risk Waste Management Plan.

Recycling enhancement recommendations resulted in the construction of storage buildings at the new transfer stations and the development of an operating agreement with a local business to establish and operate a public recycling buy-back facility serving the Omak/Okanogan area.

Some plan recommendations were not implemented. Enforcement against illegal dumping has been handled without deputizing OCPH personnel.

1.8.4 1993 Plan Update

Major recommendations of the 1993 Plan update included completing the two major 1984 Plan update activities: 1) designing and building the Central Landfill, and 2) closing the Okanogan and Ellisforde landfills.

Other disposal-related recommendations included:

- Continuing post-closure monitoring
- Establishing special waste areas at the Central Landfill
- Refining rate structures

Waste reduction and recycling recommendations included:

- Promotion and education activities
- Enhancing buy-back and drop-off activities
- Pursuing yard waste composting
- Coordinating residential and commercial on-site collection
- Continued monitoring
- Establishing preferential purchasing for recycled materials

All of the disposal-related recommendations of the 1993 Plan update have been implemented, and some of the waste reduction/recycling activities have been implemented. The County developed a recycling facility at the Central Landfill for self-haulers. Curbside recycling is not currently available in Okanogan County. A newly expanded drop-off recycling program, located at the Twisp Transfer Station, has been developed for the western portion of the County. No formal composting programs have been established for yard waste and no preferential purchasing policies for recycled material have been developed.

1.8.5 2005 Plan Update

The 2005 Plan update described the existing conditions, needs, and alternatives, and made recommendations for the management of solid waste in Okanogan County. The 2005 update fulfilled the requirements of the RCW and was intended to serve as a guiding document for the 2005-2009 five-year planning period. The 2005 Plan update superseded the previously adopted 1993 Plan.

The 2005 update also included a moderate risk waste element (Chapter 10), which addressed the local hazardous waste planning requirements of RCW 70.105.220. That element superseded the County's prior Moderate Risk Waste Management Plan previously adopted in 1993.

The region covered by the 2005 update includes most of the unincorporated areas of Okanogan County as well as most of the incorporated municipalities and portions of the Colville Reservation.

The 2005 update contained the following elements:

- Review of the planning process and previous plans
- Physical and demographic data for the planning area
- Details of various components of the solid waste management system describing needs, alternative solutions, and recommendations
- Waste prevention, recycling, collection, waste processing, transfer, landfilling, moderate risk wastes, administration, and enforcement
- Overview of Okanogan County's Solid Waste System
- Facilities—Central Landfill and transfer stations
- Participation, input, and approval by Ecology and the WUTC
- Summary of recommendations on the following: annual work plan, waste and post-closure monitoring, current and expanded recycling program, private roads haulers, existing and future transfer system, special wastes, private facilities, waste import and export, moderate risk waste program, business technical assistance, Cities participation, OCPH's role, Okanogan County SWAC's role, Public Works Department coordination and management, and system funding

1.8.6 2012 Plan Update

The 2012 Plan update described the existing conditions, needs, and alternatives, and made recommendations for the management of solid waste in Okanogan County. The plan update fulfilled the requirements of the RCW and was intended to serve as a guiding document for the 2012-2016 five-year planning period. The 2012 Plan update superseded the previously adopted 2005 Plan.

As with the 2005 Plan, the 2012 Plan continued with the inclusion of a moderate risk waste element (Chapter 11), which addressed the local hazardous waste planning requirements of RCW 70.105.220.

The region covered by the 2012 Plan includes most of the unincorporated areas of Okanogan County as well as most of the incorporated municipalities and portions of the Colville Reservation.

The 2012 Plan:

- Identified goals and strategies for improved waste reduction, recycling management, waste disposal, and moderate risk and hazardous waste management
- Reviewed the existing waste management system and provided recommendations for program improvements during the planning period

- Addressed key decisions that need to be made during the planning period and established an orderly process for making those decisions
- Recommended program of action taken by Okanogan County; Board of Commissioners, Public Health, Board of Health, and the staff of the Public Works Department

In general, the 2012 Plan recommended a continuation of the existing system with improvements to waste reduction, and recycling and waste handling systems, as funding allowed. The Plan recommended that the recycling system undergo periodic review through a "recycling potential assessment" process throughout the planning period.

1.9 Administration of the Plan

1.9.1 Plan Revision Procedures

Comprehensive Solid Waste and Moderate Risk Waste Management Plans should be reviewed and updated every 5 years. However, revision of this Plan may become desirable prior to the intended schedule if unforeseen events require a re-evaluation of solid waste programs or facilities.

Grant assistance, site operating permits, and waste disposal site designations for plan participants must conform to the plan. The following procedures should be followed to formalize the request for consideration and adoption of proposed new elements in the Plan:

- Any request for a revision to the Plan is directed to the Board for referral to the SWAC, and any participating City or Town.
- Requested Plan changes and their impacts on the present system are developed by the County and may include impacts on waste volumes at facilities affected; financial impacts of construction and operation; how the proposed change conforms to legal requirements; how the proposal is to be financed; and the proposed timing of implementation.
- The public and all affected jurisdictions, including the OCPH and any Cities or adjacent counties, are notified of the SWAC meeting dates related to the Plan update.
- SWAC recommendations are forwarded to the affected jurisdictions and to the Board.
- A review of the plan amendment under SEPA is performed, if appropriate.
- Ecology reviews the Plan amendment to verify conformance with the State Solid Waste Planning Guidelines and state regulations.
- If applicable, the WUTC reviews the Plan's cost assessment, and the Washington State Department of Agriculture reviews the plan's compliance with RCW 17.24 related to pests and plant diseases.
- Adoption of the Plan amendment is made by the Board and affected jurisdictions.

The amendments may be proposed by private sector interests, participating jurisdictions, or jurisdictions outside Okanogan County.

1.9.2 Solid Waste Advisory Committee Roles and Procedures

Pursuant to state law, RCW 70.95.165(3), each county shall establish a local SWAC. The 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. The committee is required to

have, at a minimum, nine members that represent a balance of interests, including citizens, public interest groups, businesses, waste management industry representatives, and local elected public officials.

Ecology's Guidelines for Development of Local Comprehensive Solid Waste Management Plans and Plan Revisions (Publication No. 10-07-005) describes the ongoing operation of a local SWAC, including the development of a charter or set of bylaws or procedures. In addition to its ongoing task in development of programs and policies and review of proposed rules, policies, or ordinances; the SWAC is also an integral partner in assisting and participating in the review, revision, or amendment of the Plan.

As an ongoing committee, Ecology also recommends that the local SWAC meet, when necessary, to discuss issues related to the solid waste system (i.e., to review the plan for consistency) with more frequent meetings during the Plan revision process.

The SWAC operates under bylaws adopted by the committee (see Appendix B), elects its own chairman, and has a regular rotation of new members appointed by the Board. The Public Works Department provides staff support to the SWAC, including meeting arrangements, minutes and agenda preparation, supplemental information, and may also provide financial support for attendance at relevant conferences and seminars.

The primary function of the SWAC is to review all significant policy and program development issues, and recommend a position to the Board and Board of Health. Specific documents to be submitted for SWAC review prior to action by the Board include:

- The Comprehensive Solid Waste Management and Moderate Risk Waste Management Plan and Plan amendments
- Proposed changes of the County regulations on solid waste handling and of the Board of Health regulations relating to solid waste
- Annual budgets and work plans that are related to the implementation of current plan recommendations
- Rates and rate revisions concerning solid and moderate risk wastes
- Annual operating data concerning solid and moderate risk waste diversion, recycling, and disposal.

In Okanogan County SWAC meetings are usually held bimonthly, on the first Monday of the month, at a location to be determined each month at the discretion of the committee. The SWAC meets monthly during the 5-year plan update/revision process. Meeting notices are provided to the media and the public is encouraged to attend and participate.

1.9.3 Plan Development and Public Participation

This Plan was made possible by a number of participants and was funded entirely by Okanogan County Department of Public Works Solid Waste Division. The Okanogan County Public Works Department was the lead agency during development of the Plan and the SWAC was instrumental in providing periodic reviews and comments.

Okanogan County's SWAC represents a variety of interests including citizens, local jurisdictions, recycling and environmental interests, the solid waste industry, and local businesses. The SWAC helped establish the Plan's goals, reviewed preliminary drafts of the Plan's chapters, commented on them, and assisted with evaluating alternatives and recommendations. The SWAC also participated in updating the draft and final versions before its adoption by the local jurisdictions.

In addition, the County held a special meeting during Plan development with local private recycling and solid waste collection businesses to inform them of the Plan and its recommendations related to recyclable collection, processing, and marketability.

Okanogan County and most of the incorporated municipalities within its borders have worked cooperatively to develop this Plan. Participants have included Okanogan County and the municipalities of Brewster, Conconully, Okanogan, Omak, Oroville, Pateros, Riverside, Tonasket, Twisp, and Winthrop.

Officials from each City and other stakeholders were contacted at the start of the Plan development process to inform them about the planning process, to encourage participation in the process, and to discover key issues to address in this Plan. SWAC-reviewed chapters were mailed or e-mailed to each City and the CCT, and comments were encouraged during the chapter review process, as well as when all of the chapters were integrated into the preliminary draft.

Various local and state agencies also participated in Plan development through comments, suggestions, and review of the Plan from the initial planning stages through final Plan adoption. News releases encouraged public participation at the SWAC meetings. Minutes from the SWAC meetings are included as Appendix C.

A public meeting was held **XX, 2018** in the Board's Hearing Room in Okanogan to receive comments on the draft Plan.

Comments on the draft Plan were received from Ecology, the WUTC, and Washington State Department of Agriculture. Those comments and a summary of responses are provided in Appendix D. The SEPA checklist is provided in Appendix E.

2. BACKGROUND OF THE PLANNING AREA

This chapter provides background information on the elements of the natural, human, and economic environment that affect waste management in Okanogan County. Included are summaries of current and projected populations and waste quantities, as well as a review of the composition of waste disposed at County disposal facilities.

2.1 Natural Environment

Okanogan County, geographically, is Washington State's largest county and has wide climatic, topographic, and geologic diversity. Population centers, and hence waste generation, occur primarily in the lowland valleys. These are semi-arid areas, which are located on river bottom and terraced topography, and are characterized by alluvial and glacial sedimentary deposits. These are also areas where important surface and groundwater resources are accessible and subject to impacts from human activities. The lowland areas also provide important seasonal habitats for many wildlife species in Okanogan County.

Immediately adjacent to these populated corridors are steep, rocky, and mountainous upland areas characterized by igneous and metamorphic rock formations. These areas typically have little or no soil deposition, steep slopes prevent most forms of land development, and annual precipitation is higher than the surrounding lowland areas.

2.1.1 Climate

Precipitation is the dominant climatic factor in the populated areas. Precipitation is generally low (8 to 14 inches annually). A high percentage of the precipitation occurs as snowfall in winter. Occasional significant runoff events are caused by rapid snow melt and summer storms. Sustained high temperatures in the summer (90°-100°F in daytime) and lows in the winter (successive days of below zero, with dips to -30°F) create periodic operational problems for waste management activities. Waste collection, transfer station operation, transfer hauling, and landfill operation must take these climatic factors into account for design and operation of these facilities. Typically, the relatively low precipitation and its seasonal distribution are favorable for avoiding leachate production and potential groundwater contamination. Snow accumulation can make transfer and landfill operations challenging, as well as impact curbside collections of waste or recyclables. Design and operation of potential composting operations need to account for these climatic factors.

2.1.2 Topography and Geology

Topography and geology have the greatest impacts on the selection, design, and operation of landfill sites. This is discussed in more detail in Chapter 8, which addresses landfill-siting criteria. Potential landfill areas are characterized by gentle slopes, adequate soil deposition, and reasonable access to the road system. These areas are usually associated with human settlement, irrigated or non-irrigated agricultural development, high groundwater tables, or proximity to surface water resources. These factors, in addition to the statutory siting criteria, severely limit potential locations for landfill sites.

2.2 Built Environment

2.2.1 Transportation

The transportation network is the most significant element of the built environment in developing the County's waste management system. The network of roads and highways is extensive and well developed in most of the populated areas. Connection between population centers is via state highway routes in all cases except for the widely dispersed populations of Chesaw, Molson, Havillah, Loomis, and Conconully. Bridges or other weight limitations restricting collection or transfer operations are non=existent on state routes in the County. Winter maintenance on these state routes is adequate to avoid disruptions, except for occasional extreme conditions when travel is unsafe for any purposes.

The small communities previously mentioned, as well as the majority of the rural residential areas served by collection service, are served by the County road system. These roads are generally excellent, typically have no limiting bridge weight restrictions, and are maintained in winter according to a priority schedule that accommodates waste facility operation and most needs of waste collection routes. Temporary restrictions on size, weight, or speed may be imposed on portions of the County road system for vehicles that could cause damage to the roads due to climatic or other conditions.

Air traffic facilities include airports at Omak and Okanogan, with lesser airstrips at Brewster, Twisp, Mazama (unincorporated Okanogan County), Winthrop, Tonasket, and Oroville. These facilities are significant to waste management only in that they require specified separation from waste disposal facilities according to Federal Aviation Administration guidelines and state siting criteria.

Active rail service extends the length of the Okanogan River from the United States-Canada border to the Columbia River and areas south. Rail has not historically been a factor in waste management until recent proposals in other jurisdictions for long-haul transport to distant landfills.

2.2.2 Utilities

Electrical power distribution networks traverse many of the same river bottoms and adjacent terraced lands discussed above, limiting development of landfill disposal sites. Local electrical service is available along most roads serving residences, but often is a significant distance from potential landfill locations, requiring costly service extensions or use of an on-site generator.

Water and sewer service is available in limited areas. Most of these areas are in incorporated municipalities. Service may not be available to transfer and landfill site locations with provisions for water supply and wastewater disposal generally needing to be provided.

2.2.3 Land Development

Existing land development patterns affect collection routing and facilities locations. The solid waste collection system must accommodate very extensive routing to distant and sparsely settled areas, the cost of which is incorporated into the rates (approved by the WUTC or Cities) for collection services in the various service areas. Locations for needed transfer stations and recycling centers have been accommodated by utilizing the existing industrial zoned lands near population centers or at previous landfill sites. New transfer stations, recycling collection centers, and recycling processing centers are either outright disallowed, or a conditional use, or a permitted use depending on the zoning designation and activity (Okanogan County Code 17A.220.010).

2.3 Population and Economics

The population and economic structure are the most significant influences on the quantity and character of the solid waste generated in Okanogan County. Projected changes in population and industry are important to the planning process to anticipate changes in the quantity and composition of the waste stream. Changes in total population of a county have significant impact on the amount of waste generated, recycled, and processed.

2.3.1 Current Population Estimates

The estimated 2017 total population of Okanogan County is 42,110 (OFM 2017a). The estimated population densities based on April 2017 data for the planning area are presented in Table 2-1.

Table 2-1 includes the communities within the County that are covered by the Okanogan County Solid Waste Management Plan: Brewster, Conconully, Okanogan, Omak, Oroville, Pateros, Riverside, Tonasket, Winthrop, and unincorporated Okanogan County (see listing in Table 2-1). The Town of Nespelem is covered by the Tribal Solid Waste Management Plan, but their solid waste is deposited in Okanogan County's Central Landfill. The Town of Coulee Dam (part of which is located in Okanogan County) and Elmer City use the Delano Regional Transfer Station located in Grant County, and are covered by the Grant County Solid Waste Management Plan. Coulee Dam and Elmer City have relatively low estimated populations: 915 for Coulee Dam's portion that lies in Okanogan County, and 290 for Elmer City in 2017.

Table 2-1. 2017 Population Densities and Housing Units

Jurisdiction	Population 2017*	Area Square Miles**	Density Population/ Square Mile**	Housing Units***
Brewster	2,400	1.21	1,980.4	739
Conconully	230	0.22	1,029.4	202
Coulee Dam	915	0.66	1,666.7	444
Elmer City	290	0.18	1,635.0	131
Nespelem	245	0.19	1,289.5	81
Okanogan	2,610	2.31	1130.80	1,082
Omak	4,925	3.82	1,290.4	2,227
Oroville	1,705	1.78	959.30	802
Pateros	580	0.46	1261.80	241
Riverside	285	0.91	311.7	158
Tonasket	1,110	0.88	1,255.90	549
Twisp	970	0.84	1160.40	550
Winthrop	445	1.24	358.3	326
Unincorporated	25,400	5,254.15	4.78	15,721
Total	**42,110**	**5,268**	**7.99**	**23,253**

Notes:

Housing units data includes single and multiple units, mobile homes, and trailers.

Coulee Dam and Elmer City utilize Grant County Landfill for solid waste disposal.

* Source: April 1, 2017 Population of Cities, Towns and Counties, Office of Financial Management, Forecasting and Research Division, Olympia, WA. April 1, 2017 (OFM 2017a).

** Incorporated cities source: Estimates of April 1 Population Density and Land Area by City and Town, Office of Financial Management, Forecasting and Research Division, Olympia, WA. April 1, 2017 (OFM 2017b); County source: 2017 Estimates of April 1 Population Density and Land Area by County, Office of Financial Management, Forecasting and Research Division, Olympia, WA. April 1, 2017 (OFM 2017c).

*** Source: 2017 Postcensal Estimates of Housing Units, April 1, 2010 to April 1, 2017. Office of Financial Management, Forecasting and Research Division, Olympia, WA. April 1, 2017 (OFM 2017d).

County-wide population data have been used for waste generation forecasting, even though Coulee Dam and Elmer City are not participating in the Plan. Both cities have relatively low populations likely compensated for by seasonal influxes of tourists and workers. Thus, the average County population for waste generation purposes probably parallels the forecasted population for the entire County fairly closely.

2.3.2 Population Changes

The estimated population percent increase in unincorporated Okanogan County from April 2010 to April 2017 was about 2.50 percent compared to approximately 2.26 percent in the incorporated areas (OFM 2017a). Some communities such as Tonasket (7.56 percent), Conconully (9.52 percent), and Winthrop (12.94 percent) are growing at a rate higher than the across-county average. The population change for the state of Washington during this same timeframe was approximately 8.70 percent (OFM 2017a). The estimated population change in Okanogan County between 2016 and 2017 was 0.91 percent compared to a population change between 2015 and 2016, which was 0.31 percent. Considering that the County only saw an overall estimated population change of 2.50 percent over a 7-year period, the percent increase for years 2016 to 2017 is quite significant (OFM 2017e). However, the County's share in the total state population is approximately 0.60 percent in contrast to urban centers where, for example, King County holds approximately 29.0 percent and Spokane County holds approximately 6.8 percent of the state's population.

The Growth Management 2017 Projections ("medium series") for Okanogan County during the span of 2010 to 2040 show a total population change of approximately 11 percent. Most of the change in growth occurs between 2010 and 2020, with a decline in later years. For example, between 2015 and 2020, the change in population was projected as a net gain of 1,224 while the years 2030 to 2035 show a net gain of 511. This suggests that the County population would likely grow slowly through the year 2040 (OFM 2017f). According to the 2014 Okanogan County Comprehensive Plan, which also applies the Washington State Office of Financial Management (OFM) intermediate (medium growth) scenario, the *average household size is two (sic) people per household and historically birth, death and growth is at least one-half of the project population*, which suggests an even slower growth rate than projected. The County's Comprehensive Plan also anticipates the majority (175 people per year on average) of the population will concentrate in cities compared to 40 people per year in rural/high density areas, and 10 people per year in rural resource/low density areas (Okanogan County 2014b).

According to the OFM data, there is a significant and continued demographic shift in the 65 and over population statewide and this trend is expected to hold through 2040 (OFM 2016). In 2010, persons age 65 and over in Okanogan County was 17.20 percent compared to 20.90 percent in 2016—an increase of approximately 4 percent. By comparison, persons age 65 and over represented 12.30 percent of the state's population in 2010 and 14.80 percent in 2016—an increase of less than 2.50 percent (United States Bureau Census 2017).

The demographic shift of those age 65 and over, and percent population change that is greater in some incorporated areas and overall greater in unincorporated areas, may result in changed patterns of waste generation. While waste generation patterns often track more closely to household income than population age, the potential consequence of the aging population is an increase in medical waste, which requires special handling at a greater disposal cost compared to the standard solid waste stream. The higher rate of population change in incorporated areas generally indicates the need for increased collection of residential waste and waste generated by supporting industries (i.e., retail, food services).

2.3.3 Employment and Industry

Table 2-2 provides a summary of County employment in 2014, the most recent year for which data are available. The employment profile is based on employees covered by employment security, and excludes

those who are self-employed or otherwise ineligible for jobless benefits. Thus, this employment profile likely underestimates agricultural and construction employment categories.

Table 2-2. 2014 Employment Categories in Okanogan County[1]

Job Category	Employees	% of Employees	% Wages
Agriculture, Forestry, Fishing, and Hunting	6,324	33.90%	22.30%
Mining	-	-	-
Utilities	-	-	-
Construction	454	2.50%	3.00%
Manufacturing	492	2.70%	3.10%
Wholesale/Retail Trade	2,051	11.20%	10.10%
Transportation and Warehousing	238	1.30%	1.40%
Information	134	0.70%	1.00%
Finance, Insurance, and Real Estate	304	1.70%	1.50%
Professional and Technical Services	196	1.10%	1.20%
Management of Companies	42	0.20%	0.40%
Administrative and Waste Services	202	1.10%	0.90%
Educational Services	47	0.30%	0.20%
Health Care and Social Assistance	1,561	8.50%	8.50%
Arts, Entertainment, and Recreation	142	0.80%	0.40%
Accommodation and Food Services	1,180	6.40%	3.40%
Other Service	217	1.20%	0.90%
Government	4,650	25.30%	38.20%
Unincorporated Areas	221	1.20%	3.50%
Total	**18,365**	**100%**	**100%**

[1] Source: Employment Security Department 2016.

As shown in Table 2-2, the County employment sectors are led by agriculture (33.90 percent), local government (25.30 percent), retail trade (11.20 percent), health care and social assistance (8.50 percent), and accommodation and food services (6.40 percent). The agriculture industry, the largest employer in the County, primarily emphasizes fruit harvesting and wheat. In 2014 it provided more jobs than any other sector countywide (Employment Security Department 2016).

The natural beauty of the region and large swaths of public land (i.e., access to Cascade Mountains and North Cascades National Park) are very attractive to outdoor enthusiasts. Recreation activities include skiing and snowshoeing, camping, hunting, fishing, biking (mountain and road), rock climbing, and wildlife viewing. The region is recognized for having the "largest ski-trail system in North America" with more than 120 miles of groomed trails. The tourism industry, closely tied to the retail sector, tends to fluctuate with the economy. For example, in 2008, the retail trade peaked at 1,866 jobs, but with the economic downturn, it declined in 2009 to 1,822 jobs and down to 1,738 jobs in 2011. With an uptick in the economy, retail jobs increased by approximately 1.60 in 2015 (Employment Security Department 2016).

According to the Employment Security Department, between 2000 and 2013 the average annual non-farm employment growth rate was 0.20 percent in the United States, 0.70 percent in state of Washington, and minus 0.20 percent in Okanogan County. The County was hardest hit by the recession in 2009 and 2010, and stabilized from the recession in 2013. Local non-farm employment stabilized in 2014 with an average annual increase of 2.60 percent, but with a significantly lower rise of 0.50 percent

in 2015. It is projected that the North Central Workforce Development Area (Adams, Chelan, Douglas, Grant, and Okanogan Counties) will have an average non-farm job growth rate of 1.50 percent from 2012 to 2022, slightly less robust than the projected growth rate for the state of Washington with a projected 1.60 percent growth rate (Employment Security Department 2016).

The median household income in Okanogan County from 2010 to 2014 was $39,665, approximately 65.8 percent of the state's household income at $60,294. From 2010 to 2014, 23.2 percent of the County's population was living below poverty level, much higher than 13.20 percent in the state of Washington (Employment Security Department 2016).

The implications for waste management include the following factors: less than average per capita growth in waste generation due to a slower rate of income growth; increased business and commercial collections related to the recreation industry; and few new sources of non-farm industry-related wastes.

2.4 2016 and 20-year Projected Waste Generation

The term "waste generation" indicates the total amount of discards requiring management by the County's solid waste system. The generated waste can be handled either through recycling collection or garbage collection programs. Waste generation includes both recycling and disposal quantities but does not include those materials diverted through waste reduction activities such as backyard composting or other activities, because those materials do not require management through the County's formal recycling or disposal system.

2.4.1 2016 Waste Generation

Table 2-3 outlines the waste disposal in 2016 by source and region.

Table 2-3. 2016 Waste Disposal by Source and Region

Location		Tonnage
Central Landfill		
Colville Solid Waste		2,620
Sunrise Disposal		6,810
Okanogan Valley Disposal		2,386
Roll-off Boxes Commercial (e.g., Walmart, Safeway, Food Depot)		923
Other Charge Accounts		2,368
Cash Self-haul		3,135
Subtotal		18,242
Bridgeport		
	Subtotal	6,434
Ellisforde		
	Subtotal	6,810
Twisp		
	Subtotal	4,385
GRAND TOTAL		35,871

2.4.2 20-year Projections

The 20-year projections for waste covered by this Plan was estimated by using 2015 as a baseline year, looking at population changes throughout the planning period, and then projecting forward. Projected waste generation is detailed in Table 2-4. 2017 OFM population projections were reviewed to produce population projections and waste generation projections for this study. The following sections address Table 2-4 assumptions.

Table 2-4. 20-Year Population, Waste Generation, and Disposal Projections[1]

Year	Projected Population[2]	Rate	Disposal (tons/year)	Recycling (tons/year)	Total (tons/year)
2015	41,860	0.58%	35,226	-	35,200
2016	41,917		35,430	-	35,400
2017	42,110		35,004	1,785	36,800
2018	42,473		35,300	1,800	37,100
2019	42,797		35,600	1,810	37,400
2020	43,084	0.49%	35,800	1,830	37,600
2021	43,409		36,100	1,840	37,900
2022	43,615		36,300	1,850	38,200
2023	43,804		36,400	1,860	38,300
2024	43,981		36,600	1,860	38,500
2025	44,149	0.31%	36,700	1,870	38,600
2026	44,285		36,800	1,880	38,700
2027	44,428		36,900	1,880	38,800
2028	44,567		37,000	1,890	38,900
2029	44,699		37,200	1,890	39,100
2030	44,824	0.23%	37,300	1,900	39,200
2031	44,952		37,400	1,910	39,300
2032	45,063		37,500	1,910	39,400
2033	45,167		37,500	1,910	39,400
2034	45,257		37,600	1,920	39,500
2035	45,335	0.13%	37,700	1,920	39,600
2036	45,414		37,800	1,930	39,700
2027	45,480		37,800	1,930	39,700
2038	45,535		37,900	1,930	39,800
2039	45,581		37,900	1,930	39,800
2040	45,621	0.58%	37,900	1,930	39,800

[1] The projected disposal tonnage is rounded to nearest 100 tons. 2017 is used as the base year for the per capita disposal rate, and the landfill disposal is projected at the population growth rate. The recycling rate of 5.1 percent is based on 2016 recycling tonnage.

[2] Source: OFM 2017F

The 2015 base population is referenced from the 2017 County Growth Management Population Projections for 2010 to 2040 (OFM 2017). As discussed previously, some error is introduced by using county-wide populations rather than excluding Coulee Dam and Elmer City populations, but this is offset by the seasonal influx of recreational visitors. Using the 2017 County Growth Management Population Projections, Medium Series, it is estimated that the County would experience a total growth of approximately 7 percent over the 20-year planning period (2018 to 2038) (OFM 2017f).

In 2017, total disposal at the Central Landfill was 35,004 tons with a total estimated per capita waste disposal of 0.83 tons per year. Of the total generation, approximately 1,785 tons were recycled (projecting from2016 data provided by County and other local recyclers – see Chapter 4). With minimal population increase, Table 2-4 holds the per capita generation and recycling rate constant per year.

2.4.3 Waste Composition

Ecology has performed four waste composition studies over the last 15 years. These studies have typically surveyed the disposed waste stream from residential, commercial, and industrial generators to determine which materials are currently disposed of as garbage. The results are used to assess the performance of recycling programs and to serve as background data for planning new programs and policies to minimize the quantity and toxicity of disposed waste.

The latest composition study was conducted by Ecology at county transfer stations and landfills in the Central region (Grant and Chelan Counties) in 2015 and 2016. The 2015-2016 Washington Statewide Waste Characterization Study provides a summary of findings and a detailed breakdown by material-type according to the waste sector (i.e., residential, commercial). Figure 2-1, extracted from the 2015-2016 study, provides a breakdown of the composition results for the Central Waste Generation Area (WGA) (Ecology 2016). Appendix F includes the 2016 Central WGA composition results.

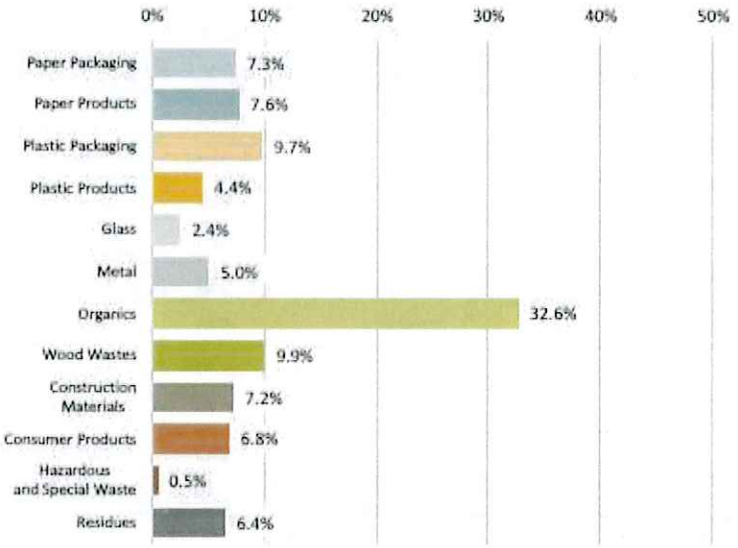


Figure 2-1. 2015-2016 Combined Residential and Commercial Waste Stream

Triggered by the need to improve their understanding of consumer products disposal, the SWAC Recycle Committee conducted its own waste composition study in September 2017. Chapters 4 and 5 describe the findings related to both the Ecology and SWAC Recycle Committee studies.

3. WASTE PREVENTION

The terms "waste reduction" and "recycling" are often confused. Waste reduction and waste prevention refer to not creating waste or minimizing waste at its point of generation. Recycling diverts materials from the waste stream for processing into new goods. The state of Washington's definition for waste reduction, as stated in RCW 70.95.030(7), is as follows: "'Waste Reduction' means reducing the amount or toxicity of waste generated or reusing materials." In this Plan, the terms "waste reduction" and "waste prevention" are used interchangeably, with a preference for the less confusing term, waste prevention.

Waste prevention rates are commonly measured based on per capita waste generation rates (including both disposal and recycling). It is important to note that it is very difficult to accurately and cost-effectively measure waste prevention activities due to the nature of waste prevention—there is no production of waste in the first place.

3.1 Existing Conditions

A number of waste prevention programs operate in Okanogan County, by local and state agencies, the CCT, and non-profit organizations. This section describes the various complementary waste prevention programs available in the County.

3.1.1 State Waste Prevention Activities

State waste reduction programs having local impact include the following:

- Grant funding assistance for local waste reduction programs
- Video library on waste reduction topics
- Waste reduction programs implemented in state offices and institutions
- Award programs for school and institutional waste prevention
- Operation of Ecology's "Recycling Hotline," that provides waste prevention information to callers, as well as recycling assistance
- A Reusable Materials Exchange entitled "2Good2Toss" with Okanogan County as one of only two counties in Eastern Washington participating in the program
- Information and assistance to manufacturers to improve practices to reduce the impact of waste, pollution, and toxicity in the workplace called "Technical Resources for Engineering Efficiency (TREE) Team," which emphasizes a number of ways to environmentally improve operations, including special expertise in solid waste reduction and diversion
- Legislative provisions allowing collection rates to include the expense for information distribution by local solid waste haulers and the operation of the local solid waste management program
- Technical assistance for local governments interested in establishing waste prevention programs
- Continued planning and legislative support for waste prevention activities (including toxicity reduction) throughout the state

Existing state programs have a limited ability to raise consumer awareness and are mainly intended to assist local jurisdictions in implementing their own waste reduction program. Well-focused local

programs, developed with the support and assistance of the public within each jurisdiction, are the key to shifting individual habits toward reduced waste generation.

3.1.2 County Waste Prevention Initiatives

The County's efforts to encourage waste prevention include:

- As funding allows, annual County Fair booth display and information distribution, operated by the Public Works Department with support from Ecology[2]
- Web access on Okanogan County site
- Printed materials on local waste reduction, recycling, and reuse opportunities as well as alternatives to hazardous products
- Printed materials promoting home composting
- Purchasing bulk foods
- Services provided by charitable organizations, thrift stores, antique stores, rental agencies, etc.
- Distribution of backyard composters

The County has a recycling coordinator funded, in part, by an Ecology grant. This position shares the responsibility for recycling and other facility operations with the County's solid waste manager. The County has had limited funds to maintain existing programs or launch new waste prevention initiatives. In 2012, a backyard composter program distributed 137 composters, but the systems lacked capacity and durability, and the program was not considered very successful, with several bundles of composters still in the County's possession. Other similar waste prevention programs have not been implemented. Reuse and/or exchange materials for non-hazardous materials such as latex paint have proven to be unworkable in Okanogan County due to local temperature extremes that render almost all discarded paint unusable.

The apparently low waste generation rate (compared to statewide averages) is most likely due to lower household income, low waste generation lifestyles[3] and/or inappropriate disposal, such as backyard burning and burying, rather than a high level of conscientious waste prevention. However, some activities such as extending the life of durable goods through reuse and repair are often a more established ethic in rural areas and contribute to a reduction in waste generation rates. The extent to which this occurs in Okanogan County is unknown.

Garbage collection rate incentives have been used in many jurisdictions to encourage waste prevention and recycling. Residential rate incentives are developed by cross-subsidizing lower services levels from higher service levels. For example, a single 20-gallon mini-can or 32-gallon garbage can would be proportionately lower priced, and the two- or three-can rate would be proportionately higher. This approach is very common in Western Washington but less so in Eastern Washington. Mini-cans are offered in some areas of Okanogan County. Rate incentives are further discussed in Chapter 6.

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[2] This is an ongoing program that was discontinued in 2017 due to lack of public outreach funding provided by the Ecology-awarded Local Solid Waste Financial Assistance (LSWFA). The County is still interested in continuing this program subsequent to grant funding.

[3] e.g., buying fewer disposal goods, hunting, canning, etc.

3.1.3 Other Waste Prevention Initiatives

Two non-profit organizations are engaged in education and/or infrastructure around waste prevention including Methow Recycles, operating out of Twisp, and Green Okanogan, operating out of Tonasket. The CCT and incorporated cities are also actively engaged in waste prevention.

Green Okanogan offers various educational events including workshops, videos, environmental education fairs, and field trips for children to its facility. The organization also provides a home and building supply reuse store "Go Again" at their recycling center. Go Again sells lumber, plumbing, electrical fixtures, pipe, wire, wood, and metal furnishings at reasonable prices.

Methow Recycles holds an annual Earth Week celebration that promotes recycling and waste prevention. The celebration includes working with students of all ages. Their website includes a specific tab entitled "Exchange It." Exchange It includes multiple links to social media and websites that encourage reuse including links to "Methow Valley Buy, Sell, Trade" and "2Good2Toss," for example.

The CCT holds several annual events including America Recycle Day and Earth Day Celebration. Both events include booths that educate the public about waste prevention and recycling. Cities advertise through social media, newspapers, radio, and fliers.

3.2 Needs and Opportunities

Funding constraints and the elimination of formal staffing for waste prevention education in Okanogan County have severely restricted progress in waste prevention education and material reuse programs. The financial constraints inherent in the County's solid waste system will continue to make the implementation of an expanded waste prevention program very difficult.

The following sections address needs and opportunities for waste prevention related to funding, promotion, financial incentives, and reuse.

3.2.1 Baseline Monitoring

There is relatively little data on shifts in waste generation patterns, other than dividing observed annual landfill disposal quantities by total population to obtain a rough per capita measurement. Additional effort should be considered to document the sources and quantities of solid wastes by geographic and generator (e.g., residential, commercial, construction, demolition) sectors to allow more accurate analysis of waste generation patterns. This, in turn, will allow programs and policies to be better targeted and more cost-effective.

3.2.2 Funding

In most Washington jurisdictions, waste reduction and recycling programs are considered an integral part of the overall solid waste system, and are budgeted accordingly as a component of disposal fees or disposal/collection district revenues. This relatively stable funding base can provide for the implementation of various educational or facility improvements over the life of the Plan, even if the funding base is small relative to the overall solid waste fund.

Although the County has been able to take advantage of Ecology grant funds in the past, those grants are not a stable source of revenue for staff positions, and do not necessarily provide long-term funding.

The County will need to determine what level of funding can be absorbed within existing disposal fees, additional fees, other funding sources, and how to continue current programs with the unstable or total

loss of grant funds. Compared to the instability of grant funding, user fees (tipping fees) continue to be a stable source of revenue. The County could introduce periodic review of their user fees to determine if an increase in fees is necessary to cover solid waste operations (e.g., moderate risk waste, recycling, composting).

3.2.3 Education and Promotion Programs

The County will need to develop a formal waste prevention component to their overall solid waste program to meet Plan goals and to contribute to state solid waste reduction goals. This component could include any number of promotional and educational elements, but should be based on specific objectives and annual work plans.

3.2.4 Financial Incentives

Waste prevention offers inherent financial incentives. However, the County and participating cities may have the opportunity to expand financial incentives for waste prevention. Incentives could include differential tipping fees for varying types of wastes, lower fees for smaller/reduced number of garbage cans, or reduced permit fees for construction projects that include a reuse component.

3.2.5 Reuse

The County does not currently provide a waste exchange area at the Central Landfill. There is an opportunity to increase material reuse and reduce the disposal of usable items through the development of an exchange area.

3.3 Alternatives

Some waste prevention alternatives are somewhat constrained by the limited waste diversion infrastructure available in Okanogan County. For example, disposal bans on yard debris are common throughout North America to encourage waste prevention and centralized composting. However, publicly accessible composting is not available in Okanogan County; therefore, there is no practical alternative for managing yard debris other than backyard composting, which cannot be practiced by all households. Thus, disposal bans cannot be implemented as a waste prevention alternative in Okanogan County.

3.3.1 Funding

Few alternatives are available for funding waste prevention programs. In Okanogan County, only disposal tipping fees and grants are available for funding waste prevention.

3.3.2 Education and Promotion Programs

There are several alternatives for education and promotion programs:

- The County could support "Master Recycler" and "Master Composter" training programs. Under this model, the County could sponsor a training course and resource notebook for interested individuals; those individuals would then agree to provide at least 35 to 40 hours of public contact time teaching others about recycling or composting techniques. These programs are often a cost-effective way to provide volunteers at public events, fairs, and other promotional opportunities. These volunteers can also serve as a grassroots resource to help increase waste prevention and recycling awareness within their neighborhoods and peer groups.

- The County could develop and produce a range of brochures about waste prevention topics. Brochures could then be distributed at key locations throughout the County. Potential topics could include toxic reduction, backyard burning, material reuse, backyard composting, and selective purchasing.
- Information about waste prevention and recycling could also be provided at the point of disposal on garbage collection containers. A "door hanger" tag or sticker could be attached to waste containers, providing either specific or general waste prevention and recycling information.
- The County could develop and implement a non-residential technical assistance program to help area businesses and institutions review operations, evaluate waste prevention and recycling alternatives, and plan implementation activities. This program could work in conjunction with existing Ecology programs or provide extended outreach beyond the ability of Ecology's existing program.
- The County could expand their participation in public events (e.g., local community clean-up events) held by non-profit organizations, CCT, and incorporated municipalities throughout the County to promote waste reduction, recycling, reuse, and proper disposal of household hazardous waste.

3.3.3 Financial Incentives

Some possible financial incentives could include the following:

- Incentive garbage collection rates could be implemented in city contract areas. Specific alternatives and recommendations for solid waste collection incentives are discussed further in Chapter 6.
- Differential disposal fees could be developed for selected waste streams. For example, a lower disposal fee could be charged for construction/demolition loads free of reusable and/or recyclable materials.
- Reduced construction or demolition permit fees could be charged for projects demonstrating waste reduction or recycling activities.

3.3.4 Reuse

The County could consider promoting and supporting a community swap event one or more times each year to promote the exchange, rather than disposal, of reusable materials, which would also educate the community in reuse and recycling at said events.

3.4 Recommendations

Waste prevention recommendations were developed by the County SWAC Comprehensive Plan Subcommittee during SWAC meetings in fall 2017.

All of the following recommendations will be pursued, in conjunction with other organizations or entities, with the goal of implementation during the 6-year planning period that ends in 2024. Implementation of the following recommendations is limited subject to continued availability of state funding.

Recommendation 3-1—Annual Work Plan. Review annual progress toward waste prevention and recycling goals based on progress and grant funding availability, which will be administered by the SWAC

and the County. Develop an annual work plan to implement waste prevention programs. The work plan will review options for working with various community partners to promote waste prevention and recycling within Okanogan County.

Recommendation 3-2—Waste Monitoring. Develop a tracking system to annually monitor and evaluate waste generation throughout the planning area. The tracking system would be used to determine progress toward waste prevention and recycling goals, as well as identify potential areas of concern regarding illegal disposal or export.

Recommendation 3-3—Master Composter/Recycler Programs. Work with local agencies, such as cooperative extensions or other partners, to design and implement Master Composter and Master Recycler programs for training volunteers as community resources.

Recommendation 3-4—Financial Incentives. Review periodically to assess the potential for additional financial incentives for waste prevention and recycling. The SWAC will provide recommendations to the County, Cities, and CCT for potential programs and policies.

4. RECYCLING

This chapter describes the recycling and source-separated components of Okanogan County's solid waste management system. State law defines recycling as:

> Transforming or remanufacturing waste materials into usable or marketable materials for use other than landfill disposal or incineration (RCW 70.95.030(15))

The term "recycling" applies both to the recycling of paper, metals, plastics, and other traditionally recycled materials, and to source-separated organics composting. Municipal solid waste composting is discussed in Chapter 5.

The County's waste reduction and recycling programs are based on the state's *Waste Not Washington Act*, which asserts that waste reduction and recycling are to become the structural base for solid waste management in Washington. Chapter 70.95.010 RCW includes several goals to contend with the "ever mounting problems" related to disposal of solid waste. Solid waste management plans are required to demonstrate how these goals will be realized. Plans should consider natural resource limitations, energy shortages, and economics; with an emphasis of "waste reduction" as the fundamental strategy of solid waste management followed by recycling.

The responsibility for providing infrastructure that supports waste reduction and recycling is a combined effort of the state, County, and City governments. After all achievable methods for waste reduction and recycling are exhausted, residual waste should be handled in an environmentally and economically sound manner, with the need for continuous monitoring of the best programmatic solutions to further reduce the tonnage of waste that is landfilled.

This Plan is required to determine level of service to residential and non-residential waste generators, and to develop clear criteria for designating level of service for rural versus urban populations. As required in Chapter 70.95.010 RCW, *collection, handling, and management of solid waste are necessary and should be followed in descending order as applicable:*

- *Waste reduction*
- *Recycling, with source separation of recyclable materials as the preferred method*
- *Energy recovery, incineration, or landfill of separated waste*
- *Energy recovery, incineration, or landfill of mixed municipal solid wastes*

4.1 Existing Conditions

4.1.1 Current Recycling Rate

Okanogan County recycled an estimated 1,918 tons in 2016, and an estimated 1,417 tons in 2012. This estimated tonnage represents a recycling rate of 5.1 percent in 2016 compared to 4.5 percent in 2012. Table 4-1 provides a breakdown, by commodity of collected recycling quantities (if available), as reported by the recycling centers in Okanogan County.

Table 4-1. 2016 Okanogan County Recycling Tonnage

Recycling Center	2012 Tons Recycled	2016 Tons Recycled
Okanogan County Recycling Center		
Newspaper	35.9	55.9
Corrugated Paper (cardboard)	329.9	413.0
Mixed Waste Paper	91.1	32.0
Aluminum Cans	4.7	9.2
Plastic ("other recyclable plastics")	2.8	N/A
Scrap Metal (ferrous and nonferrous)	241.4	442.2
Batteries (household/vehicle)	7.7	11.6
Tires	31.9	21.4
Used Oil (Recycled on-site for heating)	15.44	10.1
Total Recycled	**760.8**	**995.4**
Methow Recycles		
Newspaper	43.0	24.0
Corrugated Paper (cardboard)	294.0	263.0
Mixed Waste Paper	18.5	21.0
Magazines/Catalogs	82.0	45.7
Office Paper	18.0	16.0
Aluminum Cans	7.0	6.8
Tin Cans	9.5	5.6
Plastic	12.4	8.2
Aluminum (foil, pie pans)	--	--
Glass	154.5	118.6
Ferrous Scrap Metal	2.0	126.7
Non-ferrous Metal	3.4	5.0
Commingled (shipped to Spokane)	--	131.6
Batteries	--	--
Tires	0	0
E-Waste (electronics)	12.3	12.0
Total Recycled	**656.6**	**784.2**
Green Okanogan		
Newspaper	--	0.6
Corrugated Paper (cardboard)	--	44.6
Mixed Waste Paper	--	--
Aluminum Cans	--	--
Tin Cans	--	--
Plastic	--	2
Aluminum (foil, pie pans)	--	--
Glass	--	--
Scrap Metal	--	--
Green Okanogan (continued)		
Batteries	--	--
Tires	--	--

Table 4-1. 2016 Okanogan County Recycling Tonnage (continued)

	2012	2016
Recycling Center	**Tons Recycled**	**Tons Recycled**
E-Waste (electronics)	--	18.8
Total Recycled	**0**	**67.5**
Colville Tribal Recycling[1]		
Newspaper	--	2.5
Corrugated Paper (cardboard)	--	56
Mixed Waste Paper	--	--
Aluminum Cans	--	--
Tin Cans	--	--
Plastic	--	10
Aluminum (foil, pie pans)	--	2.4
Scrap Metal	--	--
Batteries	--	--
Tires	--	--
Electronics	--	--
Total Recycled	**0**	**70.9**
Total Recycled – Countywide	**1,417**	**1,918**

[1]CCT Recycling tonnages are estimated based on the Okanogan County Recycling Center recycling tonnage as a percentage of the solid waste.

Table 4-2 illustrates the percentage of materials landfilled in lieu of being recycled according to the findings of Ecology's 2016 Waste Characterization Study for the Central Urban Growth Area (Ecology 2016). The categories in Table 4-2 are broad and comprised, in part, of materials that are currently not recycled anywhere in the state of Washington (e.g., plastic toys) or recycled on a limited basis (e.g., plastic film). However, it does provide a general sense of the areas where there is a need for improved waste prevention or recycling and reuse. Although highly recyclable, paper products and packaging are still making it into the waste stream, and plastic packaging is also a large portion of the waste generated that has the opportunity for recycling. Note: Chapter 5 discusses the estimated percentage of organics in the Central Urban Growth Area waste stream.

Table 4-2. Central Waste Generation Area Composition Results[1]

Material[2]	Percentage Based on Study	Disposed Quantities
Paper Packaging	7.3 percent	2,619 tons
Paper Products	7.6 percent	2,726 tons
Plastic Packaging	9.7 percent	3,479 tons
Plastic Products	4.4 percent	1,578 tons
Glass	2.4 percent	861 tons
Metal	5.4 percent	1,937 tons

[1] Source: 2016 Waste Characterization Study (Ecology 2016) and Okanogan County/Sunshine Disposal Waster Characterization Study (September 2017).

[2]Study results for organics are discussed in Chapter 5, and wood wastes and construction materials (Construction and Demolition Waste) are discussed in Chapter 9.

The SWAC Recycling Advisory Committee (RAC), in cooperation with Sunrise Disposal and the County, performed a waste characterization study for garbage collected in two residential neighborhoods in the cities of Okanogan and Omak in September 2017. In total, study participants sifted through approximately 3,370 pounds of solid waste to identify the percentage of materials currently recyclable in the County (Okanogan County 2017a). The County measured approximately 12 percent (391 pounds) of recyclable materials in the garbage during this study. Table 4-3 breaks down the recyclable materials by weight and percentage of the total weight collected.

Table 4-3. Okanogan County Waste Characterization Study Results[1]

Number of Customers	Total Weight (pounds)	Estimated Pounds per Customer
82	3,370 pounds	41 pounds
Waste Stream[2]	**Weight**	**Percent of total weight**
Cardboard	82 pounds	2%
Aluminum	16 pounds	<1%
Plastics	79 pounds	2%
Glass	99 pounds	3%
Mixed paper	87 pounds	3%
Tin cans	19 pounds	<1%
E-waste	9 pounds	<1%

[1] Source: Okanogan County 2017a

[2] Study results for organics are discussed in Chapter 5.

4.1.2 Recycle Advisory Committee

The SWAC formed a sub-committee, referred to as the Recycle Advisory Committee (RAC), to explore the potential for increasing the Public Works solid waste recycling program, and the possibility of implementing a composting program. The primary goal of the RAC was to determine whether Okanogan County should increase its recycling program or support the growth of private sector recycling programs. Objectives include:

Objective #1. Review the annual budget, including the Ecology grant mechanism.

Objective #2. Determine the monetary impact of increased tipping fees for customers and whether a tipping fee increase may be appropriate.

Objective #3. Review adequate information to determine the cost of specific facility upgrades. Generate criteria to determine whether the cost of facility upgrades is worth the investment by Okanogan County rate payers. Review the cost of specific upgrades to equipment, the facility, staffing, and maintenance.

Objective #4. Review the types of materials the County currently processes and whether it could begin processing additional materials.

Objective #5. Explore the potential for growth of other recycling programs. Review whether this could alleviate some of the need to upgrade Okanogan County's recycle facility.

Objective #6. Support increased education and community outreach regarding the benefits of recycling, composting, and waste prevention.

Since the RAC's inception, it has engaged in discussion, facility review, and existing programs in support of the overarching goal of improving the County's recycling program. An explanation of the entire RAC agenda is provided in Appendix G.

The following sections of this chapter review current recycling efforts for a variety of sectors, including residential recycling collection programs, commercial/non-residential collection, drop-off/buy-back sites, and recycling of special materials.

4.1.3 Residential Collection Programs

4.1.3.1 Regulatory Framework

State law currently allows Cities and Counties to control both single-family and multi-family residential recycling, although to differing degrees. Cities have the most authority and may directly provide or contract for, franchise with, or direct WUTC-certificated collection companies to collect recyclables within their jurisdictions. Counties have less authority and may only contract or direct WUTC-certificated collection companies (via Service Level Ordinance) to collect residential recyclables in unincorporated areas.

4.1.3.2 Services

In practice, Cities typically determine whether to include recycling services in municipal collection contracts or through the provision of municipal collection services. No Cities within Okanogan County have chosen to offer source-separated or commingled recycling collection or drop-off recycling services; instead, they have relied on the County rural drop-off recycling system. There are beginning discussions of providing expanded recycle collection services by some municipalities within Okanogan County. Currently, the RAC is actively studying a commingled recycling service with revisions to the current operation. Okanogan County does not have a Service Level Ordinance directing any recycling collection activities.

Although some areas within the County may meet the definition of urban-type densities appropriate for source-separated recycling collection (e.g., Omak/Okanogan), those Cities have elected to instead rely on the County drop-off recycling system and the recycle center located at the Central Landfill due to cost considerations and a desire to minimize collection rates.

In cooperation with Methow Recycles, the local WUTC hauler in the Methow Valley, Methow Valley Sanitation Service, Inc., with the registered tradename, WasteWise Methow (WasteWise), offers curbside commercial and residential recycling throughout the Methow Valley. For residential, WasteWise provides a 96-gallon bin to customers, accepts commingled materials, and charges a flat fee for monthly pickup. Other recycling services provided include hauling materials from "blue bag" drop-off sites, described further in Section 4.1.5. WasteWise hauls the commingled recycling to Methow Recycles in Twisp where contaminants are removed and clean commingled material is baled and shipped to Waste Management's sorting facility in Spokane. The Spokane facility sorts the materials, re-bales them by material type, and ships them to market.

4.1.4 Non-residential Collection Programs

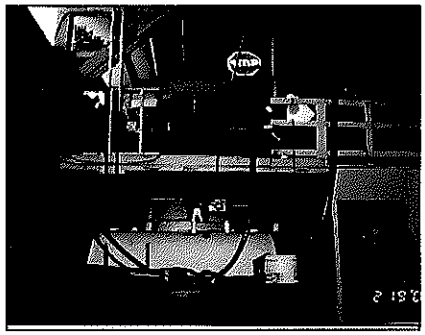
The non-residential sector includes industrial, commercial, and institutional generators of recyclable materials. Collection services for the non-residential sector are typically less uniform or are tailored to the varied needs of generators.

4.1.4.1 Regulatory Framework

Commercial recycling collection was deregulated in 1994 at the federal level. Local, state, and federal governments cannot regulate rates, routes, or services for hauling commercial property, including recyclables. Prior to 1994, the WUTC regulated property carriers through common carrier permits (separate and distinct from garbage collection certificates). Many garbage collection companies in Washington had obtained common carrier permits to mirror their garbage collection activities, even if they did not actively offer commercial recycling services. The WUTC's role is now limited to confirming insurance and similar activities for firms holding common carrier permits.

4.1.4.2 Services

Service providers in urban areas typically include "informal collectors" that use pick-up trucks to collect cardboard or scrap metal for resale to recycling centers, private recyclers that collect and process specific materials, and garbage collection companies (operating under common carrier permits) that collect a wide range of materials that are then delivered to local recyclers.



Much of this infrastructure is unavailable in Okanogan County. The County recycling site at the Central Landfill, Green Okanogan near Tonasket, Methow Recycles in Twisp, and the Colville Tribal Recycling Center in Nespelem are the only multi-material recycling processing sites. None of these directly offers commercial recycling collection, although all accept self-hauled commercial materials. As described below, Methow Recycles accepts commercial recyclables collected by WasteWise.

Okanogan County-certificated haulers all have common carrier permits, which allow them to offer commercial recycling collection services. The service provides 96-gallon bins to customers and offers weekly, bimonthly, or monthly pick-up at a graduated fee. WasteWise also offers the option of additional 96-gallon bins to any commercial recycling package (weekly, bimonthly, monthly) at a reduced hauling rate. Certified haulers provide metal and cardboard hauling with the provision of 20-cubic-yard and 30-cubic-yard containers for pick-up. They charge a separate fee for delivery of the container and for hauling it away.

4.1.5 Drop-off and Buy-Back/Processing Sites

Okanogan County is served by four multi-material recycling processing sites and a buy-back site, as well as several unstaffed recycling drop box/drop-off locations. The following subsections provide greater detail on these various sites.

4.1.5.1 Drop Box/Drop-off Sites

At the time of this Plan development, the County operates source-separated recycling drop-off bins located in Brewster, Pateros, Conconully, Okanogan, Omak, Ellisforde, and Nespelem, and other locations within the boundary of the Colville Reservation. All the communities have at least one drop box. The Ellisforde drop box is only open during the transfer station's hours of operation. The County hauls the recyclables from these bins to the Okanogan County Recycle Center. Materials accepted are limited to aluminum cans, cardboard, and newspaper.

The CCT has 40-yard dumpsters in many areas of the Colville Reservation that accept metal and cardboard. These materials are hauled to their recycling center in Nespelem.

Methow Recycles operates the Horizon Flats separated drop box facility in Winthrop. The Winthrop drop box system is opened seasonally with a limited suite of recyclables compared to the location in Twisp, which handles a much more robust suite of recyclables. The materials collected in Winthrop are hauled to the Methow Recyles recycling center located adjacent to the Twisp Transfer Station.

In cooperation with Methow Recycles, WasteWise sells 13-gallon blue plastic bags to customers through participating businesses in the Methow Valley. The blue bags are dropped off by customers at the locations where the bags were purchased, and WasteWise hauls them to Methow Recycles in Twisp for processing.

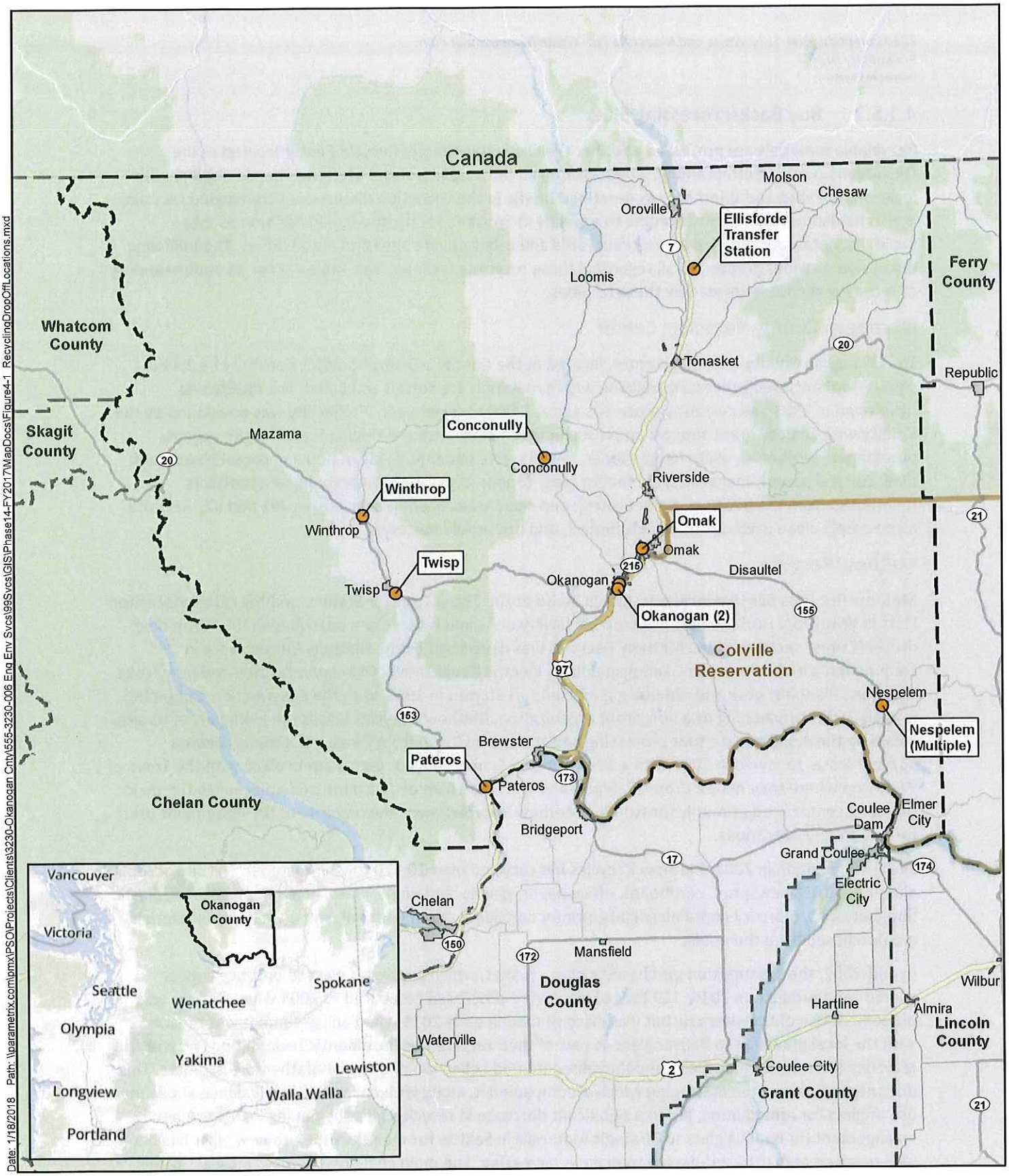
Table 4-4 describes the services provided at these locations, and Figure 4-1 shows the general distribution of drop boxes.

Table 4-4. Recycling Opportunities in Okanogan County

Location and/or Facility or Service	Materials Recycled	Special Wastes/ Other Services	Hours of Operation
Drop Box/Drop-Off Site			
Pateros, Conconully, Okanogan, Omak, Ellisforde/ Drop Box	Separated Recycling: aluminum cans, newspaper, corrugated cardboard	N/A	24 hours
Methow Valley (5 locations in Twisp, Winthrop, unincorporated Okanogan County [Mazama])/Blue Bag Drop Off (Methow Recycles)	Commingled Recycling: aluminum cans, tin cans, newspaper, cardboard, office paper, magazines, cartons (e.g., milk), all other paper (e.g., egg cartons, wrapping paper, cereal boxes), plastic containers (most types).	N/A	24 hours
Buy-Back/Processing Sites			
Okanogan/Okanogan County Recycling Center	Separated Recycling: aluminum cans, scrap metal (copper, brass, clean aluminum, and radiators [purchased at market rates]); newspaper; cardboard; office paper; mixed waste paper (e.g., cereal boxes, junk mail, colored paper); magazines; and plastic jugs (clear light green and milk jug #2)	Clean-Used Motor Oil, Unbroken Auto, Household & Rechargeable Batteries.	Tuesday – Saturday April 1 to September 30 9:00 am to 5:00 pm October 1 to March 31 9:00 am to 4:00 pm *Light Recycling: Saturday only
Twisp/Methow Recycles	Separated Recycling: aluminum cans, tin cans, newspaper, cardboard, office paper, magazines, all other paper (e.g., egg cartons, wrapping paper, cereal boxes), plastic containers (#1 to #7*), clear plastic film (no tinted film), foil and pie pans, glass, scrap metal *A $5 fee per 13-gallon blue bag for lettuce boxes, plastic tubs, cartons (e.g., milk), prescription bottles, clamshell-type carry-out (commingled); separated recycling	Accepts year-round: CFL light bulbs and fluorescent tubes, e-waste, household batteries, and printer ink cartridges. Accepts during two-day metal drive: washers, dryers, pressure tanks (free); refrigerators, freezers, air conditioners ($20); wire, cable, pipe, chain/ scrap steel/iron, non-ferrous metals	Tuesday/Thursday 10:00 am to 4:00 pm Saturday 9:00 am to 4:00 pm

Table 4-4. Recycling Opportunities in Okanogan County (continued)

Location and/or Facility or Service	Materials Recycled	Special Wastes/ Other Services	Hours of Operation
	only accepts plastic bottles and jugs (#1, #2).	Other Services: secure document shredding; education and links to reuse alternatives, ways to reduce waste, handling of fire debris.	
Winthrop, Horizon Flats/ Methow Recycles	Separated Recycling: aluminum cans, tin cans, newspaper, corrugated cardboard, office paper, magazines	N/A	Open Seasonally/24 hours
Tonasket/Green Okanogan	Separated Recycling: aluminum cans, tin cans, newspaper, cardboard, office paper, magazines, cartons (e.g., milk), all other paper (e.g., egg cartons, wrapping paper, cereal boxes), plastic baling twine, translucent bottles #1 & #2, e-waste	E--waste	Summer/Winter Tuesday 12:00 pm to 6:00 pm/ 12:00 pm to 4:00 pm All Year Thursday/Saturday 10:00 am to 4:00 pm
Nespelem/Colville Tribal Recycling	Separated Recycling: aluminum cans, tin cans, non-ferrous metals, newspaper, cardboard, office paper, magazines, cartons (e.g., milk), all other paper (e.g., egg cartons, wrapping paper, cereal boxes), plastic containers (#1, #2), foil and pie pans, scrap metal	*General Public:* e-waste, car batteries, fluorescent lights, washers, dryers, microwaves *Tribal Members:* refrigerators, tires, untreated wood and other woody debris	Monday to Saturday 8:00 am to 4:00 pm
Haul Services			
Methow Valley (includes Twisp, Winthrop, and unincorporated Okanogan County)/WasteWise Methow	Commingled Recycling: aluminum cans, copper, brass, clean aluminum, and radiators (purchased at market rates); newspaper; cardboard; office paper; mixed waste paper (e.g., cereal boxes, junk mail, colored paper); magazines; and plastic jugs (clear light green and milk jug color [opaque])	Curbside commingled recycling service (96-gallon bin) for both residential and commercial, and mixed metal hauling (20 and 30 cubic yards)	Monthly (residential) Commercial (weekly, bimonthly, monthly)



Parametrix

Source: © Mapbox, © OpenStreetMap, State of Washington, Okanogan County Comprehensive Solid Waste Management Plan 2012

0 5 10 20 Miles

- Recycling Drop-Off Location
- Okanogan County
- City Boundary
- Tribal Boundary

Figure 4-1. Recycling Drop-Off Locations
Okanogan County
Solid Waste Master Plan

Okanogan County, WA

4.1.5.2 Buy Back/Processing Sites

Recyclable materials are processed at either the Okanogan County Recycle Center located at the Okanogan County Central Landfill, Green Okanogan in Tonasket, or the Methow Recycles facility with locations in Twisp and Winthrop. As described briefly in the collection discussion, commingled recycling is also hauled beyond County borders to a facility in Spokane for processing. In addition to these facilities, metals are recycled at wrecking yards and other private sites and metal drives. The following discussion provides greater detail regarding these recycling facilities. See Table 4-4 for an understanding of recycling services provided by these facilities.

Okanogan County Recycling Center

The Okanogan County Recycling Center, located at the County's Central Landfill, consists of a 2,412-square-foot enclosed processing building where materials are sorted and baled. The facility was developed in 1993 and currently processes about 1,000 tons per year. The facility was developed by the County with Ecology grant support and is sustained through disposal tipping fees. The site accepts newspaper; cardboard; white ledger paper; mixed waste paper (e.g., clean pop and cereal boxes, junk mail, colored paper); magazines; aluminum cans, copper, brass, clean aluminum, and radiators (purchased from the public at market rates); and clean translucent plastic bottles (#1 and #2). The site also accepts clean used motor oil automotive, and household batteries.

Methow Recycles

Methow Recycles has two locations, one in Twisp at the Twisp Transfer Station, and the other at Horizon Flats in Winthrop. Horizon Flats is a drop-off facility only, and is therefore described in the "drop box/ drop-off sites" section above. Methow Recycles was developed by the Methow Conservancy in conjunction with Ecology, the Okanogan County Electric Cooperative, Okanogan County, and numerous sponsors. Planning work and obtaining grant support started in 1999, with the construction completed in early 2002. Functioning as a non-profit organization, Methow Recycles leases the main part of its site, including the 4,500-square-foot processing and storage building, from Okanogan County under a $1/year lease, renewed in 2011 with a 10-year term. Similar $1/year leases are in place with the Town of Winthrop where they have a drop-off depot, and with the Town of Twisp for land adjacent to the main recycling center used primarily for storage. Methow Recycles owns the majority of the equipment used for day-to-day operations.

Since its inception in 2002, Methow Recycles has recycled over 10,270 tons of material. The site accepts aluminum cans, newsprint, cardboard, office paper, plastic containers, glass, tin cans, magazines, plastic film, batteries, mercury-containing lights, printer cartridges, aluminum foil, and e-waste. No materials are purchased from the public.

In mid-2002, the organization purchased a glass crusher, which processes glass to produce a glass coarse-sand product. In 2016, 119 tons of glass were processed compared to 2004 when 60 tons was processed. Use of the glass crusher was discontinued in early 2013 when an agreement was reached with the local gravel pit to deliver glass as part of their required environmental reclamation. WasteWise recycling does not include glass, and they discontinued collection of any grandfathered customers. This discontinuation and the messaging which accompanied it, along with consumer ambivalence about the use of glass for remediation, led to a significant decrease in recycled glass beginning in 2014. A new arrangement for hauling glass to Strategic Materials in Seattle for manufacture into new glass has been well received and 2016 self-hauled tonnage is increasing. The main challenge of recycling glass is the expense of transportation; therefore, Methow Recycles asks for financial contributions when the product is dropped off at the center.

In 2013, Methow Recycles teamed up with the local WUTC hauler WasteWise. As described in Sections 4.1.3 and 4.1.4, WasteWise offers curbside commingled recycling options for both residential and commercial entities. The commingled recycling is then brought to the Methow Recycles' Twisp location to be baled and shipped to Waste Management's Spokane recyclables processing facility.

WasteWise collects residential and curbside recycling (except glass, electronics, and scrap metal) throughout the week and delivers to the Methow Recycles facility during non-public hours for processing by staff. The WasteWise staff provides the first line of defense against contamination by removing glass and trash found at the time of collection. Methow Recycles staff provides further quality control while baling. Methow Recycles charges WasteWise a per ton service fee for the handling and shipping of the baled product; a residual charge or value resulting from the delivered commingled bales is credited to WasteWise. Currently, commingled materials represent about 25 percent of the tonnage processed by Methow Recycles (Methow Recycles 2017).

Green Okanogan

Green Okanogan in Tonasket is a non-profit organization that has been in operation since July 2010. During the early years, the non-profit focused on environmental education, which involved holding yearly Earth Day events and operating a monthly drop-off site for metals and e-waste. In 2015, Green Okanogan started leasing the facility where they are now located, offering a full-service recycling center open 3 days a week. Purchase of the new facility was realized through the financial support of grants and a business loan. The facility, through their "Go Recycle" program, currently recycles cardboard, newspaper, white and mixed paper, translucent plastic bottles (#1 and #2), aluminum, tin, mixed metals, and e-waste. Their cardboard buyer in Wenatchee turns the material into apple pack trays, which shows adaptive, local use of recycled materials. Green Okanogan provides very limited glass recycling. They do not collect glass at their recycling center, but they do collect glass at local fairs and crush the material to fill holes on their site, while offering limited sales to customers for use on driveways and trails. They would have to upgrade their equipment to handle the quantity of glass if they were to start accepting it at their recycling center. Since their opening, Go Recycle has recycled about 200 tons.

Green Okanogan also provides a home and building supply reuse store "Go Again" at their recycling center. Go Again sells lumber, plumbing, electrical fixtures, pipe, wire, wood, and metal furnishings at reasonable prices (Green Okanogan 2017).

Colville Tribal Recycling Center

Based in Nespelem, CCT has operated a recycling program since 2008. The recycling facility accepts aluminum cans, tin cans, non-ferrous metals, newspaper, cardboard, office paper, magazines, cartons (e.g., milk), all other paper (e.g., egg cartons, wrapping paper, cereal boxes), plastic containers (#1, #2), foil and pie pans, glass, and scrap metal. To the public they also accept special wastes including e-waste, car batteries, fluorescent lights, washers, dryers, and microwaves. To tribal members they offer an expanded service that collects refrigerators, tires, untreated wood, and other woody debris. Materials are graded, sorted, and prepared for recycling pick-up (from outside sources) and shipped to end users (The Star 2017).

Other

Other options throughout the County for recycling services include:

- Home Depot in Omak accepts rechargeable batteries, CFLs (compact fluorescent light bulbs), and old incandescent holiday light strings.
- Lead-acid battery retailers (automotive batteries) accept used batteries upon purchase of new batteries (see Chapter 10).

- Multiple retail stores accept household batteries throughout the County (see Chapter 10).
- A resident in the City of Pateros currently collects post-consumer Styrofoam, crushes it, and ships it to a recycling center in California.
- Systems are in place at "fire camps" during the wildfire season for the collection of various recyclables including cardboard, plastic, and batteries.

Table 4-4 lists the recycling opportunities in Okanogan County.

4.1.6 Special Wastes

A number of recycling opportunities exist for a wide range of materials that are not traditionally considered recyclable commodities or that are considered problem materials. These materials include wood waste, construction and demolition debris, tires, white goods, e-waste, and lead acid (automotive) and household batteries. To avoid redundancy, the existing conditions for these materials are discussed in Chapters 9 and 10, respectively, as outlined below:

- Wood waste—Chapter 9
- Construction and demolition debris—Chapter 9
- Tires—Chapter 9
- White goods—Chapter 9
- Lead acid (automotive) and household batteries—Chapter 10
- Electronic waste (e-waste)—Chapter 10

4.1.7 Organic Materials

WAC 173-350-100 defines organic materials as any solid waste that is a biological substance of plant or animal origin capable of microbial degradation. Organic materials include, but are not limited to, manure, yard debris, food waste, food processing wastes, wood waste, and garden wastes. Chapter 5 is dedicated to the discussion of organic materials.

4.1.8 Non-Source-Separated and Commingled Recycling

Non-source-separated recycling refers to materials that are separated from municipal solid waste (MSW) at centralized facilities rather than at the point of generation. Commingled refers to recyclable materials mixed together, often collected from residences or at a central drop-off location.

A centralized processing facility that separates commingled recyclables is referred to as a material recovery facility (MRF). Centralized processing facilities that separate recyclables from mixed waste are sometimes called dirty MRFs. These facilities usually consist of a series of conveyors, trammel screens, magnetic separators, air classifiers, and picking lines. As described in this chapter, a MRF has been in operation in Spokane since 2012. Methow Recycles ships commingled curbside recycling to this facility in cooperation with the local hauler, WasteWise. The Spokane facility sorts the materials, re-bales them by material type, and ships them to market.

4.1.9 Promotion and Education

Okanogan County, CCT, Cities, and local non-profit recycling centers provide combined waste reduction and recycling promotion as described in Chapter 3.

4.2 Urban/Rural Service Areas

One of the requirements of the 1989 Waste Not Washington Act was that Comprehensive Solid Waste Management Plans include an urban/rural designation to specify recycling collection service areas (codified as RCW 70.95.092). Minimum performance requirements are specified for each area, including the establishment of source-separated recycling services (or programs yielding greater diversion in urban areas) and drop-off recycling opportunities in rural areas. Minimum requirements are also specified for yard debris collection in both urban and rural areas.

Although Okanogan County includes several cities, all are relatively small. A benchmark figure for evaluating the feasibility of urban source-separated recycling programs is a minimum city population of 4,000 to 5,000. In Okanogan County, only Omak falls within this range (with an estimated 2017 population of 4,925 [OFM 2017b]). Brewster and Okanogan have an estimated 2,500 people, and the remaining jurisdictions have much smaller populations (OFM 2017b).

Only the combined cities of Omak and Okanogan could be considered to have the population approaching the minimum necessary for viable urban source-separated collection programs. However, the limited recycling processing infrastructure, the high unit costs of processing recyclables, and distance from markets combine to make source-separated recycling relatively expensive. In addition, the relatively low level of household income and high proportion of retirees on fixed incomes make the addition of new programs with increased rates very unpopular. Thus, source-separated recycling is not considered economically feasible at this time. The low to negative rate of population growth within these cities indicates that these factors would not likely change during the planning period. Therefore, for the purposes of this Plan, the entire planning area is designated "rural" for complying with RCW 70.95 recycling requirements.

The previous Ecology guidelines for the development of comprehensive solid waste management plans included criteria for rural recycling based on the provision of a fixed multi-material recycling center for every 5,000 to 10,000 population and recycling opportunities at or near each disposal facility open to the public. The most recent guidelines are less prescriptive, but still clearly expect both urban and rural counties to plan to meet the intent of state law and contribute toward the 50 percent diversion goal.

4.3 Recyclable Material Designation

Ecology guidelines (173-350 WAC) require that comprehensive solid waste management plans include a list of designated recyclables. This list is used to determine which materials will be targeted by local recycling efforts and, more specifically, which materials should be included in government-sponsored collection programs such as drop-off or source-separated recycling programs.

The list of designated recyclables is intended to be developed through a review of each potential material's market value, market stability, transportation costs, and other factors. This analysis is intended to ensure that all recyclables that can be feasibly recycled are included in curbside/source-separated or drop-off collection programs.

To be included on the designated list of recyclable materials, there should be established programs offered throughout the County that allow residents and businesses the opportunity to recycle all of the designated materials through at least one of those programs. In other words, if no County program collected tin cans, then that material would not be included on the list of designated recyclables. The

following sections discuss the current recycling market, current funding for recycling, and finally, with consideration of the viability of recycling in Okanogan County, the list of designated recyclables.

4.3.1 Current Recycling Market

The recycling market is currently in decline nationwide for a variety of reasons, including low oil prices, which has resulted in manufacturers using the cheaper, virgin source in lieu of reclaimed plastic, current market's heightened concern for contaminated materials, to global trade policy—China has set new limits on imported recycled materials.

Okanogan County, local recyclers (e.g., Green Okanogan), and waste haulers (e.g., WasteWise) supply a commodity to a market that for the most part: 1) has an abundance of recyclable materials, and 2) ships recycled materials overseas for processing or resale to a manufacturer. With a saturated market for recyclables, the volume of recycled material collected in areas of low density, such as Okanogan County, is of insufficient scale to realize a profit from shipping recyclables to these distant recyclers. As one local recycling facility operator noted in a questionnaire related to their operations: As the recycling markets and landfill disposal fees currently stand, recycling costs more than disposing waste in a landfill. Many market economists note that until the economic structure evolves to include full life-cycle costs of materials, the recycling (and non-recycling) public must fund the process through tip fees; entities must run the most cost-effective operations possible; and the public must continue to be educated (Cushman 2017).

4.3.2 Current Funding for Recycling

Grants issued by the state of Washington are the key source of funding for local government recycling programs, particularly for rural communities akin to Central Washington. The following three sources comprise the primary state-level of funding for recycling programs:

- Solid waste collection tax
- Coordinated prevention grants
- Litter tax

The solid waste collection tax is an excise tax on garbage collectors historically used to fund loans for public infrastructure through the Public Works Trust Fund. According to a recent study, in 2005 approximately 10 percent of this tax revenue was used for solid waste infrastructure; in 2011 the revenue was directed to the general fund; and in 2016 the solid waste collection tax revenue was redirected to the Education Legacy Trust Account (Ecology 2017a).

At the time of this plan development, the State Legislature has not agreed on a 2017-2019 capital budget for Local Solid Waste Financial Assistance (LSWFA) that support local solid waste programs, permitting, and enforcement. If the proposed $10 million annual budget is approved, it still falls short of funding that was available in years past. In 2015 to 2017, $15 million was appropriated, and in 2013 to 2015, $28.2 million was appropriated. This reduction in funding is closely tied to low oil prices (via a hazardous substance tax), which historically funded the LSWFA program through taxation. Because of the shortfall in gas tax, the funding mechanism was switched to the State Building Construction Account.

In addition, the Waste Reduction, Recycling and Litter Control Act ("litter tax"), in part, provides funding for waste reduction and recycling programs at Ecology; as with the collection tax revenue, much of this revenue has been diverted to other state agencies (Ecology 2017b).

The E-Cycle Washington Program is another mechanism used within the state to offset the cost of recycling electronic products. As described later in Chapter 10, manufacturers offset the cost of recycling their products in the cost of doing business (i.e., charge higher prices to the consumer).

4.3.3 Designated List of Recyclables

Transportation costs, the unreliability of the market, and the lack of reliable funding from the state are the most significant barriers to recycling in Okanogan County. While trucking deregulation and backhauls can provide some relief, transportation costs remain high relative to the return on recycling. These uncertainties make it difficult to operate existing recycling programs or to plan for future expansion.

If the decision on designating recyclable materials were based solely on markets and transportation costs, it is likely that only aluminum cans, newspaper, cardboard, and white ledger paper would be designated as recyclable materials. However, the County, Methow Recycles, Green Okanogan, and CCT attempt to recycle additional materials (such as tin cans, glass, and plastics) to the degree possible. Designating a narrow range of recyclables for the purposes of meeting planning requirements can be counterproductive, because it may lead many to assume that collecting only the minimum with no changes during the planning period will meet statutory requirements for contributing to state goals. The following list of recyclables (Table 4-5) prioritizes materials based on the prevalence of opportunities available from the various resources throughout the County.

The list of designated materials could change overtime as triggered by a number of scenarios including, but not limited to, availability of new local or regional processing of a material, recycling facilities that are no longer available for a particular material, legislative mandate, or extreme market decline. The process for making a change to the designated recycling list must undergo SWAC review. The SWAC ultimately decides whether to add or remove the material from the list. Its recommendation must be approved by the Board, and if approved, the list must be updated and submitted to Ecology. Revisions to the designated recyclables list does not have to go through Ecology's formal amendment process (Ecology 2010a).

Table 4-5. Designated Recyclable Materials for Okanogan County

Material	Locations Recycled	Rating
Aluminum cans	Drop boxes, commingled pick-up in Methow Valley, all other recycling facilities	HIGH
Tin cans	Commingled pick-up in Methow Valley, Methow Recycles, Horizon Flats, Green Okanogan, CCT	HIGH
Newspaper	Drop boxes, commingled pick up in Methow Valley, all other recycling facilities	HIGH
Corrugated cardboard	Drop boxes, commingled pick-up in Methow Valley, all other recycling facilities	HIGH
Office paper	Commingled pick-up in Methow Valley, Okanogan County Recycling Center, Methow Recycles, Horizon Flats, Green Okanogan, CCT	HIGH
Magazines	Commingled pick-up in Methow Valley, Okanogan County Recycling Center, Methow Recycles, Horizon Flats, Green Okanogan, CCT	HIGH
e-waste	All recycling facilities, including retailers, except Horizon Flats and drop-off boxes	HIGH
Cartons (e.g., milk)	Commingled pick-up in Methow Valley, Methow Recycles, Green Okanogan, CCT	MEDIUM
Plastic jugs (clear light green and milk jug color [#1 and #2])	Commingled pick-up in Methow Valley, Okanogan County Recycling Center, Methow Recycles, Green Okanogan, CCT	MEDIUM

Table 4-5. Designated Recyclable Materials for Okanogan County (continued)

Material	Locations Recycled	Rating
Glass	CCT, Methow Recycles	MEDIUM
Ferrous metal (scrap)	Okanogan County Recycling Center, Methow Recycles, various private recyclers	MEDIUM
Non-ferrous metal (copper, brass, aluminum, radiators)	Okanogan County Recycling Center, Methow Recycles, CCT, various private recyclers	MEDIUM
Plastic containers (clear light green and milk jug color [#1 and #2])	Commingled pick-up in Methow Valley, Okanogan County Recycling Center (#2 only), Methow Recycles, Green Okanogan, CCT	MEDIUM
Plastic containers (#3 to #7)	Commingled pick-up in Methow Valley, Methow Recycles	LOW
Prescription bottles	Methow Recycles	LOW
Clear plastic film (bags)	Methow Recycles	LOW
Foil and pie pans	Methow Recycles, CCT	LOW

4.4 Needs and Opportunities

This section discusses needs and opportunities for residential and non-residential recycling, processing sites, and special materials.

4.4.1 Recycling Material Designation

Some jurisdictions have used a process known as a "recycling potential assessment" (RPA) to provide a mechanism for periodically reviewing and evaluating the progress of collection programs meeting recycling goals. This process is used to analyze current waste stream, existing and potential commodity recycling rates, and collection and processing costs to determine whether collection programs should be expanded to include other sectors, or whether existing programs should be modified to target additional or different commodities. This process acknowledges that market conditions and collection technologies change over time and that periodic re-evaluation is necessary to obtain maximum cost-effective waste diversion levels.

4.4.2 Residential Recycling

Green Okanogan opened up their operations in the north-central region (Tonasket) of the County in 2015. This new facility allows local area residents to recycle a larger array of materials compared to the limitations of the drop box system that was the only option prior to that point. The impetus for this new facility was the removal of the drop box in Tonasket several years ago. Green Okanogan has identified the need to upgrade their facility with a new building and another more efficient baler. Users have doubled in the last year, thereby doubling their intake of materials. The recycling center reports that the community is very supportive and appreciative of the recycling center and its proximity to Tonasket and easy access. With one part-time staff member and antiquated equipment, there is an essential need to upgrade their facility and equipment as well as adding staff in the future.

The range of recyclable materials accepted has expanded since the 2012 Plan at Methow Recycles, CCT, and inherently at Green Okanogan, but not at the County Central Landfill. Because the Central Landfill has equipment and baler capacity, the feasibility of accepting additional materials should be considered.

An equitable funding mechanism needs to be developed for recycling activities. Existing funding levels for recycling are very low. The allocation of disposal tipping fees to various cost centers (including recycling) should be reviewed to balance diversion and disposal needs and objectives.

An in-depth study needs to be done of expanded commingled recycling in Okanogan County, particularly with the new MRF facility in Spokane. Currently, the communities of Brewster and Pateros are studying the potential for single-stream collection and recycling with the intent of hauling the commingled materials to Spokane's MRF facility. The study has initially identified the need for a site to accommodate the recycling center and baling equipment. Capacity on the County recycling center as well as Green Okanogan should be expanded. An increase of tipping fees should be diverted to do this expansion work. If upgraded facilities are in place, then residential pick-up could take place by local haulers. This would divert materials from the landfill, which in the long run would cost a lot less than making a new landfill or hauling garbage out of the County.

4.4.3 Non-residential Recycling

Other than large generators, relatively few institutions and commercial businesses have access to cost-effective recycling services. In Methow Valley, WasteWise offers an array of commercial recycling, including large scrap metal. North Valley Hospital, Tonasket School District, Beyer's Market, Midway Building Supply, and Veranda Beach as well as numerous small local businesses self-haul to Green Okanogan. According to Green Okanogan, the amount of recycling dropped off from businesses is on the increase, including businesses from Oroville.

There is a need to further integrate large generators into the recycling program.

4.4.4 Drop-off and Buy-Back/Processing Sites

The range of recyclable materials accepted is expanding. Because all existing recycling facilities in the County have equipment and baler capacity, the marginal costs of adding additional materials should be continually evaluated.

4.4.5 Special Materials

The needs and opportunities for special materials management and recycling are described in Chapters 9 and 10, respectively, as listed below.

- Wood waste—Chapter 9
- Construction and demolition debris—Chapter 9
- Tires—Chapter 9
- White goods—Chapter 9
- Lead acid (automotive) and household batteries—Chapter 10
- Electronic waste (e-waste)—Chapter 10

4.4.6 Organic Materials

The needs and opportunities for organic waste management and recycling are discussed in Chapters 3 and 5, respectively.

4.5 Alternatives

4.5.1 Recycle Material Designation

An RPA process could be used, if appropriate, by Okanogan County to adjust the range or ranking of materials collected by drop-off or collection programs within the County. Based on a review of current programs, the County would develop specific recovery goals for each recyclable material and use those goals to evaluate the performance of current collection systems. The list of designated recyclables would be reviewed at least every 2 years through the RPA to determine which materials should be added or removed from household collection programs. Criteria used in the RPA could include waste stream composition, availability of markets or beneficial uses, processing capability or feasibility, capability of existing or new collection equipment, incremental and overall system cost impacts, public acceptance, and other factors.

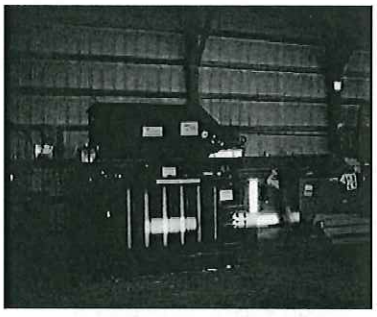
4.5.2 Single- and Multi-family Residential Recycling

Alternatives for expanded residential recycling include:

- Consider an optional rural commingled collection program in the Omak/Okanogan core. This could be done with existing contracts at any time during the planning period.
- Expand the current number of drop boxes to include more locations in the north, south, and east portions of the County. Seek additional partners to monitor drop box locations.

4.5.3 Non-residential Collection Programs

Alternatives for expanded non-residential recycling include:



- Work with contracted and certificated haulers to determine whether an office pack and/or detachable container cardboard collection route would be feasible in their respective areas. Feasibility is expected to be highest in the Omak/Okanogan, Winthrop/Twisp, Tonasket, and Nespelem areas due to reduced transportation costs to processing sites.
- Develop a non-residential technical assistance program to help businesses identify waste diversion options, including recycling. This option would depend on the simultaneous expansion of actual recycling opportunities at the County's Central Landfill—the other recycling facilities in the County already have a fairly robust list of recyclables accepted.

4.5.4 Drop-off and Buy-Back Processing Sites

Alternatives for drop-off and buy-back processing site recycling include:

- Determine a stable funding source or mechanism for covering recycling processing costs. The level of funding will need to be sufficient to cover the costs of an expanded recycling collection program. Two funding mechanisms are commonly used to fund recycling programs:
    a. Incorporate a disposal tipping fee component to fund recycling programs. This mechanism can provide stable funding if the component is small relative to the overall disposal cost. If the component is large (e.g., 10 to 25 percent) and the diversion program is successful, there would be significantly reduced tipping fee revenues to cover recycling costs. Because the potential level of funding in Okanogan County would be relatively low, this is not expected to be a problem.
    b. Incorporate recycling costs into City collection contracts. This mechanism is typically used to fund source-separated recycling, both in City contract areas and WUTC-certificated areas. Thus, the costs of residential recycling collection are embedded in collection fees paid by garbage collection customers. This is less appropriate for a drop-off based program, because both residential and non-residential customers use drop-off sites, and also garbage collection subscribers and non-subscribers have access to drop-off recycling sites.
- Identify other viable funding mechanisms or opportunities for recycling programs. For example, the County has the authority to establish a solid waste disposal and collection district. This would allow excise taxes on residents and businesses, or on collection services. Fees could also be imposed on construction, remodeling, or deconstruction permits to support construction and demolition recycling and waste prevention.
- Periodically evaluate the feasibility of adding materials to make full use of existing processing capacity. This could be performed through an RPA or done on a more informal basis, such as the glass recycling project being undertaken by Methow Recycles.

4.5.5 Special Materials

Alternatives for special materials management and recycling are described in Chapters 9 and 10, respectively, as listed below.

- Wood waste—Chapter 9
- Construction and demolition debris—Chapter 9
- Tires—Chapter 9
- White goods—Chapter 9
- Lead acid (automotive) and household batteries—Chapter 10
- Electronic waste (e-waste)—Chapter 10

4.5.6 Organic Materials

Alternatives for home composting as a waste prevention method are discussed in Chapters 3 and 5, respectively.

4.6 Recommendations

Recycling recommendations were developed by the County SWAC Comprehensive Plan Subcommittee during SWAC meetings in fall 2017.

All of the following recommendations will be pursued, in conjunction with other organizations or entities, with the goal of implementation during the 6-year planning period that ends in 2024. Implementation of the following recommendations is limited subject to continued availability of state funding.

Recommendation 4-1—Recycling Potential Assessment (RPA). Perform, if needed, an RPA during the planning period to determine potential adjustments in County recycling programs. The results of each assessment will be reviewed with the SWAC to determine how to best implement recommended programs or adjustments in the range of materials recycled by the County.

Recommendation 4-2—Additional Recycling Sites. Work to develop additional partnerships for expanded recycling drop-off sites in under-served areas of the County. Expanded drop-off sites could include either permanent or mobile drop-off programs.

Recommendation 4-3—Optional Source-Separated or Commingled Recycling. Encourage Cities with adequate densities and access to recycling processing facilities to implement source-separated or commingled recycling collection. The County will further investigate these opportunities.

Recommendation 4-4—Commercial Recycling. Review the County's recycling processing capacity to determine whether additional commercial materials can be handled at the Central Landfill recycling facility. If capacity is available, the County will encourage local haulers to provide expanded cardboard, and possibly office pack, collection to area businesses and institutions.

Recommendation 4-5—Private Sector. Continue to support and encourage the private sector to provide hauling services for source-separated or co-mingled recyclables to out-of-county processors and markets such as Spokane or the Puget Sound area.

Recommendation 4-6—Recycling Funding. Maintain a recycle facility to the level funded by Ecology. The County may use tipping fees and explore alternative funding opportunities to operate the current County recycle center. The County will continue to support the private sector and CCT, as opportunities arise.

Recommendation 4-7—Market Development. Research and recommend purchase of recycled-content products (e.g., copy paper, tissue paper, construction materials) to the extent practicable and consistent with other purchasing objectives. This task will be conducted by the County, Cities, and CCT.

5. ORGANIC MATERIALS

5.1 Introduction

In Okanogan County, organic materials comprise one of the single largest recyclable components of the disposed waste stream; this is in line with the findings of the 2015-2016 Washington Statewide Waste Characterization Study (No. 16-07-032) published by Ecology (Ecology 2016). Managing organic materials through diversion could play a key role during the planning period, particularly as County population continues to increase and the markets for other recyclables become more volatile. Included in this chapter are:

- Estimates of the quantity and type of organic materials disposed of in the County
- A review of regulations applicable to organics management
- An examination of the types of processing technologies available for handling organics

Biosolids are no longer regulated under Solid Waste Handling Standards, Chapter 173-350 WAC, but are now regulated under Chapter 173-308 WAC, Biosolids Management. Therefore, although biosolids is mentioned, it is not considered a key component of organics management. Additionally, agricultural waste is a small component of the overall organic waste stream for the County and is therefore not considered in the planning.

While diversion is significant in managing organic materials, it is important to do so in a manner that encourages proper handling and storage to reduce potential public health issues (i.e., rodent and insect concerns with backyard composting), and to protect water quality and salmon recovery efforts in the state. Recommendations are also presented for marketing compost as part of organics material management.

This chapter primarily focuses on two types of organic materials, yard debris/green waste and food waste, from various sources. For each type of organic materials, the existing conditions are documented, needs and opportunities are discussed, and alternatives are presented.

5.2 Background

The 2016 municipal solid waste total for Okanogan County was 35,871 tons. The County has not separated yard and food waste in the past; therefore, no volumetric data are currently available for use. The total tonnage of municipal solid waste includes all waste except tires, metals, petroleum-contaminated products, and asbestos. In order to approximate the levels of organic materials for Okanogan County, this update used the percentages published in the 2015-2016 Washington Statewide Waste Characterization Study (Section 5.5 Existing Conditions).

5.3 State Legislation, Regulations, and Guidelines

The following discussion provides an overview of applicable regulations and guidance to organics management.

The Waste Not Washington Act (Engrossed Substitute House Bill [ESHB] 1671) asserts that waste reduction and recycling must become a component of solid waste management plans. Specifically, the act requires rural services to include programs that "divert yard waste from landfills, if markets exist."

Solid Waste Handling Standards (Chapter 173-350 WAC) includes guidance and requirements for composting facilities. Most composting facilities are required to be designed and constructed according to WAC 173-350-220, and permits must be obtained from OCPH according to the permit application process defined in WAC 173-350-710. If a facility meets certain criteria for organic materials and volume, that facility may be exempt from having to obtain a solid waste handling permit from OCPH, but would still be required to comply with the performance standards of solid waste facilities (WAC 173-350-040), among other requirements (e.g., manage to prevent migration of agricultural pests). Exempt facilities are those that deal with small volumes of all organic materials or those that deal strictly with agricultural wastes.

Updated in 2013, the definitions for feedstocks (Type 1, Type 2, etc.) under Chapter 173-350-220 WAC (Composting Facilities) were removed. Permitting needs of a proposed composting facility are based on the type of organic material used for feedstock and the volume of material on site.

State Waste Discharge Permit (Chapter 173-216 WAC) must be obtained if leachate from the composting facility is discharged to groundwater or to a municipal sewage treatment plant.

General Regulations for Air Pollution Sources (Chapter 173-400 WAC) work to control and/or prevent the emission of air contaminants statewide. The Northeast Washington Air Control Authority is responsible for enforcing this regulation.

Washington State Biosolids Management Rule (Chapter 173-308 WAC) applies to compost facilities handling biosolids. The biosolids rule is self-implementing. This means that the basic requirements of the rule must be met regardless of the permit status of a facility. Biosolids management is not being considered as part of these planning activities.

State Environmental Policy Act (Chapter 197-11 WAC) applies to all new compost facilities during the permit application to an agency. All solid waste handling permits require SEPA review, which includes an environmental checklist.

The U.S. Composting Council's 2009 Best Management Practices (BMPs) for Incorporating Food Residuals into Existing yard Waste Composting Operations is a guide funded by a grant from the U.S. Environmental Protection Agency (EPA). The document provides design and operations guidance for composters who are looking to add food waste residuals into their composting operations.

Washington State Department of Agriculture issued emergency rules amending the apple maggot quarantine in 2016 to include municipal solid waste (MSW), yard debris, organic feedstock, organic materials, and agricultural wastes to the list of commodities regulated under the apple maggot quarantine (WAC 16-470-101). These regulated commodities are prohibited from moving from the quarantine area into pest-free areas without a special permit. Under these rules, the agency is allowed to issue a special permit for transportation and distribution of commodities in the pest-free area (Okanogan County is located in a pest-free area).

5.4 Definitions

The following definitions are applicable to the discussions in this section as defined in Chapter 173-350-100 WAC:

- **"Agricultural wastes"** means wastes on farms resulting from the raising or growing of plants and animals including, but not limited to, crop residue, manure from herbivores and non-herbivores, animal bedding, and carcasses of dead animals.

- **"Biosolids"** means municipal sewage sludge that is a primarily organic, semisolid product resulting from the wastewater treatment process, that can be beneficially recycled and meets all applicable requirements under Chapter 173-308 WAC, Biosolids Management.
- **"Composting"** means the biological degradation and transformation of organic solid waste under controlled conditions designed to promote aerobic decomposition. Natural decay of organic solid waste under uncontrolled conditions is not considered composting.
- **"Crop residues"** means vegetative material left over from the harvesting of crops, including leftover pieces or whole fruits or vegetables, crop leaves, and stems. Crop residue does not include food processing waste.
- **"Manure and bedding"** means manure (feces) and bedding from herbivorous animals such as horses, cows, sheep, and goats.
- **"Organic materials"** means any solid waste that is a biological substance of plant or animal origin capable of microbial degradation. Organic materials include, but are not limited to, manure, yard debris, food waste, food processing wastes, wood waste, and garden wastes.
- **"Organic feedstocks"** means source-separated organic materials including bulking agents suitable for vermicomposting, composting, anaerobic digestion, and other processes that transform organic materials into usable or marketable materials.
- **"Post-consumer food waste"** means source-separated organic materials originally intended for human consumption including, but not limited to, vegetables, fruits, grains, meats, and dairy products resulting from serving food. Post-consumer food waste is typically collected from cafeterias, homes, and restaurants.
- **"Solid waste"** or **"wastes"** means all putrescible and non-putrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials.
- **"Vermicomposting"** means the controlled and managed process by which live worms convert organic residues into dark, fertile, granular excrement.
- **"Yard debris"** means plant material commonly created in the course of maintaining yards and gardens and through horticulture, gardening, landscaping or similar activities. Yard debris includes, but is not limited to, grass clippings, leaves, branches, brush, weeds, flowers, roots, windfall fruit, and vegetable garden debris.

5.5 Existing Conditions

This section describes the existing organic waste types and management of these components of the waste stream.

As described in the 2015-2016 Washington Statewide Waste Characterization Study, organic materials account for 32.6 percent of the waste generated in the Central Waste Generation Area (WGA), which includes Okanogan County.

Applying the Central WGA percentage of 32.6 percent to the total waste collected in Okanogan County, the County collects an estimated 11,720 tons of organic materials. Of this quantity, approximately 10,510 tons are yard and food waste. The remainder consists of agricultural waste and other residuals that are incidental to the waste stream and not part of the overall planning process. Table 5-1 shows the

breakdown of estimated quantities of yard debris, food waste, and agricultural waste based on the percentages in the study (Ecology 2016).

Table 5-1. Okanogan County Organic Materials Disposal Estimates[1]

Organic Material Type	Percentage Based on Study	Disposed Quantities
Yard Debris	10.9 percent	3,910 tons
Food Waste	18.4 percent	6,600 tons
Remainder[2]	3.4 percent	1,210 tons

1. Applying the percentages for the organic material types to the total MSW collected in Okanogan County (35,871 tons in 2016).
2. The remaining quantities are assumed to include manures, fruit waste, agricultural waste, and other non-classified organics.

As described in Chapter 4, the SWAC Recycling Committee, in cooperation with Sunrise Disposal and the County, performed a waste characterization study for garbage collected in two residential neighborhoods in the cities of Okanogan and Omak in September 2017. In total, study participants sifted through approximately 3,370 pounds of solid waste to identify the percentage of materials currently recyclable in the County (Okanogan County 2017a). The County measured approximately 2 percent (60 pounds) of organic materials in the garbage during this study.

Currently, no composting facilities are sited in Okanogan County and the County lacks compatible space at the Central Landfill. The County recognizes that a great deal of compostable material is observed in the solid waste stream. Therefore, it supports the operation of a composting facility because it would be beneficial to the longevity of the Central Landfill. They do not foresee this as a County-led operation at this time, but rather an enterprise opportunity by the private sector.

5.5.1 Residential Yard Debris and Food Waste

The County does not have resources to provide residential source-separated collection (or processing) of food or yard waste.

In lieu of curbside collection or self-hauling, many rural residents of the County use on-site composting for food and yard waste ("backyard composting") or open burning to manage their yard waste. Some residents incorporate food waste directly into trenches in their gardens. Handling of yard debris and food waste in areas of greater population density within the County is largely a component of MSW collection and, to a lesser degree, backyard composting.

Free annual clean-up events occur in Omak, Okanogan, and Twisp centered around yard debris. These events have no limitations on the amount of waste set out for collection, but they do have some restrictions such as the size of woody debris (e.g., in Okanogan, branches cannot be greater than 3 inches in diameter or over 4 feet long). Although the material collected is not composted, it does reduce the amount of yard waste that is open burned, which improves air quality and reduces the risk of wildfires.

County-provided education programs have supported backyard composting. For example, in 2012, a backyard composter program distributed 137 composting bins. However, the systems lacked capacity and durability, and the program was not considered very successful, with several composting units still in the County's possession.

See Chapter 9 regarding Multi-Hazard Debris Management, which includes a discussion regarding organic debris management.

5.5.2 Non-Residential Yard Debris and Food Waste

The County does not have resources to provide non-residential source-separated collection (or processing) of food or yard waste.

Some large institutional generators of yard debris, such as schools, cities, and parks, self-haul their yard debris to centralized facilities, or, in some cases, practice on-site composting. Some businesses have yard maintenance services haul debris to centralized facilities (the landfill or transfer stations), while other businesses commingle these wastes with other MSW. In Pateros, non-residential food waste is collected and shipped to Chelan to their composting facility. Non-residential food waste generally includes organic grocery debris (unsaleable fruits and vegetables, vegetative trim, wax-coated cardboard), restaurant organics (food preparation waste, table scraps, soiled and non-recyclable paper), and food processing wastes. Businesses dispose of food waste in a variety of ways: donating to food banks, using garbage disposals, contracting with rendering services, or sending to farmers for animal feed. The extent of these disposal methods within the County is not fully understood.

5.5.3 Biosolids

Biosolids composting is currently not practiced in the County. Biosolids is not regulated under the solid waste program but can be an acceptable feedstock for composting at a facility that has met solid waste permitting requirements. Biosolids is not considered further in the County's planning for management of organic materials.

5.5.4 Agricultural Wastes

Agricultural wastes are regulated in Washington under WAC 173-350; however, most agriculture waste generated in Okanogan County never enters the waste stream and is most often disposed on site. There are limited data on the specific types and quantities of livestock that produce wastes or on the farm acreage and crops being cultivated in the County and cities. The three principal methods for disposing of agricultural wastes on site are:

- Land application (manure and crop residue)
- Burning (trimmings and crop residue)
- Use as animal feed (crop residue)

Agricultural waste includes manure and crop residues, which also includes vegetative materials from farming operations. Because these materials generally are not part of the organic material waste stream, they are not considered further in this Plan. Concentrated Animal Feeding Operations, although present in Okanogan County, are not considered under this Plan because they are regulated under the Clean Water Act's National Pollutant Discharge Elimination System (NPDES) permitting program.

Although the 2012 Plan included a discussion of agricultural waste, there is little agricultural waste disposed at the Okanogan County Central Landfill. Therefore, agricultural wastes are not under the purview of this Plan. As described above, agricultural wastes are most often disposed of on site, whether crop residues or animal manure.

5.6 Needs and Opportunities

There are several needs and opportunities associated with organics management and composting in Okanogan County. The amount of yard debris remaining in the County's waste stream is not precisely

known, but it can be assumed that there is sufficient material available that could be composted. The available waste composition data indicate that there is approximately 3,910 tons of yard debris in the waste stream and an estimated 6,600 tons of food waste are disposed into the garbage each year (Ecology 2016). If an Okanogan County urban residential organic materials collection program were fully implemented, there is the opportunity to remove approximately 11,720 tons of organics from the waste stream. Composting even just a portion of this waste would help the County meet its waste diversion goal and bring them closer to meeting the state goal of reducing food waste by 50 percent.

The County currently lacks private or publicly operated composting facilities that could compost organics removed from the solid waste stream, and there is insufficient space at the Central Landfill to support a composting operation. There is a need for a composting facility in a centralized location within Okanogan County. A facility sited near adequate modes of transportation (i.e., highway access) would better support the collection, marketing, and sales of the final product.

In addition to a non-governmental customer base (e.g., agricultural, commercial), there are opportunities for the County to participate in developing increased markets for the resulting compost products in cooperation with privately operated composting facilities including:

- Expanding compost use in road projects and other County and City applications
- Using compost in controlling erosion as sediment-catching berms and wood fiber hydro mulch
- Promoting the use of compost for application on rights-of-way throughout the County
- Using compost and mulches in focused erosion control applications in wildfire burned areas

Composting is not the only waste diversion option of recovered food waste. Some pre-consumer food wastes and food processing byproducts can be used by food banks, used for animal feed, or turned into other animal feed products by using processes other than composting. Under the EPA's Sustainable Management of Food program, Food Recovery Challenge, several resources and information are available to the public on food waste recovery and reduction.

It should also be noted that the 2012 Plan identified that yard debris in the waste stream likely increases when cities in Okanogan County experience a burn ban. Public education on how to handle yard waste may be an ongoing need, which could in turn increase the amount of material diverted to composting, and also provide a feed stock for composting operation—compost facilities are chronically short of wood material to serve as a bulking agent. The input of this additional material could maximize the capacity and productivity of compost facility operations.

The County also has an opportunity to engage with local non-profit recycling facilities, Cities, and CCT towards reducing organics from the solid waste stream. For example, recycling facilities owned and operated by CCT, Methow Recycles, and Green Okanogan could be useful formats for educating and promoting composting in the County.

5.7 Review of Alternatives

5.7.1 Collection

The evaluation of implementing residential food waste collection programs should include an assessment of availability and costs of specialized composting capacity, household containerization requirements, and the degree of change to existing collection systems required to implement food waste recovery.

The County could research collection programs for jurisdictions of similar size and demographics to ensure that advanced technologies in commingling and co-collection are pursued to the fullest extent possible to minimize program costs and maximize diversion. The County could explore potential cost savings due to collecting garbage and separated yard and/or food waste using the same truck. A consideration would be to examine a potential ordinance for yard and/or food waste curbside collection. If the cost estimate is competitive, it may benefit the County to work with a certificated hauler to provide organics collection.

Successful organic materials collection programs often use alternating week collection, with organic materials collected one week and residential wastes collected the next week. This represents a substantial change from the solid waste collection systems known and expected by residents, except in Methow Valley where recyclables are collected monthly (see Chapter 4). Garbage and organic materials (either all organics or yard debris only) could also be co-collected weekly by a split packer truck, which would require capital investment from hauling companies. Co-collection results in the two materials being dumped at the same end-location, which could require reloading and transport of the organics to another location for composting. Finally, the successful implementation of food waste collection requires an intensive education effort far beyond that required to implement user-pay curbside recycling.

5.7.2 Organics Input

5.7.2.1 Yard Waste

The County and the hauler could work together on educational efforts. Promotional activities may include direct mailing, a collection guide and calendar, development and distribution of brochures, and grade school promotional activities. Success of the promotions can be measured by tracking subscription rates in specific areas. The County could also solicit help from various youth programs such as 4-H, and Boy Scouts and Girl Scouts of America to get the word out about composting and the importance of recycling.

The County should continue and expand coordination with other agencies for educational and technical assistance programs that offer alternatives to open burning. Urban locations within the County may be affected by a burn ban periodically. The County should work with the SWAC to proactively promote alternatives to burning to assist the affected parties when a ban is implemented. There are several options that could be considered for supplying yard debris management alternatives to these areas. First, the County may want to establish a rural drop-off location where rural generators can drop off source-separated brushy and woody materials. Grass clippings and other green yard debris would not be included due to the odor-generating potential. Second, curbside collection options for yard debris could be made available in all areas affected by the burn ban. Options include:

- Provide curbside collection within the burn ban area. Negotiations will need to take place to determine a fair cost of service. There may be the need for urban and rural pricing.
- Coordinate with a certificated hauler to provide yard debris service in the burn-ban area outside of the service area.

5.7.2.2 Food Waste

Food waste could be problematic because of the high moisture of this material, potential for greater odor generation prior to collection, and the greater demand for (and potential shortage of) bulking agents such as yard debris. Other potential problems associated with large-scale food waste could include odors, vectors (insects and other vermin), contamination (most common are plastic film, plastic

garbage bags, rigid plastics, and glass), and end-product marketability issues. Although problematic, the County should consider options for reducing food waste in the solid waste stream.

The EPA's Food Recovery Hierarchy included in the United States 2030 Food Loss and Waste Reduction Goal, as well as the state's goal for reduced food waste, is summarized below in Table 5-2 with indication of possible alternatives available in the County.

Table 5-2. Alternatives to Landfilling Food Waste

Source Reduction	Educating residents about ways to cut down on food waste before it happens. Provide links to EPA resources on the topic on County and Health District websites. This requires cultural and behavioral changes.
Food Donations	Non-perishable and unspoiled perishable food can be donated to food banks, soup kitchens, shelters, and other charitable organizations.
Animal Feed	Some types of food discards, such as inedible produce, can be used directly as animal feed. Other types such as baked goods can be converted into a high-quality pelletized poultry food.
Rendering	Meat products and cooking oils can be used in the rendering industry and converted into animal food, cosmetics, soap, and other products.
Composting	This method offers a range of options, from aerated windrows, where organic materials are formed into long piles, to in-vessel composting, where waste is enclosed in a temperature- and moisture-controlled chamber, to vermicomposting, which uses worms to break down materials.

5.7.3 Organics Processing

As described under existing conditions, the County lacks capacity at the Central Landfill for an organics processing facility, and favors private processing over a County-owned and operated processing facility. The County and the SWAC could research the potential for privately operated processing facilities in jurisdictions of similar size and demographics to identify the potential for operations in the County.

5.8 Recommendations

Recommendations for the managing of organic materials were developed by the County SWAC Comprehensive Plan Subcommittee during SWAC meetings in fall 2017.

All of the following recommendations will be pursued, in conjunction with other organizations or entities, with the goal of implementation during the 6-year planning period that ends in 2024. Implementation of the following recommendations is limited subject to continued availability of state funding.

Recommendation 5-1—Economically Feasible Opportunities. Continue to investigate economically feasible opportunities for organic materials management, and keep the SWAC informed of any new processes that might be beneficial.

Recommendation 5-2 —Support Compost Facility Development by Others. Continue to support other entities initiating compost facility development, either public or private. The County will provide input to the understanding of feed stocks (e.g., agricultural, DNR Firewise activities), impact on collection, landfill life, facility siting, and funding mechanisms.

Recommendation 5-3—Community Education. Educate residents about ways to cut down on food waste before it is generated through provisions such as links to EPA resources on County and OCPH websites, or introducing the topic through community events or other public formats.

Recommendation 5-4—Non-Residential Organics Education. Educate non-residential generators of organic waste about ways to reduce food waste (e.g., donation of non-perishable and unspoiled perishables to food banks, or conversion to animal feed).

Recommendation 5-5—Community Engagement Opportunities. Support demonstration gardens in at least one of its parks and other locations to educate residents about the benefits of yard debris composting or vermicomposting. The County could offer support through promotions (e.g., advertisement), or staff time when available.

Recommendation 5-6—Vermicomposting. Encourage vermicomposting projects. Home composting of food waste should be encouraged through public education on the proper methods for vermicomposting or incorporation into compost bins.

6. COLLECTION

This chapter describes route-based solid waste collection systems, focusing primarily on refuse collection. Collection through County-operated transfer stations is discussed in Chapter 7.

6.1 Existing Conditions

6.1.1 Regulatory Environment

Solid waste collection in Okanogan County is regulated under three authorities: the Washington Utilities and Transportation Commission (WUTC), municipal collection contracts with some Cities, and tribal government on CCT lands. The County has no authority to operate or contract for garbage collection services except in the case where no WUTC-certificated hauler is willing to provide service. However, counties do have authority to provide for recycling collection services via contract or through a service level ordinance directing WUTC-certificated haulers to provide services and include the costs in their rates.

The WUTC regulates solid waste collection companies ("haulers") under the authority of RCW 81.77. In brief, the law provides for regulated garbage collection companies to operate within specified geographical (and certificated) areas. These certificated areas are typically exclusive, although in some cases more than one hauler has rights to a particular area. Haulers charge uniform rates, subject to WUTC approval across each certificated area. Haulers must provide collection services at the specified tariffs to all customers within their certificated area. The original certificates were awarded in 1961. These certificates are perpetual unless a hauler fails to offer adequate service, cedes, or sells all or part of their certificated area to another hauler.

Haulers prepare rate filings to the WUTC for services consistent with the Plan and the County service level ordinance (if any). The WUTC evaluates and then approves, denies, or suspends proposed rates as well as providing general regulatory oversight. Ratepayers, through an annual fee paid by the hauler, pay for WUTC rate review and regulatory oversight service.

Certificated collection companies operating in Okanogan County are listed in Table 6-1. Okanogan County is serviced by five WUTC certified haulers, Bob Pelligrini DBA Upper Valley, and Methow Waste have the two largest WUTC service areas in Okanogan County. Sunrise Disposal, Zippy Disposal Service, Torre Refuse & Recycling (Sunshine Disposal), and Waste Management have very small portions of their certificated areas within Okanogan County; therefore, they have a minimal customer base within the County.

Geographical areas covered by certificated haulers are shown on Figure 6-1. Note that these areas are the approximate certificate boundaries, not necessarily areas in which the respective company has customers.

Cities have the option of providing for solid waste collection either through municipal crews, contracted services, or deferring to WUTC-certificated haulers. If Cities do not elect to exert local authority over collection, collection services will be provided by the hauler with the underlying certificate for the geographical area that includes the city.

Within Okanogan County, Brewster, Coulee Dam, Elmer City,[4] Okanogan, Omak, Oroville, Pateros, and Riverside have municipal contracts for residential and commercial solid waste collection. City of Oroville

[4] Coulee Dam and Elmer City are not within the planning area.

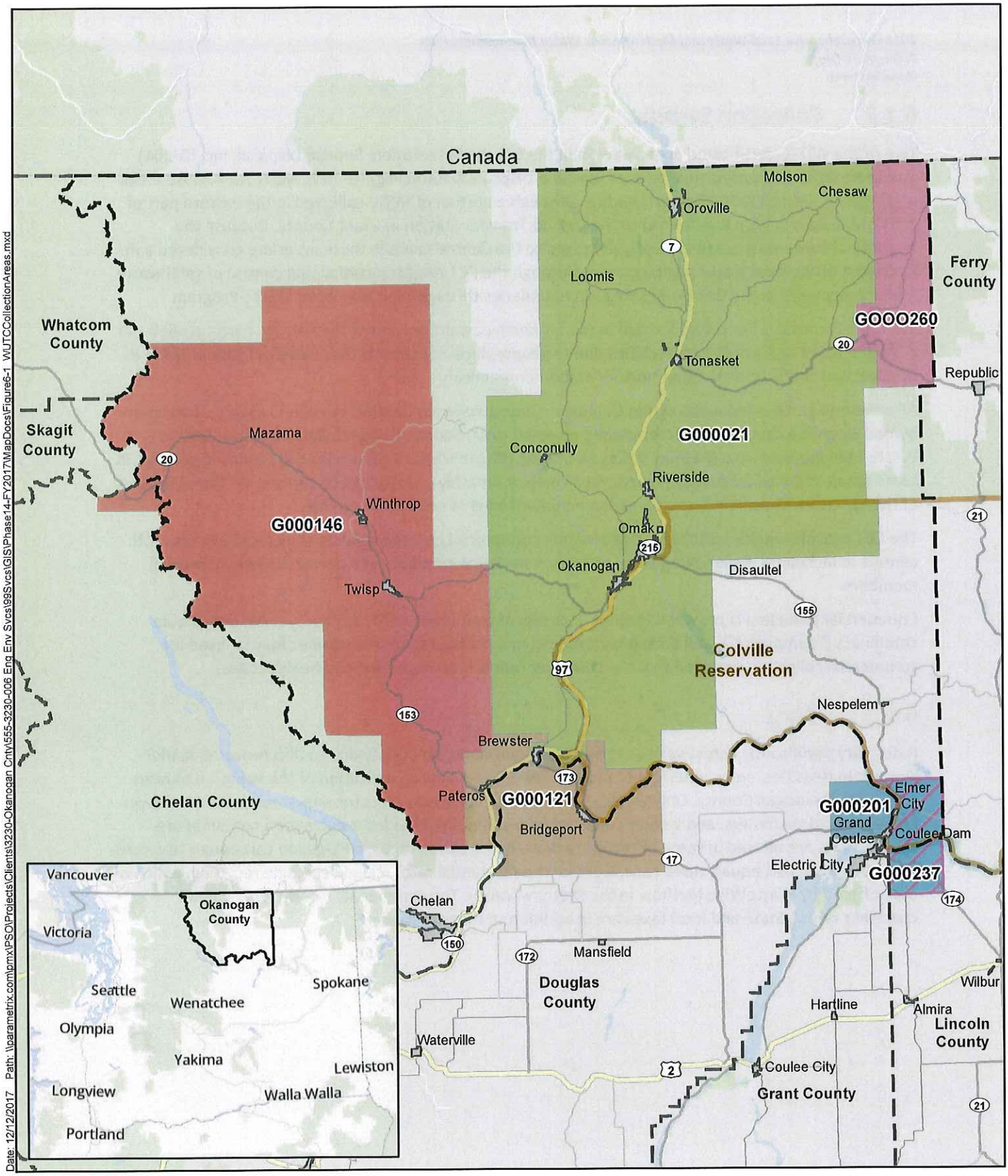
provides garbage collection service. Conconully, Tonasket, Twisp, and Winthrop have not asserted local authority and consequently are serviced under WUTC authority. Table 6-2 lists collection companies operating within each city and the population of each city.

Table 6-1. WUTC-Certificated Collection Companies in Okanogan County

Firm	WUTC Certificate Number
Robert J. Pelligrini DBA Upper Valley Disposal 43707 Highway 97 Oroville, WA 98844	G-21
Zippy Disposal Service P.O. Box 1717 Chelan, WA 98816	G-121
Methow Valley Sanitation Service, Inc. DBA WasteWise Methow P.O. Box 656 Twisp, WA 98856	G-146
Sunrise Disposal, Inc. P.O. Box 1267 Okanogan, WA 98840	G-201
Waste Management of Washington, Inc. 720 4th Avenue, Suite 400 Kirkland, WA 98033	G-237
Torre Refuse & Recycling, LLC DBA Sunshine Disposal & Recycling P.O. Box 13369 Spokane Valley, WA 99213	G-260

Table 6-2. Solid Waste Collection in Cities of Okanogan County

City	Collection Company	2016 Population
Brewster	Sunrise Disposal, Inc.	2,395
Conconully	Upper Valley Disposal/WUTC	230
Nespelem	Colville Nations	245
Okanogan	Sunrise Disposal, Inc.	2,595
Omak	Sunrise Disposal, Inc.	4,925
Oroville	Municipal Crews	1,710
Pateros	Zippy Disposal Service/WUTC	560
Riverside	Sunrise Disposal, Inc./WUTC	285
Tonasket	Upper Valley Disposal/WUTC	1,110
Twisp	Methow Valley Sanitation/WUTC	950
Winthrop	Methow Valley Sanitation/WUTC	430



Parametrix

Source: © Mapbox, © OpenStreetMap, State of Washington, Okanogan County Comprehensive Solid Waste Management Plan 2012

Figure 6-1. WUTC Collection Areas
Okanogan County
Solid Waste Master Plan

Okanogan County, WA

6.1.2 Collection Systems

Two of the WUTC-certificated areas are within the Colville Reservation: Sunrise Disposal, Inc. (G-201) and Torre Refuse Recycling and Refuse (Sunshine Disposal & Recycling) (G-260). MSW from those areas is typically delivered to the Central Landfill, although a portion of MSW collected in the eastern part of the Colville Reservation is delivered to the Delano Transfer Station in Grant County. Because the majority of these wastes are currently delivered to the Central Landfill, these areas are considered a de facto part of the solid waste planning area, although the CCT retains jurisdictional control of solid waste management within the Colville Reservation boundaries through their own Solid Waste Program.

Sunshine Disposal & Recycling, located in the far north eastern portion of the County, currently delivers collected MSW to Ferry County facilities due to geographical constraints that make delivery of MSW to the Central Landfill or an existing transfer station impractical.

All cities and certificated areas within Okanogan County have residential collection based on customer-owned 32-gallon cans or contractor-owned wheeled carts. Sunrise Disposal, Zippy Disposal Service, Waste Management, and Methow Valley Sanitation (WasteWise) all offer mini-can service levels and, in some cases, reduced frequency (every other-week or monthly) service at a lower cost. At the other end of the spectrum Oroville offers a 65-gallon minimum level of residential service.

The CCT provide weekly curbside residential and commercial garbage service. They also have drop-off centers in Inchelium, Keller, Nespelem, and Omak for tribal members and permit-holding non-tribal members.

Commercial collection is provided through a variety of containers, including cans, carts, detachable containers ("dumpsters"), and drop boxes. Almost any configuration of container may be used for commercial collection provided that the container meets local municipal and health codes.

6.1.3 Rates

Rates vary significantly across various service areas in Okanogan County due to differences in hauler size, route densities, and economies of scale. Table 6-3 provides an indication of the variation of rates present in Okanogan County. Only weekly 32-gallon can collection rates for one or two cans are shown for residential customers, and weekly collection of a company-provided 1-cubic-yard container are shown. Carts are offered in some of the more densely populated areas; a 65-gallon cart equals two cans, and a 95-gallon cart equals three cans. None of the residential rates include curbside recycling, which is only offered by WasteWise Methow in the Methow Valley. The commercial rate shown includes container rental. State and local taxes are in addition to the rate shown.

Table 6-3. 2016 Solid Waste Collection Rates in Okanogan County Areas (monthly charges for weekly services)

		Residential		Commercial
Service Area	Mini-can	1 can	2 cans	1 yard
Brewster		13.86	15.92	
Conconully		16.57	22.60	Disposal Fee: 37.00 Container Service: 15.51 a month
Okanogan	11.75	16.11	20.98[1]	
Omak	9.74[2]	12.16	17.05	74.75
Oroville	--	13.50	16.50	
Pateros	--	--	20.30	--
Riverside	--	--	--	--
Tonasket	--	16.57	22.60	Disposal Fee: 37.00/ Container Service: 15.51 a month
Twisp	--	16.90	23.80	Disposal Fee: 14.80 non-compacted, 37.00 compacted / Container Service: 14.90 a month
Winthrop	--	16.90	23.80	Disposal Fee: 14.80 non-compacted, 37.00 compacted / Container Service: 14.90 a month
Methow Valley Sanitation	15.95	16.90	23.80	Disposal Fee: 14.80 non-compacted, 37.00 compacted / Container Service: 14.90 a month
Sunrise Disposal, Inc.	13.65	16.35	20.55	Disposal Service 37.00/ Container Service: 15.51 a month
Zippy Disposal Service	--	16.35	20.55	Disposal Fee: 14.80 non-compacted, 37.00 compacted / Container Service: 16.30 a month
Upper Valley Disposal	N/A	16.31	22.25	Disposal Fee: 37.00/ Container Rent: 15.51 a month

[1] Rate for a 65 gallon cart (which is essentially 2 cans)

[3] For customers 65 years of age or older only.

6.2 Needs and Opportunities

6.2.1 Regulatory and Administrative

A number of cities and haulers do not have mini-can or reduced collection frequency for residential services. This reduces the incentive for waste reduction and recycling and likely reduces the number of potential customers in rural areas. Residents who dispose of less than one can of materials per week and are in areas without mandatory collection may not have an appropriately sized garbage collection alternative; instead, they may self-haul to avoid paying for excessive services.

Cities with contracts may have the opportunity to reduce customer rates though periodic competitive procurement processes for collection services. The extent to which Cities negotiate rather than bid is unknown. The lack of competitive procurement is sometimes raised as an issue by ratepayers.

With the expansion of cities within Okanogan County, some questions might arise as to jurisdiction over collection services in annexed areas. RCW 35.02.160 (RCW 35A.14.900 for Code cities) provides for the

orderly cancellation or acquisition of franchises for public service businesses in territories that have been annexed by Cities. A potential conflict exists when unincorporated areas served by WUTC-certificated haulers are annexed by Cities using contracted collection services. The law requires annexing Cities to purchase rights or grant a franchise of not less than 7 years to such businesses. Since most Cities in Okanogan County contract with the underlying WUTC-certificated haulers, this has not resulted in conflicts in the past. However, if a City attempted to bid for collection within their entire city limits or contracted with another hauler, a potential conflict between service providers or service levels between areas might exist.

6.2.2 Disposal and Collection Districts

Needs and opportunities, alternatives, and recommendations related to disposal and collection districts are discussed in Chapter 11.

6.2.3 Rate Structures

Existing residential and garbage collection rate structures are largely based on WUTC cost-of-service formulas. Some Cities may wish to encourage additional waste reduction and recycling through the use of incentive rate structures that artificially increase the costs of higher service levels (e.g., two- and three-can rates) while reducing lower service levels (e.g., mini-can and one-can rates).

6.2.4 Physical Systems

Unimproved private roads have caused some concern for haulers. At this time, haulers negotiate with residences served by private roads to determine whether housing clusters accessible via private roads can be serviced by collection vehicles. Houses along primitive roads may be assessed a surcharge. If the hauler believes that the private road cannot be safely negotiated by their collection vehicles, the residents are asked to place garbage and recycling containers on the nearest public road.

6.3 Alternatives

6.3.1 Regulatory and Administrative

Alternatives for adding additional levels of service to city contract and WUTC-certificated service areas include:

- In the case of contract cities or tribal areas, additional service levels can be included when contracts are rebid or renegotiated. Cities may need to revisit current municipal codes to ensure that reduced container sizes and/or reduced frequency collection is allowed.
- In the case of WUTC-certificated areas, the County would need to work with haulers to encourage them to include additional service levels within their tariffs. The County may be able to enact a service level ordinance to ensure consistent service levels across the County, although the degree to which this is necessary or advisable is uncertain.

There are two alternatives for the interlocal coordination of recycling services and service boundary changes due to annexation by Cities:

- The County could provide technical assistance to Cities by drafting a uniform franchise agreement that could be applied each time city boundaries are expanded. The agreement could set a conversion franchise period to clarify ownership issues related to refuse containers and

define procedures to be used if the affected City bids for solid waste collection services during the period of the conversion franchise.

- The County and Cities could include provisions for coordinating garbage collection services and rate structures for both incorporated and annexation areas in interlocal solid waste agreements.

6.3.2 Rate Structures

Rate design alternatives are almost unlimited. Within WUTC-regulated areas, only their cost-of-service methodology is usually allowed. On the other hand, Cities can shift rates as desired. The following alternatives are available for developing rates:

- Cost of Service Rates. Cost-of-service rates use a defined methodology to distribute the costs of collection between various customer classes and service levels. Depending on how costs are distributed, the difference between service level rates can be considerable. For example, distributing all costs by container weight results in near-linear rates. Current WUTC cost-of-service formulas are based on distributing most costs by customer, with only disposal costs and other minor costs based on container size. Thus, current cost-of-service rates have moderate differences between various service levels.
- Linear or Near-Linear Rates. Linear or near-linear incentive rates are set artificially high to encourage waste reduction and diversion. In the case of linear rates, the charge for two cans of garbage is twice that for one can of garbage. Rates are set to be revenue-neutral to the hauler. These rates are often used in communities with curbside recycling to encourage participation and other waste reduction. This type of rate structure is rarely used unless convenient recycling opportunities are also available.
- Weight-Based Rates. A number of cities, including Seattle, have experimented with "garbage by the pound" pilots where residents and/or businesses are charged based on the actual amount of garbage placed in their containers. While this type of metered service may be appropriate in the future, current problems with certifying scales make this an evolving option, at best.

6.3.3 Physical Systems

The collection of solid waste by private collection companies on private roads does not directly impact the County or its overall solid waste management objectives; however, haulers have raised concerns regarding unimproved private roads. The County does have the following alternatives for facilitating better outcomes for the collection companies:

- Education programs could be implemented to encourage well-designed and constructed private roads. Educational materials could be provided to developers and homebuilders at the time construction permits are submitted or received.
- Customers could be directed to place garbage and recycling containers on the nearest accessible public road.

6.4 Recommendations

Collection system recommendations were developed by the County SWAC during a meeting in Fall 2017.

All of the following recommendations will be pursued, in conjunction with other organizations or entities, with the goal of implementation during the 6-year planning period that ends in 2024.

Implementation of the following recommendations are limited subject to continued availability of state funding.

Recommendation 6-1—Minimum Container Sizes and Residential Service Levels. Review existing contracts and city codes to ensure that appropriate garbage service levels and incentives are available to residents and businesses that produce relatively low volumes of waste. The cities should perform this task. Minimum service levels such as 20-gallon mini-cans, single 32-gallon containers or once-per-month collection will be considered and implemented where appropriate. The County will work with WUTC-certificated haulers to expand service level options that encourage waste prevention and recycling. During this planning period, the County does not expect to increase staff hours or expenditures for minimum container sizes and residential service levels.

Recommendation 6-2—Incentive Rate Structures. Consider potential incentive rate structures when negotiating or bidding contracts for cities or filing WUTC rates. The cities and haulers are responsible for this task. Incentive rates will be implemented, where feasible, to support waste reduction and recycling goals. During this planning period, the County does not expect to increase staff hours or expenditures for incentive rate structures.

Recommendation 6-3—Private Roads. Work with customers to encourage appropriate road maintenance to minimize damage and wear to roads and trucks. The haulers will be responsible for this task. When private roads are inadequate, haulers will collect garbage on the nearest public road. During this planning period, the County does not expect to increase staff hours or expenditures for private roads.

7. TRANSFER

Okanogan County operates three transfer stations serving self-haulers and commercial garbage collection companies in the northern, western, and southern portions of the County. This chapter reviews these transfer operations and provides recommendations for the transfer component of the County's solid waste system.

7.1 Existing Conditions

As small municipal and county landfills were closed in the 1980s, they were replaced by drop-box transfer stations, which were used to transfer wastes to either the Okanogan County Landfill or out of County as the Okanogan County Landfill was closing. All wastes and recyclables from these transfer stations are now hauled to the Central Landfill. The following sections describe each of the transfer stations. Figure 7-1 indicates transfer station locations and wastesheds[5].

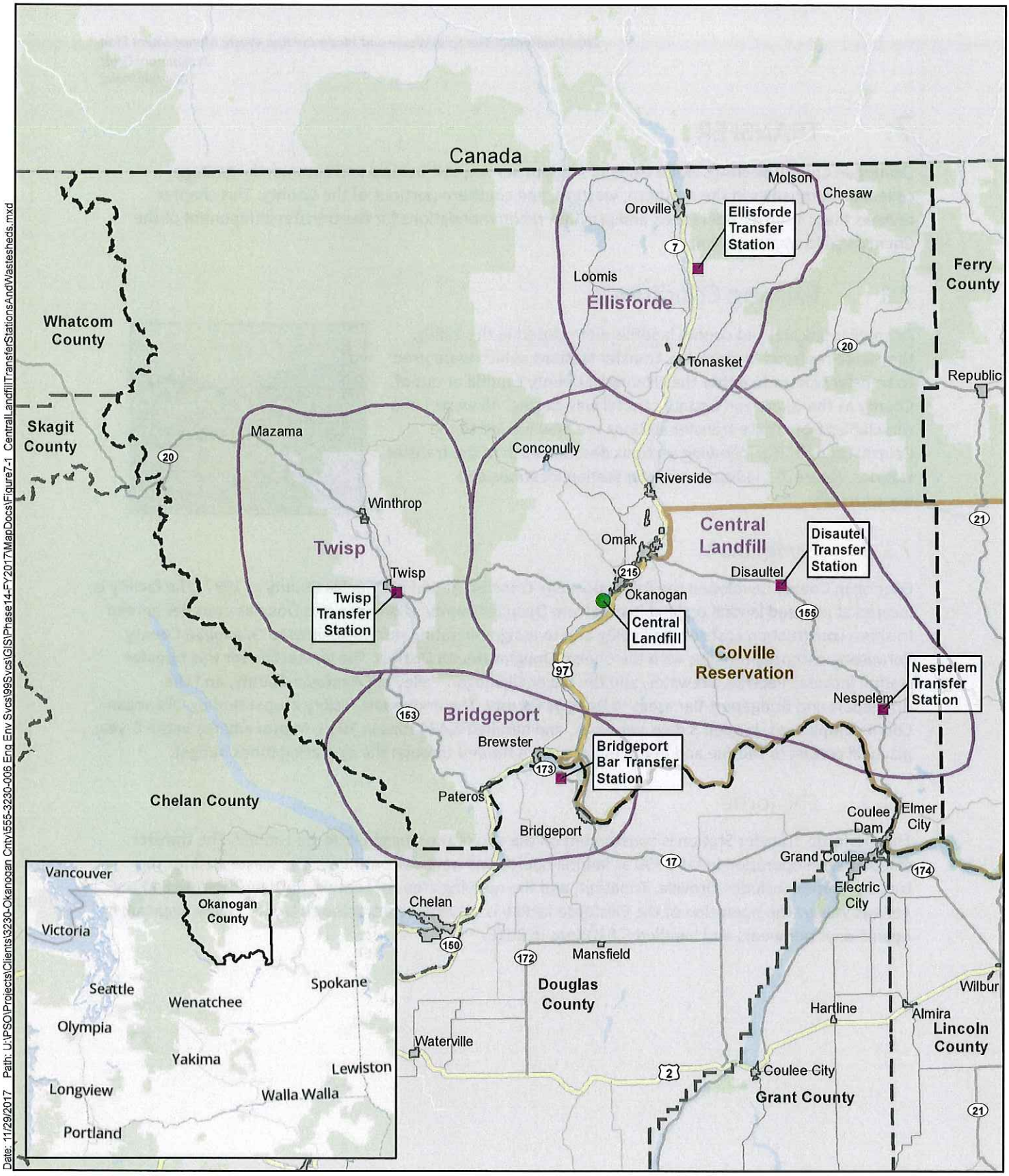
7.1.1 Bridgeport

Okanogan County developed the Bridgeport Bar Transfer Station in Douglas County in 1987. The facility is located at a closed landfill on land leased from Douglas County. Okanogan and Douglas Counties agreed to share construction costs of the facility and to assign operating responsibilities to Okanogan County. Permitting authority remains with the Chelan-Douglas Health District. The wasteshed for this transfer station includes Pateros, Brewster, and the lower Okanogan Valley in Okanogan County, and the Bridgeport and Bridgeport Bar areas in Douglas County. The Bridgeport facility is operated by Okanogan County employees, is open 3 days per week, and handled 6,434 tons in 2016. Improvements in the 6-year plan will consist of routine and major maintenance funded through the operating funds budget.

7.1.2 Ellisforde

The Ellisforde Transfer Station is constructed on the site of the closed Ellisforde Landfill. The transfer station began operation in fall 1990 as landfill operations were discontinued. The wasteshed for this transfer station includes Oroville, Tonasket, and the outlying areas of Loomis, Chesaw/Molson, and the Aeneas Valley. The operation of the Ellisforde facility is currently contracted to Upper Valley Disposal, is open 5 days per week, and handled 6,810 tons in 2016.

[5] A wasteshed is the area from which the disposal facilities draws wastes and is roughly analogous to the term "watershed" as it applies to drainages.



Date: 11/29/2017 Path: U:\PSO\Projects\Clients\3230-Okanogan Cnty\555-3230-006 Eng Env Svcs\99Svcs\GIS\Phase14-FY2017\MapDocs\Figure7-1 CentralLandfillTransferStationsAndWastesheds.mxd

Parametrix

Source: © Mapbox, © OpenStreetMap, State of Washington, Okanogan County Comprehensive Solid Waste Management Plan 2012

0 5 10 20 Miles

- Tribal Boundary
- Central Landfill
- Transfer Station
- Wastesheds
- Okanogan County
- City Boundary

Figure 7-1. Central Landfill, Transfer Stations, and Wastesheds
Okanogan County
Solid Waste Master Plan

Okanogan County, WA

7.1.3 Twisp

The Twisp Transfer Station is directly south of the Town of Twisp and is located on industrial property adjacent to the wastewater treatment plant. The location was selected for convenience and operational suitability because the location of the closed Twisp Landfill offered no suitable transfer site. The wasteshed for this transfer station includes Twisp, Winthrop, and the Methow Valley. The Twisp facility is operated by Okanogan County employees, is open 3 days per week, and handled 4,385 tons in 2016. Improvements in the 6-year plan consist of routine and major maintenance funded through the operating funds budget.

These three transfer stations are all operated under County authority as part of the County's solid waste system. The CCT operate four drop-box transfer stations on the Colville Reservation, two of which are in Okanogan County. The CCT facilities at Nespelem and Disautel transfer waste to the Central Landfill. No other municipal or private transfer stations are currently authorized under this Plan.

The Central Landfill and all County transfer stations charge uniform disposal fees. The costs of operating the transfer stations and hauling drop boxes to the Central Landfill are funded as part of the overall solid waste management system.

7.2 Needs and Opportunities

The existing transfer system has adequate capacity to handle waste quantities for the foreseeable future. Each of the transfer stations handles an annualized average volume of 100 to 135 tons per week, with higher waste quantities in the summer and correspondingly lower quantities in the winter. If waste quantities increase significantly or if the County shifts to a waste export disposal system, some changes in handling systems may be necessary. However, these changes (e.g., shifting to open-topped transfer trailers) can be made incrementally, as waste volumes increase.

Although the current drop-box system is not always the best choice for moving large quantities of waste, it allows for frequent container replacement, which can be important during the summer when putrescible wastes rapidly decompose.

An additional transfer station may need to be developed in the eastern portion of the County to adequately service the Nespelem area and the Elmer City/Coulee Dam areas, if the latter Cities wish to rejoin the County solid waste system. However, this area is currently outside the planning area and would need careful consideration prior to pursuing expanding the current system.

Some transfer facilities do not currently have a full range of recycling opportunities available to self-haulers. This is addressed in Chapter 4.

At some point in the future, the transfer station serving the Brewster/Pateros area should be relocated from the Bridgeport Bar site to a closer location. While this is a long-term need, it is unlikely that the County will have funds during this planning period to perform activities other than initial siting and feasibility analysis. This transfer station relocation is listed as one of the County's long-term needs for the 20-year planning horizon.

7.3 Alternatives

Additional transfer stations might be appropriate to serve the eastern portion of the County. However, the capital and added operating costs would likely cost more than the additional waste volumes would gain the County. Thus, a careful financial evaluation would be necessary to determine whether an additional station could be added without increasing net system costs.

Alternatively, a local transfer station could be developed and operated by a sponsoring jurisdiction (as is currently done on the Colville Reservation), with the MSW transferred to the Central Landfill. This may be the most cost-effective approach for accommodating the Elmer City/Coulee Dam area, if those Cities wish to rejoin the Okanogan County system.

7.4 Recommendations

Transfer recommendations were developed by the County SWAC during a meeting in fall 2017.

All of the following recommendations will be pursued, in conjunction with other organizations or entities, with the goal of implementation during the 6-year planning period that ends in 2024. Implementation of the following recommendations is limited subject to continued availability of state funding.

Recommendation 7-1—Continue the Existing Transfer System. Continue to operate the Bridgeport, Ellisforde, and Twisp transfer stations. The County and SWAC will continue to review alternative funding options, including variable tipping fees at the transfer stations and Central Landfill. Tipping fees are currently uniform at all facilities Countywide, but will be changed in the future. Within the 6-year planning period, the County will evaluate the efficacy of variable tipping fees, and other types of rate adjustments, and may implement a new fee schedule accordingly. During this planning period, the County does not expect to increase transfer station staff hours or expenditures beyond inflationary and disposal rate (tonnage) increases, unless determined to be necessary for safety or operational purposes.

Recommendation 7-2—Evaluate Additional Transfer Station. Evaluate the potential costs and revenues associated with operating an additional facility if Elmer City and Coulee Dam petition to re-enter the Okanogan County solid waste system, or if operating an additional or replacement facility to serve other populations is considered feasible. The County will operate an additional transfer station only if net revenues meet or exceed the capital and operating costs of the additional facility. During this plan period, no staff hours or expenses will be incurred for evaluating an additional transfer station.

Recommendation 7-3—Non-County Facilities. Allow private, municipal, and tribal transfer stations with the following provisos: 1) they meet all land use, health district, and other agency permitting requirements; 2) they do not detract from the financial viability of the County transfer system; and 3) all collected MSW is delivered to the Central Landfill or other facility designated by the County. During this plan period, no staff hours or expenses will be incurred for non-County facilities.

8. LANDFILL DISPOSAL

All municipal solid waste (MSW) delivered to outlying Okanogan County transfer stations and the public drop-off site at the Central Landfill and Recycling Center is currently landfilled. This chapter describes the previously closed landfills within the County and the County's existing landfill capacity, as well as future disposal alternatives.

8.1 Existing Conditions

8.1.1 Closed Landfills

Prior to the early 1990s, a number of small local landfills served various areas of Okanogan County. These landfills were typically unlined and predated modern landfill standards. All of these landfills were closed due to either WAC 173-301 or WAC 173-304 standards prior to the implementation of the more stringent federal Resource Conservation and Recovery Act (RCRA) standards. These closed landfills include the Okanogan, Ellisforde, Twisp, and Pateros landfills.

8.1.1.1 Okanogan County Landfill

The Okanogan County Landfill operated until shortly after the County's new Central Landfill opened in early 1994. During the 1980s, other landfills were closed, and their wastes were transferred to the Okanogan County Landfill. From 1990 (when the Ellisforde Landfill closed) until late 1993, the Okanogan County Landfill was the only operating landfill in the County. The Okanogan County Landfill's proximity to the Okanogan Municipal Airport was in violation of the location standards of the State's Minimum Function Standards (WAC 173-304 (130)). The combination of location standards, physical limitations at the site, and the federal permit complications of the landfill's location within the Colville Reservation resulted in active efforts to site a new landfill and resulted in the Okanogan County Landfill's closure in 1994, once the Central Landfill was operational. The site was closed to WAC 173-304 standards with a lined closure system. The site is currently in the post-closure monitoring phase, which will continue for the coming years in order to acquire additional groundwater data.

8.1.1.2 Ellisforde Landfill

The County-owned Ellisforde Landfill was closed in September 1990. This closure was necessitated by the depletion of capacity, physical limitations that prevented expansion, and the high costs of maintaining and operating a small landfill as regulations became more stringent. The site was closed to WAC 173-304 standards with a lined closure system, and is currently in the post-closure monitoring phase. Post-closure monitoring will be eliminated in the near future if environmental and regulatory requirement can be satisfied because the site has stabilized with no evidence of groundwater contamination or landfill gas migration.

8.1.1.3 Pateros Landfill

The Pateros Landfill is owned and was operated by the City of Pateros, and ceased accepting waste in May 1987. The landfill contains approximately 16,380 cubic yards of household waste, construction debris, and yard waste. The site was closed in accordance with WAC 173-301 standards, and is currently in the post-closure monitoring phase by the County.

8.1.1.4 Twisp Landfill

The Twisp Landfill was closed in 1986 in accordance with recommendations from the 1984 Solid Waste Plan. Closure was accomplished in accordance with a closure plan accepted by Ecology. Two groundwater monitoring wells were installed and are currently monitored by County staff.

8.1.2 Central Landfill

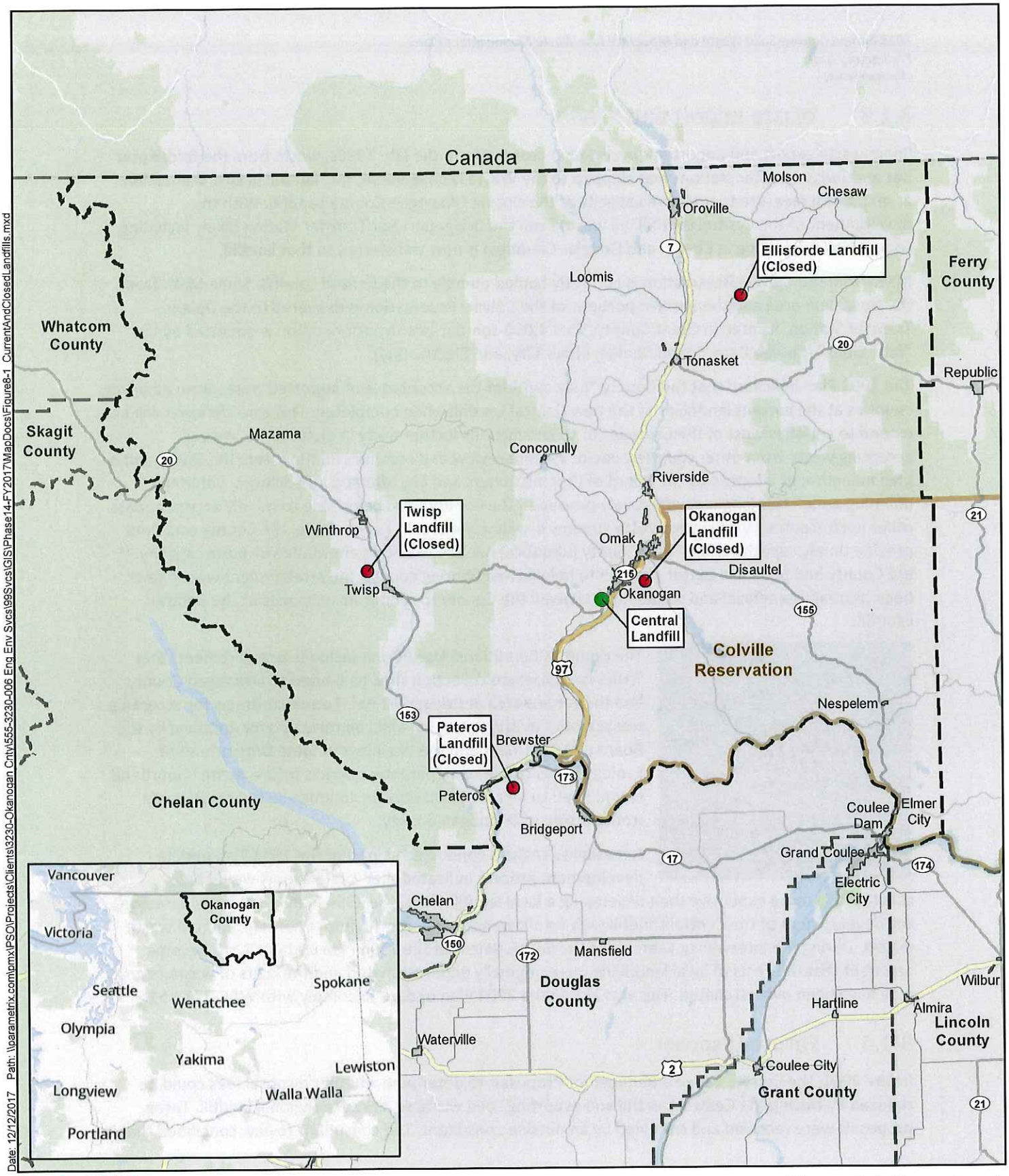
During the late 1980s, the County accelerated efforts to site a replacement landfill. Preliminary site selection and environmental review of two candidate sites were completed in 1989. In 1990, the SWAC recommended the selection and development of the "Rifle Range South" site, south of the city of Okanogan on the B&O Road. A Conditional Use Permit was granted by the County Board of Adjustment on May 6, 1991. Site design and construction occurred during 1992 and 1993, in compliance with RCW 70.95.165c and WAC 173-351, and the site opened for waste acceptance in early 1994.

The Central Landfill is located on 185 acres of County land, including 40 acres set aside as wildlife habitat mitigation. The site includes an animal shelter, a law enforcement shooting range, and the County Road Department's gravel pit. The Central Landfill is lined and is fully compliant with current Ecology standards for non-arid landfills. The actual fill footprint will be 24 acres over the 30- to 35-year planned life of the landfill. As of the end of 2016, a total of 610,000 tons of MSW had been landfilled in Cell #1 and Cell #2. When Cell #1 and #2 reach capacity, operations will extend into the constructed Cell #3. An additional well was constructed in 2010 with water rights on adjoining County property for the purpose of providing another water source to meet the Central Landfill Conditional Use Permit. Construction of the delivery pipeline occurred in the spring of 2012.

The initial capital costs of the Central Landfill were approximately $4 million. The landfill was financed through two capital construction bonds, with a current debt service requirement of approximately $257,400 per year (equivalent to about $8.46 per ton of landfilled waste). One capital construction bond was paid off in 2007 and the other capital construction bond was paid off in 2012. Future closure and cell construction will be financed through current operations. Approximately $537,000 per year, equivalent to about $17.30 per ton of landfilled waste, is set aside for closure and pre-financing of future cells.

All MSW and some construction/demolition wastes generated in the planning area are delivered to the Central Landfill, both through direct haul by generators and collection companies, and through transfer from the three County transfer stations. The landfill is currently open Tuesday through Saturday.

Figure 8-1 indicates the location of previously closed landfills as well as the Central Landfill.



Parametrix

Source: © Mapbox, © OpenStreetMap, State of Washington, Okanogan County Comprehensive Solid Waste Management Plan 2012

0 5 10 20 Miles

- Central Landfill (Current)
- Closed Landfill
- Okanogan County
- City Boundary
- Tribal Boundary

Figure 8-1. Current and Closed Landfills
Okanogan County
Solid Waste Master Plan

Okanogan County, WA

8.1.3 Waste Import and Export

Some waste export and import has occurred in past years. In the late 1980s, waste from the Bridgeport Bar and Twisp transfer stations was shipped to the Waste Management, Inc. landfill in East Wenatchee as an interim measure to preserve capacity at the closing Okanogan County Landfill. With the development of the Central Landfill, all waste from the Bridgeport Bar Transfer Station (likely including some MSW originating in Chelan and Douglas Counties) is now transferred to that landfill.

MSW from the Colville Reservation is currently hauled directly to the Central Landfill. Some MSW from the Nespelem area and the eastern portions of the Colville Reservation is delivered to the Delano Transfer Station, located in Grant County. That 4,000-ton-per-year transfer station is operated by the "four Cities" (Coulee Dam, Grand Coulee, Elmer City, and Electric City).

The 1993 Plan indicated that the County "may consider the acceptance of imported waste from adjacent counties at the current landfill or at the new Central Landfill when completed. This consideration will not extend to counties west of the Cascades or to jurisdictions further away in distance." However, accepting waste from other counties would "require review and recommendation from the SWAC and a plan amendment adopted by the Board of Commissioners and any affected jurisdictions within the planning area." This language effectively precluded the County from being able to rapidly accommodate other north-central Washington waste streams in a timely manner. For example, the County could not provide timely capacity when Ferry County (Republic) needed to obtain alternative disposal capacity. If the County had been in a better position to help its neighboring county, the arrangement would have been mutually beneficial and would have allowed the County to reduce its unit costs at the Central Landfill.

The County's Conditional Use Permit includes a requirement[6] that "(t)he landfill waste collection shall be limited to Okanogan County, and the service area at Bridgeport Bar. Future contracts for accepting waste from the Bridgeport Bar shall be reviewed for approval by the Board of Adjustment and the Washington State Department of Ecology." This condition apparently restricts future waste import and would need to be addressed prior to committing to accept waste from outside of Okanogan County.

A feasibility analysis conducted as part of the 1994 Plan update development process indicated that waste export would be substantially more expensive than developing a local landfill. Thus, the 1994 Plan update was based on the development of the Central Landfill with no allowance made for the future consideration of waste export. During the intervening years since the development of the 1994 Plan update, it has become apparent that the costs of local landfilling were originally underestimated and the costs of waste export may have been overestimated. This was also in the 2004 Plan update to comply with WAC-173-351.

8.1.4 Future Disposal

In late 2001, the County issued a Request for Proposals to determine whether disposal fees could be reduced by closing the Central Landfill and exporting solid waste to a private regional landfill. Three proposals were received and reviewed by an outside consultant. The consultant review concluded that it

[6] CUP 91-1, condition 17

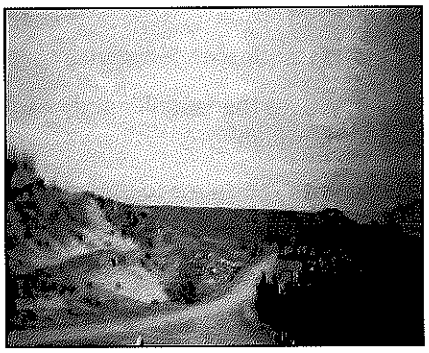
would be difficult to determine the precise financial impacts of the proposals without having better tracking data on the relative costs of the various components of the solid waste system. Nevertheless, there did not appear to be any compelling financial advantage to proceeding with negotiations with any of the proposers. This analysis was presented to the SWAC and County Commissioners in June 2002.

Since 2012, the County has developed and operated Cell #2A and Cell #2B at the Central Landfill. In 2014, the County developed Cell #3 for future capacity. The County will begin operation of Cell #3 in 2018, with projected operational capacity through 2021. The County plans to develop Cell #4A and Cell #4B in the 2020s, with projected capacity through 2032. Subsequently, the County may develop Cell #5, located to the north and northeast of Cells #3, #4A, and #4B, to provide capacity through the remainder of the 20-year planning period (2018 through 2037) and beyond. With continued efficient operations of the landfill cells since 2003, the County has determined that export of Okanogan County solid waste would not save money at this time. The SWAC will periodically evaluate this issue during the planning period.

8.1.5 State and County Criteria for Siting Disposal Facilities

One of the requirements for a Comprehensive Solid Waste and Moderate Risk Waste Management Plan is to identify specific locations for future disposal facilities. During the late 1980s, Okanogan County conducted a landfill siting project that resulted in the development of the Central Landfill. Site selection was guided by:

- Application of the mandatory state siting criteria derived from federal standards and state legislation
- Development of local criteria that recognized local environmental, social, and economic factors



State and local criteria were used to screen locations initially selected as possessing generally acceptable characteristics for a centrally located landfill. The criteria were applied in a pass/fail mode to determine which of the potential sites warranted further suitability analysis and scoring for comparative ratings. The two top-rated sites had detailed contour mapping, geophysical analysis by test boring, and preliminary site design work done to provide data for an environmental impact statement (EIS). The EIS provided detailed information on site suitability and environmental impacts needed for final site selection by the Okanogan County Board of Commissioners.

8.1.5.1 State Criteria

The following state-mandated locational factors were applied to qualify candidate sites for further analysis. Sites not meeting these criteria were eliminated from further consideration (RCW 70.95.165 and WAC 173-351).

According to state standards, sites must not be located:

- Over a Holocene fault, subsidence area, or structurally unstable formation
- Where the bottom of the fill would be within 10 feet of the seasonally high groundwater level
- Over a sole source aquifer, without demonstrating that groundwater will not be impacted
- Within 1,000 feet from a downgradient drinking water supply well
- Where active areas are within a 100-year floodplain

- Within 200 feet of a stream, lake, pond, river, or in a wetland
- Within 10,000 feet of an airport runway serving turbojets, or within 5,000 feet of a piston aircraft runway
- The property line buffer standard is not included in the criteria; 100 feet from non-residential zoned property and 250 feet from residential zoned property
- In habitats of threatened or endangered plants or animals
- At variance with local zoning codes
- Within 1,000 feet of a state or national park boundary

8.1.5.2 Local Criteria—Okanogan County

The following criteria were adopted by the Board, to be applied in addition to the state criteria, in order to qualify a candidate site for further consideration.

Sites must be located:

- Within 20 miles of Omak or Okanogan in order to meet transportation requirements
- Within 1 mile of county or state roads and highways in order to reduce access development costs
- On lands with low agricultural development potential
- Where the landfill's active areas are capable of being screened from view of public thoroughfares
- With the space to provide 40 years of disposal capacity
- With adequate buffering from adjacent residential land use
- Where they are eligible for development under the Arid Design Standard within the state Solid Waste Handling Standards to reduce construction and operating costs; arid design will eventually be eliminated through WAC 173-350 and WAC 173-351
- Not on land located within the boundary of the Colville Reservation, or on Trust Lands located outside the boundary of the Reservation.

The last criterion was adopted in response to assertion of jurisdiction by the CCT and the requirement for submitting the project to federal review under the National Environmental Policy Act (NEPA). Other criteria considered to be implicit in the local site selection process included the requirement that candidate sites be located on reasonable slopes, and the requirement that workable soils be present in quantities adequate for major portions of landfill development and operation.

8.1.6 Delineation of Areas Meeting State and Local Criteria

The application of state and local criteria in the selection process for a central landfill site is documented in a report entitled Central Landfill Siting Process and Recommendation of Sites for SEPA Evaluation (June 1988, Century West Engineering Corporation). This report is attached as Appendix A of the Final Environmental Impact Statement for the Okanogan County Central Landfill (Century West Engineering Corporation 1990).

If new in-county disposal capacity becomes necessary for Okanogan County, these reports as well as alternative disposal arrangements will be reviewed to determine the feasibility of locating another landfill within Okanogan County.

8.2 Needs and Opportunities

8.2.1 Closed Landfills

All closed landfills, except Ellisforde, will require post-closure monitoring throughout the statutory monitoring period. At Ellisforde, post-closure monitoring may be eliminated in the near future if environmental and regulatory requirement can be satisfied because the site has stabilized with no evidence of groundwater contamination or landfill gas migration. The monitoring of the other sites will include groundwater well sampling and testing, gas flare maintenance where installed, and continuous visual monitoring to ensure cover integrity throughout the post-closure period.

8.2.2 Central Landfill

The County will need to continue to work with affected parties to fully implement all Conditional Use Permit requirements[7] related to Central Landfill operation. These conditions include visual screening, fire protection, and other similar conditions to limit adverse impacts.

The Central Landfill is currently operating at annual tonnage levels below that at which RCRA landfills are normally considered cost-effective. It may be financially advantageous to consider accepting additional tonnage from adjacent counties. Increased tonnage would allow spreading the fixed costs of operating the landfill over a larger base, and could result in reduced unit costs and/or additional revenues for the County. However, this option would decrease the site life of the landfill.

8.2.3 Waste Import and Export

The County will need to better clarify its policies for waste import and export to allow for additional flexibility. Waste import may provide an opportunity for greater economies of scale and reduced unit costs for the Central Landfill. Alternatively, waste export may allow the County to avoid the relatively high fixed costs of maintaining a landfill with the limited size of Okanogan County's waste stream.

8.2.4 Future Disposal

The County will need to consider whether the continued operation of the Central Landfill meets County and City objectives for cost, availability, and reliability. Prior to the development of each new cell, there is an opportunity to consider whether an alternative disposal method or waste export may be preferable to making the investment in developing a new landfill cell. The phased design of the Central Landfill allows this decision to be made about every 5 years, as new cells are developed. Cell #4A construction is planned for 2019.

[7] Including both the original CUP 91-1 and the 2001 amendment CUP 2001-8.

8.3 Alternatives

8.3.1 Closed Landfills

There are no alternatives to providing statutory post-closure monitoring.

8.3.2 Central Landfill

There are no alternatives for complying with the Conditional Use Permit or other regulatory conditions for the operation of the Central Landfill, as long as the landfill operates. If the landfill were replaced by a waste export transfer station in the future, the Conditional Use Permit may require revision and compliance with new or different conditions.

8.3.3 Waste Import and Export

8.3.3.1 Waste Import

A number of various waste import alternatives could be considered. Each would require addressing the Conditional Use Permit condition limiting the Central Landfill use to Okanogan MSW.

- The County could continue to restrict the use of the Central Landfill to Okanogan County waste. This would remove the ability of the County to import waste to gain revenue or to reduce unit costs through economies of scale. However, it would ensure that the 30- to 35-year projected landfill life would be fully realized without expansion beyond the current planned fill area.
- The County could allow waste import from only neighboring counties, including Chelan, Douglas, Grant, and Ferry Counties[8]. This could allow the benefits of increased economies of scale, while still limiting waste volumes to minimize impacts. This option may be limited by existing contractual and market conditions.
- The County could seek to develop the Central Landfill as a regional landfill in competition with larger private facilities. This would likely require the expansion of the site into the gravel pit area, as well as revising the Conditional Use Permit to allow a much larger operation. However, the County could receive significant financial benefits as a host community if it were able to successfully compete for large disposal contracts.

Waste import would only be a logical policy if the Central Landfill were to continue operation over the term of the import agreements. The County's options for determining future disposal methods (e.g., local landfilling versus waste export) may be constrained if the County has executed one or more interlocal agreements committing its landfill capacity to another jurisdiction.

8.3.3.2 Waste Export

Waste export may be a future option (see Section 8.3.4 – Future Disposal) if there are compelling financial or operational reasons to shift away from local landfilling. If waste export is considered, the following steps will need to be addressed:

[8] Whatcom and Skagit Counties do not have direct year-round transportation access to Okanogan County and thus are not feasible users of the Central Landfill.

- A transfer station capable of compaction will need to be developed, possibly at the Central Landfill site. The Central Landfill site has a current permit for disposal activities and has scale, office, recycling, moderate risk waste, and equipment maintenance facilities. These facilities would be necessary for a transfer station operation.
- A comprehensive agreement would need to be developed to address not only transportation and disposal price, but also waste acceptance practices, how to handle special waste streams (asbestos, metals, dead animals, and other problem wastes), the allocation of responsibility for future liabilities, and backup contingencies in case of the failure of either the transportation or disposal site.
- A competitive process would need to be carefully performed to select the preferred transportation and disposal contractors.

In the event that waste export is implemented, post-closure monitoring and maintenance of the Central Landfill would continue to be required throughout the minimum 30-year post-closure period.

8.3.4 Future Disposal

The County has already investigated whether waste export could provide a more cost-effective means of disposal than local landfilling. However, the 2002 Disposal Request for Proposals process lacked sufficient information on the existing costs of various solid waste system components and how they would change under an export scenario. A more complete analysis would include a financial review of all components of the solid waste system, including:

1. Administration and planning
2. Rural transfer station operation and hauling (Bridgeport, Ellisforde, and Twisp)
3. Moderate risk waste facility costs
4. Recycling facility costs
5. Post-closure monitoring and remediation
6. Landfill operation

Shifting from local landfilling to waste export would not affect the system costs of the first five of the above six components. The landfill could be closed and replaced with a transfer station capable of compaction (quite possibly at the Central Landfill). In short, the main change in the system would be to load transfer trailers and ship waste to another site instead of landfilling at the Central Landfill site. Many costs would remain roughly similar to existing costs such as those for county administration, operating the rural transfer system, operating the moderate risk waste/recycling facility, post-closure costs, and providing scaling and loading operations at the main transfer station site. This is the fundamental reason why waste export may not be less expensive, even if a $30- to $38-per-ton disposal fee could be obtained at an out-of-county private regional landfill.

Because the County has committed to constructing the next landfill cell, the next convenient opportunity for shifting to an export system will be in approximately 5 years. Developing an alternative waste export system would probably require about 18 to 24 months, including competitive procurement. Thus, the analysis of whether to continue local landfilling or shift to a waste export system could occur in late 2019 or early 2020, prior to constructing Cell #4A. The results of that analysis could then be used to either proceed with competitive procurement of private landfill capacity, or to provide the basis for the County's development of a successive cell at the Central Landfill.

8.4 Recommendations

Landfilling recommendations were developed by the County SWAC during a meeting in fall 2017.

All of the following recommendations will be pursued with the goal of implementation during the 6-year planning period that ends in 2024. Implementation of the following recommendations is limited subject to continued availability of state funding.

Recommendation 8-1—Continue Post-Closure Monitoring. Continue post-closure monitoring of the closed Okanogan, and Pateros landfills.

Recommendation 8-2—Continue Near-Term Operation of Central Landfill. Continue to operate the Central Landfill as the sole disposal facility within the planning area. The County will comply with the Conditional Use Permits and landfill Plan of Operations, as either is amended from time to time, and report annual progress to the SWAC. During this planning period, the County does not expect to increase staff hours or expenditures beyond inflationary and disposal rate increases.

Recommendation 8-3—Waste Import. Consider importing waste from neighboring counties if it is in the County's interest to do so. The importation of MSW from Chelan, Douglas, Grant, or Ferry Counties will be specifically permitted without a Plan amendment, provided that such import is allowed under the Central Landfill's Conditional Use Permit and Operating Permits, as revised from time to time. In the event that importation appears desirable, the County will review specific costs and benefits with the SWAC. During this planning period, no staff hours or expenses will be incurred for waste import.

Recommendation 8-4—Waste Export. Consider a transfer station for waste export if the County determines that waste export is advisable once Central Landfill Cell #3 is filled. The Central Landfill or an alternative site can be used as an export transfer station. County MSW will then be transported and disposed at an out-of-county landfill. This Plan specifically allows the export of waste from a future County transfer facility, if that disposal method is chosen. If waste export is chosen as a future disposal method, the existing Central Landfill may be retained as an inactive but not fully closed facility to provide local backup to the export arrangement. Existing waste export by Couse's Sanitation to Ferry County and other export from areas of the Colville Reservation will continue to be permitted, subject to interlocal agreement with the destination county, unless the County located an additional transfer station in the eastern portion of the County. A Plan amendment would be required. During this planning period, no staff hours or expenses will be incurred for waste export.

Recommendation 8-5—Future Disposal. Conduct a comparison of disposal costs at the Central Landfill with an alternative operation of a transfer and export system to other regional landfills 2 years prior to the expected filling of Cell #4A. The comparison will be brought before the SWAC for review. If waste export appears to meet cost, reliability, management control, and other County and SWAC objectives, the County may choose to proceed with a Request for Proposals to determine actual system costs. The County would then either proceed with negotiations to contract a waste export system or develop Cell #4B at the Central Landfill. During this planning period, no staff hours or expenses will be incurred for future disposal.

Recommendation 8-6—Landfill Expansion. Continue landfill development and operation at the Central Landfill under this Plan. The County will begin operation of Cell #3 in 2018, with projected operational capacity through 2021. This Plan recommends that the County develop Cell #4A and Cell #4B in the 2020s, with projected capacity through 2032. Subsequently, this Plan recommends that the County prepare to develop Cell #5, located to the north and northeast of prior cells, to provide capacity through the remainder of the 20-year planning period (2018 to 2037) and beyond.

9. SPECIAL WASTE

Special wastes are solid wastes that require special handling and are collected, transferred, recycled, and/or disposed of separately from municipal solid waste (MSW). Household hazardous waste and motor oil are also handled separately, and are addressed in Chapter 10. This chapter describes the management and disposal of special wastes in Okanogan County.

Special wastes outlined in this chapter are:

- Construction, demolition, and landclearing waste and multi-hazard debris management
- Contaminated soil
- Medical waste
- Tires
- White goods/appliances
- Asbestos
- Animal carcasses

9.1 Existing Conditions

9.1.1 Construction, Demolition, and Landclearing Waste

Construction, demolition, and landclearing waste includes non-hazardous solid wastes resulting from construction, remodeling, alterations, repair, demolition, and landclearing. These wastes include material that is recycled, reused, salvaged, or disposed as garbage. These materials fall into the Ecology 2015-2016 Waste Characterization Study (Ecology 2016) categories of Wood Wastes and Construction Materials. Because of the nature of construction, demolition, and landclearing activities, the solid waste industry often categorizes and manages these wastes as two separate waste streams, namely construction and demolition debris and wood waste (clean wood). The generation of these materials is primarily the result of construction or demolition, landclearing, wildfire cleanup, and brush or tree removal. These latter two items are of particular note to Okanogan County due to the area's high wildfire risk and need to conduct proactive fire fuels management.

9.1.1.1 Construction and Demolition Debris

Using the Ecology waste study categories, construction and demolition debris consists of treated or painted wood, dimensional lumber, engineered wood, and residual/composite wood wastes; plastic lumber; insulation; asphalt paving; concrete; drywall; carpet and carpet padding; soil, rocks, and sand; asphalt roofing; plastic floor covering; ceramics and bricks; and other materials that do not fit easily within the other materials (Ecology 2016). The Ecology waste study shows that these construction and demolition materials accounted for 11.9 percent of the Central WGA's composition (Ecology 2016).

Green Okanogan's GO Again Thrift Store accepts reusable construction materials for resale to the public. There are currently no other formal reuse or recycling programs for construction and demolition materials in Okanogan County. Some rock, asphalt, and concrete is likely recycled by aggregate firms, but no estimates are available about the extent of this practice or the quantities involved. It is much more likely that rock/soil, asphalt, and concrete are used as fill at permitted and unpermitted sites.

There are no known gypsum wallboard recycling operations in Okanogan County.

Mixed construction and demolition wastes from construction, remodeling, and building demolition are currently landfilled as mixed waste, burned by owner, or possibly shipped out-of-county to less expensive demolition debris landfills. Materials from buildings that are machine demolished are often crushed to a degree that limits reuse and recycling. These materials are usually disposed at landfills. Large pieces of concrete are broken down before disposal at the Central Landfill.

As a component of their building permit process, the CCT requires applicants to present their solid waste disposal receipts. This is aimed at ensuring the applicant is not illegally dumping their construction and demolition waste.

Metal items such as piping and sheet metal are separated at the Central Landfill for recycling as staff time allows. In 2016 a total of 442 tons of scrap metal were recycled at the Central Landfill and 127 tons were recycled at the non-profit Methow Recycles, including metals recovered from construction and demolition debris.

9.1.1.2 Wood Waste

WAC 173-350-100 defines "wood waste" as "solid waste consisting of wood pieces or particles generated as a by-product or waste from the manufacturing of wood products, construction, demolition, handling and storage of raw materials, trees and stumps. This includes, but is not limited to, sawdust, chips, shavings, bark, pulp, hogged fuel, and log sort yard waste, but does not include wood pieces or particles containing paint, laminates, bonding agents or chemical preservatives such as creosote, pentachlorophenol, or copper-chrome-arsenate." By this definition, the following 2015-2016 Waste Characterization Study categories are "wood waste": Natural Wood (listed under Construction Materials) and Dimensional Lumber, Pallets & Crates, and Untreated Wood (all listed under Wood Wastes).

The waste study also shows that 5.2 percent of the waste generated in the Central WGA fall under this definition of clean wood waste (Ecology 2016). Untreated wood waste can be ground and used as hog fuel, bedding, chip board, or compost bulking agents. Most wood wastes are either landfilled with solid waste at the Central Landfill or buried or burned on site at the point of generation.

9.1.1.3 Multi-Hazard Debris Management

Local multi-hazard mitigation planning is required by the Federal Emergency Management Agency (FEMA) and Washington Military Department, Emergency Management Division. As described in the Okanogan Multi-Hazard Mitigation Plan, events that have the potential to increase the generation of solid waste includes flood, earthquake, landslide, severe weather, and wildland fire. Debris burning, an alternative for handling of solid waste in rural areas, is described as a major cause of wildland fires. In turn, removal of debris is identified as a financial implication for property owners following these natural disasters (Okanagan County 2014b). Outside of the stated financial implications, Okanogan Multi-Hazard Mitigation Plan does not specifically describe how disaster debris is handled from the perspective of solid waste management nor does it provide mitigation strategies for debris entering the solid waste stream.

In response to the 2014 Carlton Complex Fire and the 2015 Twisp River/Okanogan Complex Fire, several local organizations provided and continue to provide information and support to property owners as listed below.

- OCPH issued fact sheets regarding disposal of debris from burned buildings, including potential health implications. The debris handling fact sheet describes the limits of inert waste that can be

buried on site without having to get a permit, and what type of materials are not considered inert that must be disposed at a permitted facility (e.g., Okanogan Central Landfill).

- Methow Recycles teamed up with Cascade Concrete and local contractors to connect property owners with resources to recycle their metal debris (e.g., roofing, farm equipment, vehicles) affected by wild fire.
- Washington Department of Natural Resources (DNR) works with federal and other partners to provide technical assistance related to "firewise" activities.
- Okanogan Conservation District provided preventative guidance including educating property owners on what to do following a fire on their property, conducting wildfire risk assessments, and providing a prioritized list of actions to prevent loss of property to a fire.
- Methow Conservancy has an entire page on their website that provides links to resources for wildfire preparation, recovery, and restoration.

9.1.2 Petroleum-contaminated Soil

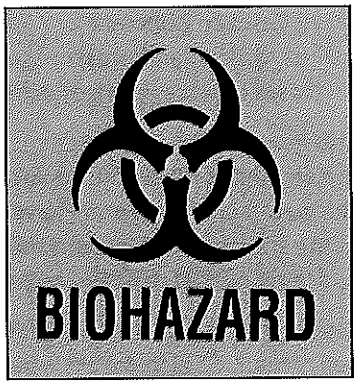
Petroleum-contaminated soil (PCS) could be contaminated as a result of leakage, periodic discharge, or an accidental spill of petroleum products or other toxic materials. Highly contaminated soil cleanup and disposal requires special procedures.

The level of PCS contamination determines the method of disposal used. Soil that is not considered hazardous waste is accepted at the Central Landfill. According to Ecology's latest data, in 2014, 469 tons of contaminated soils were disposed of at the Central Landfill (Ecology 2017c). There is not currently a PCS remediation facility in Okanogan County.

At spill sites, immediate response is handled by fire personnel or the State Patrol. Ecology then oversees the cleanup and directs the material, as appropriate, to a special facility. Hazardous waste sites are outlined in Chapter 10.

9.1.3 Medical Waste

Medical waste is defined in WAC 173-304 as "all the infectious, and injurious waste originating from a medical, veterinary, or intermediate care facility." This includes animal veterinary waste, laboratory waste, needles and other sharp objects, cultures, blood, tissue, and body parts.



Medical waste is not accepted at transfer stations, only at the Central Landfill. Businesses must contact the landfill before bringing properly prepared medical waste for disposal. There is a minimum charge for medical waste disposal, as with asbestos. The disposal fee is double the standard disposal rate for mixed waste. Upon collection, medical wastes are placed within a pit and immediately covered to avoid exposure to workers and wildlife. According to Ecology's latest data, in 2014, zero pounds of infectious wastes was disposed of at the Central Landfill (Ecology 2017c).

As of April 2002, needles and sharp objects from home users are accepted free of charge to encourage proper disposal and reduce exposure to solid waste collection and disposal workers. Residents are asked to bring needles to the landfill in a plastic container such as a soft drink bottle or drug store sharps container. Sharp objects are

also accepted at pharmacies within the County and brought to the landfill. The County currently contracts with Stericycle Environmental Solutions for sharp objects disposal.

In December 2002, the County enacted an infectious waste ordinance (Ordinance 2002-7) to ensure that those wastes are properly collected and disposed. In October 2006, the ordinance was updated to include penalties for offenders (Ordinance 2006-7). The ordinance requires generators to properly segregate, package, and dispose of infectious wastes, and establishes requirements and standards for infectious waste transporters and storage/treatment facilities.

Three hospitals in Okanogan County dispose of infectious waste through Stericycle Environmental Solutions services.

9.1.4 Tires

"Waste tires" are defined by RCW 70.95.550 as "tires that are no longer suitable for their original intended purpose because of wear, damage or defect." RCW 70.95.500 disallows tire disposal on land or in water.

Most tires generated in Okanogan County are managed by individual tire stores. A licensed tire hauler is typically paid to ship the collected tires to fuel processors, recycling facilities, or other storage or disposal facilities. Relatively few tires are brought to the County's Landfill. The County charges a per-tire fee at the Central Landfill that varies depending on the tire type and rim attachment. The tires are accumulated and shipped through a licensed tire hauler.

The County charges a per-tire fee at all transfer stations and the Central Landfill. Accumulated tires are shipped through a licensed tire hauler to be used as fuel for a nearby cement plant. As a joint project with OCPH, Ecology funded a Tire Amnesty event in 2013; 54 tons of tires were collected in Methow Valley alone. As reported by Central Landfill staff, the County shipped 21 tons of collected tires in 2016. Over the past 11 years, an annual average of 31.3 tons were collected and shipped by the County. CCT also collects tires, but the estimated tonnage of the material collected is unknown.

9.1.5 White Goods

White goods include household appliances such as clothes washers and dryers, dishwashers, ranges, refrigerators, and other large household appliances. White goods are accepted at all transfer stations and the Central Landfill. Methow Recycles and Cascade Concrete host a 2-day metal drive event every year at Cascade Concrete in Winthrop. The 2-day metal drive service is free for appliances such as washers, dryers, and pressure tanks, and there is a nominal purging fee for appliances containing refrigerants such as refrigerators, freezers, and air conditioners.

White goods have long been recycled as light ferrous scrap. More recently, refrigerant regulations for the handling of chlorofluorocarbons (CFCs, commonly referred to by the trade name Freon) and chlorinated compressor oil have resulted in the segregation of compressor-equipped appliances at County transfer stations and the Central Landfill. Collected appliances are drained, CFCs and compressor oils are recovered, and the hulks are shipped to scrap metal processors.

According to the County, in 2016, 442 tons of scrap metal were recycled at the Central Landfill, including appliances. CCT also collect white goods but the tonnage of the material collected is unknown.

9.1.6 Asbestos Waste

Asbestos is a mineral found in the form of long, thin fibers, and is considered to be a carcinogenic air pollutant when inhaled. Asbestos handling, from site removal to disposal, is regulated by the National Emission Standards for Hazardous Air Pollutants (NESHAP) (40 Code of Federal Regulations [CFR] Part 61 Subpart M). Asbestos is commonly landfilled because after it is buried it is not considered to be a threat. An Asbestos Demolition/Renovation Notification Form must be sent to the Okanogan County Planning Department, if a property owner or contractor demolishes, remodels, or burns a building for fire training. The entity must submit the form at least 10 business days before starting work (Ecology 2017e).

Asbestos can only be disposed at the Central Landfill in Okanogan County. In 2014, 49 tons of asbestos were disposed at the Central Landfill facility (Ecology 2017c). The charge for disposing of asbestos is double the fee of regular MSW disposal and is subject to a minimum charge, regardless of quantity. Asbestos is accepted only on specific days of the week, and must be contained in heavy-duty plastic bags. Businesses or residents disposing of asbestos must call ahead before visiting the landfill. Each asbestos load is placed in a designated area of the landfill that is registered with the local health district and Ecology.

9.1.7 Animal Carcasses

While some dead animals are rendered or managed on site, others are accepted at the Central Landfill. Small animals need to be triple bagged and the attendant informed of the disposal (particularly for veterinary animals). Large animals must be disposed of at the Central Landfill and a special fee is charged plus an additional weight charge for extra handling. Specific conditions regarding the times of acceptance, special handling, and fees are addressed by the County's operating policies.

9.2 Needs and Opportunities

9.2.1 Wood Waste

Additional private recycling could be encouraged.

9.2.2 Construction, Demolition, and Landclearing Debris

The County needs to ensure that construction and demolition wastes are properly handled through either disposal or recycling, as discussed in Chapter 4. If larger quantities of these segregated materials were received at the Central Landfill, the County could potentially provide some recycling services (e.g., grinding clean wood waste). For land clearing debris, the existing practices of permitted burning and burying will be difficult to counter (WAC 173.425.60).

As described in Chapter 4, Green Okanogan provides a home and building supply reuse store "Go Again" at their recycling center, and they plan to expand as space allows. Providing construction demolition materials reuse to other areas of the County should be considered, particularly in areas of greater density and growth.

Additional materials could be recovered, such as gypsum, wood waste, and crushed concrete.

County and Cities could implement building permits that require builders to document the destination of construction and demolition wastes.

The County's Multi-Hazard Mitigation Plan does not emphasize debris management. Future updates to the Multi-Hazard Mitigation Plan may include an expanded description of solid waste management measures the County could implement to enhance post-event response.

9.2.3 Petroleum-contaminated Soil

According to 173-350-100 WAC, "Contaminated soils" means soils removed during the cleanup of a hazardous waste site, or a dangerous waste facility closure, corrective actions, or other cleanup activities, and which contain harmful substances but are not designated dangerous wastes. The term "municipal solid waste" does not include solid waste containing contaminated soil and debris resulting from response action taken under Section 104 or 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 USC 9601); Chapter 70.105D RCW, Hazardous waste cleanup—Model Toxics Control Act; Chapter 173-340 WAC, the Model Toxics Control Act cleanup regulation, or a remedial action taken under these rules.

The County does not currently have a clear set of procedures for handling PCS at the Central Landfill. A specific plan and a better publicized acceptance level standard is needed to prevent improper disposal of PCS containing hazardous levels of contaminants. The landfill's operating permit does not currently specify the cleanup levels needed to be reached before acceptance, or the protocols employed to make sure what is being accepted meets the standards. If the County chooses to accept PCS, these acceptance standards and protocols will need to be addressed in the next permit.

There is currently not a PCS remediation facility in Okanogan County. PCS, which cannot be remediated on site and exceeds the maximum contaminant levels for landfill daily cover at the Central Landfill, must be transported and disposed out-of-county.

9.2.4 Medical Waste

Most infectious waste generated by health care providers in Okanogan County appears to be handled privately and shipped out-of-county. However, additional disposal alternatives (e.g., at transfer stations) may be necessary to increase proper disposal of infectious waste generated in households, particularly regarding needles and sharp objects. Additional attention on managing home-generated, dental, and veterinary infectious waste is needed, as well as promoting and enforcing the County's infectious waste ordinance 2006-7.

9.2.5 Tires

No needs or opportunities were identified for tires, other than support for continued state and regional efforts for researching alternative markets.

9.2.6 White Goods

Currently, there are no strong incentives to discourage illegal dumping of items to avoid disposal costs. Economic incentives for proper disposal and stronger penalties for illegal disposal may need to be considered. Reuse alternatives for working appliances could be investigated to reduce County processing and recycling costs.

9.2.7 Asbestos

There should be a decrease in asbestos disposal because new construction does not allow asbestos-containing building materials. Until the volume sharply decreases, options should be determined for businesses and residents that are not close to the landfill to ensure proper disposal. Providing public education regarding the dangers of asbestos and the need to submit a Notification of Demolition and Renovation form would also encourage residents and businesses to handle asbestos-containing materials properly (Ecology 2017e).

Following the NESHAP asbestos regulation, the County should have clear standards for how asbestos needs to be handled before disposal.

9.3 Alternatives

9.3.1 Wood Waste

The County could develop a separate wood waste grinding operation, with the ground materials sold as mulch or composting additive. Tipping fees charged for source-separated wood waste could be reduced to reflect only grinding costs to encourage residents to bring their waste wood to the landfill rather than burning or burying on site.

9.3.2 Construction, Demolition, and Landclearing Debris

Alternatives for managing construction, demolition, and landclearing debris include:

- To the extent practicable, given the available cell and storage space and staffing, the County, with the support of the SWAC, will determine whether additional diversion alternatives are feasible for managing construction/demolition materials such as concrete, asphalt, and clean wood.
- The County and Cities could incorporate building permit requirements that require builders to document the destination of construction and demolition wastes. These requirements would likely increase the flow of construction and demolition materials to the Central Landfill or other permitted out-of-county facilities, and could also increase recycling, as discussed in Chapter 4.
- The County could implement a differential tipping fee for construction and demolition waste where a lower charge is assessed for inert waste. This may attract more inert waste to the landfill, offsetting the revenue loss due to the lower tipping fee. However, if more waste were not actually attracted to the landfill from improper disposal, the County would experience a net revenue loss.
- The County should update their Multi-Hazard Mitigation Plan to discuss debris management and disposal.

9.3.3 Petroleum-contaminated Soil

Alternatives for proper disposal and prevention of contaminated soil include:

- The County could require on-site testing of contaminated soil to determine if it is safe for landfilling or needs to be handled through Ecology-permitted specialized treatment or disposal facilities.

- The Central Landfill could become a remediation site for contaminated soil, with treatment provided prior to use as landfill cover.
- To prevent spills, the County could provide education to businesses more prone to spills about prevention and handling procedures.

9.3.4 Medical Waste

Alternatives for medical waste handling include:

- The County could provide general and targeted education to limit the improper disposal of infectious waste. General education could include a notation on proper infectious waste disposal in County promotional materials. Targeted promotion could include letters to home health care organizations and medical associations asking them to remind clients that improper disposal of infectious waste unnecessarily exposes solid waste collection and disposal workers to infectious materials and that appropriate alternatives are available.
- The County could increase screening activities to identify improper disposal of infectious waste. This screening could be performed on a periodic or continuous basis in conjunction with other screening programs (e.g., asbestos). If infectious wastes are encountered, their source could be determined and the County could directly address proper management with the generator.
- The County could accept infectious waste at transfer stations, with the collected material either transferred to the Central Landfill for sharp objects collection or disposal, or a contracted transporter could be retained to provide collection and disposal directly from the transfer stations.

9.3.5 Tires

Alternatives for tire management include:

- The County could investigate additional recycling opportunities for tires and set a preference for shipping tires to fuel processors over stockpile operators.
- The County could work with the private sector to encourage local market development of remanufacturing uses for used tires. A number of small-scale uses for tires might be feasible if local entrepreneurial interest allows.
- The County could investigate the feasibility of structural uses for used tires. One option might be to use shredded tires for road base at the Central Landfill and/or transfer stations, or other County or City facilities.
- The County could investigate additional out-of-county recycling opportunities for tires and consider whether it would be appropriate to pay an additional disposal amount to favor recycling over disposal.

9.3.6 White Goods

Alternatives for white goods disposal include:

- The County could identify repair and donation possibilities for some appliances before turning them into scrap. While this alternative could reduce the need to process refrigerators, freezers, and other appliances, it may be counterproductive for very old appliances that are not energy efficient. Appliance acceptance programs in some jurisdictions discourage or disallow reuse due to supporting energy conservation.

- The County could offer incentives for proper disposal of white goods (i.e., annual discount coupons, free collection days) to avoid illegal dumping. These programs could serve to reduce the generator cost and inconvenience of disposing of old appliances, but may result in a loss of some existing revenues for the Central Landfill.

9.3.7 Asbestos

Alternatives for proper disposal of asbestos include:

- Through the County and City building departments, the County could provide educational materials to support the required use of the Notification of Demolition and Renovation form by building permit applicants. Applicants must submit the forms to the Okanogan County Office of Planning and Development.
- The County could expand the screening of incoming waste to ensure that asbestos is properly handled. Some common items such as old vinyl flooring and cement board siding commonly disposed as MSW may contain asbestos and would be candidates for a more intensive screening program. If the County were to increase screening activities, some consideration should be given on how to deal with customers unwilling to pay extra or handle the materials separately, and proceed to leave the disposal site. More aggressive screening policies may inadvertently lead to increased illegal disposal.
- The County could establish more explicit requirements for disposal of asbestos, such as double-bagging in 6-mil thick, or greater, plastic bags with conspicuous labeling. An effective trade-off will need to be made between the need for containment and the need to encourage homeowners and contractors to identify and separately handle asbestos.
- The County could accept double-bagged asbestos waste at transfer stations, with separate storage and transportation to the Central Landfill.

9.4 Recommendations

Special waste recommendations were developed by the County SWAC during a meeting in fall 2017.

All of the following recommendations will be pursued with the goal of implementation during the 6-year planning period that ends in 2024. Implementation of the following recommendations is limited subject to continued availability of state funding.

Recommendation 9-1—Construction and Demolition Materials. Determine whether additional diversion alternatives are feasible for managing construction and demolition materials such as concrete, asphalt, and clean wood, to the extent practicable, given the available cell and storage space and staffing. The County will be supported in this effort by the SWAC.

Recommendation 9-2—PCS Acceptance and Remediation. Continue to enhance monitoring of contaminated soil deliveries at the Central Landfill to ensure that maximum contamination levels are not exceeded for material directly used as landfill cover. The County will investigate the feasibility of establishing a PCS remediation area at the Central Landfill. If feasible and cost effective, the County will develop a remediation site, with the remediated soil used as landfill cover.

Recommendation 9-3—Medical Waste. Monitor periodically incoming solid waste at transfer stations and the Central Landfill to determine the presence of infectious waste. If significant quantities are observed, the source will be determined and the County will inform the generator of the need to handle

infectious waste separately to limit worker exposure to infectious wastes and sharp objects. If continuing quantities of infectious waste are noted in incoming solid waste, the County will work with local health care and professional organizations to provide notification of proper disposal methods for infectious waste. The County will investigate the feasibility of accepting infectious waste at transfer stations and will implement if cost effective.

Recommendation 9-4—Tire Management. Investigate periodically alternative tire management methods to determine whether additional in-county reuse or recycling might be possible. If feasible and cost effective, the County will support in-county tire reuse and recycling alternatives.

Recommendation 9-5—White Goods. Investigate the financial and operational impacts of offering discounts, City-sponsored collection events, amnesty days, or other methods to divert white goods from illegal dumping or improper accumulation. If feasible, the County (and Cities) will proceed with recycling incentives for white goods.

Recommendation 9-6—Asbestos. Monitor periodically incoming solid waste at transfer stations and the Central Landfill to determine the presence of asbestos. If significant quantities are observed, the source will be determined (if possible) and the County will inform the generator of the need to handle asbestos separately to limit the exposure of workers and other solid waste site users to asbestos fibers.

Recommendation 9-7—Asbestos. Provide educational materials through the County and City building departments to support the required use of the Notification of Demolition and Renovation form by building permit applicants. The Okanogan County Building Department will be the repository for the completed forms.

Recommendation 9-8—Multi-Hazard Plan Update. Update the Multi-Hazard Mitigation Plan to discuss debris management and disposal.

10. MODERATE RISK WASTE

This chapter defines moderate risk waste (MRW), provides an understanding of the regulations and guidance, and describes Okanogan County's objectives for managing this waste stream.

This chapter addresses:

- MRW collection
- Regulated generators, transporters, and sites
- The hierarchy of managing MRW
- Planning responsibilities
- Prevention
- Infrastructure needs

MRWs are hazardous materials generated by households and businesses that produce less than 220 pounds per month of materials classified as Dangerous Wastes, or 2.2 pounds per month of materials classified as Extremely Hazardous Waste. Thus, "moderate risk waste" does not mean the waste is moderate in risks to human health and the environment; instead, it means it is moderate in quantity, more accurately defined as "small volume hazardous wastes."

10.1 Background

According to Ecology, in 2002 it was estimated that only 17 percent of MRW in the state was taken to MRW facilities. Although these data are outdated, Ecology presumes little has changed, and most MRW is commingled with other solid waste and landfilled or incinerated. Landfilling this waste stream is not banned by state or federal law, and Okanogan County does not have an ordinance in place that discourages landfill disposal.

Ecology reported that approximately 38,000 pounds (19 tons) of moderate risk waste materials were collected from residents and small quantity generators in Okanogan County in 2016 compared to 45,000 pounds (22 tons) in 2009. This resulted in a collection rate average of approximately 1.0 pound per capita in 2016 compared to approximately 2 pounds per capita of household hazardous waste in 2009 (Ecology 2017d). These rates do not include used oil collection or battery collection. The County collected 2,819 gallons of uncontaminated used motor oil and 15,000 pounds of batteries in 2016 compared to 3,300 gallons and 7,600 pounds collected in 2011, respectively.

Okanogan County implements the following initiatives in the management of MRW:

- Provides MRW collection
- Provides household and public education
- Provides small business technical assistance
- Ensures businesses and facilities handling MRW comply with environmental laws and regulations (enforcement)
- Provides used oil collection and education
- Supports product stewardship programs
- Provides review of the MRW planning elements to identify where there is a need for improvements

10.1.1 Regulations and Guidance

Hazardous Waste Management Act (RCW 70.105) and Solid Waste Management and Reduction and Recycling Act (RCW 70.95) require all local governments to develop and implement moderate risk waste plans. This chapter updates the 2012 Plan.

Solid Waste Handling Standards (Chapter 173-350-360 WAC) provides regulatory guidance on MRW handling procedures for fixed facilities and mobile collection events. Handlers are subject to measures that meet specific performance and design standards, including spill prevention, prevention of public exposure, handling procedures, and labeling. Handlers are required to submit a copy of an annual report detailing collection activities (e.g., quantities and types) to the jurisdictional health department (i.e., OCPH).

Guidelines for Developing and Updating Local Hazardous Waste Plans provides guidelines to help local governments to update their hazardous waste plans (Ecology 2010b)

Hazardous Waste and Toxics Reduction Program is the primary authority that regulates hazardous waste in the state with an emphasis on pollution prevention, compliance with regulations, and permitting/corrective action at facilities that manage hazardous wastes.

Solid Waste and Hazardous Waste Management Plan - Moving Washington Beyond Waste and Toxics addresses regulated hazardous waste generators, pollution prevention plans, and moderate risk waste (Ecology 2015).

Emergency Response Plan for Hazardous Material was developed in 2006 by a local committee (Local Emergency Planning Committee), which is chaired by the County Sheriff. The purpose of this plan is to develop policies and procedures for responding to a spill of hazardous materials. The plan addresses incidents involving transportation, use, and storage of hazardous materials, including waste materials. The plan provides for the coordination of local government action in response to an incident, and outlines procedures to protect emergency workers and the population at large. This is in conformance with federal statutes in the Superfund Amendments and Reauthorization Act of 1986 (SARA), and RCW 38.52 Emergency Management. (Okanogan County 2006).

10.1.2 Definitions

"Moderate Risk Waste (MRW)" means (a) any waste that exhibits any of the properties of hazardous waste but is exempt from regulation under this chapter solely because the waste is generated in quantities below the threshold for regulation, and (b) any household wastes which are generated from the disposal of substances identified by the department as hazardous household substances.

"Household Hazardous Wastes (HHW)" are substances identified by Ecology as hazardous household substances in the guidelines developed under RCW 70.105.220. Appendix H contains the list of substances identified as hazardous by Ecology (Ecology 2010b).

"Small Quality Generators (SQGs)" are businesses or residents in Washington 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. SQGs may accumulate up to 2,200 pounds (or up to 2.2 pounds for wastes regulated at the 2.2-pound limit). The rules for this category of dangerous waste generators are less complex than they are for medium or large quantity generators.

10.2 Existing Conditions

Moderate risk waste generators (HHW and SQGs) producing under 220 pounds of material (or less than 2.2 pounds of certain highly toxic wastes) per month can have their materials handled by the County. Businesses that generate amounts over this threshold must ship their materials to permitted dangerous waste recyclers or treatment, storage, and disposal facilities.

The current MRW program is financed through a combination of tipping fee revenues and Ecology LSWFA funds.

10.2.1 MRW Waste Collection Facilities

10.2.1.1 Fixed Facilities

Residents and businesses that are SQGs of MRW can drop off items for collection on Saturdays at the Central Landfill Moderate Risk Waste Facility and on some Thursdays during the month at the Twisp Transfer Station (business SQGs by appointment). Okanogan County residents may dispose of unusable and unwanted materials such as paints, solvents, batteries, antifreeze, oil, brake fluid, cleaners, insecticides, herbicides, and swimming pool and hobby supplies. Residents can drop off their HHW for free; SQGs are required to pay a fee. Facility details are provided in Table 10-1.

Table 10-1. Okanogan County MRW Waste Facilities

Facility	Hours/Days of Operation	Limitations
Okanogan Central Landfill	• 10:00 a.m. – 3:00 p.m. • Open Saturdays • Closed on holidays or *when the temperature is below 20 degrees Fahrenheit*	• No more than 15 gallons per visit • Containers cannot exceed 5 gallons • No more than 15 containers • Not intended for commercial customers (small quantity generators [200 pounds per year] must call for fees)
Twisp Transfer Station	• 12:00 p.m. – 3:00 p.m. • Nov. – Mar. open 2nd Thursday of the month • Apr. – Oct. open 2nd and 4th Thursday of the month • Closed on holidays or *when weather prohibits*	• No more than 15 gallons per visit • Containers cannot exceed 5 gallons • Not intended for commercial customers (small quantity generators [200 pounds per year] must call for fees)

In 2016, seven SQGs and 558 residents disposed of hazardous waste through the locally operated MRW collection program (Ecology 2017d). The amounts of these materials collected for 2011 (from 2012 Plan) compared to 2016 are shown in Table 10-2. All hazardous materials collected in Twisp are transported to the Central Landfill facility for proper handling and shipment. All materials are handled by Stericycle Environmental Solutions for proper treatment, recycling, or disposal.

Table 10-2. Household Hazardous Waste Collection On Site at the Central Landfill [1] (sent to Stericyle Environmental Solutions)

Type	2011 Amount (pounds)	2016 Amount (pounds)
Antifreeze[2]	1,000	800
Aerosols[3]	0	1,250
Acids[4]	0	450
Flammable Liquids	400	0
Contaminated Oil[5]	1,000	500
Pesticide/Poison Liquid[3]	1,000	620
Pesticide/Poison Solids[3]	0	300
Oxidizers	0	0
Oil-Based Paint[3]	7,150	5,875
Latex Paint[4]	6,800[6]	1,325
Latex Paint Contaminated[3]	0	10,500

[1] The collection estimates are based on what is also delivered from the Twisp Transfer Station.

[2] Disposal Method = Recycled

[3] Disposal Method = Energy Recovery

[4] Disposal Method = Treated as physical, chemical, or biological processing prior to landfilling

[5] Disposal Method = Contaminated used oil sent to hazardous waste facility. Uncontaminated oil is discussed in Section 10.2.1.3.

[6] It is assumed this number represents both contaminated and non-contaminated latex paint.

10.2.1.2 Collection Events and Mobile Services

Okanogan County no longer holds satellite one-day collection events. Expenses and personnel required for one-day events have become prohibitive. The County does not provide mobile collection services nor has it historically provided this service.

10.2.1.3 Used Motor Oil Collection

RCW 70.951 recognizes that used motor oil is a valuable resource that can be recycled; otherwise, it can contribute to air, water, and land pollution, and endanger public health and welfare. As such, each local government is required to include an oil recycling element as a component of hazardous waste planning. WAC 173-303-515 provides used oil management standards for generators, transporters, collection centers, aggregation points, transfer facilities, processors, re-refiners, burners, and marketers of used oil.

In the County, residential/commercial small generator used motor oil is collected at all transfer stations and transported to the Central Landfill. All collected uncontaminated oil is used on site for heating. Prior to use, oil is screened. If it is contaminated, it is barreled and sent to a licensed hazardous waste disposal facility. It is important to note that in 2016, 500 gallons or approximately 12 barrels were reported to be contaminated (Ecology 2017d). The 2012 Plan reported that approximately 1 to 2 barrels of oil per year are contaminated.

In 2016, approximately 2,819 gallons of uncontaminated used motor oil were collected by the County compared to 3,300 gallons collected in 2011 (Ecology 2017d).

Table 10-3 summarizes the amount of oil collected from the public at each County transfer site, and the total number of gallons transported to the Central Landfill.

Table 10-3. Residential/Commercial Small Generator Used Motor Oil Collection by Okanogan County, Based on Location

Transfer Station	Gallons of Used Motor Oil - 2011	Gallons of Used Motor Oil - 2016
Bridgeport Bar Transfer Station	500	514
Twisp Transfer Station	750	1,291
Ellisforde Transfer Station	750	500
Okanogan County Central Landfill	1,300	514
TOTAL AMOUNT COLLECTED	**3,300**	**2,819**

Commercial used oil generators (e.g., automotive service stations), if considered SQGs, either haul their own oil to collection centers or have it collected by a private contractor. Transport of greater than 55 gallons to a used oil collection center requires that the collector record the name, telephone number, date of delivery, and quantity. If defined as a medium or large quantity generator, they are required to hire a transporter who then disposes of it at a permitted treatment, storage, disposal, and recycling facility.

10.2.1.4 Batteries

Lead Acid Batteries

Lead acid batteries (e.g., automotive batteries, marine batteries) are accepted for recycling by the County at the Central Landfill and the Twisp Transfer Station, and through a collection program at retail stores.

A sample of battery retailers was polled and most reported accepting used batteries upon the purchase of new batteries. Used batteries are collected and shipped for recycling through new battery distributors.

Household Batteries

Early in 2002, Okanogan County started a household battery collection program by partnering with businesses throughout the County to collect household batteries at no charge to residents; part of this program is funded by Ecology. Each collection point has a display and buckets for collection. Sites accept the following batteries: alkaline (AAA–D, 9-volt, etc.), button cell, hearing aid, calculator, watch, and rechargeable (electronics and portable tool). Batteries are periodically picked up and transported to the Central Landfill to be sorted into recyclable and non-recyclable batteries for proper disposal and recycling with the National RBRC Company. Residents and SQGs also have the option of disposing of their batteries at the Twisp Transfer Station or the Central Landfill. In 2016, an estimated 15,300 pounds of household batteries were collected compared to approximately 9,560 pounds collected in 2012. Table 10-4 lists the number of household battery collection locations by jurisdiction within Okanogan County.

Table 10-4. 2011 Household Battery Collection at Retail Stores

City	Number of Store Collection Sites
Omak	1
Okanogan	2
Brewster	1
Pateros	1
Twisp	1
Oroville	1
Tonasket	1

10.2.1.5 Extended Producer Responsibility Programs

Product stewardship is a product-centered approach to environmental protection, also referred to as extended product responsibility (EPR). EPR involves those in the product life cycle (e.g., manufacturers, retailers, users, and disposers) to share responsibility for reducing the environmental impacts of products.

In Washington, electronic waste and mercury-containing lights are covered under this program (described below). The state is also currently working with manufacturers and local governments to develop an EPR for paint, carpeting, batteries, and packaging. Paint legislation, for example, has already passed in Oregon, California, and Connecticut, which is funded through retail sales of paint. In 2016, Okanogan County reported nearly 18,000 pounds of paint collected, including oil-based paint and latex. That is approximately 47 percent of the municipal hazardous waste (MHW) collected by the County (excluding non-contaminated oil and batteries) for that year total. The passing of paint EPR legislation would be an important step in the distribution of responsibility for this problematic waste stream (Northwest Product Stewardship Council 2017).

Electronic Waste (E-Waste)

Many electronic devices contain toxic materials such as lead, cadmium, and mercury. Recycling these materials keeps the toxics out of landfills and incinerators and recovers these valuable resources (in lieu of obtaining them from virgin sources). The recycling of electronics involves disassembly, separation of the materials (glass, plastic, metal, toxics), and then usable materials (metals, plastic, and glass) are sold as commodities or reused as raw materials.

In 2006, Washington passed a law (WAC 173-900) that requires electronics manufacturers to pay for the recycling of specific electronic waste identified in the program (described below). WAC 173-900 is an example of "producer responsibility" legislation, whereby the company that makes a product is responsible for recycling the product at the end of its life. Manufacturers offset the costs of recycling their products in the cost of doing business (i.e., charge higher prices to the consumer). The Electronic Product Recycling Program (E-Cycle Washington) is a free program that provides Washington households, small businesses, charitable organizations, schools, and school districts the resources to recycle their broken, obsolete, or worn out electronics. The overarching goal of the program is to prevent electronics from being exported out of the country to regions where hazardous waste regulations are weak.

Covered Electronic Products (CEPs) that can be recycled for free through the E-Cycle Washington Program include televisions, computer monitors and computer towers, portable or laptop computers,

including tablet computers, e-readers, and portable DVD players. Computer peripherals and other items that are considered e-waste and are sometimes also included as part of e-cycle services include printers, keyboards, and mouses; toner cartridges; and cellular telephones. No one facility in the County recycles all these materials. Table 10-5 shows where the various common types of e-waste are recycled in Okanogan County.

Table 10-5. E-Waste Recycling Locations

Electronic Waste	Location/Organization
Televisions	Twisp/Methow Recycles; Tonasket/Green Okanogan; Nespelem/Colville Tribal Recycling Program
Computer monitors	Twisp/Methow Recycles; Tonasket/Green Okanogan; Nespelem/Colville Tribal Recycling Program
Computer towers	Twisp/Methow Recycles; Tonasket/Green Okanogan; Nespelem/Colville Tribal Recycling Program
Portable or laptop computers, including tablets	Twisp/Methow Recycles; Tonasket/Green Okanogan; Nespelem/Colville Tribal Recycling Program
E-Readers	Twisp/Methow Recycles; Tonasket/Green Okanogan
Portable DVD players	Twisp/Methow Recycles
Printers	Nespelem/Colville Tribal Recycling Program
Keyboards	Nespelem/Colville Tribal Recycling Program
Mouses	--
Toner and ink cartridges	Nespelem/Colville Tribal Recycling Program; cartridges only: Methow Recycles
Cellular telephones	Nespelem/Colville Tribal Recycling Program

To qualify as an E-Cycle Washington collector, collectors must have a valid business license in Washington; gather program-covered CEPs from households, small businesses, school districts, small governments, and charities; and ship them to a CEP recycling plant. To be paid for these services, collectors must register annually with Ecology, meet performance standards in WAC 173-900-450, and be listed "in compliance" on the Ecology-managed collector registration list. Ecology provides detailed information on how to participate and comply with the program on their E-Cycle Washington website.

Mercury-Containing Lights

Beginning January 1, 2013, RCW 70.275 requires all producers of mercury-containing lights sold in Washington to fully finance and participate in a product stewardship program for that product, including Ecology's cost for administering and enforcing the program. The product stewardship programs shall provide, at a minimum, no cost services in all cities and counties in the state with populations greater than 10,000 on an ongoing, year-round basis. WAC 173-910 implements the proper disposal of mercury-containing lights.

This mandate requires all persons, government, commercial, industrial, retail facilities, and office buildings in Washington State to recycle their mercury-containing lights. Small businesses can recycle up to 10 lights a day. For larger businesses, mercury-containing lights are typically handled as universal waste. If a larger business is already handling other materials as dangerous waste, they would also handle mercury-containing lights through that same process.

Okanogan County MRW began participating in this program in January 2013. In 2016, Okanogan County collected approximately 1,400 pounds of mercury-containing lights at the Ellisforde Transfer Station and

Central Landfill. Methow Recycles, CCT and the Home Depot hardware store also participate in this program, but the quantity of their collection is unknown.

10.2.2 Regulated Generators, Transporters, and Sites

The Resource Conservation and Recovery Act (RCRA) and the Hazardous Waste Management Act (HWMA) regulate hazardous waste for large generators and transporters of hazardous waste. Businesses that generate, transport, or own/operate a hazardous waste treatment facility have an EPA/state identification number. There are no hazardous waste recycling or disposal facilities in Okanogan County.

10.2.3 Other County Programs

10.2.3.1 Public Outreach

Okanogan County briefly discontinued public outreach when support from the Local Solid Waste Financial Assistance (LSWFA) dissolved in 2017. However, the County has now renewed their efforts to distribute promotional and educational materials on the importance of proper MHW handling regardless of LSWFA funding through the following methods:

- Providing information on their website (currently updating their website)
- Mailing fliers to residents (currently updating flyers)
- Providing fliers at all transfer stations (currently updating flyers)
- As funding allows, distributing handouts at an annual fair booth (currently updating flyers, did not have fair booth in 2017, but plan on continuing this program in the future)
- Giving tours and offering class field trips of the Central Landfill Moderate Risk Waste facility
- Advertising in the Omak Chronicle, Gazette Tribune, Quad City Herald, and Methow Valley News (on an as-needed basis)
- Sponsoring radio announcements on stations such as KOMW, FM and AM (on an as-needed basis).

The importance of proper handling of MHW is also promoted through many CCT programs and events, including advertising in the Tribal Tribune, and local events including Stampede, Earth Day, America Recycle Day, and spring cleanup days.

10.2.3.2 Business Technical Assistance

The County currently provides a three-part business technical assistance program. When businesses request assistance or are flagged as having unallowable MRW in their disposed wastes, the County solid waste department will determine what type and quantity of material is held by the generator. Depending on the response, the County will then provide direct suggestions on how to best handle the materials, refer them to an Ecology contact, or refer them to a professional environmental service provider.

10.3 Needs and Opportunities

The County's vision for reduction in MRW generally follows Ecology's hierarchy of managing hazardous waste as outlined in RCW 70.105.150:

1. **Waste reduction**—reducing waste so that hazardous byproducts are not produced, which is the most economical and environmentally sound of management alternatives
2. **Waste recycling**—reusing waste materials and extracting valuable materials from a waste stream
3. **Physical, chemical, and biological treatment**—processing the waste to render it completely innocuous, produce a recyclable byproduct, reduce toxicity, or substantially reduce the volume of material requiring disposal
4. **Incineration**—reducing the volume or toxicity of wastes by use of an enclosed device using controlled flame combustion
5. **Solidification/stabilization treatment**—use of encapsulation techniques to solidify wastes and make them less permeable or leachable
6. **Landfill**—use of encapsulation techniques to solidify wastes and make them less permeable or leachable

This section describes the needs and opportunities necessary to realize this hierarchy through concepts such as waste prevention programs, assignment of hazardous waste responsibilities to the appropriate entities (e.g., state, County, residents, producers), and identification of infrastructure needs.

10.3.1 Moderate Risk/Hazardous Waste

Residents and businesses may need more convenient methods to increase recovery of hazardous waste. Accessibility will promote proper disposal methods. Currently, the Central Landfill only accepts materials one day a week, and the Twisp Transfer Station only accepts materials on one Thursday per month during the winter, and two Thursdays per month during the summer. Accepting materials on additional days of the week may increase diversion. However, this is an improvement from the previous planning period where the only opportunity was at the Central Landfill one day a week. Notably, the collection rates have increased since the 2012 Plan, which may correlate with the additional collection location.

Only seven SQGs disposed of MRW at collection locations in 2016; therefore, it is possible that the County needs to identify additional opportunities and increase the breadth of public outreach to SQGs on items considered MRW, how to properly handle them, and alternatives for their disposal.

10.3.2 Used Motor Oil

Partnering with service stations or stores to provide a countywide collection system could motivate residents and businesses to turn in oil for recycling. Public education would lessen the potential for the improper management of used oil (e.g., applied to roads and driveways as dust control or poured down drains).

10.3.3 Batteries

Since its inception, the household battery recycling program has been successful in removing household batteries from the waste stream, and the program should be expanded to additional retailers.

10.3.4 Extended Producer Responsibility Program

Compared to the previous planning period, e-waste collection is on the rise with participation from the County, several local recyclers, and CCT. The County will need to review and consider whether expanding potential e-waste collection locations is necessary.

Mercury-containing lights collection opportunities are limited compared to the E-Waste Washington program. The County will need to review and consider expanding the collection program for mercury-containing lights.

10.3.5 Regulated Generators, Transporters, and Sites

No needs or opportunities have been identified for regulated hazardous waste generators, transporters, and sites. These parties will continue to be regulated by state and federal agencies.

10.3.6 Business Technical Assistance

If Ecology no longer provides business technical assistance, the County may need to provide or ensure the availability of more extensive technical assistance, if locally available.

10.4 Alternatives

10.4.1 Moderate Risk Waste

Alternatives for moderate risk waste generators include:

- The County could make its MRW facilities at the Central Landfill and Twisp Transfer Station available more than one day a week. This may entail additional staffing costs, depending on how staff coverage is managed, and how many staff members have the appropriate training to accept and process MRW materials. Increased diversion would also increase recycling and disposal costs.
- The County could establish a collection system for a limited number of materials at all transfer stations. An inexpensive collection system could be developed using simple covered containers and existing staff and trucks to transport materials to the Central Landfill facility.
- The County could continue and/or expand its efforts to educate businesses and residents about less toxic alternatives that can be purchased to avoid generating MRW.
- The County could encourage reuse of appropriate MRW materials through the use of an exchange shelf at the MRW facility. Automotive products and many household chemicals can be reused, thus avoiding transportation and disposal charges. Both Whatcom and Island Counties use this method and include a liability release sheet to manage their reuse program.

10.4.2 Used Motor Oil

Alternatives for used motor oil handling include:

- Additional public education on used oil management could be used to further reduce inappropriate handling of the material.
- Additional public disposal sites could be solicited by the County. For example, large automotive parts retailers could be encouraged to provide small quantity motor oil recycling.

- If curbside recycling programs are implemented in the future, motor oil could be included as an accepted material. This has been the trend in many Western Washington curbside programs, because it eliminates the need for residents to bottle motor oil and transport it to a collection facility.

10.4.3 Batteries

Alternatives for proper disposal of batteries include:

- The County could expand its promotion efforts to more specifically target lead acid batteries and further educate residents and businesses on the importance of recycling.
- The County could work with the OCPH to address concerns related to accepting lead-acid batteries at transfer stations. Transfer station permits could then be amended to allow the segregation and recycling of lead acid batteries.

10.4.4 Extended Producer Responsibility Programs

Alternatives to disposing of electronics and computers include:

- Join Northwest Product Stewardship Council to understand existing and proposed legislation and programs.
- Work with regional and state organizations to support retail take-back programs.
- Support reuse efforts to link residents and businesses with old computers with individuals and organizations seeking free computers.
- Investigate providing additional electronics recycling opportunities at the Central Landfill. The County could accept non-programmatic electronics for recycling (at a voluntary additional charge) and ship pallets of obsolete electronics to processors in Spokane and Seattle.

10.4.5 Business Technical Assistance

Alternatives for expanded technical assistance or replacement technical assistance if Ecology services are no longer available include:

- The County could expand its solid waste additional staffing or provide training to existing staff to handle additional technical assistance requests. This would require supplemental funding and, even if the program charges technical assistance fees, may be unable to be self-supporting. Providing additional HazMat training to existing staff may be more cost-effective, but would require the County's investment in training as well as changing existing job responsibilities and workloads.
- The County could develop an expanded list of environmental consultants to provide fee-based technical assistance to local businesses and institutions. This would not require County funding, but would be more expensive for local generators, which would perhaps make them less likely to seek assistance unless incentivized by disposal load rejection at the County disposal facilities.

10.5 Recommendations

MRW recommendations were developed by the County SWAC during a meeting in fall 2017.

All of the following recommendations will be pursued with the goal of implementation during the 6-year planning period that ends in 2024. Implementation of the following recommendations is limited subject to continued availability of state funding.

Recommendation 10-1—Continue MRW Facility at Central Landfill and Twisp Transfer Station/ Consider Expanding the Program. Continue to provide a MRW facility at the Central Landfill, the Twisp Transfer Station, or successor disposal facility. The County's MRW facility will be open at least one day per week and the Twisp Transfer Station will be open bi-weekly or monthly depending on the season. Both facilities will accept materials from households and conditionally exempt SQGs. The facilities may be open additional days, as staffing and funding allow. Collected materials will be reused or shipped via regulated haulers to treatment, recycling, or disposal facilities. The County will consider expanding to other areas of the County based on need.

Recommendation 10-2—MRW Promotion and Education. Continue to provide MRW reduction, recycling, and disposal promotion and education as part of the County's overall solid waste program. Promotion and education programs will be tailored to address specific topics and reminders on a rotating basis throughout the planning period. Examples of topics include MRW facility availability and acceptance policies, proper motor oil management, battery recycling, and electronics reuse and recycling.

Recommendation 10-3—MRW Reuse. Investigate the legal and operational issues related to providing a reuse area at the MRW facility for appropriate materials. If feasible, the County will allow the reuse of certain MRW materials such as automotive products and household chemicals. Extremely hazardous wastes and banned materials (DDT, penta preservatives, etc.) will not be allowed for reuse and will be disposed as MRW.

Recommendation 10-4—Lead Acid Battery Recycling. Work with the jurisdictional health department to determine the feasibility of accepting lead acid batteries at transfer stations. If it does not increase cost of operations, the County will accept lead acid batteries at transfer stations.

Recommendation 10-5—Electronics Recycling. Investigate the feasibility of accepting e-waste at the Central Landfill, or additional sites or special collection days in the central and eastern parts of the county. If feasible, EPR cost recovery fund will be secured to cover the costs of recycling the components.

Recommendation 10-6—Business Technical Assistance. Continue to refer Okanogan County SQG business owners to Ecology's technical assistance for businesses program.

11. ADMINISTRATION AND ENFORCEMENT

This chapter reviews the administrative and enforcement mechanisms and jurisdictional responsibilities for solid waste management in Okanogan County. County ordinances and resolutions related to solid waste are provided in Appendix I.

11.1 Existing Conditions

11.1.1 Jurisdictional Roles and Responsibilities

11.1.1.1 Cities

Cities in Okanogan County administer their solid waste programs by ordinances and, in some cases, contracts with garbage haulers or municipal collection. Only one city within the planning area, Oroville, currently provides municipal collection. In most Okanogan County cities, municipal ordinances and contracts regulate the operation of private collection systems, including service charges (rates), frequency of service and billing, recordkeeping, and procedures for recovering delinquent charges. Some cities defer to WUTC-certificated haulers and have little role in specifying services or rates. In Okanogan County, some city-contracted collection companies provide their own direct billing services, while others rely on municipal billing.

The County and cities also have litter control and illegal dumping cleanup programs within their respective jurisdictions, although these activities are often informal and generally performed by public works or parks crews as needed.

11.1.1.2 The Confederated Tribes of the Colville Reservation

The CCT maintains jurisdiction over all its lands for all solid waste functions, including collection, transfer, and enforcement. The CCT operates its own transfer stations and currently directs a majority of its MSW to the County's Central Landfill, although it has also considered developing a landfill or a "super transfer station" on tribal land. There is currently no interlocal agreement between the CCT and the County.

11.1.1.3 Washington State Department of Ecology

Ecology is charged with promulgating and enforcing state regulations for solid waste disposal, air emissions, and wastewater and leachate discharges. The state solid waste regulations that Ecology enforces result from state legislation (RCW 70.95) and in response to federal law such as RCRA.

Ecology reviews and approves local solid waste management plans, and works with local health departments to enforce the solid waste handling standards (WAC 173-350). Ecology may periodically revise facility criteria (e.g., WAC 173-351) for demolition landfills, compost facilities, and MRW facilities, as part of code revisions.

Ecology also has regional responsibility for regulating and enforcing air quality in the absence of local air pollution control authorities. Solid waste management activities that affect air quality fall under Ecology's jurisdiction (e.g., WAC 173-400-040).

11.1.1.4 Washington Utilities and Transportation Commission

The WUTC regulates private garbage and refuse collection companies that operate throughout Okanogan County. Cities with municipally operated or contracted collection services are not subject to WUTC regulation. The Commission regulates collection fees and operating standards, as well as requiring annual revenue and expense reports for certificated collection companies (see Chapter 6 for an additional description of regulatory authorities).

If curbside recycling were desired within a WUTC-certificated collection area in Okanogan County, the respective jurisdiction would need to enact a service level ordinance directing the hauler to add the service and incorporate the costs in rates proposed to the WUTC. In Okanogan County, the County and Cities have not previously enacted service level ordinances to direct the activities of certificated haulers, in part due to the absence of curbside recycling in any certificated collection area. If a service level ordinance were enacted, the WUTC would then be responsible for regulating the certificated haulers' services within the framework of the City's or County's service level ordinance.

The WUTC also reviews the County's Comprehensive Solid Waste and Moderate Risk Waste Management Plan during the approval process and evaluates the probable financial impacts to County rate payers through the WUTC Cost Assessment Questionnaire (Appendix J).

11.1.1.5 Washington Department of Agriculture

The Washington Department of Agriculture issued emergency rules (RCW 70.95.095) amending the apple maggot quarantine in 2016 to include MSW, yard debris, organic feedstock, organic materials, and agricultural wastes to the list of commodities regulated under the apple maggot quarantine (WAC 16-470-101). These regulated commodities are prohibited from moving from the quarantine area into pest-free areas without a special permit. Under these rules, the Department of Agriculture is allowed to issue a special permit for transportation and distribution of commodities in the pest-free area (Okanogan County is located in a pest-free area).

The Department of Agriculture also has a 45-day review period of the County's Comprehensive Solid Waste and Moderate Risk Waste Management Plan during the approval process to ensure compliance with the apple maggot quarantine.

11.1.1.6 Okanogan County Public Health

OCPH is a cooperative local agency governed by a board composed of the three County Commissioners and three city representatives (typically mayors or their designees). OCPH is charged with local enforcement of regulations and ordinances, and issues all local solid waste permits for the Central Landfill and transfer stations.

OCPH also responds to complaints of illegal dumping, burying, and accumulations of waste on private property. OCPH has traditionally used an educational approach over a more punitive enforcement approach to illegal burying and accumulations of waste on private property. When necessary in special cases, OCPH will resort to civil or criminal penalties. OCPH also works with Public Works and local law enforcement agencies to respond to and control illegal dumping activities.

11.1.1.7 Okanogan County Solid Waste Advisory Committee

The Okanogan County SWAC was established to provide stakeholder comment and advice on the planning, administration, and management of solid waste within the County. The SWAC holds periodic

meetings (usually bi-monthly) to discuss County policies and ordinances, and other issues related to local solid waste management.

SWAC meetings are open to the public and memorialized with written minutes. Drafts of documents and meeting minutes are sent to the mayors of the cities, affected agencies and organizations, and to interested individuals.

11.1.1.8 Okanogan County Public Works

Solid waste functions are performed through Okanogan County's Public Works Department. The Department is responsible for administering the County's solid waste management program.

Department staff administrative activities include:

- Operating the Central Landfill and managing the County's three transfer stations (two of which are operated by County staff and one of which is privately contracted)
- Establishing solid waste funding mechanisms
- Collecting fees and budgeting expenses
- Managing post-closure activities at former landfills
- Implementing, monitoring, and evaluating waste prevention, recycling, collection, disposal, and other components of the County's waste management system
- Implementing the MRW program
- Planning solid waste management
- Administering permit compliance, inspections, reporting, etc.

In Okanogan County, the Public Works Department performs solid waste and moderate risk management planning with input from the Cities and SWAC. Cities within the planning area participate in a review and approval process of the County's plan instead of submitting individual plans for inclusion.

The Public Works Department, OCPH, and the County Sheriff's Department cooperate to perform litter and illegal dumping control activities throughout the County. The state provides litter pickup along state highways.

Department staff also provides enforcement and control over the disposal of moderate risk wastes. Enforcement typically happens at the scale house with inquiry, visual check, and random inspections of both private and commercial loads. Inspection also occurs when transfer containers are being packed and dumped at the working face of the Central Landfill. Depending on the situation when MRW is discovered, the product is returned to the generator or is removed from the disposal stream and properly handled as MRW. Whenever possible, or if able to identify, the generator who improperly disposed of MRW is charged disposal and labor costs for special handling.

11.1.2 Solid Waste System Financing

The County's solid waste system is funded almost entirely through tipping fees at transfer stations and the Central Landfill. The 2017 municipal solid waste tipping fee was $74/ton, with higher charges in effect for medical waste, asbestos, and other materials. Total revenue in 2017 was approximately $2.86 million with tipping fee revenue of approximately $2.65 million. Ecology grants (LSWFA and others), investment interest, and revenue from the sale of recyclables accounted for the difference.

Solid waste tipping fees are used for essentially all solid waste-related expenses, including transfer operations, landfill disposal, construction debt service, post-closure fund contributions, recycling, moderate risk waste, public education, and administration. Ecology grants have been used for planning, recycling, and other programs, with the County's match obtained from disposal tipping fees.

Solid waste revenues and expenses are well monitored at this time. Disposal tipping fees have been stable for several years, with no increases since 1995. Tipping fee increases are expected to be reviewed during the next 2 years, and periodically thereafter. Construction bonds for the Central Landfill were retired in 2012, which reduced by approximately $280,000 per year what the County expended on debt service. However, the $537,000 level of annual contribution to the Central Landfill post-closure fund has increased since 2012 and will continue to do so with increased construction costs and regulatory requirements. Also, new construction may be necessary for facility upgrades to the County's recycle center, and other facility improvements needed for perpetual operation of the transfer stations.

In 2002, the County instituted new budget tracking methods to better allocate costs among the various components of the solid waste system. Better data are now available, allowing the County to better identify transfer, disposal, and recycling costs by location. This allows the County to better evaluate its future options for managing the system.

RCW 82.21.030 imposes a Hazardous Substances Tax on petroleum products, pesticides, and certain chemicals. RCW 70.105D, the Model Toxics Control Act (MTCA), directs a portion of the revenues from this tax into the Local Toxics Control Account (LTCA). The LTCA, through the LSWFA program, provides financial assistance to local governments to help them properly manage solid waste, improve recycling, enforce solid waste laws, and safely manage household hazardous waste. The governor's proposed 2017-2019 budget set the LSWFA funding level at $10 million, which reflects a reduction from the $15 million appropriated in 2015-2017, and $28.2 million in 2013-2015. The declining funding stems from low oil prices reducing collections from the Hazardous Substance Tax, which traditionally funded LSWFA (the state switched funding for the LSWFA program to the State Building Construction Account in 2015-2017 due to these tax shortfalls). Because of this funding switch and reliance on the state capital budget, the 2017-2019 budget remains unfunded due to lack of a capital budget. The future of the program is uncertain. All County-operated MRW and recycle programs are currently funded by tipping fees, which has decreased the amount of funding available for other operational expenses.

Known capital funding needs during the 6-year planning period and a longer 20-year time horizon are listed in Appendix K. The short-term funding needs will be funded out of existing tipping fee and grant revenues. The specific small capital improvement priorities are re-evaluated yearly during the County's budget process and are implemented as funding allows. Longer range projects, such as relocating transfer stations or obtaining additional disposal capacity, are funded through a combination of reserves, grants, and current tipping fee revenues.

11.2 Needs and Opportunities

Many of the components of the County's solid waste management system have been developed during the past 10 years and have reached a level of stability after initial adjustments. Needs and opportunities are presented for jurisdictions (local governments and regional and state agencies) and financing issues relating to the County's solid waste management system.

11.2.1 Jurisdictional Needs and Opportunities

11.2.1.1 Cities

Cities will need to continue to develop and refine their municipal garbage collection systems. Cities will need to continually monitor and periodically update their rate structures and collection services to incorporate waste reduction incentives and maintain consistency with the County transfer and disposal system. Alternatives and recommendations for municipal collection charges and rate structures are discussed in Chapters 4 and 6, respectively.

As solid waste law and contract administration become more complex, many smaller Cities will have difficulty retaining trained staff capable of addressing the more technical aspects of solid waste issues. For example, negotiating and administrating annexation agreements with certificated haulers may require specific experience not necessarily available to Public Works Department staff assigned to solid waste as one of many job tasks.

11.2.1.2 The Confederated Tribes of the Colville Reservation

The CCT and the County will need to continue to coordinate on consolidated efforts in managing solid waste, recycling, and MHW.

11.2.1.3 Washington State Department of Ecology

Ecology will need to continue its solid waste review and approval activities, as well as administering air quality (with an emphasis on burning of debris) and hazardous waste management regulation and enforcement. The ability of Ecology to manage these responsibilities depends on its regional level of funding, which is dependent on the Legislature.

11.2.1.4 Washington Utilities and Transportation Commission

The WUTC will need to continue its regulation of certificated haulers under the authority of RCW 81.77. If the Legislature shifts or eliminates the WUTC's system of G-certificates, local government may need to be more active in managing the garbage collection system under contracts or franchises.

11.2.1.5 Washington Department of Agriculture

The Department of Agriculture will need to continue its regulation of commodities that are prohibited from moving from the quarantine area into pest-free areas without a special permit. The Department will continue to issue a special permit for transportation and distribution of commodities in the pest-free area.

11.2.1.6 Okanogan County Public Health

OCPH will need to continue providing local enforcement of Solid Waste Handling Standards and Criteria for Municipal Solid Waste landfills, both for closed landfills and currently operating facilities, following WAC 173-304 and WAC 173-351. OCPH will also need to continue to educate residents and provide enforcement against illegal disposal and accumulations of material that pose a threat to public safety. Additional activities to educate residents to reduce littering are also needed.

The County Public Works Department will need to work with OCPH to revise the County Code to clarify authorities and penalties, and to coordinate enforcement efforts for illegal disposal and unsafe accumulations of solid waste.

11.2.1.7 Okanogan County Solid Waste Advisory Committee

The County's SWAC will need to continue its advisory role in the management of County and city solid waste activities, including a periodic review of this Plan, once adopted. The periodic review will need to include reviewing the County's recycling potential assessment as described in Chapter 4.

In the event that an alternative disposal system such as waste export is proposed, the SWAC will need to assist with reviewing the feasibility and provide a recommendation to the County Commissioners and amend the current County Plan.

11.2.1.8 Okanogan County Department of Public Works

The Public Works Department will need to continue existing solid waste management activities, including landfill expansion and operation, transfer station operation, waste prevention and recycling programs, MRW management, post-closure monitoring of closed landfills, and other related activities.

11.2.2 Solid Waste System Financing

The County will need to continue to ensure that solid waste revenues cover the costs of operating the solid waste system. Disposal tipping fees have historically been a stable revenue base, although tipping fee-financed disposal systems can be open to competition from neighboring jurisdictions, particularly when competing private operations without similar system-wide costs (e.g., recycling, moderate risk waste, and transfer) can offer disposal at a lower price than the local system. However, given the fact that 2017 tipping fees in Chelan County ($95.00/ton), Douglas County ($92.50/ton), and the Delano Transfer Station ($124.00/ton) far exceed Okanogan County's $74.00/ton, very little waste likely leaks to these neighboring counties.

Funding alternatives may be required to maintain the system if competition diverts waste flow away from the County system. The County would not necessarily be able to raise tipping fees to cover revenue lost to competing disposal operators because higher tipping fees would likely drive additional flow to those competitors. Thus, the County may need to consider funding contingencies in the event that tipping fees cannot be adjusted to meet fixed system expenses. To determine the likely impact of waste "leakage" from the County's system, the County should consider evaluating this issue and how the current waste flow control through the interlocal agreements mitigates its impact or needs strengthening.

The recent downward trend in LSWFA funding has raised concerns with the long-term viability of programs that the County has funded under the LSWFA program. The County and other recipients of LSWFA funds will need to encourage the Legislature to provide more stable funding and assure authorization of funding in a timely manner.

11.3 Alternatives

11.3.1 Jurisdictional Alternatives

11.3.1.1 Cities

Alternatives for City management of the solid waste system include:

- Continuing the status quo where each City assigns staff to manage the City's solid waste program, including collection contract or program administration, education and promotion, and illegal disposal and mandatory collection enforcement (if enacted)
- Combine programs with shared management, perhaps with a shared solid waste manager allocated among participating cities
- Continue status quo, with additional support from the County, possibly in the form of technical assistance or workshops for municipal staff on specific issues of concern

11.3.1.2 Washington State Department of Ecology

Under current state law, there are no alternatives to Ecology's enforcement air quality programs. If statutory authorities change in the future to reduce Ecology's regulatory mandate, the County, Health District, or Cities would need to develop regulatory programs for these functions.

11.3.1.3 Washington Utilities and Transportation Commission

Under current state law and regulation, there is no alternative to current regulatory roles and responsibilities. If statutory authorities change in the future to reduce the WUTC's regulatory mandate, the County or Cities would need to provide economic and operational regulation of certificated haulers.

11.3.1.4 Okanogan County Public Health

OCPH administers solid waste regulation under the Solid Waste Handling Standards and Criteria for Municipal Solid Waste Landfills as well as local code. These regulatory activities will continue through the planning period. No alternatives have been investigated for the local regulation of these functions.

11.3.1.5 Okanogan County Department of Public Works

The Public Works Department is charged with managing the County's solid waste system for both the cities (via interlocal agreement) and the unincorporated areas. As lead agency for solid waste, the County will continue to manage the system components on behalf of the entire planning area. These components include managing the transfer and disposal system, as well as waste reduction, recycling, and MRW programs.

If a future decision is made to shift to a waste export-based disposal system, the County could structure that system in a variety of ways, ranging from a completely public system to a completely contracted system. In either case (or in the event of a combination of approaches), the County's role in planning and managing the various components of the solid waste system would continue.

11.3.2 Solid Waste System Financing Alternatives

There are four alternatives for funding the solid waste system (excluding grants):

- The County could continue to rely on disposal tipping fees to fund the capital and operating costs of the solid waste system. The County would periodically adjust disposal fees to ensure that revenues and expenses are evenly matched. Fees may vary as old debt is retired and new debt is retained for future expansion, and as operating costs vary with fluctuations in waste flows and program expenses. In order to stabilize revenues to cover growing capital, operations, and reserve needs, the County could institute an annual or bi-annual rate review and tie tipping fee adjustments to actual operational cost increases or an accepted state or federal cost of living adjustment (COLA) index.
- The County could reduce tipping fees to cover only operating costs and fund fixed capital costs from property tax or other revenues. This would probably reduce informal waste export and may increase landfill tonnages and net revenues. However, the County has limited tax revenues and competition from other needs limit the feasibility of this option. Considering the much higher tipping fees in neighboring counties, informal waste export likely represents an insignificant impact on solid waste revenues. Additionally, this alternative does not incentivize waste reduction and recycling.
- The County could exercise its authority under RCW 36.58.100 to establishing a solid waste disposal district encompassing planning area cities and unincorporated areas. Cities would need to adopt resolutions to be in the district. If enacted, the disposal district would be a quasi-municipal corporation with taxing authority. The district would be authorized to assess a levy on property parcels, solid waste collection, or on tipping fees to fund disposal district activities. Eligible functions include essentially all of the functions currently performed by the County. A disposal district would have the advantage of raising a portion of solid waste funds from a parcel or collection services tax, and reducing its reliance on disposal tipping fees. Although this statutory authority has been in place for 30 years, only one or two Washington counties have elected to form disposal districts, due to the acceptability of tipping fees and the rarity of fully privatized disposal systems that require alternative funding for county administrative activities.
- The County could exercise its authority under RCW 36.58A to form a solid waste collection district. If enacted, the collection district would require mandatory collection within its boundaries and provide for penalties for non-compliance. The collection district essentially gives counties the ability to invoke mandatory collection in a manner similarly available to cities under municipal ordinance. A collection district is a necessary adjunct to a disposal district if the disposal district depends on a collection fee tax collected by certificated haulers. In the absence of mandatory collection, the customer base of certificated haulers in unincorporated areas might be reduced due to the effective service cost increase from the disposal district tax. Even under a collection district, enforcement can be problematic when residents refuse to pay for unwanted collection services.

11.4 Recommendations

Recommendations for solid waste administration and enforcement were developed by the County SWAC during a meeting in fall 2017.

All of the following recommendations will be pursued with the goal of implementation during the 6-year planning period that ends in 2024. Implementation of the following recommendations is limited subject to continued availability of state funding.

11.4.1 Jurisdictional Recommendations

Recommendation 11-1—Cities Participation. Continue to be part of the Okanogan County solid waste management system and maintain compliance with the provisions of interlocal agreements. This applies to all cities within the planning area–Brewster, Conconully, Okanogan, Omak, Oroville, Pateros, Riverside, Tonasket, Twisp, and Winthrop.

Recommendation 11-2—City Management. Continue to manage their solid waste collection programs and municipal ordinances. The County may provide technical assistance workshops to member cities as interest, staff time, and funding allow.

Recommendation 11-3—The Okanogan County Public Health's Role. Continue to enforce solid waste handling practices throughout the County. This effort will be implemented by OCPH's Environmental Health Division. These activities include monitoring and permitting solid waste disposal facilities and transfer stations. When local concerns dictate, the OCPH will adopt local regulations for solid waste management facilities.

Recommendation 11-4—The Okanogan County Solid Waste Advisory Committee's Role. Continue to review and provide comment on County policies and programs related to solid waste management, including reviewing periodic recycling potential assessments, disposal option planning, and a periodic review of this Plan. County staff will provide support to the SWAC, as appropriate.

Recommendation 11-5—Public Works Department Coordination and Management. Continue to provide coordination and management of the County solid waste management system. These activities include post-closure monitoring at former landfills, operation of transfer stations and the Central Landfill, the implementation of County ordinances (including Collection and Disposal Districts, if enacted), waste prevention and recycling programs, and MRW programs.

11.4.2 Okanogan County Solid Waste System Financing Recommendations

Recommendation 11-6—System Funding. Continue to use disposal tipping fees to fund the solid waste system to the extent practical and consider adjusting tipping fees on a regular basis in accordance with true operational costs. The County will consider and implement Disposal and Collection Districts or other funding mechanisms if future events result in a need to reduce tipping fees and recapture lost revenue through direct taxation of parcels or collection services.

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Appendix A

Interlocal Agreements

Interlocal agreements will be included with the preliminary draft submitted to Ecology following the public comment period.

Appendix B

Bylaws

OKANOGAN COUNTY SOLID WASTE ADVISORY COMMITTEE
BYLAWS AND MEETINGS PROCEDURE

I. CREATION, LEGAL BASIS, AND PURPOSE

The Okanogan County Solid Waste Advisory Committee (S.W.A.C.) has been established by the attached Okanogan County Board of Commissioners' Resolution No. 46-84 of September 25, 1984, in accordance with Chapter 70.95 (165) RCW as amended by the "Sprenkle" House Bill No. 1671 passed and made effective July 1, 1989. The above referenced RCW requires the S.W.A.C. to "assist in the development of solid waste handling programs and policies concerning solid waste handling and disposal, and review and comment on proposed rules, policies or ordinances prior to their adoption ..."

Resolution 46-84 further states that the Committee "shall serve to make recommendations to the Board of County Commissioners in the matter of (such) policies ..." These Bylaws will become a part of the County Solid Waste Plan by reference and will define the S.W.A.C. function and rules.

The Committee has therefore been appointed to review solid waste program issues and arrive at a cooperative point of consensus to recommend appropriate public policy to the County Commissioners.

II. PRIMARY TOPICS OF REVIEW

1. County Solid Waste Plan. Formulation of the Plan, including recommendations, amendments and addenda to the Plan. The Committee will review the Plan, no less frequently than once annually and recommend appropriate changes, amendments or modifications thereto.

2. Legislative Proposals. Regulations adopted by the Board of Health, and by the Board of County Commissioners affecting solid waste management, recycling and related issues as may be assigned to the Committee for review and comment prior to their adoption.

3. Other Issues. Additional questions pertaining to Okanogan County's waste management program may be addressed to the Committee by the Board of Commissioners as deemed appropriate. Any other items according to State law that require review and/or comment by the Advisory Committee.

III. COMPOSITION

1. Members. The Committee shall be composed of nine (9) members (per the attached Resolution 46-84) representing a balance of interests among the following groups: citizens, public interest groups, business, the waste management industry and local

elected public officials. Members shall provide on-going public input, coordination and information exchange between the groups.

2. Vacancies. Vacancies shall be filled by the County Commissioners as soon as possible for the remainder of the term of the vacant position consistent with the initial appointment and the attached Resolution 46-84.

3. Attendance. A member of the S.W.A.C. who has three (3) unexcused absences of regular meetings in a row is automatically removed from the committee. An excused absence may be granted by the Chairperson for reasons beyond the control of the absentee.

4. Substitution. An appointed member may have a person, representing the absent member's interest, attend meetings and vote in the member's place. Provided, however, said member's substitute has written approval by the County Commissioners or their designate, which may be an officer of the S.W.A.C., prior to any such meeting. The number of substitutions for each member will be limited to three (3) per year.

IV. CHAIRPERSON AND VICE CHAIRPERSON

1. Chairperson and Chair. A 2/3 vote of the members present shall elect one of its members as Chairperson following adoption of these bylaws. Thereafter, any member may be elected to a one year term in the October regular meeting of each year by a 2/3 vote of the members present. The Chairperson, or in his absence the Vice Chairperson, shall preside at all meetings and be designated as the Chair. The Chairperson shall have the authority to call for special meetings and shall be considered the titular head of the Committee. He shall represent, or select from the Committee or Committee staff, a designate to represent the Committee at meetings of the County Commission and at other official or unofficial functions. The Chair may only vote in case of a tie.

2. Vice Chairperson. The Committee, by 2/3 vote of the members present immediately following election of the Chairperson as above, shall elect a Vice Chairperson. The Vice Chairperson shall assume the duties of Chairperson in the elected Chairperson's absence. When both the Chairperson and Vice Chairperson are absent, the Committee shall elect by majority vote of the members present a temporary Acting Chairperson who shall assume the duties of Chairperson until the return of the Chairperson or Vice Chairperson.

3. Removal of Chairperson or Vice Chairperson. The Chairperson or Vice Chairperson may be removed at any time by the vote of five members of the Committee, provided that such vote shall be held at an official meeting and that within ten days of such meeting, the Committee shall present to the Commission and record in the minutes the cause or causes of such removal. The Committee shall elect a replacement by the end of the next official meeting.

V. SECRETARY

1. Selection. The County Public Works Director or his designate shall act as Secretary to the Committee.

2. Duties.

   a. The Secretary shall be responsible for notice to the press and radio of all meetings and public hearings.

   b. The Secretary will mail to each member an agenda and copies of materials pertinent to the agenda, and material requested by the Chairperson at least two days prior to each regular meeting.

   c. The Secretary shall furnish each member a copy of the minutes of the preceding meeting at least two days prior to each regular meeting.

   d. When requested by the Chairperson, the Secretary shall notify specific interested parties of meetings and public hearings, whose notice is not required by ordinance, stature or other requirements.

   e. The Secretary shall record and keep the minutes of all official action of the Committee, except that upon request of the Chairperson, he shall provide for assistance in recording the minutes.

   f. The Secretary shall act as representative of the County Public Works Department staff and as staff advisor to the Committee.

   g. The Secretary shall prepare or cause to be prepared special reports, information surveys, study projects or similar reports requested by the Chairperson.

VI. SUBCOMMITTEES

1. Appointment. The Chairperson may appoint standing and ad hoc subcommittees with approval of each subcommittee in advance by a majority of the members present. A subcommittee may be formed in this manner to investigate any matter of interest to the Committee. Each subcommittee shall be headed by a member of the Committee who will be responsible for its activities. Each subcommittee may contain non-members of the Advisory Committee who have special knowledge of the matters at hand.

2. Meetings. Meetings of the subcommittees will be in addition to the regularly scheduled meetings of the Advisory Committee. Deliberations of subcommittees shall be presented

to the Advisory Committee for review and consensus at a regular scheduled meeting by the head of each subcommittee.

3. Disbanding Subcommittees. The Chairperson, or as directed by a majority vote of the members present, may disband any subcommittee(s) at a regular meeting of the Advisory Committee. The head of such a disbanded subcommittee will be responsible for bringing the subcommittee's activities to an orderly close and report same by the next regular meeting of the Advisory Committee.

VII. CONDUCT OF MEETINGS

1. Robert's Rules of Order Newly Revised. The parliamentary rules known as Robert's Rules of Order Newly Revised shall apply to and govern the procedures of all meetings of the Committee. That listing of motions entitled "Table of Motions in Order of Precedence", shall be a guide to procedure at all meetings of the Committee, but in case of dispute, Robert's Rules of Order Newly Revised shall prevail.

2. Speakers Addressing the Chair. Any person wishing to address the Committee, a member of the Committee, or the audience shall first address the Chair and shall give his, or her, full name and address in a manner sufficient for the secretary to enter such information in the minutes.

3. Public Comments. Public comments are encouraged. However, at the discretion of the Chair, public comments (and Committee responses) may be limited to a time following the Committee's conclusion of each item of business on the meeting's agenda. Failure to abide by the above conduct rules, swearing or other disruptive behavior will be sufficient cause to have the offending party removed from the meeting.

VIII. MEETINGS

1. Official Action. The Committee shall adopt no recommendation, except in a meeting open to the public and then only at a meeting, the date of which public notice has been given by notifying press and radio in the county, and by such other means as may now or hereafter by provided. Such notification shall be at least 24 hours prior to the time scheduled for such meetings.

2. Regular Meetings. The Committee shall hold regular meetings to take "Official Action" as referenced above on the second Monday of every month at 7:00 p.m. in the Okanogan County's Administration Building. By a majority vote of the members present, regular meetings can be held more or less often depending on the business at hand.

3. Special Meetings. The Chairperson, or in his absence the Vice Chairperson, may call a Special Meeting for one or more specific purposes, provided that proper notice is given consistent with the "Official Action" section above.

4. Public Hearings. Public Hearings, Board of Health and other meetings will be called by the Board of Commissioners for the purpose of receiving public input on policy and planning decisions. The Advisory Committee Chairperson and members are encouraged to provide direct input on behalf of the committee.

5. Quorum. A regular or special meeting, or a public hearing, shall be called to order only when five (a quorum) or more members of the Committee are in attendance by the announced time for such meeting. Provided, however, in case of one or more vacancies of the Committee's membership, then a simple majority of the then current membership shall constitute a quorum. Should a quorum not be in attendance within a period of twenty (20) minutes after the announced time for the meeting or public hearing, no meeting shall be called. The agenda published for the canceled meeting shall be placed at the head of the agenda for the next regular meeting or special meeting.

IX. RECOMMENDATIONS OF THE COMMITTEE

1. By Majority Vote. The Committee's primary business is to advise and make recommendations to the County Commissioners on matters within their scope and charge as provided for in these bylaws. This will normally be accomplished by a majority vote of the members present and recorded in the minutes.

2. By Roll-Call Vote. At the request of any member, a recommendation of the Committee that is not unanimous can be made by a roll-call vote. In this instance, the recommendation as listed in the minutes will include the names of those members in favor, in opposition, etc. Any member of the Committee may present their position in writing to the Chairperson within one week of a roll-call vote. The Chairperson will in turn submit such written positions to the Board of Commissioners.

X. MISCELLANEOUS

1. Staff. Besides staff support mentioned above, the County shall provide other appropriate staff support as requested by the Chairperson and permitted by the County Commissioners. The Chairperson can request additional support to include, but not be limited to, secretarial, technical, legal and other services as necessary for the Committee to properly function. However, any expenditure of funds must be approved by at least one County Commissioner. Committee members' use of staff office space, telephones, copiers, libraries and files should be permitted as long as such members' use is necessary to further the business of the Committee.

2. Travel and Other Expenses. To the extent permitted by law and approved by the County Commissioners, the Committee will be reimbursed by the County in performing official Committee business outside of the County.

3. Amendments. To the extent that such an amendment would not conflict with the attached Resolution, any of these bylaws may be amended or repealed, and new bylaws may be adopted by 2/3 vote of the members present.

4. Savings Clause. Should any portion of these bylaws be declared unconstitutional or otherwise contrary to law, such decision shall not affect the validity of the remaining portion of these bylaws.

5. Waiver of the Rules. Any of the above rules or procedures may be waived by the majority vote of the members present provided further that the reason therefore be included in each motion for waiver.

OKANOGAN COUNTY
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION

RESOLUTION No. 46-84

WHEREAS, Okanogan County has adopted a 1984 Solid Waste Mangement Plan; and

WHEREAS, the 1984 Solid Waste Management Plan outlines major capital improvements in Solid Waste Facilities; and

WHEREAS, the 1984 Session Laws requires the formation of a Solid Waste Advisory Committee, and

WHEREAS, the Okanogan County Solid Waste Advisory committee shall serve to make recommendations to the Board of County Commissioners in the matter of policies concerning solid waste handling and disposal and to review and comment upon proposed rules, policies or Ordinances prior to adoption.

NOW THEREFORE BE IT RESOLVED, that the Board of County Commissioners for Okanogan County couse to be established the Okanogan Solid Waste Advisory Committee, to number nine (9) positions as follows: one (1) position representing the Solid Waste Industry, one (1) position representing the Colville Indian Tribe, four (4) positions representing elected Town officials and three (3) positions representing the public at large. Wherein the Okanogan County Solid Waste Advisory Committee shall be citizens of Okanogan County appointed by Commission action.

BE IT FURTHER RESOLVED, that the following Advisory Committee positions and the initial term be established:

Position 1	Solid Waste Industry Representative, 1 year term
Position 4	Elected City Official Representative 1 year term
Position 7	Public at large Representative 1 year term
Position 2	Colville Indian Tribe Representative 2 year term
Position 5	Elected City Official Representative 2 year term
Position 8	Public at Large Representative 2 year term
Position 3	Elected City Official Representative 3 year term

Position 6 Elected City Official Representative
3 year term

Position 9 Public at large Representative
3 year term

All position's terms shall serve three-year terms following expiration of their initial term.

DATED this 25th day of September, 1984.

BOARD OF COUNTY COMMISSIONERS
OKANOGAN COUNTY, WASHINGTON

Melvin Kuhlmann, Chairman

Archie Elffert, Member

Arlie Clinkenbeard, Member

ATTEST:

Evleyn Frazier, County Auditor
and Ex-Officio Clerk of the Board

Appendix C

Solid Waste Advisory Committee (SWAC) Public Involvement - Meeting Minutes

SOLID WASTE ADVISORY COMMITTEE
08-07-17
OKANOGAN COUNTY PUBLIC WORKS OFFICE

ADVISORY COMMITTEE	POSITION
Wayne Turner	Elected
Leslie Michel	At-Large
Sue Christopher	At-Large

NON-VOTING ADVISORS	
Ben Rough	Okanogan County Public Works
Lorraine Utt	Okanogan County Public Works
Jim Utt	Okanogan County Solid Waste

GUESTS	
Dwight Miller	Parametrix
Katheryn Seckel	Parametrix
Laura Kelley	DOE Representative
Ernie Rasmussen	CCT Environmental Trust
Betsy Cushman	Methow Recycle

Unable to attend: Stan Carter, Stephen Clark, Richard Howe, Joaquin Bustamante, George Brady and J.J. Bellinger.

Ben states the meeting can begin at 4:06 pm, there is not a quorum.

Dwight Miller and Katheryn Seckel from Parametrix are here to share their 2017 Solid Waste Management Plan (2012 Revision). Dwight gave a history of working with Okanogan County and the landfill and closure activities. Excited to assist the County to do the SWCMP.

Dwight Miller has been with Parametrix for 32 years originally from Walla Walla area. He primarily works in solid waste, hazardous waste and moderate waste. Industrial and food wastes and management that plays into this area as well.

Katheryn Seckel has been with Parametrix for 4 years. She started out in Alaska in transportation plans and limited roads systems. She then moved to Seattle area to get more into the environmental planning. Her main focus was in NEPA and SEPA, critical area ordinance and a background in solid waste research. Worked in the Seattle zero waste initiatives.

The following are from the PowerPoint presentation:

➢ Background:

Waste characterization studies of waste counts by categories going into the landfills. The greatest percentage amount of materials that go into the landfill is Organics (food waste) at 32.6% with plastic and wood material being the next highest. This slide is by a study using the Grant county (Ephrata) and Chelan county (Greater Wenatchee) solid waste programs. A good example of how numbers are generated.

Leslie arrives.

Dwight mentions this is similar to the state wide waste counts. If there is any low hanging fruit it is organics. Green waste, food waste and composting. Laura states there is a great potential to feed hungry animals with the amount of food waste in the state.

➢ Landfills & Transfer Stations:

Discussed the landfill and transfer locations. Dwight asked Ernie about the tribal locations and adding them onto the map. Ernie indicates the tribe has 3 transfer stations with drop boxes that get transferred to Okanogan County landfill. Also a recycling center.

Ernie stated that the tribe has an integrated Solid Waste Management Plan and an ongoing SWAC in place that has been going on for years.

Ben and landfill staff have been recently working on household hazardous waste collection program with the tribe. Ernie has a new Public Works director that is pushing to make progress on how they handle their waste.

➢ Background:

Dwight stated the MSW is measured by population. Katheryn shared the demographics in the county compared to the way to manage waste through facilities and not sure there is much change. Betsy asks if there is a population growth of 1% what the growth rate should be of the landfill. Dwight share on the chart the fluctuation of the past 10 years due to economy and other factors. Numbers to continue cycling into the future. The Methow area sees a lot of seasonal use in their figures. The revenues is how they will project out if there is a decline.

Leslie asks about how the fires have impacted the tonnage in the past few years? Jim states the fires have increased the tonnage a lot. The impacts were a huge jump in the tonnage, some of that was paid for with tipping fees and some was dumped at no cost by

the Commissioner's authorization. Betsy said the 2016 was a big jump from fires in recycle also.
The income and tonnage are not the same. Dwight asks about the specific numbers from fire waste. An application to FEMA is in the works for a few months in 2016.

➢ SWAC's Role:
Katheryn stated this was pulled from the guidance for the SWAC to be involved in the step by step process of updating the plan. This chart is straight from Department of Ecology's guidance of the SWMP. Laura mentions that DOE loves circles. Dwight states the implementation is just as important as the preparation it guides everyone through what you can do.

➢ Amendment vs. Revision:
We will be doing a Revision as the flow chart shows the process is over the 5 years. The cost assessment is also one of the deciding factors of an amendment and revision. There is a new review process through Department of Agriculture along with the WUTC review.

➢ Plan Objectives:
Future checking, Dwight sent recommendations to the SWAC and Chris Branch. By going through the previous plans recommendations they can see how the county did in accomplishing those recommendations from 2012. Coordination with other jurisdictions, do they fit? E-waste - Private - State.

➢ Planning Approach:
SWAC to review chapters 1-5 of the draft SWMP during the September 11th meeting, Chapters 6-9 at the October 2nd meeting, and Chapter 10-12 for the November 6th meeting. If we **hold monthly meetings** and go through any changes at the meeting we can stay on a productive schedule. A lot of the material can be gone through and shared via e-mail to make the process smoother. January is when they hope to have the draft ready to go to Department of Ecology. They had not put a meeting on December 4, which is a regular meeting date.

➢ Public Review and Completion:
When DOE gets the draft she has 120 to review. Then Laura sends it out to both Dept. of Ag and then their 45 days reviews begin. When DOE gets it back from the Dept. of Ag they will send to WUTC and their 45 days to review begins. Laura states that one hold up for Chelan County was in the Dept. of Ag review was to redo the organics section.

Hopefully have the draft done by January 2018 and the competed final by July 2018. Laura reads the plans and it seems like someone's thoughts. Having a consultant do the plan they will make the more accurate updated data and information. All Laura's opinion! The last one was done by SWAC and Sue. Katheryn will be doing the interviews, updating data, and gather information that is current data.

➢ Action Items:

Short-Term getting thing started by contacting all the SWAC, Tribal Departments, Cities in the county, recycling contacts, review previous plan recommendations, SEPA process done here done by Okanogan County and inter local agreements. Local agreements take about a month or two to get through all the city councils.

SWAC must review the status list prepared by Parametrix and provide comments by the end of August. Those comments will be submitted to Public Works. Public Works will consolidate the comments and send them back to Parametrix. The Recycle Committee may also provide comments on the status list.

Ben Rough explained to SWAC, Parametrix and WSDOE the importance to stay on schedule in order to complete and approve the SWMP by municipalities expire. If the lengthy WSDOE review process is extended then the SWMP may not be complete on-time and we will need to find an alternative methods to extend inter local agreements with the local municipalities. Laura states some inter local agreement don't even have expiry dates.

Dwight states some other counties have cities not willing to sign agreements and maybe have our next inter local agreements extended out further then 5 years and maybe the duration of the cells in the landfill. Laura has seen some that never expire, only verbiage of 30 day notice to get out of an agreement.

➢ Schedule:

Katheryn has laid out a tentative schedule adding December in. Laura uses the checklist and some items may be done within her time frame. Flowcharts, checklists and circles are the best to work from. Monthly meetings to review Draft SWMP with Parametrix:

- September 11, 2017
- October 2, 2017
- November 6, 2017
- December 4, 2017

Any input may be sent in earlier to be sent in.

- Current Status:

Questions and answers, recycling funding has not been approved yet. That is a big issue.

- References:

Areas that Parametrix will be getting a lot of detailed information for building the revision of Comprehensive Solid Waste Management Plan.

Get package out to SWAC along with the Matrix. Sometimes we are not sure what was ours and when to share with the SWAC members.

In 3 sessions they failed to pass the state's capital budget, including the CPG grant which funds recycling and household hazardous waste. The Hirst decision was blamed for also holding up a final vote which has to do with water rights.

DOE can't even take any paperwork on project during this time.

Dwight indicate that Construction and Demolition materials are not getting their state funding.

Emergency Management Plans, flooding and FEMA activities that need to get included into the comp plan. Will send the EM plan to Katheryn. Maybe even cross reference amount of debris and how solid waste was handled during fires and floods. How the material should be handled. Get EM plan to Dwight and Katheryn.

Also a list and copies of the County resolutions that pertain to Solid waste and landfills.

Betsy thinking about the private sector and restructuring funding sources and having some activities help pay with other activities. Fees for services. She states she is being intentional vague on purpose. And while prices are high and diversify when the recycle market is low. To not be at the mercy of what the legislature does, by being into our own destiny. Like this is our garbage and we should decide how we are going to structure the revenue. Laura through DOE or a draft in their office of ways for local governments to help pay for things. She will look into sharing the draft. Classes that you take then help share information to others. Master gardeners, recycling programs and hazmat training.

Discussed the Leachate pond update for a few minutes as that was on the agenda if there would have been a quorum for of SWAC Members.

Meeting adjourned at 5:40 p.m.

SOLID WASTE ADVISORY COMMITTEE
09-11-17
OKANOGAN COUNTY PUBLIC WORKS OFFICE

ADVISORY COMMITTEE	POSITION
Steve Clark	Elected
George Brady	Elected
Stan Carter	At-Large
Leslie Michel	At-Large
Sue Christopher	At-Large
Joaquin Bustamante	Tribal Representative
Richard Howe	Solid Waste Industry

NON-VOTING ADVISORS	
Ben Rough	Okanogan County Public Works
Lorraine Utt	Okanogan County Public Works
Jim Utt	Okanogan County Solid Waste

GUESTS	
Laura Kelly	DOE Representative
Randy Marcelly	CCT Public Works Director
Betsy Cushman	Methow Recycle
Chelsey Trout	Ok. Co. Conservation District
Dwight Miller	Parametrix via GoToMeeting.com
Katheryn Seckel	Parametrix via GoToMeeting.com

Unable to attend: Wayne Turner and J.J. Bellinger.

Stan bring the meeting to order at 4:04 pm, there is a quorum.

Sue makes a motion to accept April 3, 2018 SWAC meeting minutes and Steve C. seconds the motion.

Introductions around the room as there were some new faces before the meeting gets started.

By-Laws were voted on amending them from meeting each month to every other month on August 5, 2013 and October 7, 2013. Steve makes a motion and Leslie seconds the motion to finish the amendment at this time.

Agenda:

- #1 Leachate Update: Ben and Jim evaluated the leachate pond. Everything is looking better but will depend on the winter weather. Parametrix is encouraging solid waste to do constructions as needed. They will begin using the next cell in 2018 and the sooner the construction takes place

maybe the cost will be lower to do now and not down the road a couple of years. Ben and Gary had budgeted for the pond for this year but we have run out of time. The Preliminary with design would run approximately $350,000.

Dick asks Jim how the pond levels are now compared to last year at this time. The level is currently higher than this time last year. Sue ask about the current ponds being able to handle the current cell and the new cell after a moist fall, winter and spring. Sue thinks it is a good idea to be pro-active with a new pond.

Discussed the amount of gas emissions from the material in the landfill.

- #2 Preliminary 2018 Budget: Ben has submitted the draft version of the budget for solid waste. He has added the new pond expense into the 2018 budget as we did not use in 2017.

  SWAC usually goes over the solid waste budget during the October meetings.

  Joaquin ask about adding more funding for landfill and recycling employees to participation in outreach programs and community events as the PCG funding will not be available. The recycling and hazmat needs to be active at the County Fair, Earth Day and other local events.

- #3 E-Waste Collection: Josh Unser of recycling is getting the landfill signed up to handle e-waste. Discussed recycle income and how other facilities are handling their e-waste.

  Joaquin ask about adding more funding for participation in outreach programs and community events as the PCG funding will not be available. The recycling and hazmat needs to be active at the County Fair, Earth Day and other local events.

  CCT will host an America Recycle Day, the event will be on November 15th from 10:00 am - 2:00 pm at their government center.

- #4 SW Status Report to 8/31/17: Jim was not aware he was supposed to bring the to-date status report.

- #6 DOE - Laura - Some of the chapter work could be done off-line. She asks if there is a quorum. Yes, we have 7 members of 8 here tonight.

Joaquin invites everyone to the American Recycle Day, an event held by Colville Confederated Tribes at the Government Center in Nespelem on Wednesday, November 15th, 2017 from 10:00 am - 2:00 pm.

- #5 Review of Chapters 1 - 3: We are joined by Katheryn and Dwight via GoToMeeting.com. At approximately 4:45 pm.

Katheryn has imported the status comments into the status sheets that were sent in by Ben, Jim, Lorraine and a few SWAC members that participated.

Kathryn shared a slide show of the way Parametrix will process the first 3 chapters. OFM Offer of Financial Management heavy on the projections. This chapter is guided by the solid waste generated and demonstrates what the future needs will be in the next 20 years. Dwight is using the 2015 numbers as a start as the 2016 has a lot of fire debris. The 2015 and 2016 both have fire debris increasing the amount of solid waste tonnage.

Chapter 1 - Introduction and Review: The primary topics of discussion include. Discussed funding and how some grants are no longer available. Hopefully the funding will normalize in the next 3-5 years.

Chapter 2 - Background of the Planning Area: The primary topics of discussion include. Waiting for recycling responses to include the recycling set of the 20 year projection.

Chapter 3 - Waste Prevention: The primary topics of discussion include. This chapter is program orientated. Anything to helps prevent waste would be helpful. Grant reliant in the past are now funds that are drying up.

Dwight states Chapter 6 - Waste Processing and Technologies will be move into Chapters 4 - Recycling & Chapter 5 - Organic Waste and Composting accordingly.

Discussed Emergency Plans. The two years of fire debris and how to handle such large amounts of garbage. Emergency plans go over what to do in the event of an emergency but does not help show how to deal with the waste and debris from such disasters. One big issue of floods after fires. Should have a disaster plan for solid waste.

Dwight will recap all of recommendations for Chapters 4, 5 & 6. He will then send for review by the SWAC member mid to late October.

Steve C. makes a motion to adjourn the meeting and Dick seconds the motion.

Meeting adjourned at 6:06 p.m.

SOLID WASTE ADVISORY COMMITTEE
09-11-17
OKANOGAN COUNTY PUBLIC WORKS OFFICE

ADVISORY COMMITTEE	POSITION
George Brady	Elected
Denise Varner	Elected Sub.
Stan Carter	At-Large
Sue Christopher	At-Large
Joaquin Bustamante	Tribal Representative

NON-VOTING ADVISORS	
Chris Branch	Okanogan County Commissioner
Ben Rough	Okanogan County Public Works
Kent Kovalenko	Okanogan County Solid Waste
Lorraine Utt	Okanogan County Public Works

GUESTS	
Betsy Cushman	Methow Recycle
Amelia Marchand	
Dwight Miller	Parametrix
Katheryn Seckel	Parametrix via conf. call

Unable to attend: Wayne Turner, Leslie Michel, Steve Clark, Richard Howe and J.J. Bellinger.

Stan bring the meeting to order at 4:05 pm, there is a quorum.

Added the Manager's Report to the Agenda as they are available.

Kent introduced himself as the new Solid Waste Manager for Okanogan County. He has been in the industry for over 26 years in recycling and MRF operations. He worked as manager for a hauling company for 3 different transfer stations and two recycling facilities.

- Manager Reports shows tonnage for the year at 26,369. Water monitoring and gas monitoring just done on 9/28/17. Any questions regarding the Manager's Report to 9/30/17 please talk to Kent after the meeting.

- #1 - SWAC By-Laws update: In August and October 2013 there was an update that was never completed as moving the SWAC meeting to every other month, which will be on the Commissioner's consent agenda tomorrow.

- #2 - SWAC Membership, Term Appointments/Expirations: Ben goes over the previous meeting as another member has shown

interest in being a SWAC member. Ben goes over the Membership and the current vacated position is to be an Elected City Official Representative Position No. 5. Either change by-laws or update memberships. Could this be a city delegated person?

George would like to see the memberships expanded to more citizens that may be interested in what SWAC activities pertain to. There is not any representation from the Methow area and Ben needs to check with the cities about interest in Twisp or Winthrop or have the cities appoint Betsy to represent them. The current opening was vacated by Chris Branch as an employee of the City of Oroville. Oroville has been contacted with no response.

Stan suggest a by-law change. Ben will have something for the next meeting. Chris state the By-Laws are the SWAC committee's decision on their changes that need to be approved by the Commissioners.

Ben states there are substitutes for the absent members in the By-Laws but maybe add an alternate member. Then that person could fill in to make up a quorum.

- #3 SWAC Membership: Composition: Annual membership renewal are due. Denise makes a motion to renew - reappoint the current three that are due for renewal are Dick Howe, Wayne Turner and Stan Carter. Denise moves to have Stan retain the Chairman position for renewal Sue seconds the motions. All are in favor of continued memberships.

- #4 Review of Chapters 4 - 8: We are joined by Katheryn via conference call at approximately 4:25 pm.

Chapter 5 - Organics: Will go over next meeting as the responses from the cities and recycling contacts have not all been returned or added.

Chapter 4 - Recycling: The primary topics of discussion include. Glass will be removed from CCT Recycling, Styrofoam will be added to City of Pateros, and remove closed recycling centers from the 2012 comp plan. Need to update tables 4-1, 4-2, and items that are recyclable and not accepted in several recycle centers. Discussed using Okanogan County Solid Waste figures from 2016 or 2017 in the plan. Discussed all county recycle events need to be current in the plan.

Chapter 6 - Collection: The primary topics of discussion include. Table 6-1 need new map with boarders a little more clear. Table 6-2 needs to have business names updated. Talked about the cities, outside city limits and private roads collection having separate rates and special circumstances during the winter months due to snow impact. Which might need to be address before WUTC review. May also need to include details for possible rate changes and market changes for materials.

Chapter 7 - Transfer: The primary topics of discussion include. Discussed Bridgeport Transfer Station history as to being in Douglas County and not Okanogan County. Discussed keeping all rates in the county equal from Pateros to Oroville. Discussed illegal dump sites and not having a code officer and that the CPG funds use to help cover some of the cost involved to clean up. Dwight continued the Recommendations being 3 parts to Continue the Existing Transfer System, Evaluate Additional Transfer Stations and Non-County Facilities should all remain the same as in previous plan.

Chapter 8 - Landfill Disposal: The primary topics of discussion include. Dwight discussed the post closures of Ellisforde and Pateros closed landfills in the county coming off the monitoring lists. Discussed futures cells at the landfill to be developed and the life expectancy of the landfill. In Recommendations include Cell # 5 interests and Exports and Import of solid waste.

Want to include a section for Disaster and how that may affect the disposal levels like the previous year's fires. Also the impact the fires have on recyclables and fire camp cardboard, batteries and plastics.

Next meeting, November, 6th we will go over Chapters 4 & 5 with Parametrix.

Another additional meeting will be scheduled for Monday, November 20th to go over chapters 9 - 11. Lorraine will create a Doodle poll to confirm a quorum.

Denise V. makes a motion to adjourn the meeting and George B. seconds the motion.

Meeting adjourned at 5:58 p.m.

SOLID WASTE ADVISORY COMMITTEE
11-06-17
OKANOGAN COUNTY PUBLIC WORKS OFFICE

ADVISORY COMMITTEE	POSITION
George Brady	Elected
Wayne Turner	Elected
Steve Clark	Elected
Leslie Michel	At-Large
Sue Christopher	At-Large
Joaquin Bustamante	Tribal Representative
Richard Howe	SW Industry

NON-VOTING ADVISORS	
Chris Branch	Okanogan County Commissioner
Ben Rough	Okanogan County Public Works
Kent Kovalenko	Okanogan County Solid Waste
Lorraine Utt	Okanogan County Public Works

GUESTS	
Betsy Cushman	Methow Recycle
Katheryn Seckel	Parametrix
Peter Severtson	DOE Representative
Randy Marcellay	Tribal Public Works

Unable to attend: Stan Carter and J.J. Bellinger.

Steve C. bring the meeting to order at 4:07 pm, there is a quorum.

- #1 - Minutes to the September 11 meeting updated to third sentence read accept minutes for April 3, 2017 not 2018. Then on page 2 in conversation with Dick and Jim the levels were lower than the previous year not higher. With these correction the minutes are approved for September 11, 2017 and October 2, 2017.

- #2 - Manager Reports just done today. Any questions regarding the Manager's Report to 10/31/17 please talk to Kent after the meeting.

- #3 - SWAC By-Laws Update and Revisions: Ben has updated the Solid Waste By-Laws that refer to Resolution 46-84. He has removed the resolution number in the update By-Laws. In the last meeting it was discussed to remove one City Elected position and add a Recycle position as Position #5 is VACANT. This would make the SWAC members 3 At Large, 3 Elected City Officials or designate and 3 from industries. The next thing he added are the Substitution for members that was already in

the By-Laws. Ben added Alternates (2) to have coverage at meetings and a quorum when regular members can't attend and have voting rights.

X. MICELLANEOUS 3. Amendments. ~~To the extent that such an amendment would not conflict with the attached Resolution, any of~~ ~~t~~These bylaws may be amended or repealed, and new bylaws may be adopted by ~~2/3 vote of the members present~~ written approval of the County Commissioners. This change would take the membership decision away from SWAC and the Commissioner's would decide who the members would be.

10/2/17 minutes: Chris state the By-Laws are the SWAC committee's decision to make changes that then the SWAC's recommendations would need to be approved by the Commissioners.

Ben asks that everyone go over the update and bring back any input at the next meeting.

- #4 - SWAC Membership, Term Appointments/Expirations: Ben discovered that all positions shall serve 3 year terms following expiration of their initial terms. Annual membership have been renewed and sent out to the members.

- #5 Review of Chapters 4 & 5: Katheryn states the SWAC and RAC have gone through Chapter 4 a few times. Chapter 5 - Organic is a short chapter with not much change.

Chapter 4 - Recycling: The primary topics of discussion include. Sue starts on Chapter 4 on page 4-6 where Brewster Drop off bin is not available. Not sure if we want to totally remove this if another place becomes available. Also the recommendation 4-7 Recycle Funding has not been updated to show funding support is to the County Landfill Recycle center. There needs to be a period after "current County recycle center". Then add that the County will supports the private sector and CCT as opportunities arise.

George asks if the Brewster recycle bin will be replaced. The Pateros bins get hit pretty hard now that the Brewster bin is not available.

Discussed some update that did not get into the most current update that was discussed at other meetings. The maps will be done all at once in the end draft. Sue asks about the Commercial recycling that goes on within the county like Safeway, Wal*Mart, Grant's and

other business that take their own recycling is not always included of what is done in the county as a whole. Also any private individuals that choose to take their recyclables to Spokane, Wenatchee, Chelan or even to the west side of the mountains to get better prices. It is challenging to track those materials.

Betsy asks about the RCW's on page 1 being current in the plan. Katheryn assures the committee that they check all RCW's as they are updated often.

Joaquin asks about the fires impact on recyclables and fire camp cardboard, batteries and plastics. Where would this be place in the plan? Also, other material from fire debris 1 to 2 years after fires in Okanogan County.

At 4:45 pm Ben suggest to move on to Chapter 5 as we are limited on time. Katheryn and Ben will follow up with previous changes.

Chapter 5 – Organics: The primary topics of discussion include. Organic Chapter goes into the food waste from the food stream. There was a study done in Grant, Douglas and Chelan counties in 2016 by Cascadia. Recently Dick, Ben, Josh U. and did a composition study at the landfill and the breakdown approximately 80,000 pounds of material. Katheryn would like to know how it was done, the things they looked for and the categories they used. Dick indicated it was with residential material only. No commercial material. She is curious of the studies percentages they did at Okanogan landfill vs the study in the other three counties last year.

Peter discussed the orchard waste in Chelan County and how the county has a large quarantined area.

4:55 Chris Branch arrives.

Leslie asks about having a composting pile to keep material from going into the landfill. Dick and Sue talked about a wood waste and chipping done once at the landfill.

Leslie suggest in the Recommendations section the words, will, could and should for language to assure county as a partner. She wants to make sure the county collaborates and supports other efforts in the county by partnerships.

Get the Study from Central Landfill before the next meeting.

Next meeting Monday, November 20th at 3:00 pm we will go over Chapters 9 – 11. Those have come in from Parametrix and will be sent out tomorrow or the next day.

Next meeting, November, 20th at 3:00 pm. We will go over Chapters 9 - 11 & Chapter 4 again with Parametrix.

Chris adds the goal is to recycle and the way to do that is through the language in the plan.

Wayne share that Denise had no idea how high upon the radar the SWAC is and does in the county. She was glad to be part of the meetings in his absence.

Leslie makes a motion to adjourn the meeting and Dick H. seconds the motion.

Meeting adjourned at 5:48 p.m.

SOLID WASTE ADVISORY COMMITTEE
11-20-17
OKANOGAN COUNTY PUBLIC WORKS OFFICE

ADVISORY COMMITTEE	POSITION
George Brady	Elected
Wayne Turner	Elected
Steve Clark	Elected
Stan Carter	At-Large
Sue Christopher	At-Large
Joaquin Bustamante	Tribal Representative
Richard Howe	SW Industry

NON-VOTING ADVISORS	
Ben Rough	Okanogan County Public Works
Kent Kovalenko	Okanogan County Solid Waste
Lorraine Utt	Okanogan County Public Works

GUESTS	
Betsy Cushman	Methow Recycle
Dwight Miller	Parametrix
James Rivard	DOE Representative
Ernie Rasmussen	Tribal Planning

Unable to attend: Leslie Michel and J.J. Bellinger.

Stan C. bring the meeting to order at 3:01 pm, there is a quorum.

- #1 - Minutes to the November 6, 2017 meeting minutes are approved by Dick H. and seconded by Steve C.

- #2 - SWAC By-Laws Update and Revisions: Ben asks that everyone go over the update and bring back any input at the next meeting.

- #3 - Buy Back Program: The Buy Back Program is currently temporarily suspended. After Gary took the recycling tour of Washington, Idaho and Wyoming there was conversations of not having a Buy Back Program. Please consider recommendations to the Commissioner for the next meeting.

- #4 - Review of Chapters 4, 9, 10 & 11:

Chapter 4 - Recycling: The primary topics of discussion include. The 11/2/17 meeting had the 10/19/17 version. Tonight we have the current versions by Parametrix. The red boxes are the descriptions of what was discussed the last meeting. Everything at prior meetings are in the document. Tables will be updated last.

Parametrix is sourcing some tables from DOE. Sue asks about the recent dump and sort that was recently done at the landfill and how it compared to the one done in 2016 by Cascadia. George askes about in Needs and Opportunity that Brewster and single stream be put in for evaluation of a feasibility study. Hope to have the buy-back program decided before completing the draft.

Chapter 9 - Special Waste: The primary topics of discussion include. Stan discussed wood waste separations from burnable item, firewood and untreated materials. Katheryn indicated how much waste is in the construction industry and that it is included in some permitting process you have to list how they will be disposing of waste for job sites.

Stan states there needs to be a responsible solution to the problem of building and remodeling of homes and businesses. Dick states that government projects now include separate waste to be in the bid specs.

Steve asks about Biohazard materials. Sue indicated that most medical facilities are using Stericycle directly now. Central and transfer stations still take sharps items.

Kent wants to know if cannabis farmers are able to dispose of their plant by-products by composting. James from DOE will help provide the information to Dwight.

Steve asks if this would be the chapter to insert the wild fire debris information. The last wildfire debris had been brought in a year after the fire.

In Recommendation 9.6 the Building Department is who will decide how asbestos is handled during the permitting process.

Chapter 10 - Moderate Risk Waste: The primary topics of discussion include. Dwight explains that Moderate Risk Waste is quite a mature program. Katheryn tells how Okanogan County has a lot of resources and is easier to access. Okanogan County has a program that works. Joaquin wants to add in 10.6 that CCT still takes lighting. And to add into page 10-7 that CCT has an annual event for Earth day into the public outreach section.

Recommendation 10.5 needs to include that Okanogan County Solid Waste can provide a Hazardous Waste personnel to assist in city cleanups days and

Sue wants to remove the grant stuff as it in 10.5. The CPG grant at 75% funding is no longer available.

Chapter 11 - Administration and Enforcement: The primary topics of discussion include. George state the City of Pateros was able to get funds for after fire by being aggressive. He states being pushy and knowing what funding is needed and available.

On page 11-1, line 20 - 23 in CCT developing a new landfill may only be a super transfer station. The wording as to no Interlocal agreement between CCT and the county should have been Nespelem has an agreement with the Tribal SW.

On page 11-1 and Page 11-2 Jurisdictional Roles and Responsibilities and 11-5 In Needs and Opportunity 11.2 page 11-4 & 11-5 need to add the Department of Agriculture along with Ecology and WUTC.

In 11.2.2 page 11-5 and 11-6 discussed adding the possibility of increasing tipping fees.

Dick asks about page 11-8 line 36 and the wording of the System Funding and tipping fees. This is addressed on page 11-6 line 2.

Sue asks about the SWAC viewing the 2018 Solid Waste Budget. Ben and Kent will try to have available for the December 4th meeting.

Dick H. makes a motion to adjourn the meeting and Sue C. seconds the motion.

Meeting adjourned at 5:24 p.m.

Appendix D

Draft Plan Comments and Responses

Public comments will be included with the preliminary draft submitted to Ecology following the public comment period.

Appendix E

Draft SEPA Checklist

WAC 197-11-960 Environmental checklist.

ENVIRONMENTAL CHECKLIST

Purpose of checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

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.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable: **2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan**
2. Name of applicant: **Okanogan County Department of Public Works**
3. Address and phone number of applicant and contact person:
   Ben Rough
   1234-A 2nd Avenue South
   Okanogan, WA 98840
   509-422-7335
4. Date checklist prepared: **February 2018**
5. Agency requesting checklist: **Okanogan County Department of Public Works**
6. Proposed timing or schedule (including phasing, if applicable): **The 2018 Comprehensive Solid Waste Management Plan is intended to be for the 2018 – 2023 six-year period,assuming adoption and approval in mid-2018.**
7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   The Plan will be reviewed in approximately 5 years, pursuant to RCW 70.95.

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 prepared, or will be prepared, directly related to this proposal.

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.

   No.

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

    The facilities described in the Plan require various permits for operation. Permitting agencies include local land use departments, the Okanogan County Health District, the Washington State Department of Ecology, the Washington State Utilities and Transportation Commission (in the case of certificated garbage collection), and the Washington Department of Agriculture (to ensure compliance with apple maggot quarantine).

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.)

    Okanogan County's draft 2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan (Draft 2018 Plan) supersedes the County's previous 2012 Comprehensive Solid Waste and Moderate Risk Waste Management Plan (2012 Plan). The 2018 Plan was developed to fulfill the requirements of RCW 70.95, which requires local planning jurisdictions (in this instance, the Okanogan County)to prepare a solid waste and moderate risk waste plan, and to review and revise that plan every five years.

    The County's Draft 2018 Plan generally recommends the continuation of the existing waste reduction, recycling, solid waste collection, transfer and disposal operation. No new facilities or major programs are recommended in the initial years of the Plan. Future decisions on transfer station numbers and locations, as well as disposal alternatives, may require additional review (including SEPA review), if and when facility-specific changes are contemplated.

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 Draft 2018 Plan applies to the entire County, with the exception of Elmer City and Coulee Dam, which have elected to participate in the Grant County solid waste management system. The Colville Indian Reservation is generally within the planning area, since solid waste from that region is currently directed to County facilities.

B. ENVIRONMENTAL ELEMENTS

1. **Earth**

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other . . . . . .

Does not apply.

b. What is the steepest slope on the site (approximate percent slope)?

Does not apply.

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 prime farmland.

Does not apply.

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

Does not apply.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Does not apply.

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

Does not apply.

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

Does not apply.

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

Does not apply.

2. **Air**

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Not directly applicable. The plan seeks to address illegal burning and if programs and policies are successful, air emissions would be reduced.

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

Does not apply.

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

The administration and enforcement elements of the CSWMP seek to reduce illegal or improper burning of solid wastes.

3. **Water**

a. Surface:

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.

Does not apply.

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.

Does not apply.

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.

Does not apply.

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

Does not apply.

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

Does not apply.

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.

Does not apply.

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

Does not apply.

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.

Does not apply.

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.

Does not apply.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Does not apply.

3) Could waste materials enter ground or surface waters? If so, generally describe.

Does not apply.

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

Does not apply.

4. **Plants**

a. Check or circle types of vegetation found on the site: **Does not apply.**

_____ 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

b. What kind and amount of vegetation will be removed or altered?

Does not apply.

c. List threatened or endangered species known to be on or near the site.

Does not apply.

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

Does not apply.

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

Does not apply.

5. **Animals**

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

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

b. List any threatened or endangered species known to be on or near the site.

Does not apply.

c. Is the site part of a migration route? If so, explain.

Does not apply.

d. Proposed measures to preserve or enhance wildlife, if any:

Does not apply.

e. List any invasive animal species known to be on or near the site.

Does not apply.

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.

Not Directly Applicable. Existing solid waste management activities require energy inputs including diesel for collection vehicles and mobile equipment at transfer stations and the Central Landfill. These inputs may be minimized insofar as the 2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan is successful in encouraging waste reduction.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

Does not apply.

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:

Does not apply.

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.

1) Describe any known or possible contamination at the site from present or past uses.

Does not apply.

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.

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.

Not Directly Applicable. This Plan seeks to reduce environmental health hazards through proper management activities for solid and moderate risk wastes and infectious wastes.

1) Describe special emergency services that might be required.

Does not apply.

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

Does not apply.

b. **Noise**

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

Existing solid waste management activities produce noise from collection vehicles, traffic and mobile equipment at transfer stations and the Central Landfill. These impacts are not expected to greatly increase or decrease as a result of the 2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan recommendations.

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.

Site-specific impacts have been (and will be in the future) addressed as part of facility permitting.

3) Proposed measures to reduce or control noise impacts, if any:

Does not apply.

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.

Does not apply.

b. Has the 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.

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:

Does not apply.

c. Describe any structures on the site.

Does not apply.

d. Will any structures be demolished? If so, what?

Does not apply.

e. What is the current zoning classification of the site?

Does not apply.

f. What is the current comprehensive plan designation of the site?

Does not apply.

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

Does not apply.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Does not apply.

i. Approximately how many people would reside or work in the completed project?

Does not apply.

j. Approximately how many people would the completed project displace?

Does not apply.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Does not apply.

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

Does not apply.

9. **Housing**

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

Does not apply.

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

Does not apply.

c. Proposed measures to reduce or control housing impacts, if any:

Does not apply.

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?

Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?

Does not apply.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Does not apply.

11. **Light and glare**

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

Does not apply.

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

Does not apply.

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

Does not apply.

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

Does not apply.

12. **Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?

Does not apply.

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

Does not apply.

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

Does not apply.

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.

Does not apply.

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.

Does not apply.

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.

Does not apply.

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.

Does not apply.

14. **Transportation**

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Not Directly Applicable.

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?

Does not apply.

c. How many additional parking spaces would the completed project or nonproject proposal have? How many would the project or proposal eliminate?

Does not apply.

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).

Does not apply.

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

Does not apply.

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

Does not apply.

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.

Does not apply.

h. Proposed measures to reduce or control transportation impacts, if any:

Does not apply.

15. **Public services**

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

Does not apply.

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

Does not apply.

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.

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.

Does not apply.

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: .....

Date Submitted: .....

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(do not 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 2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan generally seeks to implement programs consistent with the State's waste management hierarchy of waste reduction, recycling, recovery and landfilling. Reducing, recycling and recovering wastes reduces the disposal impacts of handling those materials through landfilling. Thus, the full implementation of the CSWMP should decrease discharges to water; emissions to air; the production, storage or release of toxic or hazardous substances; and the production of noise.

   Proposed measures to avoid or reduce such increases are:

   No increases are expected.

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

   No impacts are expected.

   Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

   Additional waste reduction and recycling will conserve energy and natural resources.

   Proposed measures to protect or conserve energy and natural resources are:

   All waste reduction and recycling recommendations. (2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan Chapters 3 and 4, respectively).

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?

   No impacts are expected.

   Proposed measures to protect such resources or to avoid or reduce impacts are:

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?

   No impacts are expected.

   Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

   No impacts are expected.

   Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

   No conflicts are expected.

Appendix F

2016 Central Waste Generation Area Composition Results

Table 26: Central WGA Overall Disposed Waste Stream, Detailed Composition, 2015-2016

Material	Est. Percent	+/-	Est. Tons
Paper Packaging	**7.3%**		**37,984**
Newspaper Packaging	0.1%	0.1%	320
Cardboard/Kraft Paper Packaging	3.9%	0.9%	20,063
Other Groundwood Paper Packaging	0.4%	0.5%	2,133
Mixed/Low Grade Paper Packaging	1.8%	0.4%	9,243
Aseptic and Polycoat Packaging	0.1%	0.0%	620
Compostable Paper Packaging	0.5%	0.1%	2,499
R/C Paper Packaging	0.6%	0.2%	3,106
Plastic Packaging	**9.7%**		**50,379**
#1 PETE Plastic Bottles	1.8%	1.1%	9,169
#1 PETE Plastic Non-bottles	0.7%	0.3%	3,517
#2 HDPE Plastic Natural Bottles	0.7%	0.3%	3,673
#2 HDPE Plastic Colored Bottles	0.4%	0.1%	2,053
#2 HDPE Plastic Jars & Tubs	0.3%	0.2%	1,563
#3 PVC Plastic Packaging	0.0%	0.0%	10
#4 LDPE Plastic Packaging	0.0%	0.0%	6
#5 PP Plastic Packaging	0.4%	0.1%	1,929
#6 PS Plastic Packaging	0.0%	0.0%	68
#7 Other Plastic Packaging	0.2%	0.1%	984
Expanded Polystyrene Packaging	0.7%	0.4%	3,593
PLA/Compostable Plastic Packaging	0.0%	0.0%	70
Plastic Merchandise Bags	0.5%	0.1%	2,518
Non-industrial Packaging Film Plastic	2.0%	0.9%	10,295
Industrial Packaging Film Plastic	1.8%	1.4%	9,241
Flexible Plastic Packaging	0.1%	0.1%	453
R/C Plastic Packaging	0.2%	0.1%	1,236
Metal	**5.0%**		**25,889**
Aluminum Beverage Cans	0.5%	0.1%	2,596
Aluminum Foil/Containers	0.1%	0.1%	687
Other Aluminum	0.2%	0.2%	836
Other Nonferrous	0.1%	0.0%	261
Food Cans - Tinned	0.8%	0.2%	4,101
Food Cans - Coated	0.0%	0.0%	114
White Goods	0.0%	0.0%	0
Other Ferrous Metal	2.0%	0.8%	10,476
R/C Metals	1.3%	0.7%	6,817
Glass	**2.4%**		**12,679**
Clear Glass Containers	1.1%	0.3%	5,783
Green Glass Containers	0.4%	0.2%	1,958
Brown Glass Containers	0.6%	0.2%	3,142
Plate Glass	0.0%	0.0%	170
Stoneware/Kitchen Ceramics	0.0%	0.0%	31
R/C Glass	0.3%	0.2%	1,596
Organics	**32.6%**		**168,970**
Edible Food - Vegetative	5.9%	1.9%	30,515
Inedible Food - Vegetative	8.5%	1.8%	44,093
Edible Food - Meat, Fats, Oils	1.4%	0.9%	7,175
Inedible Food - Meats, Fats, Oils	2.6%	1.1%	13,281
Yard & Garden Waste - Leaves & Grass	6.8%	2.5%	35,326
Yard & Garden Waste - Prunings	4.1%	2.0%	21,163
Animal Manure	1.7%	0.7%	8,881
Animal Carcasses	0.0%	0.0%	85
Crop Residues	0.0%	0.0%	0
Fruit Waste	1.3%	1.5%	6,611
R/C Organics	0.4%	0.2%	1,840
Wood Wastes	**9.9%**		**51,524**
Treated Wood	0.5%	0.4%	2,494
Painted Wood	2.1%	1.3%	10,878
Dimensional Lumber	2.8%	1.3%	14,499
Engineered Wood	1.4%	0.7%	7,029
Pallets & Crates	1.5%	1.1%	8,030
Other Untreated Wood	0.7%	0.6%	3,676
Wood By-products	0.2%	0.1%	930
R/C Wood Wastes	0.8%	0.6%	3,987
Construction Materials	**7.2%**		**37,225**
Natural Wood	0.1%	0.2%	710
Plastic Lumber	0.0%	0.0%	0
Insulation	0.4%	0.4%	2,013
Asphalt Paving	0.0%	0.0%	0
Concrete	0.6%	0.5%	3,320
Drywall	1.4%	1.0%	7,370
Carpet	0.8%	0.4%	4,045
Carpet Padding	0.7%	0.6%	3,617
Soil, Rocks, Sand	0.6%	0.4%	3,028
Asphalt Roofing	0.7%	0.7%	3,827
Plastic Flooring	0.0%	0.0%	103
Ceramics & Brick	0.3%	0.2%	1,373
R/C Construction Materials	1.5%	0.7%	7,820
Residues	**6.4%**		**33,325**
Disposable Diapers	3.2%	0.9%	16,622
Ash	0.2%	0.3%	1,068
Dust	0.0%	0.0%	13
Fines	1.5%	1.4%	7,631
Sludge/Special Industrial	1.5%	1.5%	7,991
Sample Count	**115**		

Material	Est. Percent	+/-	Est. Tons
Paper Products	**7.6%**		**39,584**
Newspaper	0.5%	0.2%	2,369
Cardboard/Kraft Paper Products	0.0%	0.0%	19
Magazines	0.3%	0.1%	1,297
High-Grade Paper Products	2.0%	1.8%	10,341
Other Groundwood Paper Products	0.0%	0.0%	24
Mixed Low Grade Paper Products	1.1%	0.5%	5,944
Compostable Paper Products	3.0%	0.6%	15,624
Paper Processing Sludge	0.0%	0.0%	0
R/C Paper Products	0.8%	0.8%	3,966
Plastic Products	**4.4%**		**22,991**
#1 PETE Plastic Products	0.0%	0.0%	92
#2 HDPE Plastic Products	0.0%	0.0%	34
#3 PVC Plastic Products	0.0%	0.0%	36
#4 LDPE Plastic Products	0.0%	0.0%	0
#5 PP Plastic Products	0.0%	0.0%	109
#6 PS Plastic Products	0.1%	0.1%	568
#7 Other Plastic Products	0.6%	0.3%	3,219
PLA/Compostable Plastic Products	0.0%	0.0%	14
Plastic Garbage Bags	1.0%	0.2%	5,136
Non-bag Plastic Film Products	0.2%	0.2%	982
Bulky Rigid Plastic Products	1.4%	0.8%	7,061
R/C Plastic Products	1.1%	1.1%	5,739
Consumer Products	**6.8%**		**35,175**
Televisions - CRT	0.1%	0.2%	579
Televisions - LCD	0.0%	0.0%	0
Television Peripherals	0.0%	0.0%	0
Computer Monitors - CRT	0.0%	0.0%	0
Computer Monitors - LCD	0.0%	0.0%	0
Computers	0.0%	0.0%	42
Computer Peripherals	0.0%	0.0%	0
Computer Printers	0.1%	0.2%	694
Audio Equipment	0.0%	0.1%	243
Electronic Gaming Equipment	0.0%	0.0%	55
Other Consumer Electronics	0.4%	0.4%	2,135
Textiles - Organic	1.9%	0.8%	9,800
Textiles - Synthetic, Mixed, Unknown	0.6%	0.3%	2,921
Shoes, Purses, Belts	0.6%	0.3%	2,917
Tires & Rubber	1.0%	0.9%	5,365
Furniture	1.4%	0.8%	7,144
Mattresses	0.6%	0.7%	3,280
R/C Consumer Products	0.0%	0.0%	0
Hazardous and Special Waste	**0.5%**		**2,397**
Pesticides	0.0%	0.0%	59
Fertilizers	0.0%	0.0%	0
Herbicides	0.0%	0.0%	0
Fungicides	0.0%	0.0%	0
HID Lamps	0.0%	0.0%	0
Compact Fluorescent Lamps	0.0%	0.0%	5
Fluorescent Tubes	0.0%	0.0%	6
UV/Germicidal Lamps	0.0%	0.0%	0
Asbestos	0.0%	0.0%	0
Water Based Paints	0.1%	0.1%	451
Solvent-based Glues	0.0%	0.0%	0
Water Based Glues	0.0%	0.0%	0
Oil-based Paint	0.0%	0.0%	0
Oil-based Clear Coatings	0.0%	0.0%	0
Lacquer	0.0%	0.0%	0
Varnish	0.0%	0.0%	0
Urethane Coatings	0.0%	0.0%	0
Deck Coatings/Floor Paint	0.0%	0.0%	0
Field/Lawn Markings	0.0%	0.0%	0
Rust Preventive Coatings	0.0%	0.0%	0
Primers/Sealers	0.0%	0.0%	18
Stains	0.0%	0.0%	0
Water Repellants	0.0%	0.0%	0
Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Solvents	0.0%	0.0%	36
Caustic Cleaners	0.0%	0.0%	67
Dry-cell Batteries - Single Use	0.0%	0.0%	51
Dry-cell Batteries - Rechargeable	0.0%	0.0%	4
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	0
Motor Oil	0.0%	0.0%	29
Antifreeze	0.0%	0.0%	0
Other Vehicle Fluids	0.0%	0.0%	0
Oil Filters	0.0%	0.0%	80
Explosives	0.0%	0.0%	0
Medical Wastes	0.3%	0.4%	1,346
Sharps	0.0%	0.0%	4
Pharmaceuticals/Vitamins	0.0%	0.0%	9
Other Cleaners/Chemicals	0.0%	0.0%	62
Personal Care Products	0.0%	0.0%	90
Other Potentially Hazardous Waste	0.0%	0.0%	80
Totals	**100%**		**518,121**

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 27: Central WGA Commercial Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+/-	Est. Tons	Material	Est. Percent	+/-	Est. Tons
Paper Packaging	**9.9%**		**17,797**	**Paper Products**	**5.6%**		**10,091**
Newspaper Packaging	0.0%	0.1%	89	Newspaper	0.1%	0.1%	260
Cardboard/Kraft Paper Packaging	6.6%	2.4%	11,995	Cardboard/Kraft Paper Products	0.0%	0.0%	19
Other Groundwood Paper Packaging	0.9%	1.3%	1,642	Magazines	0.1%	0.1%	231
Mixed/Low Grade Paper Packaging	1.4%	0.6%	2,450	High-Grade Paper Products	0.6%	0.4%	1,146
Aseptic and Polycoat Packaging	0.1%	0.1%	212	Other Groundwood Paper Products	0.0%	0.0%	2
Compostable Paper Packaging	0.3%	0.2%	544	Mixed Low Grade Paper Products	0.4%	0.2%	636
R/C Paper Packaging	0.5%	0.3%	864	Compostable Paper Products	2.5%	0.9%	4,439
Plastic Packaging	**14.0%**		**25,229**	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	1.4%	0.7%	2,616	R/C Paper Products	1.9%	2.3%	3,358
#1 PETE Plastic Non-bottles	0.8%	0.6%	1,503	**Plastic Products**	**4.1%**		**7,403**
#2 HDPE Plastic Natural Bottles	1.3%	0.9%	2,332	#1 PETE Plastic Products	0.0%	0.0%	28
#2 HDPE Plastic Colored Bottles	0.4%	0.3%	668	#2 HDPE Plastic Products	0.0%	0.0%	8
#2 HDPE Plastic Jars & Tubs	0.5%	0.5%	972	#3 PVC Plastic Products	0.0%	0.0%	36
#3 PVC Plastic Packaging	0.0%	0.0%	9	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	2	#5 PP Plastic Products	0.1%	0.1%	100
#5 PP Plastic Packaging	0.3%	0.1%	544	#6 PS Plastic Products	0.1%	0.1%	216
#6 PS Plastic Packaging	0.0%	0.0%	19	#7 Other Plastic Products	0.3%	0.2%	518
#7 Other Plastic Packaging	0.1%	0.1%	148	PLA/Compostable Plastic Products	0.0%	0.0%	0
Expanded Polystyrene Packaging	0.7%	0.5%	1,224	Plastic Garbage Bags	0.9%	0.3%	1,597
PLA/Compostable Plastic Packaging	0.0%	0.0%	34	Non-bag Plastic Film Products	0.2%	0.3%	329
Plastic Merchandise Bags	0.2%	0.1%	399	Bulky Rigid Plastic Products	0.1%	0.1%	240
Non-Industrial Packaging Film Plastic	2.7%	2.3%	4,939	R/C Plastic Products	2.4%	3.2%	4,331
Industrial Packaging Film Plastic	4.8%	4.0%	8,675	**Consumer Products**	**4.8%**		**8,665**
Flexible Plastic Packaging	0.1%	0.1%	182	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.5%	0.4%	962	Televisions - LCD	0.0%	0.0%	0
Metal	**5.9%**		**10,713**	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.5%	0.2%	816	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.1%	0.0%	141	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.4%	0.6%	721	Computers	0.0%	0.0%	0
Other Nonferrous	0.0%	0.0%	9	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.8%	0.5%	1,427	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	16	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	2.5%	1.4%	4,563	Other Consumer Electronics	0.3%	0.5%	571
R/C Metals	1.7%	1.8%	3,019	Textiles - Organic	1.9%	2.1%	3,350
Glass	**2.0%**		**3,625**	Textiles - Synthetic, Mixed, Unknown	0.5%	0.7%	930
Clear Glass Containers	0.9%	0.6%	1,589	Shoes, Purses, Belts	0.1%	0.1%	176
Green Glass Containers	0.2%	0.1%	290	Tires & Rubber	0.4%	0.5%	777
Brown Glass Containers	0.7%	0.5%	1,341	Furniture	0.5%	0.8%	838
Plate Glass	0.0%	0.0%	0	Mattresses	1.1%	1.8%	2,024
Stoneware/Kitchen Ceramics	0.0%	0.0%	9	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.2%	0.2%	395	**Hazardous and Special Waste**	**0.9%**		**1,671**
Organics	**17.3%**		**31,308**	Pesticides	0.0%	0.1%	59
Edible Food - Vegetative	4.8%	4.2%	8,732	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	3.6%	1.7%	6,451	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.1%	0.1%	236	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	1.2%	1.5%	2,221	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	1.8%	1.5%	3,267	Compact Fluorescent Lamps	0.0%	0.0%	3
Yard & Garden Waste - Prunings	1.2%	1.1%	2,171	Fluorescent Tubes	0.0%	0.0%	6
Animal Manure	0.7%	0.7%	1,190	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.1%	69	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.2%	0.3%	313
Fruit Waste	3.7%	4.3%	6,611	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.2%	0.2%	360	Water Based Glues	0.0%	0.0%	0
Wood Wastes	**16.7%**		**30,090**	Oil-based Paint	0.0%	0.0%	0
Treated Wood	1.0%	1.1%	1,892	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	3.5%	3.5%	6,246	Lacquer	0.0%	0.0%	0
Dimensional Lumber	5.2%	3.3%	9,362	Varnish	0.0%	0.0%	0
Engineered Wood	1.8%	1.6%	3,208	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	3.4%	2.8%	6,073	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	0.0%	0.0%	25	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.0%	0.0%	73	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.8%	1.6%	3,210	Primers/Sealers	0.0%	0.0%	0
Construction Materials	**8.2%**		**14,897**	Stains	0.0%	0.0%	0
Natural Wood	0.2%	0.4%	444	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	1.1%	1.2%	1,901	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	1.0%	1.3%	1,851	Dry-cell Batteries - Single Use	0.0%	0.0%	31
Drywall	1.3%	1.6%	2,369	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	0.5%	0.6%	866	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	1.1%	1.3%	2,024	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	0.9%	0.8%	1,673	Motor Oil	0.0%	0.0%	0
Asphalt Roofing	0.0%	0.1%	75	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	28	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.5%	0.5%	956	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	1.5%	1.4%	2,709	Explosives	0.0%	0.0%	0
Residues	**10.6%**		**19,147**	Medical Wastes	0.7%	1.1%	1,252
Disposable Diapers	1.4%	1.0%	2,486	Sharps	0.0%	0.0%	2
Ash	0.6%	1.0%	1,068	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.0%	0	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	4.2%	4.1%	7,602	Personal Care Products	0.0%	0.0%	3
Sludge/Special Industrial	4.4%	4.2%	7,991	Other Potentially Hazardous Waste	0.0%	0.0%	1
Sample Count	**49**			**Totals**	**100%**		**180,636**

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 28: Central WGA Residential Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+/-	Est. Tons
Paper Packaging	**6.6%**		**17,408**
Newspaper Packaging	0.1%	0.1%	169
Cardboard/Kraft Paper Packaging	2.5%	0.8%	6,421
Other Groundwood Paper Packaging	0.2%	0.1%	480
Mixed/Low Grade Paper Packaging	2.4%	0.8%	6,385
Aseptic and Polycoat Packaging	0.1%	0.1%	387
Compostable Paper Packaging	0.7%	0.3%	1,890
R/C Paper Packaging	0.6%	0.2%	1,676
Plastic Packaging	**9.2%**		**24,084**
#1 PETE Plastic Bottles	2.5%	2.1%	6,487
#1 PETE Plastic Non-bottles	0.8%	0.2%	1,992
#2 HDPE Plastic Natural Bottles	0.5%	0.1%	1,209
#2 HDPE Plastic Colored Bottles	0.5%	0.1%	1,358
#2 HDPE Plastic Jars & Tubs	0.1%	0.1%	338
#3 PVC Plastic Packaging	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	4
#5 PP Plastic Packaging	0.5%	0.2%	1,323
#6 PS Plastic Packaging	0.0%	0.0%	49
#7 Other Plastic Packaging	0.3%	0.2%	827
Expanded Polystyrene Packaging	0.9%	0.6%	2,339
PLA/Compostable Plastic Packaging	0.0%	0.0%	36
Plastic Merchandise Bags	0.8%	0.2%	2,081
Non-industrial Packaging Film Plastic	2.0%	0.5%	5,258
Industrial Packaging Film Plastic	0.1%	0.1%	382
Flexible Plastic Packaging	0.1%	0.1%	270
R/C Plastic Packaging	0.0%	0.1%	129
Metal	**3.9%**		**10,089**
Aluminum Beverage Cans	0.7%	0.2%	1,736
Aluminum Foil/Containers	0.2%	0.1%	545
Other Aluminum	0.0%	0.0%	36
Other Nonferrous	0.0%	0.0%	0
Food Cans - Tinned	1.0%	0.2%	2,641
Food Cans - Coated	0.0%	0.0%	98
White Goods	0.0%	0.0%	0
Other Ferrous Metal	1.3%	1.2%	3,410
R/C Metals	0.6%	0.3%	1,623
Glass	**3.2%**		**8,488**
Clear Glass Containers	1.6%	0.4%	4,171
Green Glass Containers	0.6%	0.3%	1,667
Brown Glass Containers	0.7%	0.3%	1,801
Plate Glass	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.0%	0.0%	0
R/C Glass	0.3%	0.3%	849
Organics	**48.2%**		**126,353**
Edible Food - Vegetative	8.2%	2.3%	21,379
Inedible Food - Vegetative	14.2%	3.3%	37,293
Edible Food - Meat, Fats, Oils	2.6%	1.8%	6,923
Inedible Food - Meats, Fats, Oils	4.2%	1.9%	11,023
Yard & Garden Waste - Leaves & Grass	10.2%	4.6%	26,821
Yard & Garden Waste - Prunings	5.3%	3.5%	13,993
Animal Manure	2.9%	1.4%	7,475
Animal Carcasses	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0
R/C Organics	0.6%	0.3%	1,445
Wood Wastes	**1.5%**		**3,860**
Treated Wood	0.0%	0.0%	0
Painted Wood	0.5%	0.8%	1,316
Dimensional Lumber	0.1%	0.1%	240
Engineered Wood	0.2%	0.2%	445
Pallets & Crates	0.0%	0.0%	0
Other Untreated Wood	0.5%	0.7%	1,223
Wood By-products	0.2%	0.2%	502
R/C Wood Wastes	0.1%	0.1%	133
Construction Materials	**1.0%**		**2,655**
Natural Wood	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0
Insulation	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0
Concrete	0.0%	0.0%	0
Drywall	0.0%	0.0%	58
Carpet	0.1%	0.2%	311
Carpet Padding	0.5%	0.6%	1,267
Soil, Rocks, Sand	0.1%	0.1%	156
Asphalt Roofing	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	0
Ceramics & Brick	0.0%	0.1%	116
R/C Construction Materials	0.3%	0.5%	747
Residues	**5.4%**		**14,136**
Disposable Diapers	5.4%	1.6%	14,136
Ash	0.0%	0.0%	0
Dust	0.0%	0.0%	0
Fines	0.0%	0.0%	0
Sludge/Special Industrial	0.0%	0.0%	0
Sample Count	**24**		

Material	Est. Percent	+/-	Est. Tons
Paper Products	**10.8%**		**28,329**
Newspaper	0.7%	0.3%	1,952
Cardboard/Kraft Paper Products	0.0%	0.0%	0
Magazines	0.3%	0.2%	827
High-Grade Paper Products	3.4%	3.6%	9,000
Other Groundwood Paper Products	0.0%	0.0%	0
Mixed Low Grade Paper Products	1.9%	1.0%	4,989
Compostable Paper Products	4.2%	1.1%	10,970
Paper Processing Sludge	0.0%	0.0%	0
R/C Paper Products	0.2%	0.1%	591
Plastic Products	**4.5%**		**11,659**
#1 PETE Plastic Products	0.0%	0.0%	58
#2 HDPE Plastic Products	0.0%	0.0%	27
#3 PVC Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Products	0.0%	0.0%	0
#5 PP Plastic Products	0.0%	0.0%	9
#6 PS Plastic Products	0.1%	0.1%	316
#7 Other Plastic Products	0.9%	0.6%	2,450
PLA/Compostable Plastic Products	0.0%	0.0%	0
Plastic Garbage Bags	1.3%	0.3%	3,308
Non-bag Plastic Film Products	0.2%	0.3%	480
Bulky Rigid Plastic Products	1.6%	1.3%	4,180
R/C Plastic Products	0.3%	0.2%	832
Consumer Products	**5.5%**		**14,349**
Televisions - CRT	0.0%	0.0%	0
Televisions - LCD	0.0%	0.0%	0
Television Peripherals	0.0%	0.0%	0
Computer Monitors - CRT	0.0%	0.0%	0
Computer Monitors - LCD	0.0%	0.0%	0
Computers	0.0%	0.0%	0
Computer Peripherals	0.0%	0.0%	0
Computer Printers	0.2%	0.4%	640
Audio Equipment	0.0%	0.0%	0
Electronic Gaming Equipment	0.0%	0.0%	0
Other Consumer Electronics	0.6%	0.7%	1,458
Textiles - Organic	2.0%	0.6%	5,225
Textiles - Synthetic, Mixed, Unknown	0.7%	0.5%	1,752
Shoes, Purses, Belts	1.0%	0.6%	2,677
Tires & Rubber	1.0%	1.2%	2,597
Furniture	0.0%	0.0%	0
Mattresses	0.0%	0.0%	0
R/C Consumer Products	0.0%	0.0%	0
Hazardous and Special Waste	**0.2%**		**527**
Pesticides	0.0%	0.0%	0
Fertilizers	0.0%	0.0%	0
Herbicides	0.0%	0.0%	0
Fungicides	0.0%	0.0%	0
HID Lamps	0.0%	0.0%	0
Compact Fluorescent Lamps	0.0%	0.0%	0
Fluorescent Tubes	0.0%	0.0%	0
UV/Germicidal Lamps	0.0%	0.0%	0
Asbestos	0.0%	0.0%	0
Water Based Paints	0.0%	0.0%	0
Solvent-based Glues	0.0%	0.0%	0
Water Based Glues	0.0%	0.0%	0
Oil-based Paint	0.0%	0.0%	0
Oil-based Clear Coatings	0.0%	0.0%	0
Lacquer	0.0%	0.0%	0
Varnish	0.0%	0.0%	0
Urethane Coatings	0.0%	0.0%	0
Deck Coatings/Floor Paint	0.0%	0.0%	0
Field/Lawn Markings	0.0%	0.0%	0
Rust Preventive Coatings	0.0%	0.0%	0
Primers/Sealers	0.0%	0.0%	18
Stains	0.0%	0.0%	0
Water Repellants	0.0%	0.0%	0
Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Solvents	0.0%	0.0%	36
Caustic Cleaners	0.0%	0.0%	67
Dry-cell Batteries - Single Use	0.0%	0.0%	20
Dry-cell Batteries - Rechargeable	0.0%	0.0%	4
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	0
Motor Oil	0.0%	0.0%	0
Antifreeze	0.0%	0.0%	0
Other Vehicle Fluids	0.0%	0.0%	0
Oil Filters	0.0%	0.1%	80
Explosives	0.0%	0.0%	0
Medical Wastes	0.0%	0.1%	93
Sharps	0.0%	0.0%	2
Pharmaceuticals/Vitamins	0.0%	0.0%	9
Other Cleaners/Chemicals	0.0%	0.0%	62
Personal Care Products	0.0%	0.0%	87
Other Potentially Hazardous Waste	0.0%	0.0%	49
Totals	**100%**		**261,936**

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 29: Central WGA Self-hauled C&D Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+/-	Est. Tons	Material	Est. Percent	+/-	Est. Tons
Paper Packaging	**4.4%**		**1,537**	**Paper Products**	**0.6%**		**204**
Newspaper Packaging	0.2%	0.3%	62	Newspaper	0.3%	0.4%	95
Cardboard/Kraft Paper Packaging	2.3%	2.5%	788	Cardboard/Kraft Paper Products	0.0%	0.0%	0
Other Groundwood Paper Packaging	0.0%	0.0%	0	Magazines	0.0%	0.0%	0
Mixed/Low Grade Paper Packaging	0.6%	0.7%	204	High-Grade Paper Products	0.0%	0.0%	8
Aseptic and Polycoat Packaging	0.0%	0.0%	1	Other Groundwood Paper Products	0.0%	0.0%	0
Compostable Paper Packaging	0.0%	0.0%	1	Mixed Low Grade Paper Products	0.0%	0.0%	0
R/C Paper Packaging	1.4%	2.2%	480	Compostable Paper Products	0.3%	0.5%	96
Plastic Packaging	**1.1%**		**388**	Paper Processing Sludge	0.0%	0.0%	0
#1 PETE Plastic Bottles	0.0%	0.0%	7	R/C Paper Products	0.0%	0.0%	4
#1 PETE Plastic Non-bottles	0.0%	0.0%	0	**Plastic Products**	**1.4%**		**478**
#2 HDPE Plastic Natural Bottles	0.3%	0.6%	120	#1 PETE Plastic Products	0.0%	0.0%	4
#2 HDPE Plastic Colored Bottles	0.0%	0.0%	0	#2 HDPE Plastic Products	0.0%	0.0%	0
#2 HDPE Plastic Jars & Tubs	0.3%	0.4%	116	#3 PVC Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Packaging	0.0%	0.0%	1	#4 LDPE Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0	#5 PP Plastic Products	0.0%	0.0%	0
#5 PP Plastic Packaging	0.0%	0.0%	0	#6 PS Plastic Products	0.0%	0.0%	1
#6 PS Plastic Packaging	0.0%	0.0%	0	#7 Other Plastic Products	0.0%	0.0%	8
#7 Other Plastic Packaging	0.0%	0.0%	2	PLA/Compostable Plastic Products	0.0%	0.1%	14
Expanded Polystyrene Packaging	0.0%	0.0%	1	Plastic Garbage Bags	0.3%	0.3%	89
PLA/Compostable Plastic Packaging	0.0%	0.0%	0	Non-bag Plastic Film Products	0.0%	0.0%	10
Plastic Merchandise Bags	0.0%	0.0%	6	Bulky Rigid Plastic Products	0.6%	0.5%	203
Non-Industrial Packaging Film Plastic	0.2%	0.2%	61	R/C Plastic Products	0.4%	0.7%	150
Industrial Packaging Film Plastic	0.2%	0.2%	74	**Consumer Products**	**9.1%**		**3,178**
Flexible Plastic Packaging	0.0%	0.0%	0	Televisions - CRT	0.0%	0.0%	0
R/C Plastic Packaging	0.0%	0.0%	0	Televisions - LCD	0.0%	0.0%	0
Metal	**3.8%**		**1,328**	Television Peripherals	0.0%	0.0%	0
Aluminum Beverage Cans	0.0%	0.0%	2	Computer Monitors - CRT	0.0%	0.0%	0
Aluminum Foil/Containers	0.0%	0.0%	0	Computer Monitors - LCD	0.0%	0.0%	0
Other Aluminum	0.1%	0.2%	40	Computers	0.0%	0.0%	0
Other Nonferrous	0.2%	0.3%	61	Computer Peripherals	0.0%	0.0%	0
Food Cans - Tinned	0.0%	0.0%	0	Computer Printers	0.0%	0.0%	0
Food Cans - Coated	0.0%	0.0%	0	Audio Equipment	0.0%	0.0%	0
White Goods	0.0%	0.0%	0	Electronic Gaming Equipment	0.0%	0.0%	0
Other Ferrous Metal	0.7%	0.8%	229	Other Consumer Electronics	0.0%	0.0%	0
R/C Metals	2.9%	2.1%	996	Textiles - Organic	0.0%	0.0%	3
Glass	**1.2%**		**421**	Textiles - Synthetic, Mixed, Unknown	0.0%	0.0%	3
Clear Glass Containers	0.0%	0.0%	7	Shoes, Purses, Belts	0.0%	0.0%	0
Green Glass Containers	0.0%	0.0%	0	Tires & Rubber	5.4%	8.7%	1,883
Brown Glass Containers	0.0%	0.0%	0	Furniture	3.7%	6.1%	1,290
Plate Glass	0.5%	0.6%	170	Mattresses	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.0%	0.0%	0	R/C Consumer Products	0.0%	0.0%	0
R/C Glass	0.7%	0.9%	244	**Hazardous and Special Waste**	**0.5%**		**166**
Organics	**0.1%**		**33**	Pesticides	0.0%	0.0%	0
Edible Food - Vegetative	0.0%	0.0%	10	Fertilizers	0.0%	0.0%	0
Inedible Food - Vegetative	0.0%	0.0%	0	Herbicides	0.0%	0.0%	0
Edible Food - Meat, Fats, Oils	0.0%	0.0%	0	Fungicides	0.0%	0.0%	0
Inedible Food - Meats, Fats, Oils	0.0%	0.0%	0	HID Lamps	0.0%	0.0%	0
Yard & Garden Waste - Leaves & Grass	0.0%	0.0%	0	Compact Fluorescent Lamps	0.0%	0.0%	0
Yard & Garden Waste - Prunings	0.0%	0.0%	6	Fluorescent Tubes	0.0%	0.0%	0
Animal Manure	0.0%	0.0%	0	UV/Germicidal Lamps	0.0%	0.0%	0
Animal Carcasses	0.0%	0.1%	17	Asbestos	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0	Water Based Paints	0.4%	0.6%	137
Fruit Waste	0.0%	0.0%	0	Solvent-based Glues	0.0%	0.0%	0
R/C Organics	0.0%	0.0%	0	Water Based Glues	0.0%	0.0%	0
Wood Wastes	**33.3%**		**11,590**	Oil-based Paint	0.0%	0.0%	0
Treated Wood	1.7%	1.8%	602	Oil-based Clear Coatings	0.0%	0.0%	0
Painted Wood	5.9%	3.0%	2,063	Lacquer	0.0%	0.0%	0
Dimensional Lumber	10.6%	5.1%	3,698	Varnish	0.0%	0.0%	0
Engineered Wood	6.4%	3.9%	2,235	Urethane Coatings	0.0%	0.0%	0
Pallets & Crates	5.6%	7.4%	1,957	Deck Coatings/Floor Paint	0.0%	0.0%	0
Other Untreated Wood	1.6%	2.6%	560	Field/Lawn Markings	0.0%	0.0%	0
Wood By-products	0.4%	0.6%	136	Rust Preventive Coatings	0.0%	0.0%	0
R/C Wood Wastes	1.0%	0.9%	340	Primers/Sealers	0.0%	0.0%	0
Construction Materials	**44.5%**		**15,507**	Stains	0.0%	0.0%	0
Natural Wood	0.4%	0.7%	149	Water Repellants	0.0%	0.0%	0
Plastic Lumber	0.0%	0.0%	0	Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Insulation	0.1%	0.2%	44	Solvents	0.0%	0.0%	0
Asphalt Paving	0.0%	0.0%	0	Caustic Cleaners	0.0%	0.0%	0
Concrete	4.2%	4.8%	1,469	Dry-cell Batteries - Single Use	0.0%	0.0%	0
Drywall	9.1%	8.1%	3,154	Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Carpet	3.4%	3.0%	1,172	Wet-cell Batteries	0.0%	0.0%	0
Carpet Padding	0.3%	0.5%	100	Gasoline/Kerosene	0.0%	0.0%	0
Soil, Rocks, Sand	2.7%	4.3%	931	Motor Oil	0.1%	0.1%	29
Asphalt Roofing	10.8%	10.4%	3,752	Antifreeze	0.0%	0.0%	0
Plastic Flooring	0.2%	0.3%	75	Other Vehicle Fluids	0.0%	0.0%	0
Ceramics & Brick	0.8%	1.0%	296	Oil Filters	0.0%	0.0%	0
R/C Construction Materials	12.5%	5.7%	4,364	Explosives	0.0%	0.0%	0
Residues	**0.0%**		**13**	Medical Wastes	0.0%	0.0%	0
Disposable Diapers	0.0%	0.0%	0	Sharps	0.0%	0.0%	0
Ash	0.0%	0.0%	0	Pharmaceuticals/Vitamins	0.0%	0.0%	0
Dust	0.0%	0.1%	13	Other Cleaners/Chemicals	0.0%	0.0%	0
Fines	0.0%	0.0%	0	Personal Care Products	0.0%	0.0%	0
Sludge/Special Industrial	0.0%	0.0%	0	Other Potentially Hazardous Waste	0.0%	0.0%	0
Sample Count	**20**			**Totals**	**100%**		**34,842**

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Table 30: Central WGA Self-hauled Other Disposed Waste Sector, Detailed Composition, 2015-2016

Material	Est. Percent	+/-	Est. Tons
Paper Packaging	**3.1%**		**1,243**
Newspaper Packaging	0.0%	0.0%	0
Cardboard/Kraft Paper Packaging	2.1%	1.4%	860
Other Groundwood Paper Packaging	0.0%	0.0%	11
Mixed/Low Grade Paper Packaging	0.5%	0.4%	203
Aseptic and Polycoat Packaging	0.0%	0.1%	20
Compostable Paper Packaging	0.2%	0.2%	64
R/C Paper Packaging	0.2%	0.2%	85
Plastic Packaging	**1.7%**		**678**
#1 PETE Plastic Bottles	0.1%	0.1%	59
#1 PETE Plastic Non-bottles	0.1%	0.1%	21
#2 HDPE Plastic Natural Bottles	0.0%	0.0%	12
#2 HDPE Plastic Colored Bottles	0.1%	0.0%	27
#2 HDPE Plastic Jars & Tubs	0.3%	0.5%	137
#3 PVC Plastic Packaging	0.0%	0.0%	0
#4 LDPE Plastic Packaging	0.0%	0.0%	0
#5 PP Plastic Packaging	0.2%	0.2%	62
#6 PS Plastic Packaging	0.0%	0.0%	0
#7 Other Plastic Packaging	0.0%	0.0%	7
Expanded Polystyrene Packaging	0.1%	0.1%	29
PLA/Compostable Plastic Packaging	0.0%	0.0%	0
Plastic Merchandise Bags	0.1%	0.1%	32
Non-industrial Packaging Film Plastic	0.1%	0.1%	36
Industrial Packaging Film Plastic	0.3%	0.4%	110
Flexible Plastic Packaging	0.0%	0.0%	2
R/C Plastic Packaging	0.4%	0.4%	144
Metal	**9.2%**		**3,758**
Aluminum Beverage Cans	0.1%	0.1%	42
Aluminum Foil/Containers	0.0%	0.0%	2
Other Aluminum	0.1%	0.2%	39
Other Nonferrous	0.5%	0.5%	192
Food Cans - Tinned	0.1%	0.1%	33
Food Cans - Coated	0.0%	0.0%	0
White Goods	0.0%	0.0%	0
Other Ferrous Metal	5.6%	3.1%	2,273
R/C Metals	2.9%	1.9%	1,178
Glass	**0.4%**		**145**
Clear Glass Containers	0.0%	0.0%	16
Green Glass Containers	0.0%	0.0%	0
Brown Glass Containers	0.0%	0.0%	0
Plate Glass	0.0%	0.0%	0
Stoneware/Kitchen Ceramics	0.1%	0.1%	21
R/C Glass	0.3%	0.4%	108
Organics	**27.7%**		**11,277**
Edible Food - Vegetative	1.0%	0.9%	393
Inedible Food - Vegetative	0.9%	1.1%	349
Edible Food - Meat, Fats, Oils	0.0%	0.1%	16
Inedible Food - Meats, Fats, Oils	0.1%	0.1%	37
Yard & Garden Waste - Leaves & Grass	12.9%	9.4%	5,237
Yard & Garden Waste - Prunings	12.3%	11.5%	4,993
Animal Manure	0.5%	0.9%	217
Animal Carcasses	0.0%	0.0%	0
Crop Residues	0.0%	0.0%	0
Fruit Waste	0.0%	0.0%	0
R/C Organics	0.1%	0.1%	35
Wood Wastes	**14.7%**		**5,984**
Treated Wood	0.0%	0.0%	0
Painted Wood	3.1%	3.3%	1,253
Dimensional Lumber	2.9%	4.7%	1,199
Engineered Wood	2.8%	3.1%	1,141
Pallets & Crates	0.0%	0.0%	0
Other Untreated Wood	4.6%	5.8%	1,868
Wood By-products	0.5%	0.6%	218
R/C Wood Wastes	0.7%	0.8%	305
Construction Materials	**10.2%**		**4,166**
Natural Wood	0.3%	0.5%	116
Plastic Lumber	0.0%	0.0%	0
Insulation	0.2%	0.2%	68
Asphalt Paving	0.0%	0.0%	0
Concrete	0.0%	0.0%	0
Drywall	4.4%	7.2%	1,788
Carpet	4.2%	3.0%	1,696
Carpet Padding	0.6%	0.7%	225
Soil, Rocks, Sand	0.7%	0.8%	268
Asphalt Roofing	0.0%	0.0%	0
Plastic Flooring	0.0%	0.0%	0
Ceramics & Brick	0.0%	0.0%	5
R/C Construction Materials	0.0%	0.0%	0
Residues	**0.1%**		**30**
Disposable Diapers	0.0%	0.0%	0
Ash	0.0%	0.0%	0
Dust	0.0%	0.0%	0
Fines	0.1%	0.1%	30
Sludge/Special Industrial	0.0%	0.0%	0
Sample Count	**22**		

Material	Est. Percent	+/-	Est. Tons
Paper Products	**2.4%**		**960**
Newspaper	0.2%	0.2%	61
Cardboard/Kraft Paper Products	0.0%	0.0%	0
Magazines	0.6%	0.9%	239
High-Grade Paper Products	0.5%	0.7%	187
Other Groundwood Paper Products	0.1%	0.1%	23
Mixed Low Grade Paper Products	0.8%	0.9%	319
Compostable Paper Products	0.3%	0.4%	119
Paper Processing Sludge	0.0%	0.0%	0
R/C Paper Products	0.0%	0.0%	13
Plastic Products	**8.5%**		**3,452**
#1 PETE Plastic Products	0.0%	0.0%	2
#2 HDPE Plastic Products	0.0%	0.0%	0
#3 PVC Plastic Products	0.0%	0.0%	0
#4 LDPE Plastic Products	0.0%	0.0%	0
#5 PP Plastic Products	0.0%	0.0%	0
#6 PS Plastic Products	0.1%	0.1%	35
#7 Other Plastic Products	0.6%	0.5%	243
PLA/Compostable Plastic Products	0.0%	0.0%	0
Plastic Garbage Bags	0.3%	0.2%	142
Non-bag Plastic Film Products	0.4%	0.5%	162
Bulky Rigid Plastic Products	6.0%	4.9%	2,439
R/C Plastic Products	1.0%	1.0%	427
Consumer Products	**22.1%**		**8,983**
Televisions - CRT	1.4%	2.3%	579
Televisions - LCD	0.0%	0.0%	0
Television Peripherals	0.0%	0.0%	0
Computer Monitors - CRT	0.0%	0.0%	0
Computer Monitors - LCD	0.0%	0.0%	0
Computers	0.1%	0.2%	42
Computer Peripherals	0.0%	0.0%	0
Computer Printers	0.1%	0.2%	54
Audio Equipment	0.6%	1.0%	243
Electronic Gaming Equipment	0.1%	0.2%	55
Other Consumer Electronics	0.3%	0.4%	106
Textiles - Organic	3.0%	2.0%	1,222
Textiles - Synthetic, Mixed, Unknown	0.6%	0.5%	236
Shoes, Purses, Belts	0.2%	0.1%	64
Tires & Rubber	0.3%	0.4%	109
Furniture	12.3%	8.8%	5,017
Mattresses	3.1%	2.7%	1,255
R/C Consumer Products	0.0%	0.0%	0
Hazardous and Special Waste	**0.1%**		**32**
Pesticides	0.0%	0.0%	0
Fertilizers	0.0%	0.0%	0
Herbicides	0.0%	0.0%	0
Fungicides	0.0%	0.0%	0
HID Lamps	0.0%	0.0%	0
Compact Fluorescent Lamps	0.0%	0.0%	2
Fluorescent Tubes	0.0%	0.0%	0
UV/Germicidal Lamps	0.0%	0.0%	0
Asbestos	0.0%	0.0%	0
Water Based Paints	0.0%	0.0%	0
Solvent-based Glues	0.0%	0.0%	0
Water Based Glues	0.0%	0.0%	0
Oil-based Paint	0.0%	0.0%	0
Oil-based Clear Coatings	0.0%	0.0%	0
Lacquer	0.0%	0.0%	0
Varnish	0.0%	0.0%	0
Urethane Coatings	0.0%	0.0%	0
Deck Coatings/Floor Paint	0.0%	0.0%	0
Field/Lawn Markings	0.0%	0.0%	0
Rust Preventive Coatings	0.0%	0.0%	0
Primers/Sealers	0.0%	0.0%	0
Stains	0.0%	0.0%	0
Water Repellants	0.0%	0.0%	0
Concrete/Masonry/Wood Waterproofers	0.0%	0.0%	0
Solvents	0.0%	0.0%	0
Caustic Cleaners	0.0%	0.0%	0
Dry-cell Batteries - Single Use	0.0%	0.0%	0
Dry-cell Batteries - Rechargeable	0.0%	0.0%	0
Wet-cell Batteries	0.0%	0.0%	0
Gasoline/Kerosene	0.0%	0.0%	0
Motor Oil	0.0%	0.0%	0
Antifreeze	0.0%	0.0%	0
Other Vehicle Fluids	0.0%	0.0%	0
Oil Filters	0.0%	0.0%	0
Explosives	0.0%	0.0%	0
Medical Wastes	0.0%	0.0%	0
Sharps	0.0%	0.0%	0
Pharmaceuticals/Vitamins	0.0%	0.0%	0
Other Cleaners/Chemicals	0.0%	0.0%	0
Personal Care Products	0.0%	0.0%	0
Other Potentially Hazardous Waste	0.1%	0.1%	31
Totals	**100%**		**40,708**

Confidence intervals calculated at the 90% confidence level. Percentages for material types may not total 100% due to rounding.

Appendix G

Recycle Advisory Committee (RAC) Agenda

Recycle Advisory Committee

Purpose Statement: Okanogan County SWAC is exploring the potential for increasing the Public Works Solid Waste recycle program, and the possibility of implementing a compost program. SWAC would also like to determine why Okanogan County's recycle program is important, and explore the value of the programs vs. the costs to run or expand these programs? SWAC must determine whether increased operations are in the best interest of Okanogan County and whether such a proposal is economically feasible.

The recycle advisory committee (RAC) is a sub-committee to SWAC. The primary objective of the RAC is to compile and review information regarding Okanogan County's recycle program and potentially a compost program. They will review the Solid Waste budget, tipping fees, grants, facilities, equipment, etc. The committee makes no formal decisions. The committee makes recommendations to SWAC.

Committee Goals

Goal #1: The primary goal of the RAC is to determine whether Okanogan County should:
a) Increase it's recycle program
b) Support the growth of private sector recycle programs

Goal #2: Support waste prevention education and implementation

Goal #3: Provide adequate information to SWAC in order to support proposed facility upgrades

Goal #4: Make a recommendation to SWAC

Committee Objectives

Objective #1: Review the recycle annual budget including the WSDOE grant

Objective #2: Confirm the monetary impact of increased tipping fees (i.e. $10/ton increase equals how much for the normal household?)

Objective #3: Review adequate information to determine the cost of specific facility upgrades. Generate criteria to determine whether the cost of facility upgrades is worth the investment by Okanogan County rate payers. Review the cost of specific upgrades to:
a) Equipment
b) Facility
c) Staffing
d) Maintenance

Objective #4: Review the types of products we currently process. Whether we could begin processing additional products such as glass.

Objective #5: Explore the potential for growth of private sector recycle programs. Review whether this could alleviate some of the need to upgrade Okanogan County's recycle facility.

Objective #6: Support increased education and community outreach regarding the benefits of recycling, composting, and waste prevention.

Benefits of Recycling & Compost Programs

Benefit #1: Increased lifetime of the landfill (2035/2065) by keeping recyclable and compost materials out
a) Building a new landfill in a new location will be very expensive and highly regulated, possibly not feasible or possible
b) Without a landfill, Okanogan County will have to ship all solid waste to another landfill in a different region, with high transportation and disposal fees.

Benefit #2: Potential to create jobs and increase revenue for businesses
Benefit #3: Creates partnerships

Appendix H

Hazardous Household Substances List

Hazardous Household Substances List

Substance(s) or Class(es) of Substances	Primary Hazards			
	Flammable	**Toxic**	**Corrosive**	**Reactive**
Group 1: Repair and Remodeling				
Adhesives, Glues, Cements	X	X		
Roof Coatings, Sealants		X		
Caulkings and Sealants		X		
Epoxy Resins	X	X		X
Solvent Based Paints	X	X		
Solvents and Thinners	X	X	X	X
Paint Removers and Strippers		X	X	
Group 2: Cleaning Agents	**Flammable**	**Toxic**	**Corrosive**	**Reactive**
Oven Cleaners		X	X	
Degreasers and Spot Removers	X	X	X	
Toilet, Drain, and Septic Cleaners		X	X	
Polishes, Waxes, and Strippers	X	X	X	
Deck, Patio, and Chimney Cleaners	X	X	X	
Solvent Cleaning Fluid	X	X	X	X
Household Bleach (< 8% solution)			X	
Group 3: Pesticides	**Flammable**	**Toxic**	**Corrosive**	**Reactive**
Insecticides	X	X		
Fungicides		X		
Rodenticides		X		
Molluscides		X		
Wood Preservatives		X		
Moss Retardants		X	X	
Herbicides		X		
Fertilizers		X	X	X
Group 4: Auto, Boat, and Equipment Maintenance	**Flammable**	**Toxic**	**Corrosive**	**Reactive**
Batteries		X	X	X

Hazardous Household Substances List

Substance(s) or Class(es) of Substances	Primary Hazards			
	Flammable	**Toxic**	**Corrosive**	**Reactive**
Waxes and Cleaners	X	X	X	
Paints, Solvents, and Cleaners	X	X	X	X
Additives	X	X	X	X
Gasoline	X	X	X	X
Flushes	X	X	X	X
Auto Repair Materials	X	X		
Motor Oil		X		
Diesel Oil	X	X		
Antifreeze		X		
Group 5: Hobby and Recreation	**Flammable**	**Toxic**	**Corrosive**	**Reactive**
Paints, Thinners, and Solvents	X	X	X	X
Pool/Sauna Chemicals	X	X	X	X
Photo Processing Chemicals	X	X	X	X
Glues and Cements	X	X	X	
Inks and Dyes	X	X		
Glazes		X		
Chemistry Sets	X	X	X	X
Pressurized Bottled Gas	X	X		X
White Gas	X	X		X
Charcoal Lighter Fluid	X	X		
Batteries		X	X	X
Group 6: Persistent Bioaccumulative Toxins (PBT's)	**Flammable**	**Toxic**	**Corrosive**	**Reactive**
Mercury • CFLs and Fluorescent Tubes • Auto Switches • Thermometers • Barometers • Thermostats • Button Cell Batteries		X (all)	X(all)	

Hazardous Household Substances List

Substance(s) or Class(es) of Substances	Primary Hazards			
	Flammable	**Toxic**	**Corrosive**	**Reactive**
Lead • Lead Acid Car Batteries • Fishing Weights • Unused Lead Shot • Unused Traffic Paint • Unused Art Supplies (for Stained Glass and Lead Pottery Glaze)		X (all)		
Polybrominated Diphenyl Ether (PBDE's) • Televisions • Computers • Other Electronic Products Note: These items should all be treated as electronics and recycled.		X (all)		
Polycyclic Aromatic Hydrocarbons (PAH) • Roofing Sealant • Pavement Sealant • Used Motor Oil		X (all)		
Polychlorinated biphenyl (PCB) • Caulking (manufactured prior to 1979) • Light Ballasts (manufactured prior to 1979)		X (all)		
Group 7: Miscellaneous	**Flammable**	**Toxic**	**Corrosive**	**Reactive**
Ammunition	X	X	X	X
Asbestos		X		
Fireworks	X	X	X	X
Marine Aerial Flares	X	X		
Pharmaceuticals		X		
Non-controlled Substances		X		
Sharps				
Personal Care Products	X	X	X	

Appendix I

County Solid Waste and Moderate Risk Waste Management Ordinances and Resolutions

OKANOGAN COUNTY COMMISSIONERS'

RESOLUTION 98-95

The following resolution amends Resolution No. 32-93 and No. 98-94.

WHEREAS, the costs of performing all related solid waste activities within Okanogan County have been consolidated into a single budgetary item.

WHEREAS, these costs have increased due to the following reasons:

Installation of Scales at three (3) Transfer Stations.

Debt retirement of loans has increased.

Costs of living adjustments are required.

Inflation has caused certain costs to rise.

WHEREAS, The County desires to finance County administration, contract operations and the bond fund through user fees collected at the solid waste facilities; and

WHEREAS, All fees collected have been discussed with the various contract parties for the handling of solid waste; and

WHEREAS, The County wishes to equalize the method and fees collected within their jurisdiction; and

NOW THEREFORE BE IT RESOLVED, that the Board of Okanogan County Commissioners set forth the rates as shown on Appendix A, dated September 12, 1995, attached hereto and made a part thereof this resolution; and

BE IT FURTHER RESOLVED, that the contract prices are as follows:

Ellisforde Transfer Station	$24,539.40/yr.
Transfer Stations to Landfill Haul Costs	Current Contract Cost
Landfill Operations Contract	$213,787/yr.

These fees may be adjusted annually based on fluctuating cost factors; and

BE IT FURTHER RESOLVED, that due to the 75 day waiting period requirement for regulated Commercial Haulers to file any rate adjustment with the UTC, said regulated Commercial Haulers shall be charged the present cubic yard rates in effect at the Transfer Stations

Commercial Haulers shall be charged the present cubic yard rates in effect at the Transfer Stations and the present tonnage rates in effect at the Central Landfill. As of December 1, 1995 rates for regulated Commercial Haulers shall be as stated in this resolution and Appendix A.

BE IT FURTHER RESOLVED, that the rates shown in this resolution and Appendix A shall be effective on October 1, 1995.

DATED at Okanogan, Washington this 12th day of September 1995.

BOARD OF COUNTY COMMISSIONERS
OKANOGAN, WASHINGTON

Dave Schulz, Chairman

Spencer W. Higby, Member

Edwin E. Thiele, Member

ATTEST:

Brenda J. White, Clerk of the Board

APPROVED AS TO FORM

Martin F. Muench, Chief Civil Deputy

APPENDIX A

1995 Solid Waste Rates and Expenses

I. Rate is based on weight (tonnage) when scales are functional (Plus tax):

$74.00/ton

II. Specific Charges (plus tax):

1. Minimum fee: $11.00.

2. Carcasses of large animals: $25.00 plus weight (Only accepted at Landfill).

3. Automobile bodies or major parts thereof: $25.00 plus weight (Only accepted at Landfill).

4. Tires

a. Light truck and passenger car:	$ 5.00
b. Large tires:	$10.00

5. Household appliances: $14.00 *

* Freon extraction has an additional surcharge.

III. If scales are not functional, the following emergency volumes will be used (Plus tax):

1. Minimum fee:	$ 11.00
2. Loose cubic yards:	$14.80/c.y.
3. Compacted cubic yards:	$37.00/c.y. **

** Customer supplied certified weights may be accepted by the County.

n:resbudgt

	Resolution #98-95 dated September 12, 1995					
	SOLID WASTE FUND #405					
	Cost per ton - 1996 rates		1998	1996	1995	1995
			TOTAL BUDGET	PRICE PER	TOTAL BUDGET	PRICE PER
	ACTIVITY	COSTS	SOLID WASTE	TON	SOLID WASTE	TON
				19,500 ton		17,878 ton
1	County Management					
	Paul	25.20 x 2080 x 60% x 1.04	32,708	1.68	18,473	1.03
	Murray	21.50 x 2080 x 1.04	46,509	2.38	12,869	0.72
	Accounting	35.00 x 10hr/wk x 52 x 1.04	18,928	0.97	8,000	0.45
2	Operations					
	Scalehouse attendant	13.78 x 2080 x 1.04	29,809	1.53	28,000	1.57
	Assistant 50%	12.80 x 2080 x 50% x 1.04	13,845	0.71		
	Temporary help	8.30 x 2080 x 50% x 1.04	8,978	0.46		
3	Capital Outlay		18,000	0.92	10,000	0.56
4	Special Programs		52,605	2.70	82,612	4.62
5	Recycle		10,000	0.51	10,001	0.56
6	Depreciation		4,000	0.21	3,500	0.20
7	Gound Water	monitoring	10,000	0.51	32,200	1.80
8	Scales	10,238 + 13,824 + 9950 + 6000	40,011	2.05		
9	Closure reserve fund		224,275	11.50	299,133	16.73
10	Debt retirement	Bond interest	235,000	12.05	401,972	22.48
		Bond Principal	168,000	8.62		
	B & O Road	PWTF money @ 1%	37,000	1.90	39,520	2.21
	PWTF	230,000 @ 6% over 5 years	59,800	3.07		
11	Transfer Station oper.					
A	Attendent	12.80 x 24 hr/wk x 52 x 2 x 1.04	33,228	1.70		
B	Non-employee		6,000	0.31		
C	Equipment		12,000	0.62		
D	Repair/Improvements		7,500	0.38		
E	Permits		2,500	0.13		
12	Contractor Costs					
	Landfill	NCRR (214,000 x 1.04 = 222,560)	222,560	11.41	191,180	10.69
	Cost of Living	NCRR	7,200	0.37		
	Transfer Station	Ellisforde	25,521	1.31		
	Haul to Landfill	estimated at $78,000	78,000	4.00		
13	B & O Tax - County				18,338	1.03
14	Contingency 2.78%		39,000	2.00		
	totals		1,442,977	74.00	1,155,798	64.65
	SOLID WASTE FUND #405					
	95 -96 COST COMPARISON			1996	1995	
				PRICE PER	PRICE PER	
	ACTIVITY	COSTS		TON	TON	DIFFERENCE
				19,500 ton	17,878 ton	
1	County Management					
	Paul	25.20 x 2080 x 60% x 1.04		1.68	1.03	-0.65
	Murray	21.50 x 2080 x 1.04		2.38	0.72	-1.66
	Accounting	35.00 x 10hr/wk x 52 x 1.04		0.97	0.45	-0.52
2	Operations					
	Scalehouse attendant	13.78 x 2080 x 1.04		1.53	1.57	0.04
	Assistant 50%	12.80 x 2080 x 50% x 1.04		0.71		-0.71
	Temporary help	8.30 x 2080 x 50% x 1.04		0.46		-0.46
3	Capital Outlay			0.92	0.56	-0.36
4	Special Programs			2.70	4.62	1.92
5	Recycle			0.51	0.56	0.05
6	Depreciation			0.21	0.20	-0.01
7	Gound Water	monitoring		0.51	1.80	1.29
8	Scales	10,238 + 13,824 + 9950 + 6000		2.05		-2.05
9	Closure reserve fund			11.50	16.73	5.23
10	Debt retirement	Bond interest		12.05	22.48	10.43
		Bond Principal		8.62		-8.62
	B & O Road	PWTF money @ 1%		1.90	2.21	0.31
	PWTF	230,000 @ 6% over 5 years		3.07		-3.07
11	Transfer Station oper.					
A	Attendent	12.80 x 24 hr/wk x 52 x 2 x 1.04		1.70		-1.70
B	Non-employee			0.31	0.00	-0.31
C	Equipment			0.62		-0.62
D	Repair/Improvements			0.38	0.00	-0.38
E	Permits			0.13		-0.13
12	Contractor Costs					
	Landfill	NCRR (214,000 x 1.04 = 222,560)		11.41	10.69	-0.72
	Cost of Living	NCRR		0.37	0.00	-0.37
	Transfer Station	Ellisforde		1.31		-1.31
	Haul to Landfill	estimated at $78,000		4.00		-4.00
13	B & O Tax - County				1.03	1.03
14	Contingency			2.00		-2.00
	totals			74.00	64.65	-9.35

OKANOGAN COUNTY

ORDINANCE 2006-7

IN THE MATTER OF AN ORDINANCE AMENDING THE INFECTIOUS WASTE CODE AND ADOPTING REGULATIONS AND PENALTIES FOR THE ADMINISTRATION AND ENFORCEMENT THEREOF.

WHEREAS, the Board of Okanogan County Commissioners adopted Ordinance 2002-7, the "Infectious Waste Management " Code, but did not provide a mechanism to enforce the provisions of that code; and,

WHEREAS, RCW 36.32.120 authorizes counties within the State of Washington to make and enforce by resolution or ordinance police and sanitary regulations and to declare by ordinance what shall be deemed a nuisance; and RCW 7.05.060 which authorizes the Board of Health to enact and enforce local rules and regulations to preserve, promote, and improve the public health; and to control and abate nuisances detrimental to public health.

WHEREAS, the Board of Okanogan County Commissioners has heretofore examined and understands the scope and purpose of the amendments to the Infectious Waste Management code adopted under this ordinance, and deems it to be in he public interest and for the general health, safety and welfare of the citizens of the County that such amendments be adopted as the law of Okanogan County: and,

WHEREAS, a duly noticed public hearing was held regarding the adoption of this ordinance and that one (1) copy of this ordinance was filed in the County Auditor's Office ten (1) days prior to the public hearing; and all persons desiring to speak for and against the adoption of this ordinance have been heard as required by law; now therefore,

BE IT ORDAINED BY THE BOARD OF OKANOGAN COUNTY COMMISSIONERS AS FOLLOWS:

Section 1. Repealer. Chapters 8.62.080 and 8.62.090, adopted by Ordinance 2002-7, are hereby repealed.
Section 2. Chapters 8.62.100, 8.62.110 and 8.62.120 and certain section thereunder are hereby enacted as set forth below:

8.62.100 Administration and enforcement.

A. Enforcement of this chapter may be by any law enforcement officer, fire department, HAZMAT response official, or jurisdictional health officer. All such enforcement officers are empowered to issue citations and/or notice of violation to persons violating the provisions of this chapter. Nothing in

this chapter prohibits citizen's complaint or arrests as may be otherwise permitted under applicable state regulations, state statute, and ordinance or court rule.

B. The citations and/or notice of violation shall contain:
    a. A description of the location where the violation occurred;
    b. A statement identifying the Generator who has committed the violation of this chapter with a brief and concise description of the conditions found to be in violation;
    c. A statement specifying the amount of any civil penalty assessed on account of the violation;
    d. Statement advising that if any assessed civil penalty is not paid, the Generator's privileges at all Okanogan County disposal facilities may be suspended until the penalty is paid.
    e. A statement advising that the order shall become final unless, no later than ten (14) days after the notice and order are served, any person aggrieved by the order requests in writing an appeal before the Board of Health.

8.62.110 Penalties.

A. Enforcement. All violations of this chapter are determined to be detrimental to the public health, safety and welfare and are hereby declared to be public nuisances.

B. Any Generator who violates or fails to comply with any of the provision of this chapter shall be subject to the following penalties:
    a. For a first violation, the Generator shall pay a $150 civil penalty; attend a mandatory biomedical waste training course designated through the Okanogan County Public Health District; and submit a biomedical waste management plan to the Okanogan County Public Health District within 30 days of being issued a citation and/or notice of violation. In addition to the civil penalty, the Generator shall also be responsible for the cost of reviewing the biomedical waste management plan at a rate of not less than $65 per hour; and shall reimburse the County for all mitigation, clean-up, and decontamination costs resulting from the violation at a rate of not less than $185.86 per hour.
    b. For a second violation within one calendar year, the violator shall pay a $1,000 civil penalty. In addition to the civil penalty, the Generator and shall reimburse the Okanogan County Public Health District at a rate of $65 per hour, and the County for all mitigation, clean-up, and decontamination costs resulting from the violation at a rate of not less than $185.86 per hour.
    c. For a third violation within one calendar year, the Generator shall pay a $4,000 civil penalty. In addition to the civil penalty, the Generator shall reimburse the Okanogan County Public Health District at a rate of $65 per hours, and County for all mitigation,

clean-up, and decontamination costs resulting from the violation at violation within a calendar year at a rate of not less than $185.86 per hour.

d. For a fourth or any subsequent violation within one calendar year, the Generator shall pay a $10,000 civil penalty and shall lose any and all waste disposal privileges at Okanogan County landfills for a period of 6 months. In addition to the civil penalty, the Generator and shall reimburse the Okanogan County Public Health District at a rate of $65 per hour, and County for all mitigation, clean-up, and decontamination costs resulting from the violation at a rate of not less than $185.86 per hour.
e. A Generator, whose waste disposal privileges have been suspended, may apply in writing for probationary reinstatement of waste disposal privileges to the Okanogan County Public Health District. The Generator's waste disposal at Okanogan County Landfills shall be subject to monitoring by the Okanogan County Public Health District during the probationary period and the Generator shall pay all cost of monitoring at rate of not less than $65 per hour.
f. Generator's waste disposal privileges shall not be reinstated under sub-section D or E until the violator has paid in full all outstanding penalties and costs.
g. Any Generator who fails to pay in full any assessed penalties and/or costs within 30 days of being issued a citation and/or notice of violation shall have its waste disposal privileges at Okanogan County landfills suspended until such time as payment is made in full.
h. Cost for decontamination of landfill equipment and/or site will be borne by violator at a minimum rate of $185.86 per hour.

8.62.120 Appeal

A. The citation and/or notice for a violation of this chapter shall become final unless, no later than ten (14) days after the notice and order are served, any person aggrieved by the order requests in writing an appeal before the Board of Health. The request shall cite the citation and/or notice appealed from, and contain a brief statement of the reasons for seeking the appeal hearing.
B. Such appeal hearing shall be conducted within a reasonable time after receipt of the request for appeal. Written notice of the time and place of the hearing shall be given at least ten (10) days prior to the date of the hearing to each appealing party, to the Okanogan County Public Health District and to other interested persons who have requested in writing that they be so notified. The Okanogan County Public Health District may submit a report and other evidence indicating the basis for the citation and/or notice.

C. Each party shall have the following rights, among others:
   a. To call and examine witnesses on any matter relevant to the issues of the hearing;
   b. To introduce documentary and physical evidence;
   c. To cross-examine opposing witnesses on any matter relevant to the issues of the hearing;
   d. To impeach any witness regardless of which party first called him to testify;
   e. To rebut evidence against him;
   f. To represent himself or to be represented by anyone of his choice who is lawfully permitted to do so.
   g. Following review of the evidence submitted, the Board of Health shall make written findings and conclusions, and shall affirm or modify the citation and/or notice previously issued if it finds that a violation has occurred. The Board shall reverse the order if it finds that no violation occurred. The written decision of the Board shall be mailed by certified mail, postage prepaid, return receipt requested, to all the parties.

D. An order which is subjected to the appeal procedure shall become final twenty (20) days after mailing of the Board of Health's decision unless within that time period an aggrieved person initiates review by writ of certiorari in Okanogan County Superior Court.

E. Enforcement of final order. If, after any order duly issued by the director has become final, the person to whom such order is directed fails to pay the civil penalty assessed under such order, the director may:
   a. Institute any appropriate action to collect a civil penalty assessed under this chapter; and/or
   b. Suspend dumping privileges at all Okanogan County disposal facilities.

DATED at Okanogan, Washington this 16 day of Oct 2006.

BOARD OF COUNTY COMMISSIONERS
OKANOGAN, WASHINGTON

Don (Bud) Hover, Chairman

ABSENT
Andrew Lampe, Member

Mary Lou Peterson, Member

ATTEST:

Brenda J. Crowell, Clerk of the Board

BOARD OF OKANOGAN COUNTY COMMISSIONERS

ORDINANCE 2007-1

AN ORDINANCE AMENDING AND CORRECTING ORDINANCE NO. 2006-6 AND 2006-7.

WHEREAS, Ordinance 2006-6 and Ordinance 2006-7, passed and approved by the Okanogan County Board of Commissioner's contain scrivener's errors; and

WHEREAS, Ordinance 2006-6 and Ordinance 2006-7 should be amended to correct said errors;

NOW THEREFORE BE IT ORDAINED BY THE BOARD OF OKANOGAN COUNTY COMMISSIONERS AS FOLLOWS:

Ordinance 2006-7 8.62.100(b)(e) shall be amended to read:

A statement advising that the order shall become final unless, no later than fourteen (14) days after the notice and order are served, any person aggrieved by the order requests in writing an appeal before the board of health.

8.62.110(B)(b) shall be amended to read:

For a second violation within one calendar year, the violator shall pay a $1,000 civil penalty. In addition to the civil penalty, the Generator shall reimburse the Okanogan County Public Health District at a rate of $65 per hour, and the County for all mitigation, clean-up, and decontamination costs resulting from the violation at a rate of not less than $185.86 per hour.

8.62.110(B)(c) shall be amended to read:

For a third violation within one calendar year, the Generator shall pay a $4,000 civil penalty. In addition to the civil penalty, the Generator shall reimburse the Okanogan County Public Health District at a rate of $65 per hours, and County for all mitigation, clean-up, and decontamination costs resulting from the violation at a rate of not less than $185.86 per hour.

Ordinance 2006-6

The bail schedule shall be amended to correct scrivener's errors as reflected in Exhibit "A" attached hereto:

DATED at Okanogan, Washington this 9 day of January 2007.

BOARD OF COUNTY COMMISSIONERS
OKANOGAN, WASHINGTON

Andrew Lampe, Chairman

ABSENT
Don (Bud) Hover, Member

Mary Lou Peterson, Member

ATTEST:

Brenda J. Crowell, Clerk of the Board

Appendix J

WUTC Cost Assessment Questionnaire

COST ASSESSMENT QUESTIONNAIRE

PLAN PREPARED FOR THE COUNTY OF: Okanogan

PREPARED BY: Parametrix (in cooperation with Okanogan County)

Contact: Kent Kovalenko **Phone:** (509) 422-7300

DATE: February 16, 2018

DEFINITIONS

Throughout this document:

- YR.1 shall refer to calendar year 2018.
- YR.3 shall refer to calendar year 2020.
- YR.6 shall refer to calendar year 2023.

1. DEMOGRAPHICS

1.1 Population

1.1.1 Total population of Okanogan County:

- YR.1 42,473
- YR.3 43,084
- YR.6 43,804

1.1.2 Planning level population: (Excluding the Towns of Coulee Dam and Elmer City which for geographic location reasons participate in Grant County's solid waste system, but including an equal number of persons to reflect seasonal influxes of tourists and workers.)

- YR.1 42,473
- YR.3 43,084
- YR.6 43,804

1.2 References and Assumptions

Total population estimates from Table 2-4. 20 Year Population, Waste Generation and Disposal Projections, *Draft Okanogan County 2018 Comprehensive Solid Waste and Moderate Risk Waste Management Plan* (CSWMP), January 2018, page 2-7. The source for the population estimates for 2017 in Table 2-4 was *Projections of the Total Population for Growth Management: 2010 – 2040. 2017 GMA Projections Medium Series.*, Washington Office of Financial Management (OFM), Olympia, WA, December 2017. This OFM source also was the basis for the projections for 2020 and 2023.

Area under Okanogan County's jurisdiction and covered by the CSWMP excludes the Towns of Coulee Dam and Elmer City, which have elected to use Grant County facilities due to geographic constraints, and the Colville Confederated Tribes (the Tribes), which maintains jurisdiction over waste management regulations, practices and financing within the Colville Reservation boundaries. However, the Tribes do participate in the planning process through membership on the SWAC, and the Okanogan County portion of the Colville Reservation uses the County's Central Landfill.

Coulee Dam and Elmer City have relatively low populations, 915 for Coulee Dam's portion that lies in Okanogan County and 290 for Elmer City in 2017. The seasonal influx of tourists and workers likely compensates for the exclusion of these two cities in terms of population and the resultant solid waste generation. Thus, for purposes of solid waste management planning the CSWMP used total county population as the basis for forecasting waste generation.

2. WASTE STREAM GENERATION

2.1 Tonnage Recycled

- YR.1 1,800
- YR.3 1,830
- YR.6 1,860

2.2 Tonnage Disposed

- YR.1 35,300
- YR.3 35,800
- YR.6 36,400

2.3 References and Assumptions

Total generation, recycling and disposal tonnage data and projections for 2015-2040 provided in Table 2-4 of the Draft CSWMP, op. cit., page 2-7. Generation projections based on per capita generation rate of 0.83 tons per person for 2017. Recycling projections based on increased recycling tonnage at rate of 5.1% per year, as described in the Draft CSWMP on page 2-7.

3. SYSTEM COMPONENT COSTS: This section asks questions specifically related to the types of programs currently in use and those recommended to be started. For each component (i.e., waste reduction, landfill, composting, etc.) please describe the anticipated costs of the program(s), the assumptions used in estimating the costs and the funding mechanisms to be used to pay for it. The heart of deriving a rate impact is to know what programs will be passed through to the collection rates, as opposed to being paid for through grants, bonds, taxes and the like.

3.1 Waste Reduction Programs

3.1.1 Solid waste prevention programs which have been implemented and those which are proposed are listed below, along with the page number in the Draft CSWMP where each is described.

Implemented	Page	Proposed	Page
As funding allows, annual County Fair booth display and information distribution, operated by the Public Works Department with support from Ecology	3-2	Recommendation 3-1—Annual Work Plan. Review annual progress toward waste prevention and recycling goals based on progress and grant funding availability, which will be administered by the SWAC and the County. Develop an annual work plan to implement waste prevention programs. The work plan will review options for working with various community partners to promote waste prevention and recycling within Okanogan County.	3-5, 3-6
Web access on Okanogan County site	3-2	Recommendation 3-2—Waste Monitoring. Develop a tracking system to annually monitor and evaluate waste generation throughout the planning area. The tracking system would be used to determine progress toward waste prevention and recycling goals, as well as identify potential areas of concern regarding illegal disposal or export.	3-6
Printed materials on local waste reduction, recycling, and reuse opportunities as well as alternatives to hazardous products	3-2	Recommendation 3-3—Master Composter/Recycler Programs. Work with local agencies, such as cooperative extensions or other partners, to design and implement Master Composter and Master Recycler programs for training volunteers as community resources.	3-6
Printed materials promoting home composting	3-2	Recommendation 3-4—Financial Incentives. Review periodically to assess the potential for additional financial incentives for waste prevention and recycling. The SWAC will provide recommendations to the County, Cities, and CCT for potential programs and policies.	3-6
Distribution of backyard composters	3-2		

3.1.2 Costs, including capital costs and operating costs, for waste reduction/prevention programs implemented and proposed:

IMPLEMENTED

- YR.1 $2,000
- YR.3 $2,000
- YR.6 $2,000

PROPOSED

- YR.1 $10,100
- YR.3 $10,700
- YR.6 $11,700

3.1.3 Funding mechanism(s) that will pay the cost of the programs in 3.1.2. (Note: Tip = landfill and transfer station tipping fees; CPG = Department of Ecology Coordinated Prevention Grants.)

IMPLEMENTED

- YR.1 Tip, CPG
- YR.3 Tip, CPG
- YR.6 Tip, CPG

PROPOSED

- YR.1 CPG
- YR.3 CPG
- YR.6 CPG

3.2 Recycling Programs

3.2.1 Proposed or implemented recycling program(s), their costs, and proposed funding mechanisms, including page number in the Draft CSWMP where each program is described, are listed below. (Note: Tip = landfill and transfer station tipping fees, CPG = Department of Ecology Coordinated Prevention Grants, Sales = revenue from selling recycled materials.)

	Year 1	Year 3	Year 6	Funding	Page #
Recycling					
Recommendation 4-1—Recycling Potential Assessment (RPA).	$0	$3,800	$0	Tip	4-25, 4-26
Recommendation 4-2—Additional Recycling Sites.	$7,600	$8,100	$8,800	Tip	4-26
Recommendation 4-3—Optional Source-Separated or Commingled Recycling.	$3,800	$4,000	$4,400	Tip	4-26
Recommendation 4-4—Commercial Recycling.	$0	$0	$0	Tip	4-26
Recommendation 4-5—Recycling Funding.	$0	$0	$0	Tip	4-26
Recommendation 4-6—Market Development.	$0	$0	$0	Tip	4-26
Organic Materials					
Recommendation 5-1—Economically Feasible Opportunities.	$1,000	$1,100	$1,200	Tip	5-8, 5-9
Recommendation 5-2—Community Education.	$1,000	$1,100	$1,200	Tip	5-8, 5-9
Recommendation 5-3—Non-Residential Organics Education.	$1,000	$1,100	$1,200	Tip	5-9
Recommendation 5-4—Community Engagement Opportunities.	$2,000	$2,100	$2,300	Tip	5-9
Recommendation 5-5—Vermicomposting.	$500	$500	$600	Tip	5-9

Solid Waste Collection Programs

3.3.1 Regulated Solid Waste Collection Programs

WUTC Regulated Hauler Name: Sunrise Disposal G-permit #G-201		Year 1	Year 3	Year 6
	Residential			
Number of Customers		30	30	31
Tonnage Collected		31	32	33
	Commercial			
Number of Customers		No Customers	No Customers	No Customers
Tonnage Collected		No Customers	No Customers	No Customers
WUTC Regulated Hauler Name: Okanogan Valley/Upper Valley Disposal G-permit #G-21		**Year 1**	**Year 3**	**Year 6**
	Residential			
Number of Customers		2,800	2,840	2,887
Tonnage Collected		1,706	1,731	1,760
	Commercial			
Number of Customers		200	203	206
Tonnage Collected		3,313	3,361	3,417
WUTC Regulated Hauler Name: Zippy Disposal Service G-permit #G-121		**Year 1**	**Year 3**	**Year 6**
	Residential			
Number of Customers		124	126	128
Tonnage Collected		128	130	132
	Commercial			
Number of Customers		332	337	343
Tonnage Collected		1,646	1,670	1,698
WUTC Regulated Hauler Name: Waste Management, Inc. G-permit #G-237		**Year 1**	**Year 3**	**Year 6**
	Residential			
Number of Customers		No Customers	No Customers	No Customers
Tonnage Collected		No Customers	No Customers	No Customers
	Commercial			
Number of Customers		No Customers	No Customers	No Customers
Tonnage Collected		No Customers	No Customers	No Customers
WUTC Regulated Hauler Name: Methow Valley Sanitation Service, Inc. G-permit #G-146		**Year 1**	**Year 3**	**Year 6**
	Residential			
Number of Customers		1,400	1,420	1,444
Tonnage Collected		847.7	860	874

Commercial			
Number of Customers	332	337	343
Tonnage Collected	1,646.2	1,670	1,698
WUTC Regulated Hauler Name: Torre Refuse & Recycling, LLC G-permit #G-260	**Year 1**	**Year 3**	**Year 6**
Residential			
Number of Customers	No Customers	No Customers	No Customers
Tonnage Collected	No Customers	No Customers	No Customers
Commercial			
Number of Customers	No Customers	No Customers	No Customers
Tonnage Collected	No Customers	No Customers	No Customers

Notes: Customer growth rates based on population growth rates.

3.3.2 Other (non-regulated) Solid Waste Collection Programs

City of Oroville	**Year 1**	**Year 3**	**Year 6**
Residential			
Number of Customers	797	808	822
Tonnage Collected	1,043	1,058	1,076
Commercial			
Number of Customers	No Customers	No Customers	No Customers
Tonnage Collected	No Customers	No Customers	No Customers

Notes: Customer growth rates based on population growth rates.

3.4 Energy Recovery & Incineration (ER&I) Programs

No ER&I facilities used in Okanogan County.

3.5 Land Disposal Program

3.5.1 Landfill Name: Central Landfill

Owner: Okanogan County

Operator: Okanogan County

3.5.2 Estimate the **approximate tonnage** disposed at the landfill by **WUTC regulated haulers.** If you do not have a scale and are unable to estimate tonnages, estimate using cubic yards, and indicate whether they are compacted or loose. Note: Estimates given here are based on hauler interview data

- YR.1 8,496
- YR.3 8,618
- YR.6 8,762

3.5.3 Using the same conversion factors applied in 3.5.2, please estimate the **approximate tonnage** disposed at the landfill by other contributors. Note: Estimates given here are derived from total tonnage projections given in 2.2.1, less regulated hauler disposal tonnage given in 3.5.2.

- YR.1 26,436
- YR.3 26,816
- YR.6 27,264

3.5.4 Estimated cost of operating (including capital acquisitions) the Central Landfill.

- YR.1 $2,459,400.
- YR.3 $2,609,200
- YR.6 $2,851,100

3.5.5 Please describe the funding mechanism(s) that will defray the cost of this component. Transfer station and landfill tip fees fund landfill costs.

	Year 1	Year 3	Year 6	Funding	Page #
Landfill Disposal					
Recommendation 8-1—Continue Post-Closure Monitoring.	$61,200	$64,900	$70,900	Tip	8-10
Recommendation 8-2—Continue Near-Term Operation of Central Landfill.	$2,459,400	8-10	$2,851,100	Tip	8-10
Recommendation 8-3—Waste Import.	Included in 8-2 Line Item.				8-10
Recommendation 8-4—Waste Export.	Included in 8-2 Line Item.				8-10
Recommendation 8-5—Future Disposal.	Included in 8-2 Line Item.				8-10
Recommendation 8-6—Landfill Expansion.	Included in 8-2 Line Item.				8-10
Special Waste					
Recommendation 9-1—Construction and Demolition Materials.	$500	$500	$600	Tip	9-9
Recommendation 9-2—PCS Acceptance and Remediation.	Included in 8-2 Line Item.				9-9
Recommendation 9-3—Medical Waste.	$500		$600	Tip	9-9
Recommendation 9-4—Tire Management.	$500	$500	$600	Tip	9-10
Recommendation 9-5—White Goods.	$500	$500	$600	Tip	9-10
Recommendation 9-6—Asbestos.	Included in 8-2 Line Item.				9-10
Recommendation 9-7—Asbestos.	$1,000	$1,100	$1,200	Tip	9-10
Recommendation 9-8—Multi-Hazard Plan Update.	$10,000	$0	$11,600	Tip	9-10
Moderate Risk Waste					
Recommendation 10-1—Continue MRW Facility at Central Landfill and Twisp Transfer Station/ Consider Expanding the Program.	$115,800	$122,900	$134,200	Tip	10-12
Recommendation 10-2—MRW Promotion and Education.	$3,800	$4,000	$4,400	Tip	10-12
Recommendation 10-3—MRW Reuse.	Included in 8-2 Line Item.				10-12
Recommendation 10-4—Lead Acid Battery Recycling.	Included in 8-2 Line Item.				10-12
Recommendation 10-5—Electronics Recycling*.	$2,400	$2,500	$2,800	Tip	10-12
Recommendation 10-6—Business Technical Assistance.	$500	$500	$600	Tip	10-12

* The County would be compensated in-part for the collection of "covered" electronic products by the Washington Materials Management and Financing Authority (WMMFA).

3.6 Administration Program

3.6.1 Budgeted cost for administering solid waste and recycling programs and major funding sources are given below.

Budgeted Cost

- YR.1 $207,500
- YR.3 $220,100
- YR.6 $240,500

Funding Source

- YR.1 Tip
- YR.3 Same as YR.1
- YR.6 Same as YR.1

3.6.2 Administration cost components included in these estimates are:

Wages, benefits, supplies, professional services, advertising, taxes, miscellaneous.

3.6.3 Department of Ecology CPG grant, tip fees and interest are used to recover the cost of each of these cost components.

	Year 1	Year 3	Year 6	Funding	Page #
Administration[1]	$207,500	$220,100	$240,500	Tip	
Recommendation 11-1—Cities Participation.	Included in 3.6 Line Item				11-9
Recommendation 11-2—City Management.	Included in 3.6 Line Item				11-9
Recommendation 11-3—The Okanogan County Public Health's Role.	Included in 3.6 Line Item				11-9
Recommendation 11-4—The Okanogan County Solid Waste Advisory Committee's Role.	Included in 3.6 Line Item				11-9
Recommendation 11-5—Public Works Department Coordination and Management.	Included in 3.6 Line Item				11-9
Recommendation 11-6—System Funding.	Included in 3.6 Line Item				11-9

[1]Escalated over 2012 Plan

3.7 Other Programs: None

3.8 References and Assumptions: See notes provided in each section above or below.

4. FUNDING MECHANISMS

4.1 Funding Mechanisms. This section relates specifically to the funding mechanisms currently in use and the ones which will be implemented to incorporate the recommended programs in the draft plan.

Table 4.1.1 Facility Inventory

Facility Name	Type of Facility	Tip Fee per Ton	Transfer Cost	Transfer Station Location	Final Disposal Location	Total Tons Disposed	Total Revenue Generated (Tip Fee x Tons)
Bridgeport TS	transfer	$74	$33.18	Bridgeport	Central Landfill	6409.71	$474,318.54
Ellisforde TS	transfer	$74	$33.57	Ellisforde	Central Landfill		$500,434.62
Twisp TS	transfer	$74	$40.18	Twisp	Central Landfill	6762.63	$338,417.54
Central Landfill	disposal	$74	0	Okanogan County		4573.21	$1,271,642
						17,183.45	$474,318.54

Table 4.1.2 Tip Fee Components

Tip Fee by Facility	Surcharge	City Tax	County Tax	Debt/Capital Costs	Operational Cost	Administration Cost	Closure Costs
All at $74					63.1%	4.6%	32.3%

Table 4.1.3 Funding Mechanism

Name of Program Funding Mechanism will defray costs	Bond Name	Total Bond Debt	Bond Rate	Bond Due Date	Grant Name	Grant Amount	Tip Fee	Taxes	Other	Surcharge
Administration							X			
Collection									Rates	
Transfer/Disposal							X		Interest	
WRR					CPG	$43,260	X		Sales	
MRW					CPG	$43,260	X			

Table 4.1.4 Tip Fee Forecast

Tip Fee per Ton by Facility	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
All	$74	$74	$74	$74	$74	$74

Note: Per recommendation 11-6, the County will continue to use disposal tipping fees to fund the solid waste system to the extent practical and consider adjusting tipping fees on a regular basis in accordance with true operational costs.

4.2 **Funding Mechanisms** summary by percentage:

Table 4.2.1 Funding Mechanism by Percentage

Year One

Component	Tip Fee %	Grant %	Bond %	Collection Tax Rates %	Other %	Total
Waste Reduction & Recycling					100%	100%
Collection						100%
Transfer	100%					100%
Land Disposal	100%					100%
Administration	100%					100%
MRW	46.7%	51%			2.3%	100%
Closure	100%					100%
Debt Service						100%

Table 4.2.2 Funding Mechanism by Percentage

Year Three

Component	Tip Fee %	Grant %	Bond %	Collection Tax Rates %	Other %	Total
Waste Reduction & Recycling	36%	31%			33%	100%
Collection						100%
Transfer	100%					100%
Land Disposal	100%					100%
Administration	100%					100%
MRW	46.7%	51%			2.3%	100%
Closure	100%					100%
Debt Service						100%

Table 4.2.3 Funding Mechanism by Percentage

	Year Six					
Component	Tip Fee %	Grant %	Bond %	Collection Tax Rates %	Other %	Total
Waste Reduction & Recycling	36%	31%			33.7%	100%
Collection					100%	100%
Transfer	100%					100%
Land Disposal	100%				4.1%	100%
Administration	100%					100%
MRW	46.7%	51%				100%
Closure	100%					100%
Debt Service						100%

4.3 References and Assumptions:

Please see attached spreadsheet entitled *Okanogan County 2018 Solid Waste Management Plan WUTC Cost Assessment.*

4.4 Surplus Funds

Okanogan County's Solid Waste Fund.

Appendix K

Six-year Capital and Acquisition Project and 20-year Solid Waste Handling Projection

Okanogan County 2018 Solid Waste Management Plan WUTC Cost Assessment

			YR.1	YR.3	YR.6	Funding	Notes
WUTC Section 3.1 Waste Reduction Programs			$10,100	$10,700	$11,700	CPG	Escalated over 2012 Plan
Waste Prevention	3-1	Annual Work Plan	$0	$0	$0	-	Included in 3.1 line Item
Waste Prevention	3-2	Waste Monitoring	$0	$0	$0	-	Included in 3.1 line Item
Waste Prevention	3-3	Master Composter/Recycler Programs	$0	$0	$0	-	Included in 3.1 line Item
Waste Prevention	3-4	Financial Incentives	$0	$0	$0	-	Included in 3.1 line Item
WUTC Section 3.2 Recycling Programs			$105,300	$111,700	$122,100	Tip	Escalated over 2012 Plan
Recycling	4-1	Recycling Potential Assessment (RPA)	$0	$3,800	$0	Tip	Mid-planning period update
Recycling	4-2	Additional Recycling Sites	$7,600	$8,100	$8,800	Tip	Escalated over 2012 Plan
Recycling	4-3	Source-Separated or Commingled Recycling	$3,800	$4,000	$4,400	Tip	Escalated over 2012 Plan
Recycling	4-4	Commercial Recycling	$0	$0	$0	-	Included in 3.2 line Item
Recycling	4-5	Recycling Funding	$0	$0	$0	-	Included in 3.2 line Item
Recycling	4-6	Market Development	$0	$0	$0	-	Included in 3.2 line Item
Organics	5-1	Economically Feasible Opportunities	$1,000	$1,100	$1,200	Tip	Staffing of outreach
Organics	5-2	Community Education	$1,000	$1,100	$1,200	Tip	Staffing of outreach
Organics	5-3	Non-Residential Organics Education	$1,000	$1,100	$1,200	Tip	Staffing of outreach
Organics	5-4	Community Engagement Opportunities	$2,000	$2,100	$2,300	Tip	Staffing of outreach and materials
Organics	5-5	Vermicomposting	$500	$500	$600	Tip	Nominal staff costs
WUTC Section 3.3 Solid Waste Collection Programs							
Collection	6-1	Minimum Container Sizes and Residential Service Levels	$0	$0	$0	-	Included in 3.6 Line Item
Collection	6-2	Incentive Rate Structures	$0	$0	$0	-	Included in 3.6 Line Item
Collection	6-3	Private Roads	$0	$0	$0	-	Included in 3.6 Line Item
Transfer	7-1	Continue the Existing Transfer System	$417,400	$442,800	$483,900	Tip	Escalated over 2012 Plan
Transfer	7-2	Evaluate Additional Transfer Station	$0	$0	$0	-	Included in 7-1 Line Item
Transfer	7-3	Non-County Facilities	$0	$0	$0	-	Included in 7-1 Line Item
WUTC Section 3.4 Energy Recovery & Incineration Programs							
No ER&I facilities are used or planned in Okanogan County							
WUTC Section 3.5 Land Disposal Program (Okanogan County includes Special Waste and MRW)							
Landfill	8-1	Continue Post-Closure Monitoring	$61,200	$64,900	$70,900	Tip	Escalated over 2012 Plan (ex. Ellisforde
Landfill	8-2	Continue Near-Term Operation of Central Landfill	$2,459,400	$2,609,200	$2,851,100	Tip	Escalated over 2012 Plan
Landfill	8-3	Waste Import	$0	$0	$0	-	Included in 8-2 Line Item
Landfill	8-4	Waste Export	$0	$0	$0	-	Included in 8-2 Line Item
Landfill	8-5	Future Disposal	$0	$0	$0	-	Included in 8-2 Line Item
Landfill	8-6	Landfill Expansion	$0	$0	$0	-	Included in 8-2 Line Item
Special Waste	9-1	Construction and Demolition Materials	$500	$500	$600	Tip	Nominal staff costs
Special Waste	9-2	PCS Acceptance and Remediation	$0	$0	$0	-	Included in 8-2 Line Item
Special Waste	9-3	Medical Waste	$500	$500	$600	Tip	Nominal staff costs
Special Waste	9-4	Tire Management	$500	$500	$600	Tip	Nominal staff costs
Special Waste	9-5	White Goods	$500	$500	$600	Tip	Nominal staff costs
Special Waste	9-6	Asbestos Monitoring	$0	$0	$0	-	Included in 8-2 Line Item
Special Waste	9-7	Asbestos Education	$1,000	$1,100	$1,200	Tip	Staffing of outreach
Special Waste	9-8	Multi-Hazard Plan Update	$10,000	$0	$11,600	Tip	Debris management update
Moderate Risk Waste	10-1	Continue MRW Facilities/Consider Expanding the Program	$115,800	$122,900	$134,200	Tip	Escalated over 2012 Plan

Okanogan County 2018 Solid Waste Management Plan WUTC Cost Assessment

			YR.1	YR.3	YR.6	Funding	Notes
Moderate Risk Waste	10-2	MRW Promotion and Education	$3,800	$4,000	$4,400	Tip	Escalated over 2012 Plan
Moderate Risk Waste	10-3	MRW Reuse	$0	$0	$0	-	Included in 8-2 Line Item
Moderate Risk Waste	10-4	Lead Acid Battery Recycling	$0	$0	$0	-	Included in 8-2 Line Item
Moderate Risk Waste	10-5	Electronics Recycling	$2,400	$2,500	$2,800	Tip	Escalated over 2012 Plan
Moderate Risk Waste	10-6	Business Technical Assistance	$500	$500	$600	Tip	Nominal staff costs
WUTC Section 3.6 Administration Program			$207,500	$220,100	$240,500	Tip	Escalated over 2012 Plan
Admin. & Enforcement	11-1	Cities Participation	$0	$0	$0	-	Included in 3.6 Line Item
Admin. & Enforcement	11-2	City Management	$0	$0	$0	-	Included in 3.6 Line Item
Admin. & Enforcement	11-3	The OCPH's Role	$0	$0	$0	-	Included in 3.6 Line Item
Admin. & Enforcement	11-4	The Okanogan County SWAC's Role	$0	$0	$0	-	Included in 3.6 Line Item
Admin. & Enforcement	11-5	Public Works Department Coordination and Management	$0	$0	$0	-	Included in 3.6 Line Item
Admin. & Enforcement	11-6	System Funding	$0	$0	$0	-	Included in 3.6 Line Item
Total Cost of Okanogan County Solid Waste Operations			**$3,403,200**	**$3,603,500**	**$3,945,400**		

Cost escalation factors (past and future)

11442.97	Engineering New Record, CCI-11/17
9056.6	Engineering New Record, CCI-09/11
26.3%	**Escalation 2011 to 2017**
3%	**Annual Future Escalation**

Okanogan County Solid Waste Disposal Projections through 2040.

Year	Projected Population	Rate	Disposal Tonnage	Recycling Tonnage (2016 rate)	Total Tonnage
2015	41,860	0.58%	35,226	-	35,200
2016	41,917		35,430	-	35,400
2017	42,110		35,004	1,785	36,800
2018	42,473		35,300	1,800	37,100
2019	42,797		35,600	1,810	37,400
2020	43,084	0.49%	35,800	1,830	37,600
2021	43,409		36,100	1,840	37,900
2022	43,615		36,300	1,850	38,200
2023	43,804		36,400	1,860	38,300
2024	43,981		36,600	1,860	38,500
2025	44,149	0.31%	36,700	1,870	38,600
2026	44,285		36,800	1,880	38,700
2027	44,428		36,900	1,880	38,800
2028	44,567		37,000	1,890	38,900
2029	44,699		37,200	1,890	39,100
2030	44,824	0.23%	37,300	1,900	39,200
2031	44,952		37,400	1,910	39,300
2032	45,063		37,500	1,910	39,400
2033	45,167		37,500	1,910	39,400
2034	45,257		37,600	1,920	39,500
2035	45,335	0.13%	37,700	1,920	39,600
2036	45,414		37,800	1,930	39,700
2027	45,480		37,800	1,930	39,700
2038	45,535		37,900	1,930	39,800
2039	45,581		37,900	1,930	39,800
2040	45,621		37,900	1,930	39,800

Notes: Projected tonnage rounded to nearest 100 tons
Used 2017 as base year for Per Capita disposal rate
Landfill disposal projected at population growth rate

Disposal Per Capita (#/day)	Recycling Per Capita (#/day)
4.554803	0.232268