TG-090253

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
4601 N Monroe Street • Spokane, Washington 99205-1295 • (509)329-3400

February 11, 2009

Ms. Carole Washburn, Secretary
WA Utilities and Transportation Commission
1300 South Evergreen Park Drive SW
MS FY-11
Olympia, WA 98504-8002

Re: *Preliminary Review of Franklin County Comprehensive Solid Waste Management Plan, Preliminary Draft, Dated October 2008*

Dear Ms. Washburn:

Ecology is forwarding the formal submission of the *Franklin County Comprehensive Solid Waste Management Plan Update Preliminary Draft, October 2008* for preliminary review under RCW 70.95.090 and 70.95.094. Enclosed are two copies of the plan which include the cost assessment.

Ecology received this plan on October 2009. Under the Interagency Agreement, comments from WUTC plan reviewers should be sent within 45 days from the date the plan is received by the WUTC.

Please forward copies of your correspondence with Franklin County Public Works to me, and also please inform me of the date when this item will be presented at the WUTC public meeting.

Thank you for your continued cooperation and assistance in plan review.

Sincerely,

James V. Wavada II

James V. Wavada II
Environmental Planner
Eastern Regional Office

Enclosures

cc: Penny Ingram, WUTC
Tim Fife, Franklin County Public Works Department

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
4601 N Monroe Street • Spokane, Washington 99205-1295 • (509)329-3400

February 11, 2009

Mr. Tim Fife, PE
Public Works Director/County Engineer
Franklin County Public Works
3416 Stearman Avenue
Pasco, WA 99301-7104

RE: Review of Franklin County Comprehensive Solid Waste Management Plan, Preliminary Draft, Dated October 2008

Dear Mr. Fife:

On Oct. 13, 2008, Ecology received five copies of the Franklin County Comprehensive Solid Waste Management Plan Update Preliminary Draft of October 2008. On Feb. 9, 2009, Ecology received the remaining documents required to request a preliminary review under RCW 70.95.094. Therefore, we are initiating our official review of your preliminary draft plan as of Feb. 9, 2009. I will forward two copies of your plan to the Washington Utilities and Transportation Commission for review. They perform their review inside of the timeline under which Ecology will do its review. They will schedule any hearing necessary for the review of the cost assessment you submitted.

Per RCW 70.95.094, Ecology has a maximum of 120 days from Feb. 9, 2009 to review and comment on the draft plan. You will receive our comments on or before June 9, 2009. We will, however, try to forward our comments to you well in advance of that deadline.

Thank you and all involved parties for your hard work in preparing this document. If you have any questions on the progress of our review or any other questions pertaining to your plan, please call me at (509) 329-3545.

Sincerely,

James V. Wavada II

James V. Wavada II
Environmental Planner
Solid Waste and Financial Assistance Program

Enclosure

cc: Carole Washburn, WUTC
Penny Ingram, WUTC

Franklin County Integrated Solid Waste Management Plan

Cover

Page

List of Abbreviations and Acronyms

ACM	Asbestos-containing Material
BFHD	Benton Franklin Health Department
BDI	Basin Disposal, Inc.
BRI	Basin Recycling, Inc.
Center	Clean Washington Center
CEP	Covered Electronic Products
CERB	Community Economic Revitalization Board
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFC	Chlorofluorocarbon
CPG	Coordinated Prevention Grant
DW	Dangerous Waste
Ecology	Washington State Department of Ecology
EPA	Environmental Protection Agency
ER/I	Energy Recovery and Incineration
FCDPW	Franklin County Department of Public Works
FCWWAC	Franklin County Solid Waste Advisory Committee
FEMA	Federal Emergency Management Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
GMA	Growth Management Act
HCFC	Hydochlorofluorocarbon
HDPE	High-density Polyethylene
HHW	Household Hazardous Waste
HWMA	Hazardous Waste Management Act
HWMP	Hazardous Waste Management Plan
IAC	Washington State Intergovernmental Agency Committee
L&I	Washington State Department of Labor and Industries
MFS	Minimum Functional Standards for Solid Waste Handling
MMSW	Mixed Municipal Solid Waste
MSA	Metropolitan Statistical Area
MSW	Municipal Solid Waste
MTCA	Model Toxics Control Act
MRW	Moderate Risk Waste
MWTA	Medical Waste Tracking Act of 1988
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NPDES	National Pollutant Discharge Elimination System
OAR	Oregon Administrative Rules
ODEQ	Oregon Department of Environmental Quality
OFM	State of Washington's Office of Financial Management
OSHA	Occupational Safety and Health Act
PBDE	Polybrominated Diphenyl Ether
PCB	Polychlorinated Biphenyls
PCS	Petroleum Contaminated Soils
PET	Polyethylene Terephatalate
Plan	2008 Franklin County Integrated Solid Waste Management Plan
PNNL	Pacific Northwest National Laboratory
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington

RDF	Refuse Derived Fuel
SARA	Superfund Amendments and Reauthorization Act
SEPA	State Environmental Policy Act
SQG	Small Quantity Generator
SWAC	Solid Waste Advisory Committee
TSCA	Toxic Substances Control Act
UGA	Urban Growth Area
USGBC	United States Green Building Council
VOC	Volatile Organic Compound
WAC	Washington Administrative Code
WDOT	Washington State Department of Transportation
WISHA	Washington Industrial Safety and Health Act
WSDA	Washington State Department of Agriculture
WTE	Waste-to-Energy
WUTC	Washington Utilities and Transportation Commission

Glossary

acid gas
A gas produced in the combustion process. It contains acid components such as sulfides and chlorides.

Actinomycete
A group of microorganisms, intermediate between bacteria and true fungi, that usually produce a characteristic branched mycelium. These organisms are responsible for the earthy smell of compost.

active gas collection
A technique that forcibly removes gas from a landfill by attaching a vacuum or pump to a network of pipelines in the landfill or surrounding soils to remove the gases.

Aeration
The process of exposing bulk material, like compost, to air. *Forced aeration* refers to the use of blowers in compost piles.

aerobic
A biochemical process or condition occurring in the presence of oxygen.

aerobic decomposition
A type of decomposition that requires oxygen.

air classifier
A device used to separate materials at a facility such as a MRF. Air in the form of a wind is used to blow lighter materials off and away from the heavier materials.

anaerobic decomposition
A type of decomposition that does not use oxygen. Anaerobic decomposition creates odor problems; aerobic decomposition does not.

aquifer
A geological formation, group of formations, or portion of a formation capable of yielding significant quantities of groundwater to wells or springs.

area fill
A method of landfilling that compacts the refuse in cells and then uses soil cover to separate and cover the cells. This is typically done in layers and in separate phases.

ash quench water
Water that is used to cool the bottom ash when it is removed from an incinerator.

ash residues
The left-over material from a combustion process. They may take the form of fly ash or bottom ash.

attenuation
A process of converting and destroying a chemical compound as it passes through layers of soil or rock.

avoided cost
The amount of money saved when another less costly option that yields the same result is selected or used.

baghouse
A municipal waste combustion facility air emission control device consisting of a series of fabric filters through which flue gases are passed to remove particulates prior to atmospheric dispersion.

baler
A machine used to compress recyclables into bundles to reduce volume. Balers are often used on newspaper, plastics, and corrugated cardboard.

baling
The compaction of solid waste (shredded or non-shredded) or plastic and metal recyclables (flattened or non-

flattened) into small rectangular blocks or bales. Baled solid waste is placed in a landfill in a similar fashion as a cell, with cover surrounding a bale or group of bales. Baling recyclable materials makes them easier to handle and transport.

bentonite
A type of soil that swells greatly in the presence of water. Because bentonite impedes the flow of water, it is used for liners, covers, and various other landfill applications.

berm
An elongated pile of soil used to control and direct the flow of surface water runoff. Berms may also be used to block out noise and screen operations from public view.

bio-accumulation
The retaining and accumulation over time of certain chemical compounds in organic matter such as the tissues of plants and animals used as food sources.

biodegradable material
Materials that can be broken down by microorganisms into simple, stable compounds such as carbon dioxide and water. Most organic materials, such as food scraps and paper, are biodegradable.

bottle bill
A law requiring deposits on beverage containers (see Container Deposit Legislation).

bottom ash
The remaining noncombustible material collected on grates or in other locations during the combustion process .

broker
An individual or group of individuals who act as agents or intermediaries between the sellers and buyers of recyclable materials or waste services.

Btu (British thermal unit)
A unit of measure for the amount of energy a given material contains (e.g., energy released as heat during combustion is measured in Btu's.) Technically, one Btu is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit.

buffer zone
Neutral area serving as a protective barrier separating two conflicting forces. An area that minimizes the impact of pollutants on the environment or public welfare. For example, a buffer zone is established between a composting facility and neighboring residents to minimize odor problems.

bulking agent
A material used to add volume to another material to make the second material more porous, which increases air flow. For example, municipal solid waste may act as a bulking agent when mixed with water treatment sludge.

bulky items
Large items of refuse including, but not limited to, appliances, furniture, large auto parts, nonhazardous construction and demolition materials, trees, branches, and stumps that cannot be handled by normal solid waste processing, collection, or disposal methods.

buy-back center
A facility to which individuals bring recyclables in exchange for payment.

canyon fill
A method of landfilling that is similar to area filling but is used primarily in mountainous terrain. Canyon fill landfills are typically much deeper than other types of landfills.

clamshell bucket
A bucket attachment for a crane. The bucket has two sides that come together when picking up material.

co-composting
Simultaneous composting of two or more diverse feedstocks.

co-generation
Simultaneous generation of electricity and thermal energy.
commercial waste
Waste materials originating in wholesale, retail, institutional, or service establishments, such as office buildings, stores, markets, theaters, hotels, and warehouses.

commingled recyclables
Two or more recyclable materials collected together (i.e., not separated). In some types of collection programs, recyclable materials may be commingled, as long as they do not contaminate each other. For example, glass and plastic can be commingled, but glass and oil cannot

compaction station
A type of transfer station in which waste is compacted as an intermediate step before sending it to a disposal site.

composite liner
A liner system that is composed of both natural soil liners and synthetic liners. The liner must be in direct and uniform contact with the clay.

composting
The controlled biological decomposition of organic solid materials under aerobic conditions.

condensate knock-out tank
A tank that uses a series of baffles to remove vapor moisture from a gas.

construction and demolition waste
Materials resulting from the construction, remodeling, repair, or demolition of buildings, bridges, pavements, and other structures.

converter
A company that creates a more usable material from a raw product.

conveying line
A conveyor belt assembly that is used in a facility such as a MRF or IPC, to move materials from the tipping floor/pit to other areas of the facility.

corrugated paper
Paper or cardboard having either a series of wrinkles or folds, or alternating ridges and grooves.

cover material
Material, either natural soil or geosynthetic material, used in a landfill to impede water infiltration, landfill gas emissions, and bird and rodent congregation. It is also used to control odors and make the site more visually attractive. Landfills have three forms of cover: daily cover, intermediate cover, and final cover.

cullet
Clean, usually color-sorted, crushed glass used to make new glass products.

curbside collection
Programs in which recyclable materials are collected at the curb, often from special containers, and then taken to various processing facilities.

daily cell
In landfills, a portion of refuse that has been compacted and then surrounded with cover material. Daily cover is placed over the landfilled materials at the end of each day to complete the cell.

daily cover material
Material, usually soil, that is used in a landfill to cover the refuse after it has been compacted at the end of each day. The cover is placed mainly to ward off animals and for odor control.

decide-announce-defend strategy
In the decision-making process, a strategy in which decisions are made and announced without input from other affected parties. After announcing their decisions, policy makers defend them. This strategy does not allow for public participation in the decision-making process.

densified refuse-derived fuel (D-RDF)
Refuse-derived fuel that has been compressed or compacted through such processes as pelletizing, briquetting, or extruding. Densifying materials makes them easier to handle or improves their burning characteristics.

detention basin
An excavated area of land that is used to collect surface water runoff for the purpose of creating a constant outflow from the basin.

detinning
Recovering tin from "tin" cans by a chemical process that makes the remaining steel more easily recycled.

direct discharge noncompaction station
A type of transfer station in which refuse goes directly from smaller collection vehicles into the larger transportation vehicles. This type of station has a waste storage capacity of less than one day.

diversion rate
The amount of material being diverted for recycling, compared to the total amount that was previously disposed of.

double-liner system
A system in which two liners are used in a landfill to protect against groundwater contamination. The liners may by either synthetic or natural, and may be composed of several layers each.

double composite liner
A landfill liner system that uses synthetic and natural soil liners to prevent groundwater contamination. Two liners of each type are used, and each liner has several layers. (See "composite liner.")

drop-off collection
A method of collecting recyclable or compostable materials in which the materials are taken by individuals to collection sites, where they deposit the materials into designated containers.

eco-shopping
See "precycling."

electrostatic precipitators
Device for removing particulate matter from an incinerator facility's air emissions. It works by causing the particles to become electrostatically charged and then attracting them to an oppositely charged plate, where they are precipitated out of the flue gasses.

end-use market
A company that purchases recycled materials for use as feedstock in manufacturing new products.

energy recovery
Conversion of waste to energy, generally through the combustion of processed or raw refuse to produce steam. See "municipal waste combustion," and "incineration."

enterprise fund
A fund for a specific purpose that is self-supporting from the revenue it generates.

ferrous metals
Metals derived from iron. They can be removed from commingled materials using large magnets at separation facilities.

flood plain
A region of land around a body of water, usually a river or stream, that is flooded on a regular basis, usually annually.

flue gas
All gasses and products of combustion that leave a furnace by way of a flue or duct.

fluidized bed combustor
A type of RDF combustor (see below) that burns materials directly on a layer of material having a high melting point, such as sand.

fly ash
Small, solid particles of ash and soot generated when coal, oil, or waste materials are burned. Fly ash is suspended in the flue gas after combustion and is removed by pollution control equipment.

gas control and recovery system
A series of vertical wells or horizontal trenches containing permeable materials and perforated piping. The systems are designed to collect landfill gases for treatment or for use as an energy source.

gas monitoring probe
Probes placed in the soil surrounding a landfill above the groundwater table. The probes are used to determine if landfill gases are migrating away from the landfill.

gate volume
The amount of waste, measured by volume, that enters a landfill.

Gaylord box
A heavy corrugated box (4 feet square) that is used as a dumpster for collecting wastes and other materials.

general obligation (G.O.) bonds
A method of financing in which bonds are backed by the faith and credit of a municipality.

generation rate
The amount of waste that is produced over a given amount of time. For example, a district may have a generation rate of 100 tons per day.

geographic information system (GIS)
A system, usually computerized, that includes locations of all geographical characteristics of an area of land. Items may include elevation, houses, public utilities, or the location of bodies of water, aquifers, and flood plains.

geonet
A synthetic liner component that facilitates drainage. A geonet is analogous to the sand component in natural liners.

geotextile
A synthetic component that is used as a filter to prevent the passing of fine-grained material such as silt or clay. A geotextile may be placed on top of a drainage layer to prevent the layer from becoming clogged with fine material.

glassphalt
A mixture of asphalt that includes a small amount of finely crushed glass as an admixture.

grain size distribution
A method of categorizing soils in which soil particles are separated according to size. A well-graded soil has a uniform grain size distribution while a poorly graded soil has a non-uniform grain size distribution.

groundwater monitoring well
A well placed at an appropriate location and depth for taking water samples to determine groundwater quality in the area surrounding a landfill or other site.

hammermill
A type of crusher or shredder used to break materials up into smaller pieces.

hazardous waste
Waste material that exhibits a characteristic of hazardous waste as defined in RCRA (ignitability, corrosivity, reactivity, or toxicity), is listed specifically in RCRA 261.3 Subpart D, is a mixture of either, or is designated locally or by the state as hazardous or undesirable for handling as part of the municipal solid waste and would have to be treated as regulated hazardous waste if not from a household.

heat value
Heat generated per unit weight or volume of combustible material completely burned.

HELP (hydrologic evaluation of landfill performance) Model
A specialized computer program that performs the water balance equation and aids in modeling by predicting

leachate generation. By selecting different covers and liners, an optimum combination can be achieved.

humus
Organic materials resulting from decay of plant or animal matter. Also referred to as compost.

hydraulic conductivity
A measurement of how fast a liquid can pass through the pores of a solid. Typically, the liquid is water and the solid is a soil of some type.

incinerator
A facility in which solid waste is combusted.

industrial waste
Materials discarded from industrial operations or derived from manufacturing processes.

infiltration layer
A low hydraulic conductivity layer in a landfill, usually a component in the cover, that is placed to minimize liquid infiltration to the waste layers.

inorganic waste
Waste composed of matter other than plant or animal (i.e., contains no carbon).

institutional waste
Waste materials originating in schools, hospitals, prisons, research institutions, and other public buildings.

integrated solid waste management
A practice using several alternative waste management techniques to manage and dispose of specific components of the municipal solid waste stream. Waste management alternatives include source reduction, recycling, composting, energy recovery, and landfilling.

intermediate processing center (IPC)
Usually refers to the type of materials recovery facility (MRF) that processes residentially collected mixed recyclables into new products available for markets; often used interchangeably with MRF.

in-vessel composting
A method in which compost is continuously and mechanically mixed and aerated in a large, contained area.

knuckleboom crane
A crane with a bending or pivot point in the boom, which enables it to reach over a longer horizontal distance.

landfill gas
A mixture of primarily methane and carbon dioxide that is generated in landfills by the anaerobic decomposition of organic wastes.

landfill mining
A process of removing reusable resources from old landfills for recycling.

lateral pipe
A pipe used to connect wells or trenches in a landfill.

leachate
Liquid that has percolated through solid waste or another medium and has extracted, dissolved, or suspended materials from it. Because leachate may include potentially harmful materials, leachate collection and treatment are crucial at municipal waste landfills.

leachate collection system
A network of pipes or geotextiles/geonets placed at low areas of the landfill liner to collect leachate from a landfill for storage and treatment. Flow of leachate along the liner is facilitated by the use of a soil drainage blanket or geonet.

lift
In landfilling, a lift is a completed layer of adjacent cells.

liner
A system of low-permeability soil and/or geosynthetic membranes used to collect leachate and minimize contaminant flow to groundwater. Liners may also adsorb or attenuate pollutants to further reduce contamination.

macrorouting (route balancing)
Creating collection routes by dividing a collection area into smaller areas representing one day of work for one crew.

magnetic separation
A system to remove ferrous metals from other materials in a mixed municipal waste stream. Magnets are used to collect the ferrous metals.

mass-burn system
A municipal waste combustion technology in which solid waste is burned in a controlled system without prior sorting or processing.

mechanical separation
The separation of waste into components using mechanical means, such as cyclones, trommels, and screens.

methane
An odorless, colorless, flammable, explosive gas produced by municipal solid waste undergoing anaerobic decomposition. Methane is emitted from municipal solid waste landfills.

microrouting
Takes the smaller areas created in macrorouting and defines specific route paths for collection crews to follow

modular incinerator
Small, self-contained incinerators designed to handle small quantities of solid waste. Modules may be combined as needed, to match plant capacity with the quantity of waste to be processed.

monitoring well
A well that is used to detect items such as gas concentrations, water contamination, and leachate concentration. Wells are usually placed in and around landfills or compost facilities to monitor the migration of harmful substances from the facilities.

moisture content
The fraction or percentage of a substance or soil that is water.

municipal (project) revenue bond
A method of financing in which bonds are given on the basis of the worthiness, technological feasibility, and projected revenue of a project.

municipal solid waste (MSW)
MSW means household waste, commercial solid waste, nonhazardous sludge, conditionally exempt small quantity hazardous waste, and industrial solid waste.

mulch
Ground up or mixed yard trimmings placed around plants to prevent evaporation of moisture and freezing of roots and to nourish the soil.

natural liner
A landfill liner that is made up of low-permeability soil.

NIMBY
Acronym for "not in my back yard." An expression frequently used by residents whose opposition to siting a waste management facility is based on the facility's proposed location.

organic material (organic waste)
Materials containing carbon. The organic fraction of MSW includes paper, wood, food scraps, plastics, and yard trimmings.

overlay maps

A series of individual maps, each of which shows specific data. The maps are placed on top of one another to form a composite map showing all the data.

particulate matter (PM)
Tiny pieces of matter resulting from the combustion process. PM can have harmful health effects when breathed. Pollution control at combustion facilities is designed to limit particulate emissions.

passive venting
A venting technique using the natural pressure created in landfills to expel gases and control gas migration.

pathogens
Disease-causing agents, especially microorganisms such as bacteria, viruses, and fungi.

percolate
To ooze or trickle through a permeable substance. Groundwater may percolate into the bottom of an unlined landfill.

permeable
Having pores or openings that permit liquids or gasses to pass through.

permeability
A measure of how well a liquid moves through the pores of a solid. Expressed as a number applied to landfills in terms of how quickly water moves through soil; it is typically expressed as centimeters per second.

phase diagram
A diagram (or series or diagrams) used to show chronological order in a project. The diagram should show key transition points and contain enough detail to move smoothly from phase to phase.

phasing
A system of running a project in more than one step (phase). Each phase is generally independent of the others, which offers more flexibility in management and operation.

pilot program
A trial run of the planned program conducted on a small scale to forecast the workability of the planned program. Changes may be made to the program depending on the results of the pilot study.

platform/pit noncompaction station
A type of transfer station that has a waste storage capacity of several days or more. While the waste is in temporary storage, recyclable materials may be removed.

post-closure care
A procedure of maintaining the environmental controls and appearance of a landfill after it has ceased to accept waste.

post-consumer recycling
The reuse of materials generated from residential and commercial waste, excluding recycling of material from industrial processes that has not reached the consumer, such as glass broken in the manufacturing process.

precycling
The decision-making process consumers use to judge a purchase based on its waste implications. Criteria include whether a product is reusable, durable, and repairable; made from renewable or nonrenewable resources; over-packaged; or in a reusable container.

primary leachate
When waste enters a landfill, it contains some amount of liquid, which leaches out of the refuse as primary leachate.

recycling
The process by which materials otherwise destined for disposal are collected, reprocessed, or remanufactured, and are reused.

refractory
A material that can withstand dramatic heat variations. Used in conventional combustion chambers in incinerators.

refuse-derived fuel (RDF)
Product of a mixed waste processing system in which certain recyclable and non-combustible materials are removed, with the remaining combustible material converted for use as a fuel to create energy.

residential waste
Waste generated in single- and multiple-family homes.

residue
The materials remaining after processing, incineration, composting, or recycling. Residues are usually disposed of in landfills.

resource recovery
A term describing the extraction and use of materials and energy from the waste stream. The term is sometimes used synonymously with energy recovery.

retention basin
An area designed to retain precipitation runoff and prevent erosion and pollution.

reuse
The use of a product more than once in its same form for the same purpose; e.g., a soft drink bottle is reused when it is returned to the bottling company for refilling.

roll-off container
A large waste container that fits onto a tractor trailer that can be dropped off and picked up hydraulically.

salvaging
At landfills or material recovery facilities, salvaging is the controlled separation of recyclable and reusable materials. Controlled means that the separation is monitored by operators.

scavenging
At a landfill or material recovery facility, scavenging is the uncontrolled separation of recyclable and reusable materials. Uncontrolled means that the operator does not monitor the removal of materials, and in many cases prohibits it. Material scavenging of recyclables may also occur at the curb or at drop-off centers.

scavenger
One who illegally removes materials at any point in the solid waste management system.

scrap
Discarded or rejected industrial waste material often suitable for recycling.

scrubber
Common anti-pollution device that uses a liquid or slurry spray to remove acid gases and particulates from municipal waste combustion facility flue gases.

secondary leachate
When water percolates through a landfill, the water becomes contaminated and becomes leachate. This leachate is known as secondary leachate.

secondary material
A material that is used in place of a primary or raw material in manufacturing a product.

sedimentation basin
An excavated area of land that is used to allow solid particles in water to settle out. The rate of sedimentation is dependent on the depth of the basin and the size and weight of the particles.

settlement
As refuse decomposes and/or becomes compacted by the weight of overlaying layers, landfills experience a volume decrease and compaction of individual layers of waste in the landfill. Settlement refers to this volume decrease and compaction of layers.

sludge
A semi-liquid residue remaining from the treatment of municipal and industrial water and wastewater.

shredder
A mechanical device used to break waste materials into smaller pieces by tearing and impact action. Shredding solid waste is done to minimize its volume or make it more readily combustible.

silviculture
The cultivation of trees.

soil cut-and-fill balances
A technique used to create the same amount of earth cut as fill for a specified area of land. The excess soil is placed where it is needed in low areas. This helps minimize construction costs.

soil boring
A sample of earth representing underground conditions for the surrounding area. They are used to gather information about and model subsurface characteristics, which are important when designing landfills.

solid waste
Any garbage, or refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permit under 33 U.S.C. 1342, or source, special nuclear, or by-product materials as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923). (Definition from 40CFR 258.2.)

source reduction
The design, manufacture, acquisition, and reuse of materials so as to minimize the quantity and/or toxicity of waste produced. Source reduction prevents waste either by redesigning products or by otherwise changing societal patterns of consumption, use, and waste generation. (See also, "waste reduction.")

source separation
The segregation of specific materials at the point of generation for separate collection. Residential generators source separate recyclables as part of curbside recycling programs.

special waste
Refers to items that require special or separate handling, such as household hazardous wastes, bulky wastes, tires, and used oil.

Subtitle C
The hazardous waste section of the Resource Conservation and Recovery Act (RCRA) of 1976.

Subtitle D
The solid, nonhazardous waste section of the Resource Conservation and Recovery Act (RCRA) of 1976.

Subtitle F
Section of the Resource Conservation and Recovery Act (RCRA) of 1976 requiring the federal government to actively participate in procurement programs fostering the recovery and use of recycled materials and energy.

Superfund
Common name for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to clean up abandoned or inactive hazardous waste dump sites.

Swale
An elongated trench that is used to collect and direct the flow of surface water runoff.

synthetic liner
A type of liner consisting of a plastic membrane, instead of soil. Synthetic liners are less permeable, thinner, and more flexible than soil liners.

test pit
Pat of an investigative procedure in which a backhoe or similar piece of equipment excavates a deep trench in the earth in order to allow subsurface investigation.

thermophilic microorganisms
Heat-loving microorganisms that thrive in and generate temperatures above 105 degrees Fahrenheit.

tipping fee
A fee charged for the unloading or dumping of material at a landfill, transfer station, recycling center, or waste-to-energy facility, usually stated in dollars per ton. (Sometimes called a disposal or service fee.)

tipping floor/pit
Unloading area for vehicles that are delivering municipal solid waste to a transfer station or municipal waste combustion facility.

transfer station
A permanent facility where waste materials are taken from smaller collection vehicles and placed in larger vehicles for transport, including truck trailers, railroad cars, or barges. Recycling and some processing may also take place at transfer stations.

trommel
A perforated, rotating, horizontal cylinder that may be used in resource recovery facilities to break open trash bags, remove glass in large enough pieces for easy recovery, and remove small abrasive items such as stones and dirt. Trommels have also been used to remove steel cans from incinerator residue.

tub grinder
Machine used to grind or chip wood for mulching, composting or size reduction.

vadose zone
The zone between the land surface and the water table.

volatile organics
Organic compounds that vaporize at relatively low temperatures or are readily converted into a gaseous by-product.

volatilization
A process in which gases are produced and escape into the atmosphere. In landfills, methane volatilization is of concern.

volume-based fees
A fee paid to dispose of material at a facility such as a landfill, based on the volume of the material being disposed of.

waste combustion
The combustion of MSW in an incinerator to produce electrical or thermal energy. The MSW may be sorted or non-sorted, and may also be processed before incineration.

waste management boundary
The boundary around the area occupied by the waste in a landfill, measured in terms of area.

waste exchange
A computer and catalog network that redirects waste materials back into the manufacturing or reuse process by matching companies generating specific wastes with companies that use those wastes as manufacturing inputs.

waste reduction
Waste reduction is a broad term encompassing all waste management methods—source reduction, recycling, composting—that result in reduction of waste going to a combustion facility or landfill.

waste stream
A term describing the total flow of solid waste from homes, businesses, institutions and manufacturing plants that must be recycled, burned, or disposed of in landfills; or any segment thereof, such as the "residential waste stream" or the "recyclable waste stream."

waste-to-energy system (WTE)
A method of converting MSW into a usable form of energy, usually though combustion.

wastewater
Water that is generated, usually as a by-product of a process, that cannot be released into the environment without

some type of treatment.

water balance
An equation that is used to model and predict the amounts of water that will go to various destinations. Typical destinations include evaporation, infiltration, and run-off. The sum of the amounts to the destinations must be equal to the source of the water (usually precipitation).

water table
The level below the earth's surface at which the ground becomes saturated with water. Landfills and composting facilities are designed with respect to the water table in order to minimize potential contamination.

waterwall incinerator
Waste combustion facility using lined steel tubes filled with circulating water to cool the combustion chamber. Heat from the combustion gases is transferred to the water. The resultant steam is sold or used to generate electricity.

wet/dry collection systems
A collection system that allows wet organic materials to be separated by generators from dry wastes. Wet organic materials are suitable for composting, while dry materials are non-organics that may include recyclables.

wetlands
An area that is regularly wet or flooded and has a water table that stands at or above the land surface for at least part of the year. Coastal wetlands extend back from estuaries and include salt marshes, tidal basins, marshes, and mangrove swamps. Inland freshwater wetlands consist of swamps, marshes, and bogs. Federal regulations apply to landfills sited near or at wetlands.

wet scrubber
Anti-pollution device in which a lime slurry (dry lime mixed with water) is injected into the flue gas stream to remove acid gases and particulates.

white goods
Large household appliances such as refrigerators, stoves, air conditioners, and washing machines.

windrow
A large, elongated pile of composting material, which has a large exposed surface area to encourage passive aeration and drying.

working face
The area of the landfill that is currently being filled with refuse. The refuse is typically placed in cells. The open face where refuse is being unloaded and compacted is the working face.

yard trimmings
Leaves, grass clippings, prunings and other natural organic matter discarded from yards and gardens. Yard trimmings may also include stumps and brush, but these materials are not normally handled at composting facilities.

Note on Sources
Some of the definitions in this glossary were taken with permission from Rynk, et al., *On-Farm Composting Handbook* (NRAES-54). This publication is available from NRAES, Cooperative extension, 152 Riley-Robb Hall, Ithaca, NY 14853-5701, (607) 255-7654.

From: Decision Maker's Guide to Solid Waste Management, Volume II, (EPA 530-R-95-023), 1995. Project Co-Directors: Philip R. O'Leary and Patrick W. Walsh, Solid and Hazardous Waste Education Center, University of Wisconsin-Madison/Extension. This document was supported in part by the Office of Solid Waste (5306), Municipal and Industrial Solid Waste Division, U.S. Environmental Protection Agency under grant number CX-817119-01. The material in this document has been subject to Agency technical and policy review and approved for publication as an EPA report. Mention of trade names, products, or services does not convey, and should not be interpreted as conveying, official EPA approval, endorsement, or recommendation.

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EXECUTIVE SUMMARY

Background

This 2008 Franklin County Integrated Solid Waste Management Plan (Plan) replaces the 1992 Benton Franklin Moderate Risk Waste Plan and the 1994 Benton Franklin Solid Waste Management Plan. The 2008 Plan incorporates Moderate Risk Wastes into this integrated plan. The Plan describes past and current practices of solid waste management in Franklin County. It has been prepared in accordance with The Solid Waste Management – Reduction and Recycling Act, Chapter 70.95 of the Revised Code of Washington (CH.70.95 RCW). This revision was initiated with the goal of developing a plan exclusive of Benton County as both jurisdictions mutually agreed upon separation on a regional basis with cooperation and coordination on issues that affect both entities.[1]

The Plan was prepared under the direction and guidance of the Franklin County Solid Waste Planning Committee and Franklin County Department of Public Works. It puts forth alternatives in the form of programs prioritized by the Franklin County Solid Waste Advisory Committee (SWAC) and other activities to be evaluated during the implementation of this plan. The SWAC members represent the interests of their agencies and businesses, and as residents and members of the community they also represent the public's interest. From this membership came the current program enhancements, future programs, and future activities of Solid Waste Management in Franklin County.

Process and Schedule for Adoption of the Plan

This copy of the Franklin County Integrated Solid Waste Management Plan is the "pre-final draft plan" that incorporates comments received on preliminary draft chapters. The plan will incorporate comments received during the pre-final draft phase and be distributed in July as a "final" draft. It is anticipated that the plan will be adopted in August by Franklin County and the four cities, and when approved by the Department of Ecology it will become the final plan.

Recommendations

The proposed recommendations are to provide decision makers with guidelines for the enhancement and development of programs, policy and operating plans; a basis for permitting decisions; support needed to obtain grants and funds for subsequent planning, program and project implementation. The Plan makes recommendations that are summarized with the following general categories:

Waste Reduction. The Plan emphasizes waste reduction through a variety of educational programs for residential and commercial users of the solid waste system. These include additional educational material, school and business material informational materials, and waste audits for small businesses.

Recycling. Recycling programs are recommended to continue and expand as population continues to expand. This is especially true within the urban growth are of Pasco, where 80% of the people in Franklin County reside. Early efforts expand recycling through educational materials. A community survey and evaluation of curbside recycling are planned.

The County currently has a 27% recycling rate, which is expected to increase to 31% after the 6-year plan recommendations in this document are implemented. The recycling rate could be increased significantly, to over 40%, if curbside collection of yard waste (organics) and/or recyclables is initiated. This will also help the County maintain a diversion rate of greater than

50%. It is estimated that the County had a 54% diversion rate in 2005, 31% of which is constituted by recycling efforts by the concrete, asphalt, and construction companies in the County.

Moderate Risk Waste. The current Moderate Risk Waste program is incorporated into this Plan as a separate chapter. It used to be a 450 page document that was a stand alone plan. The Plan continues the existing program. It proposes to enhance program activities in education, waste reduction and collection events during the next six years.

Solid Waste Collection. Existing collection programs for solid waste will continue. The incorporated jurisdictions will examine collection rate structures and how they may be revised to promote recycling and waste reduction.

Solid Waste Transfer and Disposal. Existing direct haul, transfer, and export will continue. The Plan evaluates the need for a partially staffed transfer station in Connell. Long term disposal options are closely tied to economic and political realities regionally.

Alternatives to Disposal. There are no disposal options in Franklin County other than export. Currently new technologies are evolving for the inclusion of solid waste into biomass for fuel or power generation. Currently it is estimated that over half of the biomass energy available in Eastern Washington is contained within Franklin County and its adjoining counties.

Special Waste Streams. There are ten separate special waste streams evaluated for existing and future program activities by the Franklin County Solid Waste Advisory Committee. These programs have been prioritized based on the County's needs for the next six years. There will be many enhancements in education, public outreach, and additional planning activities to be implemented.

Administration and Enforcement. Program administration and enforcement will be continued through Franklin County Department of Public Works and Benton Franklin Health Department (BFHD). Cooperation and coordination among the participating jurisdictions will be encouraged. There is a new interlocal agreement for cooperation and financing certain plan elements planned during the next six years. BFHD will continue review and enforcement und solid waste programs. Enhancements are expected to include increased public awareness of illegal dumping and littering.

Financing and Implementation. A six and twenty year financial plan for programs and schedules of their implementation is put forth. Operating costs are expected to total $89,500 over the six year planning period. About $15,000 is expected to be spent on operating costs in the six year period; however the plan recommendations would require approximately $1.3 million over the 2008 to 2028 planning period. A detailed breakdown of these costs is provided in Chapter 11.

These recommendations were made by the Franklin County Solid Waste Advisory and prioritized based on current needs and available financial resources. Actual budgets to carry out the recommendations over the next six years will vary year to year as specific programs are defined. They will vary upon availability of grant funding and budgets approved by local governments. Six year operations cost are expected to increase for new programs along with additional capital costs acquiring signage material for enforcement. A comprehensive cost assessment questionnaire is provided with the plan for the Washington State Utilities Commission in Appendix G.

The Plan will be reviewed and revised every 5 years as required by RCW 70.95. However, during the next 5 years, changes may occur as new information is collected, rules or regulations are revised due to legislative action, or other events occur that influence the planned activities. Changes that are minor and consistent with the Plan will not require an amendment. These changes will be documented and provided to local jurisdictions in the county. Major changes would require a Plan amendment. The Franklin County Solid Waste Advisory Committee will

continue to meet on an ongoing basis to review the progress of the solid integrated waste management plan on future development of solid waste issues in Franklin County.

[1] 2006 Benton County Solid Waste Management Plan Update, page ES 1.

1.0 Introduction

1.1 Background

The 2008 Franklin County Integrated Solid Waste Management Plan (Plan) presents a comprehensive, long-term approach to solid waste management in the county. The Plan has been developed in accordance with The Solid Waste Management-Reduction and Recycling Act Chapter 70.95 of the Revised Code of Washington (Chapter 70.95 RCW). This law requires each county, in cooperation with the cities within the county, to prepare a solid waste management plan. This document updates and combines the 1992 Benton-Franklin Regional Solid Waste Management Plan and 1994 Benton–Franklin Regional Moderate Risk Management Plan into one document for planning purposes. The Plan is intended to provide citizens, and decision makers for Franklin County with a guide to implement, monitor, and evaluate future solid waste activities in the planning area for a 20-year period. Recommendations developed for the Plan not only guide local decision makers, but substantiate the need for local funds and state grants to underwrite solid waste projects. Although the plan addresses a 20-year timeframe, it will be necessary to revise and update the plan periodically.

The format of the Plan follows that recommended in the Department of Ecology (Ecology) Guidelines for the Development of Local Solid Waste Management Plan and Plans Revisions (March 1990 and December 1999) and the 1991 Moderate Risk Management Plan Ecology Guidelines. This introductory chapter discusses the driving forces behind the Plan's legislative mandate, reviews the history of solid waste planning in Franklin County, and describes the current planning process. Chapter 2 discusses features of the natural and human environment in Franklin County. Chapters 3 through 11 address the following solid waste programs:

- Chapter 3 Waste Stream
- Chapter 4 Reducing, Reusing, and Recycling Wastes in Franklin County
- Chapter 5 Moderate Risk Waste
- Chapter 6 Collection Systems
- Chapter 7 Transfer and Disposal of Waste
- Chapter 8 Solid Waste Processing Technologies
- Chapter 9 Special Wastes
- Chapter 10 Administration and Enforcement
- Chapter 11 Financing and Implementation

Each program/system addressed in Chapters 3 through 11 is described in terms of the following:

- Regulatory Framework
- Existing types of programs and levels of service provided
- Needs and opportunities for consideration
- Evaluation of alternatives to resolve problems and address levels of service

An Executive Summary provides an overview of the Plan while focusing on the recommendations. The planning process, including participation of the Franklin County Solid Waste Advisory Committee (FCSWAC) and the public, is also described in the Executive Summary.

1.2 Planning Authorities

The Plan was prepared under the direction and guidance of Franklin County Public Works Department and the FCSWAC.

1.2.1 Role of Local Governments

Under state law, each municipality in a county may fulfill its solid waste management planning responsibilities in one of three ways:

- Prepare its own solid waste management plan for integration into the comprehensive county plan.
- Participate with the county in preparing a joint city-county plan for solid waste management
- Authorize the county to prepare a plan for the city's solid waste management for inclusion in the comprehensive county plan.

Prior to development of the Plan, all participating jurisdictions (Pasco, Connell, Kahlotus, and Mesa) signed an "Interlocal" agreement that established roles and responsibilities in the solid waste management planning process. The participating jurisdictions have chosen to prepare a joint city–county plan, giving Franklin County authority as the lead planning agency.

1.2.2 Role of the Franklin County Solid Waste Advisory Committee (SWAC)

According to Chapter 70.95 RCW, "each county shall establish a local solid waste advisory (SWAC) committee to assist in the development of programs and policies concerning solid waste handling and disposal and to review and comment upon proposed rules, policies or ordinance prior to their adoption." The SWAC adopted rules, by-laws and elected a chair and vice chair. Committee members include representatives from the waste hauling industry, recycling industry, food processing industry, local government, public citizen(s), business, and agriculture. A minimum of nine members and a maximum of twelve members will be appointed by the Franklin County Commissioner's to serve "staggered" three year terms. Two primary responsibilities of the SWAC are to advise on Plan development and to assist in the Plan adoption process. The SWAC will participate in Plan development by reviewing draft reports, providing input and comment on all issues covered by the Plan, acting as a liaison to their constituencies, and assisting in public involvement. The SWAC will also review the complete draft and final Plans, and will be asked to recommend the Plan for adoption by the County and Cities. After the Plan is adopted, the SWAC will routinely evaluate implementation of recommended programs, and will help to promote waste reduction and recycling throughout the County. SWAC members will also participate in amending the Plan if necessary. The Plan will be updated every 5 years.

1.3 Regulatory Review

The primary law guiding the planning effort is the Solid Waste Management Reduction Recycling Act (Chapter 70.95 RCW). This statue and Chapter 431, Laws of 1989 (which amended Chapter 70.95 RCW), the Hazardous Waste Management Act, the Clean Washington Act, the Minimum Functional Standards for Solid Waste Handling (MFS) and relevant Oregon solid waste regulations are discussed in this section.

1.3.1 Solid Waste Management Act

This Plan was developed in response to the Solid Waste Management – Reduction and Recycling Act, Chapter 70.95 of the Revised Code of Washington (RCW), passed in 1969. This Act states that:

> *Each county within the state, in cooperation with the various cities located within such county, shall prepare a coordinated, comprehensive solid waste management Plan* (RCW70.97.080).

The primary reason for Plan development is the local (multi-county, county, and municipal) need for a coordinated, comprehensive solid waste program based on established goals and policies. Local decision makers need a context for evaluation of proposed programs, facilities, or policies that directly or indirectly affect any element of the solid waste system. The Solid Waste Management – Reduction and Recycling Act (RCW 70.95.165) also specifies the formation, memberships, and role of the SWACs. Furthermore, the statute requires the Plan be maintained in a current condition through periodic review and updating, if necessary, at least once every 5 years (RCW 70.95.110)

1.3.2 Waste Not Washington Act – Chapter 431, Laws of 1989

In 1989, the Washington State Legislature amended the Solid Waste Management Act. The action resulted in the Waste Not Washington Act, Engrossed Substitute Bill 1671. The revised legislation addresses two significant issues relevant to the development of solid waste management plans: (1) waste reduction; (2) recycling, with source separation of recyclable materials as the preferred method; (3) energy recovery, incineration or landfilling of separated waste; (4) energy recovery, incineration, or landfilling of mixed waste.

Public information, education campaigns, commercial incentives and reduction in product packaging are all presented in Chapter 431, Laws of 1989 as policy options that may be available to local jurisdictions as a means to meet waste reduction goals. Recycling program elements are also discussed. Specifically, public education to promote recycling and the collection of source separated materials from residents in urban and rural areas are emphasized. The programs established in local plans are designed to help Washington State achieve a 50 percent recycling goal by 1995. However, no specific recycling goals for counties are set by the legislation.

1.3.3 Hazardous Waste Management Act

In 1985, the Washington State Legislature amended the Hazardous Waste Management Act to require all cities and counties in the State to develop plans for improving moderate risk waste management in their jurisdictions. Moderate risk waste, as defined by the Act, includes:

- Any household wastes identified by Ecology as hazardous household substances
- Any hazardous waste conditionally exempt from regulation because the waste is generated or accumulated in quantities below the threshold for state or federal regulation (typically 220 pounds per month or per batch).

Management of the moderate risk waste stream is closely associated with the management of other solid wastes. Proper management of moderate risk waste is important, since such wastes pose a threat to public health, worker safety, and the environment. Moderate risk waste management plans, therefore, support solid waste management plans by discouraging indiscriminate dumping and diverting hazardous waste from solid waste handling and disposal facilities, and wastewater treatment facilities. In 1992, Benton and Franklin Counties completed

their moderate risk waste management plan as required by the Hazardous Waste Management Act. The findings and recommendations of the Benton and Franklin Counties Moderate Risk Waste Management Plan have been integrated into this document as they relate to Franklin County.

The Act also requires that each local government, or combination of contiguous local governments, amend its local hazardous waste plan to include a used oil recycling element. A draft of the used oil recycling element was required to be presented to Ecology by July 1, 1993. The element must include:

- A plan for establishing collection sites for used oil, based upon local goals.
- A plan for enforcing sign and container ordinances. The Act requires retailers of lubricating oil and vehicle oil filters to post and maintain signs informing the public of the importance of used oil recycling and how and where used oil may be recycled.
- A plan for public education on used oil recycling.
- An estimate of funding needed to implement the used oil recycling element.

The Act also requires local governments to submit annual reports to Ecology describing the number of collection facilities in operation and the amounts of used oil collected from households. In addition to requirements for retailers to post and maintain signs, the Act regulates the transportation, treatment, recycling, and disposal of used oil. The Department of Ecology is required to help implement the Act by developing guidelines for planning, conducting educational and technical assistance, and establishing regulations.

1.3.4 Clean Washington Act – SSB5591

The Second Substitute Senate Bill 5591, also known as the Clean Washington Act, was passed by the Washington State Legislature in April 1991. The Act amends or repeals different sections of several Washington State laws, including Chapters 70.93, 70.95, 43.31 and 19.114 RCW. The packaging legislation requires that all plastic containers be labeled with a code that identifies the materials used to produce the container. In addition, the Act sets limits on specific heavy metals in products, packages, or packaging components.

The Clean Washington Center (Center) was created as a new program within the Washington Department of Trade and Economic Development. Because the supply of many recycled commodities far exceeds demand, local governments cannot adequately address problems associated with market development. The mission of the Center is "to direct service to businesses that transform or remanufacture waste materials into usable or marketable materials or products (RCW 70.93.030). In recognizing the private sector has the greatest ability to create and expand upon existing markets, the Center's purpose is to provide or facilitate business assistance, research and development, marketing, and public education. Funding for the Center was sunsetted in 1996.

1.3.5 Minimum Functional Standards for Solid Waste Handling

Ecology established the Minimum Functional Standards for Solid Waste Handling (MFS) (Chapter 173-304 Washington Administrative Code [WAC]) as required by the Solid Waste Management-Reduction and Recycling Act. The MFS, originally adopted in 1972, stipulate performance and operational criteria for storing and disposing of solid waste. Among these criteria are requirements for preventing environmental contamination related to solid waste storage and disposal. In particular, the MFS require steps be taken to prevent leachate from contaminating soils, surface water, and groundwater. The MFS also require that systems, such

as groundwater monitoring wells, be installed near certain solid waste management facilities for early detection of environmental contamination.

Ecology has revised the MFS. The changes focus primarily on previously unaddressed waste streams such as contaminated soils, moderate risk waste, woodwaste, and sludge; technological advances such as leachate detection systems, and composting facilities; and other new issues such as liner standards, and importing and exporting waste. A draft environmental impact statement considering these changes to the MFS was published in 2002 and the new regulations went into effect in 2003.

1.3.6 WAC 173-350

In 2003, chapter 173-350 WAC, Solid Waste Handling Standards, was adopted. This rule essentially replaced the requirements of chapter 173-304 WAC, Minimum Functional Standards for Solid Waste Handling (MFS), described previously. The revised Solid Waste Handling Standards include the requirements for most of the solid waste facilities in Washington, excluding municipal solid waste landfills which are regulated under chapter 173-351 WAC, Criteria for Municipal Solid Waste Landfills. While there are similarities with the MFS, there have also been some significant changes and modifications:

- Beneficial Use Exemption – the legislature, through ESSB 6203, directed Ecology to develop a process to exempt from permit requirements activities that beneficially use solid waste and pose little threat to human health and the environment. Requirements to obtain this permit exemption are contained in WAC 173-350-200.
- Permit Deferrals – the legislature, also through ESSB 6203, directed Ecology to explore methods for deferring solid waste permits to other environmental permits. This procedure can be found in WAC 173-350-710.
- Limited Purpose and Inert Waste Landfills – these are the only two types of solid waste landfills regulated under chapter 173-350 WAC (municipal solid waste landfills are regulated under chapter 173-351 WAC). There are no longer inert/demolition, woodwaste or problem waste landfill classifications. The two landfill types, limited purpose and inert landfills, have similar requirements to the MFS. One significant change is that inert waste landfills cannot accept demolition waste. Inert waste management requires a permit only when being disposed of or used as fill in quantities greater than 250 cubic yards. For limited purpose landfills design requirements are based on the level of risk posed by the type of waste and the site characterization. Financial assurance and ground water monitoring are required for limited purpose landfills.
- Inert materials – these are defined in rule and criteria for classifying waste is found in WAC 173-350-990.
- Ground Water Monitoring Requirements – each section of the rule indicates whether monitoring is required for that type of facility. Testing methods and parameters and site characterization are clarified in WAC 173-350-500. More flexibility is allowed under the rule. There is also improved coordination with chapter 173-200 WAC, Ground Water Quality Standards.
- Waste Recycling Facilities – the definition of recycling comes from chapter 70.95 RCW, the Solid Waste Management Act. The act of recycling is categorically exempt with the conditions that it complies with local solid waste management plans and that Ecology and the jurisdictional health department are notified of the intent to operate. Storage for the purpose of recycling is subject to appropriate regulation under chapter 173-350 WAC.

- Compost Facilities – compost meeting certain quality standards is no longer a solid waste under this rule and is considered "composted material." Testing parameters and frequency are identified in WAC 173-350-220. Some specific exemptions are included in the rule. For permitted facilities, pads are required; stormwater and leachate must be controlled. Other requirements can be found in WAC 173-350-220.
- Moderate Risk Waste – requirements for household hazardous waste facilities and events and for conditionally exempt small quantity generators are included in WAC 173-350-360. Financial assurance will be required for fixed MRW facilities that store more than 550 gallons of MRW on-site.
- Waste Tire Storage – requirements for waste tire storage and transportation are included in WAC 173-350-350. Requirements of chapter 173-314, Waste Tire Carrier and Storage Site Licenses, are being incorporated in that section. Financial assurance will be required for waste tire storage facilities permitted under this rule.

1.3.7 WAC 173-351

Municipal solid waste landfills are regulated under chapter 173-351 WAC, Criteria for Municipal Solid Waste Landfills. The purpose of this regulation is to establish minimum state-wide standards for all municipal solid waste landfill (MSWLF) units under the authority of chapter 70.95 RCW as amended in order that jurisdictional health departments can enact ordinances equally as or more stringent than this regulation and to have jurisdictional health departments implement such ordinances through a permit system set forth in Section 700. There are no MSWLFs operating in Franklin County. Both New Age and Pasco Sanitary Landfills are closed.

1.3.8 Relevant Oregon Solid Waste Regulations

Oregon statute (ORS 459.305) requires out-of-state local governments, which export more than 75,000 tons annually into Oregon for landfill disposal, to provide the opportunity to recycle and implement recycling education programs. Specifically, the local government must either achieve a recovery rate equivalent to that achieved in a comparable Oregon county or implement an equivalent recycling program. The disposal site operator is responsible for demonstrating to the Oregon Department of Environmental Quality that the city from which the waste originates has implemented an equivalent recycling program.

An equivalent recycling program requires that each person be notified of the opportunity to recycle and be encouraged to source-separate recyclables through education programs. Additionally, for cities with a population of:

- Less than 4,000, a convenient drop-off recycling location must be provided for source separated recyclables.
- More than 4,000, monthly curbside collection of source-separated recyclables must be provided.

Furthermore, cities with a population of more than 4,000 are required to implement certain elements out of a list of nine provided in the statute depending on their population size. The elements include:

- Provide durable recycling containers (e.g., recycling bins).
- Provide weekly curbside recycling collection, on the same day as garbage collection.
- An expanded education program that informs generators on how to recycle; the benefits of reducing, reusing, recycling, and composting; and promotes the use of recycling services. The city must either submit an education plan to DEQ or implement an education program that follows the requirements of ORS 459A.010(2)(c)((B).

- Collection of at least four principal recyclable materials from each multi-family dwelling complex having five or more units.
- An effective residential yard debris collection and composting program that promotes home composting and includes either monthly curbside collection of yard debris or a system of yard debris collection depots that are open weekly.
- A commercial recycling program for source-separated materials for firms employing 10 or more persons and occupying 1,000 square feet or more in a single location.
- Expanded depots for recycling and expanded education to increase depot use.
- Residential collection rates that encourage waste reduction, reuse, and recycling, through reduced rates for smaller containers and a rate that does not decrease on a per-pound basis for large containers.
- A collection and composting system for food, contaminated paper, and other compostable waste from commercial and institutional entities that generate large quantities of this waste.

Cities that export more than 75,000 tons annually, and with a population of at least 4,000 to 10,000, must implement the first three elements or design a program incorporating at least three elements from the list. Cities with a population of more than 10,000 must implement the first three elements and one additional element or design a program that includes at least five elements from the list. At this time there is no city in Franklin County that has been required to submit a plan for certification.

1.4 Solid Waste Planning in Franklin County

1.4.1 The 1977 Comprehensive Solid Waste Management Plan (Benton and Franklin Counties)

Benton and Franklin Counties developed the first two phases of a solid waste management plan in 1970. Phase 1 and Phase 2 studies addressed residential, industrial, and agricultural solid waste. The 1977 Benton-Franklin Regional Solid Waste Management Plan and Program replaced the Phase 1 and Phase 2 studies and included planning for potential resource recovery programs. The 1977 Plan was based on the following general objectives:

- To remove any danger to the public health
- To improve efficiency, quality, and coverage of service
- To protect and preserve the overall environment
- To reduce total consumption of energy
- To promote resource recovery efforts

Recommendations made in the 1977 Solid Waste Management Plan included the following:

- Initiate a study focusing on waste disposal methods in rural and agricultural areas of Benton and Franklin Counties. Determine if the disposal methods used on private property are sanitary. Determine the composition, volume, and tonnage of such refuse and evaluate whether such materials need to be disposed of in a more sanitary manner than private dumping.
- Explore and define techniques to institute source separation of fractions of the solid waste stream. If such techniques prove technologically feasible and fiscally prudent, such action should be initiated.
- Encourage each jurisdiction to advertise for and receive competitive bids from the private sector to evaluate the most prudent way of disposing of refuse. Competitive bids that include recycling and volume reduction elements should be given preference.

- When choosing a firm for collection, transport, and disposal of garbage, jurisdictions should be encouraged to consider bids with resource recovery and reduction techniques which may absorb a fraction of the total waste stream in a particular jurisdiction.
- Require that jurisdictions establish target quotas for the separation and recycling of defined fractions of the waste stream.
- Require each public or private waste collection operation to accurately determine the loading and the relationship of volume to tonnage in its solid waste operations. Include a record of median or average figures of total tonnages and volumes processed from various categories, such as residential, industrial, and commercial sources.
- Establish the Benton-Franklin Governmental Conference as a "Regional Solid Waste Management Planning Agency" as provided for in the Federal Resource Recovery and Conservation Act of 1976 (42 USC 6901 et~al 90 Stat. 2795).

1.4.2 Status of 1977 Plan Recommendations

Many different jurisdictions and private solid waste management firms operate in Benton and Franklin Counties. Since the 1977 Plan was prepared, there has been no concerted effort to carry out each recommendation on a regional basis. However, there have been numerous actions taken by various jurisdictions and private operations which support the intent of the 1977 Plan recommendations. As discussed in Chapters 3 and 4, there have been a variety of efforts taken to promote waste reduction and recycling. The feasibility of developing a regional resource recovery facility was examined in 1982. The study found that developing such a facility was not cost-effective for the area at that time.

Other recommendations in the Plan related to tracking waste quantities produced. All solid waste disposal facilities are now required to report annual tonnage figures to the Benton-Franklin Health District. Finally, the Benton-Franklin Governmental Conference (now known as the Benton-Franklin Regional Council) was identified as the regional solid waste management planning agency for the next planning effort (the 1994 SWMP).

1.4.3 The 1992 Moderate Risk Waste Plan (Benton and Franklin Counties)

The Hazardous Waste Management Act called for the implementation of a local moderate risk waste management plan for each county and municipality in Washington State by December 1991. The Benton and Franklin Counties' Moderate Risk Waste Management Plan was adopted by Benton and Franklin Counties and each of the cities and towns within the counties. A description of the Moderate Risk Waste Management Plan and its new relationship to this 2008 Plan is included in Chapter 5.

1.4.4 1994 Comprehensive Solid Waste Management Plan (Benton and Franklin Counties)

The 1994 Plan was developed in conjunction with Benton and Franklin counties, their respective cities and the SWAC for the Benton Franklin Regional Council. The elements found in the plan are listed below.

- A detailed inventory and description of all existing solid waste handling facilities, including an inventory of any deficiencies at existing facilities in meeting current solid waste handling needs.
- The estimated long-range needs for solid waste handling facilities projected 20 years into the future.

- A program for the orderly development of solid waste handling facilities in a manner consistent with the plans for all of Benton and Franklin Counties that:
    - Meets the MFS for solid waste handling adopted by the Department of Ecology and all laws and regulations relating to air and water pollution, fire prevention, flood control, and protection of public health.
    - Takes into account the comprehensive land use plan of local jurisdictions.
    - Contains a 6-year construction and capital acquisition program for solid waste handling facilities.
    - Contains a plan for financing both capital costs and operational expenditures of the proposed solid waste management system.
- A program for surveillance and control.
- A current inventory and description of solid waste collection needs and operations within each jurisdiction included in the Plan that includes:
    - Any franchise for solid waste collection granted by the Utilities and Transportation Commission including the name of the franchise holder, the business address, and the service area covered.
    - Any city solid waste operation within Benton and Franklin Counties and the boundaries of the operation.
    - The population density of each area serviced by a city or franchise operation.
    - The projected solid waste collection needs for the respective jurisdictions for the next 6 years.
- The waste reduction and recycling element includes:
    - Waste reduction strategies.
    - Source separation strategies, including: (1) programs for collecting recyclables in urban and rural areas, (2) programs to monitor the collection of source separated waste at nonresidential sites, (3) programs to collect yard waste, and (4) programs to educate and promote the concepts of waste reduction and recycling.
    - Recycling strategies, including: (1) a description of markets for recyclables, (2) a review of waste generation trends, (3) a description of waste composition, (4) a discussion of existing programs and any additional programs needed, and (5) an implementation schedule for the designation of specific materials to be collected and for the provision of recycling collection services.
    - Other information that the counties or cities submitting the plan determine is necessary.
    - An assessment of the plan's impact on the cost of solid waste collection.
- A review of potential areas that meet the disposal facility siting criteria as outlined in RCW 70.95.165.

1.5 Current Planning Process in Franklin County

1.5.1 Planning Requirements

The Guidelines for the Development of Local Solid Waste Management Plans and Plan Revisions (Ecology 1999) direct the development of solid waste management plans in Washington State. The specific elements which must be included in such plans are identified in RCW 70.95.090. These elements are:

- A detailed inventory and description of all existing solid waste handling facilities, including an inventory of any deficiencies at existing facilities' in meeting current solid waste handling needs.
- The estimated long-range needs for solid waste handling facilities projected 20 years into the future.
- A program for the orderly development of solid waste handling facilities in a manner consistent with the plans for all of Franklin County, which shall:
    - Meet the MFS for solid waste handling adopted by the Department of Ecology and all laws and regulations relating to air, and water pollution, fire prevention, flood control, and protection of public health.
    - Take into account the comprehensive land use plan of local jurisdictions.
    - Contain a 6-year construction and capital acquisition program for solid waste handling facilities.
    - Contain a plan for financing both capital costs and operational expenditures of the proposed solid waste management system
- Contain a plan for surveillance and control
- A current inventory and description of solid waste collection needs and operations within each jurisdiction included in the Plan which shall include:
    - Any franchise for solid waste collection grated by the Utilities and Transportation Commission (UTC) including the name of the franchise holder, the business address, and the service area covered.
    - Any city solid waste operation within Franklin County and the boundaries of the operation.
    - The population density of each area service by a city or franchise operation.
    - The projected solid waste collection needs for the respective jurisdictions' for the next 6 years.
- The waste reduction and recycling element shall include:
    - Waste reduction strategies.
    - Source separation strategies including: (1) programs for collecting recyclables in urban and rural areas, (2) programs to monitor the collection of source separated waste at nonresidential sites, (3) programs to collect yard waste, and (4) programs to educate and promoted the concepts of waste reduction and recycling.
    - Recycling strategies: (1) a description of markets for recyclables, (2) a review of waste generation trends, (3) a description of waste composition, (4) a discussion of existing programs and any additional programs needed, and (5) an implementation schedule for the designation of specific materials to be collected and for recycling collection services.
    - Other information that the counties or cities submitting the plan determine is necessary.
    - An assessment of the plan's impact on the cost of solid waste collection.
- A review of potential areas that meet the disposal facility siting criteria as outlined in RCW 70.95.165.

1.5.2 Plan Development

The process of plan development involves the following major steps:

1. Collection and analysis of information
2. Projection of solid waste handling needs
3. Preparation of draft reports and plan chapters for SWAC review

4. Public workshops
5. Preparation of preliminary draft Plan for SWAC review
6. Completion of the State Environmental Policy Aact documentation process
7. Preparation of a revised draft Plan
8. Submission of Plan to Ecology and WUTC and the distribution of the Plan for review by the public, municipalities, counties, and the SWAC
9. Workshops and hearings
10. Review and incorporation of pertinent comments by Ecology and WUTC
11. Preparation of the final Plan
12. Obtaining resolutions of adoption from municipalities and counties
13. Submit final Plan to Ecology for approval
14. Obtaining Ecology approval of Plan
15. Plan implementation

1.5.3 Amendment, Review, and Revision Process of the Plan

The current SWAC is made up of a minimum of nine (maximum of 12) participants as outlined in Chapter 70.95.165 RCW as an ongoing committee. The by-laws and procedures of the SWAC are identified in Appendix A.

This committee represents the balance of interests including but not limited to: citizens, public interest groups, business; the waste management industry; and local elected public officials. This committee is only an advisory body. It makes recommendations to the Franklin County Commission, which then makes the final decision on the plan after considering those recommendations and other available information. Every five years the SWAC will updating the plan formally, but updates may occur earlier as necessary.

1.6 Relationship of the Solid Waste Management Plan to Other Plans

This Plan must be viewed in the context of the overall planning process within all jurisdictions. As such, it must function in conjunction with various other plans, planning policy documents, and studies which deal with related matters. Included among these are the County Generalized Comprehensive Plans, Zoning Codes, Shoreline Management Master Plans, and the Benton and Franklin Counties Moderate Risk Waste Management Plan.

1.6.1 Comprehensive Land Use Plans

The planning guidelines require that the Plan reference all comprehensive land use plans for all participating jurisdictions. These plans include the Franklin County Growth Management Comprehensive Plan adopted June 1, 2005 and comprehensive plans for various cities.

The reason for considering the local plans is to ensure that the Solid Waste Management Plan is consistent with policies set forth in the other documents. The most important aspect is the siting of new facilities and ensuring that siting meets local land use policies. The following discussion focuses on the County Comprehensive Plans, but other local comprehensive plans will be considered in more detail during the planning process.

Most jurisdictions are currently in the process of updating their comprehensive plans to meet the requirements of the Growth Management Act (GMA) (ESHB 2929). The most significant impact of the GMA is that the law now requires that counties and cities designate urban growth areas,

resource lands (forest, agricultural, and mineral lands) and critical areas (wetlands, geologically hazardous areas, fish and wildlife habitat conservation areas, aquifer recharge areas, and frequently flooded areas).

The 2005 Franklin County Comprehensive Plan provides general guidance on solid waste management. The overall goal of the plan is to "provide efficient and effective management of solid waste." This section was developed around the 1994 Plan and is to provide decision makers with a set of goals, policies, and recommendations for implementing and evaluating solid waste management efforts. The following goals policies and recommendations contained in the 1994 Plan, as amended and adopted, are referenced and appurtenant to the comprehensive plan:

- Goal 1 - Encourage reliable and cost-effective service by provider.
- Goal 2 - Encourage recycling and reduction of solid waste.
- Goal 3 - Encourage adequate disposal of special wastes by provider.

1.6.1.1 State Goals

- Urban Growth - Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.
- Economic Development - Encourage economic development throughout the state that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of this state, especially for unemployed and for disadvantaged persons, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services, and public facilities.
- Environment - Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.
- Permits - Applications for both state and local government permits should be processed in a timely and fair manner to ensure predictability.
- Public Facilities and Services - Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards.

1.6.1.2 STATE MANDATES

Washington State mandates that: Each comprehensive plan shall include...A utilities element consisting of the general locations, proposed locations, and capacity of all existing and proposed utilities, including, but not limited to, electrical lines, telecommunication lines, and natural gas lines (RCW 36.70A.070(4)).

1.6.1.3 COUNTY GOALS, POLICIES, AND STRATEGIES

The following goals, policies, and strategies were outlined in the 2005 Franklin County Comprehensive Plan:

- Goal 1 - To ensure that the energy, communication, and solid waste disposal facilities and services needed to support current and future development are available when they are needed.
- Goal 2 - To minimize impacts associated with the siting, development, and operation of utility services and facilities on adjacent properties and the natural environment.
- Policy 1 - Ensure that energy, communication, solid waste facilities, and other public facilities and services are available for future development.
- Strategy 1 - Minimize impacts associated with the siting, development, and operation of utility services and facilities on adjacent properties and the natural environment.

- Policy 2 - Ensure coordination between Franklin County and utility providers for consistency between the growth plans for the County and the system plans of each utility.
- Strategy 1 - Franklin County shall retain copies of and refer to the comprehensive system plans of each utility serving the County.
- Policy 3 - Ensure that utility providers utilize the Franklin County Comprehensive Plan in planning for expansion of their facilities.
- Strategy 1 - Provide utilities with updates and amendments to the comprehensive plan, which should include projections of population, employment and development growth rates.
- Policy 4 - Monitor the siting of new utility facilities so as to avoid or mitigate adverse environmental consequences.
- Strategy 1 - Determine the capability of land and natural systems when providing such facilities and services as storm water drainage and flood prevention, water, sewage/septic, and solid waste disposal.

1.6.2 Zoning Codes

Zoning regulations classify land according to permissible uses within those land areas. The regulations usually address the size of structures allowed and include some site design requirements, including set backs from property lines. In addition, the siting of any new solid waste management facilities will be guided by the siting criteria discussed in Section 2.3 of the Franklin County zoning code. This Franklin County Zoning Code allows for sanitary landfills in an industrial-2 (1-2) district. Furthermore, if a conditional use permit is obtained, landfills are allowed in agricultural production and open space zones. All proposed sites must be approved by the Benton Franklin Health District.

1.6.3 Shoreline Management Plans

Shoreline Management Plans establish policies and regulations for development along shorelines. Shorelines are defined as all waters of the state, including reservoirs, floodplains and their associated wetlands. Portions of rivers having a mean annual flow of less than 20 cubic feet per second, and lakes less than 20 acres in size, are excluded from the regulations.

While the area is recognized as arid and semi-arid there are a number of hydrological features meeting the definitions for protection under the Washington Shoreline Management Act of 1972. Franklin County contains Clark Pond, Bailie Pond, Kahlotus Lake, Scooteney Reservoir, Mesa Lake, Sulphur Lake, Scooteney Lake, and 17 unnamed lakes. The shorelines of the Columbia and Snake Rivers are also regulated by the Shoreline Management Act.

The Franklin County Shoreline Management Plan (revised 1983) requires that the location of landfills must comply with the Solid Waste Management Plan for Benton and Franklin Counties, and that "all sanitary landfills shall be located away from the shoreline." Generally, all solid waste is a possible source of much nuisance. Rapid, safe and nuisance-free storage, collection, transportation and disposal are of vital concern to all persons and communities. If the disposal of solid waste material is not carefully planned and regulated, it can become not only a nuisance, but a severe threat to the health and safety of human beings, livestock, wildlife, and other biota.

1.6.4 Benton and Franklin Counties Moderate Risk Waste Management Plan

The Hazardous Waste Management Act calls for the implementation of a local moderate risk waste management plan for each county and municipality in Washington State by December

1991. The Benton and Franklin Counties Moderate Risk Waste Management Plan has been adopted by Benton and Franklin Counties and each of the cities and towns within the counties. A description of the Moderate Risk Waste Management Plan and its relationship to this Plan is included in Chapter 5.

1.6.5 Franklin County Emergency Management Disaster Recovery Plan

In preparing and implementing an integrated solid waste plan for the County, emergency management planning must be part of the process. Recovering from a very major disaster requires planning with local governmental agencies to assure for timely return to normalcy. If an incident occurs, local officials may be inundated with solid waste materials, which would require a fast relief from potential public health risks occurring.

1.6.6 Air, Water, and Soils

In preparing and implementing solid waste management plans, it is important to identify the effect of other regulatory requirements on solid waste issues. An individual-medium approach can result in the transfer of pollutants to other media, rather than actual removal of pollutants from the environment or reduction in toxicity. For example, stringent limits in wastewater discharges have resulted in the generation of increased quantities of wastewater residuals, which sometimes contain the very pollutants originally intended to be controlled. Similarly, remediation of groundwater contaminated with volatile and semi-volatile organics can lead to increased emissions of volatile organic compounds into the air depending on the treatment technology employed. In the case of solid waste practices in Washington, in the past, uncontrolled burning of garbage was a common practice both on an individual basis and at unlined dumps. This caused cross contamination of air, water, and soils.

Since the early 1970s the federal Clean Air and Clean Water acts have been implemented that call for reduction of pollution of the air and water. After more than three decades, great progress has been made in compliance with these Acts, and the effort continues. One of the results of regulatory compliance has been a shift in burden of air and water pollution management to solid waste management. Control of water pollution has essentially eliminated the dumping of effluent into waterways, and replaced this with solid waste handling methods, such as land application or composting of biosolids. Similarly, electronic precipitators and baghouses have removed industrial air pollutants from process air streams, and created a solid waste in the form of ash that requires disposal. Another major regulatory effort is control of toxic and hazardous contaminates and pollutants. Collection and accumulation of materials containing these pollutants has also increased the need for solid waste disposal for these waste streams.

2.0 Background of the Planning Area

Franklin County comprises 1,244 square miles. The major land use is agriculture, although the Pasco area of the County is becoming increasingly urbanized. The federal government uses a large area, the Hanford Reservation, for defense, energy, and environmentally related research. The Hanford Reservation occupies 20 square miles in Franklin County. A map of Franklin County is provided as Exhibit 2-1.

This chapter describes the population, economic, land use, and physical characteristics of the planning area. It also introduces the locational standards for siting landfills and identifies potential areas within Franklin County which meet these standards.

2.1 Economic Development

Franklin County is included in the Richland-Kennewick-Pasco Metropolitan Statistical Area (MSA) designated by the U.S. Census Bureau and referenced in this document as the Tri-Cities MSA. Although, the economies of the bi-county area and region each contribute to the vitality of the Tri-Cities MSA and Franklin County, for the purposes of this analysis and because the land use discussed in the comprehensive plan is primarily unincorporated Franklin County, this section will focus on the rural economy of Franklin County.

2.1.1 Non-agricultural Economy

During the current decade, all of eastern Washington is experiencing significant population and economic growth for reasons beyond local influence. It is anticipated that the current regional growth trend will continue into the near and mid-term future (5 to 10 years).

Three major sectors have been the principal driving forces of the economy in the Franklin County since the early 1970s:

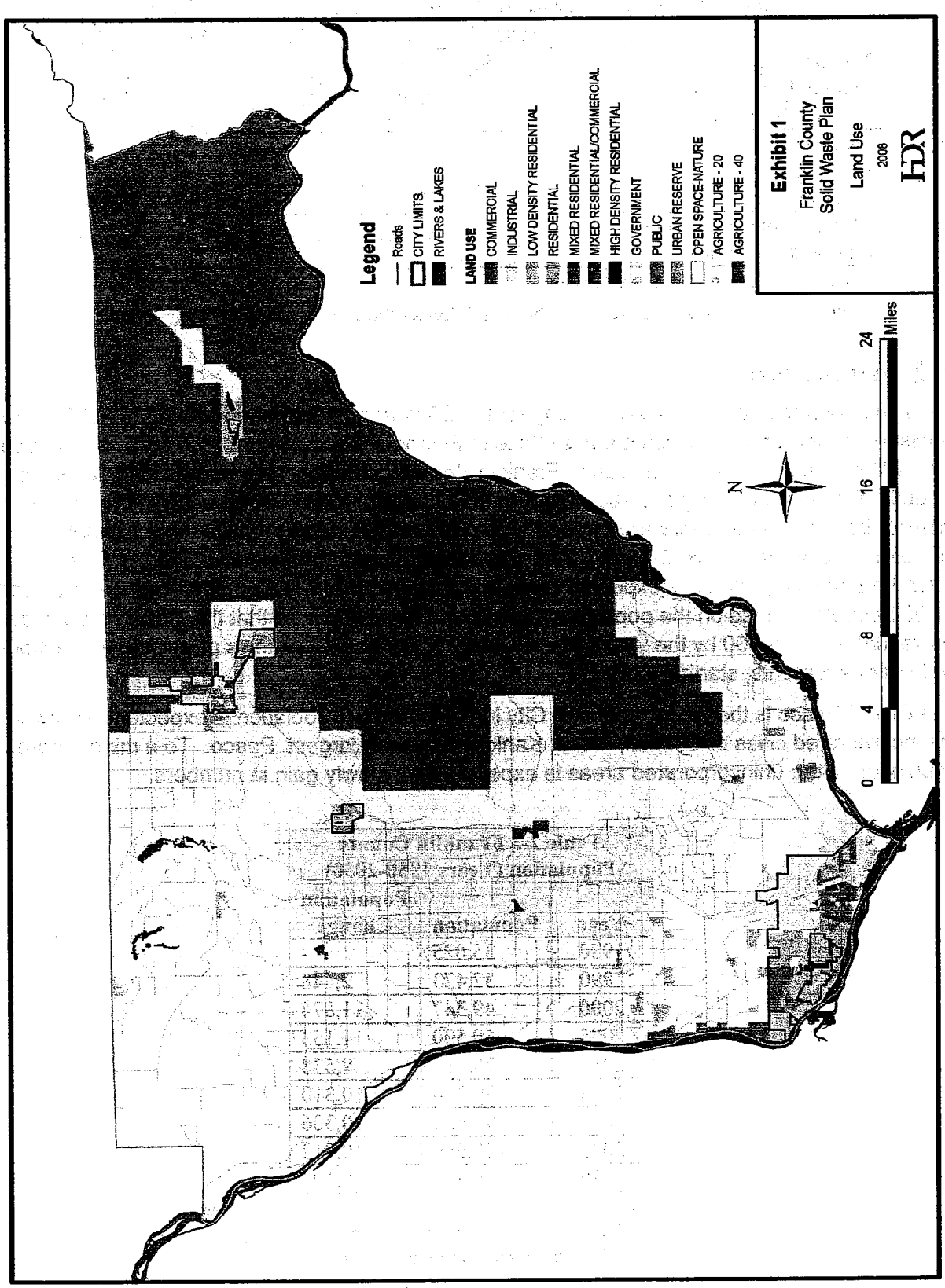
- The Department of Energy (DOE) and its contractors operating the Hanford Site.
- The Rail, Water, and Air Transportation Hub.
- The agricultural community, including a substantial food-processing component. Except for a minor amount of agricultural commodities sold to local-area consumers, the goods and services produced by these sectors are exported outside the county.

In addition to these three major employment sectors, three other components can be readily identified as contributors to the economic base of the County. The first of these components, loosely termed "other major employers," include the five major non-Hanford employers in the region. A summary of the major employers of the region (Franklin County) is provided in Table 2-1.

Table 2-1 Summary of Major Employers in Franklin County		
Major Employers in Franklin County	**Product / Service**	**Number of Employees**
Tri Cities Airport	Air Transportation	703
Lourdes Health Network	Health Care	640
Franklin County	Government	325
City of Pasco	Government	254
Pasco School District	Education	1,300
CBC	Education (Junior College)	500
Franklin County PUD	Electrical Services	250
Con Agra / Lamb Weston	Food Processing	1,425
Ameri Cold Logistics	Food Preservation	125
White Shield	Construction Services	125
Broetje Orchards	Agricultural (Seasonal)	990
KG Farms	Agricultural (Seasonal)	250
Sagemoor Farms	Agricultural (Seasonal)	500
Zirkle Farms	Agricultural (Seasonal)	500
Wa. State Dept. of Corrections	Correctional Facility (Connell)	350

2.1.2 Agriculture

Air, water, and land are important economic resources for Franklin County. Since before statehood, fertile soils, available irrigation water, sunny skies, and long summer daylight hours have made agriculture a cornerstone for economic development. Franklin County lies within the Columbia Basin, one of the Northwest's most productive agricultural regions. According to the Agricultural Censuses taken every 5 years by the Washington Agricultural Statistics Service, in Franklin County there were 848 farms in 1997 and 943 farms in 2002, an increase of 11 percent. However, the land area in farming varied as much as 16 percent annually between 1982 and 2002. The average size of a farm varied over the past 20 years, with 739 acres in 1987 and 705 acres in 2002 (Table 2-2). The increase in irrigated acres and in the market value of agricultural products since 1982 is also illustrated in Table 2-2. In the future, agriculture will continue to be a major industry in Franklin County and therefore agricultural lands should continue to be protected as an important county resource.


Legend
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CITY LIMITS
RIVERS & LAKES
LAND USE
COMMERCIAL
INDUSTRIAL
LOW DENSITY RESIDENTIAL
RESIDENTIAL
MIXED RESIDENTIAL
MIXED RESIDENTIAL/COMMERCIAL
HIGH DENSITY RESIDENTIAL
GOVERNMENT
PUBLIC
URBAN RESERVE
OPEN SPACE-NATURE
AGRICULTURE - 20
AGRICULTURE - 40
Exhibit 1
Franklin County
Solid Waste Plan
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Table 2-2 Number and Size of Farms in Franklin County by Year					
	1982	1987	1992	1997	2002
Number of Farms	856	894	857	848	943
Land in Farms (Acres)	632,519	660,813	670,149	563,716	664,875
Average Size of Farms (Acres)	-	739	782	665	705
Number of Farms with Irrigated Land	727	736	715	725	744
Irrigated Acres	189,236	193,960	214,748	221,145	340,244
Market Value of Products (in thousands of dollars)	151,138	176,358	238,528	332,935	350,483

*Dash indicates no data is available

Source: Censuses of Agriculture – National Agricultural Statistics Service

2.2 Population

Population projections for Franklin County for the 20-year planning period (2008 to 2028) were published by the State of Washington's Office of Financial Management (OFM). This plan uses the OFM's medium series projections. Franklin County currently has a population of close to 70,000, with over half that population (about 50,210 people [OFM 2007]) living in the City of Pasco. Besides Pasco, there are three other incorporated Cities in the County: Connell, Kahlotus, and Mesa. Table 2-4 provides population figures for these cities and the County. Over the planning period it is expected that population in Franklin County will increase by nearly 40,000 people. Based on the population projections, it is estimated that the County's population will reach over 109,000 by the year 2030 (OFM 2007). Table 2-3 shows population projections in 5-year increments, starting in 1980.

The City of Pasco is the most populated City in the County. Population is expected to grow in the incorporated cities of Connell, Mesa, Kahlotus, and the largest, Pasco. To a minor degree population in the unincorporated areas is expected very slowly gain in numbers.

Table 2-3 Franklin County Population (Years 1980-2030)		
Year	Population	Population Change
1980	35,025	-
1990	37,473	2,448
2000	49,347	11,874
2005	60,500	11,153
2010	70,038	9,538
2015	80,348	10,310
2020	90,654	10,306
2025	100,666	10,012
2030	109,861	9,195

Notes:
1. Year 1980 and 1990 estimates from US Census Bureau (accessed 11-19-07).
2. Year 2000-2030 estimates from the OFM, medium series projections, published November 2007 (OFM 2007).

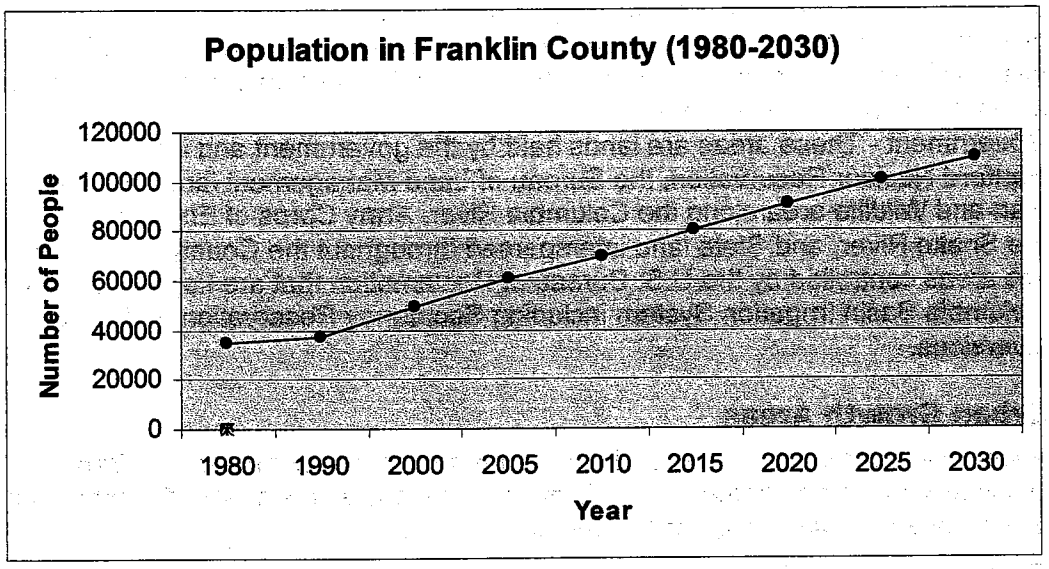


Table 2-4 Franklin County Population (1980-2030)						
Year	Connell	Kahlotus	Mesa	Pasco	Unincorporated County	County Total
1980	1,981	203	278	16,425	14,619	33,506
1990	2,005	167	252	20,337	14,712	37,473
2000	2,956	214	425	32,066	13,686	49,347
2005	3,200	220	440	48,400	8,240	60,500
2010	3,712	280	525	56,030	9,525	70,038
2015	4,361	330	600	64,278	10,799	80,348
2020	5,056	364	633	72,523	12.048	90,654
2025	5,861	402	732	80,579	13,150	100,724
2030	6,795	466	849	87,889	13,862	109,861

2.3 Land Use

Through the designation of the land use categories with their respective goals, policies, and strategies, the County intends to guide development, minimize conflict, and provide certainty for the use of property. The County has also prepared a Land Use Map which shows current land use as well as future land use over the next 20 years (Exhibit 2-2). Exhibit 2-2 as presented considers the general distribution and location of land uses and the appropriate intensity and density of land uses given current development trends.

The major land use designations illustrated on Exhibit 2-2 and described as follows:

1. Urban Growth Areas (UGAs) and within the UGA areas of the respective cities adopted Urban Growth Areas.
2. Rural Areas - unincorporated areas of the County where there is rural living and employment.
3. Resource Lands - include areas used for agriculture and mining.
    - Agriculture - dry land and irrigated farming.
    - Mining - such as gravel and mineral.

4. Open Space Areas - includes park land along the Columbia and Snake. This designation includes areas of aesthetic quality as well as areas set aside and developed for specific kinds of recreational pursuits, including all publicly owned sites. These sites should be protected from developments that preclude the particular recreation pursuits the area is intended and suitable for. These include parks and other publicly owned areas, as well as areas in private development.
5. Government - These areas are lands held by the government and include portions of the Hanford Nuclear Reservation, the Bureau of Land Management lands at Juniper Forest, Fish and Wildlife area along the Columbia River, Army Corps of Engineers land along the Snake River, and State land interspersed throughout the County. In addition, there are areas controlled by the U.S. Bureau of Reclamation that are key components of the Columbia Basin Irrigation System including Scooteney Reservation and major water diversions.

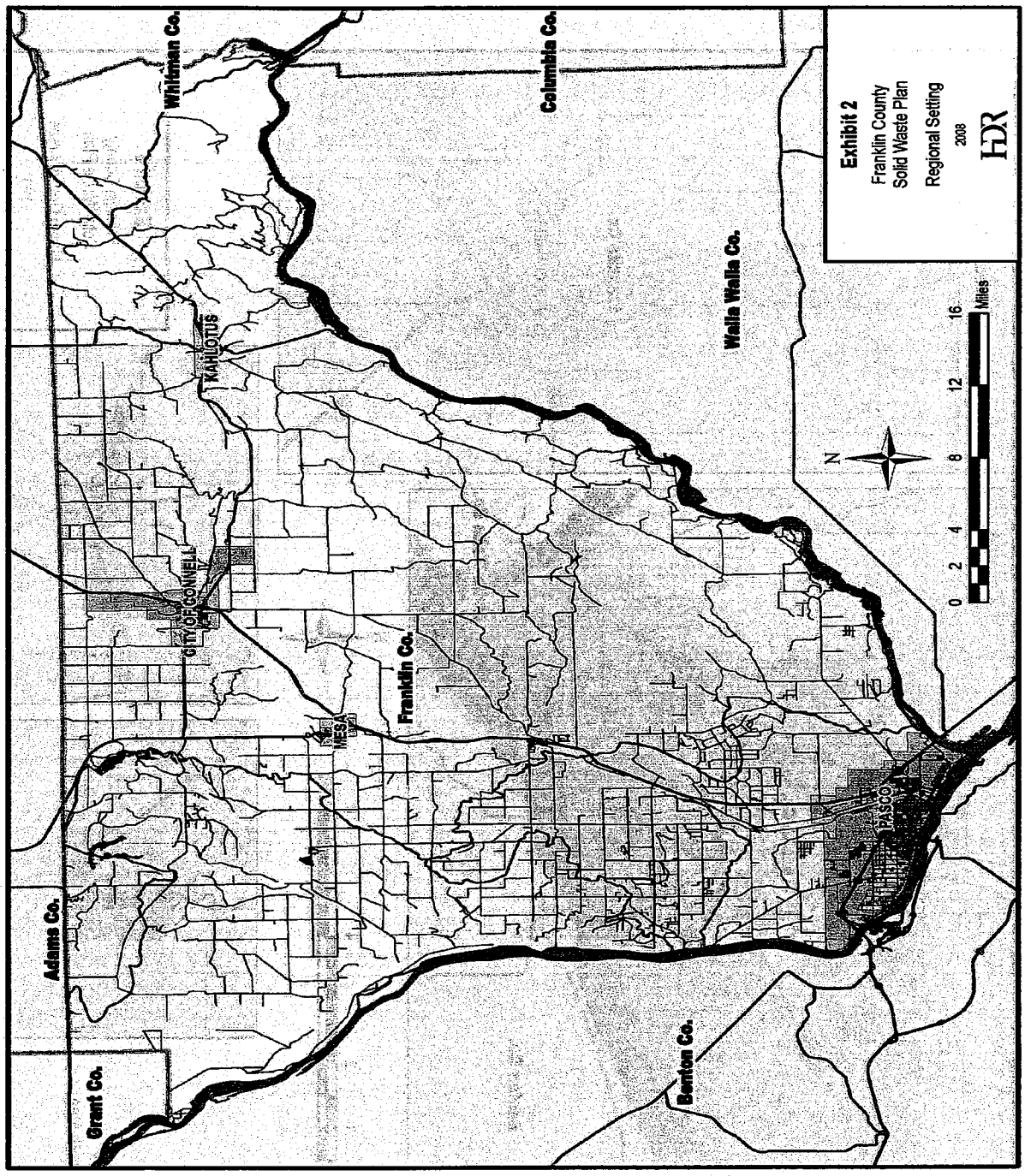
2.3.1 Urban Growth Areas

UGAs include the incorporated cities and towns and most of the population in Franklin County. Each municipality has a designated UGA. Growth in these areas consists of commercial and industrial activity and a wide range of residential densities.

Each UGA also includes unincorporated areas characterized by urban growth and/or adjacent areas within which urban infrastructure and services are provided or planned to be provided during the 20-year planning period of this document. UGAs are currently designated for the cities of Pasco, Connell, Mesa, and Kahlotus. The respective UGAs are shown in Exhibit 2-3.

New land use development with urban characteristics will be encouraged to locate first in areas with existing public infrastructure and service capacity, and second in areas where public or private infrastructure and services are planned or can be provided in an adequate manner.

Planning for such growth accomplishes two GMA goals: 1) the efficient provision and utilization of public facilities and services, including public transportation; and 2) reduced conversion of resource land into sprawling low-density development. UGA capacity is based upon intended land use, environmental constraints, forecasted population, transportation systems, available public infrastructure, and open space.


Whitman Co.
Columbia Co.
Walla Walla Co.
Adams Co.
Grant Co.
Franklin Co.
Benton Co.
KAHLOTUS
CITY OF CONNELL
MESA
PASCO
Exhibit 2
Franklin County
Solid Waste Plan
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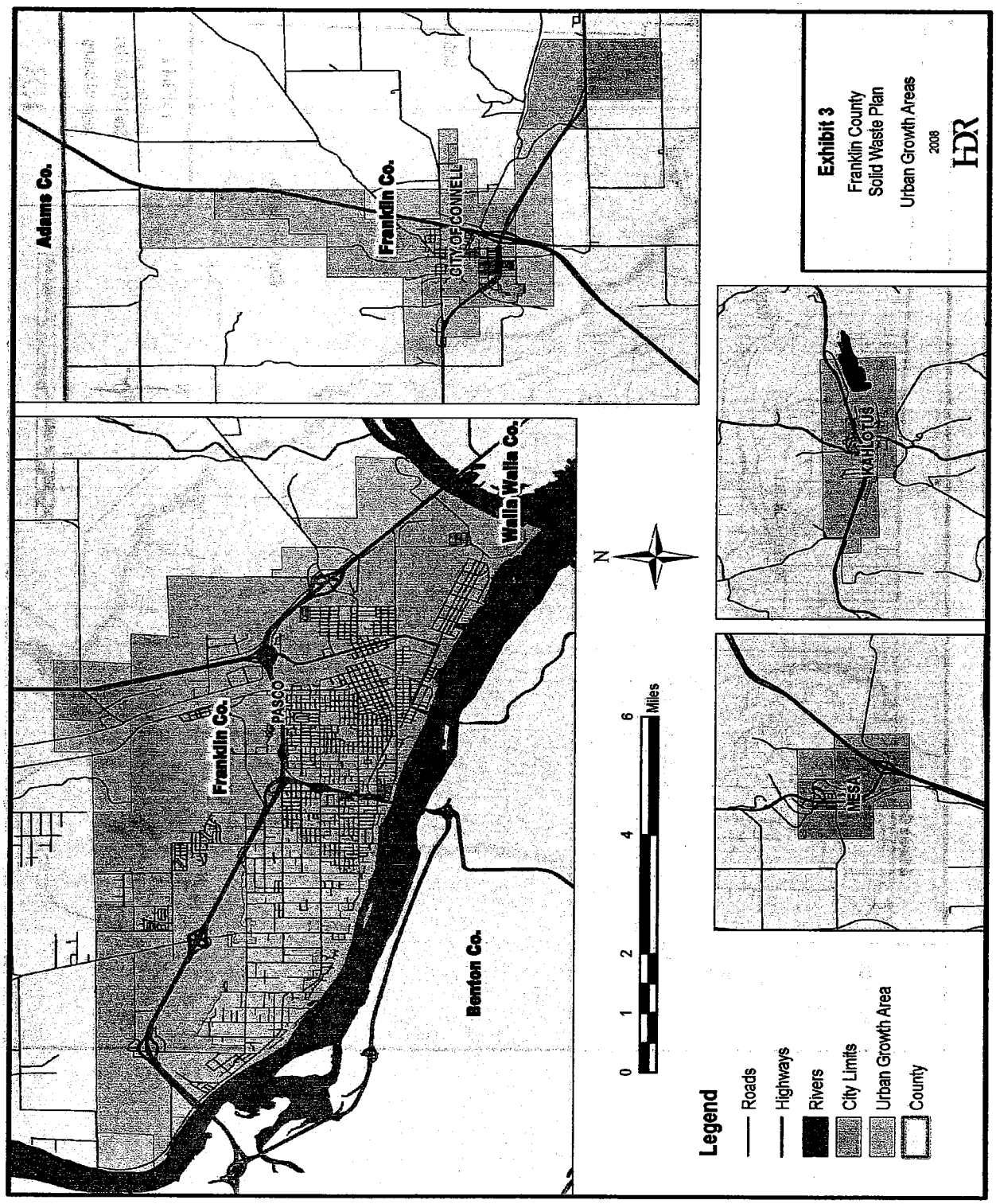
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Highways
Rivers
City Limits
Urban Growth Area
County
Exhibit 3
Franklin County
Solid Waste Plan
Urban Growth Areas
2008
HDR

2.3.2 Rural & Resource Lands

Franklin County lies at the south end of the Channel Scablands, a portion of the Columbia Basin Province formed by alternative volcanism and flooding that has occurred since the Miocene and Pleistocene eras. As a result, the County contains many canyon and cliff features such as Palouse and Devils Canyons, as well as unique rock formations and interesting geological formations. Lakes, and the Columbia and Snake Rivers make some of the rural areas suitable for the development of major recreational activities.

More recently, the Columbia Basin Project brought irrigation water into the province. The Project changed the landscape of western Franklin County by providing sufficient irrigation water for a wide variety of field crops, orchards, vineyards, etc., together with the appurtenant secondary support agricultural industries and businesses. Also within the agricultural lands of Franklin County, seasonal recreational use has become an embodiment of the rural lifestyle and is encouraged, shared, and even promoted as a facet of the extended community. Such activities are typically complementary to the business of farming or ranching and are regarded as accessory to the businesses of agri-business.

2.4 Natural Environment

2.4.1 Physical Description

Franklin County is located in the south central part of the State of Washington. It is bounded on the west and separated from Benton County by the Columbia River. On the south and east the Snake River and its tributary, the Palouse River, separate it from Walla Walla County. On the north Grant and Adams Counties bound it.

The climate of Franklin County is described as mild and dry. Throughout the year the area there are 300 days of sunshine with only an average rainfall is 6.5 inches. During the summer the maximum temperatures exceed 90^{O}F on about half of the days in July and August. The average night temperatures average 40.5^{O} F in January and 48.8^{O} F in February. The daily minimums average 24.5^{0} F in January and 30.1^{O} F in February. The average snowfall is 2.75 inches per year. The northerly latitude of the area means long hours of daylight and an abundance of sunshine during the growing season of 185 days.

2.4.2 Geology

Franklin County is part of what is referred to as the Columbia Basin Province. The County contains many canyon and cliff features such as Palouse Canyon and Devils Canyon, as well as unique rock formations. Some of the most interesting geographical features are the sand dunes located north of Interstate I-82 and the Juniper Dunes area northeast of Pasco off the Pasco-Kahlotus Highway.

The County lies at the south end of the Channel Scablands. The geology of Franklin County was formed by alternate volcanism and flooding. Three of the five geological formations, which characterize the entire Columbia River Basalt Group, occur in Franklin County. From the youngest to the oldest, these are:

- Saddle Mountain Basalt (formed 6-13 million years ago), found primarily in the Mesa area extending southeast and northwest;
- The Wanapum Basalt (13.5 to 14 million years old), occurring primarily in the northeast and along the Snake River; and
- Grande Ronde Basalt (15.6 to 17 million years old) found primarily at the eastern border.

The Grande Ronde Basalt Formation was formed 15 to 17 million years ago from large eruptions of molten lava, probably from a huge volcano located in the southeastern corner of Washington or northeastern Oregon. Flows associated with the volcano number in the hundreds and vary in thickness from a few inches to about 300 feet. Few sedimentary interbeds are found, indicating relatively short periods between eruptions.

The Wanapum Basalt Formation was formed 13.5 to 14 million years ago. Large and numerous linear vents discharging large, but less frequent, amounts of flood lava developed in the same areas as the Grande Ronde Volcano. Sedimentary interbeds were created within and between formations, mainly by the erosion of older rock surrounding the plateau and volcanic material associated with the creation of the Cascade Range. Continued deposition of flood basalts between six and thirteen million years ago is called the Saddle Mountain Basalts. These activities, primarily during the Miocene and Pliocene eras, combined with the shed sediments from the rising and volcanically active Cascade Range, form interbedded sedimentary formations within the Columbia River Basalts. These interbeds are of the Ellensburg Formation.

Deposition of sedimentary materials continued in the area during the Pleistocene era. These initial deposits are referred to as the Ringold Formation and consist of fluvial (stream) and lacustrine (lake) deposits of silts, sand, and gravel. Late in the Pleistocene Epoch, numerous glacial outwash and flood deposits occurred. These deposits are attributed to catastrophic flooding caused by the breakup of ice dams holding back impoundment, such as Lake Missoula in western Montana. Breakage of these ice dams was responsible for formation of the area north of Franklin County known as the Channel Scablands. Outpouring from these lakes scoured the land, leaving large channels. The flood waters rushed out of Lake Missoula through Spokane, spread out over the basin, and then came together again at Wallula Gap, where a large lake was created, and depositing silt in this area.

2.4.3 Stratigraphy

The geologic history summarized above provides the reasons for the current stratigraphy, or the layering and altitude of rock formations. The Columbia River Plateau can be subdivided into three informal structural sub-provinces: The Yakima Fold Belt, the Palouse Country, and the Blue Mountains. The western half of Franklin County is in the Yakima Fold Belt sub-province. The eastern half of the County lies in the Palouse sub-province.

2.4.4 Seismology

Franklin County is in a region of low to moderate seismic activity. The region can experience earthquake "swarms", typically lasting a few days to several months, where earthquakes tend to gradually increase and decay in frequency but not in magnitude.

2.4.5 Hydrogeology/Hydrology

The Columbia Plateau regional aquifer is a major system that consists chiefly of a great thickness of basalt belonging to the Columbia River Basalt Group, together with minor sedimentary deposits, which are overlain by undifferentiated consolidated and unconsolidated surficial sediments. For hydrological purposes, these formations have been subdivided into three hydrogeologic units along stratigraphic boundaries. These are from oldest to youngest:

- The Grand Ronde - This formation is composed of at least 30, and perhaps as many as several hundred, individual flows, most of which are fine grained. Sediment interbeds within the Grand Ronde Basalt are rare and generally only a few feet thick where present.
- Wanapum - This formation contains as many as ten flows, generally consisting of

medium-grained basalt relatively high in iron and titanium oxides. Sedimentary interbeds in the Wanapum Basalt are more common than in the Grand Ronde Basalt, but are still rather rare and generally only a few feet thick where present.

- Saddle Mountain - The flows of this formation vary greatly in texture and composition. The basalt averages about 600 feet in thickness with a maximum thickness of more than 800 feet near Pasco. Sedimentary interbeds are common and rather thick, often 50 feet or more.

The basalts form a complex series of aquifers and confining beds. Groundwater in the basalts occurs in joints, vesicles, fractures, and other localized features that result in permeable zones. The greatest permeability's are in highly vesicular and/or fractured tops and basal parts of basalt flows. The centers of most basalt flows are dense and have very low permeability's and generally act as confining beds.

The general direction of groundwater flow is based on inference of water level measurements from approximately 400 wells taken in March 1986. Most of the shallow groundwater flow is directed perpendicular to the water table contours, toward the Columbia and Snake Rivers, where it discharges. However, some flow is toward internal drains (canyons and coulees). On a local scale, flow at the water table is frequently toward buried drains. Although the altitude of the water table changes seasonally, the general pattern of flow remains fairly constant. With increasing depth in the groundwater system, flow is orientated more toward the rivers and is less influenced by the internal drains. This is particularly true of the basalt aquifers.

Dramatic changes in the area's groundwater level due to the Columbia Basin Irrigation Project occurred between 1950 and 1986. There are large areas where the water table has risen to, or nearly to, the land surface. Sub-surface drains have been installed in most of the areas of shallow water table. The most recent water level data (1986-1991) indicates that most of the study area has reached a state of dynamic equilibrium.

The quality and quantity of groundwater has a major impact on both the ability to develop and the cost of development. Areas that do not have ready access to groundwater or which have groundwater that is unacceptable for drinking will not be in a position to develop without some alternatives such as community water systems or other approaches that will enable them to have an adequate source of water.

Other problems facing the County because of rising water tables are deterioration of roads, particularly west of Basin City and potential loss of productive farmland due to landslides.

2.4.6 Soils

Soils are an important factor in determining appropriate land use and the costs associated with solid waste management. The soils of Franklin County were studied and mapped by the Soil Conservation Service and a soil survey was published in 1914. The Soil Conservation Service recently updated the soil map for Franklin County. The distribution of area soils, which are classified into 13 types, is presented in Exhibit 2-4 and generally described in Table 2-5. In Franklin County, agricultural lands of long-term commercial significance are Soil Types 1–3 according to the Land Capability Classification System of the Soil Conservation Service. In addition, the predominate Land Capability Classification of each generalized soil association is identified in Table 2-5.

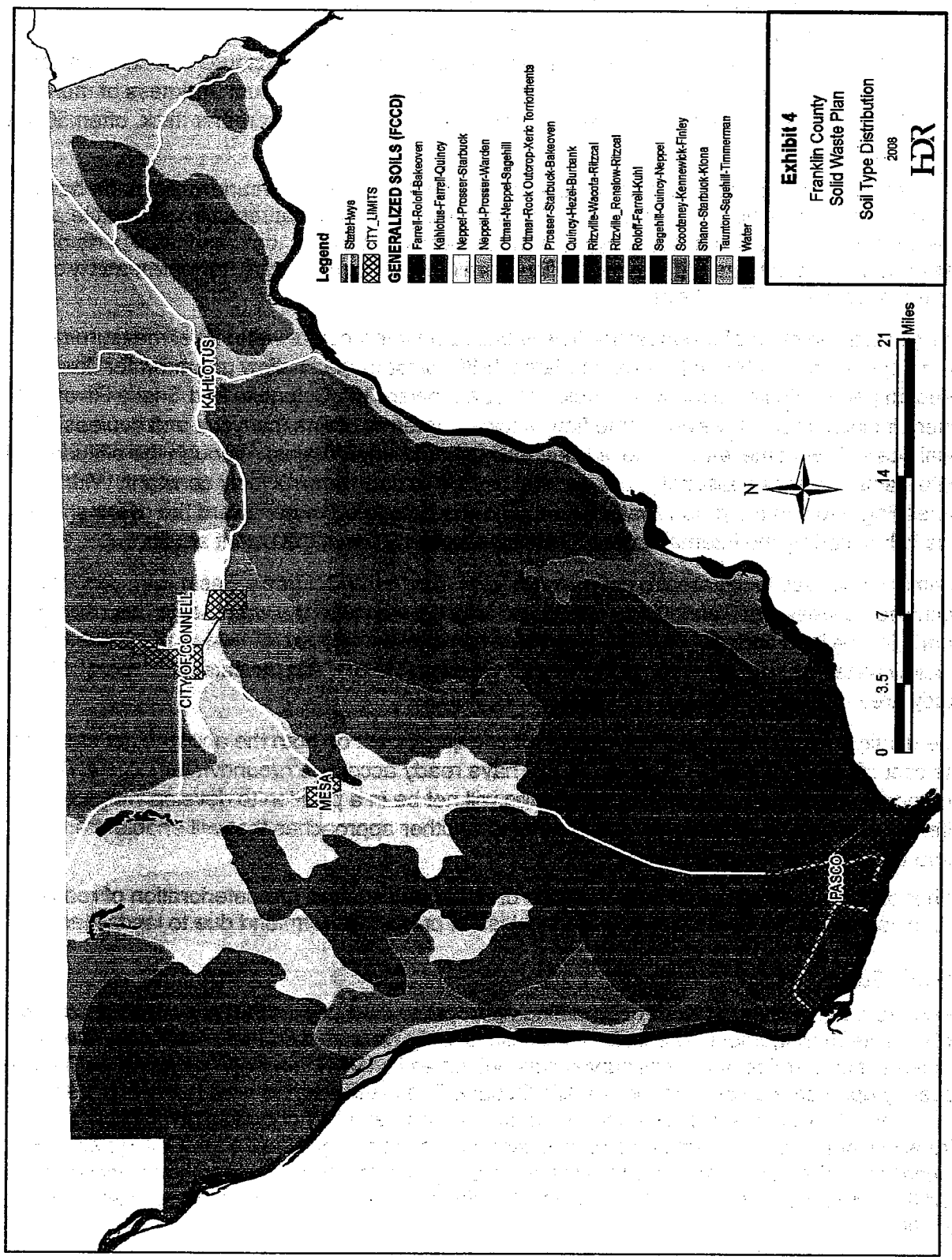

Legend
State-Hwys
CITY_LIMITS
GENERALIZED SOILS (FCCD)
Farrell-Roloff-Bakeoven
Kahlotus-Farrell-Quincy
Neppel-Prosser-Starbuck
Neppel-Prosser-Warden
Othmar-Neppel-Sagehill
Othmar-Rock Outcrop-Xeric Torriorthents
Prosser-Starbuck-Bakeoven
Quincy-Hezel-Burbank
Ritzville-Waoota-Ritzcal
Ritzville_Renslow-Ritzcal
Roloff-Farrell-Kuhl
Sagehill-Quincy-Neppel
Scoobeney-Kennewick-Finley
Shano-Starbuck-Klona
Taunton-Sagehill-Timmerman
Water
Exhibit 4
Franklin County
Solid Waste Plan
Soil Type Distribution
2008
HDR
N
0
3.5
7
14
21
Miles
KAHLOTUS
CITY OF CONNELL
MESA
PASCO

Table 2-5 Franklin County Soil Associations	
Quincy-Hezel-Burbank	Loamy fine sand to gravely sand. Soils are very deep, somewhat excessively drained on nearly level to steep terraces and active dunes. Permeability ranges from 6 to 20 in/hr and available water capacity ranges from 0.06 to 0.21 in/in. Soils have an effective rooting depth of greater than 60 inches. This soil association has a Class 7 USDA Soil Conservation Service Land Capability Classification.
Taunton-Sagehill – Timmerman	Sandy loam to gravely loam with a commonly occurring hard pan at a depth ranging from 20 t0 40 inches on alluvial fans. Soils are moderately deep to very deep, well drained to somewhat excessively drained, on nearly level to moderately steep alluvial fans and terraces. Permeability ranges from 0.6 to 6 in/hr and available water capacity ranges from 0.18 to 0.2 in/in. Soils have an affective rooting depth ranging from 20 inches to greater than 60 inches. This soil association has a Class 6 USDA Soil Conservation Service Land Capability Classification.
Sagehill-Quincy-Neppel	Very fine sandy loam to gravely sandy loam. Soils are deep to very deep, well drained to excessively drained, on nearly level to steep terraces and active dunes. Permeability ranges from 0.6 to 20 in/hr and available water capacity ranges from .06 to 0.2 in/in. Soils have an effective rooting depth of greater than 60 inches. This soil association has a Class 6 USDA Soil Conservation Service Land Capability Classification.
Neppel-Prosser-Warden	Sandy silt loam to gravely sandy loam with depth to bedrock ranging from 20 to 40 inches on benches and hillsides to greater than 60 inches on terraces. Soils are shallow to very deep, well drained to somewhat excessively drained on nearly level to steep ridges, hilltops, benches and terraces. Permeability ranges from 0.6 to 2 in/hr and available water capacity ranges from 0.08 to 0.21 in/in. Soils contain many fine roots with an effective rooting depth of 20 to 40 inches on benches, hilltops and ridges to greater than 60 inches on terraces. This soil association has a Class 6 USDA Soil Conservation Service Land Capability Classification.
Ottmar-Neppel-Sagehill	Very fine sandy loam to gravely sandy loam. Soils are deep to very deep, well drained on nearly level to steep terraces. Permeability ranges from 0.6 to 6 in/hr and available water capacity ranges from 0.08 in/in. Soils have an effective rooting depth of greater than 60 inches. This soil association has a Class 6 USDA Soil Conservation Service Land Capability Classification.
Shano-Starbuck-Kiona	Very fine sandy loam to cobbly very fine sandy loam on benches, hillsides and ridges with depth to bedrock on basalt benches ranging from 12 to 20 inches. Soils are shallow to very deep, well drained, on nearly level to very steep benches, hillsides and ridges. Permeability ranges from 0.6 to 2 in/hr and available water capacity ranges from 0.08 to 0.2 in/in. Soils have an effective rooting depth ranging from 12 inches to greater than 60 inches. This soil association has a Class 4 USDA Soil Conservation Service Land Capability Classification.

Table 2-5 Franklin County Soil Associations	
Prosser-Starbuck-Bakeoven	Very fine sandy loam on benches to cobbly loam on ridges and hilltops terraces with depth to bedrock ranging from 12 to 40 inches. Soils are very shallow to moderately deep on nearly level to very steep benches, hilltops and ridges. Permeability ranges from 0.6 to 2 in/hr and available water capacity ranges from 0.8 to 0.19 in/in. Soils have an effective rooting depth of 12 to 40 inches. This soil association has a Class 6 USDA Soil Conservation Service Land Capability Classification.
Ritzville-Renslow-Ritzcal	Silt loam on hills to very fine loam on terraces. Soils are very deep, well drained on nearly level to steep hills and terraces. Permeability ranges from 0.6 to 2 in/hr and available water capacity ranges from 0.13 to 0.21 in/in. Soils have an effective rooting depth of greater than 60 inches. This soil association has a Class 3 USDA Soil Conservation Service Land Capability Classification.
Kahlotus-Farrell-Quincy	Fine sand to very fine sandy loam. Soils are very deep, well drained to somewhat excessively drained, on nearly level to strongly sloping terraces and active dunes. Permeability ranges from 0.6 to 20 in/hr and available water capacity ranges from 0.06 to 0.11 in/in. Soils have an effective rooting depth of greater than 60 inches. This soil classification has a Class 3 USDA Soil Conservation Land Capability Classification.
Roloff- Farrell-Kuhl	Very fine sandy loam on benches and terraces to cobbly silt loam on hilltops and ridges. Soils are shallow to moderately deep, well drained, on nearly level to very steep hilltops, ridges, benches and terraces. Depth to bedrock ranging from 10 to 40 inches on benches, hilltops and ridges to greater than 60 inches on terraces. Soils are shallow to very deep and well drained. Permeability ranges from 0.6 to 6 in/hr and available water capacity ranges from 0.09 to 0.17 in/in. Soils have effective rooting depth of 10 to 40 inches on benches, hilltops and ridges too greater than 60 inches on terraces. This soil classification has a Class 4 USDA Soil Conservation Service Land Capability Classification.
Ottmar-Rock Outcrop-Xeric-Torriorthents	Soils are formed in alluvial and lacustrine deposits over siltstone and sandstone. Typically the surface layer is silt loam 3 inches thick. The underlying material to a depth of 60 inches or more is calcareous silt loam. The erosion hazard is very severe by water and wind. This soil classification has a Class 8 USDA Soil Conservation Service Land Capability Classification.
Neppel-Prosser-Starbuck	Very fine sandy loam to gravelly sandy loam with depth to bedrock ranging from 12 to 40 inches on benches, hilltops and ridges to greater than 60 inches on terraces. Soils are shallow to very deep, well drained to somewhat excessively drained on nearly level to steep ridges, hilltops, benches and terraces. Permeability ranges from 0.6 to 2 in/hr and available water capacity ranges from 0.08 to 0.19 in/in. Soils have an effective rooting depth of 12 to 20 inches on benches, hilltops and ridges too greater than 60 inches on terraces. This soil classification has a Class 6. USDA Soil Conservation Service Land Capability Classification.
Ritzville-Wacota-Ritzcal	Silt loam. Soils are very deep, well drained on nearly level to steep hills. Permeability ranges from 0.6 to 2.5 in/hr and water capacity ranges from 0.13 to 0.21 in/in. Soils have an effective rooting depth of greater than 60 inches. This soil classification has a Class 3 USDA Soil Conservation Service Land Capability Classification.

2.4.7 Biological

Franklin County can be characterized as a level to steep loessial upland steppe zone. Elevations range from about 300 feet above sea level at the southern most part of the County to over 1,000 feet in the northeastern part.

Even though rainfall amounts are small, the moisture that does fall escapes evaporation during winter months and seeps deeply into the soil. This provides water to sustain vigorous growth in the spring. The upland loams are dominated by Bluebunch Wheatgrass, Idaho Fescue, and Sandberg's Bluegrass. The sand soils support Indian Ricegrass and Sand Dropseed.

The remainder of the area is classified as "shrub-steppe" and is characterized by big sagebrush or threetip sagebrush and occasional growth of rabbitbrush, horsebrush, and spring hopsage. Dominance over most of the region is by non-native cheatgrass. Because of the turbulent floods that inundated the area, much of the soils are thin and stony, they do support perennial Bluegrass as well as stiff Sagebrush and several species of Buckwheat.

The varied terrain and major river environments that cut through the steppe region of Franklin County create many unique habitats for wildlife. Areas such as Scooteney Lake, Eagle Lake, the Lower Palouse, and the Snake River and Snake River Island are some of those.

The Washington Environment Atlas lists over 35 important species of birds and five species of mammals, which range over the area. These include Sage Grouse, Scaled Quail, Perregrin Falcon, and Coyote, among others.

The Columbia and Snake Rivers are an important ecosystem for Franklin County. The Columbia River between McNary Pool and Priest Rapids Dam is the only remaining free flowing segment in Washington, and the last spawning grounds of the fall Chinook Salmon. About 80 percent of the Great Basin Canada goose population nest and live most of the year in the Columbia River region, which also provide wintering grounds for the rare Giant Canada Goose.

2.4.8 Wetlands

The Palouse, Snake, and Columbia Rivers form the east, south, and west boundaries of Franklin County, respectively. Wetlands occur along the margins, side channels, and islands associated with these river systems. In the interior of the County, wetlands occur in low-lying areas in the northwest portion of the County, in the vicinity of Eagle Lakes and Scooteney Reservoir. Other important wetland systems occur where subsurface water emerges in coulees and canyons, such as Esquatzel Coulee near Mesa and Washtucna Coulee near Connell and Kahlotus.

Areas with a high water table in Franklin County are also frequently associated with seepage from canals and ditches, irrigation runoff, and created stock ponds. However, these areas are not classified as wetlands under the GMA, which excludes "artificial wetlands intentionally from non-wetland sites, such as irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities."

An inventory of wetlands in Franklin County was completed in order to portray the extent and distribution of wetlands. The Soil Conservation Service, with cooperation from the Franklin Conservation District has prepared a detailed soil survey and wetlands inventory for the County. When siting solid waste facilities, this information, in conjunction with site-specific wetland delineations, should be used to determine wetland boundaries on a project-by-project basis.

Wetlands vary according to their origin, geographic location, water regime, chemistry, dominant plants, and soil characteristics. Wetlands also vary in their value for providing such functions as

flood storage, sediment trapping, groundwater recharge and discharge, nutrient retention, food chain support, fish and wildlife habitat, and recreation.

2.4.9 Floodplains

The most severe flooding in the unincorporated areas of the County occurs within the Esquatzel Coulee and Kahlotus Creek during the winter and spring months. This results when either an over saturated or frozen ground condition occurs with an increase in rainfall and snowmelt runoff. However, there have been no floods of damaging proportions since 1956.

Flood levels can be positively and negatively affected by development projects through increased and decreased runoff from a particular site. It has been noted that since 1956, flood levels within the County have changed due to channel improvements and irrigation projects.

Frequently flooded areas are mapped on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps for Franklin County. These maps should be used to determine if a potential development site is located within the floodplain when siting solid waste facilities.

2.4.10 Aquifer Recharge

Groundwater naturally occurs in the sheet like zones at the top of a basaltic lava flow and the base of an overlying flow. Natural recharge to such confined aquifers occurs where the basalt crops out and where canyons and coulees have incised into the basalt, exposing the aquifers. In the Scooteney-Eagle Lakes area and in the vicinity of Washtucna Coulee, the basalt is folded, exposing the edges of the flows and allowing groundwater and surface water from the north to enter the basalt. Normal groundwater movement is south toward the junction of the Snake and Columbia Rivers, and radially inward toward the low point of the Pasco Basin.

Since implementation of the Columbia Basin Irrigation Project, groundwater elevations have substantially risen in the western portion of the County. The majority of the recharge is related to seepage from canals and ponds and applied irrigation in excess of crop use. The water table has been elevated to within 20 feet of the surface in much of the irrigated area.

Smith Canyon and Esquatzel Coulee have become major pathways for wastewaters flowing south from irrigated areas towards the Pasco Basin. Water tables in the basin have risen dramatically, since the rate of inflow exceeds the rate of drainage in this regional low point.

There seems to be little flow of groundwater east of Smith Canyon. The wells in this area are deep and low producers. Primary sources of recharge in the eastern, dryland portion of the County are where the Snake River and smaller canyons and coulees dissect the underlying basalt.

The Franklin Conservation District identifies four primary areas of aquifer recharge: (1) the irrigated parts of the county; (2) the Scooteney-Eagle Lakes area; (3) areas behind dams or other impoundments, particularly along the Snake River, and (4) Washtucna Coulee.

Franklin County is the southernmost area supplied by the Columbia Basin Irrigation Project. Being last in line presents the County with some water pollution and siltation problems generated upstream. Many activities within the County also provide sources of pollutants such as nitrates and pesticides. In many parts of the County, it is necessary to drill wells down into the basalt to obtain domestic water that meets the 10 ppm nitrate-nitrogen standard.

2.5 Evaluation of Potential Landfill Sites

A preliminary siting review assessment was performed in 1994, with the intent of providing an initial assessment of the feasibility of siting a new landfill in Franklin County. Some of the locational standards found in that review assessment were not appropriate for evaluating an entire county at once. There are site specific criteria and they should be used when evaluating a single candidate site or a limited number of potential sites. This Solid Waste Management Plan should not be used for detailed site analysis, but rather to identify areas that can be examined in detail in other studies. Additional information relevant to future landfill citing in Franklin County can be found in Appendix B.

Areas addressed in the review assessment included:

- Geology
- Surface water
- Climatic factors
- Groundwater
- Slope
- Land use
- Soil
- Cover material
- Toxic air emissions
- Flooding
- Capacity
- All other factors determined by Benton-Franklin Health District

3.0 Waste Stream Analysis

3.1 Introduction

Identifying the composition of the County's waste stream is important because it helps to determine the needs of the solid waste system; for example, whether existing systems are working, what new facilities or services may be necessary, and if regulatory requirements are being met. This information is also useful as a comparison with past studies to determine progress toward solid waste management goals.

A waste stream is usually defined as tons of solid waste disposed and recycled in Franklin County. Most types of solid waste are disposed of in landfills; however, some wastes are recycled, incinerated, used as soil amendment, or disposed in sites designated for a specific type of special waste. The largest component of the waste stream is Municipal Solid Waste (MSW). Special wastes include wood waste, asbestos, biomedical, septic tank pumpings, tires, moderate risk wastes make up this category, which each has a different characteristic. The plan addresses these types of wastes in Chapter 5 (Moderated Risk Waste) and Chapter 9 (Special Wastes).

A waste stream characterization study was recently completed in Eastern Washington for Yakima County. This study uses specific data on residential, commercial, industrial, and agricultural waste for totaling accumulated wastes. In Franklin County there has not been a waste characterization study completed. The 1994 Plan used data collected by the Washington State Department of Ecology. The data collected by Ecology was state wide and specific to an area of the state.

3.2 Historical Solid Waste Data

In 1990, according to the 1994 Benton Franklin Solid Waste Plan, each person generated 5.2 pounds per day of solid waste. Waste generation is influenced by various demographic and economic factors, including changes in levels of employment and personal income. State wide the Department of Ecology has been reporting higher per capita generation of waste in their yearly reports (2005 and 2006).

3.3 Solid Waste Forecast

In Franklin County for the year 2005, there is accurate data reported to the Department of Ecology. Ecology reports BDI landfilled 69,026.50 tons of waste. Forty-five businesses reported that they recycled or diverted 79,522.50 tons of material. The county population was 60,500 (OFM 11/02/2007 Report).

- Total Waste Generation = Total Population x Generation Rate (lb/pp/day) / 2000lb/ton x 365 days/year

The Generation Rate in 2005 was 13.45 pounds per day per person for Franklin County. The methodology used to estimate solid waste generation rates for the next 20 years consists of using the per capita generation rate and multiplying this rate by population projections. Using this per capita generation rate (13.45 lbs/day/person), the County's estimated generation rate for next 20 years is projected in Table 3-1.

Table 3-1 utilizes population projections from Table 2-3 and reflects the total waste generation over the 20-year planning period using the 2005 Franklin County per capita generation rate.

Table 3-1 Franklin County Solid Waste Projections		
Year	Population	Projected Waste Generation (tons)[1]
2010	70,038	171,917
2015	80,348	197,224
2020	90,654	222,522
2025	100,666	247,047
2030	109,861	269,668

1. Calculated using a waste generation rate of 13.45 lbs/person/day

Waste generation is influenced by various demographic and economic factors, including changes in levels of employment and personal income, the value of recyclable materials, the price of disposal services, changes in product design and packaging, and changes in behavior affecting waste reduction and recycling activities. Some of these factors are difficult to measure over time, while others are so interrelated that using them in a statistical analysis lowers the accuracy of the forecast. For these reasons a forecast was developed based on the historical waste generation and using population to indicate the upper limit of potential increase in solid waste generation within the County. However, it is important to realize that any of these related factors may change within the forecast period. To maintain accuracy, the generation rate should be monitored and projections should be routinely updated.

3.4 Waste Stream Composition

In addition to the amount of waste being generated, it is important to evaluate the components of disposed waste in order to identify potentially recyclable materials. This information is valuable in planning effective recycling and waste minimization programs.

Several factors affect waste composition, including opportunities available for recycling or composting materials, types of business and industry, the area climate, occurrence of natural disasters, mix of urban versus rural designations, the density of single and multi-family dwellings, and technological advances. No detailed waste composition study has been performed to date for Franklin County. Waste composition studies from other jurisdictions were reviewed, and it was determined by the consultant that the waste composition study conducted for Yakima County in 2002-2003 is most representative of Franklin County's disposed waste, due to proximity to the County and similarities in geography and climate. In order to estimate Franklin County's disposed waste composition, the categorical percentages from the Yakima County study were multiplied by the total disposed tonnage for Franklin County in 2005 (148,528).

The results of the composition analysis are shown in Table 3-2. The information presented in Table 3-2 is important for identifying the types and quantities of materials that could potentially be targeted for recycling or other diversion programs.

Table 3-2 Waste Disposal Composition Summary for Franklin County (based on Yakima County's Percentages)		
Category	Yakima County Percentages	Franklin County Estimated Tons
Paper	16.60%	24,656
Plastic	12.50%	18,566
Organics	*19.20%*	*28,517*
Wood Wastes	12.80%	19,012
CDL Wastes	5.10%	7,575
Glass	3.9%	5,793
Metal	11.90%	17,675
Other Waste	15.20%	22,576
Hazardous / Special Wastes	2.8%	4,149
Total Tons	**100.00%**	**148,528**

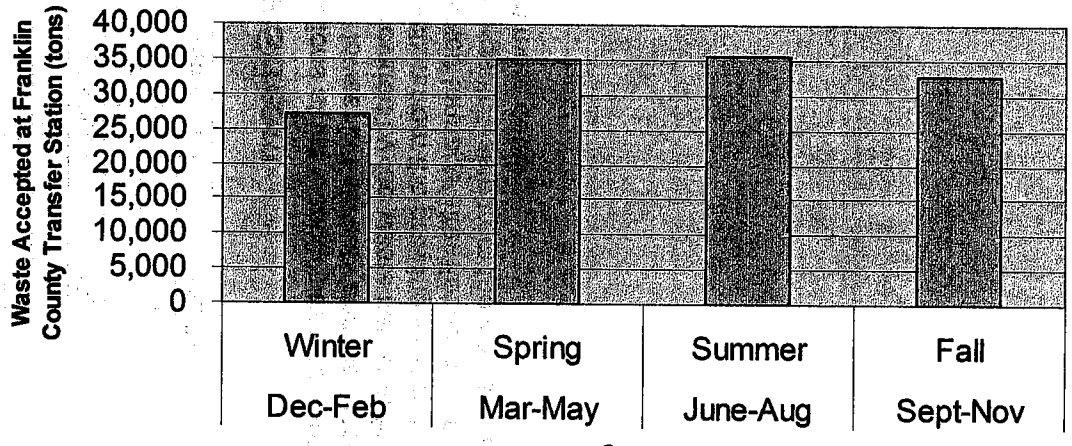
3.5 Seasonal Variations in Waste Stream

Historically municipal solid waste monthly collections at the County's transfer station in Pasco show that monthly tonnages collected are lowest in February and then increase each month until August. Table 3-3 and Exhibit 3-1 provided by the waste hauler in Franklin County shows this pattern. Organic debris collection from the growing season in Franklin County accounts for the vast majority this increased tonnage after February. This data shows that there is a strong possibility to divert organic waste from the waste stream. Chapters 4, 8 and 9 discuss available options in more detail.

Table 3-3 Tonnages Accepted at the Transfer Station in Pasco by Month[1]													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2003	8,900	7,750	9,300	10,650	11,100	10,400	11,000	10,550	10,450	10,500	8,300	8,650	117,550
2005	8,750	9,600	11,550	12,200	12,650	13,000	11,450	12,850	11,900	11,000	11,000	9,300	135,250
2007	10,000	9,100	11,650	11,750	13,700	12,100	11,900	13,150	11,500	12,000	11,450	9,300	137,600
Monthly Average	9,217	8,817	10,833	11,533	12,483	11,833	11,450	12,183	11,283	11,167	10,250	9,083	

1. The BDI transfer station accepts waste from other counties. Further details are provided in Chapter 7.

Exhibit 3-1
Seasonal Waste Variation in Franklin County
(Average of years 2003, 2005, and 2007)



4.0 Reducing, Reusing, and Recycling Wastes in Franklin County

4.1 Introduction

This chapter provides an update of Franklin County's waste diversion methods and fulfills State requirements by describing existing programs and potential options for reducing, reusing, and recycling waste being generated in the County. The Revised Code of Washington (RCW), RCW 70.95 requires that local solid waste management plans demonstrate how the following Washington State goals will be met:

- Achievement of a statewide recycling rate of 50%.
- Elimination of yard debris from landfills by 2012 in those areas where alternatives exist.
- Source separation of waste (at a minimum, separation into recyclables and non-recyclables).
- Steps towards making recycling at least as affordable and convenient to the ratepayer as mixed waste disposal.

Franklin County is also guided by the Department of Ecology's (Ecology's) Beyond Waste Plan (2004), which presents a long-term strategy for systematically eliminating wastes and the use of toxic substances. The purpose of Beyond Waste is to transform the environmental regulatory climate in Washington as toxic ingredients or wastes are eliminated at the source by either safely returning materials to the environment or efficiently recycling them by industrial processes.

Specifically, Beyond Waste's long term plan for the State of Washington includes the strategies listed below. For all these strategies Beyond Waste calls on the State government to lead by example:

- Waste Reduction
  - Promotion of sustainability in product development
  - Expansion of waste reduction information on Ecology's website
  - Increased focus on pollution prevention and planning
- Reuse
  - Make the reuse of buildings and recycling of construction materials standard business practices
  - Increase in awareness and knowledge of and access to green building resources
- Recycling
  - Proposal of solutions to statutory and regulatory barriers
  - Increase in recovery of residential, industrial, and agricultural organic waste

Ecology strongly encourages local solid waste planning to include Beyond Waste principles when possible.

Discussed in the following sections are Franklin County's public education and outreach (Section 4.2), waste reduction and reuse (Section 4.3), and recycling programs (Section 4.4) to account for these requirements, strategies, and local planning goals.

4.2 Public Education and Outreach

Public education and outreach programs support the County's waste reduction, reuse, and recycling efforts by providing information to people and businesses. Education and outreach is common to both the County's waste reduction and reuse and recycling programs, as programs messages covering all topics are often included in a single outreach effort.

The County's public education and outreach goals are to educate the public about local solid waste issues; and to encourage and expand coordination and communication regarding solid waste issues among all jurisdictions, agencies, and private firms in the County. The County plans to accomplish these goals by:

- Seeking supplemental funding sources for education and outreach efforts.
- Encouraging consistent policies across jurisdictions.
- Encouraging public involvement in the planning and implementation process.
- Emphasizing local responsibility for solving solid waste management issues.
- Reviewing the Solid Waste Management Plan every 5 years.

4.2.1 Existing Education and Outreach Programs

Public education and outreach programs supporting waste reduction and reuse, recycling, and organics management activities have been ongoing in Franklin County, which serves as an informational clearinghouse for solid waste activity in the regional area. The County has several educational programs aimed at youth, the general public, and local businesses. Information about solid waste management is provided on the County website (www.co.franklin.wa.us) under the Solid Waste section of the Public Works Department. Currently some bilingual outreach materials are available. Additional education efforts in Franklin County include the following:

- The County sets up display booths during community activities such as the Benton-Franklin County Fair, Franklin County's Renewable Energy Fair, and during Earth Month activities. The booths present information on waste reduction and recycling, household hazardous wastes, composting, how to report waste dumping violations, and more.
- Speakers are offered to local civic organizations and service clubs to share information about Franklin County's solid waste management and present information about the County's solid waste programs.
- Solid waste videos are made available to schools to educate students about waste reduction and recycling.
- Mailings and advertisements are developed by the County to alert residents about upcoming solid waste education and outreach activities, such as composting classes and household hazardous waste (HHW) collection.
- The County develops promotional materials educating residents about waste reduction and keeping hazardous materials out of their waste stream. The County also provides information to residents about used anti-freeze collection, used oil collection, and free dump coupons.
- Residential composting workshops are held twice a year through the County's Master Gardener Program. At the workshop, attendees learn composting methods and are provided with a book for further information and a composting bin. Additional workshops designed to educate the community about waste generation, litter control, and recycling are held during the County's Earth Month activities and at the Renewable Energy Fair.
- A hotline that provides information on recycling in Franklin County (1-800-967-8128) and a litter hotline to report violators (1-866-LITTER1)

A key issue in the solid waste planning process is ensuring that these existing education and outreach programs are continually monitored to gauge attendance, interest, and feedback. To address this issue, Franklin County has a solid waste coordinator who oversees the education and outreach programs and makes adjustments to programs as necessary. Other duties include distribution of materials, including a quarterly newsletter to residents within Franklin County, which contain educational material, programs, available workshops/seminars/public meetings, and available resources. In addition, the County's Solid Waste Advisory Committee (SWAC) plans to make recommendations on community programming in the future.

4.2.1.1 PUBLIC OUTREACH AND EDUCATIONAL PROGRAM RECOMMENDATIONS

The following are recommendations for public outreach and education programs:

1. Website Improvements
Information currently is offered on Franklin County's website concerning solid waste and recycling program activities. Franklin County updates its website as new information is developed. Continue efforts to improve the website by providing further information about solid waste planning in the County, including information about the SWAC. More educational information about waste reduction and recycling opportunities would also be added.

2. Bilingual Outreach Materials
Continue addressing the communication needs of the increasing bilingual population. To date, a small amount of the recycling and solid waste information materials are available in Spanish. Outreach materials, such as flyers, newsletters, and the website, would be translated into Spanish, and disseminated along with English versions.

3. Technical Assistance to Schools and Businesses
This recommendation recognizes the need to reach schools and businesses regarding their handling of solid waste. Offer free technical assistance and waste audits to identify opportunities to implement waste reduction, recycling, and composting activities. In schools, providing functional waste reduction and recycling programs yields daily reminders to students of their direct impacts on the environment. Commercial sources produce a significant portion of solid waste in Washington; therefore focusing waste reduction efforts towards the business sector can have a large impact on the waste stream as a whole. This approach is consistent with the State's Beyond Waste Plan, which was described previously in Section 4.1.

4. Phone Book Section Insert
A four- to eight-page section added near the front of the local phone book would describe rates, facilities, programs, and laws related to solid waste and recycling. This effort utilizes an existing medium to reach every household.

5. Direct Mailing Newsletter
Provide a newsletter annually or twice yearly directly to each household in the County. Content of the newsletter would include information on recycling, waste reduction and reuse, solid and hazardous waste disposal, littering, and other solid waste enforcement issues.

4.3 Waste Reduction

This section discusses existing practices for waste reduction and reuse in Franklin County and evaluates needs, opportunities, and alternatives for future waste reduction and reuse over the planning period.

Waste Reduction and reuse are recognized as long-term options managing solid waste. Waste reduction, or waste prevention, is a strategy that involves altering the design, manufacture,

purchase, use or reuse of products and materials to decrease their volume or toxicity before they enter the solid waste stream. Waste reduction lessens waste at its source, thus decreasing the costs and environmental problems associated with waste collection, processing, and disposal. These benefits make waste reduction the highest priority for management of solid waste in Franklin County and Washington State, according to RCW 70.95.

While RCW 70.95 does not mention reuse as an important step to solving waste management problems, it has become an essential strategy for local planners to consider. Reuse is considered a waste reduction strategy because it extends the life of a product and prevents or defers additional waste generation.

The following are Franklin County's waste reduction goals and objectives (consultant recommendations):

- Achieve a diversion goal of 50% by 2028 (preventing waste from entering the waste stream through waste reduction or recycling)
- Emphasize programs that target commercial waste diversion, such as waste audits for large chain stores and for agricultural processing operations that specifically focus on plastics, paper, and glass entering the waste stream
- Establish consistent methodologies to measure the baseline and future progress in achieving waste diversion, such as data reporting to the County
- Obtain accurate data on waste diversion activities through data reporting to the County
- Provide positive economic incentives for waste diversion, such as funding research and development of source reduction and education programs, funding waste exchanges, funding materials reuse programs and business

4.3.1 Existing Waste Reduction Programs in Franklin County

As a "front end" solution, waste reduction is the simplest, most direct form of waste diversion. Although Franklin County has educational programs about how individuals can incorporate waste reduction strategies into their daily lives (as discussed in Section 4.2.1), it does not have specific waste reduction programs.

4.3.2 Waste Reduction Program Recommendations

This section describes commercial and residential waste reduction program recommendations based upon successful waste reduction programs or tools that have been utilized in the Region and State. In addition to the commercial and residential sector recommendations described below, it is recommended that a sub-committee of the SWAC is created to address waste reduction in Franklin County.

4.3.2.1 COMMERCIAL SECTOR (BUSINESS AND INDUSTRY)

Waste Audits

Waste audits are the key to establishing a successful source reduction program therefore it is recommended that Franklin County provide waste audits to the commercial sector. Waste audits involve assessing the material flow through an institution and identifying the amount of materials purchased, used, recycled, and disposed of. A waste audit includes the following steps:

- Describing current purchases, use, and disposal requirements and methods
- Identifying amounts and types of materials generated, including those to target for source reduction

- Estimating cost savings
- Implementing and monitoring the program

Regionally the Cities of Richland and Kennewick have provided waste audits to commercial businesses located within their respective jurisdictions. Battelle and Flour Daniel Hanford have provided assistance to local governments in assessing their waste streams and reducing pollution as a result. Currently no regional local government is providing these services to their ratepayers.

Selective Purchasing

Selective purchasing is another recommended strategy for source reduction. The County and local governments can preferentially purchase products that are durable, reusable, and repairable; buy in bulk; and avoid purchasing single-use products. They can also consider a product's solid waste and toxicity production, recycled content, packaging, resource use, and ultimate disposal. Shifting purchasing priorities toward source reduction might entail rewriting purchasing codes and reviewing and updating material classifications based on new product developments. It is recommended that Franklin County investigate selective purchasing policies for the County and local governments. Businesses that take advantage of waste audits can also be encouraged to improve purchasing processes.

Waste Exchanges

It is recommended that the County consider a waste exchange program that is designed to help businesses find markets for their industrial byproducts, surplus materials, and wastes. The goal of such a program would be to conserve energy, resources, and landfill space by helping businesses and organizations find alternatives to the disposal of valuable materials or wastes.

The City of Seattle's Hazardous Waste Management Program has created a very successful waste exchange for businesses in the state of Idaho, Oregon, and Washington. The County could consider partnering with this program. Information about Seattle's program can be found at www.govlink.org/hazwaste/business/imex.

4.3.2.2 RESIDENTIAL (RURAL AND URBAN)

2 Good 2 Toss Program

2good2toss.com is Washington's online exchange for reusable building materials and household items. The objective of the site is to facilitate the recycling and repurposing of materials and items that would otherwise be disposed at Washington state landfills and waste to energy facilities, in addition to promoting an important environmental ethic.

People can post listings of items and materials they wish to get rid of or browse for those currently available in their area. Each listing contains a description of the materials along with a name and telephone number and any cost or delivery information. The actual exchange transactions are carried out directly between the interested parties. Regionally the City of Richland, Walla Walla, and Columbia Counties utilize this program for their homeowners. It is recommended that Franklin County investigate the feasibility of a 2 Good 2 Toss program for the entire County.

Disposal Bans

It is the State's goal that programs be established to eliminate residential or commercial yard debris in landfill by 2012 in those areas where alternatives to disposal are readily available and effective. This rule applies to waste generated in Washington going to landfills in the State of Washington. Since Franklin County sends its waste to Oregon for final disposal in a landfill, this

ban would not affect the County. However, Franklin County governments could consider phasing out the disposal of residential or commercial yard debris in the future by establishing an alternative to disposal such as a composting facility.

4.4 Recycling

After waste reduction, Washington State has established recycling as the next priority in solid waste management with source separation being the preferred method of recycling. Source separation is defined as a means of separation for different kinds of solid waste at the place where the waste originates. Washington State previously set a statewide goal of 50% recycling and waste reduction by 1995; however this goal was not reached. In 1998 the State recycling percentage was 39% and the most recent figure that was released in October 2005 is 46%. Although the original target goal has not yet been reached, marked improvement in overall recycling is encouraging and the goal remains at 50%. This section identifies a number of ways Franklin County can increase recycling to help achieve the State's goal. Franklin County has established the following recycling goals:

- Reduce Franklin County solid waste stream and achieve a 50% combined waste reduction and recycling rate by 2028.
- Continue to expand existing recycling activities within the County.
- Develop educational programs to promote recycling within the County and increase public awareness of the benefits of recycling.
- Provide new opportunities for recycling so that the greatest number of citizens can participate and the fullest practical recycling potential for each material can be realized.

4.4.1 Past Recycling Legislation

Washington State has adopted legislation aimed at increasing waste reduction and recycling statewide. In 1989, the Washington State legislature recognized in passing the Waste Not Washington Act (RCW 70.95) that "considerations of natural resource limitations, energy shortages, economics and the environment make necessary the development and implementation of solid waste recovery and/or recycling plans and programs."

The following key elements of this legislation had an important impact on local recycling programs:

- Required that counties designate urban and rural service areas. The minimum level of service to urban areas is curbside collection of recyclables (or an equivalent). The minimum service level to rural areas is drop-off or buy-back centers.
- Counties were allowed to contract for the collection of residential recyclables separately from any solid waste collection activities, or to request the Washington Utilities and Transportation Commission (WUTC) to carry out the recycling provisions of the bill.
- Rate incentives may be established to reflect solid waste priorities. This may include approval of a variable rate structure by the WUTC.
- The Washington Department of Ecology (Ecology) provided grants to local agencies to (1) develop and implement public information programs that promote waste reduction and recycling, and (2) fund facilities and equipment that process or use recyclable materials.

Other requirements of RCW 70.95 are the following programs to enhance the waste reduction and recycling:

- Programs for the collection of source separated materials.

- Programs to monitor the collection of source separated waste at nonresidential sites, where there is sufficient density.
- Programs to collect yard waste where there are adequate markets.
- Programs to educate and promote the concept of waste reduction and recycling.

4.4.2 Markets for Recyclables

The success of recycling programs in Franklin County depends on available markets for recycled materials. The following discussion summarizes regional market conditions for major designated recyclable materials.

Aluminum
Most of the aluminum collected by recycling programs is reused by the aluminum industry to remanufacture aluminum cans. Prices have remained fairly stable, and the value of aluminum is generally higher than most other recyclables.

Glass
Most recycling programs collect glass. The price for green and brown glass has been quite low and in many cases the glass is taken with no payback. The market for mixed color glass is zero. Prices paid for clear glass are relatively stable. One limiting factor is that some glass mills require preliminary processing of the glass, while others will purchase whole containers. Several glass mills are located in the Pacific Northwest region.

Paper
Paper for recycling is broken down into four categories; newsprint, high-grade (white) paper, mixed paper and corrugated containers. Some types of used paper can be manufactured into various paper and paperboard products during the final stages of production. Products manufactured with recycled paper can often be marketed the same as paper made from virgin product.

Used newspaper is usually transported to peppermills where it is processed into an end product. Most newspaper that is collected for recycling becomes new newsprint. The Pacific Northwest is home of two major newsprint mills (the closest one is near Spokane). The price for used newspaper is volatile, but has been declining recently because of the glut of newspaper collected by community recycling programs.

Office paper (largely computer, ledger, and copy paper) is a commonly recycled commodity. The fibers used to produce these papers usually have a higher market value than lower grade paper. Recycled office paper can be manufactured into a variety of paper products, including writing paper, computer paper, and household paper towels.

Mixed paper is usually a combination of a variety of grades of paper, including colored and glossy paper. Mixed paper is used to manufacturer low-grade paper products. The market for recycled mixed paper is poor; because processing costs are typically higher than the wholesale value of the end product

Large quantities of corrugated cardboard are used by commercial industries. Like newspaper, this paper product can be recycled at several Pacific Northwest paper mills. The material is most commonly manufactured into new corrugated containers. The market for corrugated cardboard is stable.

Metals
Ferrous metals are those which contain iron. The largest amount of ferrous metals recovered from the municipal waste stream is food and beverage containers. Most of these containers are made of steel covered by a thin layer of tin, to protect the product from rust. In order to be

recycled, the containers must go through a de-tinning process, which results in steel that can be reprocessed as high-grade steel. Several ferrous and tin processing centers are located in the Northwest.

Plastics

Two types of plastic are most commonly collected for recycling, polyethylene terephatalate (PET) and high-density polyethylene (HDPE). PET plastics are primarily used to produce carbonated beverage containers. HDPE plastic is more rigid and cloudy colored and is used for milk and juice containers. The largest users of recycled plastics are textile mills. The plastic is treated to remove all impurities, and then is transformed into thin, long strands used to manufacture polyester fiberfill for items such as jackets and sleeping bags. The other major use for plastic is in producing "plastic lumber" or other plastic products.

Opportunities for recycling plastic are somewhat limited. Transportation costs are relatively high because the weight-to-volume ratio of plastics is so low. Very few processing facilities are operating, and at this time the material has little, if any, economic value. In many areas plastics are being stockpiled waiting for a market that will receive plastic.

Waste Oil

The opportunity to recycle waste motor oil for reuse is fair provided the oil has not been contaminated with solvents or gasoline and there are large quantities. Often the collected oil is burned for energy recovery. Current market conditions provide free pickup and removal of waste oil at the site of collection for quantities of several hundred gallons or more. Opportunities to recycle small quantities of waste oil from households and do-it-yourselfers is quite good. Franklin County implemented a collection program to collect household waste oil. The oil is currently burned for energy recovery with the goal to recycle the oil for reuse at some time in the future when it becomes economical. This program was developed as a part of the oil recycling amendment to the Regional Local Hazardous Waste Plan. Waste oil is also discussed in Chapter 5.

Organic Debris

Yard debris consists of vegetative material from trees, plants, shrubs, leaves, and grass. The collected materials can be processed into three primary products: 1) compost, 2) hog fuel, and 3) pressed wood fuel products. Because of the distance to processing facilities, hog fuel and pressed wood fuel products are not economical options. These facilities are primarily located in the western portion of the State where there is a much more abundant supply of feed stock available.

Composting of yard debris to create compost is a possible alternative. Compost can be used locally as a soil amendment, growing media, or ground cover. In the arid portion of the State, organic matter for use in soil stabilization or land reclamation may be difficult to obtain. Yard debris compost could fill this need if a processing facility and the market were developed. Given recent difficulties by the industry to create a viable large-scale compost facility, private backyard composting is one way to fill the immediate need for waste reduction of yard debris being disposed of. However, inclusion of yard waste and organic debris from agricultural operations could create a sufficient volume to support a regional composting facility.

Asphalt

Asphalt waste is generated when roadway reconstruction removes existing asphalt surfaces. This material is often reprocessed in new asphaltic pavement or ground and placed as roadway granular sub-base material. There is always a market for asphaltic construction materials. Asphalt waste is not included in the total waste stream and no data is currently available to quantify it.

Modification to Designated Recyclables List
The list of designated recyclables was based on existing practices in Franklin County and the assumed feasibility of those practices. Future market condition and technologies may make some materials more or less desirable from a recycling standpoint. As this occurs, the list of recyclable materials will require updating.

Specific circumstances that would prompt inclusion of an additional item would include local markets expanding their list of accepted items based on new uses for materials, and technologies developing to increase demand.

One common condition that would prompt deletion of an item is, once collected; reduction in market causes the material to be stockpiled to wait out market fluctuation. This is often the situation when the market value of the material drops substantially. Stockpiling to accumulate sufficient quantity for cost effective transportation is anticipated.

4.4.3 Existing Recycling Services in Franklin County

A large portion of the wastes that are generated in the County can be recycled into feedstock for new product manufacturing. To date, Franklin County's recycling programs have focused on those materials that are cost effective to separate from the waste stream. As a result, the County's recycling programs have saved tens of thousands of dollars for ratepayers over the last 14 years. In addition, the development of recycling programs in Franklin County has created jobs which have benefited the local economy.

4.4.3.1 BASIN RECYCLING, INC.

Basin Recycling, Inc. (BRI) is a division of Columbia Basin LLC and provides the most diverse recycling operation in Franklin County. Its main facilities are in Pasco at 1721 Dietrich Road. BRI offers urban and rural residents the infrastructure to recycle. These residents are provided a drop box (30 yard container) program for these items:

- Mixed Paper: Corrugated Cardboard, Catalogues, Chip/paperboard, Computer paper, Magazine, Newspaper, Office Pack, Phonebook, White ledger
- Glass: Clear and Brown
- Metals: Aluminum and Tin
- Plastics (Only accepted at Basin Recycling in Pasco) which are 1PET-bottle and 2HDPE-natural bottle/jug

BRI also provides commercial cardboard and paper collection to businesses that request this service. For the recycling programs established in Franklin County BRI ships fully loaded containers of recyclables to a processing center at no charge.

Curbside recycling has not historically been economically feasible in Franklin County and therefore is not provided in Franklin County.

BRI also operates a buy back center at their recycling facility on Dietrich Road in Pasco. A buy-back center is a facility that buys recyclable material from the public. There are many types of buy-back centers, ranging from those that purchase only aluminum to those that purchase a full range of recyclable materials. Operators of traditional buy-back centers usually pay a percentage of the market price for the recyclable materials, which they then process, transport, and sell to manufacturers or other end users. The materials that are accepted for a cash consideration at BDI's buy-back center are: metals (aluminum and tin) and paper (cardboard).

As commodity markets change, the prices paid to those bringing material changes. These materials are collected and transported to markets within the State of Washington.

Table 4-1 summarizes information about operations of recyclers in Franklin County that accept materials from the public. The information contained in the table is subject to change. The public should call the specific recycler ahead for current information prior to going to the recycler. A complete list of Commercial and Residential recycling services for Franklin County are listed in Appendix C and can be found at http://1800recycle.wa.gov.

4.4.3.2 SUPPORT FOR PRIVATE RECYCLING EFFORTS

Support for private recycling is enhanced by the Franklin County solid waste coordinator, discussed in Section 4.2.1. The coordinator has been the focal person for public education by coordinating activities such as conducting public meetings, school programs, surveys, and public service announcements.

At present, only Franklin County provides recycling program support. The bulk of the funding used for recycling expenses (75%) is being provided by Ecology through the Coordinated Prevention Grants (CPG) program. Without additional help from other governmental entities in the County, it is doubtful that the present recycling effort will be sustainable.

Table 4-1 Recycling Operations in Franklin County							
Recycler	Facilities/ Location	Hours of Operation	Paper, Glass, Metal[1]	Plas-tics[2]	Waste Oil	HHW[3]	Elect-ronics[4]
Basin Recycling, Inc (Pasco)	Drop Box	9:00 to 5:00 (Mon. – Sat.)	X	X	X	X	X
City of Kahlotus (City Hall)	Drop Box	24 Hours	X		X		
City of Connell (Fire Station)	Drop Box	24 Hours	X		X		
City of Connell (Connell Park Estates)	Drop Off	24 Hours			X		
City of Mesa (Mesa Grocery)	Drop Box	24 Hours	X				
City of Mesa (Mesa Post Office)	Drop Off	24 Hours			X		
City of Pasco Sites:							
Pasco Senior Center	Drop Box	24 Hours	X				
Georges Ranch House	Drop Box	24 Hours	X				
Grigg's Dept. Store	Drop Box	24 Hours	X				
Memorial Pool	Drop Box	24 Hours	X				
Riverview Plaza	Drop Box	24 Hours	X				
Road 48 Soccer Field	Drop Box	24 Hours	X				
Columbia Valley Grange	Drop Box	24 Hours	X		X		
McLaughlin Middle School	Drop Box	24 Hours	X				
Food Pavilion	Drop Box	24 Hours	X				
Maya Angelo Elementary School	Drop Box	24 Hours	X				
Ochoa Middle School	Drop Box	24 Hours	X				
Schuck's Auto Supply	Drop Off	8:00 to 5:00 (Sun. – Sat.)			X		
Unincorporated Franklin County Sites							
Basin City (Corner of R 170 & Glade North Road)	Drop Box	24 Hours	X				
Basin City (Paul's Mini Mart)	Drop Off	24 Hours			X		
Merrill's Corner (Gray's Farm Repair)	Drop Off	24 Hours			X		
Eltopia (Merrill's Corner Store on N. Glade Rd.)	Drop Box	24 Hours					

1. Mixed Paper includes corrugated cardboard, catalogues, chip/paperboard, computer paper, magazines, newspaper, office pack, phone books, and white ledger paper.
Glass: Brown glass and clear glass.
Metals: Aluminum and tin cans.
2. Plastics include 1 PET bottles and 2 HDPE-natural bottle/jug
3. HHW: Household Hazardous Wastes
4. Electronics include computer monitors, computers, TVs, and other electronic equipment.

There are additional businesses that accept material for recycling in Franklin County. The majority of this material is asphalt/concrete, cardboard, topsoil, and wood. In Table 4-2 the material collected for recycling and diversion is reported from 45 businesses within and outside of Franklin County.

Table 4-2 Recycling and Diversion in Franklin County 2005 Material Collected for Recycling and Diversion in Franklin County as reported to the Washington State Department of Ecology by 45 Collectors (Material Sources = Commercial and Residential)			
Reported Materials Collected for Recycling in Franklin County		Reported Material Diverted From disposal in Franklin County	
	Tons		Tons
Fluorescent light bulbs	2.34	Antifreeze	55.18
Used Oil	3,068.60	Household batteries	0.24
Vehicle batteries	351.01	Oil filters	26.95
Aluminum cans	127.18	Donated food	2.00
Container glass	77.59	Re-used household items	12.84
Corrugated paper	5,801.05	Tires-retread	0.50
Ferrous metals	1,899.91	Food processing waste	3,079.00
HDPE plastics	10.00	Asphalt/concrete	47,263.50
High grade paper	147.84	Carpet or pad	2.79
LDPE plastics	26.83	Topsoil	3,526.5
Mixed paper	57.87	Rendering	183.00
Newspaper	1,195.55		
Nonferrous metals	580.71		
Pet bottles	20.00		
Tin cans	15.00		
Textiles	812.80		
Photographic films	10.85		
Tires	71.50		
White goods	64.80		
Wood	10,635.00		
Food waste	372.59		
TOTALS	25,349.0		54,152.50

In 2005, the Department of Ecology reports the following information generated in Franklin County. The source of the information is from two reports (Ecology 2005 Disposal Report and 2005 Franklin County Recycling Survey). From these tables the following diversion, recycling, disposal and generation rates can be calculated using the 2005 Office of Financial Management population number of 60,500 for Franklin County.

Table 4-3 2005 Franklin County Solid Waste	
	Tons Reported
MSW (Landfilled)	68,037.4
C & D (Reported at Transfer Station Landfilled)	989.1
Recycled	25,349.0
Diverted	54,152.5
Total Tons Generated	148,528.0

- Diversion is 54 %

$$\frac{\text{Tons diverted and recycled}}{\text{Tons generated (All)}} = \frac{79{,}502}{148{,}528}$$

- Recycling is 27 %

Tons recycled	25,139
Tons generated (MSW + C&D + Recycled)	94,186

- 2005 (OFM) Population 60,500

Disposal Rate	=	6.25 lb/day/person
Recycled Rate	=	2.30 lb/day/person
Diverted Rate	=	4.90 lb/day/person
Generation Rate	=	13.45 lb/day/person

These numbers are for the year 2005. They are the most current and accurately reported from Ecology and the OFM.

4.4.3.3 COMPOSTING SERVICES

As discussed in Section 4.2.1, for over ten years Franklin County has offered its residents a composting workshop twice a year called the Master Gardener Program. The program educates attendees about composting and provides them with a composting bin.

4.4.4 Recycling Program Recommendations

To increase recycling, Franklin County must address and decide on the types of materials targeted for recycling, specific collection programs needed for recyclables, levels of public service and assistance that may be necessary, methods for increasing participation, and policies or ordinances needed to support and direct the desired recycling activity.

4.4.4.1 RESIDENTIAL RECYCLING

In 1990, Ecology estimated that 64% of the total waste stream in Washington State originates from residential sources. Based on this, in 2005, Franklin County generated approximately 60,400 tons of solid waste from residential sources. 27% of this waste was recycled and remaining 83% was placed in landfills. This sector represents the greatest opportunity for recycling. Programs to collect residential recyclables will greatly increase the quantity of material removed from the waste stream. Three primary collection methods are curbside recycling, drop-boxes, and buy-back centers.

The residential sources are located in urban and rural areas that have different service level needs. When evaluating systems, population density, type of dwellings, and distance to markets are key considerations. Rural areas are typically best served by a system of drop-boxes or buy-back centers. Urban areas are candidates for curbside collection when feasible for single-family urban residences, and small multi-family units. Larger apartment buildings or multi-family units are best served by recycling bins. Materials that have the greatest potential for increased residential recycling are clear glass, tin cans, aluminum, newsprint, plastics, and yard debris.

The Washington State Solid Waste Management Plan assumes that an urban area is any city with 25,000 or more inhabitants or any county with a population density of greater than 101 persons per square mile. Franklin County's population density is approximately 8.62 persons per square mile while Pasco, the largest city in the County, had approximately 50,000

inhabitants as of 2006. Using this data, Franklin County determined that Pasco should be designated as urban area and the rest of the County should be considered rural for the purpose of solid waste planning.

Curbside Recycling

Curbside recycling collects recyclables directly from each residence. In the past, the scales of economics, distance to market place, and unstable commodity markets have affected the ability of a successful curbside program developing in Pasco, which based on population, is the only candidate for curbside collection in Franklin County.

There are two general types of residential curbside collection: co-mingled and source-separated. Co-mingled collection allows the resident to place all recyclable items in one container, while source-separated collection requires residents to separate material by type, and place each type in a separate container. Curbside collection of recyclables can be accomplished during the normal solid waste pickup by attaching special containers for recyclables to the standard collection truck. This approach provides the most cost effective curbside collection for Pasco.

To develop a successful curbside recycling program in the future, it is recommended that the County:

- Weigh the benefits and drawbacks of pursuing curbside recycling versus expanding drop-box centers in Pasco.
- Create a sub-committee of the SWAC that addresses recycling in the County, and more specifically the feasibility of curbside recycling in Franklin County.
- Conduct a community survey for Pasco to gauge interest in a curbside recycling program. Prior to taking the survey residents should be made aware of what the cost of a curbside recycling program would be.
- Expand recycling education programs to increase interest in a curbside recycling program.
- If there is community interest, create a pilot curbside recycling program in Pasco, and fully implement the program when it is cost effective to do so.

Drop-Box Centers

The other option to curbside collection is a program of drop-box centers. Drop-box centers are depositories for recyclable materials. Residents deposit pre-sorted recyclables in containers identified for individual commodities, such as newspaper, glass, and aluminum.

As previously discussed in Section 4.4.3, drop-box centers are currently used throughout Pasco and in Kahlotus, Mesa, and Connell (see Table 4-1). For the smaller communities of Franklin County, the drop-box is the most viable concept for collecting recyclables. Because of the small population, it may require a long period of time to fill containers with a quantity large enough to support the long transportation cost to market. These centers can be un-staffed and are inexpensive to set-up. It is recommended that the County maintain its current drop-box centers and open new centers as necessary, especially in the City of Pasco which is the City's largest population center.

The County should also consider the expansion of their drop-boxes to more locations in towns and unincorporated areas of Franklin County. Presently, there are seven inactive facilities in Franklin County, which were originally constructed and operated as solid waste drop-box stations. An option is to convert these facilities into drop-box centers for recyclables. The locations most suited for conversion would be those located in remote areas of the County, for municipalities with established recycling programs already in place that are capable of handling surrounding area recycling needs (i.e. Mesa, Kahlotus, and Connell).

The cost to open and operate some rural drop-off facilities outside of those already established in Mesa, Kahlotus, and Connell, will probably greatly exceed the value of the recyclables collected since only a very small population will be served by each. A more cost effective approach for unincorporated area residents may be to establish public education programs targeting these residents to utilize drop-off facilities located at each of their respective nearby towns that have drop-off facilities. Rural residents routinely make trips into nearby towns for retail trade, social, and public education purposes. Transport of recyclables to an in-town drop-box facility could be of equal or perhaps greater convenience than traveling to a rural site with more limited operating hours.

Lastly, illegal dumping problems occur any time drop-box centers are operated unattended.

Buy-Back Center

As discussed in Section 4.4.4.1, BRI operates a buy-back center in Pasco. A buy-back center is a facility that buys recyclable material from the public. It is recommended that Franklin County continue to support the operation of this buy-back center.

4.4.4.2 COMMERCIAL/INDUSTRIAL SECTOR RECYCLING

The commercial/industrial recycling potential represents a major opportunity to increase recycling levels. In 2005, according to BDI data, approximately 55% of the total waste stream disposed in Franklin County originated from these sources. A significant percentage of this waste is recyclable. To increase the amount of commercial and industrial recycling, waste generators must be made aware of the importance of waste recycling. Public education and waste audit programs could comprise this training.

Materials that have the greatest potential for increased recycling in the commercial and industrial waste stream are ferrous metals, corrugated paper, mixed paper, plastics, and organic wastes.

The recommendations for commercial/industrial source generators to develop recycling programs are similar to the residential alternatives. If curbside recycling is implemented, businesses should be required to participate. Industry and large generators of recyclables generally have programs in place to recycle materials. This is often done through a private recycler who handles the commodity and pays the generator. These practices should be encouraged and promoted by local government. These same generators should focus on the full spectrum of all other recyclables in their business and include programs to collect any small quantity materials not already being recovered.

A number of commercial/industrial businesses haul their own waste to disposal facilities. These businesses could perform source separation of recyclables. Recyclables could be delivered to a private recycler or to a drop box facility for recyclables located either at the self-haul rural locations or at the transfer station.

Small businesses typically have a large percentage of their waste stream as recyclable material, but the quantity is too small to attract a private recycler. Implement programs to encourage source separation of recyclables coupled with long term storage to increase the quantity for pickup. Large quantities will enable private recyclers to provide pickup services. Another concept could involve pooling recyclables of nearby small businesses together to enhance the quantity. Materials typically produced by small businesses include mixed paper, corrugated cardboard, and plastics.

Mixed Waste Recycling

Mixed waste processing is a process to recover recyclables from mixed dry municipal waste. This process typically requires a large volume of waste to justify a substantial capital investment

in sorting facilities. The quality of the recovered materials is generally not as high as in the source separation method.

Recovery of recyclables from mixed waste is performed at an intermediate processing facility. Processing facilities can range from simple systems consisting of a few conveyor belts with hand picking stations, to complex and capital intensive systems that use state-of-the art machinery which automatically separates and sorts several grades of recyclables. Typically paper, metals, and plastics are recovered. The facilities can be located within the collection area, at transfer points or at landfills.

Another concept for mixed waste recovery of recyclables is separate collection routing. A separate collection program involves identifying businesses that generate similar recyclables and then establishing routes that would collect only similar materials. For example, banks, insurance companies, and legal services, throw away a large volume of mixed paper, whereas restaurants and hotels dispose of large volumes of glass and cardboard. Collecting only from specific businesses with similar waste streams can generate recyclable rich loads. Separate collection involves identifying businesses in an area with similar waste streams, arranging for pickup, and perhaps establishing a collection route. Local jurisdictions could participate in this effort or encourage local recyclers to provide the service. When separate collection routes are established the collected material is relatively uniform. This uniformity improves the quality of the recyclables and reduces the amount of separation that may be required at the intermediate processing facility.

4.4.4.3 FOOD WASTE COMPOSTING

Estimates (Ecology & Yakima) that approximately 5 – 8 % of the total waste stream is food waste. Food waste is very biodegradable waste when separated from the overall waste stream and composted independently, and is a high quality product without the potential contamination problems associated with the composting of municipal solid waste.

Implementing food waste composting would require the source separation of food waste by residential and commercial/industrial generators. If a curbside collection program was implemented in Pasco, food waste would be collected from residences as part of a residential curbside collection program. Private haulers would make arrangements to collect food waste from commercial/industrial generators. The material would then be transported to a facility dedicated to composting food waste. There is potential for significant quantities of food waste or similar organic matter being generated by the Food Processing industry. A major portion of this material is already being collected and recycled as cattle feed or as soil amendments. There is a potential for a portion of this waste to reach the municipal solid waste system and impact disposal requirements. A waste audit of food processing industries would further quantify any sources of food wastes entering the solid waste stream.

Because separate collection and central processing of food waste is a capital-intensive approach it is believed that the most viable plan to compost and utilize food waste is for an on-site program.

4.4.4.4 YARD WASTE COMPOSTING RECOMMENDATIONS

As discussed in Section 4.4.4.3, Franklin County has offered its residents a composting workshop twice a year called the Master Gardener Program and the City of Mesa offers a small yard waste composing facility for its residents... It is recommended that these programs are continued, using the Mesa program as an example for small cities in the County, and that the County expands yard waste composting programs beyond these workshops. In Chapter 3.5 of

the Plan, there is a graphical and tonnage numbers to suggest that yard waste has a significant effect on the waste stream.

As with other recycling efforts, implementing educational programs, providing incentives, and developing markets for the end product are the primary methods for boosting yard waste composting. Technology involved includes backyard composting for reuse on the site of generation as a means of waste reduction and curbside or drop-box collection with processing at a central composting facility for other markets.

The most effective way to establish a regional composting facility is to through a public-private partnership between Franklin County, local cities and the Franchised Hauler. A facility could be constructed and operated through a combination of grants and private investment. Sufficient volume to support the operation could be developed through establishing convenient curbside and/or drop-box collection and special programs for commercial and agricultural waste collection.

Rate incentives could encourage residents and businesses to bring their yard waste to a processing facility. Franklin County could partner with neighboring cities and counties to propose a more economically feasible regional composting facility. The composting facility operators could charge less than a transfer station or landfill for disposal. Another form of compensation would be to give individuals who separate their yard waste a credit slip that entitles them to free compost. Because of the high capital costs involved to separately collect and then process yard waste in a central facility, it is believed that backyard composting and on-site utilization is the most viable alternative.

Collection of yard wastes for processing at a central composting facility could be established through a drop-off system or implementing separate curbside collection if feasible. A drop-off system would require generators to take bagged or loose waste directly to composting facilities, existing solid waste facilities such as the landfill or transfer stations, or other sites set up expressly to collect yard debris. A separate curbside system would provide collection services to pickup yard debris directly from the waste generator. Equipment for collection might involve dump trucks, compactors or vacuum trucks to efficiently load loose debris. Collection frequency might vary from weekly in the summer to monthly during winter periods. Drop-off systems are less convenient than curbside collection alternatives. With a good public education program, however, households will use drop-off sites for their yard debris if curbside collection is not feasible.

The easiest yard waste composting programs to implement are backyard operations that require essentially no capital outlay, when done properly. It does require a high degree of training of the public for awareness. Other drawbacks include potential odor generation on site and space requirements on each home site to conduct the processing. Composting would require a significant amount of public education.

4.5 Summary of Recommendations

Public Education and Outreach Recommendations

- Expand development of bilingual outreach materials
- Mail a newsletter directly to residents with information about solid was planning and educational information
- Develop a phone book section insert that explains rates, facilities, programs, and laws related to solid waste and recycling

- Continue to improve the Franklin County website with information about solid waste and recycling programs
- Provide technical assistance to schools and businesses

Waste Reduction Recommendations

- Create a sub-committee of the SWAC to address waste reduction in Franklin County
- Target the commercial sector for waste audits
- Investigate selective purchasing policies for the County and local governments
- Partner with a commercial waste exchange program such as City of Seattle's program
- Investigate the feasibility of a 2 Good 2 Toss program for Franklin County
- Consider phasing out the disposal of residential or commercial yard debris in the future by establishing an alternative to disposal such as a composting facility

Recycling Recommendations

- Curbside Recycling
  - Compare a curbside recycling program versus expanding drop-box centers in Pasco.
  - Create a sub-committee of the SWAC that addresses curbside recycling in the County, with the preference of utilizing the regulated solid waste system to establish such a program if determined to be feasible.
  - Conduct a community survey for Pasco to gauge interest in curbside recycling
  - Expand recycling education programs to increase interest in a curbside recycling program.
  - Investigate creating a pilot curbside recycling program in Urban Growth Boundary.
- Drop-Box Centers
  - Maintain its current drop-box centers and open new centers as necessary.
  - Consider the expansion of their drop-boxes to more locations in towns and unincorporated areas of Franklin County or establish public education programs targeting these residents to utilize drop-off facilities located at each of their respective nearby towns that have drop-off facilities
  - Investigate the beautification of drop-box centers, including making each site more permanent in nature through asphalt, curbing, and fencing.
- Buy Back Centers – Continue supporting the BDI buy-back center in Pasco
- Commercial/Industrial Sector Recycling
  - Encourage commercial and industrial operations to compost organic wastes
  - Businesses that haul their own waste to disposal facilities could perform source separation of recyclables and then deliver to a private recycler or to a drop-box facility
  - Implement programs to encourage source separation of recyclables at small businesses coupled with long term storage to increase the quantity for pickup. Consider pooling recyclables of nearby small businesses together to increase the quantity
  - Consider separate collection routing (identifying businesses that generate similar recyclables and then establishing routes that would collect only similar materials)
- Food Waste Composting – Encourage on-site food waste composting by the food processing industry.

- Yard Waste Composting
  - Continue the Master Gardener Program and use the Mesa composting program as an example for small cities in the County
  - Conduct a feasibility study to evaluate the potential of developing a regional composting facility through a public-private partnership and utilizing the benefits of the regulated solid waste system within the State, and to develop such a facility if determined to be feasible
  - Consider rate incentives to encourage residents and businesses to bring their yard waste to a central processing facility
  - Consider partnering with neighboring cities and counties to propose a more economically feasible regional composting facility
  - Implement backyard yard composting programs operations that require little capital outlay

Solid Waste Diversion in Franklin County

- Maintain the existing 50+ percent rate of diverting material from entering the landfill by supporting the sustainability of the private sectors businesses ability to provide excellent diversion programs.

5.0 Moderate Risk Waste

5.1 Introduction

The term "moderate risk waste" (MRW) refers to household waste with hazardous characteristics, and hazardous waste from businesses which do not generate more than 220 pounds of dangerous waste in any one-month or batch, or 2.2 pounds of extremely hazardous waste in any one month or batch, or accumulate more than 2,200 pounds at any one time. MRW can be hazardous to human health, wildlife, or the environment, but it is conditionally (or categorically) exempt from the State's Dangerous Waste Regulations, Chapter 173-303 WAC. MRW includes hazardous (toxic, corrosive, flammable, and reactive) wastes generated by households (HHW) and by businesses which generate only limited quantities of hazardous waste (referred to as small quantity generators or SQGs). Common examples of MRW include paint, pesticides, solvents, antifreeze, cleaners, drain opener, and hobby chemicals. Moderate risk waste has been specifically defined by RCW 70.105.010 (17) to mean:

- Any waste that exhibits any of the properties of hazardous waste but is exempt from regulation under RCE 70.105, solely because the waste is generated in quantities below the threshold for regulation.
- Any household wastes that are generated from the disposal of substances identified by the department as hazardous household substances.

RCW 70.105.220 requires all local governments to implement moderate risk waste plans. This Chapter updates the County's previous plan, which was developed jointly in 1992 with Benton County, and its subsequent updates. The 1999 guidance manual from the Washington State Department of Ecology requires that MRW plans have the following elements:

- Household and public education
- HHW collection
- Business technical assistance
- Business collection assistance
- Enforcement

5.2 Relevant Plans and Regulations

This section summarizes the Federal and State plans and regulations that govern or affect management of HHW and SQG hazardous waste and notes, purely for information, Federal and State regulation of certain generators, transporters, treatment and storage facilities, and sites related to hazardous wastes. These generators, transporters, treatment and storage facilities, and sites do not fall under the authority of this plan.

5.2.1 Beyond Waste Plan

As discussed in Chapter 4, Franklin County is guided by Ecology's Beyond Waste Plan (2004), which presents a long-term strategy for systematically eliminating wastes and the use of toxic substances. The vision statement from "Beyond Waste" says "We can transition to a society where waste is viewed as inefficient, and where most wastes and toxic substances have been eliminated. This will contribute to economic, social and environmental vitality." This involves reducing small volume hazardous materials and wastes.

The major goal of the Beyond Waste initiative is to accelerate progress toward eliminating the risks associated with products containing hazardous substances. Specifically these products and substances are used in households and in relatively small quantities by businesses. Reducing risks from these wastes and products involves more than ensuring safe handling and disposal. It also means increasing MRW recycling and reducing the use of hazardous substances in products. Reducing toxicity and waste associated with products and services, and managing products at the end of their life, are solutions that need contributions from industry, manufacturers, retailers, and consumers. Three reasons to support this goal are:

1. MRW affects everyone
2. The current management system may not affordable for the future
3. Many opportunities exist today that will quickly allow reductions in wastes generated and elimination of the risks associated with these products and materials.

There are ten specific actions outlined in the 30 year goals for Small-Volume Hazardous Materials users (MRW and SQG). These are:

1. Prioritize substances to pursue
2. Reduce threats from mercury
3. Reduce threats from Polybrominated Diphenyl Ethers (PBDEs)
4. Develop an electronics product stewardship infrastructure
5. Ensure proper use of pesticides, including effective alternatives
6. Reduce and manage all architectural paint wastes
7. Lead by example in state government
8. Ensure MRW and hazardous substances are managed according to hazards, toxicity, and risk
9. Fully implement local hazardous waste plans
10. Ensure facilities handling MRW are in compliance with environmental laws and regulations

5.2.2 Federal Regulations

- **Resource Conservation and Recovery Act (RCRA),** passed in 1976, is the primary federal legislation addressing solid and hazardous waste management. RCRA provides a comprehensive framework for managing solid and hazardous waste with the intent of eliminating or minimizing public health threats and contamination caused by these wastes.
- **Universal Waste Rule,** adopted by the Environmental Protection Agency (EPA) in 1995, streamlines regulation of certain hazardous wastes, including specific battery types, pesticides, and mercury-bearing thermostats.
- **Clean Air Act** regulates air pollutant emissions, establishing standards of performance for new municipal solid waste landfills and emission guidelines for existing landfills.
- **Mercury-Containing and Rechargeable Battery Management Legislation,** passed in May 1996, regulates the labeling of batteries; use of rechargeable batteries and used nickel-cadmium batteries, and prohibits the sale of mercury batteries.

- **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA),** also known as Superfund, provides for the cleanup of sites contaminated by hazardous waste.
- **Superfund Amendments and Reauthorization Act (SARA)** was passed in 1986. SARA Title III, the Emergency Planning and Community Right-to-Know Act, established requirements related to emergency planning notification, emergency release notification, and reporting of chemical releases by industry for community right-to-know information.
- **Clean Water Act** regulates discharges to waters through: (a) the National Pollutant Discharge Elimination System (NPDES), a permit program and (b) pretreatment standards that regulate discharge to publicly owned waste water treatment facilities.
- **Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)** regulates the manufacture, use, application, and disposal of pesticides.
- **Hazardous Materials Transportation Act and the Hazardous Materials Uniform Safety Act** regulates the transportation of hazardous materials, including wastes.
- **Transportation Uniform Safety Act** regulates the transportation of hazardous materials, including wastes.
- **Safe Drinking Water Act** sets maximum contaminant levels for drinking water supplies, including surface and groundwater sources.
- **Toxic Substances Control Act (TSCA)** regulates the manufacture, distribution, use, processing and disposal of chemical substances and mixtures posing unreasonable risks of injury to human health or the environment.

5.2.3 State Regulations

Solid and hazardous wastes are regulated in Washington State through a variety of statutes and regulations, found in RCW and WAC.

- **Solid Waste Management Reduction and Recycling Chapter 70.95 RCW** regulates solid waste handling and disposal. This law requires the development of a statewide solid waste management plan and local solid waste management plans. It also requires the establishment of minimum functional standards for solid waste handling and disposal and criteria for citing solid waste facilities. This statute establishes a waste management hierarchy similar to the Hazardous Waste Management Act (below). Waste prevention and recycling are its highest priority management options and land disposal its last option.
- **Hazardous Waste Management Act (HWMA)** regulates the transportation, treatment, storage, and disposal of hazardous waste. This statute establishes a waste management hierarchy, with waste prevention and recycling as the highest priority management options and land disposal as the last option. The HWMA also defines MRW and requires local hazardous waste (MRW) plans and their implementation.
- **Dangerous Waste Regulations, WAC 173-303**, address the designation of dangerous wastes and requirements for generators, transporters, and facilities handling or managing these wastes.
- **Model Toxics Control Act (MTCA), RCW 70.105D**, provides for the identification and cleanup of hazardous waste sites in Washington State. The act assigns liability to certain parties for damages to the environment and human health, provides enforcement

authority for the Department of Ecology (Ecology), and establishes penalties for failure to comply with Ecology's orders.

- **Used Oil Recycling Act, RCW 70.95,** requires local hazardous waste management plans to include a used oil recycling element. This element must address methods to achieve the 80% household or "Do-It-Yourselfer" used oil recycling goal established in the Act.
- **Transportation Regulations.** Washington State Department of Transportation (WDOT), which adopted Federal DOT regulations, requires hazardous waste transporters to take a hazardous materials shipping and transportation safety course.
- **Health and Safety Regulations.** The Washington Industrial Safety and Health Act (WISHA), adopted from the Federal Occupational Safety and Health Act (OSHA), governs exposures to hazardous chemicals. WISHA requires employers to provide hazardous substance training and information under "worker right-to-know" laws to their employees. WISHA also requires workers who handle or come into contact with hazardous material/waste to receive special training regarding the use, management, and disposal of hazardous material/waste.
- **Washington Pesticide Control Act**, authorizes the Washington State Department of Agriculture (WSDA) to regulate the distribution, storage, and disposal of pesticides.

5.3 Other Counties'/Regional MRW Programs

HHW is handled by a variety of means in other counties in the State. A summary of MRW programs in Eastern Washington and along the Columbia River is provided in Table 5-1. In most counties there is no cost for MRW collection, however Chelan County asks for a per vehicle donation at collection events to partially off–set the program's expense. Depending upon the level of service provided by each county, collection is centered in fixed facilities, mobile facilities, or at collection events. Some counties provide all three methods of collection. All counties have developed various informational and educational materials to provide their residents. Most information provided discusses waste reduction by using less hazardous materials in the household. An example is Benton County's brochure, "Safer Alternatives," which is provided in Appendix D.

The counties provide SQGs information on collection services and assistance in proper disposal, however collection services are limited. The service levels vary from no collection to requiring that generators pay disposal costs. Only Yakima County offers free disposal service. Ecology's Coordinated Prevention Grant (CPG) funding for the match element of a county's grant does not allow for disposal costs to be paid. However, a county SWAC upon agreement can pay for SQG disposal costs.

Table 5-1 MRW Programs Reviewed					
County	**Household and Public Education**	**HHW Collection**	**Business Technical Assistance**	**Business Collection Assistance**	**Enforcement**
Spokane (Waste to Energy Facility)	Web Site Brochures Media Exposure	3 – Fixed Facilities 7 days week 7:am – 4:30 pm Cost = $0	Assistance Visit Call	Monthly one day Pay disposal cost	County Health Dept. and Spokane County DPW
Grant	Web Site Brochures Bi-annual news letter	Fixed Facility 3 – Collection events Cost = $0	Call – Grant County Public Works	Informational assistance for collection	County Health Dept. and Grant County DPW
Yakima	Web Site Brochures	3 Facilities Used Oil (23 sites) Cost = $0	Call for technical assistance and information	Same as HHW Used Oil (23 sites) Cost = $0	County Health Dept. and Yakima County DPW
Benton	Web Site Brochures	Fixed Facility 4 Collection Events Cost = $0	Assistance Visit Call	Pay disposal cost	County Health Dept. and Benton County DPW
Clark	Web Site Brochures	Fixed Facilities Collection Events Used Oil limit Cost = $0 Home Collection for Seniors	Assistance Visit Call	Informational assistance only, no collection services noted	County Health Dept. and Clark County DPW
Walla Walla	Web Site Brochures	Fixed Facility Mon.-Sat. 8am-5pm County wide Collection Events Including seniors & disabled Cost = $0	Call WW Public Works Dept.	Informational assistance for collection	County Health Dept. and Walla Walla County DPW

Table 5-1 MRW Programs Reviewed					
County	**Household and Public Education**	**HHW Collection**	**Business Technical Assistance**	**Business Collection Assistance**	**Enforcement**
Klickitat	Web Site Brochures	3 Fixed Facilities Cost = $0	Call	Informational assistance for collection	County Health Dept. and Klickitat County DPW
Chelan	Web Site Brochures	Collection Events Cost = $0 (Ask for a donation of $3 vehicle to defray some costs)	Call	Call to apply and register for a fall event (yearly) and pay for disposal costs	County Health Dept. and Chelan County DPW
Douglas	Web Site Brochures	Collection Events	Call	Yearly event Call to qualify and pay for disposal costs	County Health Dept. and Douglas County DPW

5.4 Past MRW Management in Franklin County

In 1990, the Benton-Franklin Regional Council contracted with the consulting firm Parametrix, Inc. to provide a comprehensive MRW Plan for Benton and Franklin Counties combined. The report was finished and accepted by the local jurisdictions of both Counties in 1992. Later that year, however, the two Counties could not agree on citing and funding a permanent MRW facility. Subsequently, the following year in Benton County, the governmental entities of Richland, Kennewick, and Benton County signed their own Interlocal Agreement for Household Hazardous Waste Program. Franklin County continued using the MRW plan until 1995 when the County and BDI put forth a concerted effort to provide a new MRW program. This resulted in a revision of the MRW Plan, for which a State Environmental Policy Act (SEPA) review was completed in March of 1996. The County and the Cities of Pasco, Mesa, Kalhotus, and Connell did not formally adopt the updated 1995 MRW plan, therefore the previous plan from 1992 stayed in effect.

In 1996, a permanent MRW facility was built on Dietrich Road in Pasco, which was funded by a charge on Pasco residents' garbage bill. This facility has the required financial plan for closure and an agreement for funding the facility, which states that BDI pays for the yearly operation and maintenance and Franklin County pays for the disposal costs of the material collected. Educational efforts, which previously consisted of brochures, were expanded to make the community aware of this facility. The County Health Department was responsible for the enforcement and oversight of the facility and the entire MRW program, as it is today.

5.5 Current MRW Program in Franklin County

5.5.1 Household and Public Education

HHW education is an important method used to promote waste reduction and recycling, a major waste management priority in the original MRW Plan. There is ongoing improvement of public awareness and appropriate methods to reduce, recycle, and dispose of HHW.

Waste reduction involves reducing, avoiding, or eliminating the generation of wastes or toxicity of wastes. Waste reduction has been emphasized since it can reduce the costs associated with managing wastes, and the threats to public health and environment posed by hazardous wastes.

Another goal has been the proper management of targeted wastes: automobile waste oil, antifreeze, and paints. In particular, the County has emphasized opportunities for recycling these wastes.

The current education program consists of the following:

- Educational brochures (handouts in English and Spanish)
- Website (http://www.co.franklin.wa.us) containing HHW information
- Providing information at special events like PUD Energy Fair and Benton-Franklin County Fair

5.5.2 HHW Collection Program

5.5.2.1 Fixed Collection Facility

As explained in Section 5.4, Franklin County has a fixed collection facility where residents may drop off HHW. The facility is located at 1721 Dietrich Road in Pasco. It is open Monday through Friday from 10 am to 3 pm or by appointment by calling (509) 547-2088.

The following items are accepted at the facility:

- Paint (oil and latex)
- Wood preservatives and stains
- Adhesives and glues
- Cleaning agents
- Transmission and brake fluid
- Pesticides
- Polishes
- Motor Oil
- Gasoline
- Propane cylinders
- Aerosols
- Batteries
- Pool chemicals

Note: Explosives, asbestos, and commercial waste are not accepted at the facility

Table 5-2 presents the number of participants that have used the fixed facility between 2002 and 2006 and the costs associated with disposal, materials, and publicity. Disposal costs ranged from approximately $1,250 to over $5,500 over the period while the number of participants ranged from 123 in 2005 to 158 in 2006, which had the highest recorded participation level. Tables 5-3 through 5-7 list the amount of different types of MRW that was collected at the facility between 2002 and 2006.

Table 5-2 Participation and Costs for Fixed Facility MRW Collection in Franklin County (2002-2006)

Year	Disposal Costs ($)	Materials, Publicity, and Other Costs ($)	Number of Participants
2002	5,075	13,585	-
2003	1,245	-	129
2004	5,524	-	129
2005	4,394	0	123
2006	2,706	276	158

1. Employee costs were paid by BDI for all years
2. Dash indicates no information is available

Table 5-3 MRW Collected at Fixed Facilities in Franklin County in 2006		
Type of Waste	Pounds Collected	Final Disposal Method
Antifreeze	2,200	Recycled
Acids/Bases	167	Treated/Solid Waste LF[1]
Batteries	18,000	Recycled
Pesticides	301	Other (Incineration)
Other – adhesives	1,350	Energy Recovery
Other – aerosol/pesticides	67	Other (Incineration)

1. Physical, chemical, or biological treatment prior to land filling

Table 5-4 MRW Collected at Fixed Facilities in Franklin County in 2005		
Type of Waste	Pounds Collected	Final Disposal Method
Acids	501	Treated/Solid Waste LF[1]
Batteries	18,720	Recycled
Oil based paint	1,430	Energy Recovery
Oxidizers	163	Treated/Solid Waste LF[1]
Pesticides	601	Other (Incineration)
Other-adhesives	450	Energy Recovery
Other-aerosol/non pesticide	67	Energy Recovery
Other-aerosol/pesticide	67	Other (Incineration)

1. Physical, chemical, or biological treatment prior to land filling

Table 5-5 MRW Collected at Fixed Facilities in Franklin County in 2004		
Type of Waste	Pounds Collected	Final Disposal Method
Acids	501	Treated/Solid Waste LF[1]
Bases	67	Energy Recovery
Batteries	320	Recycled
Oil based paint	917	Energy Recovery
Oil based contaminated paint	1,376	Energy Recovery
Oxidizers	326	Treated/Solid Waste LF[1]
Pesticides/Poison Liquid	902	Other (Incineration)
Other-adhesives	450	Energy Recovery

1. Physical, chemical, or biological treatment prior to land filling

Table 5-6 MRW Collected at Fixed Facilities in Franklin County in 2003		
Type of Waste	Pounds Collected	Final Disposal Method
Bases (aerosol cans)	67	Energy Recovery
Batteries	20,055	Recycled
Oil Based Paint	1,376	Energy Recovery
Pesticide/Poison	151	Other (Incineration)

Table 5-7 MRW Collected at Fixed Facilities in Franklin County in 2002		
Type of Waste	Pounds Collected	Final Disposal Method
Acids	84	Treated/Solid Waste LF[1]
Acids (aerosol cans)	67	Energy Recovery
Bases	84	Treated/Solid Waste LF[1]
Bases (aerosol cans)	67	Energy Recovery
Oil based paint	4,127	Energy Recovery
Other Dangerous Waste	450	Energy Recovery
Pesticide/Poison	751	Hazardous waste facility

1. Physical, chemical, or biological treatment prior to land filling

5.5.2.2 Used Oil, Anti-freeze, and Crushed Oil Filter Collection in Franklin County

Franklin County collects used oil, crushed oil filters, and anti-freeze at various locations throughout the County. Table 5-8 lists the amount of these wastes collected between 2002 and 2006. The County re-refines the used oil that is collected and recycles the anti-freeze. Although the Franklin County Department of Public Works (FCDPW) does not advertise collection of used oil filters, it became necessary for the County to provide for filter disposal because people often leave them at collection sites. Oil technicians bring the used filters to the FCDPW shop where they are crushed and put into a 55 gallon barrel.

Table 5-8 Pounds of Used Oil, Crushed Oil Filters, and Anti-freeze Collected in Franklin County between 2002 and 2006			
Year	Used Oil[1]	Crushed Oil Filters	Anti-Freeze
2002	13,975	0	2,640
2003	141,044	0	1,440
2004	135,124	2,800	1,400
2005	169,090	1,400	1,760
2006	173,012	2,200	4,200

1. Majority of oil collected at Mid-Columbia Grange at Road 64 and Court Street

Mobile Collection Events (2007)

The County also has a mobile tail-gate collection event in Connell once a year where they collect MRW for disposal. Recent collection events were held in 2006 and 2007. Table 5-9 shows the costs of these events and the number of participants and Tables 5-10 and 5-11 provide the amount of MRW collected each year.

Table 5-9 Participation and Costs for Mobile MRW Collection in Franklin County (2006-2007)					
Year	Labor Cost ($)	Disposal Cost ($)	Other Costs ($)	Total Cost ($)	Number of Participants
2006	650	860	450	1,960	13
2007	650	1,140	540	2,330	24

Table 5-10 MRW Collected at Connell Tailgate Event (April 28, 2007)		
Type of Waste	Lbs collected	Final Disposal Method
Anti-freeze	162	Recycled
Bases	20	Hazardous Waste Facility
Batteries	800	Recycled
Flammable gas	25	Hazardous Waste Facility
Oil based paint	650	Hazardous Waste Facility
Pesticides	400	Hazardous Waste Facility

Table 5-11 MRW Collected at Connell Tailgate Event (October 14, 2006)		
Type of Waste	Lbs collected	Final Disposal Method
Paint	200	Treated/solid waste LF[1]
Organic toxic	250	Treated/solid waste LF[1]
Flammable aerosols	100	Treated/solid waste LF[1]

1. Physical, chemical, or biological treatment prior to land filling

5.5.3 SQG Program (Business Technical and Collection Assistance)

5.5.3.1 Commercial Sector MRW

Franklin County originally excluded SQGs from any usage of the MRW program in the County leaving the business and commercial sectors to develop their own methods of disposing their MRW. In the original MRW Plan, there was mention of looking into a program to help SQGs with this task. After years of operation of the MRW program, Franklin County's technical staff set up an MRW pilot program for SQGs in 2007. The program focuses on those businesses classified as conditionally exempt and therefore a SQG of MRW. Informational assistance is provided by FCDPW to businesses seeking help with disposal of MRW. A collection event was held on June 22, 2007 at the FCDPW Maintenance Shop from 9 am to 12 pm, however there was limited participation. Due to the lack of participation there was no cost for holding the event. Waste also can be picked up at the business site by County staff. Businesses are asked to call with information about the amount and type of waste for fees and scheduling. The program requires that businesses pay the cost of waste disposal. The program will continue with more advertising to promote MRW awareness.

5.5.3.2 Agricultural MRW

Agricultural hazardous wastes are regulated under FIFRA and the Washington Pesticide Control Act under the WSDA. The Washington State University Cooperative Extension provides farmers and residents with information about MRW and agricultural chemical, including pesticide containers. Activities include providing written materials within the cooperative extension offices, assisting in providing information where pesticides and other agricultural products are sold, mailing information to farmers, and providing speakers to address interested groups on the topic of MRW and agricultural chemical waste management.

Residential farm homes HHW services are provided for by the County. Actual farm insecticide, fungicide, and other chemical treatment wastes are collected by the WSDA. These collection events happen yearly in adjacent counties while Franklin County holds events every two to four years. These events require pre-registration but are zero cost to the agricultural producer.

5.5.4 Enforcement

The County Health Department is responsible for enforcement of solid waste regulations in the County. The Health Department inspects the fixed facility and permits collection events.

5.5.5 MRW Waste Program Funding

As discussed in Section 5.4, Franklin County is responsible for the cost of MRW disposal collected at the fixed facility and at other locations in the County and the mobile events. BDI pays the operation and maintenance costs of the fixed facility. The County has a CPG from Ecology that funds 75% of the disposal cost. The County funds the remaining 25% of the cost with a 3% surcharge on garbage collected in unincorporated Franklin County. There is concern about the sustainability of the MRW program with future money available from CPGs uncertain.

5.6 Recommendations for Franklin County

Franklin County should continue its current program, including household and public education, collection, technical assistance, and enforcement. The MRW disposal service in Franklin County, provided by a unique public/private partnership with Basin Disposal, Inc., works well and should be continued. The following program enhancements are recommended.

HHW and Public Education

- Focus on waste reduction. Promote an educational approach like Benton County's "Safer Alternatives" or Thurston County's "Green Solutions" educational brochures

HHW Collection

- As the County population increases, consider tail-gate collection events in Mesa and Kahlotus
- Set up a MRW "Material Exchange" at the County's fixed facility where people can exchange automotive products, pesticides, herbicides, etc. rather than throwing away unused product

SQG Technical Assistance

- Assist SQGs with Waste Audits (see Chapter 4 for more information)

SQG Collection Assistance

- The Commissioners of Franklin County should request that the WSDA sponsor an agricultural chemical waste collection event in Franklin or a neighboring county at least every 3 years
- The County Commissioners should encourage the WSDA to request additional appropriations from the State through the MTCA, to adequately support agricultural chemical waste collections

Financing

Ecology currently provides 75% percent of the funding necessary for MRW disposal, while the County provides the remaining 25%. It is recommended that of this 25%, the City of Pasco, which comprises approximately 75% of the County's population, fund 75% by adding a surcharge for disposal cost on their monthly billing.

It is also recommended that the SWAC enter into a new interlocal agreement for solid waste activities which includes financing MRW programs.

5.7 Program Evaluation

Corresponding with their next plan update in January 2013, Franklin County and participating cities will conduct a comprehensive review of existing services and programs. At that time, they will consider the need for additional collection services or facilities to support both the SQG and HHW programs. Services may include conducting additional collection events, enlarging the permanent facility, or contracting services to private enterprise. Franklin County will also evaluate results annually and adjust program efforts as appropriate.

6.0 Collection Systems

This chapter discusses the collection of municipal solid waste (MSW) (i.e., garbage), within the incorporated and unincorporated areas of Franklin County, including background information on how MSW collection is regulated, the legal authority that the County and municipalities have in managing collection services for solid waste, and a description of existing collection systems. Recycling is briefly addressed in this Chapter; see Chapter 4 for a complete discussion of recycling operations in Franklin County.

6.1 Regulatory Framework

MSW can be regulated by the WUTC, the County, and/or municipalities. The regulatory authority and jurisdiction for each of these entities is described below.

6.1.1 WUTC Authority (State)

The WUTC supervises and regulates solid waste collection companies. WUTC authority (Chapter 81.77 RCW and Chapter 480-70 WAC) is limited to private collection companies and does not extend to municipal collection operated by municipalities or their contractors. The WUTC requires annual revenue reports, establishes rates, and regulates service areas and safety practices.

A private solid waste collection company must apply to the WUTC for a certificate of public convenience and necessity to operate in the unincorporated areas of a county or in incorporated areas which choose not to regulate refuse collection. The WUTC grants certificates within a designated service area to an applicant based on cost data, documented need for the service, and, if the district is already served by a franchise holder, the ability or inability of the existing franchise holder to provide service to the satisfaction of the WUTC. The WUTC requires annual reports showing the refuse collection company's gross operating revenue. Certificates may have terms and conditions attached and may be revoked or amended after a hearing held by the WUTC.

The WUTC conducts open meetings for public discussion of rate increase requests, or "rate cases." At these meetings, WUTC staff present their review of the hauler's request for a rate increase. Representatives of the haulers and the counties are welcome to attend and comment on the WUTC staff's findings and present other information relative to the case. Hearings are scheduled during rate cases when there are unresolved issues between WUTC staff and certificate haulers, or on other occasions when the WUTC believes a case merits formal adjudicative handling. Expert witnesses may be called to testify, or may enter as an intervening party. County governments may offer written or oral comments during all rate cases affecting certificate haulers serving county unincorporated areas.

WUTC regulation of solid waste collection companies does not include collecting or transporting recyclable materials from a drop box or recycling buy-back center. It also does not include collecting or transporting recyclable materials by or on behalf of a commercial or industrial generator of recyclable materials to a recycler for use or reclamation (Chapter 81.77.010(8) RCW). Transportation of these materials is regulated under Chapter 81.80 RCW which governs the regulation of motor freight carriers. These carriers require a WUTC permit and proof of insurance to operate in the state. If the commercial recycling hauler also possesses a certificate to operate as a solid waste company, WUTC is responsible for ensuring compliance with safety practices. For other commercial recycle haulers, the Washington State Patrol oversees hauler traffic safety practices.

6.1.2 County Authority

The rights of counties for solid waste collection include the establishment of solid waste collection districts for the mandatory collection of solid waste (Chapter 36.58.100 RCW). However, solid waste collection districts cannot include incorporated areas without the consent of the legislative authority of the city or town.

To form a solid waste collection district, public hearings must be held and the county legislative authority must determine that mandatory collection is in the public interest. County provision of collection services can be implemented only if the WUTC notifies the county that no qualified haulers are available for a district. Under mandatory collection, a hauler may request that the county collect fees from delinquent customers.

6.1.3 Municipality Authority

Cities and towns have several options for managing solid waste collection under state law:

- The city may choose not to manage or regulate its own refuse collection services. Collection services may then be provided by the certificate hauler(s) with authority for that area under the regulation of WUTC.
- The city may require a private company to obtain a refuse collection license from the city and to conform to all city collection guidelines.
- The city may award contracts to private companies for refuse collection in all or part of the city. The contract hauler does not need to hold a WUTC certificate for that area. Usually contracts are awarded on a competitive basis to the lowest bidder.
- The city may decide to manage and maintain its own municipal collection system for all or part of its jurisdiction.

The WUTC would not have jurisdiction over the last two options (Chapter 81.77.020 RCW). State law also allows municipalities to require residents and businesses to subscribe to designated refuse collection services.

Table 6-1 Solid Waste Collection System Characteristics (Under State, City, and County Control)					
		City Controlled			County Controlled (Solid Waste Collection District[1])
System	State Controlled	State authority	Contract	Municipal	
Collector	Private	Private	Private	Municipality	Private[2]
Operating conditions and review authority	WUTC[3]	WUTC[3]	Municipality	Municipality	WUTC[3]
Rate approval authority	WUTC	WUTC[4]	Municipality	Municipality	WUTC
Subscription to collection Service	Voluntary	Voluntary or mandatory	Voluntary or mandatory	Voluntary or mandatory	Mandatory with exemption process
Billing responsibility	Collector	Collector	Municipality or collector	Municipality	Collector[5]

1. Only in unincorporated areas, or in incorporated areas with consent of the legislative authority of the city or town.
2. If no certificated hauler can provide service, the county may provide service.
3. Although municipal governments can adopt service level ordinances, the WUTC is the authority charged with enforcing compliance.
4. City has authority to include licensing tax.
5. County must collect fees if users are delinquent.

6.2 Collection Systems in Franklin County

BDI, Inc. is the only solid waste management company providing collection in the County. BDI contracts with the incorporated areas of the County, where collection is mandatory, and provides optional service for residents in unincorporated areas. In both incorporated and unincorporated Franklin County, BDI collects MSW in trucks and takes it to their transfer station located in Pasco (1721 Dietrich Road) after which it is long-hauled to Finley Buttes, Oregon for final disposal. Table 6-2 summarizes collection services in Franklin County.

6.2.1 Incorporated Franklin County

As discussed previously, each city has the right to regulate its own solid waste collection services. Currently there are no participating jurisdictions within the County that provide their own solid waste collection. The cities of Connell, Mesa, Kahlotus, and Pasco directly contract with BDI for residential and commercial services within their designated incorporated city limits. All cities require mandatory collection within their jurisdictions. The service is provided through the contract or franchise agreement with BDI and each city. The rates are set by the cities through their contract(s) with BDI. Current solid waste collection rates for cities within the County vary little. The general single unit residential cost of monthly collection, picked-up weekly for a 90+ gallon polycart is approximately $15.00. This collection rate includes the polycart container rental fee. Commercial pickups are also provided by BDI. The collection system is automated, thus providing more cost-effective collection. Because service levels are

adequate and measures have been taken to minimize cost increases, no deficiencies are identified.

6.2.2 Unincorporated Franklin County

As with most unincorporated areas, collection services in rural Franklin County are voluntary, not mandatory. All unincorporated areas in the County are covered by the WUTC certificate holder franchise (BDI); there are no solid waste collection districts. The unincorporated areas of the County are encompassed under one WUTC certificate (Certificate G-118) with curbside pickup available. Rates for these areas are approved by the WUTC. Residents in unincorporated areas may also self-haul their waste to the BDI transfer station on Dietrich Road in Pasco. There are no drop boxes or landfills in the County for MSW. Currently, service levels to these more rural areas are adequate, provided through certified BDI or by self-hauling waste.

Although county authority to collect solid waste in the unincorporated areas is limited, counties have the legal authority to assess fees on collection services provided in those areas. Presently, Franklin County includes a surcharge tax on garbage collected in the unincorporated portions of the County. RCW 36.58.045 authorizes counties to assess such fees to fund administration and planning expenses associated with solid waste management.

Table 6-2 Summary of Collection Services in Franklin County							
City	Estimated Population (2007)	Number of Residential Accounts	Number of Commercial Accounts	Type of Service	Collection Rates[1]	Mandatory Waste Collection	Fees
Connell	3,395	617	100	Residential and Commercial	City[2]	Yes	3.6%
Kahlotus	233	77	7	Residential	City[2]	Yes	3.6%
Mesa	467	117	12	Residential	City[2]	Yes	3.6%
Pasco	46,881	11,801	1,075	Residential and Commercial	$15.00	Yes	3.6%
Unincorporated	11,348	5,113	495	Residential and Commercial	$17.85	No	3.6% And 3.0% to Franklin Co.

1. Rates are the monthly charge for the 90+ gallon container.
2. Billing is completed by the City.

6.3 Needs and Opportunities

6.3.1 Criteria for Determining Needs and Deficiencies

The basic determining criterion for solid waste collection needs is the availability of service to all residents of the County. BDI service is available to all residents within Franklin County. Other issues that may arise, such as fairness of rates or quality of service, are managed by the WUTC for certified haulers and by the cities managing contracted services. Level of service is therefore dependent on how the WUTC and municipalities negotiate or regulate the service.

6.3.2 Future Needs

Franklin County's future waste and recycling collection needs are driven by population changes and changes in regulations.

6.3.2.1 POPULATION

The future demand for waste and recycling collection services will increase based on population growth in the County. Table 6-3 shows Franklin County's estimated population in 2005 and projected population in 2030. Population is expected to increase everywhere in Franklin County except for unincorporated areas, which are expected to lose population. As stated in Chapter 3, based on Ecology's waste generation rate of 7.8 lbs/day/person, Franklin County's population of about 94,500 people in 2030 would generate approximately 134,500 tons of waste. This amounts to a 56% increase in waste over the planning period. This increase in waste generation will result in a greater need for waste collection services but is not expected to change how waste collection is provided in the County. Historically BDI has been able to adjust to any change or shifts in waste stream origination without difficulty. Ensuring that all residents have refuse collection does not appear to be a problem in the planning period.

As population increases in all but the unincorporated areas, so will population density. Changes in population density will affect the cost and efficiency of waste collection. Increased population density could justify a change in recycling service levels. As stated in Chapter 4, Oregon law requires urban areas with 12,000 or more residents that export waste to Oregon to have curbside recycling services or an equivalent level of service. Based on a review of other Eastern Washington cities, population densities of greater than 1,500 people/square mile is another threshold above which curbside recycling could be considered. This would result in an increased level of service and an increased cost.

6.3.2.2 REGULATORY CHANGES

Future regulatory changes could also affect Franklin County's future waste or recycling collection needs; however there are currently no anticipated regulatory changes that would affect collection in the County.

Table 6-3 Population and Population Density in Franklin County in 2005 and 2030						
Location	Land Area 2000 (sq. mi.)[1]	Population 2005	Population Density 2005	Urban Growth Area 2000 (sq. mi.)[1]	Population 2030[2]	Population Density 2030[3]
Connell	6.74	3,200	475	11.61	6,795	585
Kahlotus	0.37	220	595	4.24	466	110
Mesa	1.66	440	265	2.27	849	374
Pasco	33.85	44,190	1,305	44.00	75,459	1,715
Unincorporated	1223	12,305	10	N/A	10,765	9
Franklin Co. Total	1,265	60,355	48	N/A	94,324	75

1. Land Area and urban growth area according to the 2000 US Census.
2. Year 2030 population projection from the Benton-Franklin County Comprehensive Plan.
3. Population density in 2030 was calculated using the urban growth area from the 2000 US Census for Connell, Kahlotus, Mesa, and Pasco. The land area from the 2000 US Census was used to calculate population density for the Unincorporated areas of Franklin County and for the County as a whole.

6.3.3 Options for Consideration

The following options for changes to waste and recycling collection in the County were considered by the SWAC during the planning process. The final recommendations are presented in Section 6.4.

6.3.3.1 COUNTY (UNINCORPORATED)

As discussed previously, statutory restrictions imposed upon counties by RCW 36.58A limit a county's authority with respect to solid waste collection. A county currently may provide collection services itself or through direct contract only if no qualified private company is willing or able to do so. In addition, a county may not provide service in an existing certificated area unless it acquires rights by purchase or condemnation. Except in the circumstances stated above, the county is prohibited from directly managing or operating solid waste collection systems. It is unlikely that such a combination of circumstances would ever occur within Franklin County. Although such changes are not likely, the County could consider service-level ordinances in the 20 year planning period.

Service-level ordinances can establish the types and levels of services to be provided to both residential and nonresidential customers. Prior to adoption, a service-level ordinance option needs to be included as part of a county's solid waste management plan. The following are different service-level changes the County can consider.

Change Recycling Service Levels to Capture More Households

The WUTC requires certificate holders to implement the provisions of the waste reduction and recycling element of a comprehensive solid waste management plan. As discussed earlier, the County has established a minimum population of 12,000 to receive curbside recycling or an equivalent. The County could consider lowering the population requirement as a means to offer more recycling services in certain areas. Recycling could be mandatory at the point of collection and co- mingled collection, as described in Chapter 4, could be and option for collection of recyclables.

Establish Collection Districts
The County could designate areas within the County as collection districts. Likely candidates would be Eltopia, Merrill's Corner, or similar areas where there is significant residential and commercial activity. Service level changes could include curbside recycling, mandatory waste collection, and rate structures.

Change Rate Structure
Within the County or collection districts, if designated, customers could be charged rates by volume or by weight. These rate structures could be considered as an incentive to reduce MSW. By changing to a weight based payment system, collection vehicles would require scales and a system for recording each ratepayer's weight. Changing to a volume based system would require ratepayers to pay by volume collected based upon a predetermined price per container (i.e. 90 gallon container = $16.00 and 30 gallon container = $12.00).

6.3.3.2 MUNICIPALITIES (INCORPORATED)

Incorporated cities within Franklin County exercise contractual agreements with BDI. Each city requires mandatory collection of MSW for residential and commercial ratepayers. However, it is very unlikely that any city would provide collection services of its own within municipal boundaries for many reasons including initial startup costs, ongoing operation and maintenance of equipment, along with costs to provide for the transfer and disposal of wastes. The following are options municipalities could consider over the 20 year planning period.

- Rates can be set by any incorporated city within the county. Each city negotiates the rates (commercial and residential) with BDI. A city may wish to negotiate a rate with BDI either based upon weight or volume.
- Service levels can be changed to require curbside recycling within an urban level like Pasco. As population densities increase, the economies of scale reduce the curbside recycling costs. Threshold levels like 1,500 to 2,000 people per square mile could serve as a determining point for providing curbside recycling.
- Curbside service could be co-collected with MSW, offering some savings to the ratepayer. These co-mingled recyclables would still have to be sorted at the time of transfer from the collection vehicle. Within the municipalities of Eastern Washington requiring curbside recycling, the average cost to the rate payer is approximately an additional $4.00 to $7.00 per month in 2007.

6.4 Consultant Recommends to SWAC

The following are recommendations to the SWAC regarding MSW collection:

- The SWAC should not make any changes to the County's level of service for collection during the next five years. Current level should be assessed on a five year basis to insure their adequacy. The service provider is encouraged to participate as a partner in all future collection and recycling planning.
- The County should consider curbside recycling when the County population reaches 100,000.
- The County supports the UTC regulatory framework because of the many benefits it offers to a primarily rural based collection system. Any additional collection options that may be considered feasible will be investigated within the framework of the UTC system.

7.0 Transfer and Disposal of Waste

7.1 Introduction

Transfer stations are facilities that provide intermediate storage and/or processing prior to final disposal. As defined in RCW 36.58.030, a transfer station is a "staffed, fixed supplemental facility used by persons and route collection vehicles to deposit solid wastes into transfer trailers for transportation to a disposal site." Transfer stations provide an economic way to link local collection programs with final disposal by consolidating many smaller loads into larger loads for hauling to a final disposal site.

In areas without a transfer station, a drop box facility often serves the same purpose. Chapter 173-350 WAC defines a drop box as "a facility used for the placement of a detachable container including the area adjacent for necessary entrance and exit roads, unloading and turn-around areas. Drop box facilities normally serve the general public with loose loads and receive waste from off-site."

Waste is transported from transfer stations and drop boxes to the final disposal site, which for waste generated in Franklin County is the landfill located in Morrow County, Oregon.

7.2 Regulatory Framework

Ecology regulates the design and operation of transfer stations and drop boxes under chapter 173-350 WAC, solid waste handling standards. Prior to 2003, Ecology regulated transfer stations under chapter 173-304 WAC, minimum functional standards for solid waste handling; however Ecology revised these standards based on the EPA's promulgation of the Solid Waste Disposal Facility Criteria (40 CFR Parts 257 and 258) in October 1991. Chapter 173-350 WAC updated the operating and environmental monitoring requirements for solid waste handling facilities, amongst other changes. Counties may site and operate transfer facilities or may contract this service to a provider. Transfer stations are required to obtain a solid waste permit from the jurisdictional health department.

In Washington State, landfill design and operations are regulated under Chapter 173-351 WAC, however Franklin County does not currently have an operating landfill. Instead, waste from the County is exported out of state to Oregon. As discussed in Chapter 4, Oregon law requires that a city exporting waste in excess of 75,000 tons per year or cities of 4,000 or more people have a certified recycling program that meets the requirements of Division 91-0030 of the Oregon Administrative Rules (OAR).

7.3 Waste Transfer and Disposal Goals

Franklin County has established a goal of safely and cost-effectively transporting waste and recyclables, and ensuring adequate landfill capacity for future waste disposal over the 20-year planning period.

7.4 Waste Transfer and Disposal in Franklin County

7.4.1 Municipal Solid Waste

Abandoned Landfills in Franklin County

Prior to its closing in 1993, the Pasco Sanitary Landfill (operated by PSL, Inc.) was located approximately 1.5 miles northeast of Pasco, Washington near the intersection of Kahlotus Road

with U.S. Highways 12 and 395. The landfill, which began operating in 1958, was listed on the federal National Priority List of hazardous waste sites (or "Superfund List") in 1990 after groundwater monitoring tests showed that volatile organic compounds (VOCs) had been released from the facility. Between 1972 and 1974, over 30,000 drums of bulk chemical waste had been disposed of at the site, leading to this contamination. Since the closure of this landfill, there has not been an operating landfill in the County.

Additional small, private solid waste "dumps" were once located in or around Mesa, Kahlotus, Basin City, Eltopia, and Road 68 in Pasco. All of these sites were closed prior to 1994.

Current MSW Transfer

Franklin County has one transfer station that accepts waste from the entire County. There are no drop boxes in Franklin County. The transfer station is operated by BDI and is located at 1721 Dietrich Road in Pasco. Waste is collected throughout the County by BDI, the only entity providing collection in the County, and is brought to the transfer station or residents may self-haul their waste directly to the transfer station. The transfer station also accepts regional waste from areas of Benton County, Walla Walla County (primarily from Prescott and Waitsburg), and Columbia County (primarily from Dayton) where BDI also provides service. Table 7-1 provides the amount of waste the Pasco transfer station received from each County from 2002 to 2006.

Table 7-1 Tons of Waste Accepted at the Pasco Transfer Station from Counties

County	2002	2003	2004	2005	2006
Franklin	68,989	70,462	81,401	65,568	86,058
Benton	28,460	30,383	36,566	48,128	34,098
Walla Walla	9,854	10,098	8,926	9,924	10,196
Columbia	1,834	1,702	3,292	3,198	3,360
Total	109,097	112,645	130,185	129,818	133,712

After trucks complete their routes to pick up waste, they arrive at the transfer station, provide their route number, and are weighed. The truck then drives into the transfer station and unloads waste onto a tipping pad. Employees working on the tipping pad remove timber, metal, and recyclables from the waste. The waste is then loaded into a drop chute for compaction. The compacted waste is transferred into a covered trailer, which is later hauled to the landfill in Oregon.

The transfer station, which has a capacity of accepting 1,200 tons of waste per day, currently accepts approximately 500 tons per day (the transfer station generally operates 5 days a week, or about 260 days a year). Based on projected population growth and an assumed waste generation rate, the transfer station is projected to have enough capacity to accept waste throughout the 20-year planning period. The projected Franklin County population in 2030 is 94,324 people. Using Ecology's waste generation rate of 7.8 pounds per person per day, it is estimated that the waste generation in Franklin County in 2030 would be approximately 428 tons per day (the transfer station operates 5 days a week). As shown in Table 7-1, imported waste from other counties account for 36% of waste accepted at the transfer station. Assuming that imported waste continues to account for 36% of the waste in the transfer station, it is projected that the transfer station would accept approximately 940 tons per day of waste in 2030. There would be a small amount of additional waste from residents who self-haul.

Current MSW Disposal

All waste accepted at the transfer station is exported outside of the County to the Finley Buttes Landfill in Morrow County, Oregon for disposal. The landfill, which is owned by Waste Connections, is located 10 miles south of the town of Boardman, Oregon (Sec. 05, T2N, R26E) and can be accessed by highway, barge, or rail. Waste from the Pasco transfer station is long-hauled to the landfill, which is a distance of approximately 55 miles (transfer by truck is generally considered the most cost-effective option for distances of less than 100 miles). The landfill is operated under Oregon Department of Environmental Quality (ODEQ) Solid Waste Disposal Permit No. 394. The landfill is currently permitted to have a 90 million ton capacity for MSW. It is estimated to have enough capacity to continue to accept waste for at least the next 20 years.

BDI also transfers a small amount of waste out of Franklin County (approximately 50 tons per year) to a transfer station in Prosser, Washington (Benton County). This waste is then transferred by truck to a landfill run by Allied Waste in Roosevelt, Washington (Klickitat County). This occurs when a customer has a special relationship with Allied Waste and requests that BDI ship their waste to this landfill because they have a special arrangement with the landfill, a special waste permit, or similar situation. Residents who self-haul their waste also export a small amount of waste from Franklin County. For example, some residents from Franklin County take waste to the Horn Rapids Landfill in Richland, Washington. The amount of waste exported rather than taken to the transfer station is considered to be very small, and is therefore not tracked by neighboring counties.

As discussed previously, in order for a city of 4,000 or more people to import into Oregon, or for a city to export greater than 75,000 tons of waste per year into Oregon, the city must have a certified recycling program according Oregon law. Franklin County is in compliance with this regulation with its drop box recycling program. See Chapter 4 for more information about recycling in the County.

7.4.2 Recycling

As discussed in Chapter 4, recycling operations in Franklin County are operated by BRI, a division of BDI. Drop boxes are maintained throughout the urban and rural areas of the County for residents to take their recyclables. Recyclables collected from the drop boxes are taken to the recycling facility, located at the Pasco transfer station. Once collected, recyclable materials are taken from the recycling center and hauled into bigger markets, generally in Portland or Seattle.

7.4.3 Moderate Risk Waste

As discussed in Chapter 5, MRW is collected at various collection events throughout Franklin County and at the MRW facility located at the Pasco transfer station. BDI operates the MRW facility while Franklin County pays for the disposal costs of the material collected. MRW materials are disposed of by an environmental company that contracts with the County. MRW defined as "hazardous" under Oregon law may not be disposed of at the Finley Buttes Landfill where Franklin County hauls its MSW.

7.5 Options for Transfer/Disposal

The following are options the County could consider to expand transfer services in the County.

Staffed or Partially Staffed Drop Box
The County could consider siting staffed or partially staffed drop boxes in the County[1]. The benefit of such a drop box is that, if located in the central or northern part of the County, it could serve the needs of area residents that already self-haul or that wish to self-haul. Because the transfer station is in Pasco, which is in southern Franklin County, it is not convenient for northern County residents to self-haul. The availability of a drop box could also reduce the likelihood of illegal dumping or disposal of waste. The cost of a drop box would be approximately $60,000 to $75,000 for the actual container and the accompanying construction (not including labor and operation and maintenance costs).

New Transfer Facility
A new transfer facility could be built in the County to achieve the same benefits as adding drop boxes in the northern part of the County. Due to the fact that the current transfer station has sufficient capacity for current and projected waste, a drop box could provide the same benefits at a much lower cost.

New Landfill
A landfill could be sited in the County rather than hauling waste to the Finley Buttes Landfill. A County landfill would reduce the cost of hauling waste out of state and would allow the County or local business to have control over disposal operations. The cost of siting and permitting a new landfill in the County, however, makes this option unlikely. In addition, given the large capacity of the Finley Buttes landfill, the County does not need additional disposal options.

7.6 Recommendations

The following are the consultant's recommendations regarding waste transfer and disposal:

- No new transfer station should be built during the planning period. The current transfer station is sufficient to handle current and projected waste throughout the planning period.
- The County should build a partially staffed drop box facility in Connell to accommodate residents in the northern part of the County. This would provide a cost-effective way to make self-haul convenient for residents in the area.
- Franklin County should continue to export waste to the Finley Buttes landfill in Oregon because it is currently the most cost-effective method of disposal and the landfill has adequate capacity throughout the planning period and beyond.
- No landfills should be considered during the planning period. Siting and permitting a landfill in the County is currently unnecessary and not feasible given the costs of a new landfill and the permitting process.

[1] A partially staffed facility would have employees working at the facility during the facility's business hours.

8.0 Solid Waste Processing Technologies

8.1 Introduction

Energy recovery and incineration (ER/I) provides a method of reducing volumes of waste while generating usable energy. WAC 173-304 defines energy recovery as "the recovery of energy in a useable form from mass burning or refuse-derived fuel incineration, pyrolysis or any other means of using the heat of combustion of solid waste that involves high temperature (above twelve hundred degrees Fahrenheit) processing." Incineration is defined as "reducing the volume of solid wastes by use of an enclosed device, using controlled-flame combustion." Energy recovery, whether through incineration or another process, does not eliminate the need for landfilling but reduces the volume requirements. The state of Washington has ranked incineration equal in priority with landfilling.

The process of recovering energy from municipal solid waste is primarily practiced in areas where the opportunity for landfilling or other disposal methods has been very limited. To provide a cost-effective source of energy, ER/I facilities (also called waste-to-energy [WTE] facilities) are generally located in more populous regions where large volumes of solid waste are generated. In sparsely populated regions, the small total volumes of solid waste generated do not provide a large enough quantity of potential energy material to make development of a WTE facility practical. As a result, energy recovery is rarely associated with small incinerators (those burning less than 250 tons per day). Medium and large MSW incinerators, however, can install larger boilers which will generate steam that can then be used to generate electricity, power industrial processes, or provide heat.

Incineration can also be used to effectively dispose of some special waste streams that otherwise would require special processing prior to landfilling or perhaps would not be acceptable in a landfill at all. Wastes with this potential include tires, certain agricultural wastes, sludges, and some industrial and institutional wastes.

The drawback of ER/I facilities is that the incineration of certain materials can negatively impact air quality. When operating a WTE facility, there must be a careful examination of which wastes are acceptable for processing by the facility. Batteries, transformers, certain industrial wastes, household hazardous wastes, and infectious wastes can all cause air quality concerns. Other materials such as automobiles, non-combustible demolition waste, liquid sludges, machinery, and non-burnable commercial and industrial wastes are also unacceptable to the WTE process.

There is currently no ER/I facility in Franklin County. This Chapter discusses the opportunity for implementing energy recovery technologies in the County over the planning period.

8.2 ER/I Technologies

ER/I facilities may use either mass burning systems, refuse derived fuel (RDF), or plasma arch. Each of these technologies is discussed below.

8.2.1 Mass Burn Incineration

Mass burning systems involve feeding mixed municipal solid waste (MMSW) into a furnace or boiler without mechanically separating or preparing the waste in any way. This process burns MSW without pre-processing at a very high temperature, leaving an ash by-product. To produce useful energy, a boiler is installed to remove heat or to generate electricity. Hog fuel

boilers are also a type of incinerator designed for a specific type of feedstock. Hog fuel boilers are common in the wood processing industry utilizing sawdust and wood scraps for fuel.

There are two basic types of furnaces used in mass-burn plants: refractory lined excess air incinerators; and water well incinerators.

When pre-processing of waste is performed, it is generally to remove large items, recyclables, and/or toxic-producing metals. By-products of mass burn technology are pre-processed materials (recyclable and bypass waste), energy, and ash.

8.2.2 Refuse Derived Fuel

In prepared fuel systems, MMSW is mechanically separated and processed to make refuse-derived fuel (RDF), either as a supplemental fuel for an existing furnace-boiler or to be used alone in a dedicated furnace-boiler. RDF technologies process solid waste before it is incinerated. Processing is performed to make the fuel more compatible with conventional boiler systems such as hog burners or coal-fired boilers. Processing generally involves removal of recyclables, reducing particle size, controlling moisture, removal of inert material and other material not suited for RDF. End products of an RDF system include bypass materials (wastes not suitable for RDF), recyclable materials, and the RDF fuel which is ready for combustion.

8.2.3 Plasma Arc

Plasma Arc is the process of decomposing materials with heat in an oxygen deficient atmosphere, to produce gaseous or liquid fuels. These fuels can then be burned directly or processed, and then supplied to an internal combustion engine. The end product of pyrolysis is much more compatible with a variety of conventional burners than RDF.

In a pyrolitic gasification facility, waste is pre-processed to remove materials that cannot be decomposed, such as metals. The heat then reduces the waste into basic components: gases (methane, ethane, hydrogen, carbon monoxide); liquids (pyro-oil and tar); and solids (char and carbon black). The hot gases can be processed into a fuel or blown into an incinerator where combustion takes place. Solid residues remaining are disposed of at a landfill.

Plasma Arch technology is still in the development stages. If it proves to be commercially viable, it does have the advantage of reducing air pollutants during the process because it achieves more complete combustion.

8.3 Existing Conditions

As discussed in Chapter 7, all waste from Franklin County is exported to a regional landfill in Morrow County, Oregon. ER/I is not currently used in Franklin County and waste exported from the County is not processed by ER/I technologies. Energy recovery from municipal solid waste should remain a future consideration for Franklin County, however. Changing conditions such as increasing hauling costs or more stringent regulatory requirements could result in the County's present waste exportation system becoming less cost-effective. In addition, the introduction of ER/I technology would provide energy from the County's waste stream, reduce the volume of waste requiring landfilling, and would provide an opportunity to recover recyclable materials during pre-processing.

8.4 Options for ER/I in Franklin County

The most promising option for ER/I in Franklin County is likely the MSW mass burn operation even though the plasma arch shows promise. Plasma arch technology is still being

demonstrated. ER/I burning of biomasses will provide additional fuel sources to produce power. Biomass used in the process includes field residues, animal wastes, forest thinning residue, food packing, food processing, animal processing, and municipal wastes. A large amount of biomass is available regionally for ER/I, making a regional biomass pyrolysis facility an option for consideration. Table 8-1 provides the amount of biomass available in tons per year from Franklin County and surrounding counties and the amount of energy in millions of kilowatt hours that the biomass could produce. Of the seven county total of 2.24 million tons of biomass per year, Franklin County accounts for nearly 675,000 tons per year. The seven counties combined account for approximately 35% of the total biomass available from all the counties in eastern Washington.

Table 8-1 Total Biomass and Bio-energy by County

County	Biomass (tons/year)	Energy (million kWh)
Adams	230,562	200
Benton	204,920	174
Columbia	76,008	66
Grant	350,434	284
Walla Walla	249,860	211
Whitman	453,537	395
Franklin	674,858	592
Seven County Total	2,240,179	1,922
Eastern Washington Total	6,449,190	5,755

Source: Ecology's Biomass Inventory and Bioenergy Assessment, 2005 (publication #05-07-047)

Franklin County is an ideal location for an ER/I facility because it is centrally located within the region. There is excellent transportation by rail or highway systems to south county area (Pasco) or the north county area (Connell).

8.5 Recommendations

Although Franklin County's current method of waste disposal is sufficient for the 20-year planning period, methods of ER/I should be considered. The implementation of ER/I technology could create a sustainable energy source, help meet state priorities of reducing dependence on fossil fuels, and would decrease the amount of waste requiring disposal. The following are the consultant's recommendations to the SWAC:

- Franklin County and the SWAC should evaluate processing technologies if transfer or disposal systems change substantially.
- Franklin County and the SWAC should evaluate processing technologies if political, economic, and technical feasibilities change substantially.

9.0 Special Wastes

9.1 Introduction

The solid waste stream in Franklin County includes categories of wastes that may require special handling, or may not be suitable for disposal directly into the transfer station or a landfill because of their physical characteristics or composition. These special wastes are usually managed separately from MSW. Special wastes identified in Franklin County and discussed in this plan are:

- Agricultural wastes
- Appliance/white goods
- Asbestos
- Biomedical wastes
- Construction and demolition wastes
- Disaster debris
- Electronic wastes
- Petroleum-contaminated soil
- Septage and street wastes
- Tires

This chapter describes the current management of these wastes and provides recommendations to ensure special wastes are properly handled and disposed of. Solid waste plans do not address wastes such as low-level radioactive wastes and biosolids. There may be other items for the special waste category but they have not been identified in Franklin County. Further details about the SWAC's prioritization of special waste streams are provided in Appendix E.

9.2 Agricultural Wastes

WAC 173-304 defines "agricultural wastes" as "wastes on farms resulting from the production of agricultural products, including, but not limited to, manures and carcasses of dead animals weighing each or collectively in excess of fifteen pounds." Agricultural wastes consist of three general types of wastes: crop wastes, livestock wastes, and agricultural chemicals. Crop wastes include residues from grain, hay, vegetables, seed crop production, and trimmings from fruit trees. Livestock wastes include manure and animal carcasses. Agricultural chemical wastes are composed primarily of empty agricultural chemical containers and banned or unused agricultural chemicals.

9.2.1 Existing Conditions

Most agricultural waste generated in Franklin County never enters the Municipal Solid Waste stream. Instead, this waste is most often disposed on-site. The three principal methods for disposing of agricultural wastes on-site are:

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

The amount of agricultural waste generated in Franklin County is difficult to determine because most agricultural wastes are currently disposed on-site. Information is available through the WSU Cooperative Extension on the specific types and quantities of livestock that produce

wastes or for farm acreage and crops being cultivated in the county and cities is available through the WSU Cooperative Extension. Given the rural nature of Franklin County, the potential exists for the generation of significant amounts of agricultural waste. Benton Franklin Health Department (BFHD) records from the past five years indicate that agricultural wastes are being managed properly in Franklin County. BFHD has only responded to four complaints involving improper disposal of agricultural wastes during this period.

9.2.2 Enhancement Options for FCSWAC Consideration

To enhance the current management of agricultural wastes, the County could investigate options for the beneficial reuse of biomass and the feasibility of developing a facility for the production of bio-fuels or bio-power, as discussed in Chapter 8. Many advantages exist for this option. There is over 2.25 million tons of biomass material estimated to be available in Franklin County and six adjoining counties. Another advantage of this option is the relatively low transportation costs for agricultural biomass to a local site in the County. The biomass can also be mixed with MSW for fuel, but the high costs of doing so have prevented this from being a reasonable option. Costs for disposal of MSW are $50/ton and $110/ton for use in incineration (waste to energy). There are new burning technologies that allow for cleaner burning for energy generation. The potential of forming public-private partnerships in this area is significant. In Benton County, the Port of Benton has entered into such an agreement. They have put together a grant from the Washington State Community Economic Revitalization Board (CERB) to involve partners Pacific Northwest National Laboratory (PNNL), Fruit Smart, and REL Associates in the production of biomass pellets for incineration and power production. The Department of Agriculture should continue to aid in the monitoring and regulation of agricultural waste disposal.

Agricultural Wastes

Priority	Rated by SWAC
1	BFHD to continue to monitor and regulate agricultural waste disposal
2	FCDPW to provide technical assistance and education as necessary
3	FCSWAC to: 1) form an exploratory committee on biomass/energy; 2) seek a grant to conduct feasibility study; and 3) implement as appropriate, incorporating lesson learned from the Benton County process.

9.3 Appliances/White Goods

Large household appliances, also known as "white goods," are included under the definition of "bulky waste" in WAC 173-304 and are defined as enamel-coated appliances, such as washing machines, water heaters, clothes dryers, stoves, refrigerators and freezers. White goods are easily recycled after an appliance has been stripped of insulation, plastic, glass, non-ferrous metals, chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and other contaminants. Most of the material in white goods is recyclable, but environmentally threatening components, such as Polychlorinated biphenyls (PCBs) -contaminated capacitors in older appliances, mercury-containing switches, and oil-filled compressors, can cause environmental contamination when damaged. These items present a special handling and disposal problem. The kinds of hazardous materials contained in an appliance vary depending on the type of

appliance and when it was manufactured. Appliances are easily recycled after all hazardous material is removed by certified specialists. The hazardous materials are then handled and disposed of in accordance with moderate risk waste procedures.

9.3.1 Existing Conditions

There are a number of companies in Franklin County and the neighboring counties that are certified to remove CFCs and HCFCs. These companies charge a purging fee for each appliance serviced. Additional charges for reuse or disposal are added on to the price after purging. A number of appliance retail outlets have "take-back" programs, whereby the store picks up a customer's old appliance as they deliver the new appliance. Many retailers providing this service charge an additional fee for the collection and disposal of a used appliance.

Current handling of appliances for recycling in Franklin County is adequate. In the past 5 years there has only been one complaint investigated by BFHD for illegal dumpling of white goods/appliances. There are two major recyclers of white goods. Only one recycler can remove the CFCs and HCFCs. However, there are four appliance maintenance companies that are certified to remove CFCs and HCFCs. All of these companies are located in the City of Pasco. Within the greater regional area of the Tri-Cities, there are many other businesses providing this service.

9.3.2 Enhancement Options for FCSWAC Consideration

The County could consider a yearly collection event of white goods to encourage their proper disposal. Such an event could occur in conjunction with another event located near the City of Pasco to increase participation. Such an event, however, could have high costs due to the cost of equipment, manpower, advertisement, and proper disposal of any CFCs and HCFCs. The transportation costs would be minimal if the event were close to the City of Pasco and therefore close to companies certified to handle CFCs and HCFCs. Other counties in Eastern Washington have offered similar one day yearly white goods/appliances collection events, including Chelan County, which charges a $5.00 fee to offset some of the cost.

Appliances/White Goods

Priority	Rated by SWAC
1	Continue to support existing framework of managing, recycling and disposal practices
2	Continue to monitor illegal dumping
3	Support yearly collection event of white goods (perhaps in conjunction with another event if located near the City of Pasco) and promote awareness of BDI's white goods pickup policy and its availability.

9.4 Asbestos

Asbestos is defined in 40 CFR Part 61, SWAPCA 476 and WAC 296-65, as the term for a group of highly fibrous minerals that readily separate into long thin microscopic fibers. The fibers are heat resistant. They are also chemically inert and possess a high electric thermal insulation.

When asbestos-containing material (ACM) becomes easily crumbled by hand pressure, it is called friable and dangerous because it can release asbestos fibers into the air. Likewise, cutting or sanding of non-friable ACM can release asbestos fibers into the air. Friable asbestos fibers are a known carcinogen, which can cause lung cancer and other disabling and fatal diseases. When inhaled, the fibers are considered a carcinogenic air pollutant. Because pure asbestos was rarely used, the waste material of actual concern here is any material that contains asbestos in quantities greater than one percent and that is friable.

Federal regulations governing handling, transportation, and disposal of ACM are known as the National Emissions Standards for Hazardous Air Pollutants (NESHAP) (40 CFR Part 61). The main requirements for asbestos disposal include: standards for covering the waste, maintenance of waste shipment records, and maintenance of records concerning location and quantity of waste disposed. State regulations are identified by Ecology's Dangerous Waste Regulations (WAC 173-401-531) stating that asbestos waste, which contains 0.01% of friable asbestos, exceeds the criteria for carcinogenic dangerous waste and must be regulated. WAC 173-303-071(3)(m) exempts friable asbestos waste from regulation as dangerous wastes, provided these wastes are managed in compliance with, or in a manner equivalent to, the asbestos management standards of NESHAP (40 CFR Part 61).

Ecology's Eastern Washington Air Office in Spokane is the agency responsible for enforcing federal and state asbestos air regulations in Franklin County. Asbestos may only be removed by licensed asbestos contractors or by homeowners in small amounts. Asbestos contractors are licensed by the Washington State Department of Labor and Industries.

9.4.1 Existing Conditions

The use of asbestos was discontinued several years ago, but asbestos-containing materials can still be found in some building materials and other applications. The strategy of encapsulating asbestos is generally effective for preventing human exposure but this practice also has the unfortunate effect of delaying the removal and proper disposal of asbestos-containing materials. In other cases, asbestos-containing materials have simply not been discovered yet. Hence, even though the use of asbestos was discontinued many years ago, disposal capacity for asbestos-containing wastes will be needed for many more years. In the past 5 years, the BFHD has not reported any enforcement activities or rule violations in Franklin County.

Municipal solid waste landfills can accept non-friable asbestos wastes. They must meet acceptance and disposal procedures that are in compliance with federal, state, and local regulations. Asbestos waste generators in Franklin County can haul their waste to the BDI transfer station for disposal or to the Horn Rapids Landfill in Richland, Washington. The Horn Rapids Landfill has modified their waste policy to accept ACM (non-friable asbestos).

Current requirements allow homeowners to remove their own asbestos if they are doing the renovation/remodeling work themselves. Some homeowners may be unknowingly placing asbestos-containing materials from small remodeling projects in with their trash.

9.4.2 Enhancement Options for FCSWAC Consideration

Franklin County residents have adequate disposal options available at the Pasco transfer station or the Horn Rapids Landfill in Benton County. There is, however, a need is to provide education to homeowners about the proper handling of asbestos. Currently there is not a clean air authority available in the County to provide educational assistance to homeowners on proper removal and disposal of asbestos from a residence. FCDPW could work with Ecology to develop information and outreach strategies for asbestos, hopefully leading to greater public compliance with asbestos safe handling and disposal rules. This option would require the cost of manpower and materials.

The FCSWAC and the 2008 Solid Waste Plan could suggest an increased enforcement by the Washington State Department of Labor and Industries (L&I) or Health Department, as asbestos regulations require a written notice of intent to remove or encapsulate asbestos. Asbestos removal contractors must send a notice of intent to L&I. As noted previously in this section, the BFHD is responsible for ensuring that requirements for asbestos disposal are followed at landfills and transfer stations. More scrutiny by BFHD or L&I might improve handling and disposal practices for sites that have provided notification and for demolition sites. There would be greater costs incurred with this option due to increases in manpower

Asbestos

Priority	Rated by SWAC
1	Educate homeowners on proper handling methods and work with Ecology on outreach strategies
2	BFHD to continue to monitor illegal dumping
3	Increase enforcement by BFHD or L&I

9.5 Biomedical Wastes

The handling, transport, treatment, and disposal of infectious waste are regulated in some fashion by the following entities: U.S. Environmental Protection Agency, Washington Department of Ecology, Washington Department of Health, Washington Department of Transportation, Washington Utilities and Transportation Commission (WUTC), BFHD, and the National Hospital Certification Association.

Under the Medical Waste Tracking Act of 1988 (MWTA), the EPA gives states the responsibility of permitting infectious waste treatment technologies. Treatment technologies must be consistent with the requirements of Title V of the Federal Clean Air Amendments.

State law (RCW 70.95K) and administrative code (WAC 480-70-041) defines biomedical wastes to include the following:

- Animal Waste: Waste animal carcasses, body parts, and bedding of animals that are known to be infected with or that have been inoculated with human pathogenic microorganisms infectious to humans.
- Biosafety Level 4 Disease Waste: Waste contaminated with blood, excretions, exudates, or secretions from humans or animals which are isolated to protect others

from highly communicable infectious diseases that are identified as pathogenic organisms assigned to biosafety Level 4 by the Centers of Disease Control, National Institute of Health, Biosafety in Microbiological and Biomedical Laboratories, current edition.

- Cultures and Stocks: Wastes infectious to humans, includes specimen cultures, cultures and stocks of etiologic agents, wastes from production of biologicals and serums, discarded live and attenuated vaccines, and laboratory waste that has come into contact with cultures and stocks of etiologic agents or blood specimens. Such waste includes but is not limited to culture dishes, blood specimen tubes, and devices used to transfer, inoculate, and mix cultures.
- Human Blood and Blood Products: Discarded waste human blood and blood components, and materials containing free-flowing blood and blood products.
- Pathological Waste: Waste human source biopsy materials, tissues, and anatomical parts that emanate from surgery, obstetrical procedures, and autopsy. "Pathological waste" does not include teeth, human corpses, remains, and anatomical parts that are intended for interment or cremation.
- Sharps Waste: All hypodermic needles, syringes with needles attached, IV tubing with needles attached, scalpel blades, and lancets that have been removed from the original sterile package.

All types of biomedical wastes are generated in Franklin County. Pathological waste is handled separately by transporting and disposing differently than other biomedical wastes. It is sent to Utah to be incinerated.

9.5.1 Existing Conditions

Stericycle has the only franchise issued by the WUTC to collect biomedical wastes in the State of Washington. In Franklin County the quantity and composition of biomedical waste generated is not known. While most medical facilities are informed about proper management of biomedical wastes, residential generators may not be as informed about proper management for sharps (such as waste needles). The major generators of biomedical wastes in Franklin County (Lady of Lourdes Hospital and La Clinica in the City of Pasco) dispose of their wastes through Stericycle. At this time, BFHD indicates there have been neither reported problems with biomedical wastes nor identification of biomedical waste disposed improperly in the waste stream from these facilities (Kay Rottell, Phone conversation July 8, 2008). Although no problems have been identified, a potential exists for improper disposal of these wastes. The BFHD provides a brochure on proper home disposal of syringes and lancets, and refers the medical community to Stericycle for disposal options.

9.5.2 Enhancement Options for FCSWAC Consideration

The County could provide additional education for all county households along with associated medical facilities utilized by dentists and veterinarians for the safe handling and disposal of sharps. Currently BFHD does provide some education and information. The FCDPW and BFHD could work in partnership in an effort to provide more information to public. This would increase manpower costs and material costs initially but over the long term these costs are very minimal. This option would result in greater compliance with proper biomedical waste disposal.

In addition, the collection program could be expanded to include farmers and ranchers. For farmers and ranchers, a collection program might best be accomplished through farm supply stores, since this is where they purchase their syringes. The collection program could also be

enhanced by collection events in conjunction with Household Hazardous Waste events. Such collection events would ensure that a greater number of sharps are properly disposed.

Both of these collection options would have considerable costs for manpower, equipment, and disposal of waste collected. Expertise in handling biomedical waste would be required and extra precautions would need to be taken to minimize public exposure to these wastes. It would also require coordination of the farm supply stores in a county wide program.

Another option would be to conduct a biomedical waste generator survey in Franklin County. There has been little information generated to date from those generating this particular waste. Disposal practices are not known for the resident using the present disposal system. Significant costs would be incurred for the initial survey, but it could provide information that could lead to more specific management recommendations, as appropriate.

Biomedical Wastes

Priority	Rated by SWAC
1	Educational program for correct management of residential medical waste
2	Collection of sharps at a farm supply stores or collection event in conjunction with MRW
3	Conduct a survey and develop applicable management recommendations based upon survey results

9.6 Construction and Demolition Wastes

These are wastes generated from construction and demolition activities, including new and used building materials (wood, sheetrock, plastic sheeting and pipe, metals, shingles, etc.), concrete, and asphalt.

A recent change in regulations affecting these wastes is the replacement of Chapter 173-304 WAC by the new solid waste handling standards (Chapter 173-350 WAC). The new regulations eliminate a category of landfill that was previously allowed ("inert demolition landfills"), replacing it with inert landfills and limited purpose landfills. The primary difference between the two types of waste is that demolition waste is considered susceptible to decomposition, whereas inert waste is considered resistant to decomposition.

Regulatory options for disposal of C&D and inert wastes include:

- Use of inert waste as fill material: WAC 173-350-410 provides for use of limited amounts (less than 250 cubic yards) of inert waste as general unregulated fill material.
- Disposal in inert waste landfills: Inert landfills may only manage concrete, asphalt, masonry, ceramics, glass, aluminum, and stainless steel, as these materials are resistant to decomposition.
- Disposal in limited purpose landfills: Limited purpose landfills are available to accept many other types of wastes including industrial waste, demolition waste, problem waste, and wood waste. Design criteria for limited purpose landfills are performance based, subject to location standards, design and operating criteria, ground water monitoring,

and financial assurance. Limited purpose landfill design specifications may require a liner and leachate collection system.

There is a potential for demolition waste to be classified as "dangerous wastes" and be regulated under the Dangerous Waste rules (Chapter 173-303 WAC). The following wastes are potentially regulated under the Dangerous Waste rules:

- Treated Wood: New types of treated wood are now being used, and those products are treated with copper and other less-toxic chemicals instead of the previous formulation that included arsenic and chromium. So treated wood from current construction sites is not a significant concern, but treated wood from a demolition project may contain previous type of treated wood (assuming the building being demolished was constructed prior to 2004-2005).
- Paints and Other Coatings: Potential for asbestos, mercury, PCBs, and lead.
- Plumbing and Pipes: Potential for asbestos or lead.
- Fluorescent and high intensity discharge light bulbs.
- Batteries: Potential for lead, mercury, or PCBs.
- Thermostats, Switches, and Other Electrical Devices: Potential for mercury.
- Other Potentially Regulated Building Wastes (siding, flooring, insulation, fireproofing, vinyl, plaster, wallboard, adhesive, caulk and other materials) that may contain asbestos and PCBs.

9.6.1 Existing Conditions

Whoever first declares a material to be a waste, such as a contractor or property owner, is responsible for determining if the Dangerous Waste rules apply. Sampling and testing may be necessary in many cases to determine if demolition wastes are regulated under the Dangerous Waste rules.

In Franklin County there are four major facilities for concrete and asphalt recycling and re-use that report to the Department of Ecology. In 2005 over 47,260 tons were reported by these four recyclers. The resulting product is transformed back into roadway construction products

Wood waste is diverted at the transfer station. The source of the wood waste comes from pallets, new construction (homes), and some demolition activity. This wood waste is taken to the Boise Cascade plant in Walla Walla County for burning as hog fuel in their boilers. This present disposal practice meets Franklin County's needs.

According to Ecology, there are many new programs and facilities around the state to recycle and reuse material from the construction and demolition waste stream. Asphalt and concrete collected for recycling has increased dramatically since Ecology began tracking these materials in 1999 (2005 Annual Report). Construction and demolition related material represent about 95 percent by weight of the materials reported. Asphalt and concrete alone account for 67 percent of the total diverted materials.

There is increasing construction activity in Franklin County. The City of Pasco leads the county in building activity (Table 9-5). This indicates an increasing amount of C&D wastes being generated, as well as regular solid waste from the increased population (discussed in Chapter 3). The Office of Financial Management (OFM) for the State of Washington indicates that population expansion will remain steady in Franklin County (September 2007 Report) for the next twenty years.

Table 9-5 City of Pasco Building Permits and Construction Values		
Year	Number of permits issued	Construction Value
1999	1119	$43,203,822
2000	1176	$48,452,712
2001	1507	$75,840,098
2002/3	No Data	No Data
2004	2329	$248,381,025
2005	2465	$227,433,367
2006	2246	$202,283,290
2007	1886	$187,781,328

In Franklin County over the past 5 years, there has only been one enforcement action taken by BFHD because of illegal dumping of wood wastes. There are no illegal dumping sites noted for the past 3 years. However, within the general region, there have been some numerous instances of illegal dumping and sham recycling operations involving construction and demolition wastes. Recent state legislation has also highlighted a substantial problem and concern statewide regarding abuses involving these and other wastes.

9.6.2 Enhancement Options for FCSWAC Consideration

Reusing and recycling C&D materials can decrease the need for C&D waste disposal. Reuse and recycling options include:

- **Central site for recycling and reuse**

  This is a convenient way to handle large amounts of wastes, but requires a facility or facilities that are properly equipped and operated to handle this waste. An ideal option could be a facility, or a series of local facilities, that combine reuse and recycling as appropriate for the material. These facilities could sell salvaged products as well as crush or grind other materials (wood, etc.) for recycling. It would be expected that these sites or facilities would be privately owned. A public facility would be cost prohibitive unless a private partner becomes available. It would take approximately $500,000 to permit, design and build a central site for recycling and reuse in the county. There are no private companies providing this service. State and Local government do not have the financial resources available to provide such services. Currently there are private companies that provide concrete and asphalt reuse/recycling facilities which are permitted and located in Franklin County. A private/public partnership might work if it is regional (involves more than one county) and provides a reasonable cost for the service provided. A central site would ensure compliance with current BFHD rules and regulations. The FCSWC should reach out to other adjacent counties to see if this enhancement would be feasible. Benton County is also looking for partners in such a regional venture.

- **Increased education and promotion of recycling and reuse**

  An important strategy would be to get contractors and building owners to plan ahead for recycling and reuse. Educational brochures can be developed for a small cost in manpower and materials. These will be initial costs. It would provide the public with safe handling for recycling/reuse and proper disposal options when needed, ensuring compliance with existing BFHD rules and regulations.

- **Increased education about potentially dangerous materials in demolition wastes**

  Contractors and homeowners could probably benefit from more information about the potentially hazardous materials that can be uncovered during demolition activities. Information should include proper handling and disposal, as well as the potential health impacts. There would be initial costs involved in this educational approach. It could lead to greater compliance with BFHD rules and regulations, especially less illegal dumping.

- **Require deposit and proof of proper disposal when building permits are issued**

  Local city and county building officials who issue building permits could stipulate that proof of proper disposal is required. The County could require that contractors deposit money which would be returned when validation of proper disposal is proven. This option provides a negative incentive to illegally dump C&D wastes. The costs to start, maintain, and sustain such a program in Franklin County would be high. Administratively this program presents too many challenges in the short term (high costs) to be effective. In addition, this option may be controversial.

- **Create a mechanism to respond to illegal dumping and sham recycling operations**

  Franklin County should authorize the Franchised Hauler to respond to all reports of illegal dumping and sham recycling operations within Franklin County, and to clean up and properly manage all wastes that are illegally stored or disposed. The Franchised Hauler can recover the costs of these response actions through its UTC tariff.

Green Building

Also as outlined in Beyond Waste, "green" building practices create a smaller amount of C&D waste. As mentioned Chapter 3 of this plan, Ecology has adopted green building as one of the five primary initiatives in the state's Beyond Waste plan. The Beyond Waste plan adopts the following definition of green building from the United States Green Building Council (USGBC): "Design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants in five broad areas:

- sustainable site planning
- conservation of materials and resources
- energy efficiency and renewable energy
- safeguarding water and water efficiency
- "indoor air quality."

There are extenuating circumstances that make the "Green Building" option less viable than reducing and recycling wastes in Franklin County. High program implementation and

enforcement costs are expected immediately. Energy efficiency, water efficiency, indoor air quality and safeguarding water quality are being incorporated into the Uniform Building Codes, which local building officials use. While this program would be sustainable over the long term and meet safe handling and utilization of C&D wastes, its initial startup costs are very high.

Construction, Demolition and Landscaping Debris

Priority	Rated by SWAC
1	Recycling: • Increased education promoting recycling and reuse
2	Recycling: • Increased education about potentially dangerous materials in demolition wastes
3	Create mechanism for enforcement and cleanup actions within Franklin County
4	Recycling: • Evaluate deposit and proof of proper disposal when building permits are issued
5	Green Building Education

9.7 Disaster Debris

Major natural disasters can generate enormous volumes of debris in short periods of time. According to the Federal Emergency Management Agency (FEMA), natural disasters generally create the following types of debris (FEMA 2007)

- Wind: Debris consists primarily of trees, construction materials from damaged or destroyed structures and personal property.
- Floods: Debris consists of sediment, wreckage, personal belongings, and sometimes hazardous materials deposited on public and private property. Additionally, heavy rains and floods may produce landslides; in such cases, debris consists primarily of soil, gravel, rock and some construction materials.
- Earthquakes: Debris consists of building materials, personal property, and sediment caused by landslides.
- Wildfires: Debris consists of burned out structures, cars and/or other metal objects, ash and charred wood waste.
- Ice Storms or Snowstorms: Debris consists of significant amounts of woody debris from broken tree limbs and branches.
- Though not discussed in FEMA literature, Franklin County must also be prepared to manage ash fall from volcanoes situated along the Cascade Range.

The primary focus of government response teams in the aftermath of a disaster is to restore and maintain public health and safety. As a result, debris diversion programs such as recycling and

reuse can quickly become secondary. Advance planning, through a Disaster Management Plan, can help Franklin County identify options for collecting, handling, storing, processing, transporting, diverting, and disposing of debris. Preparing a plan before an emergency happens will save valuable time and resources.

9.7.1 Existing Conditions

Franklin County does not have a "Disaster Management Plan" for solid waste. Solid waste generated from a natural disaster like a weather event required local emergency management personnel to default to local officials as to where the material would be taken. There is no longer a landfill within the county, the debris cannot be burned and temporary storage sites were never identified. A major disaster event has the potential to strain the existing system to beyond its capabilities.

9.7.2 Enhancement Options for FCSWAC Consideration

Franklin County needs to develop a "Disaster Management Plan" for solid waste activities to prepare and respond to various disasters that may occur over the next 20 years. It is expected that the initial costs to develop a plan of this nature would be high. It would pre-plan disposal options for various disaster scenarios. Such a plan would identify how to comply with existing BFHD rules in the event of a disaster. Ideally a disaster management plan would include:

- Locations for emergency staging and temporary storage of debris generated by natural disasters in this plan for the public to utilize
- Develop checklists that summarize the tasks to be undertaken by the local government who are the designated debris manager and team duties.

Disaster Debris Priority	Rated by SWAC
1	Develop a disaster management plan for Franklin County • Establish locations for emergency staging and temporary storage of debris generated by natural disasters in this plan • Develop checklists that summarize the tasks to be undertaken by the local government who are the designated debris manager and team duties. • Identify the certificated solid waste operator in the County, to be responsible for transporting and disposing of debris generated by natural disasters in the county Disaster Management Plan – Text from the Seattle Urban Disaster Debris Management Plan It is important to note that in jurisdictions where solid waste collection is regulated by the WUTC, contracting with additional resources for debris collection can only be pursued if the WUTC-certified hauler is unable to provide service, and only after the contractor has been issued a temporary garbage certificate by the WUTC.

9.8 Electronic Wastes

In 2006, the Washington State Legislature passed Engrossed Substitute Senate Bill 6428, which Governor Gregoire signed into law on March 24, 2006. This is known as the Washington State Electronics Product Recycling Law. Electronic products covered in the legislation include cathode ray tube (CRT) and flat panel computer monitors having a viewable area greater than four inches when measured diagonally, desktop computers, laptops, and portable computers. The law requires manufacturers of electronic products sold in Washington State to finance and implement electronics collection, transportation, and recycling programs in Washington State no later than January 1, 2009. This program will be available to households, small governments, small businesses, and charities. Ecology will oversee this program.

Ecology finished adopting WAC 173-900 in 2007 requiring computer and television manufacturers to provide consumer-convenient recycling of their covered electronic products (CEPs) throughout our state.

9.8.1 Existing Conditions

Each year in Franklin County, businesses and citizens throw away computers, monitors, laptops, and televisions. The quantity of this waste is unknown.

In Franklin County, there are no restrictions on disposal of residential electronic waste. Disposal of commercial electronic waste follows no additional restrictions in the County beyond state and federal rules regarding hazardous or dangerous wastes. Currently, BDI handles electronic waste for a fee in Franklin County. BDI also held an E-Waste collection event in Pasco in 2004. Other small retailers continue to collect old products for recycling or reuse. Currently the BFCHD has not had to respond to illegal dumping of electronic wastes within Franklin County.

9.8.2 Enhancement Options for FCSWAC Consideration

The FCDPW could apply for a grant to inventory available opportunities for electronic waste collection and recycling within Franklin County and the adjoining counties. This study should be conducted to identify existing companies or agencies locally and regionally that can provide collection and/or recycling services for electronic waste. The cost for this study would be estimated to cost as much as $15,000 and involve a grant from an appropriate agency such as Ecology. The initial survey would be a one time effort. To sustain this collection and recycling activities over the next 20 years, funding would be required for manpower, equipment, and materials.

Based on the results of the study of available resources, the County and cities would seek to establish relationships with electronic waste recyclers in the County and surrounding region. These relationships with recyclers and associated programs to recycle electronic waste would help achieve compliance of the rules and regulations. It is expected that the electronic waste recycling would increase. However this is not cost effective because of the high cost of establishing relationships to produce an inventory of recyclers that will be constantly changing.

(This may be completely pre-empted by the MMFA, assuming it does what it is supposed to do.)

BFHD should monitor the progress of the state program for collection and recycling of electronic waste, and determine if illegal dumping occurs after the state program goes into operation. If it does, BFHD, should authorize BDI to respond to all reports of illegal dumping of electronic

waste and other wastes within Franklin County, and to clean up and properly manage all wastes that are illegally stored or disposed, BDI can recover the costs of these response actions through its UTC tariff.

Electronic Wastes

Priority	Rated by SWAC
1	Promote existing program for education.
2	BFHD continues to monitor illegal dumping

9.9 Petroleum Contaminated Soils

Petroleum Contaminated Soils (PCS) consist primarily of soils containing gasoline, kerosene, diesel, oil, or propane products or residues. Generally, this occurs as a result of leakage or spills of petroleum products. Some PCS can be contaminated with lead, benzene, solvents, and PCBs and therefore may be considered hazardous. However, this section does not discuss this type of contaminated soil.

PCS cleanup is required by Ecology's Model Toxics Control Act Cleanup Regulation (WAC 173-340, MTCA). Under the MTCA, Ecology designates soils as industrial or residential in origin, and then establishes maximum allowable hydrocarbon contamination levels according to the source of contamination. The soils are tested upon removal to determine their level of contamination. Soils over the MTCA levels are required to be reported to Ecology within 24 hours. PCS cleanup will also need to comply with the proposed WAC 173-350 regulations. PCS above MTCA cleanup levels can be treated in-situ, in place, or excavated and treated onsite or at an approved treatment facility.

9.9.1 Existing Conditions

The amount of PCS has dropped significantly over the past decade (reference). Aging gasoline and fuel tanks were discovered to be leaking several years ago, forcing a major effort to remove or upgrade these tanks and to clean up the contaminated soil below them. Most of that work has now been accomplished, and the amount of PCS has dropped off considerably (reference). The occasional problem is still discovered, however, and depending on the amount of contaminated soil and the degree of contamination will still dictate how PCS is disposed.

Proper disposal of PCS is largely the responsibility of the generator. PCS generated in Franklin County are disposed of in several ways. One option is for the generator to remediate and dispose of the soil on site. Another option is to haul the PCS to the Horn Rapids Landfill, where the wastes are land farmed, disked in with native soils, and then used as cover and road-building materials at the landfill. The BFHD monitors the acceptance of PCS at the landfill and requires testing of the material before it is used at the landfill. The Horn Rapids Landfill uses a special form and procedure to track PCS through the treatment process. PCS may also be brought to the BDI transfer station, after which it is exported to the Finley Buttes Landfill in Oregon. Generators generally choose the method of disposal based on cost.

9.9.2 Enhancement Options for FCSWAC Consideration

There are no known significant problems with PCS disposal in Franklin County at this time and therefore no enhancement options are provided.

9.10 Septage and Street Wastes

This section investigates tank pumping from septage, oil/water separators (sewer systems and storm water systems) and street sweepings associated with solids swept up from the roadway.

9.10.1 Septage

Septage is defined as semisolids consisting of settled sewage solids combined with varying amounts of water and dissolved materials generated in a septic tank system. Septage is generated from onsite sewage disposal systems, either from individual residential systems or larger community systems. All homes and businesses that are not hooked up to public or private sewer treatment systems in the County are required to treat their wastewater in an onsite sewage disposal system, consisting of a septic tank and a disposal unit, and may have additional treatment units. Septage from individual onsite septic tanks are pumped out typically every 3 to 5 years by system owners.

9.10.1.1 EXISTING CONDITIONS

BFHD currently licenses 17 contractors to pump septic tanks (BFHD phone conversation with Kay Rottell, July 8, 2007). They operate out of Washington and Oregon in various counties, including Franklin, Benton, Yakima, and Adams Counties in Washington State. The contractor is required to dispose of these materials at an approved permitted facility. Reporting requirements include the submission of a written report each month, detailing the date of the pumping, the address, the nature of the material pumped, the disposal site, and the date of disposal. Ecology is responsible for approval and permitting of septage disposal sites. Land application sites for septic wastes must meet the requirements of Chapter 173-308-270 WAC. Surface impoundments and tanks greater than 1,000 gallons, including those that hold septage, are regulated under Chapter 173-350-330 WAC.

Septage is taken out of county to a site near Finley in Benton County. This is a permitted facility for land application of septage through injection. The site is 1,200 acres in size and septage is applied at agronomic rates which equal approximately 30,000 gallons/acre/year. Injection is similar to plowing: the ground is tilled and the septage is allowed to flow into the resulting troughs.

9.10.1.2 ENHANCEMENT OPTIONS FOR FCSWAC CONSIDERATION

Currently, there is one site operating which accepts all of Franklin County's septic tank wastes (near Finley). Finding an additional site would eliminate potential "emergencies" similar to the situation which occurred in 1992. In 1992 there were no facilities in either Benton or Franklin County permitted by the health department to accept these wastes. These wastes were hauled out of the counties, which increased costs to residential and commercial septic system operators. Eliminating future uncertainties related to septic waste utilization or disposal should be considered.

9.10.2 Street Wastes

Street wastes include liquid and solid wastes collected during maintenance of storm water catch basins, retention ponds, and ditches and similar storm water treatment and conveyance structures, and solid wastes collected during street and parking lot sweeping.

Chapter 173.303 WAC, provides rules for the designation and handling of solid wastes which are deemed dangerous to the public health and the environment. A waste is a Dangerous Waste (DW) if it is listed as such in Chapter 173.303 WAC, or if it exhibits dangerous waste characteristics. The chances of street wastes containing a listed waste are remote unless a spill of dangerous waste has occurred or the site has been contaminated by an illegal discharge.

If street wastes do not meet the requirements of a DW, then it becomes a solid waste and is regulated under Chapter 173.304 WAC, when the liquids have been decanted. BFCHD authorities use Chapter 173.340 WAC Method A for residential soil cleanup level as an approximation of "clean" for solid waste reuse. Determination of waste designation is the responsibility of the generator. Sampling and testing of all street waste is recommended if a jurisdiction has never tested its street wastes.

9.10.2.1 EXISTING CONDITIONS

A number of local parking lot-sweeping companies service the business community within the City of Pasco. The primary private sector generator within this area is the Road 100 Mall and the businesses adjacent to I-82 located along Road 68. The street waste from this area is collected and disposed of by a company hired under contract by the Road 100 Mall and the various businesses along Road 68.

The City of Pasco is the primary public sector generator within Franklin County. Most street wastes collected by the City of Pasco are street sweepings and vactor waste. Vactor waste is collected (vacuum) by a vactor truck. This truck separates the liquid from the organic matter and grit and then discharges the liquid back into the sewer system. Once the organic matter and grit has been separated from the liquid it is reused as roadway material after a representative sample is collected and tested to determine if the organic matter and grits meet the criteria as a solid waste. Street sweeping wastes collected by the sweepers are also sampled and tested to determine if the organic matter and grits meet the criteria as a solid waste. This material is reused in roadway or construction projects (reference).

The other cities in the County do not currently have a street sweeping program. Street wastes from highways in Franklin County are taken to regional landfills in Benton County.

9.10.2.2 ENHANCEMENT OPTIONS FOR FCSWAC CONSIDERATION

There are no recommended improvements for street waste at this time.

Septage and Street Wastes

Priority	Rated by SWAC
1	Evaluate finding and permitting a regional facility for disposal of septage before no options for septage are available regionally
2	Support continuation of private / public management of septage and street wastes

9.11 Tires

RCW 70.95 defines "waste tires" as "tires that are no longer suitable for their original intended purpose because of wear, damage or defect." It defines "storage" or "storing of tires" as "the placing of more than 800 waste tires in a manner that does not constitute final disposal of the waste tires." It defines "transportation" or "transporting" as "picking up or transporting waste tires for the purpose of storage or final disposal."

RCW 70.95.500 requires that only authorized sites be used for tire storage or disposal of vehicle tires. Other disposal on land or in water is illegal and is punishable by a civil penalty, which shall not be less than $200, or more than $2,000 for each offense. For a 5-year period after its 1989 adoption, RCW 70.95.510 directed the assessment of a $1 per tire charge on the retail sale of new vehicle tires. The funds raised from this surcharge were used for a variety of used tire programs and studies including enforcement, public information, product marketing studies for recycled tires, pilot studies and clean up of unauthorized tire stockpiles. The state legislature allowed this surcharge to "sunset" in 1994 by not reauthorizing the statute.

RCW 70.95 was recently amended to reinstate the tire fee, effective July 1, 2005. The original tire fee, which had expired in 1994, had been used to clean up tire dumps, fund a special study of tires, and conduct other activities. The new fee is also intended to clean up unauthorized tire dumps and to help prevent future accumulations of tires. The fee is expected to raise $4.4 million per year and will expire in 2010. Other amendments provide for stricter licensing requirements and make tire transporters (licensed or not) liable for the cost of cleaning up illegally stored or dumped tires.

9.11.1 Existing Conditions

Tire dealerships remove most old tires in the process of selling new ones. These large tire retailers contract with a tire collector for transport away from the site and eventual disposal/recycling. The majority of tires collected in the county are transported out of the county or state. Likewise, the transfer station will accept tires for a fee. These tires are transported out of county for recycling.

Illegal dumping of tires is an ongoing concern. Tire piles are an ideal breeding ground for mosquitoes and a popular habitat for rodents, which are a public health concern because they can transmit disease. Tire piles can also be a threat to public safety because they catch fire easily and can be very difficult to put out. BFHD permits facility(s) within the County. There are no permitted facilities but BFHD is aware of three un-permitted piles at area wrecking yards and another at a former tire sales facility (reference).

The *Study of Unauthorized Tire Piles* (G-Logics 2005) identified 54 sites in Washington with significant and unauthorized accumulations of scrap tires. Four of the sites identified in this study are in Franklin County. These sites are estimated to contain the equivalent of 77,340 tires. Removal and proper disposal of these tires is projected to cost $198,948. This is presented in Table 9-11.

Table 9-11 Unauthorized Tire Piles in Franklin County from the *Study of Unauthorized Tire Piles* (G-Logics 2005)

Cleanup Priority	Estimated Tires	Ecology Site ID	Site Name	Comments
6	53,427	62	Tommy's	The site is a storage yard for Tommy's Auto

			Steel	Wrecking Yard located one mile to the east. According to the county health department, approx. 3,000 tires will be removed and used as part of an experimental diary farm digester. Some tires have been bale. Otherwise, large tire piles are present.
26	11,983	86	Pasco Auto Wrecking	The site was not covered by the 2005 Walker air survey, and was accessible for a site visit. A pile taller than the 10-foot high perimeter fence was visible from the road during a September 2005 drive-by. Pile sizes were approximated using a September 2004 Google Earth air photo.
27	7,264	84	Bradley's Towing	A wrecking yard containing several large tire piles. A residential neighborhood is located nearby.
50	4,665	80	Ben's Basin City Tire	This site is a former Les Schwab store. Most of the tires present are used as obstacles for a paint ball court.

Source: Study of Unauthorized Tire Piles (G-Logics 2005)

9.11.2 Enhancement Options for FCSWAC Consideration

- **Public Education Programs**

Citizens of Franklin County can be educated on proper tire maintenance, tire repair, and lifecycle costs to encourage purchase of longer-life tires. A public education campaign for tires could promote proper tire maintenance (keeping tires balanced and inflated) to extend the life of tires and reduce the number of tires disposed. This campaign can promote the reuse of tires and publicize proper recycling and disposal options within the county. Another educational example could be developed in a County Park that uses an environmental theme for exhibits that emphasize the benefits of re-use and recycling. The cost of educational programs would be moderate initially. There would be manpower and materials needed for initial start up. This type of educational program could sustain itself after an initial enhancement to the CPG funding system over the 20 year planning period. Environmental themes in parks score higher in grant funding applications for urban areas than other types of park developments. The Washington State Intergovernmental Agency Committee (IAC) provides grants for outdoor park activities and park development. Exploring opportunities for grant funding by the City of Pasco or Franklin County should be investigated.

- **Develop a collection system for tires**

Provisions could be made for ongoing collections of old tires, either for free (subsidized by Franklin County or others) or for a small fee. Tires could be transferred to a private hauler for recycling or reuse. This type of program would be cost prohibitive because of the manpower, equipment, and materials utilized to initially start up and sustain. Presently there is no a revenue stream available that will fund such an operation.

- **Municipal and County Solid Waste Staff Coordination – A request for assistance in cleaning up tire piles**

At present, tire disposal in Franklin County appear to be isolated to wrecking yards or a former tire sales facility. The BFHD will identify tire piles that do not comply with state regulations and require compliance with these regulations. In addition, the County will pursue state grants, if

available, to assist in tire pile cleanup. The recent amendment to the waste tire removal account (RCW 70.95.530) allows for "funding to state and local governments for the removal of discarded vehicle tires from unauthorized tire dump sites." FCDPW should coordinate with the BFHD on securing the grant that will remove the tire piles identified.

- **Create County and City Purchasing Programs for Recycled Tire Products**

This item was also discussed in Chapter 4. Franklin County or Pasco can use its purchasing power to promote markets for scrap tires. There are a wide variety of tire-derived products available in the marketplace such as molded rubber products (e.g., carpet underlay, flooring material, dock bumpers, patio decks, railroad crossing blocks, roof walkway pads, rubber tiles and bricks, movable speed bumps). EPA has developed recycled-content recommendations for many products made from scrap rubber. Additionally, rubberized asphalt can have applications in many public works projects and loose fill crumb rubber can be used in a variety of applications for recreation and outdoor use such as playgrounds and walking trails. Purchasing programs also can promote the use of retreads in government fleets, which is a common practice in commercial fleets for large truck tires. As mentioned in Chapter 4, EPA also has a procurement guideline developed for retread tires. The initial costs to implement a program of this nature for county and city governments are high. Manpower for initial startup is expected to be high. The FCSWAC may want to consider exploring this item at a future date, outside the six year implementation schedule.

- **Create a mechanism to respond to illegal dumping and sham recycling operations**

Franklin County should authorize the Franchised Hauler to respond to all reports of illegal dumping and sham recycling of tires and other wastes within Franklin County, and to clean up and properly manage all wastes that are illegally stored or disposed, The Franchised Hauler can recover the costs of these response actions through its UTC tariff.

- **Conduct an Annual Waste Tire Collection Event for Franklin County**

Under this option the City of Pasco and Franklin County would sponsor an annual waste tire collection event in the greater Pasco area. This would allow residents a convenient opportunity to dispose of their waste tires. In order to manage costs, collection would be limited to passenger car or utility truck tires. Commercial tires, agricultural waste tires, and plastic wheel covers would not be accepted.

Tires Priority	Rated by SWAC
1	Public education programs
2	Create a mechanism to respond to illegal dumping cases.
	Develop a safe management system for tires

10.0 ADMINISTRATION AND ENFORCEMENT

10.1 Introduction

The responsibility for solid waste administration in Franklin County is currently divided among several agencies and jurisdictions in local, county, state, and federal government. At the federal and state levels, the primary regulatory authorities for solid waste management are the Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology), respectively. At the local level, the responsibility for solid waste administration and enforcement is shared by Franklin County, the incorporated cities, and the Benton Franklin Health District.

Proper enforcement of existing laws ensures that human garbage is managed and disposed of so that it does not create a risk to human health or the environment. RCW 70.95 assigns local government the primary responsibility for planning and managing solid waste. In Franklin County and the incorporated cities within, the responsibility is theirs for providing enforcement of federal, state, and local laws and regulations. This local enforcement authority ensures that the County system meets all applicable standards for the protection of human health and the environment.

10.2 Administration and Enforcement Authority

10.2.1 State

10.2.1.1 WASHINGTON STATE DEPARTMENT OF ECOLOGY

At the state level, Ecology has the primary authority for solid waste. Ecology helps local communities with solid waste planning by:

- Administering grants to provide support for local solid waste planning activities
- Reviewing solid waste permits to ensure that facilities comply with regulations

10.2.1.2 WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION (WUTC)

As discussed in Chapter 6, the WUTC supervises and regulates solid waste collection companies. WUTC authority (Chapter 81.77 RCW and Chapter 480-70 WAC) is limited to private collection companies and does not extend to municipal collection operated by municipalities or their contractors. The WUTC requires annual revenue reports, establishes rates, and regulates service areas and safety practices. Commercial recycling is also regulated by the WUTC, under laws that apply in general to motor freight carriers (RCW 81.80). See Chapter 6 for more information about the WUTC's authority in the County.

10.2.2 County/Municipal Government

10.2.2.1 FRANKLIN COUNTY PUBLIC WORKS DEPARTMENT (FCDPW)

In Franklin County, the Solid Waste Division of the Franklin County Public Works Department manages solid wastes. The responsibilities of the FCDPW include:

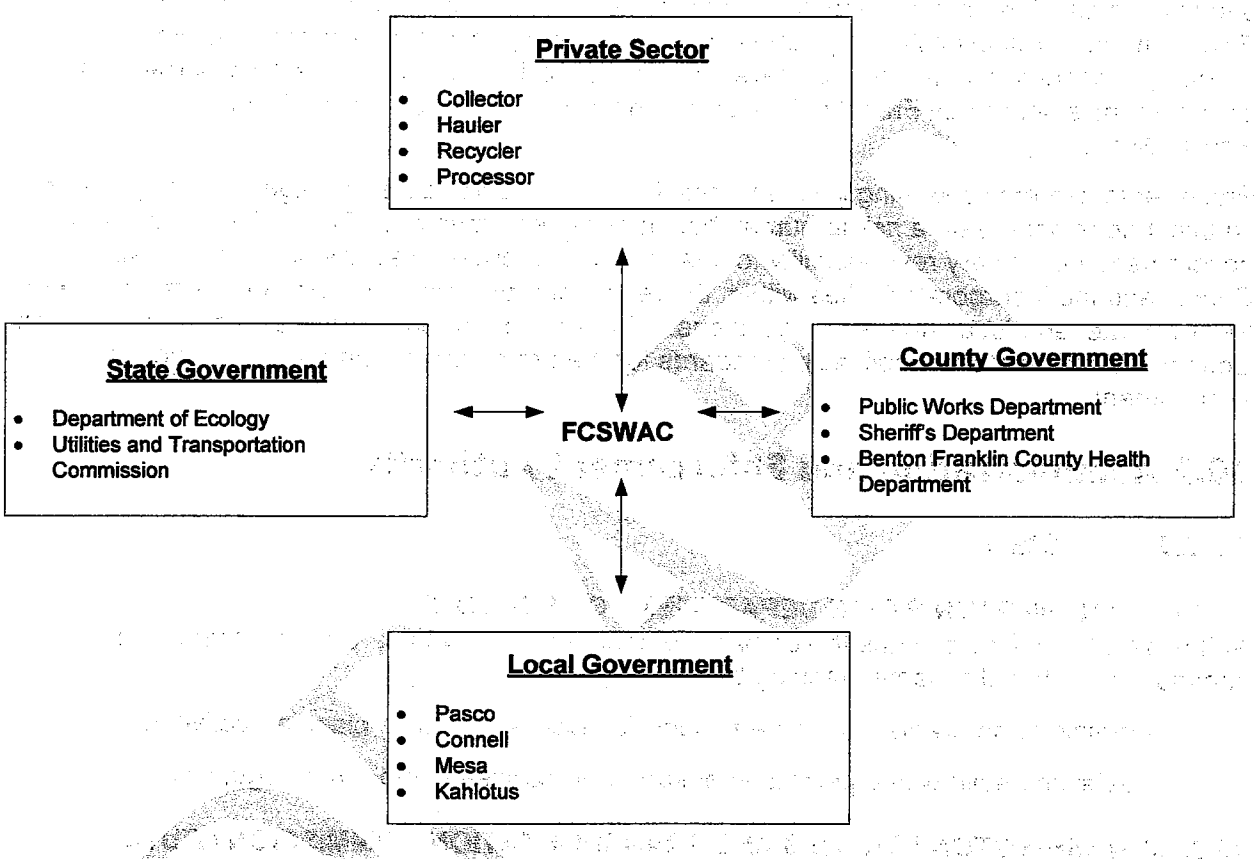
- Development and implementation of the SWMP
- Regulating the management of solid waste in the County
- Developing public education programs related to waste reduction and recycling

- Contracting with solid waste service providers

The Franklin County Solid Waste Division is funded by a surcharge fee collected from accounts in the non incorporated areas of the county. Ecology also administers a grant to the County for solid waste management planning activities and pilot projects.

Exhibit 10-1 shows the Solid Waste Division organizational structure in Franklin County.

Exhibit 10-1 Solid Waste Division Organizational Structure in Franklin County



10.2.2.2 BENTON FRANKLIN COUNTY HEALTH DEPARTMENT (BFHD)

The BFHD enforces solid waste regulations and issuing operating permits through its Environmental Health Division. In addition, BFHD is responsible for solid waste code enforcement in the County, such as monitoring illegal dumping (with the exception of Pasco, which has its own code enforcement). Ecology provides BFHD a grant to fund this enforcement. Prior to approving a permit, BFHD reviews it to ensure it complies with all relevant plans and regulations. The BFHD also inspects solid waste facilities a minimum of once a year. Much of the BFHD enforcement activities are funded by an Ecology grant.

10.2.2.3 INCORPORATED CITIES

RCW 70.95.080 requires each city to either develop a SWMP for integration into the County Plan or participate in developing the County's Plan. In Franklin County, all four incorporated cities and towns are a part of the County's solid waste management system, through an interlocal agreement (Appendix F). As discussed in Chapter 6, cities can provide solid waste collection services, however none of the cities do this in Franklin County. All the cities contract with BDI for garbage collection. Detailed information about collection in individual cities is included in Chapter 6, Collection Systems.

10.2.2.4 FRANKLIN COUNTY SOLID WASTE ADVISORY COMMITTEE (FCSWAC)

The SWAC was developed, as required under RCW 70.95.165, to develop solid waste programs and policies in Franklin County. The SWAC has a minimum of nine members, which represent different interests including local government, business, and public interest groups. SWAC members are appointed for 3-year terms. The term of the SWAC shall be at the pleasure of the Board of County Commissioners (Resolution No. xxx-2007). The FCSWAC plays a significant role in developing and updating the Franklin County Integrated Solid Plan. SWAC bylaws are provided in Appendix A.

10.2.3 Private Sector

The private sector also contributes significantly to the proper management of solid waste, and to the extent possible, public-private partnerships are used to provide the most cost-effective system. The day to day operations of collecting and properly disposing of solid waste in Franklin County is currently handled by one company (BDI, Inc.).

Collection of HHW at the privately owned transfer station is very cost effective. This is an excellent example of public-private partnerships developed over the past 25 years in Franklin County.

10.3 Current Conditions

Historically, administration of the solid waste system has been directed by the Franklin County Public Works Department. In all of the municipal jurisdictions involved, staff is assigned solid waste planning duties as necessary and these responsibilities do not represent a majority of their general job requirements. Currently, in the Public Works Department there is a full time waste reduction/recycling coordinator. The Public Works Director and the Assistant Public Works Director also work on projects as necessary. With the many new programs that are being introduced for the solid waste system and the universally complex solid waste management issues that are arising, it is important that the county and other jurisdictions involved maintain organized structures to remain current. Maintaining good communication between participating agencies and the private sector is essential to ensure programs are reasonably consistent with one another and avoid duplicate efforts.

In 2007 the FCSWAC was reactivated to provide the 2008 Integrated Solid Waste Plan. It is the lead advisory entity for long term management of solid waste issues in Franklin County. Separate sub-committees and special purpose committees will be established from time to time to address specific solid waste issues as they arise. The need for small subcommittees to analyze and provide recommendations to the FCSWAC will be determined on a case by case basis.

The Health Department officials provide permitting, monitoring and enforcement services throughout the county as provided by state law. The implementation of new standards and regulations for solid waste handling has placed an increased burden on local health departments to monitor and regulate the solid waste system.

Present Health Department responsibilities are as follows:

- Issuing permits for all solid waste facilities.
- Handling complaints and public inquiries concerning compliance with solid waste issues and regulations.
- Inspection of facilities to ensure compliance with rules, regulations, and permits.

- Granting variances, when appropriate, for solid waste facilities which do not conform to existing regulations due to unique circumstances.
- Reviewing groundwater-monitoring data to check for compliance with applicable standards, and to observe trends.
- Reviewing new technical documents for the development and management of solid waste systems.
- Enforcement of illegal dumping regulations.

Table 10-1 Enforcement and Surveillance of Solid Waste Issues from 2002 to 2006

	Year				
	2002	2003	2004	2005	2006
Illegal dumping	7	14	14	7	12
PCS				1	1
Illegal burning					1
Public Nuisance	2		3		
Hazardous waste		1			
Urban	8	13	11	2	6
Rural	1	2	6	6	8
Total yearly complaints	9	15	17	8	14
Complaint determined not solid waste issue	4	2	2	3	1

Source: BFHD data from "Complaint Records"

Illegal dumping represents the most investigated activity of solid waste enforcement by the Benton Franklin Health Department. The health department responds to all complaints in a timely manner. Each reported activity has a file written up and final deposition noted. It is worthy to note that nearly one in five complaints responded to by the health department from 2002 to 2006 was not valid.

Illegal dumping presents an environmental and public health threat, and deprives local governments of taxes and fees from the solid waste system. Illegal hauling of solid waste also deprives local governments of those revenues, undercuts the UTC franchise system, and increases costs for all customers in the system. Sham recycling operations deceive the public, pose a threat to public health and the environment, and increase costs to governments and customers.

As enforcement activities are enhanced by municipalities in urban areas by dedicating manpower (code enforcement), complaints to the health department will likely decrease. However this does not lighten the burden of helping other agencies and municipalities enforce solid waste regulations. Population projections will continue to drive service requirements in Franklin County over the next twenty years.

Environmental issues at solid waste sites can be complex and demanding on local resources. The permitting process has become more involved and requires additional time and interaction with Ecology. Monitoring and enforcement responsibilities have also grown. These increased

efforts place additional demands on Health Department staff and available funds. The Health Department may need to grow in order to continue to perform their function.

An increased awareness of the public to the problems and needs of the solid waste system may reduce the enforcement and oversight responsibilities of the county and other jurisdictions in Franklin County. The opportunities exist to provide educational programs aimed at the residents of Franklin County. These programs, which provide education on litter control, illegal dumping, waste reduction/recycling and special waste management, are intended to help the generators of solid waste in Franklin County to better understand the issues and needs for proper management. With time, this could result in a lower degree of enforcement, abatement, and monitoring activities for the County and Cities. Through greater public awareness, it is hopeful that individual citizens will better understand how the solid waste system operates and individual citizen responsibilities.

10.4 Recommended Options for Consideration by FCSWAC

- Educational Programs: The County should develop bilingual pamphlets on proper waste utilization/disposal options in Franklin County. The advantage of this approach is that it is low cost and may lead to greater compliance with solid waste regulations over time.
- Illegal Dumping, illegal solid waste hauling, and sham recycling:
    - Ecology should continue to provide grant funding for BFHD to monitor illegal dumping.
    - Franklin County should establish enforcement of solid waste laws and regulations as a priority goal.
- The County should authorize the local Franchised Hauler to respond to all reports of illegal dumping and sham recycling operations within Franklin County, and to clean up and properly manage all wastes that are illegally stored or disposed. The Franchised Hauler can recover the costs of these response actions through its UTC tariff.
- The FCSWAC Technical Advisory Subcommittee should coordinate with Ecology, UTC and others to identify illegal hauling activities, sham recycling and other violations of solid waste laws and regulations. It should also support enforcement activities and identify appropriate roles for local jurisdictions in enforcement activities.
- Littering: The County should consider reinstituting the littering hot line for Franklin County. The disadvantage of this option is the cost of initializing the program (manpower and materials). The County would also need to determine who would administer the program.
- BFHD should continue to support monitoring and enforcement for smaller cities in the County. Under the current system, the County has maintained compliance with solid waste regulations.
- The County should support local code enforcement activities, such as the City of Pasco's ongoing enforcement program within the city limits. Under the current system, the County has maintained compliance with solid waste regulations.

11.0 FINANCING AND IMPLEMENTATION

11.1 Introduction

This chapter presents Franklin County's six year financial plan for their solid waste program and a six and twenty year schedule of implementation for the recommendations made in this plan. The financial plan reviews the County's sources of funds (revenues) and application of funds (expenses) for projected future operating and capital costs.

As described in the previous chapters of this plan, the Franklin County solid waste system involves a combination of public and private sector organizations. The private sector owns and operates the county's solid waste collection, transfer, and disposal functions. Franklin County's role is to plan and manage the regional system, including implementing programs for waste recycling, waste prevention, toxicity reduction, and management of household hazardous waste. The four cities of Pasco, Connell, Kahlotus, and Mesa have various planning roles and remain focused on issues related primarily to waste collection within their boundaries. The SWAC makes recommendations to policy makers in the cities and county.

11.2 Past Financial History

In Franklin County, most solid waste activities have followed the 1994 Benton Franklin Counties Solid Waste Plan, with some minor modifications for moderate risk waste activities. The county has secured funding from Ecology in the form of grants to accomplish and continue implementation of that plan. Historically Franklin County has paid the 25% match to receive Ecology grant funds. The following two tables represent past and current program expenditures, and activities associated with those expenditures. These expenditures have not exceeded funds available and all monies, according to the County, have been spent appropriately.

Table 11-1 Past Program Expenditures

2004 - 2005	
Waste Reduction and Recycling Activities	$111,934
Moderate Risk Waste Activities	$132,048
Organics	$ 7,892
Total	$251,874
2006-2007	
Waste Reduction and Recycling Activities	$118,750
Moderate Risk Waste Activities	$136,187
Organics	$ 9,750
Total	$264,687

Table 11-2 Past and Current Solid Waste Program Activities in Franklin County		
Waste Reduction & Recycling	**Moderate Risk Wastes**	**Organics**
• Drop box recycling • Cooperation and coordination of solid waste issues • Litter clean up • Litter education (bags, anti-littering message and information) with Auditor's Office – license tabs • Waste reduction (SMART) program • Program promotion (Website, Community events, presence being sustained) • Public education • Planning • Apply for grant funds • Grant administration • E-Waste Collection Event	• Small Quantity Generator (SQG) • Collection events (MRW) • Pesticide reduction education • Partnerships (product stewardship – electronics, mercury, pesticides, solid waste) • On site business MRW audits • Used anti-freeze collection • Used oil collection • Toxics reduction education and outreach • Moderate Risk Waste (MRW) facility • Public education • Planning • Apply for grant funds • Administer grant funds	• Home composting • Christmas tree mulching • Public education • Grant administration • Planning • Grant application for Ecology funds

11.3 Financial Plan

This section presents the estimated costs for the solid waste programs recommended in this Plan. It also discusses the options available for funding and financing those costs. When citizens can make a direct connection between solid waste disposal and its associated costs, they are more likely to adopt the desired behaviors of waste reduction and recycling, and other waste management best practices.

11.3.1 Costs

The cost estimates presented in this section are conceptual planning-level estimates. The information in this chapter has been developed to conform to the WUTC Cost Assessment Guidelines for Local Solid Waste Management Planning (WUTC 2001). The WUTC cost assessment is included as Appendix G. Franklin County intends to review, revise, and extend its cost projections periodically, as needed, for good solid waste system management and to meet requirements of RCW 70.95.110.

Costs include operating and capital costs, and are described in the following sections. All known or anticipated solid waste system operating costs for the next 6 years are reflected in the following sections with as much precision and accuracy as possible (planning-level estimates).

Table 11-3 identifies Franklin County's costs to implement the recommendations in this Plan. Costs are presented in one-year increments. These annual costs are broken into the three main categories of the Department of Ecology's CPG breakdown of Waste Reduction and Recycling (WR&R), Moderate Risk Waste (MRW) and Organics (ORG).

Table 11-3 Proposed Expenditures by Year								
			2008	2009	2010	2011	2012	2013
Required by Plan								
O/M								
	WR&R		$2,000	$2000	$ 8,000	$ 8,000	$18,000	$18,000
	MRW		$1,000	$1,000	$ 2,000	$ 2,000	$ 2,250	$ 2,250
	ORGANICS		$ 500	$ 500	$ 3,000	$ 3,000	$ 8,000	$ 8,000
		SUB	$3,500	$3,500	$13,000	$13,000	$28,250	$28,250
CAPITAL								
	WR&R		$ 0	$ 0	$3,750	$3,750	$2,500	$2,500
	MRW		$1,000	$1,000	$ 0	$ 0	$ 0	$ 0
	ORGANICS		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
		SUB	$1,000	$1,000	$3,750	$3,750	$2,500	$2,500
Existing Programs								
	WR&R		$63,917	$63,917	$64,000	$64,000	$65,500	$65,500
	MRW		$77,543	$77,543	$78,667	$78,667	$80,167	$80,167
	ORGANICS		$ 3,750	$ 3,750	$ 4,000	$ 4,000	$ 5,000	$ 5,000
		SUB	$145,210	$145,210	$146,667	$146,667	$150,667	$150,667
	TOTALS		$149,710	$149,710	$163,417	$163,417	$181,417	$181,417

The activities above are further broken down yearly in Table 11-4. Additionally the capital activity costs associated with the three major program areas of WW&R, MRE, and ORGANICS are provided in Table 11-5. These have been staged out yearly in the implementation schedule. The SWAC is expected to make changes to cost activities and schedule as priorities change within the county.

11.3.1.1 OPERATING COSTS

The Plan proposes to keep the present level of activity funded with Ecology CPG funds for the next six years.

Current Program Categories

2008-2013

- Waste Reduction and Recycling
- Moderate Risk Wastes
- Organics

Franklin County's estimated new operating costs associated with program enhancements for the 6-year planning period are presented in Table 11-4. The Plan's enhanced operating costs are anticipated to total $89,500 for the activities presented herein for the next six years.

Table 11-4 Franklin County's Estimated Expanded Solid Waste Operating Costs for 2008 - 2013							
		Costs					
Major Program Area	Option	2008	2009	2010	2011	2012	2013
WR&R	Website	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500
WR&R	Tech. assistance to schools & businesses	$ 0	$ 0	$ 1,250	$ 1,250	$1,250	$1,250
WR&R	Phone Book Inserts	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
WR&R	Perform Waste Audits	$ 0	$ 0	$ 2,500	$ 2,500	$ 2,500	$ 2,500
WR&R	Waste Exchange	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
WR&R	2 Good 2 Toss	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
WR&R	Selective Purchasing (local governments)	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
WR&R	Community Survey Evaluate Curbside/Drop Box Recycling	$ 0	$ 0	$ 0	$ 0	$ 3,750	$ 3,750
MRW	New brochure	$ 0	$ 0	$ 500	$ 500	$ 0	$ 0
MRW	Tailgate Event – Connell	$ 1,000	$ 1,000	$ 0	$ 0	$ 0	$ 0
MRW	Tailgate Event – Mesa	$ 0	$ 0	$ 1,000	$ 1,000	$ 0	$ 0
MRW	Tailgate Event – Kahlotus	$ 0	$ 0	$ 0	$ 0	$ 1,000	$ 1,000
MRW	SQG Audits	$ 0	$ 0	$ 0	$ 0	$ 1,250	$ 1,250
MRW	Program Evaluation	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
WR&R	Evaluate partially staffed transfer station in Connell	$ 0	$ 0	$ 0	$ 0	$ 2,500	$ 2,500
ORGANICS	Investigate alternative disposal options	$ 0	$ 0	$ 2,500	$ 2,500	$ 0	$ 0
ORGANICS	Technical Assistance - agriculture	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500
ORGANICS	Investigate generation rates and reuse of biomass	$ 0	$ 0	$ 0	$ 0	$ 5,000	$ 5,000
WR&R	Monitor Illegal Dumping – White Goods	$ 0	$ 0	$ 500	$500	$ 0	$ 0
WR&R	White Goods Collection Event	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0

Major Program Area	Option	Cost					
		2008	2009	2010	2011	2012	2013
WR&R	Bilingual Brochure (Work with Ecology) - Asbestos	$ 0	$ 0	$ 1,000	$ 1,000	$ 0	$ 0
WR&R	Bilingual Brochure – C&D handling dangers	$ 0	$ 0	$ 1,000	$ 1,000	$ 0	$ 0
WR&R	Proper disposal permit fee (refunded)	$ 0	$ 0	$ 750	$750	$ 0	$ 0
WR&R	Write a disaster debris plan	$ 0	$ 0	$ 0	$ 0	$ 7,500	$ 7,500
WR&R	Electronic Wastes Survey	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
WR&R	Electronic Wastes – Monitor Illegal Dumping	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
ORGANICS	Locate additional septage facility in Franklin County	$ 0	$ 0	$ 0	$ 0	$ 2,500	$ 2,500
WR&R	Bilingual Brochure - Tires	$ 750	$ 750	$ 0	$ 0	$ 0	$ 0
WR&R	Seek Grant for Recycling Demonstration Park	$ 0	$ 0	$ 500	$500	$ 0	$ 0
WR&R	Finish County tire pile cleanup	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
WR&R	Bilingual Brochure – Litter	$ 750	$ 750	$ 0	$ 0	$ 0	$ 0
	Yearly Totals	$ 3,500	$ 3,500	$ 13,000	$ 13,000	$ 28,250	$ 28,250

11.3.1.2 CAPITAL COSTS

Franklin County's estimated capital costs for the 6-year planning period (2008 to 2013) are presented in Table 11-5. The County's capital costs are anticipated to total approximately $1.3 million for the planning period (2008-2028), with only a small amount projected to be spent through 2013. Table 11-5 also presents capital costs that are anticipated in the 20-year planning period. Throughout this document, where the need for additional feasibility studies is known, they have been identified, even though the potential outcome and capital expenditure recommendations resulting from such studies cannot yet be known. It is important to note the majority of the solid waste management activities rely on the private sector and very few capital costs are projected for the majority of the participating governmental jurisdictions.

Table 11-5 Franklin County's Estimated Solid Waste Capital Costs for 2008 to 2028

Year	Capital Activity Planned	Cost	Revenues Needed and Possible Sources
2008-2009	Materials Exchange - MRW	$2,000	Franklin County Coordinated Prevention Grant Offset
2010-2012	Littering "Hot Line" Signs - WR&R	$2,500	Franklin County Coordinated Prevention Grant Offset BFHD offset enforcement cost
2008 - 2013	Recycling Drop Boxes – WR&R	$10,000	Sale of recyclables Franklin County DPW Coordinated Prevention Grant Offset
	2008-2013 Subtotal	$ 14,500	
2014-2028	Regional Compost Facility (Outreach, acquisition, construction, permitting, equipment, labor) ORG	$500,000	Public/Private Partnership Agricultural processing, Landscaping companies, regional governmental agencies
2014-2028	C & D Regional Recycling Facility ORG	$500,000	Public Private Partnership Contractors Association, Construction companies, regional governmental agencies
2014-2028	Partially staffed transfer station in Connell WR&R	$225,000	User rates Coordinated Prevention Grant Offset
2014-2028	Recycling Drop Boxes (Unincorporated areas @ $5,000 station) WR&R	$30,000	Sale of recyclables Franklin County DPW Coordinated Prevention Grant Offset
	2014-2028 Subtotal	$1,255,000	

11.3.2 Sources of Funding

11.3.2.1 SURCHARGES

Franklin County has a surcharge on solid waste collected in the county's non-incorporated areas which pays for planning, educational programs, MRW disposal, and technical assistance. This surcharge has been paying for all solid waste activities funded by Franklin County.

Franklin County expects that this fund will be decreasing in the next six years due to anticipated annexations from urban growth areas into incorporated cities, especially the Pasco area.

11.3.2.2 GRANT FUNDING

Coordinated Prevention Grant Program

Under the Model Toxics Control Act (RCW 70.105D), grants are available from Ecology to local governments for solid waste management plans and programs, hazardous waste management plans and programs, and remedial actions to clean up existing hazardous waste sites. Solid and hazardous waste planning and programs are funded through the Coordinated Prevention Grants program administered by Ecology's Solid Waste and Financial Assurance Program. WAC 173-312 governs this program. The *2008-2009 Coordinated Prevention Grant Guidelines* outlines the Coordinated Prevention Grant program and the fund that supports the grants. These guidelines will most likely change every 2 years for the life of the plan as a new grant cycle is initiated. It is expected that there will be major revisions within 4 to 6 years. Much of the educational and MRW programs are funded through the Ecology CPG grant program.

Offset Cycle Ecology Grants

The offset cycle got its name because it is "offset" one year from Ecology's regular grant funding cycle. Offset cycle grants will begin on January 1, 2009, and end December 31, 2010. Offset cycle funding consists of:

1. The "Beyond Waste" Proviso funds ($4 million)
   - The "Beyond Waste" proviso requires these funds be used solely for organics composting and conversion, green building, and moderate risk waste initiatives described in the state's Beyond Waste plan.
2. Unrequested/unspent funds from the regular cycle. These funds come from:
   - Jurisdictions that do not apply for their full allocation in the regular cycle.
   - Remaining funds after the "Alternatives to Burning" proviso award process in 2007 and 2008.
   - Jurisdictions that do not use their full grant amount during the regular cycle. These funds will go to Phase Two of multiphase offset cycle grants

Table 11-6 Summary of 2009, 2011, and 2013 Offset CPG Funding Cycles

	Project Eligibility	Project Goals	Selection Criteria
Beyond Waste Proviso	Project must be consistent with local solid or hazardous waste management plans	Priorities in organics, green building, or moderate risk waste initiatives	Using five scoring elements: • outcomes • potential for lessons learned • return on investment • partnerships • need
Unrequested/ unspent funds	Same as above	• Planning • Constructing facilities • Public Education • Program Development • Special Collection Event	Same as above

		• Equipment • MRW Implementation • Green Building • Organics Facilities • Demonstration Projects	

Applicants other than a local planning authority apply for solid or hazardous waste planning and implementation grants. Applicants are required to do the following:

- Coordinate with the county in accordance with the division of responsibilities outlined in their comprehensive solid waste management plan (SWMP), hazardous waste management plan (HWMP), interlocal agreement, or resolution of adoption.
- Provide documentation that the planning authority (or designated lead agency) had the opportunity to review and confirm that the project is consistent with local solid or hazardous waste management plan(s).

Applicants for solid waste enforcement (Health Department) grants in the offset cycle are not subject to the above coordination requirements. Once the planning authority (or designated lead agency) confirms consistency for solid or hazardous waste planning and implementation grants, a health department may negotiate and sign agreements directly with Ecology. However, if specified in your SWMP or through interlocal agreement, the county may have authority to bar submittal of certain projects. Ecology may reject applications that are not coordinated with the planning authority responsible for the SWMP. Ecology encourages coordination between applicants for all projects, regardless of who is project lead.

Community Litter Pick Up Program

Community Litter Cleanup Program provides money to local governments to clean up litter and illegal dumps, as well as educate the public on the consequences of littering. It is a program to provide money to communities through interagency agreements. Franklin County has such a program that they administrate for the entire county with local district court funds used to match the money provided by Ecology. The contracts are awarded once each biennium. Franklin County will apply again in 2009.

Ecology's Alternative to Burning Grant

Ecology funds up to $2 million yearly for projects that provide alternatives to backyard burning of organic materials. Applications were received and project selections were made in October 2007. Franklin County received funding to purchase a used trackhoe, fencing, and installation of an irrigation system for the City of Kahlotus. The compost material from this facility will be used by Franklin County citizens and the local parks in Kahlotus. In the past, the City of Mesa has used the funding source for similar activities. The next application date is July 16, 2008, and will be funded from the Offset Cycle grant program.

Franklin County's projected grant funding from Ecology's CPG Program for the 6-year planning period is shown in Table 11-7.

Table 11-7 Franklin County's Projected Grant Funding from Ecology's CPG Program and Local Match (2008 to 2013)	
Year	Projected Amount
2008-2009	$290,420
2010-2011	$293,334
2012-2013	$301,334

All activity levels are expected to be funded by grants in Franklin County. The plan does not recommend additional funding beyond matching Ecology bi-annual CPG. It is expected that Ecology "Offset" CPG or other type of funding be applied for enhancing program activities that were not funded by the regular CPG cycle amount. These are the new expanded operating programs and activities.

CPG Offset funds that will be needed to fund the programs and activities the Plan recommends, the following as described in Table 11-8. The application for this grant is usually due in June of the first year CPG cycle, which will supplement the next two years.

Table 11-8 CPG Off-set Funding Needed			
	2008 - 2009	2010 – 2011	2012 - 2013
WR & R	$4,000	$25,500	$41,500
MRW	$4,000	$2,000	$4,500
Organics	$1,000	$6,000	$16,000
Totals	$9,000	$33,500	$61,500

During the next twenty years local governments will need to fund the local 25% match for Ecology grant funds based upon a percentage of the population in each entity. An equitable allocation approach has been developed where the local match requirement is provided. The local match (25%) will be provided by local government for only the amount of secured grant(s) during the next twenty years based upon the population formula and phased in according to Tables 11-8 and 11-9.

Table 11-9 Local Match Percentages	
Pasco	80%
Franklin County	13.6%
Connell	5.3%
Mesa	.7%
Kahlotus	.4%

If there are substantial population increases or decreases associated with any local jurisdiction, the population formula above will be updated. If any new areas become incorporated within Franklin County, they will be expected to adopt the Plan and participate per the updated

implementation agreement. This aspect of the Plan will be part of new "Interlocal Agreement for Plan Adoption and Implementation" found in Appendix F.

The revenues to fund the costs of the plan are presented in Table 11- 10. The local match is phased in during the next six years. The County will provide 100% for the years 2008/2009, decreasing to 50% for the years 2010/2011 and decreasing to 25% for the years of 2012/2013. Likewise the entities of Pasco, Connell, Mesa and Kahlotus will contribute to the implementation of the Plan. Starting in 2014, all local entities will pay the local match based upon population.

Table 11-10						
	2008	2009	2010	2011	2012	2013
CPG (Ecology)	$108,908	$108,908	$110,000	$110,000	$113,000	113,000
CPG Off-set (Ecology)	$3,375	$3,375	$12,563	$12,563	$23,063	$23,063
Local Match for CPG						
County	$36,303	$36,303	$20,827	$20,827	$13,259	$13,259
Pasco	$ 0	$ 0	$14,667	$14,667	$22,600	$22,600
Connell	$ 0	$ 0	$972	$972	$1,497	$1,497
Mesa	$ 0	$ 0	$128	$128	$198	$198
Kahlotus	$ 0	$ 0	$73	$73	$113	$113
Local Match for CPG Off-set						
County	$1,125	$1,125	$2,378	$2,378	$2,706	$2,706
Pasco	$ 0	$ 0	$1.675	$1,675	$4,612	$4,612
Connell	$ 0	$ 0	$111	$111	$306	$306
Mesa	$ 0	$ 0	$15	$15	$40	$40
Kahlotus	$ 0	$ 0	$8	$8	$23	$23
Totals	$149,710	$149,710	$163,417	$163,417	$181,417	$181,417

11.3.2.3 SUMMARY OF PROPOSED EXPENDITURES

	2008	2009	2010	2011	2012	2013	Total
Costs for Receivables (Capital and O&M)	149,710	149,710	163,416	163,417	181,416	181,417	989,086

CPG Grant	145,210	145,210	146,667	146,667	150,667	150,667	885,088
Ecology Match (75%)	*108,908*	*108,907*	*110,000*	*110,001*	*113,000*	*113,001*	*663,816*
County/Cities Match (25%)	*36,303*	*36,302*	*36,667*	*36,667*	*37,667*	*37,667*	*221,272*

CPG Offset	4,500	4,500	16,750	16,750	30,750	30,750	104,000
Ecology Match (75%)	*3,375*	*3,375*	*12,562*	*12,563*	*23,062*	*23,063*	*78,000*
County/Cities Match (25%)	*1,125*	*1,125*	*4,187*	*4,188*	*7,687*	*7,688*	*26,000*
Ecology Subtotal	112,282	112,283	122,563	122,563	136,063	136,063	741,816
County/Cities Subtotal	37,427	37,428	40,854	40,855	45,354	45,355	247,272
CPG Total (Regular + Offset)	149,710	149,710	163,417	163,417	181,417	181,417	989,088

11.4 Six-year Schedule of Implementation

The following is an informational breakdown in outline form and 6-year implementation schedule for program enhancements recommended in the plan.

11.4.1 Implementation Activities by Organization

The following is an outline of implementation activities by organization for the 6-year planning period.

SWAC Coordination Activity

- Sub committees
  - Recycling/Waste Reduction
    - Cities and County (Elected Officials and Staff)
    - Citizen(s) from SWAC
  - Transfer/Disposal
    - Cities and County (Elected Officials and Staff)
    - Citizen(s) from SWAC
  - Technical Advisory
    - Benton Franklin Health Department, Franklin Conservation District, Franklin County Public Works Department, Basin Disposal, Inc. and citizens from SWAC, Department of Ecology

Program Activity by SWAC Sub Committees

- Recycling/Waste Reduction
  - Education
  - Community Survey
  - Evaluation of drop box versus curbside recycling programs
  - Reports to community
- Transfer/Disposal
  - Evaluate Connell partially staffed transfer station facility
  - Evaluate biomass disposal options
- Technical Advisory
  - Enforcement
  - Special Wastes
  - Moderate Risk Wastes
  - Educational
    - Web Site (http://www.co.franklin.wa.us/solid_waste/solid_waste_options.html)
      - Newsletter
      - Bio Med (from BFHD)
    - Brochures (Bilingual)
      - Moderate Risk Waste
      - Asbestos
      - Construction and Demolition Dangerous Wastes
      - Tires
      - Enforcement

All SWAC Members

Disaster Debris Plan for Franklin County
Littering Hot Line Signs

Franklin County Public Works Department

Waste Audits
Small Quantity Generator Audits
Website Hosting for Solid Waste

BDI

Waste Exchange at MRW Facility
Evaluation of partially staffed Transfer Station in Connell

Table 11-11 Implementation Schedule for 2008-2013 and 2014-2028								
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Chapter 4	Option	2008	2009	2010	2011	2012	2013	2014 - 2028
General Items	Newsletter							
	Phonebook Inserts							
	Website							
	Provide technical assistance to schools							
	Provide technical assistance to businesses							
Waste Reduction	Form SWAC Subcommittee							
	Perform Waste Audits							
	Waste Exchange							
	2 Good 2 Toss							
	Selective purchasing policies							
	Continue Existing Programs							
Recycling	Support Buy Back Center							
	Small Business Program							
	Community Survey							
	Evaluate Curbside Options							
	Pilot Curbside Program							
	Central facility - composting							
	Continue Existing Programs							
Chapter 5	Option	2008	2009	2010	2011	2012	2013	2014 - 2028
Moderate Risk Waste	Educational Brochures							
	Tailgate Event – Connell							
	Tailgate Event – Mesa							
	Tailgate Event – Kahlotus							
	Materials Exchange Program							
MRW	SQG Waste Audits							
	Support Ag Collection Event							
	Program Evaluation							
	New Interlocal Agreement							
Chapter 6	Option	2008	2009	2010	2011	2012	2013	2014 - 2028
Collection	Continue Existing Programs							

Table 11-11 Implementation Schedule for 2008-2013 and 2014-2028								
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
	Coordination Meetings							
Chapter 7	Option	2008	2009	2010	2011	2012	2013	2014 - 2028
Transfer & Disposal	Evaluate partially staffed transfer station in Connell							
	Partially staffed transfer station in Connell							
Chapter 8	Option	2008	2009	2010	2011	2012	2013	2014 - 2028
Alternatives To Disposal	Form Sub Committee of SWAC							
	Investigative Paper							
	Evaluate Options (Biomass)							
Chapter 9	Option	2008	2009	2010	2011	2012	2013	2014 - 2028
Agricultural Wastes	BFHD to continue existing program							
	FCDPW to provide technical assistance and education as necessary							
	SWAC to form subcommittee (as noted above) to explore biomass/energy							
	Seek a grant for feasibility study							
	Implement as appropriate							
Appliances White/ Goods	Continue to support existing framework of managing, recycling and disposal practices							
	Support yearly collection event of white goods (in conjunction with another event)							
	Continue existing programs (monitoring)							
Asbestos Wastes	Continue existing program							
	Work with Ecology for outreach & education							
	Monitor illegal dumping							
	Increase enforcement by Health District or Labor and Industries							
Biomedical Wastes	Provide educational materials							
	Collection event in conjunction with MRW event							

Table 11-11 Implementation Schedule for 2008-2013 and 2014-2028		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
	Support collection of sharps at farm supply stores							
	Conduct a survey							
Construction and Demolition	Increased education promoting recycling and reuse							
	Increased education about potentially dangerous materials in demolition waste							
C & D Wastes	Central site for recycling and reuse							
	Require deposit and proof of proper disposal when building permits are issued							
	Green Building							
	Continue to monitor & enforce with BFHD							
	Evaluate existing program							
Disaster Debris	Develop disaster management plan							
	Establish staging and storage areas							
	Develop checklist for local governments							
Electronic Wastes	BFHD continues to monitor illegal dumping							
	Inventory opportunities for e-waste collection and recycling							
	Establish new relationships with collectors and recyclers of e-waste							
	Evaluate existing program							
Petroleum Contaminated Soils	Support private sector to continue managing and disposing of PCS with BFHD oversight							
Septage and Street Waste	Support continuation of private/public management of septage and street wastes							
	Find and permit a regional facility for disposal of septage before no options are available							

Table 11-11 Implementation Schedule for 2008-2013 and 2014-2028								
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Tires	Enhance public education - brochures							
	Develop a collection system for tires							
	City and County Solid Waste Staff coordination – continue to clean up large tire piles							
	Create City/County Purchasing Programs for Recycling Tires							
	Conduct an annual waste tire collection event in the county							
Chapter 10	Option	2008	2009	2010	2011	2012	2013	2014 - 2028
Enforcement	Continue to support existing practices							
	Support bilingual brochures/information packets							
	Littering Hot Line Signs							
	Coordination meetings with city and county staff							

Planning/Evaluation Period

Implementation Period

Franklin County
Solid Waste Advisory Committee
(SWAC)

BYLAWS AND MEETING PROCEDURES

I. STATEMENT OF PURPOSE

Solid Waste Advisory Committee (SWAC)

The Franklin County Solid Waste Advisory Committee (SWAC) has been appointed by the Board of County Commissioners in accordance with Chapter 70.95 (165) RCW. The statute requires the SWAC 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." These Bylaws will become a part of the County Solid Waste Plan by reference and will define the SWAC function and rules.

The scope and duties of the Franklin County Solid Waste Advisory Committee shall be to:

A. Advise Franklin County on all aspects of solid waste management planning;
B. Assist Franklin County in the development of programs and policies concerning solid waste management;
C. Review and comment on proposed solid waste management rules, policies, or ordinances prior to their adoption.

II. MEMBERSHIP AND TERMS

A. SWAC Members: The SWAC shall be composed of a minimum of nine (9) and no more than twelve (12) members 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. Nine (9) of the members shall be representatives of the cities and towns of the county and shall be recommended by their respective councils.

B. Appointment: Members shall be appointed by motion of the Board of County Commissioners.

C. Terms: Members shall serve a term of three (3) years or until their successor is appointed and confirmed as provided in the SWAC by-laws. The terms of office shall be staggered. Members may be reappointed to serve consecutive terms, but no member shall serve more than three (3) consecutive terms. Reappointment shall be subject to confirmation by motion of the Board of County Commissioners.

D. Vacancies: Vacancies shall be filled for the remainder of the term of the vacant position in the manner described in the initial appointment.

E. Participation: Members of the Committee are needed to advise on matters of public policy formulation and their regular attendance is essential. The Chair may recommend to the Board of

County Commissioners replacement of a member if three (3) consecutive meetings are missed, or half the meetings in a given year are missed.

F. Training: Members should make themselves available to participate in training workshops pertinent to current solid waste issues as they become available.

G. Substitution: An appointed member may have a person, representing the absent member's interest, attend meetings and vote in the member's place for two meetings per year.

III. MEETINGS

SWAC Meeting: 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 be provided. The committee may adopt recommendations and take other means as necessary, by a majority vote of the members present at the meeting. The committee shall hold at least one meeting each quarter. The time and place of the regular meetings shall be set by the Chair in a manner acceptable to the Committee. The Chair may cancel a meeting.

Technical Advisory Committee Workshops: The Chair, or in the Chair's absence, the Vice Chair, may call a workshop for one specific purpose, provided that proper notice is provided to each member and other interested parties describing the purposes at least twenty-four hours prior to the time scheduled for the workshop. TAC members are appointed by their own political sub division, and may or may not be associated with the SWAC.

IV. CHAIR AND VICE CHAIR

A. Chair: A majority of the committee shall elect one of its members as Chair. The term of the Chair shall be for one (1) year. The Chair shall be elected at the first meeting in January and shall serve for a term of one year. The election year and the term of the Chair will begin at the first meeting in January of each year.

B. Vice Chair: A majority of the committee shall elect one of its members as Vice Chair. The term of the Vice Chair shall be for one (1) year. The Chair shall be elected at the first meeting in January and shall serve for a term of one year. The election year and the term of the Vice Chair will begin at the first meeting in January of each year.

V. CONDUCT OF MEETINGS

A. Roberts Rules of Order: The parliamentary rules known as Roberts Rules of Order shall apply to and govern the procedures of all meetings of the Committee; provided that the Chair may elect to allow a more informal discussion format so long as business is conducted in good order and participation of all members is assured. Consensus of the members is the preferred means to resolve all questions before the Committee. Consensus is hereby defined as the absence of any no votes by members.

B. Minutes/Agendas: Minutes of all meetings shall be kept and distributed to the members within two weeks after a meeting. Meeting minutes will be approved by a majority vote of members present. Agendas will be prepared, with verbal approval of the Chair, and distributed to the members at least seven days in advance of any regularly scheduled meeting.

C. Public Access: All meetings shall be open to the public. Provision shall be made for public comment at each meeting. Approved meeting minutes shall be available to the public on request.

VI. WAIVER OF THE RULES

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

VI. AMENDMENTS

To the extent that such an amendment would not conflict with the purpose for which the Committee was established, any of these bylaws may be amended or repealed, and new bylaws may be adopted, by majority vote of the entire SWAC. Members will be provided with proposed amendments at least two weeks before action is taken to amend these bylaws.

VII. TOPICS OF REVIEW

A. County Solid Waste Plan: Formulation of the Plan, including major updates, recommendations, amendments and addenda to the Plan.

B. Moderate Risk Waste Plan: Formulation of the Plan, including major updates, recommendations, amendments and addenda to the Plan.

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

D. Other Issues: Additional questions pertaining to Franklin County's waste management program may be addressed to the Committee by the Board of County Commissioners as deemed appropriate.

Preliminary Landfill Locational Siting Evaluation

Locational criteria are standards established by regulations that govern where landfills can be located in Franklin County. They are meant to protect the environment by restricting landfills from areas where experience has shown a risk to public health and safety. Each of these standards is discussed in terms of WAC 173-351. The siting review included in this plan is intended as a general preliminary step before initiating a full-scale study for a specific facility.

Restrictions

- Airport Safety (WAC 173-351-130)
  - Not located within a five mile radius of an existing airport in Franklin County
- Floodplains (WAC 173-351-130)
  - Not located within the 100-year unless special criteria are met
- Wetlands (WAC 173-351-130)
  - Not located within a wetland unless special criteria are met
- Fault Areas (WAC 173-351-130)
  - 260 foot set back unless special criteria are met
- Seismic Impact Zones (WAC 173-351-130)
  - Not located in seismic impact zones unless special criteria are demonstrated to BFHD that all contaminant structures (liners, leachate collection systems, and surface water control systems are designed to resist the maximum horizontal acceleration in lithified earth material for the site.
- Unstable Areas (WAC 173-351-130)
  - Must demonstrate to BFHD that engineering measures have been incorporated in the landfill design to ensure that the integrity of the structural components will not be disrupted.
- Ground Water (WAC 173-351-140)
  - Liner required above 10 feet of ground water (seasonal high level)
  - Hydrogeologic report required with mandatory sections
  - Preliminary engineering required with mandatory sections
  - Design Report required with mandatory sections
  - Can not be constructed over a sole source aquifer
- Surface Water (WAC 173-351-140)
  - Not located within 200 feet of surface waters measured horizontally from the ordinary high water mark
  - Not located within 200 feet of a drinking water source or watershed control area
- Land Use (WAC 173-351-140)
  - Not located in areas designated by the United States Fish and Wildlife Service or the department of wildlife as critical habitat for endangered or threaten species.
  - Not within 200 feet of a residence
  - Not within 100 feet of land zoned nonresidential or unzoned land
  - Must comply with Franklin County Planning Departments Ordinances, Comprehensive Land Management Plan and BFHD rules.

- Toxic Air Emissions (WAC 173-351-200(5)(a),
  - must ensure that the units not violate any applicable requirements developed under the Washington state implementation plan approved or promulgated by the Federal Environmental Protection Agency pursuant to Section 110 of the Federal Clean Air Act, as amended.
  - Open burning prohibited
- Cover Material Capacity (WAC 173-351-200 (2)(a)
  - Daily cover of six inches minimum unless demonstrated to BFHD that alternative measures are acceptable
- Capacity (WAC 173-351-010 (2)(c)
  - Compliance with 173-351 is necessary
  - All landfills must adhere
- Climatic Factors
  - Arid lands must meet special criteria (WAC 173-351-300 (2)(b)
- Natural Soils
  - Must use a liner 60 mil HDPE (or equivalent) above any soils in Franklin County

Preliminary Evaluation

Geology assessment of local site is proposed. The site must meet seismographic and landslide hazards specifically.
Groundwater assessment of local area proposed to meet Franklin County Ground Water Management Area's specifications. No portion of the county is designated a sole source aquifer.
Soils in Franklin County necessitate a liner to be placed under the landfill.
Flooding occurs along either the Columbia or Snake Rivers and is controlled by the USACOE and Grant County PUD. Irrigation districts operate canals seasonally and will have to be evaluated on a case by case basis for flooding.
The Columbia and Snake Rivers are used extensively for recreation, navigation, and irrigation. Only the City of Pasco draws water from the Columbia River for potable drinking water.
Landfill must be in compliance with all Federal and State regulations.

Siting Concerns

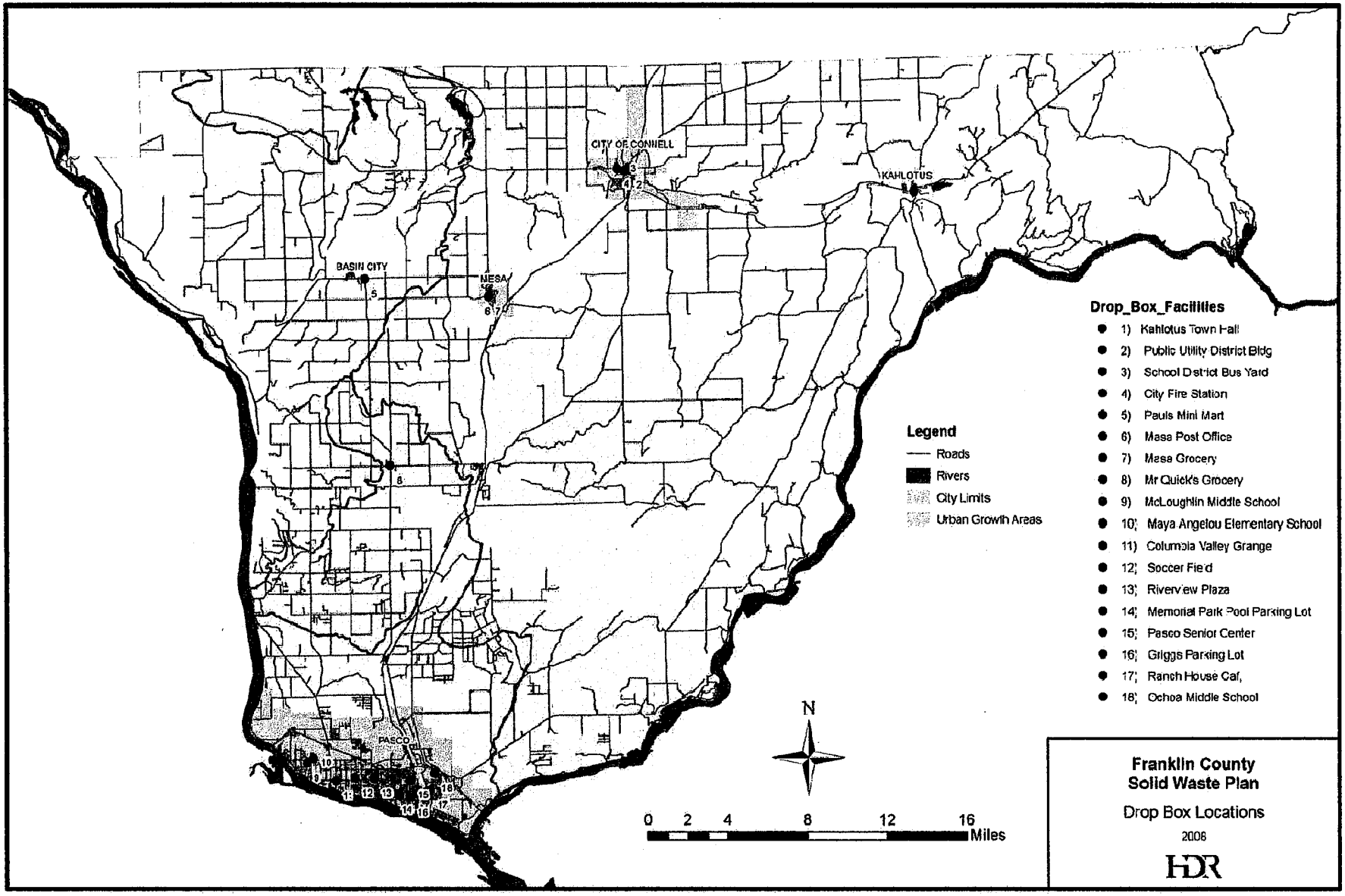
Avoidance of impacts to surrounding environment
Avoidance of ecologically sensitive areas
Avoidance of hazard prone areas
Avoidance of potential to contaminate ground water, surface water, wetlands
Avoidance of potential waste transportation corridors impacts to public and environment

Benton Franklin Health Department

Because local health agencies must ensure conformance of a permit application with the adopted solid waste plan, they would be the likely mechanism for conducting such most environmental reviews. A local land use planning agency and/or planning commission could also serve as a review instrument. It is recommended that these agencies and committees be closely involved in the development of such a process. Inclusion of land use and health agency representatives on the Franklin County Solid Waste Advisory Committee is very advantageous in this regard. Goals and policies as to the use of this process

should be developed, and implementation may require the adoption of local ordinances.

Appendix C


CITY OF CONNELL
KAHLOTUS
BASIN CITY
MESA
PASCO
Drop_Box_Facilities
1) Kahlotus Town Hall
2) Public Utility District Bldg
3) School District Bus Yard
4) City Fire Station
5) Pauls Mini Mart
6) Mesa Post Office
7) Mesa Grocery
8) Mr Quick's Grocery
9) McLoughlin Middle School
10) Maya Angelou Elementary School
11) Columbia Valley Grange
12) Soccer Field
13) Riverview Plaza
14) Memorial Park Pool Parking Lot
15) Pasco Senior Center
16) Griggs Parking Lot
17) Ranch House Cafe
18) Ochoa Middle School
Legend
Roads
Rivers
City Limits
Urban Growth Areas
N
0 2 4 8 12 16
Miles
Franklin County
Solid Waste Plan
Drop Box Locations
2008
HDR

Appendix C

COMMERCIAL

22 recycling drop-off and buy back sites that take selected materials in counties you selected

NAME	ADDRESS	COUNTY	CITY
Select Paul's Mini Mart	22553 Glade North Road	Franklin	Basin City
Select Public Utility District Bldg	N Fifth Ave and W Clark St.	Franklin	Connell
Select School District Bus Yard	N Burke Ave and E Clark St.	Franklin	Connell
Select Mr. Quick's Grocery	Eltopia West and Glade	Franklin	Merrill's Corner
Select Mesa Grocery	First Avenue	Franklin	Mesa
Select Post Office	Downtown	Franklin	Mesa
Select Basin Transfer Station	1721 Deitrich Rd.	Franklin	Pasco
Select Cascade Pallet	Port of Pasco, Bldg 6	Franklin	Pasco
Select Columbia Valley Grange	W Court St. and N Road 64	Franklin	Pasco
Select Food Pavillion	2701 West Court Street	Franklin	Pasco
Select Griggs Parking Lot	801 West Columbia St	Franklin	Pasco
Select Maya Angelou Elementary School	6001 N Road 84	Franklin	Pasco
Select McLoughlin Middle School	2803 N Road 88	Franklin	Pasco
Select Memorial Park Pool Parking Lot	N. 14th Ave and W. Shoshone St	Franklin	Pasco
Select Ochoa Middle School	1801 E Sheppard Street	Franklin	Pasco
Select Pallet Services	Call first!	Franklin	Pasco
Select Pasco Senior Center	1315 N. 7th Ave.	Franklin	Pasco
Select Ranch House Café	S California Ave and E Lewis St	Franklin	Pasco
Select Riverview Plaza	W Court Street and N Road 32	Franklin	Pasco
Select Soccer Field	W Court St and N Road 48	Franklin	Pasco
Select Tommy's Steel and Salvage	904 South Oregon	Franklin	Pasco
Select Tri Cities Batteries Inc	2104 North 4th Street	Franklin	Pasco

50 recycling pickup services that collect material(s) from customers

Appendix C

	NAME	ADDRESS	COUNTY SERVED	CITY BASED IN
Select	ABCO Wood Recycling	3704 E. Dalke	Franklin	Spokane
Select	Agco Metalex	3701 South Rd	Franklin	Mukilteo
Select	American Recycling Corporation	Pickup service	Franklin	Spokane
Select	Baker Commodities/Sunnyside/Pick-up	150 Dump Road	Franklin	Grandview
Select	Basin Recycling/Pick-Up	1721 Deitrich Rd.	Franklin	Pasco
Select	Blue Planet Recycling & Processing Corp.	Call first.	Franklin	Burnaby, BC
Select	Calbag Metals\Pick-Up	1602 Marine View Dr.	Franklin	Tacoma
Select	Cars for Homes		Franklin	
Select	Carton Services	1141 Andover Park West, Bldg. C	Franklin	Tukwila
Select	Clayton Ward Co/Pick-Up	119 East Albany	Franklin	Kennewick
Select	CMX Medical Imaging	6601 South Glacier Street	Franklin	Tukwila
Select	Darling International	2041 Marc St	Franklin	Tacoma
Select	Denton Plastics/Pick-up	4427 NE 158th Avenue	Franklin	Portland
Select	Earthworks Recycling/Pick-Up	1904 E. Broadway	Franklin	Spokane
Select	Emerald Services, Inc/Pick up	1825 Alexander Avenue	Franklin	Tacoma
Select	Flotation Services/Pick Up	2218 - 109th Ave. NE	Franklin	Bellevue
Select	Full Container Recovery	1702 Port of Tacoma Rd	Franklin	Tacoma
Select	Gless, LLC		Franklin	Auburn
Select	Great Lakes Electronics		Franklin	Detroit
Select	Green Disk	Pickup service	Franklin	Sammamish
Select	Hallmark Refining Corporation	Pickup service	Franklin	Mount Vernon
Select	HVAC Recovery/Pick Up	Call For P/U Appointment	Franklin	Kennewick
Select	Industrial Container Services	7152 1st Avenue South	Franklin	Seattle
Select	Inland ReTech	7203 East Nora Ave	Franklin	Spokane

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Select	Interstate Battery System of Yakima/Pick Up	1202 E Mead Ave	Franklin	Yakima
Select	Interstate Plastics	Pickup service	Franklin	Vancouver
Select	L & S Tire Co.	9215 39th Ave. SW	Franklin	Tacoma
Select	LifeSpan Technology Recycling	(National pickup service)	Franklin	Newton Upper Falls
Select	Lloyd Wibbelman & Company	Pick-up Service	Franklin	Snohomish
Select	Mason County Wood Recyclers	351 Millwright Road	Franklin	Shelton
Select	Northwest Tire Recycling Products	880 Curie St.	Franklin	Richland
Select	Oil Re-Refining	4150 No. Suttle Rd.	Franklin	Portland
Select	Pacific Recycling/Pick-up	1615 Chemical Drive	Franklin	Kennewick
Select	PSC/Pick Up	20245 77th Ave S	Franklin	Kent
Select	Rainier Plastics	1101 Ledwich Avenue	Franklin	Yakima
Select	Re-use Consulting		Franklin	Bellingham
Select	Recall Secure Destruction Services Inc	19821 87th Ave S	Franklin	Kent
Select	Recovered Paper Grades Plant	6328 SE 100th	Franklin	Portland
Select	Santamaria & Sons	30723 337th Pl. SE	Franklin	Ravensdale
Select	Seattle Barrel Company	4716 Airport Way	Franklin	Seattle
Select	Shred-It	18709 East Valley Highway	Franklin	Kent
Select	Technology Conservation Group	6125 A N Basin Ave.	Franklin	Portland
Select	The Grease Spot	Between Hayden Lake & Coeur d'Alene	Franklin	Coeur d'Alene
Select	Tire Disposal & Recycling/Pick-up	Pickup service	Franklin	Clackamas
Select	Tire Disposal, Inc.	14377 S Macksburg Rd.	Franklin	Molalla
Select	Tommy's Steel and Salvage/Pick-Up	904 South Oregon	Franklin	Pasco

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Select	Total Reclaim	2200 6th Ave S	Franklin	Seattle
Select	Tri Cities Batteries Inc/Pick-Up	2104 North 4th Street	Franklin	Pasco
Select	Twin City Metals/Pick Up	455 East Bruneau	Franklin	Kennewick
Select	Vehicle Donation Processing Center, Inc.		Franklin	

3 recycling mobile services that process selected material(s)

	NAME	ADDRESS	COUNTY SERVED	CITY BASED IN
Select	ABCO Wood Recycling	3704 E. Dalke	Franklin	Spokane
Select	Rainier Wood Recyclers	Mobile Grinding Service	Franklin	Auburn
Select	Rockwall Inc.	Mobile	Franklin	Spokane

3 recycling mobile services that process selected material(s)

NAME	ADDRESS	COUNTY SERVED	CITY BASED IN
Select ABCO Wood Recycling	3704 E. Dalke	Franklin	Spokane
Select Rainier Wood Recyclers	Mobile Grinding Service	Franklin	Auburn
Select Rockwall Inc.	Mobile	Franklin	Spokane

RESIDENTIAL

30 recycling drop-off and buy back sites that take selected materials in counties you selected

NAME	ADDRESS	COUNTY	CITY
Select Captain Phil's Auto Lube & Car Wash	3810 W. Court St.		Pasco
Select Call2Recycle		Franklin	
Select Paul's Mini Mart	22553 Glade North Road	Franklin	Basin City
Select City Fire Station	S Columbia Ave and W Elm Street	Franklin	Connell
Select Connell Park Estates	299 West Hawthorne	Franklin	Connell
Select Public Utility District Bldg	N Fifth Ave and W Clark St.	Franklin	Connell
Select School District Bus Yard	N Burke Ave and E Clark St.	Franklin	Connell
Select Town Hall	130 E Weston St	Franklin	Kahlotus
Select Gray's Farm Repair	13060 Glade North	Franklin	Merrill's Corner
Select Mr. Quick's Grocery	Eltopia West and Glade	Franklin	Merrill's Corner
Select Mesa Crossroads Service Station	113 N First Street	Franklin	Mesa
Select Mesa Grocery	First Avenue	Franklin	Mesa
Select Post Office	Downtown	Franklin	Mesa
Select Basin Transfer Station	1721 Deitrich Rd.	Franklin	Pasco
Select Cascade Pallet	Port of Pasco, Bldg 6	Franklin	Pasco
Select Columbia Valley Grange	W Court St. and N Road 64	Franklin	Pasco
Select Food Pavillion	2701 West Court Street	Franklin	Pasco

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Select	Griggs Parking Lot	801 West Columbia St	Franklin	Pasco
Select	Maya Angelou Elementary School	6001 N Road 84	Franklin	Pasco
Select	McLoughlin Middle School	2803 N Road 88	Franklin	Pasco
Select	Memorial Park Pool Parking Lot	N. 14th Ave and W. Shoshone St	Franklin	Pasco
Select	Ochoa Middle School	1801 E Sheppard Street	Franklin	Pasco
Select	Pasco Senior Center	1315 N. 7th Ave.	Franklin	Pasco
Select	Ranch House Café	S California Ave and E Lewis St	Franklin	Pasco
Select	Riverview Plaza	W Court Street and N Road 32	Franklin	Pasco
Select	Schuck's Auto Supply	5426 N. Rd 68	Franklin	Pasco
Select	Schuck's Auto Supply #238	738 N 20th	Franklin	Pasco
Select	Soccer Field	W Court St and N Road 48	Franklin	Pasco
Select	Tommy's Steel and Salvage	904 South Oregon	Franklin	Pasco
Select	Tri Cities Batteries Inc	2104 North 4th Street	Franklin	Pasco

21 recycling pickup services that collect material(s) from customers

	NAME	ADDRESS	COUNTY SERVED	CITY BASED IN
Select	ABCO Wood Recycling	3704 E. Dalke	Franklin	Spokane
Select	Cars for Homes		Franklin	
Select	Earthworks Recycling/Pick-Up	1904 E. Broadway	Franklin	Spokane
Select	Easter Seals Car Donation Program		Franklin	
Select	HVAC Recovery/Pick Up	Call For P/U Appointment	Franklin	Kennewick
Select	Industrial Container Services	7152 1st Avenue South	Franklin	Seattle
Select	Inland ReTech	7203 East Nora Ave	Franklin	Spokane
Select	L & S Tire Co.	9215 39th Ave. SW	Franklin	Tacoma
Select	Northwest Tire Recycling	880 Curie St.	Franklin	Richland

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	Products			
Select	Oil Re-Refining	4150 No. Suttle Rd.	Franklin	Portland
Select	Re-use Consulting		Franklin	Bellingham
Select	Recovered Paper Grades Plant	6328 SE 100th	Franklin	Portland
Select	Santamaria & Sons	30723 337th Pl. SE	Franklin	Ravensdale
Select	Seattle Barrel Company	4716 Airport Way	Franklin	Seattle
Select	Technology Conservation Group	6125 A N Basin Ave.	Franklin	Portland
Select	Tire Disposal & Recycling/Pick-up	Pickup service	Franklin	Clackamas
Select	Tire Disposal, Inc.	14377 S Macksburg Rd.	Franklin	Molalla
Select	Tommy's Steel and Salvage/Pick-Up	904 South Oregon	Franklin	Pasco
Select	Vehicle Donation Processing Center, Inc.		Franklin	
Select	Volunteers of America		Franklin	Everett
Select	Washington Council for the Blind		Franklin	

Automotive

11 recycling drop-off and buy back sites that take selected materials in counties you selected

	NAME	ADDRESS	COUNTY	CITY
Select	Captain Phil's Auto Lube & Car Wash	3810 W. Court St.		Pasco
Select	Paul's Mini Mart	22553 Glade North Road	Franklin	Basin City
Select	City Fire Station	S Columbia Ave and W Elm Street	Franklin	Connell
Select	Connell Park Estates	299 West Hawthorne	Franklin	Connell
Select	Town Hall	130 E Weston St	Franklin	Kahlotus
Select	Gray's Farm Repair	13060 Glade North	Franklin	Merrill's Corner

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Select	Mesa Crossroads Service Station	113 N First Street	Franklin	Mesa
Select	Basin Transfer Station	1721 Deitrich Rd.	Franklin	Pasco
Select	Columbia Valley Grange	W Court St. and N Road 64	Franklin	Pasco
Select	Schuck's Auto Supply	5426 N. Rd 68	Franklin	Pasco
Select	Schuck's Auto Supply #238	738 N 20th	Franklin	Pasco

Product Needed:	Safer Alternative
Ant Killer	• Caulk entry points • Kill visible ants with soapy water or vacuum • Remove sources of food and water
Brass/copper polish	• Paste of equal parts vinegar, salt, flour • Rinse well
Degreaser	• Citrus or vegetable oil-based products
Fertilizer	• Compost • Organic fertilizers
Moss killer	• ***Buildings***: zinc-galvanized or copper flashing and ridges. • ***Lawn***: correct plant deficiencies; thatch; water infrequently and deeply
Oil-based paint	• Water-based latex paint
Paint strippers	• Use strippers with "caution" label
Paint thinners	• Use water-based paints
Pesticides	• Keep plants healthy through organic fertilization, crop rotation. • Use biological controls • Organic pesticides
Roach poison	• Removes sources of food and water • Caulk cracks/crevices • Boric acid
Stainless steel cleaner	• Baking soda • Olive oil for polish
Wood preservative	• Keep wood dry • Use borax-based preservatives • Use cedar or pressure-treated lumber

Appendix D

Product Needed:	Safer Alternative
Antifreeze	• Propylene glycol-based antifreeze (less toxic)
Car battery post corrosion removal	• Baking soda and water past. • After reconnecting clamps to terminals, wipe with petroleum jelly
Car Cleaning:	
Washing	• 2 tablespoons mild dish detergent & 2 gallons warm water
Tires	• Scrub with brush & mild dish detergent & baking soda
Chrome polish	• Vinegar • Or a paste of baking soda & water
Decal remover	• Soak in hot water • OR use white vinegar
Hand cleaner (to remove paint or grease)	• Mineral/baby oil or margarine, then use soap and water
Grease/oil on floor	• Sprinkle with kitty litter or cornmeal; sweep hours later
Rug cleaner/freshner	• Sprinkle baking soda, vacuum • To absorb spills: clean with club soda, clear water or soapy water

Appendix D

FCSWAC Evaluation Tables

RECOMMENDATIONS to the Franklin County Plan by rating from the FCSWAC (The Solid Waste Advisory Committee reviewed the options discussed below and recommends the following be adopted as prioritized below or do not adopt)

MATRIX for Evaluating Options

- **Sustainability**: to what extent will this alternative provide an environmentally sound handling, utilization and/or disposal option?
- **Cost-effectiveness**: the degree to which the alternative is effective in reducing waste at a reasonable cost is also an important factor. The SWAC support of programs that can achieve the greatest amount of waste reduction for the amount spent.
- **Regulatory compliance**: to what extent will the alternative ensure that special waste is utilized or disposed in a manner which meets or exceeds federal, state, and local regulations?
- **Recommendations**: Adopt with prioritization or Do Not Adopt in Franklin County as put forward by the SWAC (based upon consultant matrix)

Rating Scores for sustainability, cost-effectiveness, and regulatory compliance are High, Medium and Low

Table A - Evaluation of Options For Agricultural Wastes				
Reasonable Option	**Sustainability**	**Cost Effectiveness**	**Regulatory Compliance**	**Recommendations**
Monitor, manage and update as necessary	High, ongoing and presently working well	High, does not add additional costs, ongoing	High, already achieving compliance	Adopt with prioritization
FCDPW provide technical assistance and education	Medium, may be better communicated by the Franklin Conservation District or WSU Extension	Medium, will add additional staff time and materials for developing this aspect of the program	High, expected to achieve compliance	Adopt with prioritization
Investigate generation and reuse of biomass	High, could provide additional source of biomass energy over the next 20 years	Low, land fill costs are presently $50/ton and biomass energy costs are $105/ton	High, expected to achieve compliance if utilized as a fuel along with MSW	Adopt with prioritization

Agricultural Wastes

Priority	Rated by SWAC
	BFHD to continue to monitor and regulate agricultural waste disposal
	FCDPW to provide technical assistance and education as necessary
	FCSWAC to form an exploratory committee on biomass/energy Seek a grant to conduct feasibility study Implement as appropriate, incorporating lesson learned from the Benton County process.

Table B - Evaluation of Options for Appliances/White Goods

Reasonable Option	Sustainability	Cost-Effectiveness	Regulatory Compliance	Recommendation
Continue to support existing framework of managing, recycling, and disposal practices	High, ongoing and presently working well	High, does not add additional costs, ongoing	High, already achieving compliance	Adopt with prioritization
Support yearly collection event	Medium, expected to compete with private sector with subsidized costs	Medium, will cost for transportation, CFC removal, staff, and special equipment	High, expected to achieve compliance	Do Not Adopt
Monitor illegal dumping	High, ongoing and presently working well	Medium, staff time and equipment involved checking out complaints	High, expected to achieve compliance	Adopt with prioritization

Appliances/White Goods

Priority	Rated by SWAC
	Continue to support existing framework of managing, recycling and disposal practices
	Support yearly collection event of white goods (perhaps in conjunction with another event
	Monitor illegal dumping.

Table C - Evaluation of Options for Asbestos				
Reasonable Option	**Sustainability**	**Cost – Effectiveness**	**Regulatory Compliance**	**Recommendations**
Educate homeowners / Work with Ecology	Medium, since asbestos is no longer being used after awhile it is expected to be totally removed from the environment	Medium, costs will be incurred for time and materials along with ongoing program maintenance	Medium, locally there is no Clean Air Authority in the County for proper compliance of air standards, expectations are not high for maximum achievement of compliance	Adopt with prioritization
Increase enforcement	Low, after an initial start of program costs will be more than desired results of sound handling and disposal	Low, expect costs to be incurred for program enforcement, like additional manpower time equipment and materials	High, expected to achieve greater compliance	Do Not Adopt
Monitor Illegal Dumping	High, ongoing and presently working well	High, does not add additional costs, ongoing	High, already achieving compliance	Adopt with prioritization

Asbestos

Priority	**Rated by SWAC**
	Educate homeowners on proper handling methods and work with Ecology on outreach strategies
	Increase enforcement by Health District or L&I
	Monitor Illegal Dumping

Table 9 D - Evaluation of Options For Biomedical Wastes				
Reasonable Option	**Sustainability**	**Cost – Effectiveness**	**Regulatory Compliance**	**Recommendations**
Additional Education	Medium, the regulations on this waste stream may change handling and	Medium, expect additional staff time for program start up and along with	High, expect greater compliance	Adopt with prioritization

	disposal options	material and equipment		
Expand collection program to incorporate at HHW Events	Medium, options may change with regulations	Low, special caution in for waste handlers, high training costs, disposal costs must be accounted for	High, expect more sharps collected, with proper handling and disposal	Do Not Adopt
Conduct a generator survey	Low, viewed as a one time activity	Medium, cost incurred for program start up and manpower to initialize	Medium, will not totally ensure proper waste disposal	Do Not Adopt

Biomedical Wastes

Priority	Rated by SWAC
	Education materials for correct management of residential medical waste
	Collection of sharps at a farm supply stores or collection event in conjunction with MRW
	Conduct a survey

Table E - Evaluation of Options for Construction and Demolition Wastes				
Reasonable Option	**Sustain-ability**	**Regulatory Compliance**	**Cost – Effectiveness**	**Recommendations**
Central site for recycling and reuse:	High, a regional facility would be satisfactory for handling, recycling and reuse	High, rules of BFHD would be met	Low, cost would be very high for property, manpower, equipment	Adopt, with prioritization
Increased education promoting recycling and reuse	High, would provide the public with safe handling and utilization methods	High, compliance expected	Medium, cost for program develop and manpower to maintain	Adopt, with prioritization
Increased education about potentially dangerous materials in demolition wastes	High, would provide the public with safe handling and utilization method	High, uppermost level of compliance	High, some initial costs	Adopt, with prioritization

Require deposit and proof of proper disposal when building permits are issue	High	High, compliance expected	Low, high manpower, and enforcement costs	Do Not Adopt
Green Building	High, would meet the safe handling and utilization of wastes for this program	High, would exceed existing rules	Medium, cost to develop a program initially are high	Do Not Adopt
Continue Monitoring with BFHD	Ongoing and sustainable	Meet existing rules of BFHD	Low cost to maintain	Adopt

Construction and Demolition Wastes

Priority	Rated by SWAC
	Central site for recycling and reuse
	Increased education promoting recycling and reuse
	Increased education about potentially dangerous materials in demolition wastes
	Require deposit and proof of proper disposal when building permits are issued
	Green Building
	Continue to monitor/enforcement with BFHD

Table F - Evaluation of Options for Disaster Debris				
Reasonable Option	**Sustainability**	**Cost – Effectiveness**	**Regulatory Compliance**	**Recommendations**
Develop a plan for Franklin County	High, will provide a good disposal option	High, initial costs are small to plan	Medium, no requirements exist to plan but a plan would create disposal that meets or exceeds present rules	Adopt, with prioritization
Include in Plan Locations for	High, will provide a place	High, initial costs are very	Medium, no requirements	Adopt, with prioritization

staging and temporary storage of debris	for sound handling of debris wastes	minimal, part of the Debris Waste Plan	exist to plan but a plan would create disposal that meets or exceeds present rules	
Include in Plan Checklists for government officials	High, will utilize existing government staff, facilities and provide the right disposal choices	High, initial costs are very minimal, part of the Debris Waste Plan	Medium, no requirements exist to plan but a plan would create disposal that meets or exceeds present rules	Adopt, with prioritization

Disaster Debris

Priority	Rated by SWAC
	Develop disaster management plan
	Establish locations for emergency staging and temporary storage of debris generated by natural disasters in this plan.
	Develop checklists that summarize the tasks to be undertaken by the local government who are the designated debris manager and team duties.

Table G - Evaluation of Options for Electronic Wastes

Reasonable Option	Sustainability	Cost – Effectiveness	Regulatory Compliance	Recommendations
Inventory and study available opportunities in county	Medium, considered to be one time study	Medium, cost for inventory /study may not achieve the greatest amount of waste reduction	Medium, not expected to achieve complete compliance	Do Not Adopt
Continue relationships with programs and recyclers	High, expect to achieve sound handling and disposal options	High, some manpower time but minimal over the next five-six years	High, compliance expected	Adopt, with prioritization
Monitor illegal dumping	High, provides a safe handling and disposal of this waste stream	Medium, some manpower costs for surveillance activities and costs if wastes are encountered	High, meets existing criteria in regulations	Adopt, with prioritization

Electronic Wastes

Priority	Rated by SWAC
	Inventory available opportunities for e-waste collection and recycling
	Establish new relationships collector and recyclers of e-waste
	BFHD continues to monitor illegal dumping

Table H - Evaluation of Options for Petroleum Contaminated Soils

Reasonable Option	Sustainability	Cost – Effectiveness	Regulatory Compliance	Recommendations
Continue to support existing programs	High, provides safe handling and utilization options	High, costs are manageable for existing program	High, existing system meets compliance regulations	Adopt, with prioritization

Petroleum Contaminated Soils

Priority	Rated by SWAC
	Private sector to continue to manage and dispose of PC soils with BFHD oversight

Table I - Evaluation of Options for Septage and Street Wastes

Reasonable Option	Sustainability	Cost – Effectiveness	Regulatory Compliance	Recommendations
Find additional site(s) regionally for Septage	Medium, do not know the length of time facility would be operational do to site limitations	Medium, manpower to find and permit a facility will cost	High, would meet existing criteria for compliance	Adopt, with prioritization
Continue existing program(s)	High, already providing a safe handling and disposal system for wastes	High, site already permitted	High, meets existing criteria for compliance	Adopt, with prioritization
Support Pasco's Street Waste Program	High, already providing a safe handling and disposal system for wastes	High	High, meets existing criteria	Adopt, with prioritization

Septage and Street Wastes

Priority	Rated by SWAC
	Find and permit a regional facility for disposal of septage before no options for septage are available regionally
	Support continuation of private / public management of septage and street wastes

Table J - Evaluation of Reasonable Options for Tires				
Reasonable Option	Sustainability	Cost – Effectiveness	Regulatory Compliance	Recommendations
Public Education Programs	High, disposal options and sound handling are good options	Medium, staff time for programs	High, already achieving compliance	Adopt, with prioritization
Develop a collection system for tires	Medium, which option to choose – disposal or recycling?	Low expected to cost to develop and sustain program	High, expect to achieve compliance	Do Not Adopt
Municipal and County Solid Waste Staff Coordination – A request for assistance in cleaning up tire piles	Medium, after the four piles are cleaned up options become limited for disposal or recycling	High, cost are grant driven	High, expect to achieve compliance	Adopt, with prioritization
Create County and City Purchasing Programs for Recycled Tire Products	High, once started the program would sustain itself by providing sound handling and recycling options	Medium, costs to implement are high	Medium, may not achieve complete compliance	Do Not Adopt
Conduct an Annual Waste Tire Collection Event for Franklin County	High, will collect tires for disposal/recycling, and provide good options	Low, cost for program start up (staff time and materials) are high	High, compliance expected	Do Not Adopt

Tires

Priority	Rated by SWAC
	Pubic education programs
	Develop a collection system for tires
	Municipal and County Solid Waste Staff Coordination – A request for assistance in cleaning up tire piles
	Create County and City Purchasing Programs for Recycled Tire Products
	Conduct an Annual Waste Tire Collection Event for Franklin County

INTERLOCAL AGREEMENT

This agreement is executed by and between Franklin County ("County") and the Cities of Pasco, Connell, Mesa and Kahlotus ("Cities") (hereinafter jointly referred to as "the parties") for the purposes of establishing an integrated solid waste management plan for Franklin County; fulfilling the Cities and County's obligations und Chapter 70.95 RCW, and other state federal laws and regulations governing solid waste management; and contributing to the health and safety of all Franklin County residents. The parties make and enter into this Interlocal Agreement ("Agreement") effective the _____ day of _____, 2007, for the purposes and under terms contained herein.

Definitions
For the purposes of this agreement and any related agreement, contracts and documents executed, adopted, or approved to this Agreement, the parties shall use the definitions found in RCW 70.950.030; 70.138.020, WAC 173-304-100 and WAC 173-350-100, unless the context indicates otherwise.

Recitals
WHEREAS, the parties recognize the need and obligation to meet federal and state mandates for solid waste management planning; and

WHEREAS, the parties believe that the integrated solid waste management plan ("Plan") can best be accomplished under the leadership of Franklin County in cooperation with the Cities, and;

WHEREAS, programs of solid waste reduction and recycling can be most effective when carried out pursuant to a coordinated Plan; and

WHEREAS, the County has secured adequate grant funding to meet the financial obligations for solid waste planning as required by law; and

WHEREAS, the parties are authorized and empowered to enter into this agreement pursuant to Chapter 39.34 RCW.

THEREFORE, in consideration of mutual promises and covenant herein, it is hereby agreed:

Franklin County:

- Prepare and submit for approval on behalf of the Cities and County a comprehensive integrated solid waste management plan as provided in RCW 780.95.080 and related provision of law. Such

plan as finally prepared, amended or modified shall be binding upon the parties in its solid waste management.

- Implement, in cooperation with the Cities, waste reduction and recycling programs within such Cities, as well as in unincorporated areas, all as enumerated in the Plan. Where appropriate and agreed, the County may provide funding to the Cities to implement such waste reduction and recycling programs.

Cities:

- Cooperatively help prepare the Integrated Solid Waste Management Plan (ISWMP) for Franklin County by participating in the Franklin County Solid Waste Advisory Committee.

- Review draft plan and respond for your city with comments to be adopted into the plan prior to formal FCSWAC recommendations.

- Any recommendation in the plan, which would result in a cost to any governmental entity shall be pre-approved by the local government before presentation to County Commission for adoption into the plan.

- Where appropriate and agreed, receive funding from the County to implement such waste reduction and recycling programs as outlined in the ISWMP.

IN TESTIMONY WHEREOF, the parties hereto have caused this agreement to be executed by their duly authorized governing authorities as of the day and year first above written.

(1) ATTEST: CITY OF PASCO SIGN FOR: CITY OF PASCO

_____ _____

City Clerk Mayor

COST ASSESSMENT QUESTIONNAIRE

Please provide the information requested below:

PLAN PREPARED FOR THE COUNTY OF: **Franklin**

PREPARED BY: **HDR, INC. and Franklin County Department of Public Works (DPW)**

CONTACT TELEPHONE:
HDR, INC. 1-509-546-2065
Franklin County DPW 1-509-545-3551

DATE: October 2008

DEFINITIONS

Please provide these definitions as used in the Solid Waste Management Plan and the Cost Assessment Questionnaire.

Throughout this document:
YR.1 shall refer to **2008**
YR.3 shall refer to **2011**
YR.6 shall refer to **2013**

Year refers to calendar: **Jan 01 - Dec 31**

1. DEMOGRAPHICS: To assess the generation, recycling and disposal rates of an area, it is necessary to have population data. This information is available from many sources (e.g., the State Data Book, County Business Patterns, or the State Office of Finance and Management).

1.1 Population

1.1.1 What is the total population of your County/City?

YR.1 **66,110** YR.3 **72,240** YR.6 **76,640**

1.1.2 For counties, what is the population of the area under your jurisdiction?

YR.1 **8,991** YR.3 **9,825** YR.6 **10,423**

1.2 References and Assumptions: **State of Washington - OFM GMA Projections (11/02/07) – Medium Series**

2. WASTE STREAM GENERATION: The following questions ask for total tons recycled and total tons disposed. Total tons disposed are those tons disposed of at a landfill, incinerator, transfer station or any other form of disposal you may be using. If other please identify.

2.1 Tonnage Recycled

2.1.1 Please provide the total tonnage recycled in the base year, and projections for years three and six.

YR.1 **27,582** YR.3 **32,689** YR.6 37,072

2.2 Tonnage Disposed

2.2.1 Please provide the total tonnage disposed in the base year, and projections for years three and six.

YR.1 **73,304** YR.3 **80,032** YR.6 **82,515**

2.3 References and Assumptions
Recycle rate estimated at 27% in year 1, 29% in year 3; and 31% in year 6

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 Please list the solid waste programs which have been implemented and those programs which are proposed. If these programs are defined in the SWM plan please provide the page number. **(Chapter 11)**

IMPLEMENTED	PROPOSED
Public Education	**Bilingual Brochures**
Moderate Risk Waste	**Materials Exchange/Waste Audits**
Outreach	**Web Page Enhancements**

3.1.2 What are the costs, capital costs and operating costs for waste reduction programs implemented and proposed?

IMPLEMENTED (Currently sustainable)

YR. 1 **$50,824** YR. 3 **$51,355** YR. 6 **$52,735**

PROPOSED (Additional Operating Costs)

YR.1 **$ 7,000** YR.3 **$ 13,000** YR.6 **$ 28,500**

PROPOSED (Additional Capital Costs)

YR.1 **$ 2,000** YR.3 **$ 7,500** YR.6 **$ 5,000**

3.1.3 Please describe the funding mechanism(s) that will pay the cost of the programs in 3.1.2.

PROPOSED TO BE IMPLEMENTED

YR.1 **Grant/Surcharge**

YR.3 **Grant/Surcharge/New Interlocal**

YR.6 **Grant/Surcharge/New Interlocal**

3.2 Recycling Programs

3.2.1 Please list the proposed or implemented recycling program(s) and, their costs, and proposed funding mechanism or provide the page number in the draft plan on which it is discussed. **(Chapter 11)**

IMPLEMENTED

PROGRAM	COST	FUNDING
Drop Box	**$12,102**	**Grant (75%) / Local Match (25%)**
Oil/Anti-freeze	**$12,102**	**Grant (75%) / Local Match (25%)**
Out-reach	**$12,102**	**Grant (75%) / Local Match (25%)**

PROPOSED

PROGRAM	COST	FUNDING
Outreach	**$9,500**	**Grant, New Interlocal, County surcharge**
MRW	**$13,000**	**Grant, New Interlocal, County surcharge**
Community Survey	**$7,500**	**Grant, New Interlocal, County surcharge**

3.3 Solid Waste Collection Programs

3.3.1 Regulated Solid Waste Collection Programs
Fill in the table below for each WUTC regulated solid waste collection entity in your jurisdiction. (Make additional copies of this section as necessary to record all such entities in your jurisdiction.)

WUTC Regulated Hauler Name: **Basin Disposal INC.**

G-permit #: **118**

	YR. 3	YR. 6
RESIDENTIAL		
- # of Customers	**5,767**	**6,136**
- Tonnage Collected	**4,783**	**4,941**
COMMERCIAL		
- # of Customers	**594**	**600**
- Tonnage Collected	**5,846**	**6,038**

3.3.2 Other (non-regulated) Solid Waste Collection Programs Fill in the table below for other solid waste collection entities in your jurisdiction. (Make additional copies of this section as necessary to record all such entities in your jurisdiction.)

Hauler Name **NA**

	YR. 1	YR. 3	YR. 6
# of Customers			
Tonnage Collected			

3.4 Energy Recovery & Incineration (ER&I) Programs
(If you have more than one facility of this type, please copy this section to report them.)

3.4.1 Complete the following for each facility: **NA**

Name: _____
Location: _____
Owner: _____
Operator: _____

3.4.2 What is the permitted capacity (tons/day) for the facility? **NA**

3.4.3 If the facility is not operating at capacity, what is the average daily throughput?

YR.1 **NA** YR.3 **NA** YR.6 **NA**

3.4.4 What quantity is estimated to be land filled which is either ash or cannot be processed.

YR.1 **NA** YR.3 **NA** YR.6 **NA**

3.4.5 What are the expected capital costs and operating costs, for ER&I programs (not including ash disposal expense)?

YR.1 **NA** YR.3 **NA** YR.6 **NA**

3.4.6 What are the expected costs of ash disposal?

YR.1 **NA** YR.3 **NA** YR.6 **NA**

3.4.7 Is ash disposal to be: **NA**
_____ on-site?
_____ in county?
_____ long-haul?

3.4.8 Please describe the funding mechanism(s) that will fund the costs of this component. **NA**

3.5 Land Disposal Program
(If you have more than one facility of this type, please copy this section to report them.)

3.5.1 Provide the following information for each land disposal facility in your jurisdiction which receives garbage or refuse generated in the county.

Landfill Name: **NA**
Owner: _____
Operator: _____

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.[1]

YR.1 **NA** YR.3 **NA** YR.6 **NA**

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.

YR.1 **NA** YR.3 **NA** YR.6 **NA**

3.5.4 Provide the cost of operating (including capital acquisitions) each landfill in your jurisdiction. For any facility that is privately owned and operated, skip these questions.

YR.1 **NA** YR.3 **NA** YR.6 **NA**

3.5.5 Please describe the funding mechanism(s) that will defray the cost of this component.

3.6 Administration Program

3.6.1 What is the budgeted cost for administering the solid waste and recycling programs and what are the major funding sources?

Budgeted Cost

YR.1 **$149,710** YR.3 **$163,417** YR.6 **$181,417**

Funding Source

YR.1 **Grants and County surcharge**
YR.3 **Grants, County surcharge, New Interlocal Agreement Contributions**
YR.6 **Grants, County surcharge, New Interlocal Agreement Contributions**

---

[1] Compacted cubic yards will be converted at a standard 600 pounds per yard. Loose cubic yards will be converted at a standard 300 pounds per cubic yard. Please specify an alternative conversion ratio if one is presently in use in your jurisdiction.

3.6.2 Which cost components are included in these estimates?
Cost components are as follows: salaries, wages, personnel benefits, supplies, other services, intergovernmental payments, capital expenditures

3.6.3 Please describe the funding mechanism(s) that will recover the cost of each component.
Funding mechanisms are grants, county surcharge, and interlocal agreements

3.7 Other Programs

For each program in effect or planned which does not readily fall into one of the previously described categories please answer the following questions. (Make additional copies of this section as necessary.)

3.7.1 Describe the program, or provide a page number reference to the plan.
Chapter 11 and Table 1 Insert

3.7.2 Owner/Operator: **Franklin County**

3.7.3 Is WUTC Regulation Involved? **No** If so, please explain the extent of involvement in section 3.8.

3.7.4 Please estimate the anticipated costs for this program, including capital and operating expenses.

YR.1 **$37,303** YR.3 **$46,668** YR.6 **$79,668**

3.7.5 Please describe the funding mechanism(s) that will recover the cost of this component.
Grant, New Interlocal Agreement, County surcharge

3.8 References and Assumptions (attach additional sheets as necessary)
Chapter 11

4. 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. Because the way a program is funded directly relates to the costs a resident or commercial customer will have to pay, this section is crucial to the cost assessment process. Please fill in each of the following tables as completely as possible.

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)
BDI Transfer Station	Trans. Station	$50.00	$0	1721 Dietrich Rd. Pasco, WA	Finley Buttes, Or.	80,689	$4,034,450

Table 4.1.2 Tip Fee Components

Tip Fee by Facility	Surcharge	City Tax	County Tax	Transportation Cost	Operational Cost	Administration Cost	Closure Costs
BDI Transfer Station	3.6% WAST Refuse Tax	Variable	3.0%	0	50.00	0	0

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
BDI	NA	NA	NA	NA	NA	NA	100%	0	0	NA

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
BDI	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00

4.2 **Funding Mechanisms** summary by percentage: In the following tables, please summarize the way programs will be funded in the key years. For each component, provide the expected percentage of the total cost met by each funding mechanism. (e.g. Waste Reduction may rely on tip fees, grants, and collection rates for funding). You would provide the estimated responsibility in the table as follows: Tip fees=10%; Grants=50%; Collection Rates=40%. The mechanisms must total 100%. If components can be classified as "other," please note the programs and their appropriate mechanisms. Provide attachments as necessary.

Table 4.2.1 Funding Mechanism by Percentage

Year One

Component	Tip Fee %	Grant %	Bond %	Collection Tax Rates %	Other %	Total
Waste Reduction		75%		25%		100%
Recycling		75%		25%		100%
Collection					100%	100%
ER&I	NA	NA	NA	NA	NA	100%
Transfer				100%		100%
Land Disposal				100%		100%
Administration		75%		25%		100%
Other	NA	NA	NA	NA	NA	100%

Table 4.2.2 Funding Mechanism by Percentage

Year Three

Component	Tip Fee %	Grant %	Bond %	Collection Tax Rates %	Other %	Total
Waste Reduction		75%		25%		100%
Recycling		75%		25%		100%
Collection					100%	100%
ER&I	NA	NA	NA	NA	NA	100%
Transfer				100%		100%
Land Disposal				100%		100%
Administration		75%		25%		100%
Other	NA	NA	NA	NA	NA	100%

Table 4.2.3 Funding Mechanism by Percentage Year Six						
Component	Tip Fee %	Grant %	Bond %	Collection Tax Rates %	Other %	Total
Waste Reduction		75%		25%		100%
Recycling		75%		25%		100%
Collection				100%		100%
ER&I	NA	NA	NA	NA	NA	100%
Transfer				100%		100%
Land Disposal				100%		100%
Administration		75%		25%		100%
Other	NA	NA	NA	NA	NA	100%

4.3 References and Assumptions

Please provide any support for the information you have provided. An annual budget or similar document would be helpful.

4.4 Surplus Funds

Please provide information about any surplus or saved funds that may support your operations.

Franklin County maintains a fund balance in one solid waste enterprise fund to guard against extraordinary or unexpected expenses, but these should not be viewed as surplus funds.

Table 1 Insert
Additional Franklin County Solid Waste Programs

Year Number	1	2	3
Recycling	$36,303	$36,668	$37,668
Moderate Risk Waste	$36,303	$36,668	$37,688
Administration	$21,782	$22,001	$22,601

A. BACKGROUND

1. Name of proposed project, if applicable:

   Franklin County 2008 Integrated Solid Waste Management Plan

2. Name of applicant:

   Franklin County Public Works Department

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

   Tim Fife, PE
   Public Works Director
   3416 Stearman Avenue
   Pasco, WA 99301
   509-545-3500

4. Date checklist prepared:

   September 2008

5. Agency requesting checklist:

   Franklin County Planning Department
   Washington State Department of Ecology

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

   It is expected that the Franklin County Integrated Solid Waste Plan will be adopted by the incorporated cities and Franklin County Commission in the late Summer or early Fall of 2008. Once adopted the plan will be submitted to Ecology for final approval and will be implemented over the course of the next six years. Specific Plan recommendations will be implemented and are shown in Chapter 11.

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

   The Franklin County Integrated Solid Waste Management Plan represents a part of an overall approach to solid waste management including moderate risk wastes. The recommendations presented in the Plan may lead to decisions regarding future waste management policies, services and facilities. Five year updates are required by Washington State Department of Ecology and as

necessary to bring the plan into compliance for funding and regulatory concerns.

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

   At this time, no environmental information relating directly to the Franklin County Integrated Solid Waste Management Plan has been prepared. However, implementation of recommendations may lead to decisions requiring an environmental impact statement or other environmental documentation to assess the environmental consequences of proposed project level actions.

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.

   Does not apply

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

    Depending on the outcome of the recommendations in the Plan, government approvals and permits may be required. Activities that would require approvals or permits include the development of new or revised facilities for collection, transfer, or disposal of solid waste, or the collection, processing, or transfer of recyclable materials. Currently the plan will be reviewed and final comments included by the following governmental agencies.
    - *Washington State Utilities and Transportation Commission*
    - *Washington Department of Ecology*

11. Give a 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.

    The Franklin County Integrated Solid Waste Management Plan describes past and current practices of solid waste management in the county. It puts forth alternatives in the form of programs prioritized by the Franklin County Solid Waste Advisory Committee and other activities to be evaluated during the implementation of this plan. From these future programs, current program enhancements and future activities the Plan makes recommendations that are summarized with the following general categories:

Waste Reduction. The Plan emphasizes waste reduction through a variety of educational programs for residential and commercial users of the solid waste system. These include additional educational material, school and business material informational materials, and waste audits for small businesses.

Recycling. Recycling programs are recommended to continue and expand as population continues to expand. This is especially true within the urban growth are of Pasco, where 80% of the people in Franklin County reside. Early efforts expand recycling through educational materials. A community survey and evaluation of curbside recycling are planned.

Moderate Risk Waste. The current Moderate Risk Waste program is incorporated into this Plan as a separate chapter. It used to be a 450 page document that was a stand alone plan. The Plan continues the existing program. It proposes to enhance program activities in education, waste reduction and collection events during the next six years.

Solid Waste Collection. Existing collection programs for solid waste will continue. The incorporated jurisdictions will examine collection rate structures and how they may be revised to promote recycling and waste reduction.

Solid Waste Transfer and Disposal. Existing direct haul, transfer, and export will continue. The Plan will evaluate the need for a partially staffed transfer station in Connell. Long term disposal options are closely tied to economic and political realities regionally.

Alternatives to Disposal. There are no disposal options in Franklin County other than export. Currently new technologies are evolving for the inclusion of solid waste into biomass for fuel or power generation. Currently it is estimated that over half of the biomass energy available in Eastern Washington is contained within Franklin County and its adjoining counties.

Special Waste Streams. There are ten separate special waste streams evaluated as to existing and future program activities by the Franklin County Solid Waste Advisory Committee. The have been prioritized as to the needs of each program individually during the next six years. There will be many enhancements in education, public outreach, and additional planning activities to be implemented.

Administration and Enforcement. Program administration and enforcement will be continued through Franklin County Department of Public Works and Benton Franklin Health Department (BFHD). Cooperation and coordination among the participating jurisdictions will be encouraged.

There is a new interlocal agreement for cooperation and financing certain plan elements planned during the next six years. BFHD will continue review and enforcement und solid waste programs. Enhancements are expected to include increased public awareness of illegal dumping and littering.

Financing and Implementation. A six and twenty year financial plan for programs and a schedule of their implementation are put forth. These recommendations were made by the Franklin County Solid Waste Advisory and prioritized as to current needs and available financial resources. Six year operations cost are expected to increase for new programs along with additional capital costs acquiring signage material for enforcement. A comprehensive cost assessment questionnaire is provided with the plan for the Washington State Utilities Commission.

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.

Each of the proposed action will take place in Franklin County.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (highlight 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 or 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, and wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.
Does not apply.

b. Are there any off-site sources of emissions or odor that may effect your proposal? If so, generally describe.
Does not apply.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:
Does not apply.

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, and 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 storm water).

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.

Proposed measured to reduce or control surface, ground and runoff water impacts, if any:

Does not apply.

4. Plants

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

√ deciduous tree: Russian Olive, Black Cottonwood, Willow, other
√ evergreen tree: Juniper, other
√ shrubs
√ grass
√ pasture
√ crop or grain
√ wet soil plants; cattail, sedges, bulrush, canary reed grass, other
√ water plants: milfoil, star-grass, other
√ other types of vegetation

Does not apply.

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.

5. Animals

a. Highlight 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, waterfowl, quail, pheasants, other
mammals: deer, bear, elk, beaver, other
fish: bass, salmon, trout, herring, shellfish, other

Does not apply.

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? Is so, explain.
Does not apply.

d. Proposed measures to preserve or enhance wildlife, if any:
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.
Does not apply.

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? Is so, describe.
Does not apply.

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)?
Does not apply.

2. What types and levels of noise would be created by or associated with the project on short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hour's noise would come from the site.
Does not apply.

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?
Does not apply.

b. Has the site been used for agriculture? If so, describe.
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 reside or work in the completed area?
Does not apply.

k. Proposed measures to avoid or reduce displacement impacts, if any:

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, 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 use? 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 places or objects listed on, or proposed for, national, state or local preservation registers known to be on or next to the site? If so, generally describe.
Does not apply.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.
Does not apply.

c. Proposed measures to reduce or control impacts, if any:
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.
Does not apply.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?
Does not apply.

c. How many parking spaces would the completed project have? How many would the project eliminate?
Does not apply.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, 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.
Does not apply.

g. 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. Highlight 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 City is relying on them to make its decisions.

Signature _____

Date Submitted: _____, 2008

D. SUPPLEMENTAL SHEET FOR NONPROJECT 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 implementation of solid waste recommendations in the Plan will not be likely to increase discharges or emissions of pollutants. In fact, the Plan's recommendations are intended to reduce the risks of environmental contamination. Some additional noise will be generated by loading recyclables and by vehicles used to collect recyclables.

The waste reduction and recycling, moderate risk waste, collection, and education programs included in this Plan would lead to an overall decrease in the release of contaminants to the environment. The production of these wastes decrease, on average, if waste reduction education is effective.

Proposed measures to avoid or reduce such increases are:

The Plan itself is intended to reduce discharges of contaminants or materials which could lead to environmental contamination. No other measures are proposed.

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

It is likely that the Plan will have beneficial effect on plants, animals, and fishery resources in Franklin County. Programs included in the Plan are intended to result in improved collection, handling, and disposal of solid waste so that the resources such as plants, animals, and fish may be better protected from illegal dumping or discharges of these wastes.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

The Plan itself is intended to reduce the potential for plant, animal, and fish exposure to solid waste contaminants.

3. How would the proposal be likely to deplete energy or natural resources?

The Plan's recommendations would not be likely to deplete energy or natural resources.

Proposed measures to protect or conserve energy and natural resources are:

The Plan would promote protection of natural resources such as ground and surface water through the implementation of improved management techniques for solid waste.

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?

None of components of the Plan would be likely to use or affect environmentally sensitive areas or areas designated for governmental protection.

Proposed measures to protect such resources or to avoid or reduce impacts are:

Specific sites developed as a result of the plan will be subject to environmental review in order to avoid or reduce impacts to these areas.

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

The plan would not affect land and shoreline use in Franklin County. Any specific facility or site proposed as a result of the plan will have an environmental evaluation prior to siting. Under current Franklin County environmental ordinance, specific conditions may be placed on site locations to mitigate adverse impacts. The plan is compatible with existing land uses and plans.

Proposed measures to avoid or reduce shoreline and land use impacts are:

Because the Plan would not affect land or shoreline use in Franklin County no measures are proposed to avoid or reduce these impacts.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

The demand for public services in Franklin County would increase under the Plan due to the need to implement solid waste education, moderate risk waste

education, compliance elements and special waste programs of the Plan. The implantation of these programs would be under the authority of Franklin County, the cities of Pasco, Connell, Mesa, and Kahlotus, Benton Franklin Health Department respectfully. Additional transportation requirements will result fro collection of recyclables as new drop-off points are created in the cities and county

Proposed measures to reduce or respond to such demand(s) are:

The increase in demand for transportation and public services to result from the Plan would be met by expanding the responsibilities of the governmental agencies. It will be necessary for cooperation and coordination of solid waste activities in the future to insure that programs are adequate and received well by the public. Financing for expanded roles and responsibilities will be available from local and state sources.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

The Plan does not conflict with any existing local, state or federal laws or requirement for the protection of the environment. Specific projects to result from the requirements contained in this plan will need to be considered in terms of their compliance with local, state, and federal environmental laws and requirements.

Franklin County Draft Solid Waste Plan Comments	
Comment	**Response**
Chapter 1 Comments	
WAC 173.351 regarding landfill regulations need to be included because of the closure of New Waste, Inc. landfill.	A description has been added as Section 1.3.7.
Item 1.3.4, the Waste Not Washington Act, is no longer funded.	Added the statement that the funding was sunsetted in 1996.
Question about why Oregon wastes were addressed.	They are addressed because the local hauler uses an Oregon landfill.
Question about why the recommendations from the 1977 SWMP were included.	These were included to provide history of solid waste management in the County.
Question regarding whether or not disposal facilities report annual tonnage to the Health District.	This is a requirement to report to Ecology and the Health District. Disposal facilities must receive a permit, which must be renewed annually.
Chapter 2 Comments	
At this time there seems to be a 20% discrepancy in population figures for Franklin County. They do not want to see anything above 10%, but would like to have it down to a 2 to 3% discrepancy.	We have updated the population figures with estimates from OFM's 2007 medium series population projection.
Section 2.1.1 (Non-agricultural Economy) – the list of non-agricultural employers does not seem to reflect all major employers. The PUD, school districts, and the City of Pasco were not considered, and there are probably more.	Table 2-1 has been updated.
Section 2.3 (Land Use) – Is there an actual increase in farming operations?	Yes, this is addressed in Section 2.1.2 and Section 2.2.
Section 2.3 (Land Use) – Is agricultural waste different?	Yes, but typically farms are good at managing their own wastes internally. They also have to run under their own management plans. For instance, dairies are required to have a Nutrient Management Plan, which may include a land application for some of their wastes.
Section 2.4.1 (Physical Description) – States a high of 75.7° F as an average temperature. Add a sentence to read that it is not unusual to reach triple digits during summer months.	Section 2.4.2 has been updated.
Section 2.6 (Waste Stream Analysis) – Will we be addressing historic and future disposal costs?	Historic and future disposal costs are addressed in Chapter 11.
Section 2.6 (Waste Stream Analysis) – Is there a breakdown of residential, commercial, and industrial wastes, and if so, are they going to be dealt with in the plan?	BDI accounted for waste as either commercial or residential. A sentence has been added in Section 3.1.
Section 2.6 (Waste Stream Analysis) – It was suggested that Chapter 2 be divided into two separate chapters.	Chapter 2 was separated into Background of the Planning Area and Waste Stream Analysis chapters.
Chapter 3 Comments	
See Chapter 2 comments	
Chapter 4 Comments	

Franklin County Draft Solid Waste Plan Comments	
Comment	**Response**
What is the economic viability of preparing the SWMP?	If there is no plan in place, the County risks losing state funding if goals are not implemented.
How likely is it that the proposed yard waste ban will be in place by 2012? By Ecology reducing staff in this area, it seems the state ahs backed off this 2012 goal at this time. A ban is unlikely unless there are other alternatives available.	Stated that Franklin County's waste is exported to Oregon so may not have as big an effect on FC.
Why aren't there recycling opportunities in apartments?	There is too much contamination.
How can we prioritize the exiting education programs when we don't know the costs associated with any of them? HDR will provide costs at a later date. The SWMP will have budgets available in 6-year increments.	The educational programs were prioritized as follows: 1. Website improvements 2. Bilingual outreach materials 3. Technical assistance to schools and businesses 4. Phone book section insert 5. Direct mailing newsletter Cost information is provided in Chapter 11.
The SWAC prioritized education and outreach programs as follows: 1. Direct mailing newsletter 2. Website improvements 3. Bilingual outreach materials 4. Phone book insert 5. Technical assistance to schools and businesses	The educational programs were prioritized as follows: 1. Website improvements 2. Bilingual outreach materials 3. Technical assistance to schools and businesses 4. Phone book section insert 5. Direct mailing newsletter
Section 4.2.1 – Suggest removing the 7th bullet regarding "Away with Waste" as this program is no longer offered by Ecology.	This statement has been removed.
Section 4.3 – Suggest changing first bullet to "Achieve a diversion goal."	This working has been changed.
Section 4.3 – Suggest removing from the 5th bullet "subsidizing repair businesses and providing tax credits or exemptions to industries that meet set goals or design criteria."	This statement has been removed.
Section 4.4.1 – The last bullet that provides for new opportunities for recycling could result in additional costs. With tremendous growth in the County, this is a necessity to locate more locations.	Section 4.4.4.1 recommends new drop-box facilities are opened, as necessary.
Section 4.4.3 – Suggest adding antifreeze, concrete, asphalt, dirt, rocks, and batteries. If not included in the SWMP, they can't be exempt from permitting.	Additional narrative was added after Table 4-1. Table 4-1 will not be addressed at this time.
Table 4-1 – Change BDI hours to 9 to 5, Monday through Saturday.	This language has been updated.
Section 4.4.4.3 – Suggest removing the sentence "The City of Mesa offers a composting workshop...its residents."	This statement has been removed.
Section 4.4.5.2 – Suggest removing the last sentence of the 2nd paragraph, "Organic wastes are generated...or another treatment	This statement has been removed.

Franklin County Draft Solid Waste Plan Comments	
Comment	**Response**
process."	
Section 4.4.5.2 - Suggest removing "County landfill" from the 4th paragraph	This phrase has been removed and replaced with "transfer station."
Section 4.4.5.4 – Suggest adding the phrase "when done properly" to the 1st sentence of the last paragraph to read, "The easiest yard waste...outlay, when done properly."	This phrase has been added.
Section 4.5 – Suggest changing the 5th bullet under recycling recommendations to read, "investigate creating a pilot curbside recycling program in Pasco."	This sentence has been changed.
Section 4.5 – Suggest adding beautification to drop box centers.	This has been added as a recommendation
Darrick Dietrich's Comments	
A full cost accounting would be necessary to show the impact of "making recycling at least as affordable" as disposal.	Comment noted. This is the State's language.
I would like the Plan to specifically support "the disposal system" first and foremost before applying the "waste reduction, reuse, and recycling" strategy. This simply keeps health issues as the primary goal before other priorities are established in the Solid Waste Planning process. Support could come in the form of enforcement of solid waste reg's by the County, as well as support for the WUTC system that provides for universal disposal options for the County.	The County's primary goal is the health of its residents. Enforcement of disposal is addressed in Chapters 9, 10, and 11.
Depending on where are actual recycling rate is, we may consider adopting a goal of 30%, etc.	The County will adopt a goal of 50%.
It would be nice for the Plan to eliminate "Bans" out of hand. Let the market place determine what goes where. However, it would be positive to investigate the cost structure of a composting facility potentially supported by the entire County collection system. Funding could be collected through the UTC rate structure if defined as such in the Plan. Could be a real sticky issue though if cost is not reasonable.	Comment noted. The costs of a composting facility is addressed in Chapter 11.
My personal opinion is that artificial pricing structures are economically harmful. If the SWAC agrees, it may be beneficial to have the Plan make a statement against such measures.	Comment noted.
I support the inclusion of concrete to recognize the investment of Poland & Sons into this infrastructure. The Plan must be mindful, however, of promoting sham recycling, or allowing marginal facilities to	Additional narrative was added after Table 4-1. Table 4-1 will not be addressed at this time.

Franklin County Draft Solid Waste Plan Comments	
Comment	**Response**
operate without the proper permits and regulation.	
"Stockpiling" can be a dangerous word. There have been many facilities that used "stockpiling" to mask a problem in marketing their recyclable material. The business often times fails, then leaves the County with a pile to clean up. I will work on suggested language that could address the issue of promoting recycling facilities and avoiding unregulated operations that ultimately leave a disposal problem.	Comment noted.
Food Waste would have to be a separate collection route. To be effective, the Pasco contract would probably have to "ban" food waste, and eliminate the "unlimited collection" provisions of the contract.	Comment noted.
Section 4.4.5.4 Contrary to the rate setting methodology of the UTC.	This part of the sentence has been deleted.
I would expand the definition of "drop box centers" to include making each site more permanent in nature; asphalt, curbing, fencing, etc.	This has been added to Section 4.5.
Chapter 4 Health Department Comments	
Page 4-9 Modification to Designated Recyclables List – What about concrete and batteries?	Additional narrative was added after Table 4-1. Table 4-1 will not be addressed at this time.
Page 4-11 Notes for Table 4-1 – What about concrete and asphalt recyclers? Also Wal-Mart collects used oil	Additional narrative was added after Table 4-1. Table 4-1 will not be addressed at this time.
Page 4-11 4.4.4.2 (Composting Services) – Mesa has a small yard waste compost pile that is exempt from permitting, they do not offer workshops as far as I know.	This language has been updated.
Page 4-14 end of 1st paragraph "and then recycled" – Recycling??	This sentence has been removed.
Page 4-14 last sentence of 3rd paragraph – change "county landfill" to "transfer station."	This phrase has been changed.
Section 4.4.5.4 1st sentence – Change "a composting workshop" to "small yard waste compost facility."	This language has been updated.
Page 4-16 2nd paragraph – Composting is not simply piling yard waste in your yard like most residents think. To encourage backyard composting will also require major education and outreach about proper techniques and carbon nitrogen balance.	Made a statement that composting would require significant public education.
Chapter 5 Comments	
Question as to why the HHW facility only accepts waste from homeowners and if other counties accept from businesses. It is believed that Yakima County is the only county that accepts hazardous waste from businesses. Sally agreed to contact Yakima	The CPG does not allow fund to be used to assist businesses.

Franklin County Draft Solid Waste Plan Comments	
Comment	**Response**
County to see how this is funded, how many businesses utilize this service annually, and how much money is spent.	
Chapter 6 Comments	
Add a Table number for the table on page 6-5.	This table has been numbered Table 6-2.
In recommendations, state that when the County population reaches 100,000, investigate curbside recycling.	This language has been updated.
Combine recommendations bullets 1 and 3	The bullets have been updated.
Chapter 7 Comments	
No comments	N/A
Chapter 8 Comments	
No comments	N/A
Chapter 9 Comments	
Add Department of Agriculture to the agency that will continue to monitor and regulate agricultural waste disposal and not just the Health District. Also, nitrated water has not been addressed in the comp plan and needs to be.	The Department of Agriculture has been added. Nitrated water will not be addressed in this plan because it is not a solid waste issue.
Appliances/White Goods: Change the priority order in the chapter to list "Monitor illegal dumping through Community Litter Cleanup Program" as No. 2 and "Support yearly collection events of white goods" as No. 3. Would also like to add to No. 2 that we will promote awareness of BDI's white goods pickup policy and its availability.	The activities have been reordered and the language has been updated.
Asbestos: Change the priority order in the chapter to list "Monitor illegal dumping" as No. 2 and "Increase enforcement by Health District of L&I" as No. 3. To this point, this has not been a real issue. It was suggested that we put a list of asbestos removal contractors in the Appendix or website.	The priorities have been reordered. The County is encouraged to put a list of asbestos removal contractors on their website.
Biomedical Wastes: It was suggested that No. 1 have language added that we would develop of a program for correct management and disposal of residential medical wastes, such as needles. The Health District will supply HDR with suggested language. It was pointed out that if this language is put into the plan the WUTC would then have to regulate permit holders in the state.	This language has been updated.
Construction and Demolition Wastes: Change order as per SWAC notes and remove "central site for recycling and reuse."	This section has been updated.
Electronic Wastes: With the new law coming into place, local businesses will be required to take back electronic wastes if they want to continue to be able to sell those types of electronics.	Section 9.8 has been updated.

Franklin County Draft Solid Waste Plan Comments	
Comment	**Response**
1. Promote existing program for education 2. BFHD continues to monitor illegal dumping	
Septage and Street Wastes: Reword first bullet to read "Evaluate finding and permitting a regional facility..."	This language has been updated.
Tire Options: Remove all recommendations except: 1. Public education programs 2. Develop a safe management system	This section has been updated
Chapter 10 Comments	
Remove first bullet of Section 10.2.1.1	This bullet has been removed.
Chapter 11 Comments	
No Comments	N/A