

## Amendments to Title 19, "Comprehensive Plan"

### T-4 Solid Waste Management Plan Update

#### 19.80.080 Solid Waste Management.

A. **Solid Waste - Issues.** ~~All of unincorporated Pierce County, its cities and towns, Fort Lewis and McChord AFB face the same issues:~~

- ~~• How to ensure 20 years of disposal capacity based on future populations;~~
- ~~• How to ensure that solid waste disposal facilities are sited and operated to meet State and local siting and permitting requirements to protect the environment;~~
- ~~• How to provide cost effective provision of waste reduction and recycling programs and to encourage private businesses to provide sufficient processing capacity;~~
- ~~• How to ensure long range financing of chosen options;~~
- ~~• How to ensure backup disposal facilities; and~~
- ~~• How to reduce illegal dumping of waste and nuisance vehicles.~~

In 2008, Pierce County adopted the *2008 Supplement to the Year 2000 Tacoma-Pierce County Solid Waste Management Plan* (Pierce County Code Chapter 8.28) for the three solid waste management systems operating in Pierce County: the Pierce County system which covers unincorporated Pierce County and cities and towns except Tacoma and Ruston; the Tacoma system which covers Tacoma and Ruston; and the Military system which covers Fort Lewis and McChord AFB. The three systems are focusing efforts on how to increase recycling and diversion of waste to preserve disposal capacity, reduce emissions, and prevent pollution, including actions such as:

- Developing aggressive recycling collection and diversion programs.
- Providing outreach and other programs to assist residents, businesses, schools, and institutions to reduce the amount of waste they generate and to help them to fully participate in recycling programs.
- Implementing sustainability actions such as environmental purchasing policies and green building practices, and product stewardship programs.
- Ensuring sufficient long-term transfer station capacity and that existing facilities are adequately maintained, operated, and expanded as necessary.
- Providing sufficient long-term capacity, capabilities, and programs to divert organic waste from disposal.
- Supporting development of processing capacity in a manner that ensures facilities are located and operated to meet siting and permitting requirements.
- Continuing support for actions to reduce illegal dumping of waste and nuisance vehicles.

The 2008 Supplement includes a new 20-year Vision statement with goals and policies designed to reduce the amount of waste requiring disposal by 75 percent from 2007 levels. The aggressive waste reduction and recycling strategy will decrease the per capita waste disposal needs from an average of 4.5 pounds per person per day to 1.09 pounds per person per day by 2032.

#### 1. **Issues of Focus for Pierce County.**



1 a. **Siting a solid waste facility. facilities.** The siting of a solid waste disposal  
2 facility, regardless of what type, poses a number of related problems facilities,  
3 including landfills, transfer stations, recycling facilities, composting facilities, and  
4 waste conversion facilities presents numerous challenges. These include choosing  
5 an environmentally suitable site that fits the particular type of facility which is (1)  
6 acceptable to the residents of the County, (2) meets the long-term solid waste  
7 management needs for disposal, and (3) is cost-effective. This is true for the  
8 siting of landfills, transfer stations and composting facilities.

9 In choosing disposal options, the basic issue becomes one of cost and  
10 acceptability to the community. Not all residents can agree on the environmental  
11 soundness of one option. Some will argue for not siting a disposal facility within  
12 the County; some will argue for the siting of one type of facility but not another  
13 type; while others will argue for and against export out of County. Because of  
14 this decision making climate, the long-term costs of any option play an important  
15 role. It is essential to have a backup disposal option at all times.

16 ~~b. **How to achieve recycling goals in a cost-effective manner and in coordination**~~  
17 ~~**with the activities of private industry.**~~ The County can design and work with  
18 the haulers and recyclers to implement all sorts of recycling collection programs  
19 and facilities but these can also be costly. The County needs to continue to build  
20 incentives into its recycling programs, such as in the existing residential collection  
21 program; encourage private recycling and composting businesses; and devise new  
22 economical ways to remove various wastes from the disposed waste stream.

23 ~~c. **How to handle special wastes, such as household hazardous waste.**~~ Pierce  
24 County, the Tacoma Pierce County Health Department (TPCHD), and all  
25 jurisdictions need to provide funding for the implementation of the Local  
26 Hazardous Waste Management Plan and for collection programs and facilities for  
27 household hazardous waste. Funding is specifically needed for educational  
28 programs for businesses about how to properly handle moderate-risk waste.

29 ~~bd. **The need to identify which solid waste facility sites are "essential public**~~  
30 ~~**facilities" and plan for those sites to be long-term solid waste facility sites**~~  
31 ~~**unlikely to convert to other uses.**~~ **Assure long-term capacity for disposal of**  
32 **non-recyclable waste.** Identify which solid waste facility sites are "essential  
33 public facilities" and plan for those sites to be long-term solid waste facility sites  
34 unlikely to convert to other uses. For instance, landfills are solid waste facilities  
35 for a long time, whether or not they are closed and no longer taking waste for  
36 disposal. This is because of the need for continued groundwater monitoring, gas  
37 and leachate collection and maintenance of a capping system and the advisability  
38 of using them for other than siting of residential development. The trend is  
39 towards using existing solid waste facility sites for other, needed solid waste  
40 facilities, such as transfer stations or composting facilities. This makes sense  
41 economically, in that leachate collection systems and other closure designs for  
42 landfills match the operation needs for other types of solid waste facilities.  
43 Traffic patterns, for the most part, remain unchanged with conversion to another  
44 type of facility and, therefore, should create no additional problems to the  
45 surrounding community. It also makes sense because there is no need for a  
46 public agency to find a new site which helps to reduce the siting issues, such as  
47 complaints about odor and traffic.



- 1           e. ~~How to reduce illegal dumping of waste and nuisance vehicles.~~ During the  
2           development of the update to the solid waste plan, citizens testified about the  
3           increasing problems with illegal dumping of waste and nuisance vehicles and the  
4           lack of effective response from the many agencies charged with enforcement.  
5           The Council adopted a number of goals and policy recommendations about  
6           resolving the problems. Directed by the County Council to prioritize needs and  
7           actions, the Solid Waste Advisory Committee developed a broad strategy  
8           encompassing five main areas: Coordination, Cleanup, Prevention, and  
9           Enforcement and the need to reprioritize funding.
- 10          c. **Waste Characterization.** Audit the waste stream to determine which materials  
11          should be targeted for waste prevention and recycling programs.
- 12          d. **Environmental Education.** Assure all residents have up-to-date information on  
13          waste prevention and recycling programs.
- 14          e. **Business Assistance.** Work with businesses to increase knowledge of, and  
15          participation in, waste prevention and recycling programs.
- 16          f. **Construction and Demolition Debris.** Divert all recyclable construction and  
17          demolition debris to legally permitted and regulatory-compliant recycling  
18          facilities.
- 19          g. **Organic Waste.** Support development of sustainable best management practices  
20          that capture or sequester carbon, reduce emissions, recover energy, or produce a  
21          product from the biodegradable organic portion of the waste stream.
- 22          h. **Residential Recycling.** Expand programs to capture recyclable or compostable  
23          materials identified by the Waste Characterization Audit as still being disposed.
- 24          i. **Reporting and Planning.** Maintain the Solid Waste Plan in a current condition  
25          as required by Chapter 70.95 RCW and report on progress in achieving the goals  
26          of reducing per capita waste disposal and the transition of services such that  
27          recycling collection is the preferred and dominant collection service.
- 28          j. **Emergency Debris Management.** Identify back-up and emergency capacity,  
29          capabilities, and programs to collect, process, and dispose waste and debris  
30          created by natural or human-caused disasters.
- 31          k. **Regulatory Controls.** Maintain Pierce County Responds and improve permit  
32          processes and public outreach that ensure materials (including nuisance vehicles  
33          and litter) are not illegally dumped, but are recycled, processed, or disposed in  
34          compliant facilities.
- 35          l. **Household Hazardous Waste.** Maintain facilities and programs for the public to  
36          dispose household hazardous waste.

37      2. **Issues of Focus for Tacoma.**

- 38      a. ~~Backup disposal capacity for the waste-to-energy facility: Tacoma has~~  
39      established a contract with a private vendor, Pierce County Recycling,  
40      Composting and Disposal dba LRI, for long-haul disposal and for in-county  
41      disposal.
- 42      b. ~~Closure plans for the Tacoma Landfill: The Tacoma Landfill was granted an~~  
43      extension to continue land-filling until 2004 and the City may request two  
44      additional five-year extensions as allowed under the Consent Decree. The City  
45      plans to fill the Central Area to the maximum grade allowed by its permit. The  
46      Consent Decree includes requirements for long-term groundwater monitoring, gas  
47      and leachate collection and household hazardous waste collection.



- a. **Increasing the recycling rate.** When the decision was made to close the Tacoma Steam Plant, Tacoma Solid Waste Management received firm guidance from the City Council that recycling was to be emphasized by Tacoma. The City will continue to evaluate and implement new programs with a goal of reducing waste disposed. This may include household and commercial programs.
- b. **Collection System Changes.** A performance audit of waste and recycling collection services in 2005 resulted in a list of recommendations for further review that could significantly impact the way in which the City serves its customers. The City will evaluate programs to make collection systems more cost and service effective.
- c. **Tacoma Landfill.** The Tacoma Landfill, a State and Federal Superfund site, currently has one remaining lined cell that is permitted through 2009 and remains available for use. A cleanup consent decree signed and filed in 1989 allowed for three extensions of five years each before closing the landfill permanently. The third extension will be considered in 2009. The City is evaluating methods to extend the life and increase capacity of its existing cell, including design, operational and regulatory avenues.
- d. **Contracted Disposal.** Tacoma has a contract with LRI through 2020 to dispose the majority of City waste at the LRI Landfill. Permits issued for the landfill, however, restrict the amount of waste LRI is allowed to accept from Tacoma. The 2008 Supplement included a policy recommendation that, if implemented, will remove the restriction placed in the Conditional Use Permit. Removing or relaxing the restriction in the Solid Waste Handling Permit is under the purview of the Tacoma-Pierce County Health Department.
- e. **Transfer System Improvements.** Tacoma is exploring improvements to the transferring, processing, and handling of solid waste and recyclables at its transfer station to provide redundant capacity, improve environmental controls, improve traffic flow, and more effectively divert and remove recyclables from the disposed waste stream.

3. **Issues of Focus for Fort Lewis/McChord AFB.**

- a. **Need to finalize revise its long-term disposal plan:** Fort Lewis has adopted a Sustainability Plan and is revising its comprehensive solid waste management plan to coordinate with long-term waste reduction, recycling and energy conservation objectives in Department of Defense Directives. ~~now that the WTE facility is no longer operable, and the Fort Lewis Landfill cannot be expanded. The Fort is currently disposing of waste out of County.~~

B. **Solid Waste - Regulatory Environment.**

1. **Relationship of Federal, State, and Local Waste Regulations Overview.** In Washington, local governments have lead responsibility for solid waste management and moderate-risk waste management. They must manage and handle waste according to state laws which ~~are comprehensive in scope and~~ include specific mandates for solid waste plans, and management, handling, and disposal systems. Local governments are also required to adopt a local hazardous waste plan for moderate-risk waste which is generated by households or small businesses and which is exempt from the State's Dangerous Waste Regulations. Commercial generators of larger quantities of hazardous waste fall under the management responsibilities of State and Federal regulations.



1 Federal regulations provide "umbrella" authority for waste regulations. ~~which are~~  
2 ~~ultimately implemented by local governments.~~ The State Washington is delegated  
3 the authority to implement the federal Resource Conservation and Recovery Act  
4 (RCRA). ~~Subtitle F of RCRA states that~~ All federal, state and interstate local  
5 requirements are applicable to federal facilities that have any jurisdiction over a solid  
6 waste management facility or disposal site or that engage in any activity that results  
7 in the disposal of solid or hazardous waste. ~~This means that~~ Fort Lewis and  
8 McChord AFB must meet the State's siting, design and permitting requirements for  
9 solid waste facilities and have been directed by the Department of Defense to  
10 develop comprehensive recycling and procurement plans, and to coordinate with  
11 local jurisdictions on recycling public education and outreach programs.

12 **2. State Regulations, Priorities and Mandates.**

- 13 a. ~~Solid Waste State of Washington Oversight.~~ The State Solid Waste  
14 Management--Reduction and Recycling Act (RCW 70.95) designates the  
15 Washington Department of Ecology (WDOE) as the State department responsible  
16 for overseeing solid waste regulations. The main administrative codes which  
17 implement the law's requirements are the Solid Waste Handling Standards (WAC  
18 173-350) and Criteria for Municipal Solid Waste Landfills (WAC 173-351),  
19 which provides standards and criteria for the location, design, operation, and  
20 maintenance of solid waste and recycling  
21 facilities/businesses are required to have solid waste permits, which require  
22 regular monthly and annual reports to demonstrate they are meeting their design  
23 requirements and operating according to their approved operation plan. ~~about~~  
24 ~~their operation.~~ Some recycling businesses ~~or other~~ and processing facilities ~~may~~  
25 ~~be are either~~ exempt from the permit process or can obtain a permit deferral. If  
26 they do not continue to meet the handling standards criteria or annually report  
27 their activities, they They may be required to obtain a solid waste permit to  
28 operate if they do not meet the required handling standards or annually report  
29 their activities. In Pierce County, the Tacoma-Pierce County Health Department  
30 (TPCHD) administers the Solid Waste Permit process. WDOE has ultimate  
31 approval authority over solid waste permits.

32 ~~To coordinate and ensure compliance with solid waste management planning~~  
33 ~~and land use and solid waste permit requirements, the Pierce County Council~~  
34 ~~adopted Chapter 8.30 of the Pierce County Code, Solid Waste Handling System,~~  
35 ~~which provides a process to designate those solid waste facilities which have~~  
36 ~~current Solid Waste Permits and makes it unlawful to handle solid waste at~~  
37 ~~facilities other than those designated by the County.~~

38 The Washington Utilities and Transportation Commission (WUTC) grants  
39 certificates (franchises) authorizing solid waste collection in designated franchise  
40 districts for unincorporated areas. ~~Solid waste collection~~ These certificates  
41 authorize ~~the private collection of~~ companies (formally designated as "solid waste  
42 collection companies") to collect garbage and refuse from all residential and non-  
43 residential generators and recyclable materials from residential sources. Rates  
44 requested by solid waste collection companies must reflect the State's solid waste  
45 management priorities and the local government's minimum service levels for  
46 recycling. The WUTC does not govern the collection rates of city collection  
47 utilities or city contracts with private haulers. If a city or town chooses not to  
48 contract for collection or to have its own collection utility, then the WUTC



1 regulates by default as in unincorporated areas. As a result of Congressional  
2 actions which limited the availability to contract for commercial recycling  
3 collection, the WUTC no longer regulates rates or service areas for the  
4 transportation of recyclable materials from businesses, although commercial  
5 recyclable haulers must possess a common carrier permit and, show proof of  
6 insurance to operate in the State, and register as a transporter of recyclable  
7 materials with the WDOE.

8 State law authorizes counties to own and operate disposal facilities but, unlike  
9 cities, prohibits counties from operating a solid waste collection system, otherwise  
10 known as a "solid waste utility." ~~Cities and towns are delegated authority to~~  
11 ~~establish collection utilities utility.~~ Counties are allowed to may establish a  
12 collection or disposal districts to require mandatory solid waste collection and a  
13 disposal district which allows a county or to levy a tax to fund solid waste. Pierce  
14 County has not established either a disposal or a collection type of district.

15 Although counties cannot contract for solid waste collection, they can contract  
16 for residential recycling collection. In 1990, Pierce County chose to work with  
17 the existing franchised solid waste haulers solid waste collection companies to  
18 implement residential recycling collection programs. In Pierce County, the solid  
19 waste collection companies provide curbside recycling and yard waste collection  
20 to residents within the franchise areas under the guidance of the County's  
21 Minimum Service Levels ordinances. Cities and towns coordinate with Pierce  
22 County to offer similar recycling and yard waste services to their residents  
23 through their contracts with the collection companies. ~~Cities and towns work with~~  
24 ~~their contracted haulers to provide the services and have implemented similar~~  
25 ~~recycling collection programs in coordination with the County.~~ If this system  
26 does not continue to provide residents with adequate service, the Solid Waste Plan  
27 provides alternatives, including the possibility of contracting for residential  
28 recycling collection and mandatory collection.

29 **b. State of Washington Solid Waste Comprehensive Planning Requirements.**

30 ~~State law requires counties, in coordination with their cities and towns, to adopt~~  
31 ~~comprehensive solid waste plans for the management, handling, and disposal of~~  
32 ~~solid waste for 20 years and to review and revise the Plan at least every five years.~~  
33 ~~Cities and towns may choose to be joint participants in the plan or delegate~~  
34 ~~planning to the County or choose to do their own plan. The City of Tacoma has~~  
35 ~~chosen to be is a joint participant in the Plan with the County. Other cities and~~  
36 ~~towns have delegated planning authority to the County.~~

37 ~~State regulations are specific and detailed as to: what is required within~~  
38 ~~comprehensive solid waste management plans, goals and policies, priorities,~~  
39 ~~criteria for an integrated handling system, programs that must be implemented,~~  
40 ~~the criteria for siting, design and operation of solid waste facilities, and process~~  
41 ~~for review and adoption of plans and review process for programs. State goals for~~  
42 ~~waste management are:~~

- 43 (1) waste reduction;
- 44 (2) recycling, with source separation of recyclable materials as the preferred  
45 method;
- 46 (3) energy recovery, incineration, or landfilling of separated wastes; and
- 47 (4) energy recovery, incineration, or landfilling of mixed wastes.



1 Chapter 70.95 Revised Code of Washington (RCW) requires counties, in  
2 coordination with their cities and towns, to adopt comprehensive solid waste plans  
3 for the management, handling, and disposal of solid waste, and to keep those  
4 plans in a 'current' status through periodic review and update. State law specifies  
5 the required contents of a comprehensive solid waste plan. Among the  
6 requirements are: estimated needs for solid waste handling facilities for 20 years  
7 of disposal capacity; a six-year construction and capital acquisition program; a  
8 comprehensive waste reduction and recycling element; and an assessment of the  
9 plan's impact on the costs of solid waste collection prepared in conformance with  
10 the guidelines established by the Washington Utilities and Transportation  
11 Commission (WUTC).

12 ~~The State's goal is to achieve a 50 percent recycling rate by 2007. Other~~ One  
13 of the priorities of state law includes waste reduction and source separation as  
14 "fundamental" solid waste management strategies with the ultimate goal of  
15 "source separation of all material with resource value or environmental hazard."  
16 (RCW 70.95) ~~The State identifies a number of types of wastes, such as vehicle~~  
17 ~~batteries, that must be recycled or banned from disposal facilities and creates state~~  
18 ~~management programs for them. The law also emphasizes reduction in excessive~~  
19 ~~packaging and encouragement of market development for recyclables. State and~~  
20 ~~local governments must adopt procurement plans to buy recycled products.~~

21 In 2004, the Washington Department of Ecology adopted the *Beyond Waste*  
22 *Plan* as the State's waste management plan. It contains long-term strategies to  
23 systematically reduce waste and use of toxic substances. The State's 30-year  
24 strategies focus on measures to reduce the use of toxic substances in industries;  
25 decrease waste generation; increase organic recycling; and properly manage any  
26 waste that remains for disposal. Measures to implement these strategies include  
27 developing partnerships between Ecology, local governments, and industry about  
28 product stewardship; and outreach and education programs about recycling,  
29 product purchasing programs, and green building practices. Other measures focus  
30 on actions by Ecology to help "establish a recycling system so organic wastes like  
31 food waste, yard waste, and crop residues are no longer landfilled." Ecology is  
32 working with counties to incorporate the strategies of the *Beyond Waste Plan* into  
33 county plans. Pierce County's *2008 Supplement to the Tacoma-Pierce County*  
34 *Solid Waste Management Plan* addresses many of the State's long-term strategies.

35 The State requires that counties establish a Solid Waste Advisory Committee  
36 (SWAC) "to assist in the development of programs and policies concerning solid  
37 waste handling and disposal . . ." The SWAC members must be representatives  
38 from "public interest groups, citizens, business, waste management industry, and  
39 local elected officials." (RCW 70.95) The Pierce County SWAC meets on a  
40 regular basis to review solid waste management programs.

41 ~~Counties must implement a number of programs which include: waste~~  
42 ~~reduction, residential recycling collection for urban and rural areas and for single-~~  
43 ~~family and multi-family residents, yard waste collection, public information,~~  
44 ~~educational programs on waste reduction and recycling, programs to monitor~~  
45 ~~collection of recyclables from businesses and industries, procurement plans, "in-~~  
46 ~~house" recycling collection programs, and handling of special wastes.~~

47 Counties must also maintain an inventory of all existing solid waste handling  
48 facilities, identify potential disposal and recycling facility needs, and assess



1 disposal capacity needs based on 20 years of population growth for all  
2 participating jurisdictions.

3 ~~—State regulations for facility design and operation contain locational criteria  
4 for each type of solid waste facility. The criteria range from specifics of physical  
5 location, such as "landfills cannot be located over geologic hazard areas," to  
6 criteria for specific land uses, such as "landfills cannot be located within 10,000  
7 feet of an airport" (WAC 173-351).~~

- 8 c. **Hazardous Waste.** Hazardous waste collection and disposal is regulated by  
9 Washington's Dangerous Waste Regulations (WAC 173-303), the administrative  
10 code which implements RCW 70.105D Hazardous Waste Clean-up - Model  
11 Toxics Control Acts. For the most part, federal and State regulations take a  
12 "cradle to grave" approach to regulating hazardous waste through the use of  
13 permitting systems for individual industrial or commercial businesses using,  
14 producing and transporting these wastes. The State has reserved the right to  
15 determine the location and siting of all hazardous waste disposal facilities and has  
16 a permitting process including public hearings in the affected community.

17 Household hazardous waste is categorically exempt from these regulations as  
18 are businesses producing such waste under certain threshold amounts. For the  
19 purposes of handling and management, these exempt wastes are defined as "solid  
20 waste" but they must be disposed or recycled as "hazardous waste." Counties, in  
21 coordination with cities and towns, are required to adopt local hazardous waste  
22 management plans for this moderate risk waste. These plans must inventory  
23 businesses producing waste, determine amounts generated, devise information  
24 and educational programs to assist businesses to properly handle the waste, ensure  
25 proper disposal, and develop collection programs for household hazardous waste.  
26 Pierce County and the cities and towns adopted the *Pierce County Local  
27 Hazardous Waste Management Plan*, which is administered by the Tacoma-Pierce  
28 County Health Department (TPCHD). The County, City of Tacoma, and TPCHD  
29 work together to provide the household hazardous waste collection programs.

30 3. **Pierce County Actions.**

- 31 a. **Comprehensive Plan and Management Systems.** For the County and its cities  
32 and towns, the management of solid waste is governed by the *Tacoma-Pierce  
33 County Solid Waste Management Plan*, as amended by the *2008 Supplement*. All  
34 of the cities and towns adopted the Plan and signed interlocal agreements  
35 committing to the management systems described in the Plan and delegating long-  
36 term planning authority to the County.

37 ~~The update to the Plan was adopted by the County Council in December 2000.  
38 After adoption by all the cities and towns in early 2001, it was approved by the  
39 Washington Department of Ecology in August 2001. As required, it's The Solid  
40 Waste Plan is an integrated system plan addressing all issues relating to the  
41 prevention, collection, recycling, processing, diversion, and disposal of solid  
42 waste, including waste reduction and recycling. It contains numerous goals,  
43 policies and recommendations for alternative programs or studies to implement  
44 the Plan. The goals address: waste reduction and recycling, refuse collection,  
45 solid waste processing technologies (such as composting), transfer system  
46 capacity, landfilling, illegal dumping, enforcement and administration, and best  
47 management practices for special wastes. The County and its cities and towns  
48 achieved a 50 percent recycling rate in 1995. New goals focus on updating~~



1 collection programs and the diversion of additional materials to increase the  
2 recycling rate and to reduce the amount of waste that is disposed per capita.

3 There are three separate collection and disposal systems. The Pierce County  
4 Management System serves the unincorporated areas and those cities and towns  
5 which sign Interlocal Agreements with the County. Cities and towns may change  
6 the agreements during each plan review. In addition to the County's system, the  
7 City of Tacoma operates its own collection utility, disposal facilities, and  
8 management system and provides disposal for the Town of Ruston which operates  
9 its own collection utility. Fort Lewis and McChord Air Force Base jointly use the  
10 Fort Lewis disposal system with separate but coordinated collection systems for  
11 solid waste and recycling. Fort Lewis has its own comprehensive solid waste  
12 management plan.

13 The Solid Waste Division of the Pierce County Department of Public Works  
14 and Utilities is the agency in County government charged with planning for  
15 disposal for the unincorporated areas and those cities and towns using the  
16 County's system and with designing and implementing waste reduction and  
17 recycling programs for unincorporated areas.

18 To coordinate and ensure compliance with solid waste management planning  
19 and land use and solid waste permit requirements, the Pierce County Council  
20 adopted Chapter 8.30 of the Pierce County Code, Solid Waste Handling System,  
21 which provides a process to designate those solid waste facilities which have  
22 current Solid Waste Permits and makes it unlawful to handle solid waste at  
23 facilities other than those designated by the County.

24 b. **Locational Requirements.** The Tacoma-Pierce County Solid Waste  
25 Management Plan summarizes the State's regulations for siting disposal facilities  
26 and the a mixed municipal solid waste landfill, WAC 173-351, and identifies  
27 areas of the County that might meet these requirements. It also summarizes the  
28 locational, operational and permitting requirements for other solid waste facilities.  
29 For example, State regulations for facility design and operations contain  
30 locational criteria for each type of solid waste facility. The criteria range from  
31 specifics of physical location, such as "landfills cannot be located over geologic  
32 hazard areas," to criteria for specific land uses, such as "landfills cannot be  
33 located within 10,000 feet of an airport." (WAC 173-351)

34 The Pierce County Zoning Code Pierce County Code Title 18A, Development  
35 Regulations - Zoning contains regulations which are coordinated with the State's  
36 requirements and the goals and policies of the Solid Waste Management Plan. In  
37 general, the Zoning Code Development Regulations designates which solid waste  
38 facilities are appropriate for which zones. For instance, the Zoning Code provides  
39 for siting most solid waste facilities away from residential uses. Recycling  
40 businesses are allowed in the commercial or industrial zone with the type of  
41 permit required depending upon the size and the intensity of uses allowed in the  
42 zones. Drop off recycling sites are allowed in all zones to provide good access.  
43 The Zoning Code also has design Design requirements for landscaping and  
44 buffering to prevent inappropriate access and to provide for screening, noise  
45 attenuation and control of litter and dust. Standards and conditions vary by zone.  
46 Public hearings are required for large-scale facilities such as municipal solid  
47 waste landfills and transfer facilities but are often not required for smaller  
48 facilities such as recycling collection sites.



1 C. **Solid Waste - Existing Conditions.** The collection of solid waste in unincorporated  
2 Pierce County is provided by Harold LeMay Enterprises (operating as Pierce County  
3 Refuse and Lakewood Refuse), Waste Connections, Inc. (operating as Murrey's Disposal  
4 and American Disposal), and University Place Refuse (Westside Disposal).

5 1. **Collection and Disposal Systems and Service Areas.** Collection of solid waste in  
6 the unincorporated areas of Pierce County is provided by certificated collection  
7 companies who have designated franchise districts from the WUTC. Two companies  
8 serve small geographic areas with large, urban populations—Lakewood and  
9 University Place/Fircrest. The other franchises cover the remainder of the County.  
10 Except for Tacoma and Ruston, the cities and towns either contract with one of these  
11 collection companies or have chosen to be included within the WUTC regulated  
12 franchises. Privately-owned solid waste collection companies collect waste and  
13 recyclables countywide except in Tacoma and Ruston where municipal crews provide  
14 the service.

15 In unincorporated areas collection of garbage is not mandatory, although the  
16 hauling solid waste collection companies offer the service to anyone who wants it  
17 resides on a serviceable road. Curbside recycling service is automatically provided to  
18 all residential garbage customers, but is also available as a voluntary subscription  
19 service to households that elect not to receive garbage collection. Curbside yard  
20 waste service is provided solely on a voluntary subscription basis. The Plan allows  
21 for the development of mandatory programs, if necessary. Recycling and yard waste  
22 collection services are also voluntary. The two recycling services are made available  
23 to anyone living on a driveable road in the County, including rural areas. Between  
24 20-23 percent of County residents dispose of their waste through composting,  
25 recycling, farming practices, or by self-hauling to a transfer station.

26 Some Most cities or and towns make subscription to garbage and recycling  
27 collection mandatory for households within their city limits. Most make recycling  
28 collection optional in their contracts with hauling companies.

29 Pierce County contracts for disposal services with through a private vendor,  
30 Pierce County Recycling, Composting and Disposal dba, which does business as LRI.  
31 The County also contracts with LRI to run and operate the County-owned transfer  
32 station, three residential solid waste drop box transfer facilities, and the yard waste  
33 composting facility. Customers may self-haul waste and recyclables to these facilities.  
34 The contract agreement approved by the In 2008, the Pierce County Council  
35 authorized and endorsed, and the County Executive signed, a new Waste Handling  
36 Agreement that sets out basic rates for waste disposal, transfer, recycling services at  
37 the transfer facilities, litter cleanup programs, and administration programs. It  
38 establishes a procedure to adjust those rates for inflation or compliance with new  
39 environmental laws or standards. The new Waste Handling Agreement also secured  
40 LRI's support for the dramatic waste reduction and recycling goals established in the  
41 Solid Waste Plan.

42 Private businesses provide an important, and growing, part of the recycling  
43 collection system. Besides the haulers' solid waste collection companies' curbside  
44 collection programs, residents and businesses can drop-off recyclables at the 40 or  
45 more recycling buy back centers and businesses which collect, process, and market  
46 recyclables and at all the transfer stations. Many of the private businesses specialize  
47 in such items as yard waste, construction debris, scrap metal, or gypsum.

48 2. **Location, Capacity, and Reliability of Facilities.**



- 1 a. **County Disposal System – Landfill.** The LRI Landfill, located at the  
2 intersection of 304th Street and Meridian in south Pierce County, opened on  
3 December 13, 1999. ~~It is a~~ At full build-out to the extent currently permitted, the  
4 328-acre site ~~with has~~ will have sufficient capacity to provide for disposal of  
5 waste generated in Pierce County for more than 20 years. The site includes  
6 ~~substantial~~ landscape buffering and is designed to provide for wetland mitigation  
7 according to its approved land use, ~~and solid waste, and conditional use permits~~  
8 ~~requirements.~~ In the Graham Community Plan the LRI Landfill is zoned with an  
9 Essential Public Facility Overlay.
- 10 b. **Transfer Stations and Drop Box Facilities.** The County owns, and ~~leases for~~  
11 ~~contracts out~~ operation, one full-scale transfer station and three residential waste  
12 drop box facilities. The facilities are strategically located around the County to  
13 provide County residents opportunities to self-haul garbage and recyclables and to  
14 provide haulers' route collection vehicles with the ability to transfer waste to  
15 larger containers. Drop box facilities are located on Anderson Island, at Key  
16 Center on the Key Peninsula, and at the corner of Prairie Ridge Drive East and  
17 South Prairie Road East, just south of Bonney Lake. Containers are provided for  
18 the collection of recyclables and for yard waste. Together, the three drop box  
19 facilities ~~can~~ handle ~~62~~ over 14,000 tons per year, or 43 tons per operating day, of  
20 garbage, recyclables, and yard waste. However, these facilities can expand  
21 capacity by adding containers, expanding hours and days ~~open~~ of operation, and  
22 transferring waste more frequently to the landfill.

23 The Purdy Transfer Station is located on the Gig Harbor Peninsula at the site  
24 of a County-owned, closed landfill. Residents and garbage collection trucks in  
25 the Peninsula area drop off waste, recyclables, and yard waste for transport to the  
26 landfill or for recycling. Opportunities are also provided for the disposal of  
27 appliances for recycling and, commencing in 2009, drop-off of household  
28 hazardous waste. The transfer station handles ~~an average of 107 tons per day~~  
29 over 78,000 tons per year, or 218 tons per operating day, of garbage, recyclables,  
30 and yard waste. It can handle additional tonnage to meet population growth  
31 through expansion techniques.

32 Two hauling companies operate full-scale transfer stations for their collection  
33 trucks and ~~one company operates a drop box facility at its headquarters in~~  
34 ~~University Place. The two larger facilities are in the Lakewood Industrial Park~~  
35 ~~and in the Puyallup Valley, west of Puyallup~~ in the cities of Lakewood and Fife.  
36 They handle approximately 500 tons per day and their capacity can also be  
37 increased. These facilities are not open to the public for the disposal of waste  
38 ~~although residents can drop off recyclables.~~

39 The third private transfer station, the Hidden Valley Transfer Station, owned  
40 by LRI and located at the site of the closed Hidden Valley Landfill (17925  
41 Meridian Street East), is open to the public. Opportunities are provided for the  
42 drop-off of recyclables at a ~~small-scale~~ recycling facility and yard waste at LRI's  
43 Compost Factory, both of which are located at the site. The facility also provides  
44 opportunities to drop-off household hazardous waste and ~~there are additional~~  
45 opportunities to divert other items ~~from the disposed waste stream~~ such as large  
46 appliances and construction and demolition debris. The Hidden Valley Transfer  
47 Station can handle approximately 800 tons per day and is designed to be doubled  
48 in size, when additional capacity is necessary.



1 —The City of Tacoma has a recycling center and a household hazardous waste  
2 facility at its transfer station/landfill site. County residents can drop off  
3 recyclables and household hazardous waste for free but must pay an extra fee to  
4 drop off waste.

- 5 c. **Yard Waste Composting Facility Facilities.** In 1992, the County built, and  
6 leased contracted out for operation, a yard waste composting facility located  
7 adjacent to the Purdy Transfer Station on the Gig Harbor Peninsula. The facility  
8 composts yard waste collected through the haulers' yard waste collection services  
9 and other yard debris self-hauled to the transfer facilities. The composting facility  
10 was sized to handle 30,000 tons per year, but has been operating beyond its design  
11 capacity since it was built. In 1999, LRI built a 3.5-acre Compost Factory and an  
12 in-vessel compost facility at the Hidden Valley site which can compost many  
13 types of organics. This facility provides essential services for composting most of  
14 the residential yard waste collected in residential curbside programs, and provide  
15 substantial capacity to handle all of the yard waste collected from residences and  
16 businesses in the County.
- 17 d. **Private Facilities.** In addition to the private recycling collection and processing  
18 facilities and businesses referenced above, there are private inert and demolition  
19 landfills, composting facilities, recycling processing facilities, and businesses  
20 which specialize in handling demolition, land clearing debris, and petroleum  
21 contaminated soils in Pierce County. The tonnage varies from year to year,  
22 depending upon market conditions, contracts with various jurisdictions, and  
23 seasonal needs.
- 24 e. **Tacoma Disposal System.** Tacoma has a 190-acre landfill within the city limits  
25 which processes an average of 575 tons per day. Most of the landfill site has been  
26 filled. Mixed waste is processed on the site at a Refuse Derived Fuel (RDF)  
27 facility which shreds, magnetically separates, and air classifies material to yield  
28 ferrous metals, RDF, and a heavy residue. The Tacoma Energy Recovery Facility  
29 has been designed to burn a mix of RDF from the landfill, coal, and woodwaste to  
30 produce electricity. Tacoma has a transfer station, a recycling center, the  
31 EnviroHouse education center, and a household hazardous waste facility located  
32 on a 190-acre landfill site within the city limits on the 3700 block of South  
33 Mullen Street. The landfill has approximately one-year of capacity left but that  
34 capacity is reserved for back-up emergency needs. Tacoma contracts with LRI for  
35 disposal at the LRI Landfill.
- 36 f. **Fort Lewis and McChord AFB Disposal System.** Solid wastes generated on the  
37 two military reservations are taken to the Fort Lewis Recycling Center and  
38 Transfer Station and then disposed out of county, as of 2009 through a contract  
39 with the LRI Landfill. McChord has a separate demolition and inert landfills.  
40 Waste is no longer disposed in the Fort Lewis Landfill. Five of the six cells of the  
41 landfill have been closed. Cell 6 is 99 percent full and being kept open as a  
42 backup transfer point. McChord AFB has and a drop-off recycling center and  
43 provides curbside residential recycling collection. Both bases provide extensive  
44 curbside recycling and other waste reduction programs for their residents.

45 **D. Solid Waste - Analysis of Capacity Needs and Proposed Conditions.**

- 46 1. **Population and Waste Generation.** The County and the cities and towns are  
47 required by law to ensure that there is sufficient disposal capacity for 20 years for



1 whatever population exists and they are also required to provide for back-up disposal  
2 capacity.

3 The formula for determining capacity can be modified by estimating how much  
4 generated waste will be recycled. Pierce County's recycling rate has remained at  
5 approximately 50 percent since 1995. The County uses a constant per capita waste  
6 disposal rate of 4.5 pounds per day to project worst-case disposal needs based on a 50  
7 percent recycling rate projected population growth from the Office of Financial  
8 Management (OFM). Despite successful recycling efforts, it is likely that the disposal  
9 rate will remain the same and not decrease. It is not prudent to rely heavily on  
10 maintaining a 50 percent rate over 20 years and upon achieving a decrease in the per  
11 person disposed rate. Many factors can affect needed capacity. The Pierce County  
12 Department of Public Works and Utilities — The Solid Waste Division monitors  
13 recycling rates, disposed tonnage, and population growth to annually revise  
14 projections. An unexpected surge in population in one year can result in substantial  
15 increases in disposed tonnage in 20 years. Increased development in the commercial  
16 and industrial sector tends to also increase tonnage as does a strong economy. While  
17 the County can implement waste reduction and recycling programs, the

18 The 2008 Supplement has established an aggressive waste reduction and recycling  
19 strategy which will dramatically decrease the per capita waste disposal needs by  
20 2032. The Solid Waste Division will regularly evaluate programs against the yearly  
21 projection targets established in the Plan Appendices. The actual recycling rate  
22 depends upon the ability of private recycling businesses to market the collected  
23 materials and the willingness of residents to pay for collection. Recycling markets  
24 fluctuate and are affected by worldwide events and economic conditions over which  
25 the County has no control.

26 In terms of organic waste, seasonal fluctuations also enter into consideration. The  
27 County designed its yard waste composting facility to remove 30,000 tons per year of  
28 yard waste from the waste stream. The amount of tonnage removed each year,  
29 however, depends upon both the success of collection programs and whether it is a  
30 dry or wet year (which affects the growing season), as well as natural events which  
31 cause storm damage. By 1998 with all of the yard waste collection systems in place  
32 and the County's facility processing 120 tons per day, yard waste dropped from 18 to  
33 25 percent of the total municipal waste stream disposed to 4.4 percent.

34 The County regularly conducts waste audits conducted a waste characterization  
35 audit in 1995, and is conducting one in 2009 to determine how much compostable  
36 waste and recyclables were/are in the waste stream, how much is being removed by  
37 what types of facilities, and the potential for removing more tonnage. The County  
38 uses this information to identify the types of public or private facilities that might be  
39 needed to divert additional amounts of organic waste and recyclable material from the  
40 disposed waste stream. The County also uses its Data Collection system which tracks  
41 curbside recycling on a quarterly basis, and works with Ecology to monitor the types  
42 of materials and the amounts which are being recycled and composted by private  
43 businesses.

44 Besides disposal capacity and recycling/composting capacity, there is one other  
45 level of service for handling/disposal capacity required of the County and cities and  
46 towns – the capacity to collect and dispose of household hazardous waste. The  
47 Hazardous Waste Management Plan estimates that household hazardous waste  
48 comprises 0.4 percent to 0.5 percent of the Pierce County waste stream and, in line



1 with federal and state regulations, recommends diversion of this waste from the  
2 municipal waste stream to hazardous waste facilities.

3 Since 1987, Pierce County has sponsored household hazardous waste collection  
4 events in coordination with Tacoma, the Health Department, and other communities  
5 and has expanded facility capacity for collection. Under the EPA Consent Decree,  
6 Tacoma was required to establish Tacoma maintains a household hazardous waste  
7 collection facility at its Landfill transfer facility. Pierce County contracts with  
8 Tacoma to allow all residents from the unincorporated areas and the other cities and  
9 towns to drop off household hazardous waste at this facility. The County also  
10 contracts with Tacoma to provide approximately four satellite collection events in  
11 rural areas, per year, and

12 In addition to the services provided by Tacoma, the County contracts with LRI to  
13 provide household hazardous waste collection at the Hidden Valley Transfer Station.  
14 Starting in 2009, LRI will operate a County-owned household hazardous waste  
15 collection facility at the Purdy Transfer Station.

16 The County and Tacoma works with TPCHD on public education programs about  
17 how to use and properly dispose of household hazardous waste.

- 18 2. **Utility Service Areas.** Urban and rural residents of the County will continue to need  
19 collection services whether provided under the unincorporated area franchise system,  
20 through city hauling contracts, or through self-haul opportunities. The only changes  
21 that would affect County facility capacity and needs would be if a city or town  
22 developed its own plan and substantial amounts of waste left the County's system. By  
23 law, any city or town which withdraws from the county-wide solid waste plan would  
24 need to provide for its own disposal system.

25 3. **Capacity and Facility Needs.**

- 26 a. **Disposal Facilities.** Pierce County has determined a need for disposal capacity  
27 for between 10 and 11 million tons over the next 20 years. Together, the County,  
28 Tacoma, Fort Lewis and McChord AFB will need disposal capacity for municipal  
29 waste of between 15 and 16 million tons by the year 2020. Capacity needs are  
30 figured conservatively. The LRI Landfill is a designated Essential Public Facility  
31 has providing sufficient capacity to dispose of waste generated from the three  
32 disposal systems in Pierce County for more than 20 years into the future.

33 The goals and policies of the 2000 Tacoma-Pierce County Solid Waste  
34 Management Plan continue the focus adopted by the County Council in 1991 to  
35 develop "to the maximum extent" source separation waste reduction and recycling  
36 programs and to rely upon landfilling for the long term disposal option.

37 The Solid Waste Plan allows the County to contract for use of an out-of-  
38 county landfill "if there is a lack of landfill capacity in Pierce County" or if the  
39 County determines that out-of-county disposal options are cost-effective. In  
40 furtherance of this policy, the current (2008 to 2036) Waste Handling Agreement  
41 with LRI calls for diverting, to an out-of-county landfill, up to twenty-five percent  
42 of the waste needing disposal. This would gain local capacity in addition to  
43 capacity gained through aggressive waste reduction and recycling programs.

- 44 b. **Transfer Facilities.** Sufficient public and private capacity appears to exist to  
45 handle projected tonnage for 20 years. However, the County has identified the  
46 need to study additional options to site a new solid waste transfer station and to  
47 continue to upgrade existing facilities.



1 Major determinants for siting transfer stations are: the need to locate near  
2 concentrations of population so that route collection vehicles can economically  
3 transfer loads to larger transfer vehicles, the need to strategically site the facilities  
4 for the driving convenience for those in rural areas who self-haul, and the need for  
5 access to major transportation facilities.

6 Existing drop boxes and the transfer station at Purdy have expansion  
7 capability to handle any additional population growth in their geographical areas.  
8 This can be done through expanding hours open to the public, adding more  
9 transfer trailers, more frequent transfer of waste, and by providing additional  
10 recycling opportunities.

11 **c. ~~Yard Waste Composting Facilities and other Conversion Technologies.~~ Pierce**  
12 **County has more than sufficient public and private facility capacity to compost**  
13 **yard waste, food waste, and other organics and there is sufficient private**  
14 **processing capacity to handle land clearing debris that cannot be composted. In**  
15 **addition to the County's yard waste composting facility at Purdy, there is LRI's**  
16 **Compost Factory at the Hidden Valley Transfer Station which can handle many**  
17 **types of organic waste. Private capacity to compost other specific wastes is also**  
18 **growing; Wilcox Farms built a facility to compost its chicken manure. Due to**  
19 **broad public acceptance and use of existing yard waste diversion programs (both**  
20 **curbside and self-haul), Pierce County does not have sufficient in-county capacity**  
21 **to compost additional biodegradable organic materials. Public and private facility**  
22 **capacity is stretched and new capacity may be needed just to meet the demand for**  
23 **current services and a growing population. New programs to divert other**  
24 **organics, such as food waste, would need additional composting or other types of**  
25 **facility capacity, or would have to be designed to enable the shipment of organics**  
26 **to facilities outside Pierce County.**

27 Other processing technologies (designated as "Conversion Technologies" in  
28 the Solid Waste Plan) may be able to increase the efficiency of composting  
29 processes or, as stand-alone facilities, may be able to convert organic waste to  
30 electricity or to alternative fuels, such as bio-diesel, ethanol, or compressed or  
31 liquefied natural gas. The 2008 Supplement has identified a need to study whether  
32 conversion technologies may offer an efficient and cost-effective approach to  
33 manage organics and other compostable material. The Supplement also identifies  
34 a need to study the permitting requirements for these facilities.

35 Capturing and converting landfill gas to compressed or liquefied natural gas  
36 for use as a vehicle fuel, or to produce other fuels or electrical energy, is a related  
37 method for capturing the energy and resources embedded within waste. The 2008  
38 Supplement and the programmatic Environmental Impact Statement prepared for  
39 the Plan, supports the implementation of Best Available Control Technologies  
40 (BACT) which reduce landfill greenhouse gas emissions.

41 The Waste Characterization Audit will help identify the type, amount, and  
42 sources for organics that would be processed through composting facilities or  
43 other conversion technologies.

44 **d. Household Hazardous Waste Transfer Facility.** ~~The County identified a need~~  
45 ~~to provide additional opportunities to the public for drop-off household hazardous~~  
46 ~~waste. The County is contracting with LRI to site a hazardous waste collection~~  
47 ~~facility at the Hidden Valley transfer station to improve access for residents of~~  
48 ~~eastern and southern Pierce County.~~ **With the opening of a Household Hazardous**



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Waste drop-off site at the Purdy Transfer Station in 2009, residents will be served by three geographically dispersed fixed facilities and annual satellite collections in rural areas. Additional capacity at the Hidden Valley and Purdy sites can be acquired through additional processing, staffing and longer hours of operation.

- e. **Illegal dumping of waste and nuisance vehicles.** At the direction of the Pierce County Executive, in 2001 the Solid Waste Division became responsible for the ~~new~~ Pierce County Responds program aimed at reducing illegal dumping problems. The program acts as a central clearinghouse for receiving and investigating citizen complaints about illegal dumping, abandoned or inoperable vehicles, and illegal wrecking or disposal operations. The program coordinates enforcement between four County departments and the Tacoma-Pierce County Health Department. It recommends and pursues cases for prosecution; effects site cleanups; educates citizens on safe and proper recycling and disposal methods; and provides financial assistance for community volunteer cleanups.