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DECLARATION OF JONATHAN C. THOMPSON

2007 SOLID WASTE MANAGEMENT PLAN
COWLITZ COUNTY, WASHINGTON

Prepared for

Cowlitz County
Department of Public Works

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2007 Solid Waste Management Plan
Cowlitz County, Washington

The material and data in this report were prepared under the supervision and direction of the undersigned.

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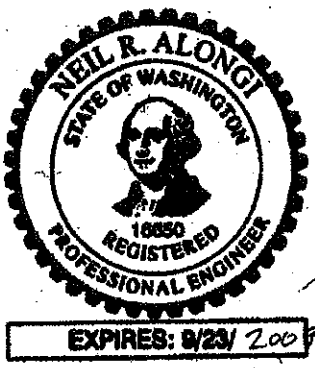

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CONTENTS

CONTENTS (Continued)

CONTENTS (Continued)

CONTENTS (Continued)

TABLES AND ILLUSTRATIONS

TABLES AND ILLUSTRATIONS (Continued)

ACRONYMS AND ABBREVIATIONS

Btu	British thermal units per pound
Building and Planning	Cowlitz County Department of Building and Planning
CCHD	Cowlitz County Health Department
CDL	construction, demolition, and land clearing
CDP	census-designated place
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFC	Chlorofluorocarbon
CLCP	community litter cleanup program
CMSWL	Criteria for Municipal Solid Waste Landfills
CPG	coordinated prevention grant
Ecology	Washington State Department of Ecology
EHU	Cowlitz County Department of Building and Planning Environmental Health Unit
ELF	Equipment, Land, and Facilities
HDPE	high-density polyethylene
HHW	household hazardous waste
LDPE	low-density polyethylene
MFS	minimum functional standards
MP	mixed waste paper
MRF	material recovery facility
MRW	moderate-risk waste
MSL	mean sea level
MSW	municipal solid waste
MTCA	Model Toxics Control Act
NIOSH	National Institute for Occupational Safety and Health
MSW	municipal solid waste
OFM	State of Washington Office of Financial Management
PCB	polychlorinated biphenyl
PET	polyethylene terephthalate
PME	Pacific Materials Exchange
Public Works	Cowlitz County Department of Public Works
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington

ACRONYMS AND ABBREVIATIONS (Continued)

RDF	refuse-derived fuel
SEPA	State Environmental Policy Act
SOQ	Statement of Qualifications
SQG	small-quantity generator
SWAC	Solid Waste Advisory Committee
SWHS	solid waste handling standards
SWMP	solid waste management plan
TDF	tire-derived fuel
UTC	Washington Utilities and Transportation Commission
WAC	Washington Administrative Code
Waste Control	Waste Control Recycling, Inc.
WGA	waste-generation area
WISHA	Washington State Department of Labor and Industries
WL	white ledger
WSDA	Washington State Department of Agriculture
WSESD	Washington State Employment Security Department

1 INTRODUCTION AND BACKGROUND

1.1 Introduction

1.1.1 Purpose and Need

The State of Washington has enacted legislation to establish comprehensive statewide programs for solid waste handling and solid waste recovery and/or recycling. The purpose of these requirements is to prevent land, air, and water pollution, and to conserve the natural, economic, and energy resources of the state. The statutory requirements to support these programs are contained in chapter 70.95 of the Revised Code of Washington (RCW).

Each county in the state is required by RCW 70.95.080 to prepare a comprehensive solid waste management plan (SWMP). According to Section 173-304-011 of the Washington Administrative Code (WAC), "the overall purpose of local comprehensive solid waste management planning is to determine the nature and extent of the various solid waste categories and to establish management concepts for their handling, utilization, and disposal consistent with the priorities established in RCW 70.95.010 for waste reduction, waste recycling, energy recovery and incineration, and landfill."

Cowlitz County (the County) previously satisfied the state requirements with a comprehensive SWMP dated July 1993. RCW 70.95.110 requires that each plan be reviewed and revised, if necessary, at least every five years. Changes in the solid waste field, developments in the county, changes in the regulatory guidance, and the need for updated plan information dictate that the County's 1993 SWMP be revised.

1.1.2 Reference Documents

As a revision of the County's 1993 SWMP, this document relies heavily on concepts, text, and information presented in the 1993 SWMP.

The 1993 SWMP was organized and written to follow guidelines published by the Washington State Department of Ecology (Ecology) in 1990 for the development of SWMPs. The 1990 guidelines were superseded by updated Ecology guidelines published

in 1999. The 1999 Ecology document, *Guidelines for the Development of Local Solid Waste Management Plans and Plan Revisions* (Ecology, 1999), are referred to throughout the County's revised SWMP as the "Ecology guidance document" or a variation thereof. WAC 173-304-011 states that these guidelines are to be followed by local governments, and the County's revised SWMP is organized and written to follow the latest Ecology guidance document.

Other documents and sources of information were used during the preparation of specific SWMP chapters or components. These documents or sources are noted in the associated SWMP chapter or component and included in a master reference list at the end of the SWMP.

1.2 County Solid Waste Policies

The County's solid waste policy mission statement, as adopted by the County Board of Commissioners on March 19, 2002, is as follows:

> *Provide the residents, businesses and cities of Cowlitz County with the most effective solid waste management possible considering economics, the environment, regulatory requirements, and the social and political environment of the community.*

The Board of Commissioners also adopted the following seven solid waste policies:

- Policy 1—Through collaborative effort, manage the disposal of solid waste in Cowlitz County utilizing the County landfill and/or through other disposal options.
- Policy 2—Cowlitz County shall preserve the capacity and value of the landfill for the benefit of Cowlitz County residents by managing imports of solid waste from outside the county.
- Policy 3—The Solid Waste Advisory Committee (SWAC) will assist and advise the Board of County Commissioners on solid waste issues.
- Policy 4—Pursue energy recovery at the landfill, in accordance with the goals of the State and the SWMP, by conducting a study to determine the economic feasibility of collecting and marketing landfill gases generated by the landfill.
- Policy 5—Fund county solid waste utility operations and capital improvements through user fees.
- Policy 6—Evaluate an economically sound source separation program in the urban, non-incorporated areas of the county.

- Policy 7—Continue to pursue and evaluate long-term solutions for the disposal of solid waste that consider both in-county and export alternatives.

1.3 SWMP Goals and Objectives

The goal of the SWMP is to provide information and present management concepts that can be used in support of the County's solid waste policies and mission statement. The following four general objectives are used throughout the SWMP development process:

- Verify that the County complies with applicable RCW and WAC solid waste planning requirements.
- Provide a mechanism for public participation in the County's solid waste planning process.
- Support statewide waste reduction and recycling goals by developing improved County strategies and management concepts.
- Employ sound and generally accepted cost analysis methods to determine economic effectiveness.

These general objectives are very similar to those contained in the 1993 SWMP. Specific objectives or action items were presented to the SWAC and discussed during the preparation of individual SWMP chapters.

1.4 Plan Participants

According to RCW 70.95.010(6c), "it is the responsibility of county and city governments to assume primary responsibility for solid waste management and to develop and implement aggressive and effective waste reduction and source separation strategies." The County is required by RCW 70.95.080 to develop the SWMP in cooperation with each city within the county. The cities have the option of preparing their own plans for integration into the County SWMP, preparing a joint city/county plan, or authorizing the County to prepare a plan for the city as part of the County SWMP.

The incorporated areas of the county are Castle Rock, Kalama, Kelso, Longview, and Woodland. The County's 1993 SWMP contains copies of resolutions from these cities authorizing the County to prepare a plan for each city's solid waste management for inclusion in the County's SWMP. The County's 1993 SWMP also contains copies of resolutions from each city adopting the SWMP prepared by the County.

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2 WASTE STREAM DESCRIPTION

Identifying and characterizing the waste stream will provide the information needed to evaluate existing programs, develop new strategies, and implement new or revised planning measures.

2.1 Solid Waste Definitions

The following definitions describe general categories of waste discussed in this Plan:

Solid Waste—For the purposes of this Plan, the term "solid waste" encompasses the total waste stream, which is made up of municipal solid waste (MSW), special wastes, and industrial waste.

Municipal Solid Waste—The entire waste stream from residential, commercial, and institutional sources and a portion of the waste stream from industrial sources comprise MSW. MSW in Cowlitz County is limited to wastes that are managed by the principal MSW handling and disposal system, as represented by all waste delivered to the Cowlitz County Landfill or solid waste originating in Cowlitz County handled by the Waste Control material recovery facility (MRF).

Moderate-Risk Wastes—Moderate-risk waste (MRW) is comprised of chemical materials that are poisonous, toxic, flammable, reactive, or corrosive. These products include but are not limited to pesticides, herbicides, mercury and mercury thermometers, some types of batteries, gasoline, kerosene, motor oil, antifreeze, oil-based paint, paint thinner, turpentine, pool chemicals, and drain cleaners. MRW is divided into two categories: household hazardous waste and small-quantity generator hazardous waste.

Special Wastes—Special wastes include construction, demolition, and land-clearing (CDL) waste, agricultural waste, auto hulks, asbestos wastes, petroleum-contaminated soil, white goods, tires, sewage sludge, and biomedical waste. Special wastes are defined as wastes that require separate handling due to their bulk, water content, or dangerous constituents.

Industrial Waste—Industrial waste includes by-products from manufacturing operations, such as scraps, trimmings, packaging, boiler ash, wood-product residuals, and other discarded materials not otherwise designated as a dangerous waste under Chapter

173-303 WAC. The county's industrial waste is generated principally by the forest products industry, which includes companies such as Longview Fibre and Weyerhaeuser. Most of the forest products industrial waste is directed to private facilities, such as the Weyerhaeuser Landfill. Relatively small quantities of non-forest product industrial waste are handled by the Cowlitz County Landfill.

Recycling—Recycling is the separation of a given waste material from the waste stream and processing it so that it may be used again as a useful material for products that may or may not be similar to the original. The Washington Department of Ecology's (Ecology) definition of recyclable materials generally includes paper, metal, glass, plastic, and organics.

Diversion—Diversion represents materials that have been diverted from disposal for reuse, and are separate from recycled materials. Diverted materials include those which do not fit the definition of recycling as promulgated by Ecology, such as anti-freeze, concrete, ash and sand used in asphalt production, land clearing debris, and materials for energy recovery (wood, used oil, and tires).

2.2 Historical Waste Disposal and Recycling Data

Solid waste disposal in Cowlitz County occurs at the Cowlitz County Landfill and the Weyerhaeuser Landfill. The Weyerhaeuser facility opened in November 1993 to provide capacity for the disposal of forest product industrial waste generated by Weyerhaeuser. Previously, the company's waste was disposed of at the Mount Solo Landfill, a private facility that was closed in 1993.

Table 2-1 summarizes historical data collected at the Cowlitz County Landfill from 1976 to 2006. Yearly fluctuations can be linked to historical events such as the installation of scales in 1981 or the temporary closure of the Mount Solo Landfill, which resulted in the Cowlitz County Landfill accepting 7,993 tons of industrial waste from Weyerhaeuser on a temporary basis in January 1991. In 1992, the Waste Control MRF expanded and began operations related to curbside recycling. The City of Longview started curbside recycling in 1992. In 1997, Kelso started operation of recycling drop-off centers. Curbside recycling was started in Woodland in 1999. Recycling data in Table 2-1 are based on the annual Washington State Department of Ecology (Ecology) Recycling Survey. Yearly totals fluctuate dramatically due to variances in reporting related to the voluntary nature of the survey and misunderstandings about what is reportable. Also, the numbers reflect fluctuations in business activities, such as long-term stockpiling or operations going out of business.

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Waste Control operates from two buildings on Third Avenue in Longview. One 44,600-square-foot building houses the equipment for the MRF. The MRF processes commingled recyclables, using a variety of equipment, including a high-density export baler, conveyor belts, a wood shredder, sorting conveyors, a pre-crush compactor, magnetic sorters, a high-velocity air-conveying system, a Lubo Star screen sorter, live-floor storage units, a dust collection system, and various computers to operate the equipment efficiently. The facility also has loaders, forklifts, excavators, and other small equipment, to handle the sorting and processing of recyclables. The other building is used to house the buy-back center. The firm has approximately 70 employees who work at the MRF and on collection routes.

Waste Control has commercial collection routes in the cities of Longview and Kelso for cardboard and office paper. In 2003, 356 tons of office paper and 2,020 tons of cardboard were collected. The company also maintains drop-off sites for recyclable materials throughout the county. Waste Control conducts an extensive recycling program for local industry, including Longview Fibre, Weyerhaeuser, and Norpac.

Other Private Recyclers—Table 4.1 identifies the recycling centers in Cowlitz County and the materials they accept.

Weyerhaeuser, Steelscape, and Longview Fibre all have major recycling operations in place.

4.3 Designation of Recyclable Materials

Ecology's *Guidelines for the Development of Local Solid Waste Management Plans* requires all local solid waste management plans (SWMPs) to develop a list that defines materials as recyclable. For purposes of this section, materials are defined as recyclable if they are marketable and result in waste-stream diversion. A marketable recycled material is defined as a material with established end-users who purchase recyclable materials, use them as raw materials, and transform them into new products. Waste-stream diversion potential is represented as the percent of a specific material in the county waste stream. The following discussion applies both criteria to specific materials to compile a list of recyclable materials for Cowlitz County.

4.3.1 Principal Markets for Recyclables

Western Washington generally has favorable market conditions for a wide variety of recyclable materials due to a large number of nearby manufacturers who buy and utilize the materials, and opportunities for export through Columbia River and Puget Sound ports. As a result, Cowlitz County is able to take advantage of relatively stable and responsive markets. Table 4-3 identifies the location of the principal markets for recyclables in southwest Washington and northwest Oregon.

Table 4-3
Southwestern Washington Markets for Recyclable Materials (2002)

MATERIAL	SELECTED MARKETS	LOCATION
Newsprint	Blue Heron Norpac Inland Empire S. P. Newsprint Export	Oregon City, OR Longview, WA Spokane, WA Newberg, OR Washington and Oregon
Corrugated Containers	Longview Fibre Simpson Tacoma Kraft Weyerhaeuser Weyerhaeuser Export	Longview, WA Tacoma, WA Springfield, OR Albany, OR Washington and Oregon
High Grade Paper	Georgia Pacific Export	Halsey, OR Washington and Oregon
Mixed Waste Paper	S. P. Newsprint Export	Newberg, OR Washington and Oregon
Container Glass	Owens-Brockway	Portland, OR
Container Glass—mixed colors	Not currently marketable	California, Washington and Oregon
Refillable Glass	Not currently marketable	Washington and Oregon
Aluminum Cans	Various	Washington and Oregon
Tin Cans	Schnitzer Metro Metals	Portland, OR Portland, OR
Ferrous Metals	Schnitzer Metro Metals	Portland, OR Portland, OR
White Goods	Schnitzer Metro Metals	Portland, OR Portland, OR
Nonferrous Metals	Various	Washington and Oregon
PET Bottles	Export	Washington and Oregon
HDPE Bottles	Export	Washington and Oregon
LDPE Packaging	Export	Washington and Oregon
Milk & Juice Cartons	Not currently marketable	Washington and Oregon
Tires	Waste Recovery	Portland, OR
Wood	Swanson Bark and Wood Various	Longview, WA Washington and Oregon
Oil	Various	Washington and Oregon
Car Batteries	United Battery Systems Inc.	Longview, WA
Construction debris (other than wood)	Lakeside Industries Storedahl & Sons Waste Control	Longview, WA Longview, WA Longview, WA
NOTES: HDPE = high-density polyethylene LDPE = low-density polyethylene PET = polyethylene terephthalate		

4.3.2 Prioritized Recyclable Materials

Table 4-4 presents the current list of prioritized recyclable materials for Cowlitz County. Prioritization is based on the marketability of the product and its potential for waste-stream diversion, as discussed above. The results of the ranking will be used as a guide to identify materials to be recovered and recycled and may be periodically modified by the SWAC according to market conditions (without update of this SWMP).

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