

**Guidance Document
for
Preparation of the NPDES
Storm Water Pollution Control Plan**



State of Oregon
**Department of
Environmental
Quality**

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GUIDANCE DOCUMENT FOR PREPARATION OF THE STORM WATER POLLUTION CONTROL PLAN

1 INTRODUCTION

In November of 1990, the Environmental Protection Agency (EPA) adopted rules found in 40 Code of Federal Regulations (CFR) §122, 123, and 124 that require National Pollutant Discharge Elimination System (NPDES) permits for storm water discharges from certain municipalities and many groups of industries. For designated industries, permits are required if there are point source discharges of storm water associated with industrial activity to surface waters.

The Department of Environmental Quality (DEQ) has issued five General NPDES permits for industrial and construction related storm water discharges designated in federal rule. The 1200-C and 1200-CA address construction activities and are not discussed in this document. The requirements of the other permits, the 1200-A, 1200-COLS, and 1200-Z for industrial storm water discharges, are discussed here. Please refer to Appendix A for *the activities* covered by the 1200-A, 1200-COLS, and 1200-Z permits.

On October 30, 2000, EPA published in the Federal Register (Vol. 65, No. 210) the NPDES Multi-Sector General Permits for Storm Water Discharges Associated with Industrial Activities. This became a part of the Federal Regulations pertaining to storm water discharges associated with industrial activities which must, at a minimum, be met by State agencies administering the storm water NPDES program.

1.1 Preparation and Update of SWPCP

The 1200-A, 1200-COLS, and 1200-Z permits require that a Storm Water Pollution Control Plan

(SWPCP) be prepared by a person knowledgeable in storm water management and familiar with the facility. A person qualified in storm water management may be the plant manager, environmental manager, facility engineer, or any other person with knowledge of the site and storm water management practices.

The staff individual(s) that comprise the facility's Pollution Prevention Team must be identified by name or title. The Pollution Prevention Team is responsible for assisting the facility/plant manager in developing, implementing, maintaining, and revising of the SWPCP.

1.2 Signature Requirements

The 1200-A, 1200-COLS, and 1200-Z permits require that the SWPCP be signed in accordance with 40 CFR §122.22. The SWPCP must be signed and retained on-site at the facility covered by the permit. Updates and revisions to the plan are also to be signed in this manner. In signing the SWPCP, the authorized facility representative is attesting that the information contained in the plan is true and accurate. The SWPCP is to be signed as follows regardless of the number of employees:

(a) Applications. All permit applications shall be signed as follows:

(1) For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation

of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

(b) All reports required by permits, and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if: (1) The authorization is made in writing by a person described in paragraph (a) of this section;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) and,

(3) The written authorization is submitted to the Director.

(c) Changes to authorization. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

(d) Certification. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

1.3 Implementation of SWPCP

The SWPCP must be prepared and implemented in accordance with Schedule C in the 1200-A, 1200-COLS, and 1200-Z permits. This schedule provides the following time frames:

Existing Permittee (for a facility with an NPDES storm water discharge permit assigned prior to September 30, 1996) - The permits require existing permittees to revise and begin implementation of their SWPCP to meet any new permit requirements within 90 days after receiving the renewal permit

New Permittee with Existing Facility (for a facility operating prior to September 30, 1996, without an NPDES storm water discharge permit) – The permits require new permittees to prepare and begin implementation of their SWPCP within 90 days after permit issuance.

New Facility (for a facility beginning operation after September 30, 1996) - The permits require new facilities to prepare and begin implementation of the SWPCP prior to starting operations.

Except for site controls that require capital improvements, the SWPCP must be implemented within 90 days of issuance of the permit to the site. Site control activities that require capital improvements must be completed in accordance with the schedule set forth in the SWPCP.

Capital improvements are defined as the following improvements that require capital expenditures:

- A. Treatment best management practices including but not limited to settling basins, oil/water separation equipment, catch basins, grassy swales, and detention or retention basins.
- B. Manufacturing modifications that incur capital expenditures, including process changes for reduction of pollutants or wastes at the source.
- C. Concrete pads, dikes and conveyance or pumping systems utilized for collection and transfer of storm water to treatment systems.
- D. Roofs and appropriate covers for manufacturing

1.4 Submittal and Availability of SWPCP

The permits require that the SWPCP and all updates and revisions to it be submitted to the appropriate DEQ Regional Office and any local agency which may have an agreement with DEQ to administer the General Industrial Storm Water Discharge Permit program for DEQ within 14 days of its completion. A list of Regional Offices and their addresses is

included in Appendix D. The plan must be kept current and updated as necessary to reflect any changes in facility operation.

A copy of the SWPCP must be kept at the facility and made available upon request to government agencies responsible for storm water management in the permittee's area. The SWPCP must be available to the public, U.S. Fish and Wildlife Service, and the National Marine Fisheries Service upon request.

At any time, DEQ or the local administering agency may require a revision to the Plan should it be determined that the Plan does not meet the minimum requirements of a SWPCP or that further information or detail is needed. You must make the required changes to the Plan and they must be received by the appropriate agency within 30 calendar days of notification along with a certification that the changes have been made and implemented.

1.5 Review of SWPCP

The 1200-A, 1200-COLS, and the 1200-Z permits include storm water benchmarks that are target concentrations used to assess the effectiveness of the SWPCPs. An exceedance of a benchmark is not a violation. However, facilities that exceed benchmarks must review their SWPCP within 60 days of receiving sampling results. The purpose of this review is to determine if the plan is being followed and to identify if any additional site controls may be implemented to further improve the quality of storm water discharges. See Section 2.2, *Site Controls* of this document for more information.

Any newly identified site controls must be implemented in a timely manner and incorporated into the SWPCP as an update. A new plan is not required. If no additional site controls are identified, the permittee must state so in an update to the SWPCP.

Revisions to the SWPCP must be submitted to the Department within 14 days of completion. If the

Department does not comment on the revised SWPCP within 30 days, the permittee must implement the revisions as proposed.

Results of the SWPCP review must be submitted to the Department and made available upon request to other government agencies responsible for storm water management in the permittee's area. If the permittee demonstrates that background or natural conditions not associated with industrial activities at the site cause an exceedance of a benchmark, then no further modifications to the SWPCP are required for that parameter. Upon successful demonstration of natural or background conditions through monitoring of the same storm event used to evaluate benchmarks, the permittee would be eligible for the monitoring reduction as outlined Section 2.1.7, *Storm Water Monitoring*.

1.6 SWPCP Content

The SWPCP must include a complete description of the industrial activities at the permitted site, along with drainage maps that show the location of the facilities, impervious areas, and point source discharges. In addition, the SWPCP must discuss control measures, either in place or to be implemented on the site, that will prevent and/or treat storm water pollution.

The following guidance outlines the components of the SWPCP and provides suggestions on supplying the necessary information for a complete and usable document.

2 STORM WATER POLLUTION CONTROL PLAN

The information requested in the Storm Water Pollution Control Plan (SWPCP) is grouped into two basic areas:

- A description of the permitted site and the ongoing industrial activities, and

- A discussion of the site controls that will be implemented on the site to prevent storm water pollution.

The following discussion outlines and suggests ways to prepare and present the needed information.

2.1 Cover Page

The information to be listed on the cover page is:

- ◆ The company legal name as listed with the Oregon Department of Commerce Corporation Division;
- ◆ The site name;
- ◆ The Site I.D. or File Number from the permit issued to the permittee;
- ◆ The type of permit, i.e. 1200-A, 1200-C, 1200-Z, 1200-COLS, etc.;
- ◆ The date of the SWPCP or revision date; and
- ◆ The county in which the site is located.

2.2 Site Description

2.2.1 General Description

A description of the ongoing activities at the site must be included, along with maps that clearly show the activities and storm water drainage both on and off the site. An introductory paragraph for the SWPCP should be prepared to include a brief history of the operations at the industrial facility, the current activities, and any future plans for expansion. **A description of the building materials used in the building construction, i.e., corrugated galvanized siding, concrete tilt-up, etc. and the roofing materials, i.e., composition, built-up, galvanized corrugated sheet metal, etc. is very helpful. Also, a description of the paving material, i.e., gravel, asphalt, concrete, etc., helps in future communications when included in the plan.**

For the 1200-A permit, the site description should include a description of the mining and processing activities to take place on site. This section should also describe the material to be mined, the mining

method, the type(s) of on-site processing, and the area to be affected.

2.2.2 General Location Map

The purpose of the *General Location Map* is to show the permitted site's boundaries and its proximity to major highways and streets, bodies of water, and prominent landmarks or features. This information is required on the general location map for both the industrial site and the area surrounding it for an appropriate distance as needed for clarity. For example, copies of city or county tax, maps are acceptable general location maps, if accompanied by a street map showing the location marked with an "X" or some other appropriate mark. They need to be highlighted to show the property boundary and must illustrate the required features both on the site and around it for a one-mile radius (the distance surrounding the site will vary as needed to show these features).

2.2.3 Site Specific Map

The *Site-Specific Map* is required to show detailed information about the ongoing activities and storm water drainage both on and off the industrial site. This map serves to illustrate the complete drainage for the overall site, and includes the location of the permitted facility, property boundaries, buildings, operations or process areas, drainage patterns, storm water control structures, (i.e. catch basins including type, oil/water separators, etc.) and surface waterbodies.

To prepare the site specific map, a suitable base map showing the topography or the physical features of the land is needed. The physical features include the elevations and slope of the land and surface waterbodies. With this information, the flow of storm water runoff both on and off the site can be identified since the runoff will flow from higher to lower elevations.

There are maps available that can serve as the basis for the site-specific map. The "as-built" site or grading map included in the construction plans for

the facility, if available, can serve as the base map if the elevations and grading of *the site* have not changed appreciably since the facility was constructed.

For very large industrial sites, maps such as the United States Geological Survey (USGS) 7.5 Minute Series Topographic Map can be purchased from the Oregon Department of Geology and Mineral Industries, (503) 731-4444, or from sporting goods stores. The following internet web sites can provide printable aerial photographs, property maps, and/or USGS maps for these purposes.

Information	Web Address
USGS (MSN)	http://www.mapblast.com/
1992 vintage Black & White Aerial Photographs (all State)	http://deq12.deq.state.or.us/website/findLoc/
Property Tax Maps, USGS Maps, & Color Aerial Photographs of Washington County	http://www.co.washington.or.us/deptmts/lut/gis/intermap/map_land.htm
Property Tax Maps, Utilities Maps, & Color Aerial Photographs of the City of Portland	http://www.protlandmaps.com/
Property Tax Maps of Clackamas County	http://www.co.clackamas.or.us/gis/disclaimer.htm
Maps of Clatsop County	http://www.co.clatsop.or.us/default.asp?pageid=209&deptid=1
Property Tax Maps of Tillamook County	http://www.co.tillamook.or.us/prop/
Color Street Maps - Oregon Department of Transportation	http://www.odot.state.or.us/tmappingpublic/
Property Tax Maps for Lane County	http://www.co.lane.or.us/online.htm
Color Maps of Jackson County	http://www.smartmap.org/
Color Property Maps for Deschutes County	http://lava.deschutes.org/mox4/lavapublic.cfm
State Property Tax Lot Maps	http://www.ormap.org/maps/maps.htm
Color Terrain Map of Josephine County	http://www.co.josephine.or.us/gis/index.htm

These maps will provide information about the elevations of the land on and around the site. However, the USGS maps are drawn to a scale that may be too small (1 inch - 2000 feet) and may not provide enough detail for the topography of the specific industrial site.

It is important to note that some local governments, such as the City of Portland Map Reproduction Department, (503) 823-4444, have topographic maps for purchase that are drawn to a larger scale (1 inch- 100 feet). These will show greater detail in the topography of the land.

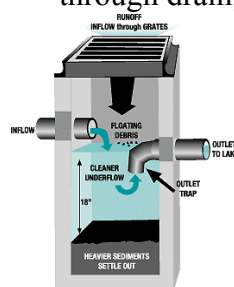
If the larger scale map does not provide enough detail for additional information to be added, a land surveyor or professional engineer should be able to map the site and develop a base map to the appropriate scale. An appropriate scale will vary depending on the size of the site. For very small sites, a base map drawn to a scale of 1 inch - 10 feet or 1 inch - 20 feet may be needed. Sites that are larger can be mapped and drawn to scales such as 1 inch - 30 feet, 1 inch - 40 feet, or larger. Good judgment should be used in selecting the scale of the map such that the information shown is easy to read and understand. It is important to remember that additional information (the location of buildings, process areas, drainage patterns, and storm water control structures) will need to be added to the base map.

Once the elevations and slope of the land are established for the permitted site, the next step is to add important drainage information to the site-specific map. *Drainage basins* should be drawn with a bold line onto the map to indicate storm water flow patterns both on and off the permitted site. Drainage basins are specific areas within the watershed in which storm water runoff flows to a common discharge or outfall point based upon the slope of the land. If the drainage basins cover large areas of land, *drainage sub-basins* may need to be drawn on the site-specific map to show the area where runoff collects on the site in greater detail. An approximation of the surface area covered by

the drainage basin or sub-basins should be included on the map.

Once the drainage basins or sub-basins have been drawn on the site-specific map, additional information about the site is required as follows:

- ◆ *Discharge structures or outfalls* for each drainage basin or sub-basin. Such structures refer to definite points where storm water runoff is collected and leaves the site. Examples of discharge structures or outfalls include pipes, ditches, channels, tunnels, or conduits. For clarity, the outfalls should be numbered. **In addition to appearing on the map, the outfall and sampling point type and description should appear in the document text.**
- ◆ *Buildings, structures, and pavement*, if they discharge storm water runoff to an outfall. These portions of the site are considered to be impervious surfaces that will not allow the runoff to infiltrate, or pass into, the natural ground. An approximation of the surface area covered by the impervious portions of the site should be noted on the map. **A description of the building construction materials should also be provided.**
- ◆ The *Drainage System* should be described. The type of catch basins should be indicated in the text, i.e. trapped (Lynch Style), drain, straight through drain, etc.



Trapped, Lynch type Catch Basin

- ◆ Areas of the site used for storage or disposal of *significant materials*. Significant materials include, but are not limited to, the following: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or

production; hazardous substances designated under Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any chemical the facility is required to report pursuant to Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as mill slag and sludge that have the potential to be released with storm water discharges.

- ◆ Existing structural control measures for reducing pollutants in storm water runoff.
- ◆ Portions of the site used for materials loading and access to the site.
- ◆ The location of hazardous waste storage or disposal facilities.
- ◆ The location of wells on the site (waste injection wells, seepage pits, dry wells, drinking water wells, etc.).
- ◆ The location of springs, lakes, wetlands, and other surface waterbodies.
- ◆ Surface flow directions should be indicated using arrows or elevation contour lines should be provided.

Examples of the General Location Map and the *Site Specific Map* are included in Appendix C. While the maps have been reduced in size for copying purposes and are no longer to scale, they are included to give examples of the content that is required. As previously stated, the permittee should include maps that are prepared to scale and adequate in size for clarity.

2.2.4 Potential Pollutants

Once the site-specific map is complete, information needs to be included in the SWPCP in a narrative form to evaluate the industrial activities taking place for any potential storm water pollution that may occur. The permittee must identify and list any potential pollutants on the site that could reach and

contaminate storm water discharge. One example of such a pollutant includes soil that leaves the site through runoff that will increase the turbidity in surface waters.

2.2.5 Significant Materials

Further, the permittee must list the significant materials that are treated, stored, or discarded on the site (as noted in Section 2.1.3. *Site-Specific Map*). The name of the material given should reflect either the common name (e.g., gasoline, diesel), or the industrial name along with the material's usage on the site. In addition, the quantity of the material stored on the site should be given in units appropriate for the particular material (cubic yards, cubic feet, gallons, etc.). The permittee must also disclose if the facility is involved in clean-up activities for past contamination of the site.

2.2.6 Receiving Body of Water

The permittee is required to describe the discharge process for storm water leaving the permitted site. If the storm water discharges to a pipe or ditch system, then the name of the street adjacent to the drainage ditch or municipal storm sewer should be given. In addition, the name of the receiving body of water that ultimately receives the discharge should be included.

2.2.7 Run-on and Non-Storm Water

Investigation of the storm water drainage system should be made looking for the presence of non-storm water and storm water run-on from off site. Storm water run-on from off site and non-storm water presence at the monitoring point(s) is not allowed. If present, the monitoring point(s) are not allowed and other monitoring point(s) upstream of the run-on or non-storm water must be chosen. **A statement that this investigation has been made and that no run-on or non-storm water is present at the sampling point(s) is required.**

2.2.8 Storm Water Monitoring

The permittee must identify, list, and describe in the SWPCP all discharge point(s) or outfalls on the site where storm water monitoring will take place (Sampling Points). For clarity, the outfalls should be numbered and a general description of their location provided. If the site contains multiple outfalls but monitoring occurs at only a few, the permittee must provide justification for the reduced sampling choice. For example, a single monitoring point (except for Columbia Slough 1200-COLS permits) can be used if all of the discharge points on the site provide drainage for similar activities and the same BMPs are used on all the outfalls because it is expected that the discharges will be similar in composition.

For permits issued in the Columbia Slough watershed, all industrial activity outfalls must be sampled for two sampling events to obtain data to justify a reduction in the number of monitoring points. Once the data is collected and analyzed, the number of sampling points may be reduced no more than 50 %. Storm water monitoring is only required for outfalls that have storm water discharges associated with industrial activities (40 CFR PART 122.26(b)(14)). Storm water discharges not associated with industrial activities are not required to be monitored. However, all discharge points must be identified in the SWPCP.

A. Determining the Number of Sampling Points

(a) Petition for Substituting Substantially Identical Effluents

As described at 40 CFR 122.21 (g)(7), when an industrial applicant has two or more outfalls with substantially identical effluents, DEQ may allow the applicant to test less than the total number of outfalls but at least one outfall must be sampled and to report that the quantitative data also apply to the substantially identical outfalls.

For facilities seeking to demonstrate that storm water outfalls are substantially identical, a variety

of methods can be used as determined by DEQ. Not initially allowed for in the NPDES 1200-COLS Permit. Three possible petition options are discussed here: (1) submission of a narrative description and a site map; (2) submission of matrices; or (3) submission of model matrices. Detailed guidance on each of the three options for demonstrating substantially identical outfalls is provided below. An owner/operator certification should be submitted with the option selected. The general SWPCP certification covers this. See Section (1.2)(d) for an example of this certification.

(1) Option One: Narrative Description/Site Map

Facilities demonstrating that storm water outfalls are substantially identical may submit a narrative description of the facility and a site map to the permitting authority. The narrative portion must include a description of why the outfalls are substantially identical. Petitioners may demonstrate that these outfalls contain storm water discharges associated with:

- Substantially identical industrial activities and processes;
- Substantially identical significant materials that may be exposed to storm water [including, but not limited to, raw materials, fuels, materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any chemical the facility is required to report pursuant to Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges as per 40 CFR 122.26(b)(12)];
- Substantially identical storm water management practices (such as retention ponds, enclosed

areas, diversion dikes, gutters, and swales) and material management practices (such as protective coverings and secondary containment); and

- Substantially identical flows, as determined by the estimated runoff coefficient and approximate drainage area at each outfall.

The site map should include an indication of the facility's topography or surface water runoff flow direction; each of the drainage and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area for each storm water outfall; all past or present areas used for outdoor storage or disposal of significant materials; identification of the significant materials in each drainage area; and identification of each existing structural control measures used to reduce pollutants in storm water runoff, materials loading and access areas, and areas where pesticides, herbicides, soil conditioners, and fertilizers are applied.

Appendix B, Exhibit 1 offers an example of a narrative description/site map petition that sufficiently demonstrates identical outfalls. Use an estimate runoff coefficient for impervious surfaces such as roofs or paving of 0.90 and 0.50 for pervious surfaces or more specific runoff coefficient from other sources to determine the estimated average runoff coefficient for the drainage area.

Estimated Average Runoff Coefficient (for 2 areas) =

$$\frac{(\text{Area A})(\text{Runoff Coef. A}) + (\text{Area B})(\text{Runoff Coef. B})}{\text{Area A} + \text{Area B}}$$

For more areas, add the Area times the Runoff Coef. in the numerator and add the area in the denominator.

Appendix B, Exhibit 2 presents an example of a site map to be included with the narrative description.

(2) Option Two: Use of Matrices to Indicate Identical Outfalls

Facilities attempting to demonstrate that storm water outfalls are substantially identical may include matrices describing specific information associated with each outfall in their Storm Water Pollution Control Plan. Matrix information is required only for those outfalls that the permit applicant is attempting to demonstrate are identical, not for all outfalls. Petitioners must demonstrate, using the matrices, that the outfalls have storm water discharges that meet the criteria listed in Section (a)(1). Refer to Exhibit 3 for examples of matrices that demonstrate substantially identical outfalls.

(3) Option Three: Model Matrices

Facilities attempting to demonstrate that storm water outfalls are substantially identical may include model matrices in their Storm Water Pollution Prevention Plan. This option is particularly appropriate for facilities with a large number of storm water outfalls and the potential for numerous groupings of identical outfalls.

Model matrices should contain information for one grouping of substantially identical outfalls. For example, if a facility has 150 outfalls and several groupings of identical outfalls, the facility would choose one of the groupings of identical outfalls to provide information in the model matrices. The petitioner must demonstrate, using these matrices, that all outfalls within this grouping have storm water discharges that meet the criteria listed in Section (a)(1).

B. Monitoring and Testing Procedures

As noted in the storm water permit general conditions, monitoring must be conducted according to test procedures approved under 40 CFR 136, unless other test procedures are specified in the permit. Schedule B in the 1200-A, 1200-COLS, and 1200-Z permits requires grab sampling of storm water runoff. A grab sample is a sample that is taken at a point in time rather than over a

period of time. Clean containers of the proper type will be needed to collect a specified quantity of runoff for testing. The laboratory that you will use should be able to furnish you with the proper type and quantity for the number of sampling points and the type of permit that you have. The parameters to test are listed in Schedule B of each permit. For example, the 1200-Z permit requires grab sampling for pH, total suspended solids (TSS), oil & grease, and total metals (copper, lead and zinc).

Once samples have been obtained, an independent laboratory can analyze the runoff and the permittee will be able to compare the results with the benchmarks and/or limitations in Schedule A of its permit. Sampling activities should be coordinated with the laboratory that will analyze the storm water runoff. Special containers and preservatives will be needed for certain parameters, and samples usually need to be refrigerated during transportation (packed in a cooler with ice).

It is recommended that the permittee develop a separate document to detail sampling protocol. This type of document is a useful training tool. The protocol will explain where and when to sample, specifically how to collect a sample, where to take the sample for analysis, and what to test for once storm water is collected. It should be written in such a way that an employee not normally assigned the monitoring duty would be able to sample storm water.

C. Frequency of Monitoring

The frequency of monitoring in Schedule B of the permits requires that sampling must be conducted two times per monitoring year with samples being collected at least sixty days apart. The monitoring year is from July 1- June 30. It is suggested that one of the samples be collected during the fall season when runoff first occurs, and the other in the spring. Visual observations of drainage areas must be made monthly when at least one storm event has produced runoff. Temperature measurements must be also made for 1200-COLS permits with the results sent in to DEQ with the annual report. Permittees are required to submit the data from

sampling activities to the appropriate DEQ Regional Office and to appropriate local government authority upon request by July 15 of each year. A list of Regional Offices and their addresses is included in **Appendix D**.

The 1200-A permit requires twice per year monitoring for total suspended solids and oil & grease with samples being collected at least sixty days apart. In addition, the 1200-A permit requires monthly visual monitoring (when discharging) for oil & grease sheen and turbidity. It also requires monthly on-site monitoring (when discharging) for pH and settleable solids. Fresh litmus paper that has the capability of determining pH to one-tenths (0.1) standard units or a property calibrated portable pH meter may be used to make field measurements of pH. Settleable solids testing should be conducted using an imhoff cone.

For permittees that have wastewater treatment and disposal activities covered by the 1200-A permit, they are required to inspect dikes, containment system, and pond freeboard on a daily basis. They are also required to inspect all streams within 300 feet of an active seepage area three times per week. The permit requires; that pH be monitored on a weekly basis in the concrete mixer washout seepage pond(s).

D. Monitoring Reduction

The permittee is not required to conduct sampling if the benchmarks specified in the 1200-A, 1200-COLS, and 1200-Z permits are met for at least four consecutive storm water monitoring events over 24 continuous months. The permittee is also eligible for the monitoring waiver if it is successfully demonstrated that exceedance of the benchmarks are due to natural or background conditions. There is no reduction in monitoring allowed for the on-site and visual monitoring requirements, and for facilities subject to limitations under federal regulations.

In addition, the following provisions apply:

- ◆ Sampling must take place during a rainfall event when runoff from the site is occurring.

- ◆ Results from sampling events cannot be averaged to meet the benchmarks.
- ◆ Composite sampling is not allowed.
- ◆ Sampling must be in the undiluted discharge stream and can not be in the receiving waters. Non-storm water presence at the sampling point is not allowed.
- ◆ Monitoring waivers may be allowed for individual parameters.
- ◆ Parameters in exceedance or not previously sampled must be monitored as required in Schedule B of the Permit until the monitoring waiver condition is met.
- ◆ Monitoring data from the previous permit period may be used to meet the waiver requirement. This data must be evaluated against the benchmarks specified in the current permit.
- ◆ Monitoring data from the same storm event must be used to demonstrate that background or natural conditions not associated with industrial activities at the site are contributing to the exceedance of a benchmark.

The permittee must submit written notification to the Department when exercising the monitoring waiver condition (refer to Schedule B.3 of the permits).

2.3 Site Controls

The permittee is required to submit information concerning the following:

- ◆ Storm water best management practices,
- ◆ Spill prevention and response procedures,
- ◆ Preventive maintenance,
- ◆ Employee education program, and
- ◆ Record keeping and internal reporting procedures.

Guidance on what practices should be employed to improve the quality of storm water may be found in the Department's manual *Recommended Best Management Practices for Storm Water Discharges*, August 1997, and Northwest Region's *Best Management Practices for Storm Water Discharges Associated with Industrial Activities*, July 1999.

2.3.1 Storm Water Best Management Practices

The permittee is required to prepare a written description of all storm water best management practices that are used or will be implemented on the site to comply with the 1200-A, 1200-COLS, and 1200-Z permits.

Permittees are required to maintain existing controls and/or develop new controls appropriate for the site. The purpose of these Controls is to minimize the exposure of pollutants to storm water. The SWPCP must have the minimum components specified below along with a description of each component. The 1200-A, 1200-COLS, and 1200-Z permits require that the following best management practices must be employed at the site *if technically and economically feasible*:

A. Containment

All hazardous materials must be stored within berms or other secondary containment devices to prevent leaks and spills from contaminating storm water. If the use of berms or secondary containment devices is not possible, then hazardous materials must be stored in areas that do not drain to the storm sewer system. An explanation of how any retained water within the containment berm is disposed should also be included.

B. Oil and Grease

Oil/water separators, booms, skimmers or other methods must be employed to eliminate or minimize oil and grease contamination of storm water discharges.

C. Waste Chemicals and Material Disposal

Wastes must be recycled or properly disposed of in a manner to eliminate or minimum exposure of pollutants to storm water. All waste contained in bins or dumpsters where there is a potential for drainage of storm water through the waste must be covered to prevent exposure of storm water to these pollutants. Acceptable covers include, but are not limited to, storing of bins or dumpsters under roofed areas and use of lids or temporary covers such as tarps.

D. Erosion and Sediment Control

Erosion control methods such as vegetating exposed areas, graveling or paving must be employed to minimize erosion of soil at the site. Sediment control methods such as detention facilities, sediment control fences, vegetated filter strips, bioswales, or grassy swales must be employed to minimize sediment loads in storm water discharges. For activities that involve land disturbance, the permittee must contact the local municipality to determine if there are other applicable requirements.

E. Debris Control

Screens, booms, sealing ponds, or other methods must be employed to eliminate or minimize debris in storm water discharges.

F. Storm Water Diversion

Storm water must be diverted away from fueling, manufacturing, treatment, storage, and disposal areas to prevent exposure of uncontaminated storm water to potential pollutants.

G. Covering Activities

Fueling, manufacturing, treatment, storage, and disposal area must be covered to prevent exposure of storm water to potential pollutants. Acceptable covers include, but are not limited to, permanent structures such as roofs or buildings and temporary covers such as tarps.

H. Housekeeping

Areas that may contribute pollutants to storm water must be kept clean. Sweeping, prompt clean up of

spills and leaks, and proper maintenance of vehicles must be employed to eliminate or minimize exposure of storm water to pollutants.

A schedule for implementing the stormwater best management practices must be included in the SWPCP. Stormwater best management practices must be implemented in accordance with Schedule C of the 1200-A, 1200-COLS, and 1200-Z permits (see Section 1.3, *Implementation of SWPCP of this document*).

2.3.2 Spill Prevention and Response Procedures

The permittee is required to develop *Spill Prevention and Response Procedures* (SPRP) for the permitted facility. The SPRP should identify areas where potential spills of significant materials can contact and contaminate storm water discharge, along with the outfalls where the contaminated storm water would leave the site. All of this information should be readily obtainable from the site-specific map discussed in Section 2.1, *Site Description*.

The SPRP establishes operating methods that will be used to prevent the spilling of materials used in industrial activities. The SPRP also includes spill clean-up procedures, including notification procedures to the appropriate state and local government agencies. Oregon Administrative Rules, Chapter 340, Division 108, *Oil and Hazardous Material Spills and Releases*, detail reportable quantities and notification procedures required by state and federal law.

A responsible person should be designated for implementation of the SPRP, and employees need to be made aware of the spill response plan. A list of the required clean-up equipment needed for the spill, along with evidence that such equipment is on the site or readily available for use by trained personnel, must also be included in the SPRP.

Much of this information may be found in spill prevention plans required by other regulations. The

permittee may substitute spill prevention plans developed under other regulations provided that storm water management concerns are adequately addressed. Existing spill prevention plans that a permittee may already have include the Spill Prevention Control and Countermeasure (SPCC) plan required by 40 CFR § 112 or the Contingency Plan required by Subpart D of 40 CFR §264 or 265.

2.3.3 Preventive Maintenance Program

A *Preventive Maintenance Program* is required to insure the effective operation of materials management facilities, control facilities, and treatment facilities. At a minimum the preventative maintenance program must be documented in the SWPCP and include the following:

- ◆ Monthly inspections of areas where potential spills of significant materials or industrial activities could impact storm water runoff.
- ◆ Monthly inspections of storm water control measures, structures, catch basins, and treatment facilities.
- ◆ Cleaning, maintenance, and/or repair of all materials handling and storage areas and all storm water control measures, structures, catch basins, and treatment facilities as needed upon discovery.
- ◆ At least, annual investigation for the presence of non-storm water in the storm water conveyance system at the sampling point(s). This should occur at different times of the year each year in order to determine if groundwater infiltration into the storm water conveyance system is occurring, non-contact cooling water is being discharged to the storm water drainage system, process waste stream is being discharged to storm water, and etc. before the sampling point(s).

2.3.4 Employee Education Program

The permittee needs to develop and implement an *Employee Education Program*. The purpose of this program is to inform personnel of the SWPCP, the spill response procedures, materials management practices, and good housekeeping measures that will prevent pollution of storm water runoff. The program can be implemented in various ways through presentations at safety meetings, by posting good housekeeping signs, and by providing training meetings for employees on use of the SWPCP and its components. A schedule for employee education shall be included in the SWPCP. Records of employee training must be kept and be available on site of employee environmental training for review upon request.

2.3.5 Record Keeping and Internal Reporting Procedures

The permittee must record and maintain the following information:

- ◆ Inspection, maintenance, repair and education activities as required by the SWPCP.
- ◆ Spills or leaks of significant materials that impacted or had the potential to impact storm water or surface waters. Include the corrective actions to clean up the spill or leak as well as measures to prevent future problems of the same nature.

This information does not need to be submitted with the SWPCP and the annual reporting requirements. However, the information must be provided to the Department and other government agencies responsible for storm water management in the permittee's area upon request.

3 SOURCES OF FURTHER INFORMATION

3.1 Document List

- ◆ *Code of Federal Regulations (CFR)*, Title 40- Protection of Environment, § 122, 123, 124, and Title 33, §153, 154, and 155.
- ◆ *Nonpoint Source Pollution Control Guidebook for Local Government*, Oregon Department of Environmental Quality & Department of Land Conservation and Development, June 1994.
- ◆ *Recommended Best Management Practices for Storm Water Discharges*, Oregon Department of Environmental Quality, August 1997.
- ◆ *Best Management Practices for Storm Water Discharges Associated with Industrial Activities*, Oregon Department of Environmental Quality Northwest Region (DEQ NWR), July 1999.
- ◆ *Standard Methods for the Examination of Water and Wastewater*, Sixteenth Edition, APHA, AWWA, and WPCF, 1988.
- ◆ *Stormwater Program Guidance Manual for the Puget Sound Basin, Volumes I & 2*, Publication #92-32 and #92-33, Washington Department of Ecology, WA, July 1992, Available for fee, WA DOE (206) 438- 7528.
- ◆ *Stormwater Management Manual for the Puget Sound Basin (The Technical Manual)*, Publication #91-75, Washington Department of Ecology, WA, February 1992, Available for fee, WA DOE (206) 438-7528.
- ◆ *Stormwater Quality Facilities, A Design Guidance Manual*, City of Portland, Bureau of Environmental Services (BES), March 1995, Available from BES (503) 823-5600.
- ◆ *Stormwater Management Manual*, City of Portland, BES, expected to be available in 1998, Available from BES (503) 823-5600.
- ◆ *Storm Water Management for Industrial Activities*, U.S. Environmental Protection Agency (EPA), April 1992, Available for fee, Education Resource Information enter/Clearinghouse (614) 292-6717, order #447N.
- ◆ *Storm Water Management for Construction Activities*, U.S. Environmental Protection Agency (EPA), April 1992, Available for fee, Education Resource Information Center/Clearinghouse (614) 292-6717, order #482N.
- ◆ *Best Management Practices for Storm Water Discharges Associated with Construction Activities*, Oregon Department of Environmental Quality Northwest Region (DEQ NWR), October 1999, Available at <http://www.deq.state.or.us/nwr/stormwater.htm>
- ◆ *Best Management Practices for Storm Water Discharges Associated with Industrial Activities*, Oregon Department of Environmental Quality Northwest Region (DEQ NWR), July 1999, Available at <http://www.deq.state.or.us/nwr/stormwater.htm>
- ◆ *Water Quality Best Management Practices Manual for Commercial and Industrial Businesses*, City of Seattle, WA, June 1989, Available for fee, WA DOE (206) 438-7528.
- ◆ *NPDES Storm Water Sampling Guidance Document*, U.S. Environmental Protection Agency (EPA), EPA 833-B-92-001, July 1992, <http://www.epa.gov/earth1r6/6en/w/formsw.htm>
- ◆ *Guidance Manual for the Monitoring and Reporting Requirements of the NPDES Multi-Sector Storm Water General Permit*, U.S. Environmental Protection Agency (EPA),

<http://www.epa.gov/earth1r6/6en/w/sw/dmrswg/ui.pdf>, January 1999

Spill Prevention Countermeasure and Control - 1-800-424-4EPA

3.2 Department of Environmental Quality Contacts

Please see Appendix D for the address and phone number for the regional office serving your county.

3.3 Other Agencies

◆ Environmental Protection Agency (EPA)

Oregon Operations Office - (503) 326-3250
Region 10 Storm Water - (206) 553-8399

◆ City of Portland, Bureau of Environmental Services, Industrial Storm Water Section - (503) 823-5600

◆ Clean Water Services, Source Control Section - (503) 681-5134

◆ Washington Department of Ecology (WA DOE)

Industrial Stormwater - (206) 438-7614
Municipal Stormwater - (206) 438-7076

APPENDIX A

Standard Industrial Code (SIC)

Permit Type	Sources Covered	
1200-A	Facilities with primary Standard industrial Classification code 14 Mining and Quarrying of Nonmetallic Minerals, Except Fuels. Also covered are asphalt mix batch plants and concrete batch plants, including mobile operations of this type. This permit can cover multiple sites under single ownership, each of less than 10 disturbed acres where only mining activities are conducted.	
1200-Z or 1200-COLS	Facilities with the following primary Standard Industrial Classification codes: 21 Tobacco Products 22 Textile Mill Products 23 Apparel and Other Finished Products Made From Fabrics and Similar Material 27 Printing, Publishing and Allied Industries 4221 Farm Product Warehousing and Storage 4222 Refrigerated Warehousing and Storage 4225 General Warehousing and Storage	
	Facilities with primary Standard Industrial Classification code 20 Food and Kindred Products.	
	Landfills, land application sites and open dumps.	
	Facilities with the following primary Standard Industrial Classification codes: 28 Chemicals and Allied Products 29 Petroleum Refining and Related Industries 30 Rubber and Miscellaneous Plastics Products 31 Leather and Leather Products 32 Stone, Clay, Glass, and Concrete Products 33 Primary Metal Industries and Steam Electric Power Generation, including coal handling sites	
	Facilities with the following primary Standard Industrial Classification codes: 34 Fabricated Metal Products, Except Machinery and Transportation Equipment 35 Industrial and Commercial Machinery and Computer Equipment 36 Electronic and Other Electrical Equipment and Components, Except Computer Equipment 37 Transportation Equipment 38 Measuring, Analyzing, and Controlling Instruments; Photographic, Medical and Optical Goods; Watches and Clocks 39 Miscellaneous Manufacturing Industries	
	Facilities with the following primary Standard Industrial Classification codes: 10 Metal Mining 12 Coal Mining 13 Oil and Gas Extraction	
	Facilities with primary Standard Industrial Classification code 26 Paper and Allied Products.	
	Hazardous Waste Treatment, Storage and Disposal Facilities, and facilities with primary Standard Industrial Classification codes 5015 Motor Vehicle Parts, Used, and 5093 Scrap and Waste Materials.	
	Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, recycling, and reclamation of municipal or domestic sewage (including land dedicated to the disposal of sewage sludge that are located within the confines of the facility) with the design flow capacity of 1.0 mgd or more, or required to have a pretreatment program under 40 CFR 1403.	
	Facilities with the following primary Standard Industrial Classification codes that have vehicle maintenance shops (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or airport deicing operations: 40 Railroad Transportation 41 Local and Suburban Transit and Interurban Highway Passenger Transportation 42 Motor Freight Transportation and Warehousing (excluding 4221 Farm Product Warehousing and Storage, 4222 Refrigerated Warehousing and Storage, and 4225 General Warehousing and Storage) 43 United States Postal Service 44 Water Transportation 45 Transportation by Air 5171 Petroleum Bulk Stations and Terminals	
	Facilities with the following Standard Industrial Classification codes: 24 Lumber and Wood Products, Except Furniture 25 Furniture and Fixtures	
	Note: Facilities with SIC codes 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, and 4221-25 are only required to apply if stormwater is exposed to material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery.	

APPENDIX B

Substantially Identical Effluents – Exhibits

EXHIBIT 1. PETITION TO SAMPLE SUBSTANTIALLY IDENTICAL OUTFALLS (NARRATIVE DESCRIPTION/SITE MAP)

Examples

- I. The Pepper Company of Philadelphia, Pennsylvania, is primarily engaged in manufacturing paperboard, including paperboard coated on the paperboard machine (from wood pulp and other fiber pulp). This establishment is classified under SIC code 2631. Pursuant to the November 16, 1990, NPDES storm water permit application regulations, this facility is considered to be “engaging in industrial activity” for the purposes of storm water permit application requirements in 40 CFR 122.26(b)(14)(i) and (ii).
- II. “When an applicant has two or more outfalls with substantially identical effluents, the Director may allow the applicant to test only one outfall and report that the quantitative data also apply to the substantially identical outfalls.” [40 CFR 122.21(g)(7)] Except for the 1200-COLS Permit.

In accordance with 40 CFR 122.21(g)(7) of the NPDES regulations. The Pepper Company hereby petitions the State of Pennsylvania (the permitting authority) for approval to sample certain representative storm water outfalls in groupings of storm water outfalls that are substantially identical. The Pepper Company will demonstrate that of the ten (10) outfalls discharging storm water from our paperboard manufacturing plant, there are two pairs of substantially identical outfalls. Outfalls 3 and 4 are substantially identical and should be grouped together. Outfalls 8 and 9 are substantially identical and should be grouped together. Outfalls 1, 2, 5, 6, 7, and 10 have distinct characteristics and, therefore, will not be grouped together with other outfalls for the purposes of storm water discharge sampling.

- III. The Pepper Company will demonstrate that the substantially identical outfalls that have been grouped together contain storm water discharges associated with: (1) substantially identical industrial activities and processes that are occurring outdoors; (2) substantially identical significant materials (including raw materials, fuels, finished materials, waste products, and material handling equipment) that may be exposed to storm water; (3) substantially identical material management practices (such as runoff diversions, gutters and swales, protective coverings, and structural enclosures); and (4) substantially identical flows, as determined by the estimated runoff coefficient and approximate drainage area at each outfall.

1. Industrial Activities

A. Description of Industrial Activities at the Pepper Company

The Pepper Company receives wastepaper in bales. This baled wastepaper is sent through a hydropulper and converted to pulp. The fiber material is concentrated, stored, and then drawn through refiners to the paper machines. Wires, plastics, and miscellaneous material are removed during the pulping.

Three systems are used to produce top liner, back paper, and filler. The highest quality fiber is used for the top liner, the medium quality is used for the back paper, and the poorest quality is used for the filler paper. Wireforming or conventional boxboard processes are employed to produce clay-coated boxboard, using a water-based clay-coating material. Additional materials may be used as binders. These are stored indoors and are not exposed to precipitation. Ammonia is used in the clay-coating process. Off-grade fiber and trim material are ground up and returned to the liquid process stream. Slime control agents, consisting of bactericides, are used in association with this process. These agents are organic materials used to prevent souring of mill operations. They are received in drums and stored indoors. Empty drums are returned to the supplier to reuse. In addition, the Pepper Company operates an onsite landfill for the disposal of miscellaneous waste materials removed during pulping and paper cuttings operations.

B. Demonstration of Why Outfalls Are Substantially Identical in Terms of Industrial Activities Conducted Outdoors.

Outfalls 3 and 4

Outfalls 3 and 4 are substantially identical in terms of industrial activities conducted outdoors. Both outfalls contain storm water discharges associated with the outdoor storage of baled wastepaper. The wastepaper, which consists of old corrugated containers, mixed paper, and other types of wastepaper, is received weekly and stored for up to 3 weeks in Storage Areas #1 and #2. These uncovered storage areas are enclosed by chain-link fencing.

Outfalls 8 and 9

Outfalls 8 and 9 drain storm water runoff from areas where all industrial activities occur indoors. The industrial activities occurring under roof cover at these two outfalls include hydropulping, storage of concentrated fiber material, refining, and paperboard production. These industrial processes have no potential for contact with precipitation.

2. Significant Materials

A. Description of Significant Materials at die Pepper Company

The significant materials listed below are used by the Pepper Company to manufacture paperboard. These materials are stored indoors, unless otherwise indicated.

(i) Raw materials, including baled wastepaper (off-spec damaged paper stock or recycled paper) [wastepaper is stored outdoors at Storage Areas 91 and 12]; clays, ammonias, sizings, and slime control agents (chlorine dioxide); caustic; ammonia, which is stored in two tanks. [See Storage Area 93].

(ii) Waste Materials, including miscellaneous materials removed during pulping and paper cuttings (such as staples, rubber bands, styrofoam, etc.). These waste materials are stored indoors in open dumpsters. However, prior to disposing of the waste in the onsite landfill, these dumpsters are moved outdoors where they are potentially exposed to precipitation for 12 hours or less. [See Storage Area 43].

(iii) Finished Products, including paperboard and molded fiber products. These are always stored indoors.

(iv) Others, including wood pallets (which are used to transport and haul raw materials, waste materials, and finished products) are stored both indoors and outdoors. [See Storage Area #3]. The Pepper Company has an above-ground fuel tank with a pump. [See Storage Area #3].

B. Demonstration of Why Outfalls are Substantially Identical in Terms of Significant Materials that Potentially May be Exposed to Storm Water

Outfall 003 and 004

Outfalls 003 and 004 are substantially identical in terms of significant materials that may be exposed to storm water. Both outfalls contain storm water discharges associated with the outdoor storage of baled wastepaper. The wastepaper, which consists of old corrugated containers, mixed paper, and other types of wastepaper, is received weekly and stored for up to 3 weeks in Storage Areas #1 and #2. These uncovered storage areas are enclosed by chain-link fencing.

Outfalls 8 and 9

Outfalls 008 and 009 are substantially identical in terms of significant materials. Both outfalls contain storm water runoff from areas that have no significant materials potentially exposed to storm water. All industrial activities occurring in the areas drained by Outfalls 008 and 009 occur completely indoors.

3. Material Management Practices

A. Description of Material Management Practices at the Pepper Company

The Pepper Company uses a wide range of storm water management practices and material management practices to limit the contact of significant materials with precipitation. Non-structural storm water management practices include employee training, spill reporting and clean-up, and spill prevention techniques. Structural storm water management practices include:

(i) Diversion Devices (both above-ground trenches and subterranean drains) are used to divert surface water from entering a potentially contaminated area.

(ii) Gutters/Swales (constructed of concrete or grass) channel storm water runoff to drainage systems leading to separate storm sewers.

(iv) Overland Flow (which is the flow of storm water over vegetative areas prior to entrance into a storm water conveyance) allows much of the storm water to infiltrate into the ground. The remainder is naturally filtered prior to reaching the storm water conveyance. This is not considered sheet flow since natural drainage channels may be carved out during a heavy storm event.

B. Demonstration of Why Outfalls Are Substantially Identical in Terms of Storm Water Management Practices Used

Outfalls 003 and 004

Outfalls 003 and 004 are substantially identical in terms of storm water management practices used. Both outfalls contain storm water discharges associated with the outdoor storage of baled wastepaper,

located in Storage Areas #1 and #2. Concrete gutters at both sites channel storm water away from the storage areas down to the respective outfalls.

Outfalls 008 and 009

Outfalls 008 and 009 are substantially identical in terms of storm water management practices used. Both outfalls contain storm water runoff from areas that have no significant materials potentially exposed to storm water. All industrial activities occurring in the areas drained by Outfalls 008 and 009 occur completely indoors. Both outfalls receive overland flow storm water. From roof drains, the storm water in both drainage areas is then conveyed over similarly graded vegetative areas prior to entrance into the respective outfalls.

4. Flow Characteristics

A. Demonstration of Why Outfalls Are Substantially Identical in Terms of Flow, as Determined by The Estimated Runoff Coefficient and Approximate Drainage Area at Each Outfall

Outfalls 003 and 004

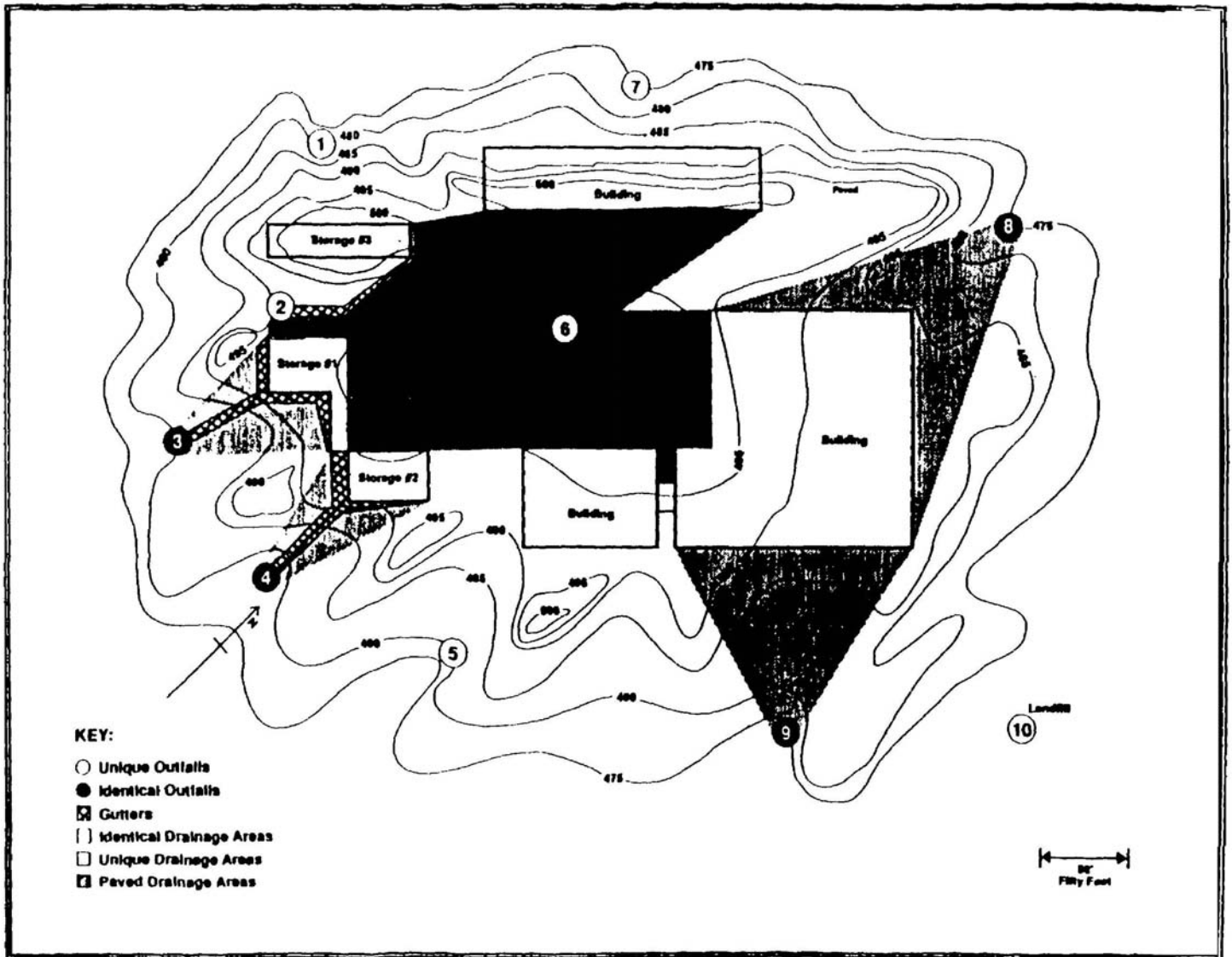
Outfalls 003 and 004 are substantially identical in terms of flow. Both drainage areas have a 2 to 7 percent grade and contain fine textured soil (greater than 40 percent clay) with a vegetative cover. The estimated runoff coefficient for both outfalls is 0.2. The approximate drainage area for each outfall is similar. Outfall 003 has an approximate drainage area of 3,500 square feet- Outfall 004 has an approximate drainage area of 2,900 square feet

Outfalls 008 and 009

Outfalls 008 and 009 are substantially identical in terms of flow. Both drainage areas have a 2 to 7 percent grade and contain fine textured soil (greater than 40 percent clay) with a vegetative cover. The estimated runoff coefficient for both outfalls is 0.2. The approximate drainage area for each outfall is similar. Outfall 008 has an approximate drainage area of 7,600 square feet. Outfall 009 has an approximate drainage area of 8,700 square feet.

APPENDIX B

EXHIBIT 2 - Site Map to be used with Option 1 Narrative (See Appendix B page 2 for another example)



APPENDIX B

EXHIBIT 3 – Matrices Demonstrating Substantially Identical Outfalls

Industrial Activities					
OUTFALL	Outdoor Storage of Raw Material & Material Handling Equipment	Fueling	Waste Material Storage (Dumpster)	Loading/Unloading of Raw Materials, Intermediate Products, & Final Products	Landfill activity
003	X	-	-	X	-
004	X			X	-
008	-	-	-	-	-
009	-	-	-	-	-

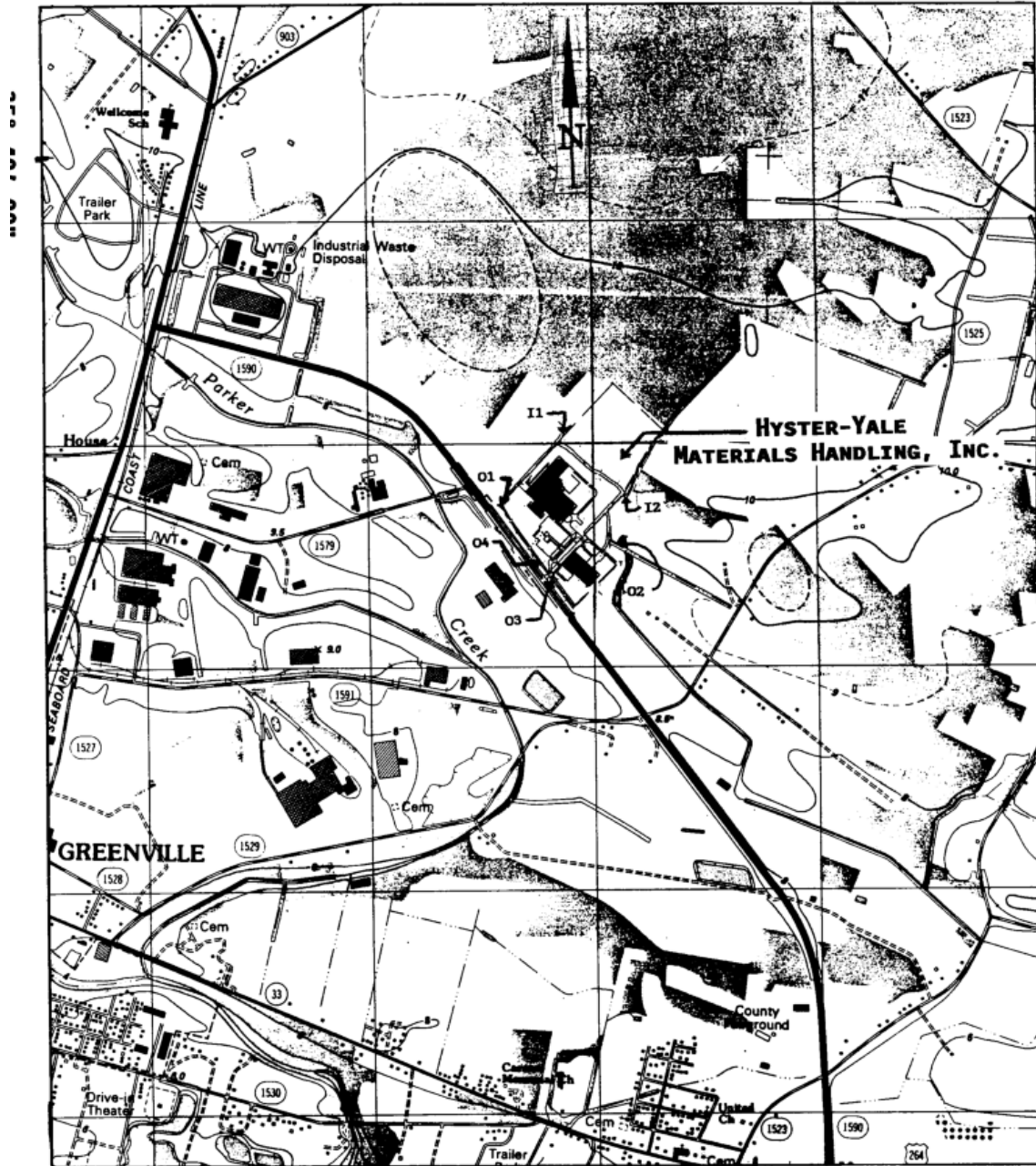
Significant Materials That May Be Exposed To Storm Water						
OUTFALL	Outdoor Ammonia Tank	Wood Pallets	Aboveground Gas Tank	Waste Materials	Baled Wastepaper	Finished Products
003	-	-	-	-	X	-
004	-	-	-	-	X	-
008	-	-	-	-	-	-
009	-	-	-	-	-	-

Storm Water Management Practices					
OUTFALL	Runoff Diversions	Wetland/Swales	Vegetative Filter Strip	Catch Basin Insert Bags (without overflow)	Vacuum Sweeping
003	-	X	-	-	-
004	-	X	-	-	-
008	-	-	X	-	-
009	-	-	X	-	-

Flow Characteristics		
OUTFALL	Estimated Runoff Coefficient	Approximate Drainage Area of Outfall (sq. ft.)
003	0.2	3,500
004	0.2	2,900
008	0.2	7,600
009	0.2	8,700

APPENDIX C

Topographic Map



77° 20' 00"



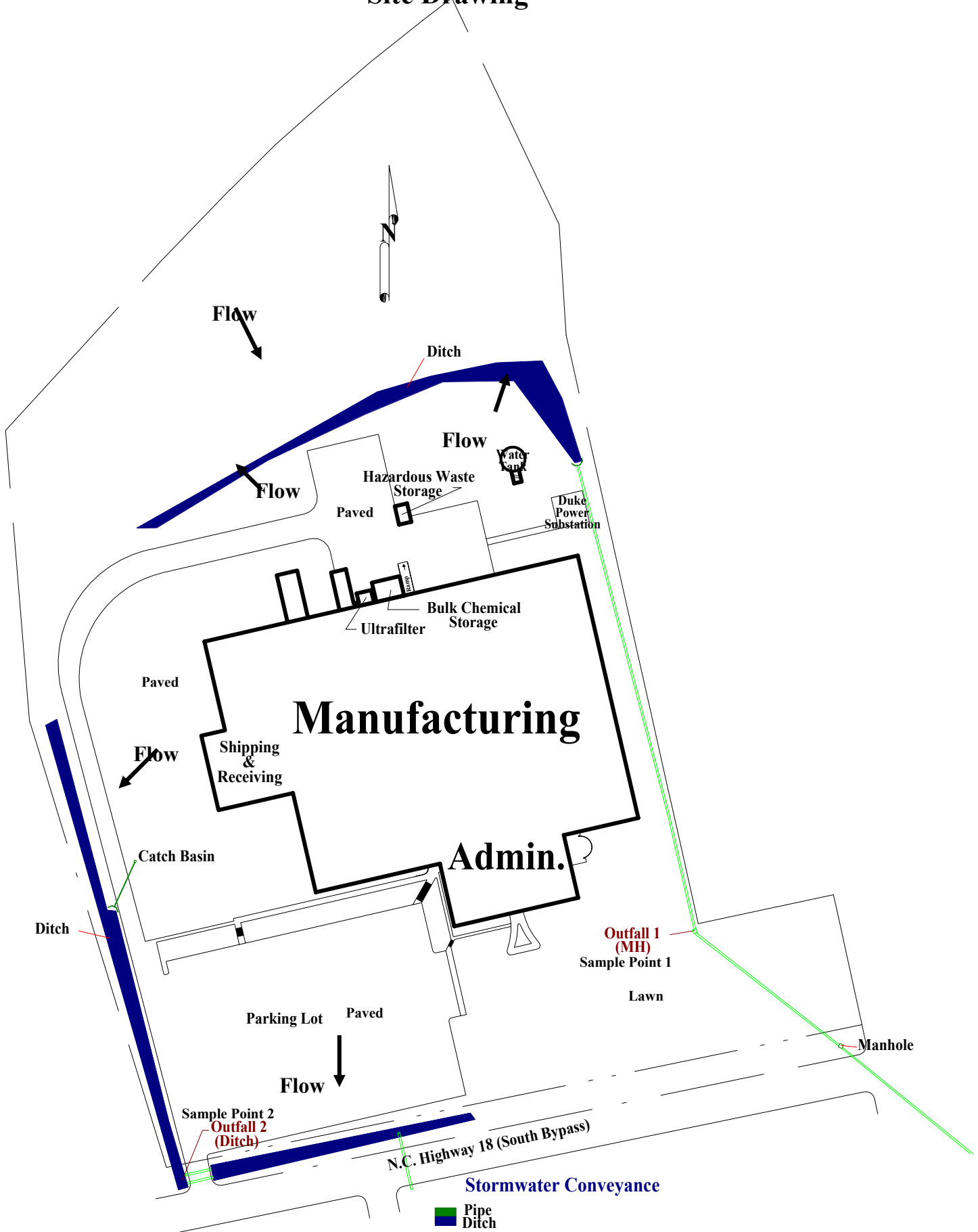
QUADRANGLE LOCATION

CONTOURS AND ELEVATIONS
IN METERS

(GREENVILLE SE)
5555 III SE
SCALE 1:24 000

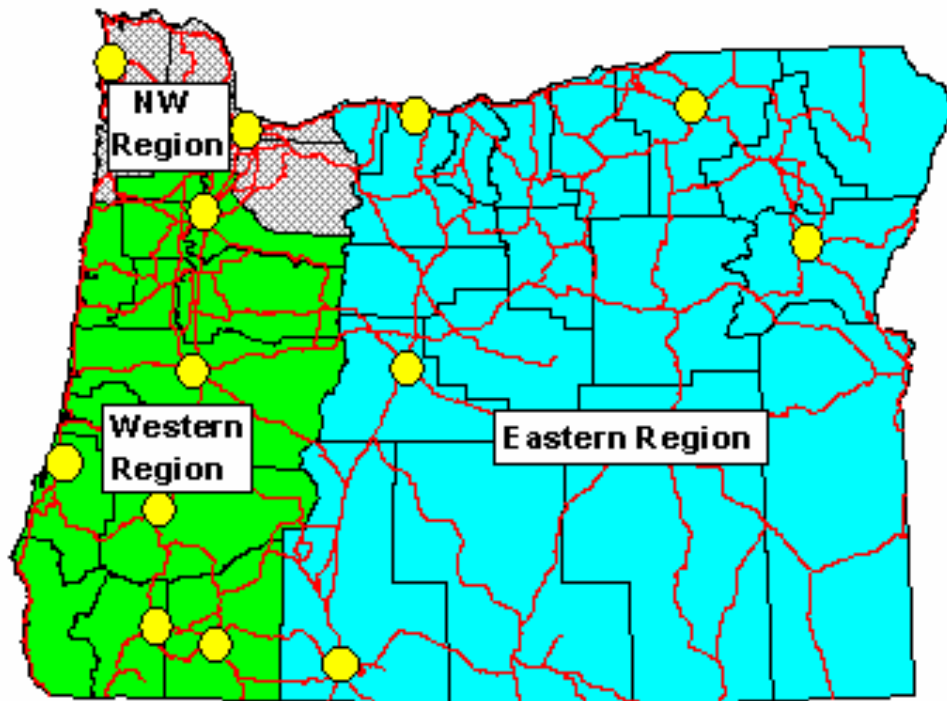


APPENDIX C Site Drawing



APPENDIX D

DEQ Offices



Northwest Region

Northwest Region - 503-229-5263
FAX - 503-229-6945
2020 SW 4th Ave., #400
Portland OR 97201

North Coast Branch Office 503-861-3280
17 N. Highway 101
Warrenton, OR 97146

Western Region

Western Region - 541-686-7838
1102 Lincoln St., Suite 210
Eugene, OR 97401

Medford Office 541-776-6010
201 W. Main St., #2-D
Medford, OR 97501

Salem Office 503-378-8240
750 Front St. NE, #120
Salem, OR 97310

Coos Bay Branch Office 541-269-2721
340 N. Front
Coos Bay, OR 97420

Roseburg Branch Office 541-440-3338
1937 W. Harvard Blvd.
Roseburg, OR 97470

Grants Pass Branch Office 541-471-2850
510 NW 4th, Rm. 76
Grants Pass, OR 97526

Eastern Region

Eastern Region - 541/388-6146
2146 NE 4th
Bend OR 97701

Pendleton Office 541-276-4063
700 SE Emigrant, #330
Pendleton, OR 97801

Baker City Branch Office 541-523-7998
2034 Auburn St.
Baker City, OR 97814

Columbia Gorge Branch Office 541-298-7255
Columbia Gorge Community College
400 E. Scenic Dr. Bldg. 2
The Dalles, OR 97058

Hermiston Office 541-567-8297
256 East Hurlburt, Suite 117
Hermiston, OR 97838

Klamath Falls Office 541-883-5603
PO Box 333
700 Main Street, Suite 202
Klamath Falls, OR 97601