

2022

# Stormwater Pollution Prevention Plan (SWPPP)

SUNNYSIDE SHOP  
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## Section 1: Introduction

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This section will explain the framework of a Stormwater Pollution Prevention Plan (SWPPP). It will provide information on the permit requirements, intended goals, and the limitations of this document.

### 1.1 Background

This Stormwater Pollution Prevention Plan (SWPPP) applies to the Sunnyside Shop. The SWPPP provides a set of actions and practices that can be implemented to reduce the impact the facility has on water quality. The shop is located within the City of Sunnyside. The latest Phase II Municipal Stormwater NPDES Permit for Eastern Washington was issued August 1, 2019, and states in S5.B.6.a.i(h) that a SWPPP is a requirement for material storage, heavy equipment storage, and maintenance areas.

As stated in Phase II Permit condition S5.B.6.a.i(h), the SWPPP shall include (at a minimum) the following:

- A site map showing the facility's stormwater drainage, discharge points, and areas of potential pollutant exposure.
- An inventory of the materials and equipment stored on-site, and the activities conducted at the facility which may be exposed to precipitation or runoff and could result in stormwater pollution.
- A plan for preventing and responding to spills at the facility which could result in an illicit discharge.
- A detailed description of the operational and structural BMPs in use at the facility and a schedule for implementation of additional BMPs. BMPs selected shall be consistent with the *Stormwater Management Manual for Eastern Washington*, or other Ecology approved technical manual. The SWPPP shall be updated as needed to maintain relevancy with the facility.
- Annual inspections of the facility, including visual observations of discharges, to evaluate the effectiveness of the BMPs, identify maintenance needs, and determine if additional or different BMPs are needed. The results of these inspections shall be documented in an inspection report or check list.

### 1.2 Goals

The goals for this SWPPP are:

- Establish Best Management Practices (BMPs) that identify, reduce, eliminate, and/or prevent the discharge of pollutants into stormwater.
- Prevent deterioration of surface water quality and ground water quality.
- Identify potential sources of pollutants at the Yakima County Road Facility.
- Evaluate the potential for stormwater contamination from potential pollutant sources.

- Identify operations, maintenance, inspections, and record keeping needed for source control BMPs and the needed updating of this SWPPP.

BMPs identified in this SWPPP are from the following sources:

- *Washington State Department of Ecology Stormwater Management Manual for Eastern Washington 2019*
- *Yakima County Regional Stormwater Manual (YCRSM, 2010)*
- *Yakima County Stormwater Authority (YCC 12.10)*

## Section 2: Site Information

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This section provides an overview of the Sunnyside Shop and the current stormwater drainage system.

### 2.1 Current Site Facility and Operations

The Sunnyside Shop is a 2.84-acre lot that serves the Yakima County Road Department. A single building serves as a garage for repairs and storage of equipment. Nearby are covered parking spots used for heavy equipment storage. The entire site is located within Sunnyside Washington. North of the site is the Milne Fruit Packing Plant. To the south and west are residential areas. To the east are open lots.

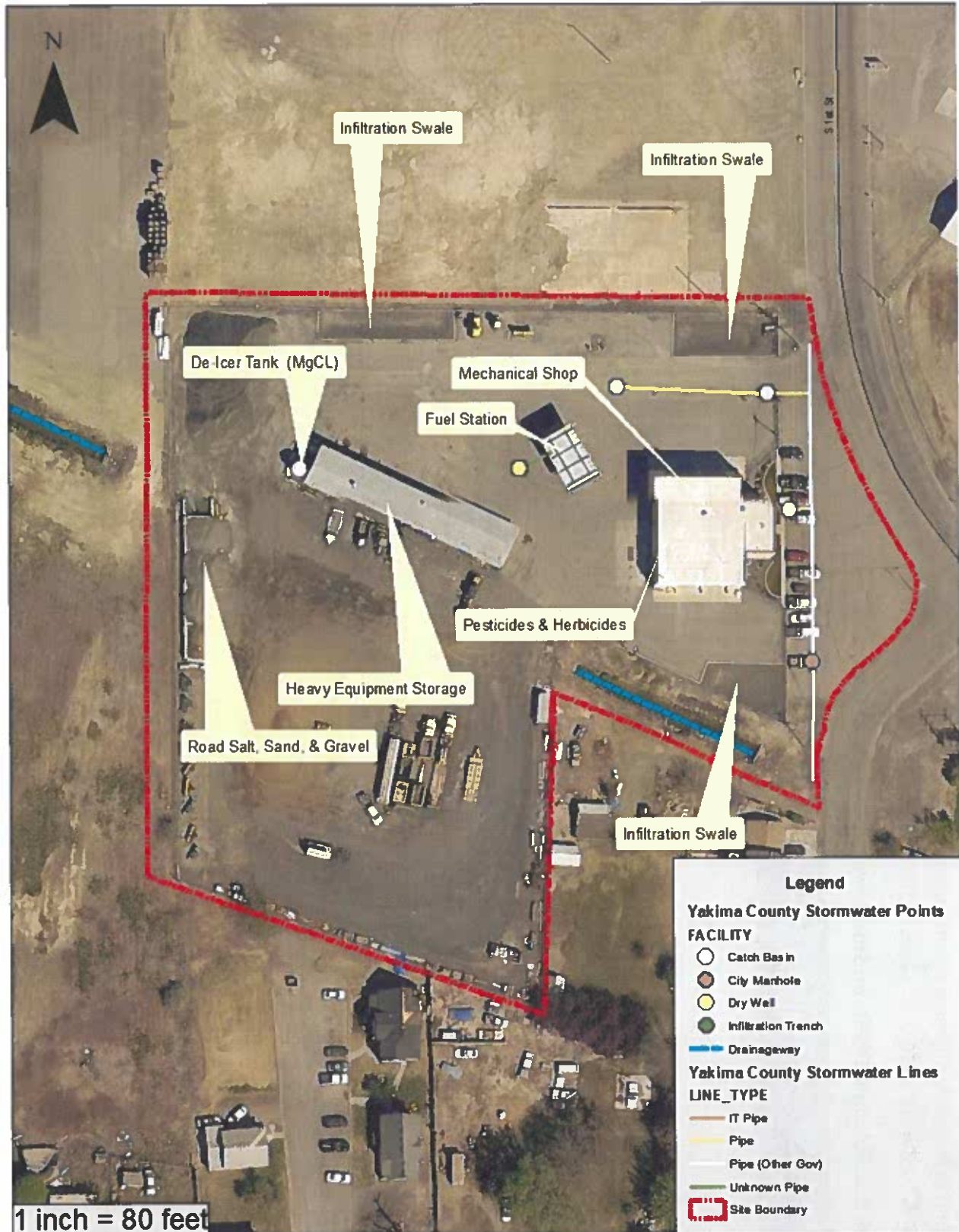
The site is used for the following purposes:

- Heavy Equipment Storage
- Fueling Stations
- Sand/Gravel Storage
- Pesticide and Herbicide Storage
- Vehicle Storage
- Equipment Repair and Maintenance
- External Wash Bay
- Hazmat Storage

In addition, there is canal that cuts through the entire site. The canal travels underground. The upstream section is on the eastern side of the site and downstream is on the western side.

A detailed map of the site is in Figure 1. A table to activities and their potential effect on stormwater is in Table 2-1

Figure 1: Site Map Sunnyside Shop



As seen in Figure 1, the main stormwater facilities are a set of catch basins connected to swales located in the north and west of the facility. To the west are a set of pipes that collect stormwater runoff. All stormwater is retained on site.

**Table 2.1: Potential Effects on Stormwater**

		Potential Pollutants								
		Sediment	Nutrients	Metals	Bacteria	Petroleum	Pesticides / Herbicides	Phosphorus	Salts	
<b>Activity</b>	<b>Description</b>									
Storage of Gravel & Sand	Stored for maintenance work and road repair.	X	X							X
Heavy Machine Repair / Maintenance	Heavy Duty Trucks are cleaned and repaired			X				X		
Paint Storage	White paint for road markings and surveying. Located both in outside storage and shop			X				X		
Storage of Road Salts	Uncovered road salts and sand for de icing during the winter months (Nov-Mar)	X	X							X
Fuel Station	Fuel pumps for county vehicles. Contains diesel and regular unleaded.			X				X		
Junk Storage	Open area for equipment and old parts			X				X		X

## 2.2 Inventory of Materials and Chemicals

A list of materials and chemicals stored at the shop is in Table 2-2. These materials and chemicals could discharge to the storm drainage system and pose a threat to water quality. Yakima County Water Resource Staff performed a field review in May 2022 to verify the quantities of these chemicals. Since materials quantities are constantly dynamic, the provided quantities are estimates.

<b>Table 2.2 Materials Exposed to Rainfall</b>			
<b>Exposed Materials</b>	<b>Quantity</b>	<b>Location</b>	<b>Method for Storage/Disposal</b>
Road Salt, Sand, & Gravel	6000 cubic yds.	East side of Shop	Containment Vaults/Used for Road Maintenance
Heavy Equipment Storage	35 vehicles (Max)	Mechanical Shop	Covered under storage
Fuel Station (Gasoline)	12,000 gallons	West of Mechanical Shop	Stored in two 6000 gal Fuel Tanks under Station
Pesticides/ Herbicide Storage	12-250 gallon tanks	Mechanical Shop	Storage Facility inside Main Shop
Waste Oil Storage	400 gallons	Mechanical Shop	Storage Facility inside Main Shop
De-Icer (MgCl)	10,000 gallons	Near Heavy Equipment Storage	Stored in 10,000 gal Tank
Paint & Chemical Storage	250 gallon tank	Mechanical Shop	Stored in 250 gal. tank
Diesel Exhaust Fluid	250 gallons	Southern Section facility	Stored in 250 gal. tank
Anti-Freeze	55 gallons	Mechanical Shop	Stored in Containers on Shelves

## Section 3: Best Management Practices

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This section describes the best management practices that Yakima County is currently utilizing on site and provides new BMP recommendations. BMPs range from new structures to individual tasks that will help prevent and/or reduce stormwater pollution. This section also provides outlines for training requirements and current BMPs implemented.

### 3.1 Current Physical BMPs.

The Sunnyside Shop utilizes the following physical BMPS

1. Three dry detention ponds.
  - a. These were installed 5-years ago and are the main outfall for the stormwater runoff.
2. A series of catch basins and pipes.
  - a. These are located on site, (see figure 2.1) and discharge into the dry swales.
3. Wash Pad with Grit Trap/Oil and Water Separator
  - a. This is used to clean incoming heavy equipment.
4. Floor Drain inside Mechanical Shop.
  - a. Use to catch polluted runoff from equipment.

### 3.2 Current Task-Based BMPS

Tasks based BMPs can be found in the Operation and Maintenance Plan provided in Appendix A.

### 3.3 Recommended Improvements

Yakima County is recommending the following structures be installed.

1. Vegetative Swales replacing the rock lined swales.
  - a. A vegetative swale is more effective than a rock lined swale at treating pollutants.
2. Cover for stored sand, salt, & gravel
  - a. The site contains stored gravel, salt, and sediment for de-icing roadways. A lack of cover means that rainwater could discharge the pollutants into local MS4s and overload them. A simple tarp cover would address this.

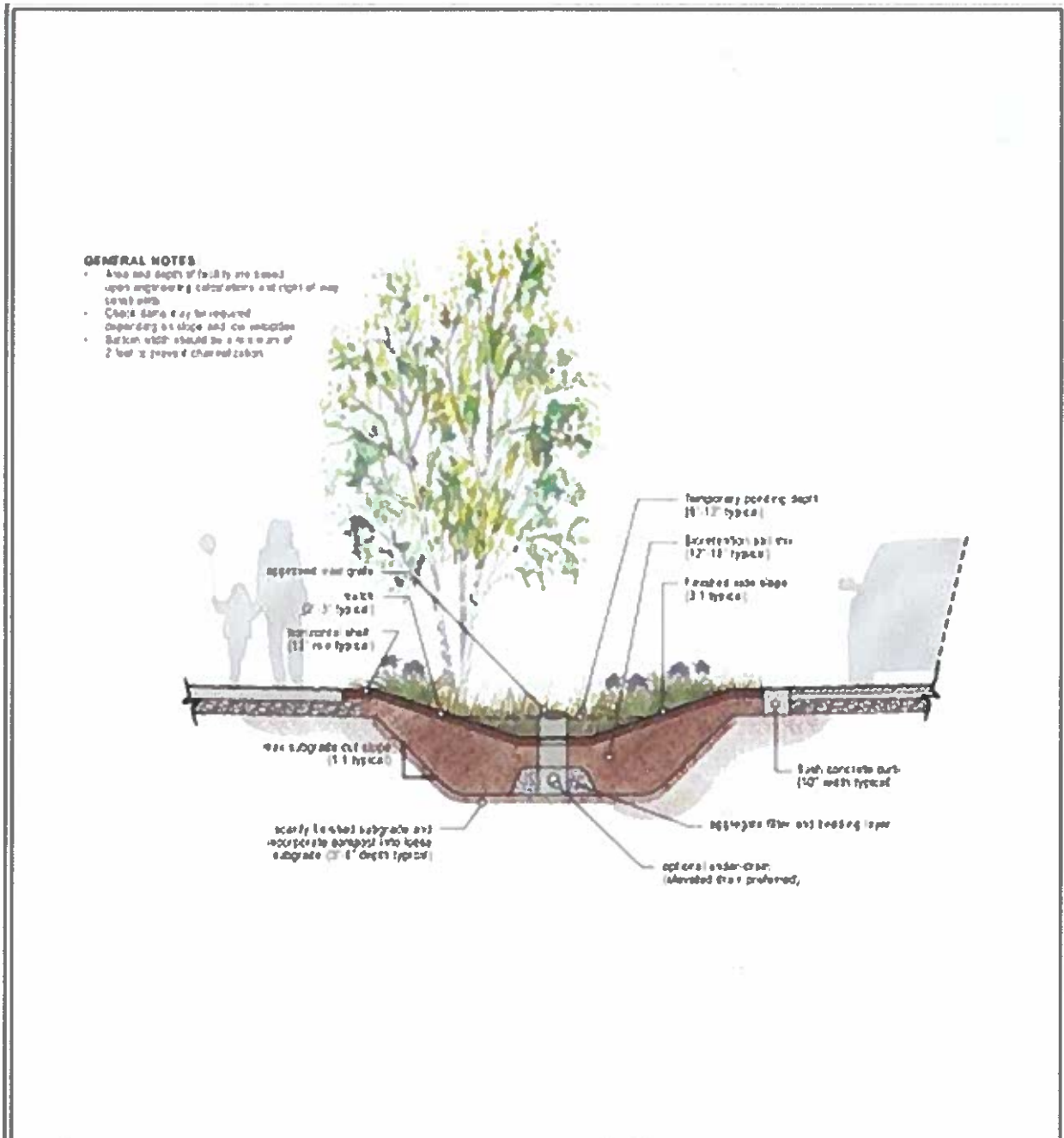
The following maintenance activities are either recommended or already being utilized at the shop for NPDES compliance.



Figure 2. Map Recommended BMPs



Figure 3. Swale (Eastern Washington Stormwater Manual, 2019)



Source: Low Impact Development Technical Guidance Manual for Puget Sound (WSU-PSP, 2012)



## Typical Bioretention Swale

Revised June 2013

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## Section 4: Visuals Inspections

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The NPDES Permit requires visual monitoring for discharges from the site. Visual inspections will need to include both dry and wet sessions; the combination provides contrasts. The wet weather inspections will determine the effectiveness of the BMPs installed and the dry weather will confirm discharge elimination. Creating a record and monitoring trends will provide an analysis for improvements. The following maintenance activities are either recommend or already being utilized at the shop for NPDES compliance. Many of these tasks are based off the Maintenance Criteria for BMPs found in Appendix A.

### 4.1 Drainage & Outfall Characteristics

The SWPPP recommends quarterly visual inspections at the following locations:

- The perimeter of the site.
- The fuel stations
- The catch basins
- Swales
- Wash Pad
- The oil and water separator

Each of these are marked in Figure 1.

### 4.2 Wet & Dry Weather Inspections

Dry weather inspection should be conducted on a quarterly basis and wet weather inspections should be conducted after every major storm event (10YR-24HR). Dry weather inspections are considered the baseline for routine reviews. These ensure that routine maintenance is occurring at the site. The wet weather inspections are to determine the effectiveness of existing BMPs during storm events. Wet weather inspections may be conducted when there is visible runoff.

Visual inspections should occur immediately after storm events (wet weather) regardless of the number events that occur during the year. This action will be done to ensure that there is enough data to get an accurate view of the effectiveness of existing BMPs.

Wet weather inspections will be conducted after significant rainfall events. This event must have visible runoff present at the shop.

The inspectors should be aware of the following items that may be present:

- **Trash/Debris:** this could possibly be landscaping material, leaf litter, drinking cans, disposable plastic, discarded food waste, etc.
- **Foam:** Soap and or other cleaning products, natural or synthetic have entered the storm system. It could be turbulence from runoff so when reviewing foam, the inspector should note any other clues like odor and or sediment.

- **Sheen:** A rainbow hue on the water surface that may indicate petroleum-based substances are in the storm system. If a flammable material is suspected, like gasoline, the inspector should management immediately, and take action to prevent a fire or explosion.
- **Turbidity:** Water appears cloudy and is a sign that sediment/dirt has entered the stormwater system.
- **Odor:** Pollutants can give off specific odors, which must be accurately described. Odor descriptions can include phrases like rotten eggs, solvent, fuel/oil, cleaning agent, etc.
- **Discoloration:** A red/orange color may indicate rust or iron bacteria. Other colors such as white could indicate paint or cleaning agent emulsions.

The inspector should note whether each indicator was present or absent at the time of inspection and note the approximate magnitude for any indicators that were observed. A sample copy of the BMP Inspection Sheet, used for both dry and wet inspection, is in Appendix B.

### 4.3 Annual BMP Evaluation

Yakima County will evaluate existing BMPs at the Sunnyside Shop to determine their effectiveness and if additional BMPs are needed. This evaluation will be done annually, and a report will be written describing findings.

### 4.4 SWPPP Revisions

The SWPPP will be reviewed on as need basis. Revisions would include new employees, contact information and evolving permit requirements.

## Section 5: Spill Response

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This section describes the Spill Response Plan (SRP) for the Sunnyside Shop. All employees who work at the shop should be trained to follow the specified procedures for initial response, clean up, and public involvement. Appendix A contains the current Operation and Maintenance Plan currently in use at the shop.

### 5.1 Purpose

The SRP will assist Yakima County Staff in containing spills to minimize impacts to the environment and personal safety. To support current and future clean-ups, spill events will be recorded, and the following will be noted:

- Patterns of pollutant discharges to determine future BMP implementation.
- Analyzing events and develop solutions to reduce the detrimental impacts of these spills (i.e., failures in source control).
- Determining how BMPs follow National Pollutant Discharge Elimination System (NPDES) Permit requirements.

## 5.2. Initial Response

Employees should be trained to follow the specified procedures for initial response, clean up, and public involvement. The primary concern is safety. The Operation and Maintenance Plan in Appendix A outlines procedure for notification to external parties, spill response during regular business hours, and the spill response outside of regular business hours.

## 5.3 Spill Response Report

The Stormwater Call Log, included in Appendix C, must be completed after each spill event. The Call Log will document the spill and maintain a record for this SWPPP.

The documentation will include photographs, and the spill's location will be recorded on a map. Depending on the situation, authorities may come to the site to sample the material and the receiving water. Any results obtained from this sampling activity, and subsequent sampling/monitoring events should be kept with the Spill Response documents.

## 5.4 Spill Kits

According to the Emergency Procedures (Appendix A), a spill kit may be used for minor leaks (less than 1-gal). These kits are in the same building as the paint and chemical storage (See Figure 1).

## Section 6: Record Keeping

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All forms, maintenance logs, and notes will be maintained for a minimum of 5 years.

Documentation should include the following:

- Visual Inspection Form (App. B)
- Annual BMP Evaluation Form (App. B)
- Call Log (App. C)