

# Drinking Water Source Protection Plan

## Update

Hooper Water Improvement District  
System Number 29006  
February 2024

Well #1 5450 South  
WS001

Prepared by:  
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# 1. Introduction

## 1.0 INTRODUCTION

### 1.1 System Information:

Hooper Water Improvement District  
29006  
5555 West 5500 South  
Hooper, Utah 84315  
(801) 985-1991

### 1.2 Source Information:

Well #1 5450 South  
WS001  
Well

### 1.3 Designated Person

Name: Scott Christiansen  
  
Address: 5555 West 5500 South  
Hooper, Utah 84315

## 2. Delineation Report

No changes

## 3. Inventory of Potential Contamination Sources (PCS) (incl. List, hazards, prioritization, location and map)

Priority ID 3 in Table 3.1.1, Septic Tanks, should be removed as a PCS. There are no longer any active septic tanks in the source protection zones for Well #1. All residents are served by a sewer collection system.

The Southern Pacific Railroad is no longer the owner of the active rail lines in Zone 4. Union Pacific Railroad is now the owner of record.

The modified Table 3.1.1 is given below. The PCSs are listed according to greatest to least risk priority. Priority was established based on distance from well.

The PCS location map has not changed. It is included in the appendix to this Update.

**Table 3.1.1 Prioritized list of PCSs and their associated hazards**

| Priority ID | Business Name or Facility       | PCS Zone | PCS Contact Name        | PCS Contact Address                   | PCS Contact Phone                      | Potential contaminant   | Potential Hazard       |
|-------------|---------------------------------|----------|-------------------------|---------------------------------------|--|---|------------------------|
| 1           | Residential Lots                | 1-4      | District Customer       | District Mailing List                 |  | Fertilizers, herbicides, pesticides / Household hazardous waste           | Chemical<br>Biological |
| 2           | Agricultural Fields/pastures    | 1-4      | District Customer       | District Mailing List                 |  | Above ground storage tanks Fertilizer, Pesticide, Herbicide, Animal waste | Chemical<br>Biological |
| 3           | Sewer Lines                     | 1-4      |                         |                                       |  | Leaky Sewer Lines   | Biological             |
| 4           | Underground Wells               | 1-4      | See Appendix 6          | See Appendix 6                        | See Appendix 6                         | Infiltrating chemicals into water aquifer                                 | Chemical<br>Biological |
| 5           | Kent's Foods                    | 2        |                         | 3535 W. 5600 S. Roy, UT 84067         | (801) 985-3940                         | Household Chemicals   | Chemical               |
| 6           | Utah Power and Light Substation | 3        | Lynn Ellis              | 2484 Washington Blvd. Ogden, UT 84404 | (801) 399-2131                         | Non-PCB oil in transforms   | Chemical               |
| 7           | 7-Eleven                        | 3        | Craig Boyer             | 5605 S. 3500 W. Roy, UT 84067         | (801) 985-3033                         | Below ground gasoline storage tanks                                       | Chemical               |
| 8           | Maverik Store 340               | 3        | Carly Parks             | 3495 W. 5500 S. Roy, UT 84067         | (801) 825-3776                         | Below ground gasoline storage tanks                                       | Chemical               |
| 9           | Ace Hardware                    | 3        | Dee                     | 3531 W. 5600 S. Roy, UT 84067         | (801) 985-7683                         | Varioius Household Chemicals  | Chemical               |
| 10          | Flash Photo                     | 3        | Jen Searle              | 5585 S. 3500 W. Roy, UT 84067         | (801) 985-1034                         | Chemicals for developing film   | Chemical               |
| 11          | Davis Hospital Weber Campus     | 3        | Jean Backus or Michelle | 3451 W. 5600 W. Roy, UT 84067         | (801) 807-7104<br>or<br>(801) 807-7635 | Varioius Household Chemicals  | Chemical<br>Biological |
| 12          | Ogden Clinic Grand View         | 3        | Jason Wells             | 3485 W. 5200 S. Roy, UT 84067         | (801) 475-3470                         | Varioius Household Chemicals  | Chemical<br>Biological |

**Table 3.1.1 Prioritized list of PCSs and their associated hazards (continued)**

|    |   |     |                      |   |                |   |  |
|----|---|-----|----------------------|---|----------------|---|--|
| 13 | Weber Basin Water Conservancy District Irrigation Reservoir | 3-4 | Mark Anderson        | 2873 E. Highway 193 Layton, UT 84040    | (801) 771-1677 | Infiltrating chemicals into water aquifer | Chemical<br>Biological                 |
| 14 | Roy Elementary  | 4   | Jack Doxey           | 1415 Gibson Ave. Ogden, UT 84404        | (801) 626-2522 | Fertilizers, Herbicides                   | Chemical                               |
| 15 | Eagle Lake Golf Course                                      | 4   | Larry Velasquez      | 2885 W. 5200 S. Roy, UT 84067           | (801) 825-3467 | Fertilizers, Pesticides                   | Chemical                               |
| 16 | Pine Pole Goat Dairy  | 4   | Jane Thurman         | 4953 S. 3100 W. Roy, UT 84067           | (801) 825-9011 | Manure                                    | Biological                             |
| 17 | Rock Run Clinics  | 4   | Michael Major        | 5640 S. 3500 W. Roy, UT 84067           | (801) 773-2838 | Varioius Household Chemicals              | Chemical<br>Biological                 |
| 18 | WINCO   | 4   |                      | 6060 S. 3500 W.                         | (801) 896-2028 | Household Chemicals                       | Chemical                               |
| 19 | Metalforce Inc.   | 4   | Rod Naylor           | 5037 S. 2700 W. Roy, UT 84067           | (801) 776-5700 | Powder Coating                            | Chemical                               |
| 20 | Roy Aquatic Center  | 4   | Julie Cragun         | 5460 S. 2700 W. Roy, UT 84067           | (801) 774-8590 | Chlorine, Pool Chemicals                  | Chemical                               |
| 21 | Union Pacific Railroad                                      | 4   | Remediation Response |   | (800) 877-7267 | Unkown hazards                            | Chemical<br>Biological<br>Radiological |
| 22 | Roy Public Works Shop                                       | 4   | Ross Oliver          | 5460 S. 2700 W. Roy, UT 84067           | (801) 774-1090 | Salt Piles, Vehicle fluids                | Chemical                               |
| 23 | Roy Park  | 4   | Ross Oliver          | 5460 S. 2700 W. Roy, UT 84067           | (801) 774-1090 | Ferilizer, Pesticide, and Herbicide       | Chemical                               |
| 24 | Heritage Park Care Center                                   | 4   | Robert Baker         | 1200 Village Road, Carbondale, CO 81623 | (970) 963-1500 | Varioius Household Chemicals              | Chemical<br>Biological                 |

## 4. Assessment of PCS Hazards

The Controls for Priority 1 in Table 4.1.3, Residential Lots, has been reassessed as Not Adequately Controlled.

Septic tanks have been removed from PCS Priority #3 has been removed from Table 4.1.3.

The Governing Agency and Status of Control column in Table 4.1.3 for Priority 21, Union Pacific Railroad, have been updated. The Railroad is regulated according to RCRA, which Act and joint enforcement by USEPA and USDOT lead Union Pacific Railroad to establish and implement Best Management Practices related to transport, prevention, and mitigation of hazardous materials.

The modified Table 4.1.3 is given below.

**Table 4.1.3 Prioritized list of PCSs and their associated regulatory controls**

| Priority | Business Name or Facility       | Potential contaminant  | Governing Agency   | Status of Control  |
|----------|---------------------------------|--|--|--|
| 1        | Residential Lots                | Fertilizers, herbicides, pesticides, Household hazardous waste               | None   | <i>Not Adequately Controlled</i>   |
| 2        | Agricultural Fields/pastures    | Above ground storage tanks<br>Fertilizer, Pesticide, Herbicide, Animal waste | None   | <i>Controlled by BMP s</i> - Applicators are trained to follow application instructions, which, when followed, will minimize negative impact on groundwater - materials being applied cost too much to be carelessly applied and thus will be applied per manufactures recommendations, manufactures are regulated by US EPA to label products for proper application. |
| 3        | Sewer Lines                     | Leaky Sewer Lines  | None   | <i>Controlled by BMPs</i> - Sewer lines: routine maintenance on sewer lines every 18 to 24 months, video record sewer lines every 5 years for leaks.   |
| 4        | Underground Wells               | Infiltrating chemicals into water aquifer                                    | UDWR Water Well Rule monitors placement, use and abandonment of wells. | <i>Controlled by Regulation</i>  |
| 5        | Utah Power and Light Substation | Non-PCB oil in transforms  | None   | <i>Controlled by physical boundaries</i> - transformers have many safety precautions to keep oil from leaking.   |
| 6        | Kent's Foods                    | Household Chemicals  | None   | <i>Controlled by BMP s</i> - Spills are controlled, cleaned up and properly disposed.  |
| 7        | 7-Eleven                        | Below ground gasoline storage tanks  | Regulated by the DERR through the Underground Storage Tank Rule.       | <i>Controlled by Regulation</i> - All underground tanks have cathodic protection and are double walled. Tanks that are on the UST list are regularly inspected and often have safeguards such a secondary containment of continuous monitoring.  |
| 8        | Maverick Store 340              | Below ground gasoline storage tanks  | Regulated by the DERR through the Underground Storage Tank Rule.       | <i>Controlled by Regulation</i> - All underground tanks have cathodic protection and are double walled. Tanks that are on the UST list are regularly inspected and often have safeguards such a secondary containment of continuous monitoring.  |
| 9        | Ace Hardware                    | Various Household Chemicals  | RCRA, Hazardous Material Rule  | <i>Controlled by BMP s</i> - Spills are controlled, cleaned up and properly disposed.  |
| 10       | Flash Photo                     | Chemicals for developing film  | RCRA, Hazardous Material Rule  | <i>Controlled by BMP s</i> - Spills are controlled, cleaned up and properly disposed.  |
| 11       | Davis Hospital Weber Campus     | Various Household Chemicals  | RCRA, Hazardous Material Rule  | <i>Controlled by BMP s</i> - Spills are controlled, cleaned up and properly disposed.  |
| 12       | Ogden Clinic Grand View         | Various Household Chemicals  | RCRA, Hazardous Material Rule  | <i>Controlled by BMP s</i> - Spills are controlled, cleaned up and properly disposed.  |

**Table 4.1.3 Prioritized list of PCSs and their associated regulatory controls (continued)**

| Priority | Business Name or Facility                                   | Potential contaminant                     | Governing Agency   | Status of Control  |
|----------|---|---|--|--|
| 13       | Roy Elementary  | Fertilizers, Herbicides                   | FIFRA Controls manufacturing, labeling, and sales of insecticides and herbicides to encourage proper application | <i>Controlled by BMP s</i> - Applicators are trained to follow application instructions, which, when followed, will minimize negative impact on groundwater.   |
| 14       | Eagle Lake Golf Course                                      | Fertilizers, Pesticides                   | FIFRA Controls manufacturing, labeling, and sales of insecticides and herbicides to encourage proper application | <i>Controlled by BMP s</i> - Applicators are trained to follow application instructions, which, when followed, will minimize negative impact on groundwater.   |
| 15       | Pine Pole Goat Dairy  | Manure                                    | GQPR   | <i>Controlled by BMPs</i> as regulated by DEQ (R315-312) - Manure is stored in concrete pits then broadcast onto agricultural fields so that concentrations will be low enough for biological uptake by vegetation.  |
| 16       | Weber Basin Water Conservancy District Irrigation Reservoir | Infiltrating chemicals into water aquifer | CWA, DWQ through UPDES permits.  | <i>Controlled by Physical Boundaries</i> - The canal is concrete lined to reduce seepage into the groundwater.   |
| 17       | Rock Run Clinics  | Varioius Household Chemicals              | RCRA, Hazardous Material Rule  | <i>Controlled by BMP s</i> - Spills are controlled, cleaned up and properly disposed.  |
| 18       | WINCO   | Household Chemicals                       | RCRA, Hazardous Material Rule  | <i>Controlled by BMP s</i> - Spills are controlled, cleaned up and properly disposed.  |
| 19       | Metalforce Inc.   | Powder Coating                            | None   | <i>Controlled by BMP s</i> - Spills are controlled, cleaned up and properly disposed.  |
| 20       | Roy Aquatic Center  | Chlorine, Pool Chemicals                  | None   | <i>Controlled by BMP s</i> - Spills are controlled, cleaned up and properly disposed.  |
| 21       | Union Pacific Railroad                                      | Unkown hazards                            | USEPA and DOT (Title 40 CFR part 263, RCRA; these regulations help UP establish and implement BMPs)              | <i>Controlled by BMP's . Hazardous Material Management ensures prevention, prepardness response and recovery of hazardous material shipments.</i>  |
| 22       | Roy Public Works Shop                                       | Salt Piles, Vehicle fluids                | None   | <i>Controlled by Physical Boundaries, and BMPs</i> - Store only as much salt as can be located on concrete pad under a shelter. Vehicles are stored on impermeable surface with storm drainage collection systems piping all runoff off-site.  |
| 23       | Roy Park  | Fertilizer, Pesticide, and Herbicide      | None   | <i>Controlled by BMP s</i> - Applicators are trained to follow application instructions, which, when followed, will minimize negative impact on groundwater - materials being applied cost too much to be carelessly applied and thus will be applied per manufactures recommendations, manufactures are regulated by US EPA to label products for proper application. |
| 24       | Heritage Park Care Center                                   | Varioius Household Chemicals              | None   | <i>Controlled by BMP s</i> - Spills are controlled, cleaned up and properly disposed.  |

## 5. Management of Existing Potential Contamination Sources

This Section includes a discussion of the specific best management practices, pollution prevention, and other land management strategies that are being proposed to control potential contamination sources identified as *not adequately controlled*. Septic Tanks and the Union Pacific Railroad have been removed from Table 5.1.1 because septic tanks are no longer an identified PCS and the Union Pacific Railroad is no longer considered an uncontrolled PCS. Residential Lots have been updated to match Table 4.1.3

The uncontrolled potential contamination sources in the District’s Source Protection Zones are Residential Lots. Table 5.1.1, below, identifies the management program for each of these PCSs.

**Table 5.1.1 Management Strategies for Existing Potential Contamination Sources**

| Business Name or Facility | Potential contaminant  | Potential Hazard     | Program, Implementation   |
|---------------------------|--|----------------------|---|
| Residential Lots          | Fertilizers, herbicides, pesticides, Household hazardous waste | Biological, Chemical | <p><b>Fact sheets</b> published by the Utah Department of Environmental Quality for fertilizer, household hazardous waste, pesticides and pollution prevention are provided <b>in the Appendix</b> and found at <a href="https://deq.utah.gov/public-interest/fact-sheets">https://deq.utah.gov/public-interest/fact-sheets</a>, which fact sheets will also be <b>linked on the District's website</b>. See Attachment 8 for suggested webpage outline.</p> <p>Customers will be <b>notified</b> of the Fact Sheets' presence once <b>in billing statements in February 2024</b> and then <b>annually in the District's Consumer Confidence Report</b>. Customers will be asked to review the documents and help prevent ground water pollution.</p> |

## 6. Management of Future Potential Contamination Sources

In order to control future PCSs, HWID will implement the following process:

1. Contact each PCS as it locates within the Well #1 protection zones.
2. Add said PCS to the inventory of potential contamination sources.
3. Identify and assess its controls.
4. Plan and implement land management strategies, if it is not adequately controlled.

Management Strategies for the HWID have been updated to address Roy and Clinton Cities, because Weber County is not the political entity that regulates development within the source protection zones for lands within Zone 1. Actions related to controlling future potential contamination sources within the source protection zones for Well #1 are outlined in Table 6.1.1.

**Table 6.1.1 Management Strategies**

| Zone | Desired Results  | Required Action for HWID   |
|------|--|--|
| 1    | Prohibition of future PCSs   | Prepare and send letter to Roy and Clinton Cities requesting that they adopt a source protection ordinance similar to Weber County's drinking water Source Protection Ordinance.   |
| 2    | Future pollution sources will be prohibited unless the pollution source agrees to implement design or operating standards which prevent discharges to ground water.            | <b>No action required:</b> DWSP Zones have been added to the Utah DEQ GIS server. Davis and Weber Counties GIS departments pull in the DEQ service for the DWSP Zones for applications used by the County Engineering, Planning and Health Departments. If a property is within a DWSP Zone, the development is subject to Davis County Drinking Water Source Protection Ordinance, Chapter 15.22 and Weber County Drinking Water Source Protection Ordinance, Chapter 108-18. |
| 3, 4 | Location of potential contamination sources is allowed if design standards for the specific land use are implemented that will prevent contaminated discharges to groundwater. |  |

## 7. Implementation Schedule

In accordance with R309-113-7 (1) (e) of the Drinking Water Source Protection Rule, an implementation schedule was developed for the land management strategies proposed by HWID. The management strategies for each of the existing PCSs are outlined in Section 5. Refer to Table 6.1.1 for management strategies proposed to control future potential contamination sources. Table 7.1.1 shows the implementation schedule for the management strategies from the aforementioned sections.

**Table 7.1.1 Implementation Schedule**

| Management Strategy                    | Description     | Implementation Date  | Frequency  |
|--|-----------------|--|--|
| Public Notification / Public Education | See Table 5.1.1 | Create Source protection web page, link Fact Sheets                          | Once, with future modifications as may be determined by District |
|  |                 | Include notice of Source Protection page in February 2024 billing statements | Once   |
|  |                 | Include Notice in Consumer Confidence Report (CCR) for 2023 (published 2024) | Annually   |
| Land Use Ordinance                     | See Table 6.1.1 | December 2020<br>See attached request letter                                 | At each DWSP Plan update if not adopted by the respective cities |

## 8. Resource Evaluation

No changes

## 9. Recordkeeping Section

HWID will update this section as required with copies of ordinances, codes, permits, memoranda of understanding, public education programs, training session agendas, minutes of meetings, diary entries, memoranda for the file, etc. to document implementation and changes in land management as it pertains to ground water source protection.

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Weber County does not regulate development within any of the Well #1 DWSP zones. Request for a land use ordinance relative to drinking source protection has been prepared and sent to the City governments within the DWSP zones for Well #1. Copy of letters attached.

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Clearfield City in Davis County has a Source Protection ordinance that restricts land use based on the presence of DWSP Zones on file with the Davis County GIS department. HWID has requested that each of the cities where one of their source protection zones is, consider a similar source protection ordinance. Copy of letters attached.

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February 2024: HWID added source protection page to its website and notified customers via billing. See attachments

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## 10. Contingency Plan

Previously approved by the Division, no changes except for those stated below, relative to the District's emergency response plan.

The District's emergency response plan, updated and on file at the District Office February 7, 2020, identifies roles and contact information as restated, below:

1. Marvin Zaugg  
District Manager – Scott Christiansen  
DUTIES – will make final decisions as they pertain to help from other agencies, and setting priority of action and work to be accomplished. Dispatch available vehicles. Contact other entities and Utah WARN.
2. Marvin Zaugg  
District Manager – Scott Christiansen  
DUTIES – security and protection of essential components of the system, especially in cases of vandalism, riot or sabotage. Determine the need for Police protection, identification, deal with threats (bomb vandalism), and issue instructions to available personnel.
3. Dennis Dallinga  
Treasurer – Cole Allen  
DUTIES – safeguard all records belonging to Hooper Water Improvement District. Provide security procedures and issue instruction for their safekeeping and handling of personnel records, engineering maps and plans, legal papers, financial data and business transactions. Represent the District in PR responses and release of information for broadcast or print.
4. Gary Kapp  
Operator – Tyler Britt  
DUTIES – will help identify trouble areas and assess repair factors, supervise repair, instruct paid and volunteer labor in proper repair, control and restoration of system back to normal functions.
5. Korry Green  
Operator – Kyle Greer  
Office Clerks –Dorella Hanford  
Jodie Hansen  
DUTIES – will receive, record and plot on a map breaks in lines, trouble areas and their nature as they are received in the office by whatever means available, including the GPS, SCADA, & GIS. Will serve as a runner and help with construction repairs as needed.
6. All alternates who do not have to fill their required duty will be at the disposal of those in charge to help in whatever capacity is necessary.

TELEPHONE NUMBERS OF BOARD AND STAFF

BOARD:

|                 |      |              |
|-----------------|------|--------------|
| Gary Kapp       | Cell | 801-430-2294 |
| Dennis Dallinga | Cell | 801-859-3992 |
| Wayne Haws      | Cell | 801-264-9002 |
| Korry Green     | Cell | 801-941-0571 |
| Marvin Zaugg    | Cell | 801-825-7378 |

STAFF:

|                    |       |              |
|--------------------|-------|--------------|
| Scott Christiansen | Cell: | 801-643-5934 |
| Brandon Barrow     |       | 801-791-6068 |
|                    | Cell: | 801-643-5937 |
| Kyle Greer         | Cell: | 801-391-0453 |
| Tyler Britt        | Cell: | 801-814-2172 |
| Rick Toledo        | Cell: | 385-245-4544 |
| Cole Allen         | Cell: | 801-663-8161 |
| Dorella Hanford    | Cell: | 801-791-4346 |
| Jodie Hansen       | Cell: | 801-336-6805 |
| Bryce Grimes       | Cell: | 385-245-5020 |

## 11. Public Notification

The Hooper Water Improvement District will include the information required by this Section 11.0 in its annual Consumer Confidence Report (CCR).

Recommended Drinking Water Source Protection verbiage for Consumer Confidence Report, from 2024 going forward. Implementation of this suggestion will be verified and a copy of the CCR will be included in the next DWSP Plan update.

“The Drinking Water Source Protection Plan for the Hooper Water Improvement District is available for your review. It contains information about source protection zones, potential contamination sources and management strategies to protect our drinking water. Our wells draw from deep aquifers where susceptibility to contamination is low. In addition to the natural barrier of deep aquifers, the District has developed management strategies to help protect our sources from contamination. Residents and businesses play a significant role in preventing potential contamination of drinking water. Please visit [<Drinking Water Source Protection webpage address>](#) for more information regarding source protection and what you can do to help protect the quality of drinking water at the source.”

## 12. Waivers

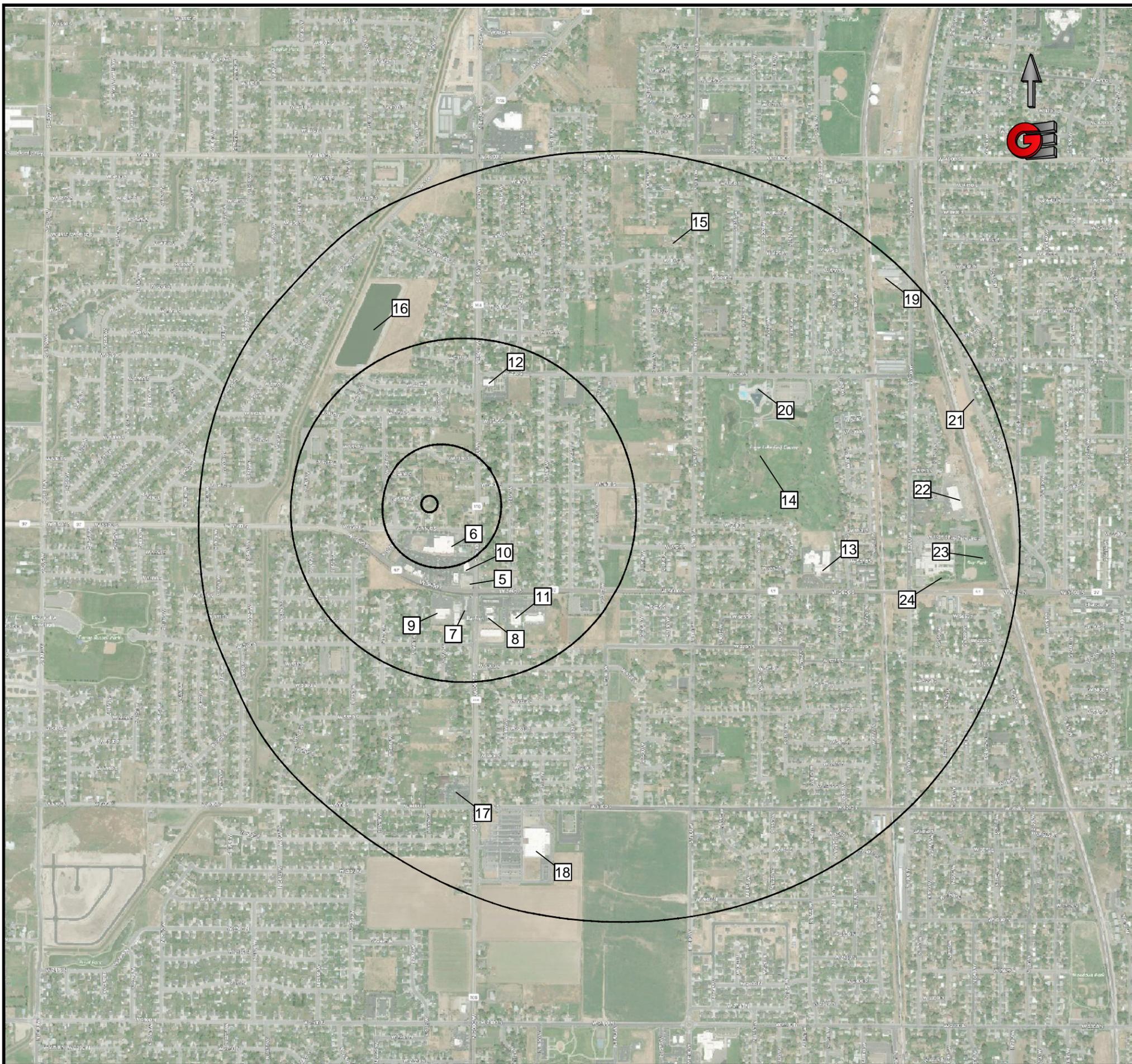
### Waivers

Well #1 is not eligible for a Use or Susceptibility Monitoring Waiver as described in R309-600-16(3).

--End of DWSP Plan update--

## Attachments

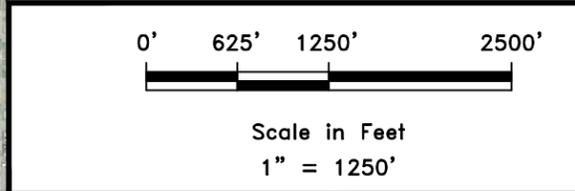
1. PCS Map  
Utah Department of Environmental Quality fact sheets
2. Fertilizer
3. Household Hazardous Waste
4. Pesticides
5. Pollution Prevention
6. Letter to Roy City
7. Letter to Clinton City
8. Suggested Source Protection Webpage outline
9. Copy of February 2024 bill with Public Notification annotation
10. Screenshot of District Source Protection Page on website, implemented February 2024



NOTE: RESIDENTIAL LOTS, AGRICULTURAL FIELDS, AND PASTURES ARE NOT LABELED, HOWEVER THEY CAN VISIBLY BE SEEN. UNDERGROUND WELLS ARE INCLUDED IN APPENDIX 6.

**PCS LOCATION REFERENCE**

- 1 RESIDENTIAL LOTS
- 2 AGRICULTURAL FIELDS/PASTURES
- 3 SEWER LINES
- 4 UNDERGROUND WELLS
- 5 UTAH POWER AND LIGHT SUBSTATION
- 6 KENT'S FOODS
- 7 7-11 STORE
- 8 MAVERIK STORE 340
- 9 ACE HARDWARE
- 10 FLASH PHOTO
- 11 DAVIS HOSPITAL WEBER CAMPUS
- 12 OGDEN CLINIC GRAND VIEW
- 13 ROY ELEMENTARY
- 14 EAGLE LAKE GOLF COURSE
- 15 PINE POLE GOAT DAIRY
- 16 IRRIGATION RESERVOIR/CANAL
- 17 ROCK RUN CLINICS
- 18 WINCO
- 19 METALFORCE INC.
- 20 ROY AQUATIC CENTER
- 21 UNION PACIFIC RAILROAD
- 22 ROY PUBLIC WORKS SHOP
- 23 ROY PARK
- 24 HERITAGE PARK CARE CENTER



|                  |                      |             |                   |
|------------------|----------------------|-------------|-------------------|
|                  | <b>PCS MAP</b>       |             | Date: 8/25/17     |
|                  | 5450 SOUTH WELL DWSP |             | Scale: 1" = 1250' |
| 3648 W. 5500 S.  |                      | Design: NW  |                   |
| ROY, WEBER, UTAH |                      | Drafted: NW |                   |
| 1                |                      | Checked:    |                   |

**GARDNER ENGINEERING**  
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# Partnership for the Environment

*Utah Department of Environmental Quality*

## Fertilizer Fact Sheet

### What Are The Potential Hazards?

Fertilizer applied to plants during crop, lawn, and garden maintenance may leach into the ground water and cause contamination. The main constituent in fertilizer is usually nitrogen. If the nitrate level of drinking water is too high, infants, up to the age of six months, can develop a fatal disease called blue baby syndrome (methemoglobinemia). Drinking water that contains 10 milligrams of nitrate-nitrogen per liter of water exceeds the drinking water standard and should not be used, especially for infant formula. Proper storage, application, and watering procedures should be included in fertilizer best management practices to prevent contamination of ground water.

### Storing Fertilizers

The less fertilizer you buy, the less you will have to store. Therefore, only purchase the amount and kind of fertilizer that you need.

- Fertilizer should be stored in locked, dry cabinets.
- Keep fertilizer and pesticides on separate shelves.
- Don't store fertilizer with combustibles, such as gasoline or kerosine, because of explosion hazards.

### Application Precautions

The chemical in fertilizer that can most easily pollute ground water is a form of nitrogen called nitrate. Nitrate moves readily in soil to the ground water strata. The best way to prevent the movement of nitrate into the ground water is to apply no more nitrogen than the crops, grass, garden plants, shrubs, or trees can use during the time that the plants are growing.

- Calibrate your spreader and sprayer to keep from applying too much fertilizer.
- Load fertilizer spreaders on the driveway or other hard surfaces so any spills can easily be swept up. Fertilizer that spills should be swept up and applied to the lawn or garden at the right time and amount. This allows the fertilizer to grow plants instead of washing off into the storm drain system and ultimately contaminating nearby streams and lakes.
- If you are using liquid fertilizer on your turf, add fertilizer to the spray tank while on the lawn. This way, if you spill the fertilizer, it will be used by the plants and not run off into the storm drain system.
- Do not spray or apply fertilizer near irrigation wells. Wells are conduits to the ground water.

### Application Rates For Lawns

Utah State University's Extension Service recommends the following for Utah lawns: "It is important to fertilize on a regular basis every four to six weeks to maintain an attractive lawn. Begin

when lawns start to green in the spring, mid to late April. Earlier applications may cause a lawn to become greener faster, but may also increase spring disease problems. Summer applications of nitrogen fertilizer will not burn lawns, if you apply them to dry grass and water immediately. Fall applications are important for good winter cold tolerance, extended fall color, and fast spring green-up. A complete fertilizer containing nitrogen, phosphorus and potassium should be applied in the fall every three to four years. This will prepare the lawn for winter conditions and allow the phosphorus to penetrate into the root zone by the next growing season.

For a well-kept lawn in Utah, apply 1 pound of available nitrogen per 1,000 square feet each four to six weeks throughout the growing season. The following chart indicates how much of various fertilizer will supply one pound of nitrogen.”

| %N on Label | Pounds of Fertilizer Per 1000 Square Feet |
|-------------|---|
| 12-15       | 7-8                                       |
| 18-21       | 5-5 ½                                     |
| 24-28       | 3 ½-4                                     |
| 30-34       | 3-3½                                      |
| 45-46       | 2-2 ¼                                     |

## Types of Plants

One of the best ways to protect your ground water is to use plants that are drought-tolerant and that are adapted to your area. Drought-tolerant or low-water-use plants can continue to survive once they are established, even during times of little rainfall. Because you do not have to water these plants, there is less chance that nitrate and pesticides will be carried with the water through the soil and into the ground water.

If low-water-use plants are not practical, then try to use medium water use plants. Water these plants only when they begin to show drought stress. Some plants will wilt when they are drought-stressed, while other plants will show marginal leaf burn.

## Watering

Over-watering plants can cause excess water to move through the soil. This water can flush fertilizer away from the root zone of your plants and into the ground water. The best way to avoid over-watering is simply to measure how much you are adding. Contact your county Extension Service to determine the best way to calculate how much water your plants need and how to measure the amount you are applying.

## For More Information, Contact:

Division of Drinking Water, Source Protection Program - (801) 536-4200  
 Department of Agriculture - (801) 538-7100  
 Environmental Hotline - 1-800-458-0145  
 Sonja Wallace, Pollution Prevention Coordinator - (801) 536-4477



# Partnership for the Environment

*Utah Department of Environmental Quality*

## Household Hazardous Waste Fact Sheet

### What is Household Hazardous Waste?

Many hazardous products and chemicals such as cleaners, oils and pesticides are used in the home every day. When discarded, these products are called household hazardous waste (HHW). HHWs are discarded materials and products that are ignitable, corrosive, reactive, toxic or otherwise listed as hazardous by the EPA. Products used and disposed of by a typical residence may contain more than 100 hazardous substances including:

- Batteries
- Cleaners
- Cosmetics
- Fluorescent light bulbs
- Glues
- Heating oil
- Insecticides and pesticides
- Ink
- Medicines
- Motor oil and automotive supplies
- Paints, thinners, stains and varnishes
- Polishes
- Swimming pool chemicals
- Smoke detectors
- Thermometers
- Fuel

### HHW is a Serious Threat

The U.S. Environmental Protection Agency estimates the average American household generates 20 pounds of HHW each year. As much as 100 pounds of HHW can accumulate in the home and remain there until the resident moves or undertakes a thorough "spring cleaning."

Since the chemicals found in HHW can cause soil and groundwater contamination, generate hazardous emissions at landfills and disrupt water treatment plants, it is important to dispose of HHW properly. Many solid waste treatment facilities are currently required to screen for HHW to avoid operating under restrictive hazardous waste laws. Furthermore, many communities may be required to establish a HHW collection program in order to qualify for permits to manage storm water.

### Safe Handling Tips

The best way to handle household hazardous materials is to completely use the product before disposing of the container. If this is not possible, then the next alternative is to return unused portions to your community household hazardous waste clean-up day. Keep products in their original package with all labels intact. If the container is leaking, place it in a thick plastic bag. Pack the products in a plastic-lined cardboard box to prevent leaks and breakage.

Household hazardous waste clean-up days are for household wastes only. No industrial or commercial wastes and no containers larger than five gallons are accepted. Explosives, radioactive

material and medical wastes are also unacceptable.

HHW can be dangerous to people and pets who come in contact with them. HHW can endanger water supplies, damage sewage treatment systems, and cause other environmental damage. Only use the products as directed. **DO NOT:**

- Flush HHWs down the toilet
- Pour HHWs down the sink
- Pour HHWs down a storm drain
- Pour HHWs on the ground

Contact your local health department or the Division of Solid and Hazardous Waste to determine whether your community has a household hazardous waste collection program.

## Identify HHW

Reduce the amount of potentially hazardous products in your home and eliminate what you throw away by following these easy steps:

### 1. Before you buy:

- Read the labels and be aware of what they mean.
- Look for these words on labels; they tell you what products may need special handling or disposal.

|             |           |
|-------------|-----------|
| Caution     | Flammable |
| Combustible | Poison    |
| Corrosive   | Toxic     |
| Danger      | Volatile  |
| Explosive   | Warning   |

- Select a product best suited for the job.
- Buy only what you can use entirely.

### 2. After you buy:

- Read label precautions and follow directions for safe use.
- Recycle/dispose of empty containers properly.
- Share what you can't use with friends or neighbors.
- Store properly.
- Use recommended amounts; more is not necessarily better.
- Use the child-resistant closures and keep them on tightly.

## For More Information, Contact:

Division of Solid & Hazardous Waste - (801) 538 - 6170  
Division of Drinking Water, Source Protection Program - (801) 536-4200  
Environmental Hotline - 1-800-458-0145  
Sonja Wallace, Pollution Prevention Coordinator - (801) 536-4477



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## Pesticides Fact Sheet

### What Are The Potential Hazards?

Pesticides applied to plants during crop, lawn, and garden maintenance may leach into the ground water and cause contamination. Proper storage, mixing, application, spill cleanup, watering, and disposal procedures should be included in pesticide best management practices.

### Storing Pesticides

The fewer pesticides you buy, the fewer you will have to store. Therefore, only purchase the amount and kind of pesticide that is needed. Pesticides should always be stored in sound, properly labeled, original containers. ***Sound containers are the first defense against spills and leaks.***

- Ensure that there are no holes, tears, or weak seams in the containers and that the label is readable.
- Pesticides should be stored in locked, dry cabinets.
- Be sure to store dry products above liquids to prevent wetting from spills.
- Storage and mixing areas should not be located near floor drains of any kind.
- Storage facilities should have secondary containment, such as a berm or dike, which will hold spills or leaks at:
  1. 10% of the total volume of the containers, or
  2. 110% of the volume of the largest container, whichever is larger.

### Mixing Pesticides

- Mix pesticides on an impermeable surface, such as concrete, so any spills will be contained.
- Mix only the amount that you will use:
  1. Measure the total square feet you intend to treat.
  2. Read the label on the pesticide container and follow the instructions. (These are often given in terms of amount of pesticide to use per thousand square feet.)
  3. By properly measuring and calculating, there should be little or no pesticide left in the spray tank when the job is finished and it will be applied at the recommended rate.

### Applying Pesticides

Pesticides are used to kill or control weeds (herbicides), insects (insecticides) and fungi (fungicides) that attack plants. Some of these pesticides can move through the soil and into the ground water. Guidelines for the safe use of pesticides are listed below:

- Be willing to accept a low level of weed, insect, and plant disease infestation.

- Use pesticides only when absolutely necessary.
- Identify pests correctly. Use the proper pesticides.
- Read and follow the directions printed on the container labels. Remember, *the label is the law*.
- Calibrate your spreader and sprayer to keep from applying too much pesticide.
- Do not spray or apply pesticides near irrigation wells. Wells are conduits to the ground water.
- Do not spray or apply pesticides near your walks and driveway. This prevents them from washing off into the storm drain system.

## **Cleaning Up Spills**

- Dry formulated pesticide spills should be swept up and applied to crops, lawns, and gardens at the rate specified on the label.
- Liquid pesticide spills should be soaked up using absorbent material (such as, soil, sawdust, and cat litter). The contaminated absorbent material should then be put in a sealed container and taken to a household hazardous waste collection site.

## **Watering**

Over-watering your plants can cause excess water to move through the soil. This water can carry pesticides that can contaminate the ground water. The best way to avoid over-watering is simply to measure how much you are adding. Contact your county Extension Service to determine the best way to calculate how much water your plants need and how to measure the amount you are applying.

## **Disposing of Pesticides**

If the pesticide was properly measured and mixed, there should be little or no spray left in the tank. The little that may be left can be safely sprayed over the area that was treated until it is gone. Disposal of “empty” pesticide containers and unused pesticides should be handled as follows:

- If you are using liquid pesticides, rinse the container three times. Be sure to pour the rinsing into your sprayer and not down a drain or onto the ground. Containers which have been emptied and rinsed can be discarded in the trash.
- Unused pesticides in their original containers can be recycled at household hazardous waste collection sites.

## **For More Information, Contact:**

Division of Drinking Water, Source Protection Program - (801) 536-4200

Department of Agriculture - (801) 538-7100

Environmental Hotline - 1-800-458-0145

Sonja Wallace, Pollution Prevention Coordinator - (801) 536-4477



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*Utah Department of Environmental Quality*

## Pollution Prevention Fact Sheet

Pollution Prevention (P2) uses source reduction techniques and practices to reduce or eliminate the amount of hazardous substances, pollutants or contaminants entering any waste stream or being released into the environment. In short, P2 means not creating waste in the first place while reducing risks to public health, welfare, and the environment.

### **Pollution Prevention is Good Business**

While most pollution control strategies cost money, P2 has saved many businesses thousands of dollars in treatment and disposal costs. Other economic benefits include:

- Reduced operating costs.
- Savings from reduced need for pollution control equipment.
- Elimination of waste transportation, storage, disposal and liability costs.
- Reduced compliance costs from government regulations.
- Improved public image.
- Stimulating reinvestment and enhancing competitiveness.
- Reducing risk of spills, accidents and emergencies.
- Increasing environmental protection.

### **P2 Techniques**

Generating less waste is the best way businesses can practice pollution prevention. This can be achieved through:

- Inventory management: Tracking all raw materials and improving operations.
- Substitute non-hazardous materials for hazardous materials.
- Improving material receiving, storage, and handling practices.
- Modifying and redesigning equipment to enhance recovery and recycling.
- Improved operating efficiency of equipment.
- Establishing strict preventive maintenance programs.
- Segregating wastes for recovery.
- Separating hazardous and non-hazardous wastes to prevent cross-contamination.
- Eliminating sources of leaks and spills.
- Use of water soluble cleaning agents in place of organic solvents and degreasers.

## **Management Support**

The support of company management is essential for developing a lasting and successful P2 program. This commitment should be passed on to employees, especially those working in areas that generate hazardous waste. Management approaches may include the following:

- Make P2 a part of the company policy, a process of continuous improvement.
- Target goals for reducing the volume and toxicity of waste streams.
- Implement recommendations identified through waste assessments.
- Reward employees who identify cost-effective P2 opportunities.
- Train employees in P2 hazardous material waste handling and emergency response procedures.

## **Good Housekeeping**

Most successful P2 waste assessments identify sources of waste and calculate the true cost of waste generation and management. A little extra attention paid to “minor” sources of waste can result in major reductions. Improved housekeeping practices, system adjustments, process and product inspections, and the use of production unit control equipment and methods are often successful P2 practices. Others include:

- Inspect and repair equipment to reduce waste caused by equipment failure, leaks and spills.
- Contain leaks and spills by using drip trays and splash guards.
- Keep containers closed except when material is added or withdrawn.
- Utilize a “first-in first-out” inventory policy to avoid losses due to expirations.

## **Product Substitution**

Some companies are so motivated by pollution prevention practices they change the products they produce in order to employ nonhazardous production processes. For example, they may change the design, specifications or composition of an existing end product to reduce the need for toxic materials can help reduce pollution and associated costs.

## **Process Modification**

Inefficient or outdated production processes that could be sources of hazardous waste generation can be upgraded or replaced by a more efficient process.

- Changes in the placement order of equipment.
- Equipment modification.
- Changes in operation settings and schedules.
- Process automation.

## **For More Information, Contact:**

Division of Solid & Hazardous Waste - (801) 538-6170  
Division of Drinking Water, Source Protection Program - (801) 536-4200  
Sonja Wallace, Pollution Prevention Coordinator - (801) 536-4477  
Small Business Assistance Program - (801) 536-4479  
Environmental Hotline - 1-800-458-0145



## HOOPER WATER IMPROVEMENT DISTRICT

P.O. BOX 217 • 5555 W. 5500 S. • Hooper, Utah 84315 • (801) 985-1991

December 7, 2020

Roy City, c/o  
Matthew Andrews, City Manager  
5051 S 1900 W, Roy UT 84067

Public Water Systems have a common mission to provide high quality water to their customers. One of the steps we take as public water suppliers is to develop Drinking Water Source Protection Plans (DWSPP), wherein we do our best to identify those areas where activities on the ground surface are most likely to impact the quality of groundwater from our wells: drinking water source protection zones. Just as Roy City and all other Public Water Systems in Utah have done, the Hooper Water Improvement District has identified drinking water source protection zones for its wells. The identified source protection zones cover land in Roy City.

Two of the strategies we as Public Water suppliers have for controlling potential contamination sources within our source protection zones is to provide public education regarding pollution prevention, and utilization of regulatory authority.

**Public Education:** Hooper Water Improvement District is providing public education to our customers via our annual Consumer Confidence Report (CCR). In addition to the notice that a DWSPP is available for review, which we have included in our CCR since 2010, we will be including links to State-published pollution prevention Fact Sheets in our 2021 edition. The linked Fact Sheets will be focused on environmentally conscious use of Fertilizers, Household Hazardous Waste, Pesticides, and general Pollution Prevention. We will include a request that our customers review the best management practices identified on the Fact Sheets to help maintain the quality of our groundwater sources:

We understand that Roy City has the same interest in protecting the quality of groundwater pulled from its own wells. We request that Roy City continue, or begin to similarly include information regarding groundwater pollution prevention in the City's CCR or City Newsletter.

**Regulatory authority:** The Hooper Water Improvement District clearly has no regulatory authority in Roy City. Therefore, we request that Roy City consider, for the purpose of protecting all public water supply sources with a source protection zone in the City boundaries, adoption of a source protection ordinance to regulate the construction and operation of future potential contamination sources. For reference, both Davis and Weber Counties have enacted a source protection ordinance to regulate the location of potential contamination sources in unincorporated areas of the respective county that may be beneficial templates for the City's use.

Hooper Water Improvement District has or will file its source protection zones with Weber and Davis Counties and requests that, if a source protection ordinance is enacted, the City notify the District of any applications for siting a potential contaminant source within those source protection zones.

Respectfully, 

S. Scott Christiansen, Manager  
Hooper Water Improvement District



## HOOPER WATER IMPROVEMENT DISTRICT

P.O. BOX 217 • 5555 W. 5500 S. • Hooper, Utah 84315 • (801) 985-1991

December 7, 2020

Clinton City, c/o  
Dennis Cluff, City Manager  
2267 N 1500 W  
Clinton, UT 84015

Public Water Systems have a common mission to provide high quality water to their customers. One of the steps we take as public water suppliers is to develop Drinking Water Source Protection Plans (DWSPP), wherein we do our best to identify those areas where activities on the ground surface are most likely to impact the quality of groundwater from our wells: drinking water source protection zones. Just as Clinton City and all other Public Water Systems in Utah have done, the Hooper Water Improvement District has identified drinking water source protection zones for its wells. The identified source protection zones cover land in Clinton City.

Two of the strategies we as Public Water suppliers have for controlling potential contamination sources within our source protection zones is to provide public education regarding pollution prevention, and utilization of regulatory authority.

**Public Education:** Hooper Water Improvement District is providing public education to our customers via our annual Consumer Confidence Report (CCR). In addition to the notice that a DWSPP is available for review, which we have included in our CCR since 2010, we will be including links to State-published pollution prevention Fact Sheets in our 2021 edition. The linked Fact Sheets will be focused on environmentally conscious use of Fertilizers, Household Hazardous Waste, Pesticides, and general Pollution Prevention. We will include a request that our customers review the best management practices identified on the Fact Sheets to help maintain the quality of our groundwater sources.

We understand that Clinton City has the same interest in protecting the quality of groundwater pulled from its own wells. We request that Clinton City continue, or begin to similarly include information regarding groundwater pollution prevention in the City's CCR or City Newsletter.

**Regulatory authority:** The Hooper Water Improvement District clearly has no regulatory authority in Clinton City. Therefore, we request that Clinton City consider, for the purpose of protecting all public water supply sources with a source protection zone in the City boundaries, adoption of a source protection ordinance to regulate the construction and operation of future potential contamination sources. For reference, both Davis and Weber Counties have enacted a source protection ordinance to regulate the location of potential contamination sources in unincorporated areas of the respective county that may be beneficial templates for the City's use.

Hooper Water Improvement District has or will file its source protection zones with Weber and Davis Counties and requests that, if a source protection ordinance is enacted, the City notify the District of any applications for siting a potential contaminant source within those source protection zones.

Respectfully, 

S. Scott Christiansen, Manager  
Hooper Water Improvement District

**ATTACHMENT 8: Drinking Water Source Protection web page outline for implementation in 2024**

It is intended that the District’s web designer create a link to a webpage containing at least the following information, presented in a format and with a user experience compatible with other pages on the District’s website.

Welcome!! Thank you for your interest in helping to protect the quality of drinking water at its source. Hooper Water Improvement District gets the majority of the water for its residents from deep groundwater wells owned and operated by the District. The District is committed to providing high quality drinking water to its customers. The most potent protection for the quality of groundwater is to prevent the introduction of potential contaminants into the groundwater system. The most common potential contaminants for the District’s wells are fertilizers and herbicides if applied incorrectly, and leaks or spills from fuel storage tanks. Individual home owners have a significant influence on keeping these potential contaminants out of the groundwater system.

The Utah Department of Environmental Quality has produced a series of informative fact sheets to help potential contaminant owners prevent groundwater contamination. The fact sheets can be found in the Drinking Water section of <https://deq.utah.gov/public-interest/fact-sheets>.

The fact sheets cover the following topics:

|                            |                      |   |
|----------------------------|----------------------|---|
| Division of Drinking Water | Junkyards            | Printing Shops                          |
| Dry Cleaning Facilities    | Metal Finishers      | Septic Tank and Drainfield Systems      |
| Fertilizer                 | Pesticides           | Utah’s Drinking Water                   |
| Household Hazardous Waste  | Pollution Prevention | Vehicle Maintenance and Repair Industry |

We invite you to review the fact sheets that may be applicable to you. We invite you to implement best management practices (BMPs) at your home or place of business. We thank you for your concern and efforts towards protecting the quality of groundwater for the customers of the District and all residents and visitors of Weber and Davis Counties.

The full Drinking Water Source Protection Plans for the District’s Sources are available by calling the Hooper Water Improvement District office at (801) 985-1991.