

# **DRINKING WATER SOURCE PROTECTION PLAN**

## ***Standard Report Format for Existing Surface Water Sources***

November 2005

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DIVISION OF DRINKING WATER**

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**DRINKING WATER SOURCE PROTECTION PLAN**  
**R309-605 of the Utah Administrative Code**

If the Standard Report Format identified in this document is followed, the Division of Drinking Water (DDW) should be able to provide timely review and response. If it is not followed, the writer must ensure that each item is adequately addressed. Letters from the Division of Drinking Water will always reference sections of this document. To ensure that each plan is complete, please number each section of the DWSP Plan to match the sections of the Standard Report Format.

Please see the Surface Water Source Protection User's Guide for additional background and details about the report sections outlined here.

**EXECUTIVE SUMMARY**

Include a brief summary of this report.

**1.0 INTRODUCTION**

**1.1 System Information:**

Include the water system name, number, and address. Is it a new or an existing water system? Is it a public or a non-public water system? If public, is it a community, a non-transient/non-community, or a transient/non-community water system? The first name of a new water system submitted to DDW will be the name under which it will be tracked in the future. Please ensure, to the best of your ability, that the name established for the water system remain the same. A water system number will be assigned to that name.

**1.2 Source Information:**

Include the source name. What is the water right number? What is the latitude and longitude of the point of diversion? Is it a new source or an existing source? Is it a lake, river, or reservoir? Is this source already constructed? Include a brief description of the source location, and the location of the point of diversion.

**1.3 Designated Person - R309-605-5**

Include the name, address, and phone number of the designated person. This information must be included in each DWSP plan that is submitted to DDW. Correspondence regarding this report and future correspondence will be directed to the designated person.

**2.0 THE DELINEATION REPORT - R309-605-7(3)**

Three alternatives are available for providing the Delineation Report.

1. The Delineation Report may be obtained from the Division of Drinking Water. The report will identify the four protection zones described in R309-605-7(3)(b), and will contain a map or maps showing the extent of the zones. A Delineation Report from DDW will become section 2.0 of your DWSP plan.
2. Alternatively, the PWS may create and provide the Delineation Report. Such a report must identify the four protection zones described in R309-605-7(3)(b), and must contain a map or maps showing the extent of the zones.
3. Alternatively, the PWS may define their own protection zones based on their own criteria (R309-605-7(3)(c)), if they can demonstrate that those zones are no less protective of their drinking water source than the zones defined in R309-605-7(3)(b). Such a report must identify the protection zones, must explain why the zones are protective of the source, and must contain a map or maps showing the extent of the zones. The entire watershed must be included in the delineation.

### 3.0 SUSCEPTIBILITY ANALYSIS AND DETERMINATION- R309-605-7(4)

#### 3.1 Susceptibility Analysis - R309-605-7(4)(a)

3.1.1 Evaluate and describe the structural integrity of the intake. Is it adequate to prevent inadvertent/accidental contamination? Does it comply, on a pass-fail basis, with the minimum requirements for diversion structures (R309-515-5(5))? These are

- (a) Withdrawal of water from more than one level if quality varies with depth;
- (b) Intake of lowest withdrawal elevation located at sufficient depth to be kept submerged at the low water elevation of the reservoir;
- (c) Separate facilities for release of less desirable water held in storage;
- (d) Occasional cleaning of the inlet line;
- (e) A diversion device capable of keeping large quantities of fish or debris from entering an intake structure; and
- (f) Suitable protection of pumps where used to transfer diverted water (refer to R309-540-5).

3.1.2 Evaluate and describe the sensitivity of the setting. Consider physiographic and hydrogeologic factors, as well as man-made or natural features that increase or decrease the likelihood of a contamination event. Note that sensitivity is not related to the presence or absence of potential contamination sources.

3.1.3 Assess the management and control of potential contamination sources  
3.1.3(a) Inventory Potential Contamination Sources (PCS) -R309-605-7(4)(a)(iii)(A)

DDW will provide you with a list of PCSs within your watershed from the state's geographic information system databases. The list will identify the type of PCS, the protection zone the PCS is located in, and the agency that maintains records regarding the PCS, along with a contact phone number. DDW will also provide maps identifying the location of the various PCSs. DDW will also provide generalized land use maps, which will allow you to assess nonpoint source of potential contamination.

**PWS Inventory:** You are responsible for inventorying the zones 1 to 3 (as applicable) and identifying any PCSs that are not in the state's database. You can rely on the information provided by DDW for the rest of the watershed. Obtain information regarding the name and address of non-residential PCSs, the types of hazards associated with a PCS, the zone the PCS is located in, and the name and phone number of a contact person at the PCS. Residential PCSs may be identified as generalized areas, rather than listing individual residential lots. Related areas, such as mining districts and the like, may also be grouped. You will provide this information with your prioritized list of PCSs in section 3.3.

- 3.1.3(b) Identify and assess controls - R309-605-7(4)(a)(iii)(B)  
You are responsible for determining whether a PCS is controlled or not, whether you identify it or DDW does. The Surface Water User's Guide contains criteria and factors that must be evaluated when you determine whether a PCS is controlled or not. Note that you must provide a discussion of what control is in place, and the criteria and factors that were evaluated. You may also wish to discuss intrinsic hazards associated with the PCS, since one currently considered controlled can become uncontrolled in the future. The specific criteria, which must be addressed in your report, can be found in the Surface Water User's Guide and in R309-605-7(4)(a)(iii)(B)(II).

### 3.2 Susceptibility Determination - R309-605-7(4)(b)

After evaluating the three factors in section 3.1, evaluate how susceptible your source is to each PCS. You will probably want to weigh the three factors against each other, *although DDW will accept your best judgement regarding susceptibility*. It is possible that one factor may conspicuously outweigh the others. As an example, if a PCS located near your intake is an uncontrolled source of pathogens, you will probably want to consider your source susceptible to that PCS, regardless of how sensitive the setting is, or what condition your

intake or diversion structure is in. You might decide that your source water is not susceptible to any PCS that is considered controlled, although in some instances, you may wish to consider your source water susceptible to a PCS that is considered controlled but that contains extremely hazardous materials.

You may, at your discretion, want to use an analytical approach to making your susceptibility determinations. This may especially be the case when you have many PCSs to evaluate, and you want to be sure that your determinations are uniform and unbiased. The Surface Water User's Guide contains examples for analytical approaches to susceptibility determinations, as well as a work sheet to assist you in compiling information for your analysis.

### 3.3 Prioritized Potential Contamination Source Inventory - R309-605-7(4)(c)

At the conclusion of your susceptibility determination for all your PCSs, you will have enough information to create a prioritized inventory of your PCSs. The inventory will be arranged in an order emphasizing the relative susceptibility of your source to each PCS. The inventory is a tool for you to use to allocate your resources towards the PCSs that represent the highest threat to your drinking water source.

When you create and present your inventory, include the following information for each PCS:

- Name and address of the PCS
- Which protection zone the PCS is located in
- The hazards associated with the PCS (chemical, biological, or radiological)
- Name and phone number of a contact at the facility, if applicable
- Whether the PCS is controlled or not

A map or maps showing the locations of all the PCSs within your watershed and protection zones must also be provided. You may use the maps provided by DDW for this purpose. DDW will provide the GIS data in electronic formats, upon request.

### 4.0 MANAGEMENT PLAN TO CONTROL EXISTING POTENTIAL CONTAMINATION SOURCES R309-605-7(5):

Utah Administrative Code R309-605 requires that land management strategies be planned for the three highest priority potential contamination sources that are *not adequately controlled*. This section is intended to be a well thought out plan that will be implemented by the PWS to control PCS hazards. It is not acceptable for the plan to simply contain a list of land management strategies that are recommended by the consultant. The PWS must concur with the land management strategies which are included in this report and be willing to carry them out.

- 4.1 Discuss land management strategies to control the chemical, biological, and radiological substances that have been identified at each of the three highest priority Potential Contamination Sources. Land management strategies must be planned to control the hazards identified at each PCS and be in accordance with the authority and jurisdiction of the PWS. Land management strategies may be regulatory and/or non-regulatory.
- 4.2 Include a discussion (if applicable) of the specific best management practices, pollution prevention, and other risk reduction strategies that are proposed to control potential contamination. Fact sheets regarding preventing pollution from many types of PCSs are available from DDW, and can be downloaded from the DDW web site.<sup>1</sup> Links to other examples of public education materials are also available on our site, including videos, commercials, posters, public service radio messages, news releases, stencils for storm drains, and the like.
- 4.3 If applicable, discuss existing management strategies that may already exist and that will accomplish the goals of preventing the spread of contamination from uncontrolled PCSs. Examples might include U.S. Forest Service Forest Management plans, existing watershed protection plans, existing zoning under other authorities, existing Water Quality Management Plans, and other existing forms of protection. DDW has some information about some programs of this type, although local land management authorities and soil conservation groups would be good sources of up-to-date information. Provide a discussion regarding how these programs, if any, meet your goals of protecting your drinking water source.

## 5.0 MANAGEMENT PLAN TO CONTROL FUTURE POTENTIAL CONTAMINATION SOURCES

*If zoning ordinances are used, provide the following information:* Discuss specific sections of the zoning ordinance that are planned or that have been promulgated and explain how they control or will control future PCSs.

*If zoning ordinances are not used, provide the following information:* Identify the plan to contact PCSs individually as they move into protection zones, include them on the inventory of PCSs, identify and assess current controls, and plan land management strategies if they are not adequately controlled. This may include existing management strategies such as those outlined in section 4.3.

## 6.0 IMPLEMENTATION SCHEDULE

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<sup>1</sup> Our new address is [www.drinkingwater.utah.gov](http://www.drinkingwater.utah.gov)

The implementation schedule is a list of the land management strategies which have been identified by the PWS for both existing and future PCSs with a beginning implementation date for each one. Each management strategy must be addressed. You will be expected to implement land management strategies as you specify in this schedule.

## 7.0 RESOURCE EVALUATION

The resource evaluation is a discussion of financial and other resources which will be needed by the PWS to implement this DWSP Plan and a determination of how these resources are to be acquired.

## 8.0 RECORD KEEPING

This section is included for the PWS to document changes as the plan is updated to show current conditions in the protection zones and management areas. As the plan is executed, you must document the implementation of each land management strategy as it is implemented. This includes copies of ordinances, codes, permits, memoranda of understanding, public education programs, training session agendas, minutes of meetings, diary entries, memoranda for the file, etc.

## 9.0 CONTINGENCY PLAN

The Contingency Plan is only due once with the first Source Protection Plan submittal. If you have an approved Contingency Plan from an earlier submittal, and if it includes your surface water source, then it's not necessary to do another one. If not, please provide a plan that includes the following information:

Emergency Response: what will you do in the event of sudden contamination of your water supply?

Rationing: How will you ration water to your customers?

Water Supply Decontamination: How will you decontaminate your source?

Source Development: Do you plan to develop alternate sources? If so, what are they?

## 10.0 PUBLIC NOTIFICATION

This section will include three subsections

10.1 Provide an example of the proposed public notification material. Examples of acceptable public notices can be obtained from DDW. At a minimum, the public notice must contain:

- < A map showing the watershed area and general areas of concern, including generalized locations of PCSs. (omit the map if you consider this information to be sensitive).
- < A general discussion of the topographic and geologic characteristics of your watershed (generally, the factors you would use in determining how sensitive your source area is).
- < A discussion regarding the general categories of PCSs found in your inventory, and how susceptible your source may be to them.
- < A general discussion of the health concerns associated with the PCSs in the watershed your source area
- < A general discussion of your land management or other protection strategies.
- < Specific information regarding how any individual can obtain a copy of your report(s).

DDW may request revisions of the public notification material if it does not contain all the information required. Revisions may delay complete concurrence with your DWSP plan.

- 10.2 Provide a discussion of the proposed methods for disseminating the information to your customers. Make note of the all the people you may consider to be your customers! You may wish to pay particular attention to locations with potentially sensitive populations, such as hospitals and nursing homes. Depending on the size of your system, a combination of methods may be desirable in order to assure that your notification is successful.
- 10.3 Provide a discussion of the schedule for public notification. Public notification must be done in a timely way, after your DWSP plan is completed.

Examples of acceptable public notices, and examples of methods for distributing the information, are available from DDW.