ASSESSMENT FORM
for Existing Stormwater Infiltration Systems

The purpose of this form is to provide information to the City of Redmond, to allow the City to evaluate the risk to the groundwater from existing stormwater infiltration systems, to prioritize efforts to reduce those risks and protect the underground drinking water resource.

1.0 INSTRUCTIONS

This custom form has been prepared for your site by City of Redmond staff. Some information has been entered in Sections 2 and 3 based on City records. Please answer all questions on the form. ***Detailed instructions for completing this form are provided in the attached instruction sheets. Please refer to the Instruction Sheets for clarification of the questions.*** *Basic instructions:*

- *Complete this form to the best of your ability. Owners and operators knowledgeable about site activities should be able to complete this assessment without hiring engineers or other technical support.*
- *Complete a separate form for each infiltration system (separate drainage area) on your property that is located in Wellhead Protection Zones 1 and 2. You may copy this form to use for separate areas.*
- *When answering the questions, only consider activities within areas that drain to the infiltration system.*
- *Feel free to attach additional maps, reports, monitoring data, permits, or other information that you believe will assist the City in better understanding the condition of your infiltration system and assessing what risks it may pose to the drinking water resource, or how you currently mitigate those risks.*
- *The City will evaluate the information you submit and will schedule a meeting with you to review your assessment and help to determine if it will be necessary to change your system to protect groundwater.*
- ***Completion of this form is required by Redmond City Ordinance RMC 13.07.100. See instructions for deadlines and incentives.***

2.0 GENERAL INFORMATION (Complete all sections)

2.1 Facility Name and Location

Facility Name					
Facility Address					
City	Redmond	**State**	WA	ZIP	98052
Phone at the facility					
Parcel Number		**Wellhead Protection Zone**			
Business Description					

2.2 Contact Information

Person Responsible for System

Name					
Organization					
Address					
City		**State**		**ZIP**	
Phone					
Email					

Property Owner

Same as Person Responsible check ☐ or, complete below:

Name					
Organization					
Address					
City		**State**		**ZIP**	
Phone					

Technical Contact Person, if applicable (Engineer, Contractor, Consultant)

Name					
Organization					
Address					
City		**State**		**ZIP**	
Phone					
Email					

3.0 LAND USE INFORMATION

3.1 Site Map

Map will be provided for each facility

Instructions:
The map provided above is based on the City's best information. Feel free to attach an alternative map, or use this one to complete the following:

1. *Note the location of the infiltration facility for this assessment. (Complete a separate assessment for each separate infiltration facility.)*
2. *Mark the limits of the drainage area. (Draw a line around the areas that drain to your infiltration facility.)*
3. *Identify the direction of flow of surface water or water flowing in stormwater pipes.*
4. *Add any water wells (note use: drinking, production, monitoring).*

☐ *Check this box if you are attaching an additional map.*

3.0 LAND USE INFORMATION (continued)

POINTS

3.2 Pollutant Loading Risk Classification

Some land uses pose a higher risk to groundwater. From Table 1 in the instructions, identify the pollutant loading risk category for the areas contributing runoff to the infiltration system. Check one, and enter a score in the points column.

Insignificant (0) ☐ **low (1)** ☐ **medium (2)** ☐ **high (3)** ☐

3.2 _____

Comments:

☐ *Check this box if you are attaching additional comments.*

3.3 High Risk Uses

Some land uses represent a special risk to the groundwater. These high risk activities are a significant risk to groundwater when conducted within the drainage area of a stormwater infiltration system. From Table 2 in the instructions, identify whether your facility has any high risk uses occurring within the area that drains to the infiltration system. Please carefully review the instructions.

3.3 _____

Check all that apply, if any high risk uses are occurring at the site check "Yes" and enter a score in the points column.

Yes (7) ☐ **No (0)** ☐

Table 2: Stormwater Infiltration High Risk Uses

1. Vehicle maintenance, repair and service (conducted outdoors).
2. Commercial or fleet vehicle washing.
3. De-icing activities (using ethylene glycol or large quantities of other deicers).
4. Storage of treated lumber.
5. Storage or handling of hazardous materials or deleterious substances.
6. Generation, storage, transfer, treatment or disposal of hazardous wastes.
7. Handling of radioactive materials.
8. Recycling facilities, except for those that recycle only glass, paper, plastic, or cardboard. **See instructions for complete description**.
9. Industrial or commercial areas that have outdoor processing, handling, or storage of raw, solid materials or finished products at the facility. **See instructions for complete description**.
10. Infiltration systems at contaminated sites where the stormwater would increase the mobility of the contaminants at the site. **See instructions for complete description**.

Comments:

☐ *Check this box if you are attaching additional comments*

3.0 LAND USE INFORMATION (continued)

POINTS

3.4 Chemical Application

Application of chemicals creates a risk of spills and/or contamination of groundwater. Check all chemicals applied within the area that drains to the infiltration system. See instructions regarding infrequent use of small quantities of rock salt.

fertilizers ☐ **pesticides** ☐ **herbicides** ☐ **deicers** ☐ **other**_____

If you did not check any, enter 0. If you check any, but you feel this use is mitigated in some way, enter 1 and describe the mitigation below. If chemicals are applied, enter 2.

3.4 _____

None used (0) ☐ **Mitigated use (1)** ☐ **Chemicals applied (2)** ☐

Comments:

☐ *Check this box if you are attaching additional comments.*

POINTS

3.5 Hazardous Materials Storage and Handling

Hazardous materials and deleterious substances are a risk factor to groundwater. Describe and provide names of any hazardous materials that are currently or that may be stored, handled, treated, produced, recycled, used, or disposed of within the drainage area of the infiltration system.

Examples of proper storage and handling include secondary containment, covering of materials, quantity reduction, spill prevention and cleanup plans in place, etc. Small quantities of hazardous materials or deleterious substances are defined as less than 50 gallons or 500 pounds at any one time. Check the category that best describes your site and enter a score in the points column.

No hazardous materials (0) ☐

Small Quantity Hazardous materials properly stored (0) ☐

Small Quantity Hazardous materials not properly stored (2) ☐

Large Quantity Hazardous Materials properly stored (2) ☐

Large Quantity Hazardous Materials not properly stored (7) ☐

3.5 _____

Provide information about quantities of hazardous materials or deleterious substances and describe how they are used within the area.

Describe any historical spills or releases and what has been done to clean them up and prevent future incidents.

Comments:

Hazardous Material Name	Quantity	Describe Use, Storage, Disposal, etc.

☐ *Check this box if you are attaching additional comments or an HMIS.*

4.0 LOCATION

POINTS

4.1 Wellhead Protection Zone

Proximity to public drinking water wells is a risk factor. Check the wellhead protection zone in which the infiltration system is located and enter the score in the points column. See the map in section 3.1. Infiltration systems located in Wellhead Protection Zones 3 and 4 are not required to complete this assessment.

Zone One (2) ☐ **Zone Two (1)** ☐ 4.1 _____

Comments:

☐ *Check this box if you are attaching additional comments.*

4.2 Drinking Water Supply Well

Distance between your stormwater infiltration system and the nearest private or public drinking water supply well is a risk factor. Please draw any nearby well locations on the map in section 3.1.

Is your infiltration system within 100 feet of a drinking water supply well? Check and enter the points score.

4.2 _____

Yes (7) ☐ **No (0)** ☐

Comments:

☐ *Check this box if you are attaching additional comments.*

5.0 INFILTRATION SYSTEM DESCRIPTION

POINTS

5.1 Water Quality Pretreatment

Does the infiltration system have Pre-treatment BMP's and/or Oil Control BMP's installed upstream of the infiltration system? If yes, please check all that apply. Add these features to the site map (Section 3.1).

Simple Floatables Separators (Tees or down-turned elbows) ☐

Advanced Oil/Water Separators (API or CPS type) ☐

Sediment/Metals Reduction (Settling pond, biofilter, media filter) ☐

Many sites require a simple oil/water separator like a down-turned elbow prior to connection to an infiltration system to reduce the chance of floatable materials from plugging the infiltration system. Medium and High Pollutant Loading sites (see Table 1 in the instructions) often require an advanced oil/water separator to remove oils from the stormwater.

Does your system include "adequate" pretreatment for the type of uses at your site? Check and enter the points score.

Yes (0) ☐ **No (3)** ☐

5.1 _____

Comments:

☐ *Check this box if you are attaching additional comments.*

5.2 Water Quality Treatment

Does the infiltration system include water quality treatment prior to infiltration? If yes, check all that apply. Add these features to your site map (Section 3.1). If you have a system not shown here, describe it below.

Biofiltration Swale ☐ **Filter Strips** ☐ **Bio-retention / Rain-garden** ☐

Ecology Embankment ☐ **Wetvault** ☐ **Basic Wetpond** ☐

Stormfilter Cartridges ☐ **Sand Filters** ☐ **Treatment Wetlands** ☐

Engineered Soil Treatment ☐

One of these systems is typically required for infiltration from pollution generating impervious surfaces like roads, driveways, and parking lots. Does your system include "adequate" treatment? Check and enter the points score.

Yes (0) ☐ **No (7)** ☐

5.2 _____

Comments:

☐ *Check this box if you are attaching additional comments.*

5.0 INFILTRATION SYSTEM DESCRIPTION (continued)

POINTS

5.3 Treatment Bypass

Risk is reduced when stormwater is treated by a treatment system like those described in 5.2 above. Risk is increased the more frequently that stormwater flows past this system without being treated (treatment is bypassed) due to large storm events.

To what extent does stormwater bypass treatment? Check the appropriate item and enter the score in the points column.

If you selected "No" in Section 5.2, then check "Always" below.

Always bypasses treatment (no treatment exists) (2) ☐ 5.3 _____

A few times per year bypasses (1) ☐

Almost never bypasses (0) ☐

Comments:

☐ *Check this box if you are attaching additional comments.*

5.0 INFILTRATION SYSTEM DESCRIPTION (continued)

POINTS

5.4 Separation

Risk of groundwater contamination is reduced the greater the distance that water must travel through soil from the infiltration system to the groundwater. A fine grained soil column can help to filter out some contaminants.

Typically stormwater infiltration systems are required to have a minimum of 5 feet of separation between the bottom of an infiltration system and the seasonal high elevation of the groundwater if there are proper soils. This distance may be reduced through careful evaluation of the groundwater and the soils at the site.

As noted above, 5 feet of separation is highly desirable. As little as 3 feet may be acceptable if the proper soils are present and an engineering analysis is performed. Less than 3 feet is generally prohibited.

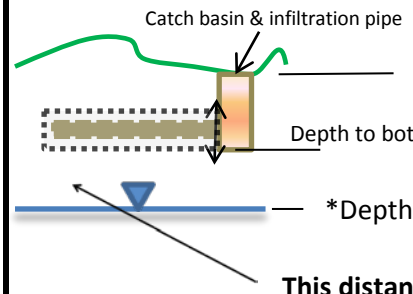
What is the distance between the bottom of your infiltration system and the seasonal high elevation of the groundwater?

Less than 3 feet (7) ☐ **Between 3 and 5 feet (3)** ☐ **Greater than 5 feet (0)** ☐ 5.4 _____

Check the value that best describes your site, enter the score in the points column, and describe how you estimated your site's value below.

Comments:

EXAMPLE: Calculating Groundwater Separation



	Example #1	Example #2	Your calculation here
ground level			
Depth to bottom of pipe or trench (ft)	4'	3'	
*Depth to groundwater (ft)	12'	5'	
This distance is the separation	12-4 = **8 ft**	5-3 = **2 ft**	

* Estimated Depth to Groundwater can be found on the map at the following link on the City's groundwater web page www.redmond.gov/groundwater. Then click on the tab for "Stormwater Infiltration". The map is listed near the bottom of the page under the heading "Other Resources".

☐ *Check this box if you are attaching additional comments.*

5.0 INFILTRATION SYSTEM DESCRIPTION (continued)

POINTS

5.5 Construction and Modification History

It may be helpful to the City to know more about when your system was constructed and what modifications you have made that may reduce risk to the groundwater.

No points are scored for this category, but you will have an opportunity in Section 6 to describe what risk reduction efforts you have made and how you think they should be scored.

When was your system installed? _____

Has it been modified? **Yes** ☐ **No** ☐

5.5 _0__

Please describe what modifications have been made to your stormwater system since it was originally installed. When were the modifications made? Please provide any engineering drawings, design documents or as-built drawings that you think would be helpful in determining the treatment capabilities of your modified stormwater system.

Comments:

☐ *Check this box if you are attaching additional comments, or information about your system.*

5.0 INFILTRATION SYSTEM DESCRIPTION (continued)

POINTS

5.6 Verification Groundwater Monitoring

Monitoring of the groundwater can be a persuasive way of demonstrating that an existing infiltration system is not a risk to the groundwater.

Because of the value of demonstrating that groundwater has not been impacted by a system, verification monitoring can reduce points from the risk score. Is a groundwater monitoring program in place to monitor groundwater quality immediately down gradient of the infiltration system?

Absence of a groundwater monitoring program will receive 0 points.
A comprehensive groundwater monitoring program will receive -7 points.
You may estimate your points deduction for an existing alternate monitoring program

Final point deductions between 0 and -7 points for existing alternate monitoring programs will be determined by the City based on the monitoring results and the appropriateness and effectiveness of the existing alternate monitoring program.

No monitoring (0) Alternate Monitoring (___) Comprehensive Monitoring (-7)

5.6 (____)

Check the item that best describes your monitoring program; enter the score in the points column that you think your program deserves. Describe your monitoring program below. Additional information documenting your program is needed to support this claim.

Comments:

☐ *Check this box if you are attaching a Quality Assurance Project Plan for monitoring.*

☐ *Check this box if you are attaching a copy of an NPDES permit.*

☐ *Check this box if you are attaching a copy of monitoring data.*

6.0 RISK REDUCTION

Are there other additional measures that may have already been taken to reduce the risk of contamination at your facility? Describe any additional measures that you have taken at your site that you want us to know about. DO NOT include actions or things that you plan to do, future actions will be accounted for in section 7. These risk reduction measures may reduce a site's risk score. Enter the number of points that you feel your risk reduction measures warrant.

Here are some examples of risk reduction measures that might <u>already</u> be in use:

- ☐ **Public / Employee Education Program for Groundwater Awareness (-1)**
- ☐ **Frequent Parking Lot Sweeping (-1)**
- ☐ **Mitigation for Chemical Use (-1)**
- ☐ **Hazardous materials are already in secondary containment (up to -7)**
- ☐ **Other _____(varies____)**

6.0 (_____)

List and describe any risk reduction measures that have been applied at your facility and justify the points reduction you are suggesting.

<u>Comments:</u>

☐ *Check this box if you are attaching additional comments.*

POINTS

Please complete ALL sections of the Assessment. If you cannot complete a section, call the City representative listed below for assistance or an appointment for help. Incomplete or unsigned assessment forms will be returned and may not qualify for incentives if submitted late. KEEP A COPY OF THE COMPLETED FORM FOR YOUR RECORDS.

7.0 CERTIFICATION

I hereby certify that the information contained in this Existing Stormwater Infiltration System Assessment is true and correct to the best of my knowledge.

Name of legally authorized representative _____ Title _____

Signature of legally authorized representative _____ Date _____

Thank you for making the time to complete this assessment. At this point, you are probably wondering what these points mean. ***The City's goal is that all sites have a risk score of 7 or less to better protect groundwater.***

City staff will be contacting you to review your answers and develop a plan by which your site's potential risk to the drinking water aquifer may be reduced.

The City will start with higher risk sites and will work closely with property owners to develop a plan that is reasonable and productive in meeting the City's two goals: 1) protect the drinking water resource; 2) support property owners who are doing their part to help protect the drinking water resource.

Between now and your initial contact from the City, you may consider your site and how you might be able to reduce the site's risk score. This assessment is the primary tool by which the City is assessing risk, so it can be a guide for the kinds of things that you could do to modify your site or your practices to reduce your site's risk.

Thanks again for your participation in this important process. If you want more information about the City's Wellhead Protection Stormwater Infiltration Assessment Program, please visit us at http://redmond.gov/groundwater, email groundwater@redmond.gov, Please call ***Kevin Murphy with any questions (425) 556-2756***

Please mail the completed form to:

City of Redmond
Wellhead Protection Program, SWI , MS:2NPW
P.O. Box 97010 REDMOND, WASHINGTON 98073-9710
You may fax the form to FAX (425) 556-2820
or email your completed form to groundwater@redmond.gov

POINTS TOTAL

Please copy your points from the previous pages to this summary and add them below.

3.2 _____

3.3 _____

3.4 _____

3.5 _____

4.1 _____

4.2 _____

5.1 _____

5.2 _____

5.3 _____

5.4 _____

5.5 __0__

5.6 (____)

6.0 (____)

TOTAL _____