

*Synthetic Organic Chemicals (SOCs)  
and Other Organic Chemicals (OOCs)  
Monitoring Waiver Application*

*2005 - 2007 Compliance Period*

**Alaska Department of Environmental Conservation  
Division of Environmental Health  
Drinking Water Program**



The SOC/OOC monitoring waiver application form and instruction booklet are to be used by public water system owners and/or operators to apply for one or more Synthetic Organic Chemical or Other Organic Chemical monitoring waivers.

***Alaska Department of Environmental Conservation  
Division of Environmental Health  
Drinking Water Program***

***Contact Persons/Numbers:***

***Drinking Water Program Offices/Staff Phone Numbers:***

<b>Juneau:</b>	<b>(907) 465-5350</b>
<b>Anchorage:</b>	<b>(907) 269-7594</b>
<b>Fairbanks:</b>	<b>(907) 451-2137</b>
<b>Mat-Su:</b>	<b>(907) 376-1860</b>
<b>Kenai:</b>	<b>(907) 262-5210</b>

**or call 1-(800)-510-2332, the ADEC Compliance Assistance Office and leave a message. Someone from a local office will return your call.**

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## *Other Related Documents (Not included in application packet):*

*The following documents are used by the Department to review and process the waiver application. They are public documents and available for public review at your local ADEC office.*

Regulated SOC/OOC Physical, Chemical, and Use Characteristics

Reviewer Checklist

Decision Criteria

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# I) Introduction

## **SOC/OOC Monitoring Waiver Definition:**

A synthetic organic chemical (SOC) or other organic chemical (OOC) monitoring waiver relieves a public water system from the requirement to test for a regulated synthetic or other organic chemical contaminant during a compliance period. Most of the regulated synthetic organic chemicals and other organic chemicals (SOCs/OOCs) are pesticides (insecticides and herbicides).

## **History and Purpose:**

Safe drinking water for all Alaskans is a goal of the Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC). Amendments to the Safe Drinking Water Act in 1986 required EPA to regulate 25 new contaminants every three years. In response to this requirement, EPA issued “Phase II” and “Phase V” regulations, which required Class A Public Water Systems (PWSs) to monitor for many insecticides, herbicides, and other chemicals.

Under certain chemical, physical, and environmental conditions, groundwater contamination can and does occur from normal use and misuse of SOCs/OOCs. However, because some SOCs/OOCs are not used in areas of the country and because certain water systems are not susceptible to contamination, EPA gave State Drinking Water Programs the option of waiving the monitoring requirements for SOCs/OOCs.

ADEC first developed the SOCs/OOCs waiver application during the 1993-1995 compliance period. To address the concerns of both the EPA and PWS owners and/or operators, ADEC staff improved and simplified the waiver application process. This “new” SOCs/OOCs waiver application process, as developed, allows public water systems that have little or no risk of regulated SOCs/OOCs contamination, to quickly complete the application.

ADEC staff believe that public water suppliers will find the enclosed waiver packet more “user-friendly” than the prior application. It should be easier for the PWS owners or operators to complete, and it helps to address EPA and ADEC concerns about SOCs/OOCs use and susceptibility.

## **SOCs/OOCs Monitoring Requirements:**

The monitoring frequency for SOCs/OOCs is described in State Regulations, 18 AAC 80.202 (4). The regulations require four consecutive quarterly samples for each regulated SOC/OOC contaminant during a compliance period, unless a waiver is granted. For SOCs/OOCs monitoring, the compliance period is a three-year period (1993-1995, 1996-1998, 1999-2001, 2002-2004, 2005-2007, etc.). **The enclosed monitoring waiver application covers the 2005-2007 compliance period.**

Federal regulations, which the State adopted, require that a PWS either monitor for regulated SOC/OOCs, or receive a waiver from monitoring for each three-year compliance period. PWSs serving more than 3,300 persons that do not detect a contaminant in the initial compliance period may reduce sampling frequency to a minimum of two quarterly samples in one year during each repeat compliance period. PWSs serving 3,300 persons or less, that do not detect a contaminant in the initial compliance period, may reduce sampling frequency to a minimum of one sample during each repeat compliance period. **PWSs that apply and qualify for a monitoring waiver are not required to test for the waived chemical contaminant during the three-year compliance period.**

All PWSs are eligible to apply for all SOC/OOCs monitoring waivers. However, not all public water systems will qualify for a monitoring waiver for all SOC/OOCs. Most systems that are denied a specific SOC/OOC waiver, will need to be testing for that SOC/OOC in the first quarter of 2007. Therefore, ADEC encourages PWS owners and/or operators to submit their 2005-2007 SOC/OOCs Monitoring Waiver Application before March 1, 2007, to allow the Department time to review the application before the end of the year.

### **Statewide Use-Waivers:**

No statewide SOC/OOC use-waiver will be issued. This application process replaces the statewide SOC/OOC use-waiver.

### **About the Application:**

The enclosed SOC/OOCs waiver application packet contains an Application Form, an Instruction Booklet, an Activity-Use Survey Form, and other informational materials.

In the Application Form, applicants are asked to identify SOC/OOC use, storage, and/or disposal activities that may impact a PWS water source. A list of activities that are generally associated with SOC/OOC use, storage, and/or disposal is provided. The Instructions Booklet explains, in detail, each question presented in the Application Form. Examples are also provided for many questions.

Three important components of the waiver application are: 1) determining the size of the “area of concern” around the PWS’s water sources, 2) identifying SOC/OOC related activities located within this area of concern, and 3) determining if the water source comes from a confined aquifer. The “area of concern” is defined, for the purposes of this application, as the **Waiver Review Area (WRA)**. The Drinking Water Protection staff will be calculating the WRA using the same methodologies used in the Source Water Assessment process and based on several months time of travel. The Activity-Use Survey Form is used when certain SOC/OOC related activities exist within a mile of a PWS water source.

### **How Many Applications Are Required For Each Water System:**

The application has been designed to allow the applicant to apply for **ALL** the SOC/OOC waivers under one application. However, some water systems will be required to submit more

than one application because they have multiple water sources. An applicant should contact ADEC to find out if multiple water sources can be included in a single waiver application. In general, the following guidelines apply:

If a PWS uses *only* **one groundwater** or *only* **one surface water source**, the applicant needs to submit **only one application**.

If a PWS uses **multiple surface water sources**, the applicant is required to submit a separate application for **each surface water source**.

If a PWS uses **multiple groundwater sources** (two or more wells), the applicant can either submit one application for each well if the wells are not located within close proximity to each other, or include more than one well in a single application if the wells are within close proximity to each other. An applicant is required to research, assess, and evaluate SOC/OOC use, storage, and/or disposal for certain activities within one mile of each well.

For most groundwater systems, the WRA will be calculated by Drinking Water Protection staff using a uniform flow equation and will be an estimate of the wellhead's zone of influence. The more hydro geological data available for the area surrounding the well, the more accurately the WRA can be defined.

For surface water systems, the WRA will be the area 1,000 feet from the surface water body (i.e., stream or lake). Applicants with surface water systems will not be required to assess all the activities in the entire watershed. Rather, the applicant is asked to focus on activities taking place within 1,000 feet of the surface water body.

After calculating the WRA, Drinking Water Protection staff will complete a contaminant source inventory using the database developed from the Source Water Assessment process. They will compare this inventory with the activities with the Activity-Use Survey you provide and assess the vulnerability (level of risk) of the drinking water source to SOC/OOC contamination. If the level of risk is high, you will be sent the WRA and contaminant source inventory to verify the accuracy of the contaminant source inventory and results.

### **Cost Savings and Fees:**

PWSs can and do save thousands of dollars if they receive several SOC/OOC monitoring waivers. The amount of savings depends upon the number of water sources the PWS uses for providing potable water to the public, the number of applications submitted, and how many of the waivers can be approved. ADEC is required to collect fees for providing drinking water related services. At this time the following waiver application fees apply:

**New Applications - If the applicant has not previously applied for the SOC/OOC waivers being requested in the 2005-2007 application, or if the applicant was previously denied the waivers requested, the following fees apply:**

New applicants are required to pay an application review fee of **\$85.00** and the use-monitoring waiver fee of **\$220.00** for **each** application submitted. The fees must accompany the completed applications.

**Renewal Applications - If the applicant has previously applied for and been granted the SOC/OOC waivers being requested in the 2005-2007 application, the following fee applies:**

Under the current regulations, applicants renewing their waiver requests pay only the \$85 renewal fee. ADEC requests that all applicants renewing their waivers complete the waiver application forms in this packet, and submit the completed forms with their \$85 renewal fee.

Contact ADEC if you have questions regarding which set of fees apply to your waiver application. **Waiver applications received without the required fees will be returned to the applicant.**

### **Conclusion:**

Enclosed is the new SOC/OOCs Monitoring Waiver Application. The waiver application process is somewhat detailed and time consuming for both our agency and PWS owners or operators. However, the alternative is for all PWSs in the state to sample for all regulated SOC/OOCs. This would cost each PWS thousands of dollars annually.

ADEC has limited resources to identify SOC/OOC contamination risks. If a PWS owner or operator suspects that they may have SOC/OOC contamination problems near their water source, they need to contact ADEC for assistance. In order for the waiver program to be effective, it is important that all parties (ADEC, PWS owners/operators, and PWS customers/consumers) continue to work together to maintain safe drinking water supplies and ensure the protection of public health for all Alaskans.

Staff at local ADEC offices are available to answer questions and to clarify issues related to this application. Refer to ADEC contact persons/numbers on the title page.

## II) Waiver Application Form

*for the 2005-2007 compliance period.*

The information you provide in this waiver application will be reviewed by ADEC staff, and used to evaluate your Public Water System's (PWS) eligibility for the Synthetic Organic Chemicals (SOCs) and Other Organic Chemicals (OOCs) monitoring waivers.

Complete this **Waiver Application Form**, using the attached **Instruction Booklet**. The instructions contain detailed information about each question in this application form. Several examples are given for clarification. The application form is separated into major sections, referenced in the table below.

<b>Section</b>	<b>Application Form</b> (page #s)	<b>Instruction Booklet</b> (page #s)
Inventory Information <i>(Questions 1, 2, 3, 4, 5 and 6)</i>	7-9	20-24
Water Source Information <i>(Questions 8 and 9)</i>	10	25-35
Activities <i>(Question 10)</i>	11-13	36
Well Information <i>(Questions 11, 12 and 13)</i>	14-15	37-38
Monitoring/Investigation <i>(Questions 14 and 15)</i>	16	39
PWS Certification <i>(Question 16)</i>	17	39
Activity-Use Survey Form and supporting documents		40-46
Glossary		

The waiver application process has been simplified. Most PWS owners or operators should be able to complete the application without assistance. However, if questions should arise, staff at ADEC are available to help.

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## Inventory Information

### 1) Public Water System (PWS) Id. No.:

PWS Name:
PWS Physical Location:

### 2) Water Source Information:

In the table below, list each water source name, as you refer to it, and provide the information requested for each source. Refer to the instructions for details.

Water Source Name: (example: Booker Street Well, Carson Stream Intake, etc.)	Type of Water Source: (GW, SW, GWUDISW)	Purpose: (Primary, Secondary, Emergency)	Method of Treatment: (chlorination, fluoridation, filtration, coagulation, sedimentation, reverse osmosis, ozone, none, etc.)

### 3) PWS Owner \_\_\_\_ or Operator \_\_\_\_ : Please Specify

Name:	
Address:	
City/State/Zip code:	
Phone:	FAX:

**4) Form prepared by:**

Name:	
Address:	
City/State/Zip code:	
Phone:	FAX:

**5) List the PWS total population served:**

Fill-in the appropriate resident, non-resident, and total population numbers, and circle whether your answer is estimated or known. The population served is the number of persons that use the water system on a regular daily basis.

**Resident Population Served:** \_\_\_\_\_ (persons/day)    **Estimated**    **Known from census** (circle one)

**Non-resident Population Served:** \_\_\_\_\_ (persons/day)

**Total Population Served by the PWS:** \_\_\_\_\_ (persons/day)

**6) Select regulated synthetic and other organic chemical contaminants for which a monitoring waiver is requested:**

The table below lists regulated synthetic and other organic chemical contaminants. From the list below, specify only those chemicals for which you are requesting a monitoring waiver, by placing a *check mark* in front of the chemical name. Many PWS owners or operators will request a monitoring waiver for all regulated SOCs/OOCs.

*Refer to pages 22-24, of the instructions, for a list of pesticide trade names and common uses.*

**Regulated Synthetic and Other Organic Chemicals**

<b>SOCs</b>	
<input type="checkbox"/> Alachlor <input type="checkbox"/> Aldicarb <input type="checkbox"/> Aldicarb Sulfoxide <input type="checkbox"/> Aldicarb Sulfone <input type="checkbox"/> Atrazine <input type="checkbox"/> Carbofuran <input type="checkbox"/> Chlordane <input type="checkbox"/> Dalapon <input type="checkbox"/> Dibromochloropropane <input type="checkbox"/> Dinoseb <input type="checkbox"/> Diquat <input type="checkbox"/> Endothall <input type="checkbox"/> Endrin <input type="checkbox"/> Ethylene Dibromide <input type="checkbox"/> Glyphosate <input type="checkbox"/> Heptachlor <input type="checkbox"/> Heptachlor Epoxide <input type="checkbox"/> Lindane	<input type="checkbox"/> Methoxychlor <input type="checkbox"/> Oxamyl (Vydate) <input type="checkbox"/> Pentachlorophenal (PCP) <input type="checkbox"/> Picloram <input type="checkbox"/> Simazine <input type="checkbox"/> Toxaphene <input type="checkbox"/> 2,4-D <input type="checkbox"/> 2,4,5-TP
<b>OOCs</b>	
<input type="checkbox"/> Beno[a]pyrene <input type="checkbox"/> Di(2-ethylhexyl)adipate <input type="checkbox"/> Di(2-ethylhexyl)phthalate <input type="checkbox"/> Hexachlorobenzene <input type="checkbox"/> Hexachlorocyclopentadiene <input type="checkbox"/> Polychlorinated biphenyls (PCBs) <input type="checkbox"/> 2,3,7,8-TCDD (Dioxin)	

*Check all chemicals that apply to this application*

## Water Source Information

**7) List the water system’s primary and secondary water sources:**

In the table below, list the water system’s primary and secondary water sources. For each water source listed, provide the name, legal description of the property, and the latitude/longitude.

Water Source Name:	Legal Description: (Township, Range, Section, and/or Lot and Block, Subdivision Name)	Latitude/Longitude: (degrees, min., sec.)
		Lat (     ,     ,     )N Long(     ,     ,     )W
		Lat (     ,     ,     )N Long(     ,     ,     )W
		Lat (     ,     ,     )N Long(     ,     ,     )W
		Lat (     ,     ,     )N Long(     ,     ,     )W
		Lat (     ,     ,     )N Long(     ,     ,     )W

**8) Describe land features (hydrologic and geologic) within the general area of the water**

**source(s):** Land features of interest include: type of vegetation, slope, drainage, and/or contour, location of rivers, streams, lakes, ponds, etc. Attach an aerial photograph, if available.

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## Activities

**9) Identify all potential sources of SOC/OOC contamination by identifying activities that, in general, have used/stored/transported SOCs/OOCs within one mile of each well or 1,000 of the surface water body.**

Review the activities in Tables 1 and 2, below. In both tables, circle the “Yes” or “No” response to indicate whether the activity exists within one mile of the well(s) or 1,000 feet of the surface water body. A “Yes” response indicates that the activity exists now or has existed within the past 10 years.

<b>TABLE 1 - Higher Concern Activities (If 'Yes' response, Activity-Use Survey Form is required)</b>					
Commercial/Agricultural			Municipal/Urban/Government		
<i>feedlots</i>	<i>Yes</i>	<i>No</i>	<i>industrial waste disposal</i>	<i>Yes</i>	<i>No</i>
<i>pesticide use/storage</i>	<i>Yes</i>	<i>No</i>	<i>landfills, dumps</i>	<i>Yes</i>	<i>No</i>
<i>grain bins for fumigation</i>	<i>Yes</i>	<i>No</i>	<i>junk yards</i>	<i>Yes</i>	<i>No</i>
<i>commercial greenhouse, nursery, farms</i>	<i>Yes</i>	<i>No</i>	<i>abandoned landfills</i>	<i>Yes</i>	<i>No</i>
<i>fertilizer use (with pesticides)</i>	<i>Yes</i>	<i>No</i>	<i>hazardous waste/storage</i>	<i>Yes</i>	<i>No</i>
Commercial/Industrial			<i>military installations</i>	<i>Yes</i>	<i>No</i>
<i>pulp mills</i>	<i>Yes</i>	<i>No</i>	<i>public gardens</i>	<i>Yes</i>	<i>No</i>
<i>logging activities</i>	<i>Yes</i>	<i>No</i>	<i>golf courses</i>	<i>Yes</i>	<i>No</i>
<i>industrial construction</i>	<i>Yes</i>	<i>No</i>	Heavy Industrial/Mining		
<i>utility substations</i>	<i>Yes</i>	<i>No</i>	<i>coal mines</i>	<i>Yes</i>	<i>No</i>
<i>wood preservers</i>	<i>Yes</i>	<i>No</i>	<i>chemical reclamation</i>	<i>Yes</i>	<i>No</i>
Medical			Wells		
<i>veterinary clinics</i>	<i>Yes</i>	<i>No</i>	<i>injection wells</i>	<i>Yes</i>	<i>No</i>
<i>research laboratories</i>	<i>Yes</i>	<i>No</i>			
<i>pet groomers/pet supplies</i>	<i>Yes</i>	<i>No</i>			

**Alaska Department of Environmental Conservation  
Division of Environmental Health  
Drinking Water Program**

<b>question 9 continued)</b>					
<b>TABLE 2 - Lower Concern Activities</b> (Activity-Use Survey Form is not required for Table 2 Activities)					
<b>Commercial/Agricultural</b>			<b>Municipal/Urban/Government</b>		
<i>meat packing/slaughter</i>	<i>Yes</i>	<i>No</i>	<i>municipal wastewater treatment</i>	<i>Yes</i>	<i>No</i>
<i>manure piles</i>	<i>Yes</i>	<i>No</i>	<i>individual residences</i>	<i>Yes</i>	<i>No</i>
<i>animal burial</i>	<i>Yes</i>	<i>No</i>	<i>subdivisions</i>	<i>Yes</i>	<i>No</i>
<i>forest lands</i>	<i>Yes</i>	<i>No</i>	<i>septic tanks</i>	<i>Yes</i>	<i>No</i>
<i>fertilizer use (without pesticides)</i>	<i>Yes</i>	<i>No</i>	<i>parks</i>	<i>Yes</i>	<i>No</i>
<i>fertilizer storage</i>	<i>Yes</i>	<i>No</i>	<i>home gardens/greenhouses</i>	<i>Yes</i>	<i>No</i>
<b>Commercial/Industrial</b>			<i>storm water impoundments</i>	<i>Yes</i>	<i>No</i>
<i>truck terminals</i>	<i>Yes</i>	<i>No</i>	<i>wastewater impoundments</i>	<i>Yes</i>	<i>No</i>
<i>rust proofing</i>	<i>Yes</i>	<i>No</i>	<i>lift stations</i>	<i>Yes</i>	<i>No</i>
<i>small engine repair</i>	<i>Yes</i>	<i>No</i>	<i>incinerators</i>	<i>Yes</i>	<i>No</i>
<i>machine shops</i>	<i>Yes</i>	<i>No</i>	<i>sewer lines</i>	<i>Yes</i>	<i>No</i>
<i>dry cleaners</i>	<i>Yes</i>	<i>No</i>	<i>urban runoff</i>	<i>Yes</i>	<i>No</i>
<i>printers</i>	<i>Yes</i>	<i>No</i>	<b>Transportation Related</b>		
<i>photo processors</i>	<i>Yes</i>	<i>No</i>	<i>roads</i>	<i>Yes</i>	<i>No</i>
<i>metal plating</i>	<i>Yes</i>	<i>No</i>	<i>railroads</i>	<i>Yes</i>	<i>No</i>
<i>descalers</i>	<i>Yes</i>	<i>No</i>	<i>airports/maintenance yards snow clean-up</i>	<i>Yes</i>	<i>No</i>
<i>food processors</i>	<i>Yes</i>	<i>No</i>	<i>salt/sand piles</i>	<i>Yes</i>	<i>No</i>
<i>laundromats</i>	<i>Yes</i>	<i>No</i>	<b>Wholesale/Retail</b>		
<i>car washes</i>	<i>Yes</i>	<i>No</i>	<i>herbicides/pesticides</i>	<i>Yes</i>	<i>No</i>
<i>beauty salons</i>	<i>Yes</i>	<i>No</i>	<i>fertilizers</i>	<i>Yes</i>	<i>No</i>
<i>heat treaters/smelters</i>	<i>Yes</i>	<i>No</i>	<i>auto/chemical supplies</i>	<i>Yes</i>	<i>No</i>
<i>painters/finishers</i>	<i>Yes</i>	<i>No</i>	<i>painting supplies</i>	<i>Yes</i>	<i>No</i>
<i>furniture strippers</i>	<i>Yes</i>	<i>No</i>	<b>Heavy Industrial/Mining</b>		
<i>autobody shops</i>	<i>Yes</i>	<i>No</i>	<i>sand/gravel mining</i>	<i>Yes</i>	<i>No</i>
<i>service stations/auto repair</i>	<i>Yes</i>	<i>No</i>	<i>power plants</i>	<i>Yes</i>	<i>No</i>
<i>above ground storage tanks</i>	<i>Yes</i>	<i>No</i>	<b>Wells</b>		
		<i>No</i>			

<b>question 9 continued)</b>					
<b>TABLE 2 - Lower Concern Activities</b> (Activity-Use Survey Form is not required for Table 2 Activities)					
<i>utility rights of way</i>	<i>Yes</i>		<i>geothermal heat recovery wells</i>	<i>Yes</i>	<i>No</i>
<b>Medical</b>			<b>Wells</b>		
<i>mortuaries/funeral homes</i>	<i>Yes</i>	<i>No</i>	<i>monitoring wells</i>	<i>Yes</i>	<i>No</i>
<i>graveyards</i>	<i>Yes</i>	<i>No</i>	<i>production wells (oil)</i>	<i>Yes</i>	<i>No</i>
<i>medical/dental clinics</i>	<i>Yes</i>	<i>No</i>	<i>water supply</i>	<i>Yes</i>	<i>No</i>
<b>Other</b>			<i>reserve pits</i>	<i>Yes</i>	<i>No</i>
<i>gravel pit</i>	<i>Yes</i>	<i>No</i>	<i>abandoned wells</i>	<i>Yes</i>	<i>No</i>
<i>asphalt</i>	<i>Yes</i>	<i>No</i>	<i>exploration wells</i>	<i>Yes</i>	<i>No</i>
<b>Tanks and Storage</b>					
<i>underground storage tanks</i>	<i>Yes</i>	<i>No</i>			
<i>fuel oil distributors</i>	<i>Yes</i>	<i>No</i>			
<i>oil pipelines</i>	<i>Yes</i>	<i>No</i>			

**If you answered “Yes” to any Table 1 activity**, the activity needs to be illustrated on site drawing that shows the activity location in relationship to the location of the water source.

For each Table 1 activity:

- 1) Show the location and the approximate size of the activity on the site drawing or map.
- 2) Show the approximate distance from the activity to each of the water system’s primary and secondary water source.
- 3) After illustrating the activities on the site drawing, **continue with question 10**, on the next page.

## Well Information

Question 10 needs to be completed by applicants that have groundwater sources. Applicants with only surface water sources should skip to Question 12.

### **10) Determine if source water is from a confined aquifer, and if the well is protected from surface runoff:**

For each of the water system's primary and secondary wells, answer the four questions (11 A-D) below. If the applicant has multiple wells complete a copy of this form for each well. Make copies of this page as needed.

#### **Well Name:**

**A)** Is the well log provided attached to the application? (A well log is required for each well) \_\_\_ Yes, \_\_\_ No

**B)** Is there evidence that water from the well comes from a confined aquifer? \_\_\_ Yes, \_\_\_ No.

*(If evidence shows that well water comes from a confined aquifer, explain in the space provided.)*

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**C)** Is there a seal on the top of the well? \_\_\_ Yes, \_\_\_ No; If Yes, what type ? \_\_\_ well cap \_\_\_ sanitary seal

**D)** Is surface water diverted from the well (grading, cement pad, bentonite grouting, etc. ) \_\_\_ Yes, \_\_\_ No

*(Explain in the space provided.)*

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**11) Well characteristics:** *Make copies of this page if necessary.*

In the table heading below, list each of the water system's primary and secondary wells. Answer the following questions for each well listed in the table heading.

Name of the Well:					
a) height of casing above ground surface? (inches)					
b) maximum pumping rate? (gallons/minute)					
c) maximum production per day ? (gallons/day)					
d) average production per day? (gallons/day)					

**Comments:** (Provide any additional information that you believe will better describe the well/s, and/or clarifies the data provided above.) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## SOC/OOC Monitoring/Investigation

Question 12 is for applicants that have Table 1 activities.

All water systems (surface water or groundwater) with no Table 1 activities should skip to question 13.

### 12) Provide information about Table 1 activities:

For each Table 1 activity marked “Yes” (*refer to page 11 of this application form*), complete one line of the table below. In the table, list the activity type (*column 1*), name of the activity and manager/owner responsible (*column 2*), and whether an Activity-Use Survey Form is attached to this application (*column 3*). For each Table 1 activity marked “Yes”, an Activity-Use Survey Form is required. *Refer to the instructions for details.*

Type of Activity	Name of Activity and the Manager/Owner responsible for the Activity:	Activity Use Survey Form Attached ? (Yes, No)
1)		
2)		
3)		
4)		
5)		
6)		
7)		

If an Activity-Use Survey Form is not attached, for any of the above listed activities, please explain why it is not available in the space provided below:

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### 13) SOC/OOC testing:

Has any SOC/OOC testing been done at this PWS: ?  *Yes*,  *No*, (*If Yes, give details below.*)

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Has any testing been done near the PWS ?  *Yes*,  *No*, (*If Yes, give details below.*)

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# PWS Certification

## 14) Owner/Operator Certification:

I certify that I have reviewed the information in this application. To the best of my knowledge and belief, the information in this application is complete and accurate.

\_\_\_\_\_  
Signature of Responsible Official (i.e., Owner or Operator)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name and Title of Responsible Official (i.e., Owner or Operator)

## Required Documents

Send the following information to ADEC: *(Keep a copy for your own records)*

- 1) A completes SOCs/OOCs Monitoring Waiver Application Form.
- 2) A site drawing and/or topographical map, showing the general location and boundary of any Table 1 activity.
- 3) Well logs, and other related hydro geological information, if available.
- 4) Aquifer pump tests completed for the wells.
- 5) Information that may support that the well is confined.
- 4) SOC/OOC test results, if available.
- 5) Completed Activity-Use Survey Forms

### III) Instructions Booklet

These instructions were developed to help applicants fill out the Synthetic Organic Chemicals (SOCs) and Other Organic Chemicals (OOCs) Monitoring Waiver Application Form. Each question in the application form is explained in further detail in these instructions.

The table below provides page numbers for major sections in the application form and the instructions.

<b>Section</b>	<b>Application Form</b> (pages)	<b>Instructions</b> (pages)
Inventory Information <i>(Questions 1, 2, 3, 4, 5 and 6)</i>	7-9	19 - 23
Water Source Information <i>(Questions 7 and 8)</i>	10	24
Activities <i>(Question 9)</i>	11-13	24
Well Information <i>(Questions 10 and 11)</i>	14-16	24 - 25
Monitoring/Investigation <i>(Questions 12 and 13)</i>	17	25 - 26
PWS Certification <i>(Question 14)</i>	18	26
Activity-Use Survey Form and supporting documents		27 - 41

# Inventory Information

## Question 1) Public Water System (PWS) Id. No.:

**PWSID No.:** Each PWS in Alaska is assigned a 6-digit number by the ADEC, Drinking Water Program. Provide this number where indicated. If this number is unknown, contact your local ADEC office.

**PWS Name:** Provide the name of the water system. For example: Moose Creek Subdivision Public Water System, Ptarmigan Heights Subdivision, etc..

**Location:** Provide the general “physical” location of the water system. The location is where the water system is physically or geographically located. For Example: West Fairbanks, or 3 miles East of Barrow, etc.. Include the name of the town, village, or city (or closest community) in the description.

## Question 2) Water Source Information:

Public water systems may have one or several water sources. For this question, list **all** the water sources for this water system. For each source listed, provided the water source name (as you refer to it), the type of water source, the water source use or purpose, and the method of treatment. Possible values for each field of the table are provided below.

**Water Source Name (Column 1):** Public water systems sometimes have more than one water source. Water sources include primary, secondary, and emergency sources. Refer to the “Glossary of Technical Terms” for definitions. List all PWS water sources by name, i.e., Booker Street Well, Lincoln Loop Well, Carson Creek, Acres Lake, etc. *(The applicant should refer to the water source by the same name throughout the application.)*

**Type of Water Source (Column 2):** For each water source you listed in Column 1, list the water source type. Examples of water source types include Groundwater (GW), Surface Water (SW), or a Groundwater Under the Direct Influence of Surface Water (GWUDISW). Refer to the “Glossary of Technical Terms” for definitions.

**Purpose (Column 3):** For purposes of this waiver application, a water source is considered either a primary, secondary, or emergency water source. A primary water source is routinely or regularly used to provide potable water to the public. A secondary water source is not routinely or regularly used to provide potable water, but it may be brought online during peak water usage, during seasonal periods, or for backup purposes. Both primary and secondary water sources are tested for bacterial, inorganic, and other contaminants. An emergency water source is used in the event of a fire or other unusual circumstance. A fire suppression well would not generally be used to supply potable water to the public and it would not usually be required to test for contaminants. Refer to the “Glossary of Technical Terms” for definitions.

**Method of Treatment (Column 4):** Many different methods of water treatment exist. Examples include: chlorination, fluoridation, coagulation, sedimentation, filtration, granulated activated carbon filtration, green-sand filtration, reverse osmosis, ozone, etc.. In the space provided, list the type of water treatment that is used for each water source listed. If no water treatment exists for the water source, indicate “none”.

## Question 3) PWS Owner or Operator:

List the name, mailing address, telephone number, and FAX number if available of the PWS owner or operator. This is the person responsible for regulatory compliance issues. He/she is the contact person for the water system. Specify, where indicated, whether the responsible official is the owner or operator of the public water system.

**Question 4) Form prepared by:**

List the name, mailing address, telephone number, and FAX number if available for the person who filled out this waiver application form. In most cases, this will be the PWS owner and/or operator. In the case where a contractor is hired to complete the application form, this information would reflect the contractor's name, address, and telephone number.

**Question 5) List the PWS total population served:**

Total population served is the total number of people that use the PWS on a regular daily basis. This information will be used by some applicants to calculate the size of the waiver review area, discussed later. Where indicated, list the resident and non-resident population that uses water from the public water system. Also, indicate whether the resident population number provided is based on a census, or if it is estimated.

**Question 6) Select regulated synthetic and other organic chemical contaminants for which a waiver monitoring waiver is requested:**

A list of regulated synthetic and other organic chemicals is provided on pages 21-23 of these instructions. Review this list of regulated SOCs/OOCs, their common trade names, and uses. Then refer to page 9 of the application form and select only those regulated organic chemicals for which you are requesting a monitoring waiver. Many public water systems will be applying for a monitoring waiver for all regulated SOCs/OOCs listed.

**REGULATED PESTICIDES, COMMON TRADE NAMES, AND RELATED CHEMICALS**

Chemical Name	Trade Name	Usage
2,4-D	2,4-Dichlorophenoxy acetic acid, Acme Main 4, Acme Butyl Ester 4, Acme LV 4, Acme LV 6, Agrotect, Amoxone, Aquakleen, Chloroxzone, Croprider, Crossbow, D50, Dinoxol, DMA-4, Dormone, Emulsamine BK, Emulsamine E-3, Estone, Fernesta, Fernimine, Fernoxone, Ferxone, Lawn-Keep, Macondray, Pennamine D, Planotox, Plantgard, Tributon, Weed-B-Gon, Weedar, Weedone, Weedmaster, Weed & Feed, Weedatul, Chipco Turf Herbicide D, DMA-4, Esterone 99, Formula 40, Spritz-Hormit, 2,4-D, Weed-Ag-Bar, Weedez Wonder Bar, Basagran, Acme Super Brush Killer 875, U 46 DP, Duplosan DP-D, Duplasan KV-Combi, Chipco Turf Kleen, 2 Plus 2, Aciril DS, Mad, Gordon's Vegemec Vegetation Killer, Lentemul, SEE	<ul style="list-style-type: none"> <li>*-herbicide for general weed control</li> <li>-used in weed &amp; feed type products to control broad leaf weeds like dandelions</li> <li>-may be combined with picloram</li> <li>-monitored</li> </ul>
2,4,5-TP	2,4,5-Trichlorophenoxy propionic acid, Silvex, Aqua Vex, Frutone T, Kurosai, Weed-B-Gon, Amchem 2,4,5-TP, Ded-Weed, Double Strength, Kuron, Silvi-Rhap, T-Nox, Fruitone, Esteron, Brush-B-Gone, Fence Rider, Line Rider	<ul style="list-style-type: none"> <li>*-herbicide used on fence rows, right of ways, golf courses, (cancelled in 1983)</li> <li>-used by local airports, Railroad, highways, after 1950's to cancellation in 1983</li> <li>-used by military</li> <li>-monitored</li> </ul>
Hexachloro-cyclopentadiene	Intermediate in the synthesis of cyclodiene insecticides, gamma BHL	
Lindane	Agronexit, Silvanol, Forlin, Gamaphex, Gammex, Isotox, Lacco Hi Lin, Lacco Lin-O-Mulsion, Lindagam, Lin-O-Sol, Novigam, Agrox 3-Way, Gamatin, Germate, Vitavax, Grano, Landafor, Lintox, Nexit, Novigam, Lindafor	<ul style="list-style-type: none"> <li>*-insecticide used for soil treatment, foliage application on fruit and nut trees (most uses restricted in 1983)</li> <li>-currently used for treating wood inhabiting beetles</li> <li>-some uses Restricted Use Pesticide (RUPs)</li> <li>-pet product for parasite control</li> <li>-monitored</li> </ul>
Methoxychlor	Double-M, Chemform, Flo Pro McSeed Protectant, Moxie, AlfaTox, DMDT Dual, Pennant, Dueler, Medal, Ontract	<ul style="list-style-type: none"> <li>*-insecticide used on fruit and shade trees, gardens, around buildings</li> <li>-fungicide</li> <li>-monitored</li> </ul>
Oxamyl	DPX-1410, Vydate, Thioxamyl	<ul style="list-style-type: none"> <li>-insecticide, nematicide used for certain insects, mites, and/or nematodes</li> <li>-used on many field crops, fruits and vegetables</li> </ul>
Polychlorinated Biphenyls (PCBs)	Arochlor, Phenochlor, Kanechlor	<ul style="list-style-type: none"> <li>*-used primarily in the electrical industry (transformers)</li> </ul>
Pentachlorophenol	Penta, Penwar, Pentacon, Penta Ready, Penta WR, Penta Plus 40, Penta EC 30, Penta Preservative Ready-to-Use, Glazd penta and Block penta, Penchlorol, Sinituho, Antimicrobial, Dow Pentachlorophenol DP-2, Dowicide EC-7, Priltox, Santobrite, Santophen, PCP	<ul style="list-style-type: none"> <li>*-used as a wood preservative</li> <li>-prior to 1987 it was also used as a wide-spectrum fungicide and bactericide</li> <li>-Restricted Use Pesticide (RUP)</li> </ul>
Picloram	Amdon, Borolin, K-Pin, Access, Tordon, Grazon	<ul style="list-style-type: none"> <li>*-systemic herbicide used on a variety of deep rooted herbaceous weeds(may be combined with 2,4D)</li> <li>- used for "right of way" weed control especially by utility companies</li> </ul>
Simazine	Cekusan, Framed, Caliber 90, Simadex, Aquazin 80 W, Amizine, Simazol, Remtal SC, Pathclear	<ul style="list-style-type: none"> <li>-selective herbicide for control of most annual grasses, broad leaf weeds, corn, lawns</li> <li>-groundwater concern</li> </ul>
Toxaphene	Camphoclor, Motox, Phenacide, Phenatox, Strobane T-90, Toxakil, Toxon 63, Attac, Motox, Phenatox, Polychloro camphene	<ul style="list-style-type: none"> <li>-widely used pesticide and herbicide on many food and non-food crops, most uses cancelled in 1982</li> <li>-Restricted Use Pesticide (RUP)</li> <li>-monitored</li> </ul>
Aldrin	Alttox, Seedrin Liquid	<ul style="list-style-type: none"> <li>-contact, stomach and fumigant insecticide used to</li> </ul>

Chemical Name	Trade Name	Usage
		control soil insects -Cancelled
Aldicarb	Temik, Temik brand TSX, OMS 771, UC21149	*-insecticide used on cotton and potatoes, restricted in many areas -groundwater concern
Aldicarb disulfoxide	Breakdown products of the oxidation of Aldicarb	-degraded from aldicarb by plants
Aldicarb sulfone	Aldoxycarb, Sulfocarb, Standak	-degraded from aldicarb by plants
Butachlor	CP 53619, Lambast, Rasayanchlor, Machete, Butanex, Butanox	-used primarily on rice
Carbaryl	Bug Master, Cekubaryl, Crunch, Denapon, Devicarb, Dicarbam, Hexavin, Sevin, Karbaspray, Septene, Tercyl, Tricarnam	*-insecticide used on a variety of crops -home and garden use, agricultural use - spruce bark beetle control
Dicamba	Banvel, Marksman, Brush Buster, Mondak, Weedmaster	*-herbicide used on corn, lawn, right-of-way
Dieldrin	HEOD	-contact insecticide in certain crops; Cancelled
3-Hydroxycarbofuran	Degradation product of carbofuran	-degradation product of carbofuran
Methomyl	Methomex, Nu Bait II SD 14999, Lannate LV	-broad-spectrum insecticide in vegetables, soybeans, certain fruit crops, and ornamentals
Metribuzin	Bay 94337, Bay Dic 1468, Lexone 4L, Lexone DF, Sencor 4, Sencor DF, Salute, Turbo, Preview, Canopy	-herbicide used on soybeans
Metolachlor	Codal, Cotoran multi, Milocep, Ontrack 8e, Bicep, Primagram, Primextra, Turbo, Pyracur, Dual	-selective herbicide on corn, soybeans -groundwater concern
Propachlor	Bexton, Ramrod	-herbicide used for many grasses and certain broadleaf weeds
Alachlor	Lasso, Pillarzo, Alatox-480, Alazine, Lozo, Lariat, Nudor Extra, Bronco, Alanex, Bullet, Stake	-herbicide on corn and soybean -groundwater concern -many formulations Cancelled
Atrazine	Aktikon, Atrazinax, Atratol, Fenamin, Aatrex, Prozine, Gesaprim, Zeaphos, Nudor Extra, Atramet Combi, Crisazin-Crisatrina, Kombi, Drexel, Rhino, Farmco Anizine, Aaa Flowable, Marksman, Primextra, Bicpe, Conquest, Candex, Extrazine, Vestal, Rapuzin, Pramamol	-widely used herbicide on corn and non-crop land -Restricted Use Pesticide (RUP) -algicide; pool, aquarium, spa agents -many formulations Cancelled
Benzo(a)pyrene	No trade name, a poly aromatic hydrocarbon, combustion by- product	-not a pesticide -usually found in coal tar -coal tar pitch volatiles
Carabofuran	Bay 70143, Crisfuran, Curaterr, Yaltox, Furan, Carbodan, Carbosip, Chinufur, Kenofuran	-soil fumigant/insecticide on corn
Chlordane	Forchlor, Kill-Ko, Sydane, Belt, Chlor Kil, Chlorotox, Corodane, Gold Crest C-100, Kilex Lindane, Kypchlo, Octachlor, Synklor, Termided, Topiclor 20, Velsicol 1068, Aspon-chlordane, Ortho-Klor, Niran, Termide, Chlorohepton	*-soil insecticide for termite control, corn, and it was used in AK for cutworm control -most uses Cancelled in 1980
Dalapon	Dalapon-Na, Ded-Weed, Devipon, Gramevin, Revenge, Unipon, Dowpon M, Radapon, Basfapon, Basinex P and N, Revenge	-selective herbicide in cropland, non-cropland areas, irrigation ditch banks
Di (2-ethylhexyl) adipate	DOA, a plasticizer	-used as a plasticizer and vinyl resins compound
Di (2-ethylhexyl) phthalates	DOP, DEHP, BEHP, Bisoflex, Eviplast, Octoil, Latimol, Sicol, a plasticizer	-used as a plasticizer for resins

Chemical Name	Trade Name	Usage
Dibromochloropropane (DBCP)	Nemafume, Nemanax, Nemaset, BBC 12, Fumazone, Nemaqon, Nematocide, Oxy	-soil fumigant for nematode control -used mostly on pineapples -most uses Cancelled in 1979
Dinoseb	DNBP, Basanite, Elgetol 318, Helfire, Kiloseb, Nitropon C, Sinox General, Caldon, Chemox, Chemsect, Dinitro, DN-289, Dynamyte, Gebutox, Premerge, Subitex, Unicrop DNBP, Dinitro Weed Killer, Vertac, Dyanap, Spurge, Contact	*-selective pre-emergent herbicide on numerous crops, -all sale and use Cancelled in 1987 -had to be shipped out of state to dispose of
Dioxin	2,3,7,8-Tetrachlorodibenzo-p-Dioxin	-preservative for cutting oil, resin emulsions, waterbased paints, cosmetics, and inks - bi-product of some manufacturing processes such as pulp mills or incinerators -contaminated batches of 2,4 D and 2,4,5 T(Silvex)
Diquat	Midstream, Actor, Dextrone, DNBP, Krop, Reglox, Aquacide, Dextrone, Weedtrin-D, Klean, Preeglone, Proglone, Weedool, Pathclear	*-herbicide used on aquatic weeds, and in non-crop areas -potato dessicant
Endothall	Aquathol, Endothal Weed Killer, Hydout, Des-i-cate, Penco, Weedtrine, Byramin, Weedaway, Hydrothol, Niagrathal, Herbicide 273	-herbicide used on algae and aquatic weeds, dessicant for alfalfa and clover
Endrin	Hexadrin, Endrex, Endrisol, Nendren, Rid a Bird	-herbicide -insecticide on small grains, Cancelled -monitored
Ethylene Dibromide (EDB)	Bromofume, E-D-Bee, Kopfume, Nephis, Dowfume, Soilbrom, EDB	-fumigant used on soil and small grains, lead scavenger -aquatic herbicide in combination with diquat *-used in some leaded gasolines -most uses Cancelled
Glyphosate	Roundup, Rodeo, Herbolex, Glycel, Honcho, Ranger, Sting, Hockey, Knockout, Shackle, Kleen-up, Myster, Accord, Azural, Arcade, Expedite	*-non-selective herbicide, controls many annual and perennial grasses and broadleaf weeds
Heptachlor	Drinox H-34, Heptamul, Heptox, H-60, Termide, Chlorohepton	-insecticide used for termite, control and on a limited number of crops -agricultural and home uses Cancelled in 1978
Heptachlor epoxide	Degradation product of Heptachlor	-degradation product of heptachlor
Hexachlorobenzene	Perchlorobenzene, Anticarie, Ceku C.B., No Bunt	-fungicide used on wheat

Regulated Pesticides, Common Trade Names, and Related Chemicals TABLE KEY:

\* = known use in Alaska,

**RUP** = Restricted Use Pesticide (must be a certified applicator to purchase or use)

**monitored** = monitoring was required under old drinking water regulations

**Cancelled** = sale is illegal; use may be illegal

## Water Source Information

### **Question 7) List primary and secondary water source name/s and location/s:**

For this question, list the water system's primary and secondary water sources. Provide the source name and location. Use the same name for the water source as specified in question 2. Provide the legal description of the property where the water source is located, and latitude/longitude of the water source in degrees, minutes, and seconds. One example of a legal description is: Lot 1, Block 2, Westbank Subdivision. If latitude/longitude is not known, estimate it using a quad-map or global positioning system (GPS). Space is available for listing latitude/longitude in degrees, minutes, and seconds. In Alaska, all latitudes are North, and all longitudes are West, with the exception of Amchitka.

### **Question 8) Describe land features (hydrologic and geologic) within the general area of the water sources(s):**

Land features include slope, drainage, type of vegetation, topography, soil conditions, etc.

## Activities

Several activities are listed in Tables 1 and 2 in the application form. Activities listed, in general, are associated with use, storage, and/or disposal of SOC and OOC. The activities listed are broken into two groups (shown in Tables 1 and 2) so that ADEC staff can focus attention on specific activity-types. Public water systems with lower risk of SOC/OOC contamination (no Table 1 activities) are allowed to skip several questions in the application form.

### **Question 9) Identify all potential sources of SOC/OOC contamination by identifying activities that, in general, have used/stored/transported SOC/OOCs:**

Review Tables 1 and 2. If any activity exists now or has existed within the last 10 years, within a mile of the well(s) or 1,000 feet of the surface water body, the applicant should circle the "Yes" response. Otherwise, the applicant should circle the "No" response, indicating that the activity does not exist.

**If the applicant circled "Yes" to any activity in Table 1**, the approximate location and boundary (size) of the Table 1 activity needs to be drawn on a site drawing or map. Include the distance (ft.) between the activity and the water system's primary and secondary water sources. Table 2 activities do not need to be illustrated on the site drawing. After completing the drawing, groundwater systems with Table 1 activities should proceed to question 10. Surface water systems with Table 1 activities should skip to question 12.

## Well Information

This question is for applicants with groundwater sources. If the applicant has only surface water sources, skip to question 12. All water systems with no Table 1 activities should skip to question 13.

### **Question 10) Determine if source water is from a confined aquifer and if the well is protected from surface runoff:**

Complete question 10 A-D for the water system's well(s). If the water system has more than one well, and the applicant this page needs to be copied and completed for each well included in the combined WRA. **You are required to submit well logs for each well as documentation.**

### Question 11) Well characteristics:

Complete question 11 for the water system's well. If the water system has multiple wells answer question 11 for each primary or secondary well. The heading for this table should specify the name of the primary and/or secondary well/s.

Enter the following information in the table provided:

- a) height of casing above the ground surface - distance (inches) from actual ground level to the top of the casing.
- b) maximum pumping rate - maximum gallons per minute the well will produce when pumped.
- c) maximum production per day - an estimate of the maximum number of gallons pumped from the well during a single day.
- d) average flow rate - an estimate of how many gallons are pumped from the well on an average day.

**Comments:** Space is provided for additional comments or information. Provide any information that may clarify your answers to question 11 including any changes made since the well was drilled. *Example: The well was reworked and deepened in 1992, therefore, the depth of the well is actually 125' and does not correspond to the information provided in the original well log.*

## SOC/OOC Monitoring/Investigation

Question 12 needs to be completed by applicants that have Table 1 activities located within a mile from each well or 1,000' from a surface water body. All applicants that have no Table 1 activities, should skip to question 13.

### Question 12) Table 1 activities:

If one or more Table 1 activities exist (*indicated by a "Yes" response to any activity listed in Table 1, on page 11, of the application form*), the applicant is required to contact the manager or owner of the activity and determine if SOC's/OOC's were used, stored, or disposed of at the activity site within the last 10 years. This Instruction Booklet includes an Activity-Use Survey Form for you to use for this purpose. The Activity-Use Survey Form has instructions on how to use the form, an example cover letter and an informational fact sheet, that can be used for completing the survey.

To complete Question 12:

- 1) List all the Table 1 Activities in the space provided, along with the name of the responsible party (see example below).
- 2) Complete one Activity-Use Survey Form for each Table 1 activity listed.
- 3) Attach the completed Activity-Use Survey Form to the application. Contact a local ADEC office if you have difficulty gathering activity-use information.

Example:

Type of Activity	Name of Activity and the Manager/Owner responsible for the Activity:	Activity Use Survey Form Attached? (Yes, No)
1) Landfill	Crestfalls Landfill, Madison Borough Govt.	Yes
2) Golf Courses	Yates Golf Course, Jim Yates, Owner	Yes

### Question 13) SOC/OOC testing:

If any SOC/OOC testing has been completed **at** and **near** the PWS, mark the “Yes” response. If known, give details about when the testing was performed, who collected the sample, and who analyzed the sample. Attach a copy of the test results, if available.

## **PWS Certification**

### **Question 14) Owner/Operator Certification:**

The person responsible for the water system, in most cases, is the owner or operator. The person responsible for the water system must sign, date, and include their printed name on the application form. By signing, the responsible person is stating that they have reviewed the information within the application, and to the best of their knowledge and belief, all information in the application is accurate and complete.

This Activity-Use form is required if the applicant has one or more Table 1 activities. All other applicants should skip this section.

## IV) Activity-Use Survey Form

### ***Instructions for the SOC/OOCs Monitoring Waiver Applicant:***

The term “Activity-Use” is an abbreviation for an activity that has used, stored, transported, or disposed of one or more regulated SOC/OOCs. An Activity-Use Survey Form is required if a “Yes” response was given to an activity listed in Table 1, (*page 11 of the SOC/OOCs Monitoring Waiver Application form*). A completed Activity-Use Survey Form is required for each Table 1 activity that occurs within one mile of each well or 1,000 feet of each surface water body.

The Activity-Use Survey can be conducted in-person, by phone, or mailed. It may be easier to conduct the survey in-person or by phone, because this gives you the opportunity to explain why the survey is being conducted and answer questions that might arise. If it is not practical to conduct the survey in-person or by phone, mail the survey forms to the owner or manager of the activity (business, land owner, etc.).

Business addresses and phone numbers can generally be found in the yellow pages of the phone book or through a local business licensing agency. Land owner addresses may be obtained from a tax assessor’s office (*who generally needs to know the legal description of the property*).

ADEC has provided an SOC/OOC waiver fact sheet and an example of a cover letter to go with the Activity-Use Survey Form. Under some circumstances, it may be beneficial to include a personalized letter, in place of the example cover letter.

**Fill-out Section I of the Activity-Use Survey Form before you mail it**, so that the survey recipient knows where the survey form came from and where it should be returned. Provide a copy of the SOC/OOC list (*pages 21-23 of the instructions*) for the survey recipient to review. It may be beneficial to send a stamped self-addressed envelope with the survey form, as this may encourage survey recipients to return the forms. You will need to collect all the completed survey forms, and submit them with the SOC/OOC waiver application.

If any of the survey recipients want to verify the authenticity of the survey form before they complete it, please direct their calls to ADEC. However, survey recipients should contact you first, if they have general questions regarding the survey form. If you do not know the answer to their questions, please call your local Drinking Water Program Office for technical assistance. Local ADEC Drinking Water Program office numbers are provided on the next page.

**Drinking Water Program Offices/Staff Phone Numbers:**

Juneau: (907) 465-5350  
Anchorage: (907) 269-7594  
Fairbanks: (907) 451-2168  
Mat-Su: (907) 376-1860  
Kenai: (907) 262-5210

or call 1-800-510-2332, the ADEC Compliance Assistance Office and leave a message. Someone from the local office will return your call.

## **ACTIVITY-USE SURVEY FORM**

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### **I. Public Water System:**

Public Water System Name: \_\_\_\_\_ PWSID Number: \_\_\_\_\_

Name, address, and phone number of person conducting the survey:

How is this person affiliated with the public water system (*Owner, Operator, or Other/describe*):

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### **II. Activity Contact Information:**

Name and/or Type of Activity Being Surveyed (*example: Greatland Greenhouse - commercial greenhouse*):

Name, address, and phone number of person being interviewed/ surveyed:

How is this person affiliated with the activity (*Owner, Manager, Operator, or Other/describe*):

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### **III. Activity Survey Questions:**

#### **A. General Information:**

1. What is the size of the activity? List acres, sq feet, etc., if applicable: \_\_\_\_\_
2. How long has the activity been conducted at this location?
3. Is the activity still in operation or active? *Yes No*
4. Has the soil or water been tested for pesticides at this site in the past? *Yes No Unknown*

#### **B. Chemical (SOCs/OOCs) Use:**

1. a. Were any chemicals on the attached SOCs/OOCs list **used** at this site in the last 10 years? *Yes No Unknown*
  - b. List Chemical(s)      Quantity      Use Frequency      How Used
  
- c. Do you anticipate using any of these chemicals in the future? *Yes No*

#### **C. Chemical (SOCs/OOCs) Storage:**

1. a. Were any chemicals on the attached SOCs/OOCs list **stored** at the this site in the last 10 years? *Yes No Unknown*
  - b. List Chemical(s) that were stored in the past      Quantify Stored      What happened to them?
  
  - c. List Chemical(s) Currently Stored      Quantity Stored      List Chemical(s) Currently On Order

#### **D. Chemical (SOCs/OOCs) Disposal**

1. a. Were any chemicals on the attached SOCs/OOCs list **disposed** of at the site within the last 10 years? *Yes No Unknown*
  - b. List chemical (s)      Quantity      When      Where

**IV. Additional questions for activities that have used, stored or disposed of SOCs/OOCs on-site**

**A. Wells and Septics:**

1. a. Does the activity have any on-site wells on the property? *Yes No*  
b. If yes, do the on-site wells have proper sanitary seals? *Yes No*  
c. If ADEC has funding available, may ADEC test these on-site wells as part of this waiver process? *Yes No*
2. a. Are you aware of any fuel spills at this site in the past? *Yes No* (*Note, this question is being asked because some pesticides are added to fuel as antiknock agents. Also, fuel speeds the rate at which some pesticides travel in the soil.*)
3. a. Are there any on-site wastewater disposal systems, storm drains, sumps or floor drains on site? *Yes No*  
b. If yes, are you aware of any pesticides being disposed of to these drains, etc. *Yes No*

**B. Agricultural-type Activities (for the past 10 years):**

1. a. Are/were any crops grown? *Yes No Unknown*  
b. List Crop (s)  
  
c. Are/were the crops treated with agricultural chemicals? *Yes No Unknown*  
d. List Agricultural Chemical(s)                      When                      Crop
2. a. Are/have livestock been present? *Yes No Unknown*  
b. List Type    Approximate Number  
  
c. Are/were the livestock treated with chemicals? *Yes No Unknown*  
d. List chemical(s)                                      When
3. Is irrigation used? *Yes No Unknown*

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**V. Observations and/or Comments:**

Does the person being surveyed, or the surveyor, have any concerns or need clarification regarding activities that ADEC should consider when reviewing this public water system's request for a SOC/OOC monitoring waiver? *Describe:*

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**VI. Signature Block:**

How was the survey completed (*Mail, Telephone, In Person, Other/describe*):

**This form was completed by:**

*Print Name:* \_\_\_\_\_ *Signature:* \_\_\_\_\_ *Date:* \_\_\_\_\_

## EXAMPLE COVER LETTER FOR ACTIVITY-USE SURVEY FORM

Dear Community Member:

I am sending this letter to you as the representative for \_\_\_\_\_, which is a Class A public water system. As a Class A water system, it is required by State Drinking Water Regulations that the water be tested for several synthetic organic chemicals (SOCs) and other organic chemicals (OOCs). A list of the regulated SOCs/OOCs is attached.

Most of the chemicals listed are pesticides (which includes herbicides). The tests for these chemicals can be very expensive (up to \$6,000, every three years, for each water source used by the public water system). This is the estimated cost for just the SOC/OOC testing requirements. Class A systems also have many other routine testing requirements for microbiological and other chemical contaminants.

The Alaska Department of Environmental Conservation (ADEC) has developed a waiver program that can reduce the water testing requirements for some Class A systems. Before applying for a waiver, water system owners need to find out if the SOCs/OOCs have been used, stored and/or disposed of near their water source(s).

**You are being asked to complete this survey form, because you own or operate a business or activity within this public water system's waiver review area** (the area surrounding the water source that needs to be evaluated for possible chemical use before ADEC can consider issuing a waiver).

Please read the enclosed fact sheet and review the list of chemicals provided. Then, to the best of your ability, answer the questions in the survey. If you have received this survey by mail, please return the completed form in the enclosed envelope (which has already been stamped and addressed). Also, if you have any questions regarding this survey, please call me at \_\_\_\_\_.

Thank you for your time and assistance. As members of this community, our primary goal is to provide safe drinking water to our consumers. We also want to practice cost-saving management practices whenever both objectives may be accomplished. Your cooperation and assistance in helping us meet these goals are appreciated.

Sincerely,

Public Water System Representative

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## **SYNTHETIC ORGANIC CHEMICALS AND OTHER ORGANIC CHEMICALS ACTIVITY-USE SURVEY FORM FACT SHEET**

**WHAT IS THE ACTIVITY-USE SURVEY FORM?** This survey form is part of a water testing waiver application developed by the Alaska Department of Environmental Conservation (ADEC), for Class A public water systems. The application is called the Synthetic Organic Chemicals (SOCs) and Other Organic Chemicals (OOCs) Monitoring Waiver Application, and its purpose is to allow a public water system owner to request a reduction in their water testing requirements. As part of this waiver application, the owner needs to determine if the regulated SOC/OOCs have been used, stored or disposed of in the area. The survey form was developed to help the owner with this effort.

**I'M NOT A PUBLIC WATER SYSTEM OWNER, SO WHY AM "I" BEING ASKED TO COMPLETE THIS ACTIVITY-USE SURVEY FORM?** If you have been asked to complete this form, it is because you operate or own an activity or business in the vicinity of a Class A public water system's well or water source. The owner/s of a Class A public water system cannot qualify for reduced monitoring unless they can determine what SOC/OOCs have been used, stored and/or disposed of in the area, and/or demonstrate that the water source is not susceptible to contamination (based on well log data, etc.)

**WHAT ARE SOC AND OOCs?** Most of the chemicals for which a water system can request a waiver from monitoring are pesticides (which include herbicides). A list of the SOC and OOCs should be provided to you with a copy of the activity-use survey form. You will need to review this list before completing the survey.

**ARE ALL BUSINESSES AND ACTIVITIES AROUND THIS WATER SYSTEM BEING ASKED TO COMPLETE THIS SURVEY FORM?** No. The size of area that needs to be evaluated for SOC/OOC use is based on the size of the public water system, and whether it uses surface water or ground water. Only "activities" that are generally associated with the use, storage or disposal of these chemicals need to be surveyed.

**IF I DO NOT COMPLETE THIS FORM, WILL THE PUBLIC WATER SYSTEM OWNER BE PENALIZED?** ADEC is mandated by regulation to require all Class A public water systems to test for these chemicals, unless the owner can demonstrate that the system qualifies for a waiver. The SOC/OOC water tests can cost up to \$6,000 per well. The tests need to be repeated once every three years. These costs really add up, and ultimately are passed on to the consumers and home owners in the area. Everyone is affected when a water system has additional water testing costs. It will take the cooperation of the general public, the water system owner, and ADEC, to make this waiver program successful. Although the primary goal of the Drinking Water Program is safe drinking water, ADEC also wants to promote cost-saving management practices. It is our hope that you will join us in this effort.

**ARE YOU TELLING ME I CAN'T USE THESE CHEMICALS?** No, in most cases ADEC will have no need to follow-up on the information you provide. The intent of this program is to establish a water testing schedule for your neighboring public water system. ADEC recognizes the usefulness of pesticides, and promotes the wise use of these chemicals, when needed. In some cases, ADEC may contact you to discuss the proper use or disposal of chemicals that are restricted or canceled. Public education is one of the good things that can occur from this process. We all need to recognize that our day-to-day activities may impact waters used by public and private drinking water systems.

**OKAY, YOU HAVE CONVINCED ME. WHERE DO I SEND THE SURVEY FORM AFTER I HAVE COMPLETED IT?** The form needs to be returned to the public water system's representative. The PWS representative is required to fill in the PWS name and address in the first section of the survey form before giving it to you. Also, the PWS representative is responsible for sending the completed survey forms to ADEC with their waiver application.

**I HAVE QUESTIONS ABOUT THIS FORM. WHO DO I CONTACT?** All questions regarding this survey should initially be directed to the representative of the public water system. He/she should be able to answer most questions about the survey, or where your activity is located in relationship to the water source(s), etc. If the PWS representative cannot answer some of your questions, ADEC is always available to help. If you want to check the authenticity of the form, and verify that the public water system operator is required to complete this survey in order to qualify for a testing waiver, call your local ADEC Drinking Water Program (see phone numbers below).

**IF I WOULD LIKE TO FIND OUT MORE ABOUT PESTICIDES, WHO DO I CALL?** The Alaska Cooperative Extension Service (ACES) can provide educational materials regarding pesticide use. They also offer technical assistance on evaluating your home environment for potential risks, and can make recommendations on how to correct them. This is part of their Home\*A\*Syst/Farm\*A\*Syst program. Call the local ACES office for more information on these assistance programs. Also, the Alaska Department of Environmental Conservation has a pesticide program that can offer you more information about pesticides and pesticide regulations. The phone numbers for these agencies are provided below.

**ADEC Drinking Water Program Offices/Staff Phone Numbers:**

Juneau:	(907) 465-5350
Anchorage:	(907) 269-7594
Fairbanks:	(907) 451-2168
Mat-Su:	(907) 376-1860
Kenai:	(907) 262-5210

or, call 1-800-510-2332 the ADEC Compliance Assistance Office. (Leave a message, and someone from a local office will return your call.)

**ADEC Pesticide Program Office:** 1-800-478-2577, or in the Mat-Su Valley, 1-907-376-1866

**ACES Home-A-Syst/Farm-A-Syst:** 1-907-279-6575

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## V) Glossary of Technical Terms

**18 AAC 80** - Alaska Drinking Water Regulations, effective 8/26/2004. Some of the numbers may change when regulations are amended.

**activity** - an action or land use that has the potential to adversely impact the quality of drinking water. Examples include: military installations, landfills or dumps, farming, etc.

**activity-use survey** - a survey of land uses in the waiver review area. The applicant conducts the survey by interviewing the owners or operators of the activity to determine past and present use of regulated synthetic or other organic chemical use, storage, or disposal. ADEC provides forms for conducting the survey.

**approved** - and "approval" - recognized by ADEC as having met regulatory requirements.

**aquifer** - a formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield economical quantities of water to wells and springs;

**Class A public water system** - a public water system that:

- is expected to serve, year-round, at least 25 **residents**, at least 10 residential service connections, or at least 13 residential bedrooms; or
- regularly serves the same 25 or more **individuals** for at least six months of the year.

**cancelled** (pesticide) - a pesticide that is either completely or partially banned.

**certified applicator** - any individual who has been authorized by ADEC to purchase, use, or sell a Restricted-Use pesticide.

**combined Waiver Review Area** (applies only to systems with multiple groundwater sources) - two or more individual waiver review areas (WRAs) grouped together to form a larger WRA. The individual WRAs are grouped by drawing a tangential line from one WRA to the next. The combined WRA is interpreted to be the all area of the individual WRAs, plus all the area in between the individual WRAs.

**compliance cycle** - the nine-year calendar-year cycle during which the owner or operator of a public water system must monitor, with each compliance cycle consisting of three three-year compliance periods; the first compliance cycle begins January 1, 1993 and ends December 31, 2001; the second begins January 1, 2002 and ends December 31, 2010; the third begins January 1, 2011 and ends December 31, 2019, and so on.

**compliance period** - a three-year calendar period within a compliance cycle; each compliance cycle has three compliance periods; we are a present within the 2<sup>nd</sup> compliance period of the 2<sup>nd</sup> compliance cycle (January 1, 2005 and ends December 31, 2007; the third begins January 1, 2008 and ends December 31, 2010).

**confined aquifer** - groundwater that is located beneath a formation with significantly lower permeability such that water cannot readily move in a vertical direction between the land surface and the aquifer.

**contaminant** - any physical, chemical, biological, or radiological substance or material in water which, in sufficient quantity, makes water unfit for human consumption.

**contamination** - the presence of any contaminant in water in noncompliance with a contaminant level set by 18 AAC 80.070, or any other contaminant in sufficient quantity to make the water unfit for human consumption.

**DBCP** - 1,2-dibromo-3-chloropropane

**department** - the Alaska Department of Environmental Conservation

**distribution system** - post-treatment storage facilities, conduits, mains, lines and fixtures, pumping stations, or other devices used to carry water to the consumer.

**drawdown** - the measured difference between the static water level in a well and the water level after some period of pumping.

**EDB** - 1,2-dibromoethane, also known as ethylene dibromide.

**effective porosity** - soil characteristic, which is the volume of interconnected void spaces in rock or sediment through which water or other fluids can travel, divided by the total volume of the rock or sediment.

**emergency water source** - a water source that is used for supplying water for fire suppression or other unusual circumstance or condition.

**EPA** - the United States Environmental Protection Agency

**filtration** - a process to remove particulate matter from water by passage through porous media.

**ground seal** - the bentonite or concrete seal surrounding the well casing, beginning near the land surface and extending some distance beneath the land surface. A ground seal is used to prevent surface water from infiltrating the well water.

**groundwater** - means water beneath the surface of the ground, except groundwater under the direct influence of surface water.

**groundwater model** - a conceptual or mathematical image of subsurface water dynamics

**groundwater under the direct influence of surface water** - means water beneath the surface of the ground with

- significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia*; or
- significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH that closely correlate to climatological or surface water conditions; direct influence must be determined for individual sources in accordance with criteria established by the department; the determination of direct influence may be based on site-specific measurements of water quality or documentation of well construction characteristics and geology with field evaluation.

**grout** - a mixture of cement, bentonite, and water used to seal the annular space between the inner and outer casings in a well, or between the casing and the wall of the borehole if there is only one casing.

**hydraulic gradient** - slope of a water table; or the change in static head per unit of distance in a given direction.

**hydrogeologic** - those properties that deal with subsurface waters, and the surrounding soil and rock; characteristics of an aquifer such as porosity and permeability

**impermeable deposits** - formations consisting of material through which water is unable to pass, such as clays and unfractured rock

**infiltration** - the entry of water into the soil or a well.

**infiltration gallery** - a system of perforated pipes, cribbed pits, or similar collection devices laid along the banks or under

the bed of a stream, lake, or other surface water body, installed to collect water from the formation beneath or adjacent to the water body.

**loess** - material transported and deposited by wind, consisting primarily of fine silt-sized particles.

**maximum contaminant level** - or "MCL" - a limit or maximum amount of a substance that is allowed to enter the distribution system of a public water system.

**MCL** - maximum contaminant level

**moisture content** - the ratio of the weight of water in a given soil mass to the weight of solid particles

**nonresident** - a person occupying a building that is not his/her primary place of abode. Examples include people entering a restaurant, church, etc.

**other organic chemicals (OOCs)** - a general term used to describe a group of regulated organic chemicals, as listed under 18 AAC 80.070(2)(D).

**PCBs** - polychlorinated biphenyls

**pesticide** - any substance intended to prevent, destroy, control, repel or mitigate any pest. A chemical or biological agent intended for use as an insecticide (control insects), herbicide (controls vegetation), rodenticide (controls rodents) and fungicide (controls fungi).

**potable water system** - any source of water, intake works, collection system, treatment works, storage facility, or distribution system from which water is available for human consumption.

**potentiometric surface** - a surface that represents the level of which water will rise in a tightly cased well. A water table is the potentiometric surface for an unconfined aquifer.

**primary water source** - a water source that is regularly used to provide potable water to the public. This includes water sources that are routinely used to supply potable water and are tested for contaminants.

**private water system** - a potable water system serving one single-family residence.

**public water system** - a source of water, intake works, collection system, treatment works, storage facility, or distribution system, including a vehicle or vessel used to distribute water, from which water is available for human consumption; "public water system" includes a system providing water to more than one residential dwelling unit, including a duplex, or to a factory, office building, restaurant, school, or similar facility, but does not include a system serving only one single-family residence.

**quarter** - or "quarterly" means one or more of the following three-month periods: January through March, April through June, July through September, or October through December.

**recharge** - the addition of water to the zone of saturation; also, the amount of water added.

**recharge area** - area in which water reaches the zone of saturation by surface infiltration.

**resident** - a person occupying a dwelling unit as a primary place of abode.

**Restricted-Use** - one of several pesticides designated by the EPA that can be purchased and applied only by certified applicators. This category may include pesticides that cause unreasonable harm to humans, animals or the environment.

**responsible party** - the person or entity that has authority for the public water system, and/or is legally responsible for the public water system. Also, the person or entity with authority for an activity such as the owner of the land or business.

**sanitary seal** - a watertight seal on top of a well casing or pipe sleeve to prevent water or other liquid from entering the well under normal conditions.

**saturated zone** - portion of the subsurface environment in which all the voids are filled with water.

**screen** - a metal or plastic slotted tube used to maintain the well opening in unconsolidated aquifer formations and admit water to be pumped from the aquifer.

**seasonal water source** - a source used only during certain times of the year.

**secondary water source** - a source of potable water that may not be used on a regular basis, but is brought on-line in the event that the primary water source is shut down. Examples of secondary water sources include: backup wells, wells used when there is an unusual water shortage, or wells used when the primary well or source is shut down for maintenance.

**sediment** - unconsolidated material deposited by streams, glaciers, etc.

**serve** - to cause or allow the provision of water for human consumption.

**single-family structure** - a building constructed as a single-family residence that is currently used as either a residence or a place of business.

**spring** - a place where water flows naturally through rock or soil onto the land surface or into a surface-water body

**soil** - the unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants.

**static water level** - the water level in a well when the pump has been off long enough for the water to reach equilibrium.

**surface water** - all water that is open to the atmosphere and subject to surface runoff.

**susceptibility** - relates to the risk of chemical contamination and is based on many different factors. These include factors such as contaminant persistence and transport, aquifer properties, geological confinement, and well construction.

**Synthetic Organic Chemicals (SOCs)** - a general term used for to describe a group of man-made chemicals regulated under 18 AAC 80.070(2)(A), which includes pesticides.

**time of travel** - the time required for water to move in the saturated zone from a specific point to a well

**treatment works** - the structure and appurtenances, including chemical feeders, coagulation and sedimentation tanks, filtration devices, ion exchange apparatus, aeration tanks, or other works, used to condition, purify, or refine water for human consumption.

**use** - relates to whether a chemical was ever applied, manufactured, stored, transported, or disposed of.

**volatile organic chemical** - and "VOC" - a carbon-based compound with the property of escaping easily from water into the air.

**vulnerability = (use \* susceptibility)** - the likelihood of a public water system being contaminated by a chemical, which is a function of whether the contaminant has been applied, manufactured, stored, transported, or disposed of near the water source, and how susceptible the water source is to contamination.

**vulnerable** - a system that is at risk of being contaminated; vulnerability is determined by the department and is based upon an assessment of previous monitoring results, proximity to sources of contaminants, protection of water source, and other criteria.

**Waiver Review Area (WRA)** - an area of concern around a water source that needs to be evaluated for activities that may use, store, or dispose of the regulated SOC and OOCs.

**water source** - a stream, lake, well, etc., used as the origin of water for a public water system.

**water table** - the water level in a saturated zone where the water pressure is equal to atmospheric pressure.

**water hauler** - the owner or operator of a vehicle that distributes potable water using a tanker truck or other vehicular distribution system for delivery.

**well** - an excavation, opening, shaft, or hole from which water can be extracted.

**well cap** - a seal approved by the department on top of a well casing or pipe sleeve to prevent water or other liquids from entering the well under normal conditions.

**well head** - the physical structure, facility, or device at the land surface from or through which groundwater flows or is pumped from subsurface water-bearing formations.

**well head protection areas** - the surface and subsurface area surrounding a water well or well field, through which contaminants are likely to move toward and reach the well or well field.

**well log** - a written report that includes a description and classification of underground strata and the depths at which they are encountered, and may also include the depth to groundwater, depth to frozen ground, depth of well, length, diameter, wall thickness, and type of casing, location of perforations in casing or screen, geographic location of well, yield and draw down tests, and the name of owner and well driller.

**well pit** - a vertical excavation, opening, shaft, or hole surrounding a well with no gravity drain to ground surface level; well pumps or other equipment are often located in these well pits below the ground surface level.

**well pump test** - a test that is conducted to determine well characteristics that include the discharge rate, rated pumping capacity of the pump used, starting time, measurement intervals from the starting time, and the water level before, during, and after the well test

**well screen** - a filtering device that serves as the intake portion of a well. The screen is generally placed in an unconsolidated aquifer and permits the water to enter the well. The screen can also help prevent sediment from entering the well, and helps support the unconsolidated aquifer material.

**zone of contribution** - the area that supplies groundwater recharge to a pumping well

**zone of influence** - the area surrounding a pumping well within which the water table or potentiometric surfaces have been changed due to groundwater withdrawal.