Synthetic Organic Contaminant (SOC) Monitoring Waiver Application

2011- 2013 Compliance Period

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

Contact Information:

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The SOC Monitoring Waiver Application Form and Instruction Booklet are to be used by public water systems to apply for a waiver from monitoring one or more Synthetic Organic Contaminant.

Revised January 11, 20011

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SOC Monitoring Waiver Application Packet

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I. Introduction

SOC Monitoring Waiver Definition:

A synthetic organic chemical (SOC) monitoring waiver relieves a public water system from the requirement to test for a regulated synthetic organic chemical contaminant during a compliance period. Most of the regulated synthetic organic contaminants (SOCs) 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 (DEC). 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 Public Water Systems (PWSs) that are either community or non-transient non-community water systems 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. However, because some SOCs 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.

DEC first developed the SOC Monitoring Waiver Application during the 1993-1995 compliance period. To address the concerns of both the EPA and PWS owners and/or operators, DEC staff improved and simplified the waiver application process. This new SOCs monitoring waiver application process allows public water systems that have little or no risk of regulated SOC contamination to more quickly complete the application.

DEC staff believes 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 and operators to complete, and it helps to address EPA and DEC concerns about SOC use and susceptibility.

SOC Monitoring Requirements:

The monitoring frequency for SOCs is described in State Regulations under 18 AAC 80.320(4). The regulations require four consecutive quarterly samples for each regulated SOC contaminant during a compliance period, unless a waiver is granted. For SOC monitoring, the compliance period is a three-year period (1993-1995, 1996-1998, 1999-2001, 2002-2004, 2005-2007, 2008-2010, etc.). **The enclosed monitoring waiver application covers the 2011-2013 compliance period**.

Federal regulations which the State has adopted require that a PWS either monitor for regulated SOCs 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 fewer 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 monitoring waivers for all SOCs. However, not all public water systems will qualify for a monitoring waiver for all SOCs. Most systems that are denied a specific SOC monitoring waiver will need to test for that SOC in the first quarter of 2013. Therefore, DEC encourages PWS owners and/or operators to **submit the application(s) by December 31, 2012, to allow the Department time to review the application(s) before the end of the first quarter of 2013.**

Statewide Use-Waivers:

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

About the Application:

The enclosed SOCs Monitoring 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 use, storage, and/or disposal activities that may impact a PWS water source. A list of activities that are generally associated with use, storage, and/or disposal is provided. The Instruction 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-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-related activities exist within one mile of a PWS well (groundwater source) or within 1,000 feet of a surface water body.

How Many Applications Are Required For Each Water System?

The application has been designed to allow the applicant to apply for **ALL** the SOC monitoring 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 DEC 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 source** or *only* **one surface water sourc**e, 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. Initial processing fees are required for each source. An applicant is required to research, assess, and evaluate SOC 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 hydrogeological 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 to the activities listed on the Activity-Use Survey(s) the applicant provides and will assess the vulnerability (level of risk) of the drinking water source to SOC contamination. If the level of risk is high, the applicant will be sent the contaminant source inventory for the WRA 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 monitoring waivers. The amount of savings depends on 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 are approved. DEC 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 monitoring waivers, if the applicant was previously denied the waivers requested, or if substantial changes have occurred to the system that do not allow the system to apply for Renewal Application, the following fees apply:

New applicants will pay an **initial processing fee of $99/source** when they submit the completed SOC Monitoring Waiver Application form. *If no synthetic organic contaminants are used* in the Waiver Review Area, the applicant will pay a **$257/source** review fee. *If synthetic organic contaminants are used in the Waiver Review Area*, the applicant will pay a **$708/source** review fee. As stated in 18AAC 80.1910

Renewal Applications—If the applicant has previously applied for and been granted the SOC monitoring waiver(s), the following fees apply:

To renew an existing waiver for a new monitoring period, all applicants will pay a *renewal processing fee of* **$99/source**. If there are no changes in the Waiver Review Area, the applicant will submit a completed SOC Monitoring Waiver Renewal Application form with the processing fee. If there are changes in the Waiver Review Area, the applicant must request a new review by submitting a completed New SOC Monitoring Waiver Application form with the processing fee. If *these changes do not include use of synthetic organic contaminants*, the applicant will pay a review fee of **$257/source**. *If these changes include use of synthetic organic contaminants*, the applicant will pay a review fee of **$708/source**.

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

Conclusion:

Enclosed is the new SOC 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 SOCs. This would cost each PWS thousands of dollars annually.

DEC has limited resources to identify SOC contamination risks. If a PWS owner or operator suspects SOC contamination problems near the system's water source, they need to contact DEC for assistance. In order for the monitoring waiver program to be effective, it is important that all parties (DEC, 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 members at the DEC Drinking Water Protection Program office are available to answer questions and to clarify issues related to this application. Refer to the DEC contact information on the front page.

II.Waiver Application Form

for the 20011-2013 Compliance Period

The information you provide in this waiver application will be reviewed by DEC staff and will be used to evaluate your Public Water Systems (PWS's) eligibility for the Synthetic Organic Contaminant (SOC) monitoring waiver.

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.

Section	**Application Form** (page numbers)	**Instruction Booklet** (page numbers)
Inventory Information *(Questions 1, 2, 3, 4, 5, 6, and 7)*	6-7	17-22
Water Source Information *(Questions 8 and 9)*	8	23
Activities *(Question 10)*	9-11	23
Well Information *(Questions 11 and 12))*	12-13	23-24
Monitoring/Investigation *(Questions 13 and 14)*	14	24
PWS Certification *(Question 15)*	15	24
Activity-Use Survey Form and supporting documents	(N/A)	25-30
Glossary	(N/A)	31-35

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

Inventory Information

1) Describe the type of SOC Application

a. **Initial SOC Waiver Application: Yes: _____**
This applies to new systems that have never applied for SOC Monitoring Waiver.

Or

b. **New SOC Monitoring Waiver: Yes:_____**
System does not qualify for Renewal of SOC Monitoring Waiver due to recent changes to the system. Examples: Greater than 10% change in population or water usage or the use of a synthetic organic chemical.

2) Public Water System (PWS) ID No.:

PWS Name:
PWS Physical Location:

3) 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.

Local Source Name: (example: Booker Street Well, Carson Stream Intake, etc.)	**State Water Source Name:** (example: WL001, IN001, WL002, SP001 as identified in Drinking Water Watch)	**Type of Water Source:** (GW, SW, GWUDISW)	**Purpose:** (Primary, Secondary, Emergency)	**Method(s) of Treatment:** (chlorination, fluoridation, filtration, coagulation, sedimentation, reverse osmosis, ozone, none, etc.)

4) PWS Owner ___ or Operator ___ : *Please Specify*

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

5) Form prepared by:

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

6) 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)

7) Select the regulated synthetic organic chemical contaminants for which a monitoring waiver is requested:

The table below lists regulated synthetic 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.

Refer to pages 20-22 of the instructions for a list of pesticide trade names and common uses.

Regulated Synthetic Organic Contaminants

___ Alachlor
___ Atrazine
___ Carbofuran
___ Chlordane
___ Dalapon
___ Dibromochloropropane
___ Dinoseb
___ Diquat
___ Endothall
___ Endrin
___ Ethylene Dibromide
___ Glyphosate
___ Heptachlor
___ Heptachlor Epoxide
___ Lindane
___ Methoxychlor
___ Oxamyl (Vydate)
___ Pentachlorophenol (PCP)
___ Picloram
___ Simazine
___ Toxaphene
___ 2,4-D
___ 2,4,5-TP
___ Benzo[a]pyrene
___ Di(2-ethylhexyl)adipate
___ Di(2-ethylhexyl)phthalate
___ Hexachlorobenzene
___ Hexachlorocyclopentadiene
___ Polychlorinated biphenyls (PCBs)
___ 2,3,7,8-TCDD (Dioxin)

Check all chemicals that apply to this application

Water Source Information

8) 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, latitude/longitude and map identifying each source.

Water Source Name:	**Legal Description** (Township, Range, Section, and/or Lot and Block, Subdivision Name)	**Latitude/Longitude *** Record in Decimal Degrees Example : Latitude : 61.18051 Longitude : -149.96231
		Lat: __ __ . __ __ __ __ __ Long: - __ __ __ . __ __ __ __ __
		Lat: __ __ . __ __ __ __ __ Long: - __ __ __ . __ __ __ __ __
		Lat: __ __ . __ __ __ __ __ Long: - __ __ __ . __ __ __ __ __
		Lat: __ __ . __ __ __ __ __ Long: - __ __ __ . __ __ __ __ __
		Lat: __ __ . __ __ __ __ __ Long: - __ __ __ . __ __ __ __ __

* The assumed datum of Latitude/Longitude is WGS 84. If another datum is used, please specify what that is.

Please attach a map that will help Drinking Water staff verify the lat/long information in the State geospatial database. (As-Built, Google Maps, Google Earth, Bing, Yahoo Maps are all acceptable)

☐ Yes a map with approximate location has been provided.

9) 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; and location of rivers, streams, lakes, ponds, etc.

_____

_____

_____

_____

_____

_____

_____

_____

Activities

10) Identify all potential sources of SOC contamination by identifying activities that, in general, have used, stored, or transported SOCs within either one mile of each well (groundwater source), or within 1,000 feet 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 within 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.

TABLE 1 - Higher Concern Activities *(If "Yes" response, the Activity-Use Survey Form found in the "Instructions Booklet" is required.)*

Commercial/Agricultural			**Municipal/Urban/Government**		
feedlot	*Yes*	*No*	*industrial waste disposal*	*Yes*	*No*
pesticide use/storage	*Yes*	*No*	*landfill, dump*	*Yes*	*No*
grain bin for fumigation	*Yes*	*No*	*junk yard*	*Yes*	*No*
commercial greenhouse, nursery, farm	*Yes*	*No*	*abandoned landfill*	*Yes*	*No*
fertilizer use (with pesticides)	*Yes*	*No*	*hazardous waste/storage*	*Yes*	*No*
Commercial/Industrial			*military installation*	*Yes*	*No*
pulp mill	*Yes*	*No*	*public garden*	*Yes*	*No*
logging activities	*Yes*	*No*	*golf course*	*Yes*	*No*
industrial construction	*Yes*	*No*	**Heavy Industrial/Mining**		
utility substation	*Yes*	*No*	*coal mining*	*Yes*	*No*
wood preserver	*Yes*	*No*	*chemical reclamation*	*Yes*	*No*
Medical			**Wells**		
veterinary clinic	*Yes*	*No*	*injection well*	*Yes*	*No*
research laboratory	*Yes*	*No*			
pet groomer/pet supplies	*Yes*	*No*			

(Question 10, Continued)

TABLE 2 - Lower Concern Activities *(Activity-Use Survey Form is not required for Table 2 Activities.)*

Commercial/Agricultural			**Municipal/Urban/Government**		
meat packing/slaughterhouse	*Yes*	*No*	*municipal wastewater treatment*	*Yes*	*No*
manure pile	*Yes*	*No*	*individual residence*	*Yes*	*No*
animal burial	*Yes*	*No*	*subdivision*	*Yes*	*No*
forest land	*Yes*	*No*	*septic tank*	*Yes*	*No*
fertilizer use (without pesticides)	*Yes*	*No*	*park*	*Yes*	*No*
fertilizer storage	*Yes*	*No*	*home garden/greenhouse*	*Yes*	*No*
Commercial/Industrial			*storm water impoundment*	*Yes*	*No*
truck terminal	*Yes*	*No*	*wastewater impoundment*	*Yes*	*No*
rust proofing	*Yes*	*No*	*lift station*	*Yes*	*No*
small engine repair	*Yes*	*No*	*incinerator*	*Yes*	*No*
machine shop	*Yes*	*No*	*sewer line*	*Yes*	*No*
dry cleaners	*Yes*	*No*	*urban runoff*	*Yes*	*No*
printer	*Yes*	*No*	**Transportation Related**		
photo processor	*Yes*	*No*	*road*	*Yes*	*No*
metal plating	*Yes*	*No*	*railroad*	*Yes*	*No*
descaler	*Yes*	*No*	*airport/maintenance yard snow clean-up*	*Yes*	*No*
food processor	*Yes*	*No*	*salt/sand pile*	*Yes*	*No*
laundromats	*Yes*	*No*	**Wholesale/Retail**		
car wash	*Yes*	*No*	*herbicides/pesticides*	*Yes*	*No*
beauty salon	*Yes*	*No*	*fertilizers*	*Yes*	*No*
heat treater/smelter	*Yes*	*No*	*auto/chemical supplies*	*Yes*	*No*
painter/finisher	*Yes*	*No*	*painting supplies*	*Yes*	*No*
furniture stripper	*Yes*	*No*	**Heavy Industrial/Mining**		
autobody shop	*Yes*	*No*	*sand/gravel mining*	*Yes*	*No*
service station/auto repair	*Yes*	*No*	*power plant*	*Yes*	*No*
above-ground storage tank	*Yes*	*No*			
utility right-of-way	*Yes*	*No*			

(Question 10, Continued—Table 2, Lower Concern Activities)

Medical			**Wells**		
mortuary/funeral home	*Yes*	*No*	*geothermal heat recovery well*	*Yes*	*No*
graveyard	*Yes*	*No*	*monitoring well*	*Yes*	*No*
medical/dental clinic	*Yes*	*No*	*production well (oil)*	*Yes*	*No*
Other			*water supply*	*Yes*	*No*
gravel pit	*Yes*	*No*	*reserve pits*	*Yes*	*No*
asphalt	*Yes*	*No*	*abandoned well*	*Yes*	*No*
Tanks and Storage			*exploration well*	*Yes*	*No*
underground storage tank	*Yes*	*No*			
fuel oil distributor	*Yes*	*No*			
oil pipeline	*Yes*	*No*			

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

For each Table 1 activity with a "Yes" response:

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 sources.
3) After illustrating the activities on the site drawing, **continue with question 11** on the next page.

Well Information

Question 11 needs to be completed by applicants who have groundwater sources. Applicants with only surface water sources should skip to Question 13.

11) 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 (10 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) A well log is required for each well. Is the well log attached to this application? ___ **Yes**, ___ **No**
(If no well log is attached, please explain why in the space provided.)

_____

_____

_____

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.)

_____

_____

_____

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.)

_____

_____

_____

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

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

	(Well Name)	*(Well Name)*	*(Well Name)*	*(Well Name)*	*(Well Name)*
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 will clarify the data provided above.)

_____

_____

_____

_____

_____

SOC Monitoring/Investigation

Question 13 is for applicants who have answered "Yes" to at least one activity from Question 10, Table 1 "Higher Concern Activities" (see page 9) .

All water systems (surface water or groundwater) with no Table 1 activities should skip to question 14 below.

13) Provide information about Table 1 activities (from Question 10):

For each Table 1 activity marked "Yes" *(refer to page 9 of this application form),* complete one line of the table below. In the table, list the activity type *(column 1),* name of the activity (such as business name) and of 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 Instruction Booklet for details.*

Type of Activity (from Table 1)	**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 in the space below why it is not available:

_____

_____

14) SOC testing:

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

_____

_____

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

_____

_____

PWS Certification

15) 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

The complete SOC Monitoring Waiver Application will contain the following documents.

1) A completed SOCs Monitoring Waiver Application Form.
2) A site drawing and/or topographical map, showing the general location and boundary of any Table 1 activity present (see page 9 for Table 1).
3) Well logs and other related hydrogeological information, if available.
4) Aquifer pump tests completed for the wells.
5) Map with identification of well location (As-build, Google Maps, Google Earth, Bing and Yahoo Maps are all acceptable.
6) Information that may support that the well is confined (in a confined aquifer or has confining layers).
7) Past SOC test results
8) Completed Activity-Use Survey Form(s), only if Table 1 activities have been identified in the WRA.

Send the completed application and supporting documents to DEC at the address below: ***(Keep a copy for your own records.)*** Please submit by December 31, 2012.

DEC Drinking Water Program
Drinking Water Protection
555 Cordova St.
Anchorage, AK 99501

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III. Instruction Booklet

These instructions were developed to help applicants fill out the Synthetic Organic Contaminant (SOC) 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.

Section	**Application Form** (page numbers)	**Instructions** (page numbers)
Inventory Information *(Questions 1, 2, 3, 4, 5, and 7)*	6-7	17-22
Water Source Information *(Questions 8 and 9)*	8	23
Activities *(Question10)*	9-11	23
Well Information *(Questions 11 and 12)*	12-13	23-24
Monitoring/Investigation *(Questions 13 and 14)*	14	24
PWS Certification *(Question 15)*	15	24
Activity-Use Survey Form and supporting documents	(N/A)	25-30
Glossary	(N/A)	31-35

Inventory Information

Question 1) SOC Application Type

a.) Identify whether this application is the initial SOC Application for a new system that has never applied for a SOC Monitoring Waiver

b.) New waiver because system no longer qualifies for a Waiver due to recent changes or a new source has been added to the system.

Question 2) Public Water System ID (PWSID) No.

PWSID No.: Each PWS in Alaska is assigned a Public Water System Identification Number (PWSID). This number is a 6-digit identification number by the DEC Drinking Water Program. Provide this number where indicated. If this number is unknown, contact the Drinking Water Program.

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 3) 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, provide the water source name (as you refer to it), the type of water source, the water source use or purpose, and the method(s) 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 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(s) 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 water treatment types used for each water source listed. If no water treatment exists for the water source, indicate "none."

Question 4) 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 5) 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 6) 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 7) Select the regulated synthetic organic chemical contaminants for which a monitoring waiver is requested:

A list of regulated synthetic organic contaminants is provided on pages 20-22 of these instructions. Review this list of regulated SOCs, their common trade names, and uses. Then refer to page 7 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 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, Chlorozxone, 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, Actril DS, Mad, Gordon's Vegemec Vegetation Killer, Lentemul, SEE	✖-herbicide for general weed control -used in weed & feed type products to control broad leaf weeds like dandelions -may be combined with picloram
2,4,5-TP	2,4,5-Trichlorophenoxy propionic acid, Silvex, Aqua Vex, Frutone T, Kurosal, 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	✖-herbicide used on fence rows, rights of way, golf courses, (cancelled in 1983) -used by local airports, Railroad, highways, after 1950's to cancellation in 1983 -used by military
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	✖-insecticide used for soil treatment, foliage application on fruit and nut trees (most uses restricted in 1983) -currently used for treating wood inhabiting beetles -some uses Restricted Use Pesticide (RUP) -pet product for parasite control
Methoxychlor	Double-M, Chemform, Flo Pro McSeed Protectant, Moxie, AlfaTox, DMDT Dual, Pennant, Dueler, Medal, Ontract	✖-insecticide used on fruit and shade trees, gardens, around buildings -fungicide
Oxamyl	DPX-1410, Vydate, Thioxamyl	-insecticide, nematicide used for certain insects, mites, and/or nematodes -used on many field crops, fruits and vegetables
Polychlorinated Biphenyls (PCBs)	Arochlor, Phenochlor, Kanechlor	✖-used primarily in the electrical industry (transformers)
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	✖-used as a wood preservative -prior to 1987 it was also used as a wide-spectrum fungicide and bactericide -Restricted Use Pesticide (RUP)
Picloram	Amdon, Borolin, K-Pin, Access, Tordon, Grazon	✖-systemic herbicide used on a variety of deep-rooted herbaceous weeds (may be combined with 2,4D) - used for "right of way" weed control, especially by utility companies
Simazine	Cekusan, Framed, Caliber 90, Simadex, Aquazin 80 W, Amizine, Simazol, Remtal SC, Pathclear	-selective herbicide for control of most annual grasses, broad leaf weeds, corn, lawns -groundwater concern
Toxaphene	Camphoclor, Motox, Phenacide, Phenatox, Strobane T-90, Toxakil, Toxon 63, Attac, Motox, Phenatox, Polychloro camphene	-widely used pesticide and herbicide on many food and non-food crops, most uses cancelled in 1982 -Restricted Use Pesticide (RUP)

Chemical Name	Trade Name	Usage
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, Pramatol	-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 polyaromatic hydrocarbon, combustion byproduct	-not a pesticide -usually found in coal tar -coal tar pitch volatiles
Carabofuran	Bay 70143, Crisfuran, Curaterr, Yaltox, Furadan, 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-chlordate, 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
Dibromochloro-propane (DBCP)	Nemafume, Nemanax, Nemaset, BBC 12, Fumazone, Nemagon, 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, water-based paints, cosmetics, and inks - byproduct 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
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

Chemical Name	Trade Name	Usage
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	Degredation 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)
Cancelled = *sale* is illegal; *use* may be illegal

Water Source Information

Question 8) 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 (see page 18). 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. The assumed datum is WGS 84; if another datum is used, please specify what that is. In Alaska, all latitudes are North, and all longitudes are West, with the exception of Amchitka.

Question 9) 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 SOCs. The activities listed are broken into two groups (shown in Tables 1 and 2) so that DEC staff can focus attention on specific activity types. Public water systems with lower risk of SOC contamination (no Table 1 activities) are allowed to skip several questions in the application form.

Question 10) Identify all potential sources of SOC contamination by identifying activities that, in general, have used/stored/transported SOCs:

Review Tables 1 and 2. If any activity exists now or has existed within the last 10 years within one mile of the well (groundwater source) 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 (from page 9), the approximate location and boundary (size) of the Table 1 activity needs to be drawn on a site drawing or map. Include the distance (in feet) 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 (see next page).

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 11) 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 multiple wells, the applicant must copy and complete Page 12 of the monitoring waiver application for each well included in the combined Waiver Review Area. **You are required to submit well logs for each well as documentation.**

Question 12) 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 - 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 feet and does not correspond to the information provided in the original well log.*

SOC Monitoring/Investigation

Question 12 needs to be completed by applicants who have Table 1 activities (see page 9) located within one mile from each well (groundwater source) or within 1,000 feet from a surface water body. All applicants who have no Table 1 activities should skip to Question 13.

Question 13) Table 1 activities:

If one or more Table 1 activities exist *(indicated by a "Yes" response to any activity listed in Tabl 1 on page 9 of the application form)*, the applicant is required to contact the manager or owner of the activity and determine if SOCs 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 DEC 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 14) SOC testing:

If any SOC testing was completed **at** or **near** the PWS, mark the "Yes" response. If known, give details about when the testing was done, who collected the sample, and who analyzed the sample. Attach a copy of the test results, if available. **Providing sampling results for regulated SOCs may speed up the processing of this is Monitoring Waiver**.

PWS Certification

Question 15) 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 Survey 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 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 SOCs. An Activity-Use Survey Form is required if a "Yes" response was given to an activity listed in Table 1,*(Question 9 on page 9 of the SOC Monitoring Waiver Application Form)*. **A completed Activity-Use Survey Form is required for <u>each</u> Table 1 activity that occurs within one mile of each well** (groundwater source) or **within 1,000 feet of each surface water body**.

In order to gather the requested information for the survey, the applicant needs to direct the Activity-Use Survey Form to the owner or manager (survey recipient) of each activity noted with a "yes" response in Table 1. The applicant can conduct the Activity-Use Survey in-person or by phone, or can mail it to the survey recipient. It may be easier to conduct the survey in-person or by phone because this gives you (the applicant) the opportunity to explain why the survey is being conducted and to 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 for survey recipients 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 the office of the tax assessor *(who will need the legal description of the property for looking up the mailing address of the owner)*.

DEC has provided an SOC 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 to the survey recipient. That section asks for your public water system, name, and address so that the survey recipient knows who the survey form came from and where to return the completed form. Provide a copy of the SOC list *(pages 20-22 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 Activity-Use Survey forms and submit them with the SOC Monitoring 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 the DEC Drinking Water Protection Program office. 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 the Drinking Water Protection Program office for technical assistance at the number below:

Anchorage: (907) 269-7549

Outside of Anchorage, call toll-free: 1-866-956-7656,

EXAMPLE COVER LETTER FOR ACTIVITY-USE SURVEY FORM

Dear Community Member:

I am sending you this letter as the representative for _____, which is a public water system—either a community water system(CWS) or a non-transient non-community water system (NTNCWS). For these water systems, State Drinking Water Regulations require that the water be tested for several synthetic organic contaminants (SOCs). A list of these regulated SOCs is attached.

Most of the chemicals listed are pesticides (which include 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 testing requirements. A CWS or NTNCWS may also have many other routine testing requirements for microbiological and other chemical contaminants.

The Alaska Department of Environmental Conservation (DEC) has developed a waiver program that can reduce the water testing requirements for some CWSs or NTNCWSs. Before applying for a monitoring waiver, water system owners need to find out if the SOCs have been used, stored, and/or disposed of near the system's 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 DEC can consider issuing a monitoring waiver).

Please read the enclosed fact sheet and review the list of chemicals provided. Then, to the best of your ability, please 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

ACTIVITY-USE SURVEY FORM

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 (O*wner, Operator, or Other/describe):*

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)*:

III. Activity Survey Questions:

A. General Information:

1. What is the size of the activity? List acres, square 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 (SOC) Use:

1. a. Were any chemicals on the attached SOC 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) Storage:

1. a. Were any chemicals on the attached SOC list **stored** at the 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 (SOC) Disposal

1. a. Were any chemicals on the attached SOC 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 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 DEC has funding available, may DEC test these on-site wells as part of this waiver process? *Yes No*

2. a. Are there any on-site wastewater disposal systems, storm drains, sumps, or floor drains? *Yes No*
   b. If yes, are you aware of any pesticides being disposed of in these drains, etc. *Yes No*

3. 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.*)

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/were livestock 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*

V. Observations and/or Comments:

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

VI. Signature Block:

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

*Print Name:*_____ *Signature:*_____ *Date:* _____

State of Alaska

Drinking Water Program Fact Sheet

Department. of Environmental Conservation
Division of Environmental Health

SYNTHETIC ORGANIC Contaminants
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 (DEC) for a public water system (PWS) that is either a community water system (CWS) or a non-transient non-community water system (NTNCWS). The application is called the Synthetic Organic Contaminant (SOC) Monitoring Waiver Application, and its purpose is to allow a public water system to request a reduction in the system's water testing requirements. As part of this waiver application, the system's owner needs to determine if the regulated SOCs 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 public water system's well or water source. The owner/s of a public water system cannot qualify for reduced monitoring unless they can determine what SOCs 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 SOCs? Most of the chemicals for which a water system can request a waiver from monitoring are pesticides (which include herbicides). A list of the SOCs 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 use is based on the size of the public water system and whether it uses surface water or groundwater. 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? DEC is mandated by regulation to require all public water systems that are CWS or NTNCWS to test for these chemicals, unless the owner can demonstrate that the system qualifies for a waiver. The SOC water tests can cost up to $6,000 per well. These tests need to be repeated once every three years. These costs really add up and ultimately are passed on to the consumers and homeowners 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 DEC to make this waiver program successful. Although the primary goal of the Drinking Water Program is safe drinking water, DEC 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, DEC 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. In some cases, DEC 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 DEC with the system's monitoring 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, DEC 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, please contact:

DEC Drinking Water Protection Program:

Anchorage: 1-907-269-7549

Outside of Anchorage, call toll-free: 1-866-956-7656.

IF I WOULD LIKE TO FIND OUT MORE ABOUT PESTICIDES, WHO DO I CALL? The Alaska Department of Environmental Conservation has a pesticide program that offers more information about pesticides and pesticide regulations. The phone number for this program is:

DEC Pesticide Program

Toll-free: 1-800-478-2577

V. Glossary of Technical Terms

18 AAC 80 - Alaska Drinking Water Regulations currently in effect. Some of the provision numbers may change when regulations are amended. 18 AAC 80 specifically refers to Title 18 of the Alaska Administrative Code, Chapter 80.

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 waiver applicant conducts the survey by interviewing the owners or operators of the activity to determine past and present use of regulated synthetic organic chemical use, storage, or disposal. DEC provides forms for conducting the survey.

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

aquifer - a geologic 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.

Community Water System: a public water system that regularly serves at least 25 year-round residents or serves at least 15 service connections used by year-round residents;

Non-Transient/Non Community Water System: a public water system that -regularly serves at least 25 of the same individuals over 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 DEC 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 all the 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 3-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; we are at present within the second compliance cycle.

compliance period - a defined three-year calendar-year period within a nine-year compliance cycle during which the owner or operator of a public water system must monitor; we are at present within the first compliance period (beginning January 1, 2011, and ending December 31, 2013) of the third compliance cycle.

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 in water of a contaminant at a level that exceeds the maximum contaminant level set by 18 AAC 80.300 or at the lead or copper action level established under 40 C.F.R. 141.80, 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, 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 – a 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.

grout 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 - water beneath the surface of the ground, with the exception of 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 - water beneath the surface of the ground with a

- significant occurrence of insects or other macroorganisms, algae, or *Giardia lambla, Cryptoporidiujm*, or other large-diameter pathogen; 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 – geologic 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.

PCBs - polychorinated 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), or 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 to 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 device attached on top of a well casing or pipe sleeve to prevent insects, dirt, or water or other liquid from entering the well under normal conditions while allowing air to flow in and out of the well.

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 – the likelihood or risk of contamination by chemicals or other contaminants, based on many different factors., including contaminant persistence and transport, aquifer properties, geological confinement, and well construction.

Synthetic Organic Contaminants (SOCs) - a general term describing a group of man-made chemicals regulated under 18 AAC 80.300, 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 (VOC) - a carbon-based compound with the property of escaping easily from water into the air; VOCs are regulated under 18 AAC 80.300.

vulnerability (= use + susceptibility) - the likelihood that a public water system will be 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 of how susceptible the water source is to contamination.

vulnerable – describes 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 or well that needs to be evaluated for activities that may use, store, or dispose of regulated SOCs.

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 insects, dirt, or 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 soil and ice strata and the depths at which they are encountered; 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 test; and the names of the 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 it 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.

Send Applications to:
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Office	*Phone*	*Fax*
Anchorage	907-269-7656	907-269-7655
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Juneau:	907-465-5333	907-465-5362
Soldotna	907-262-5210	907-262-2294
Wasilla	907-376-1850	907-376-2382