FIELD GUIDE FOR WATER SYSTEM INVENTORY FORM

SYSTEM CLASSIFICATION

"Community water system" means a potable water system serving at least 15 service connections used by year-round residents or regularly serves at least 25 residents for at least 6 months per year.

"Non-transient non-community water system" means a potable water system that regularly serves at least 25 of the same individuals for at least six months per year.

"Transient non-community water system" means a public water system that operates more than 60 days a year but does not regularly serve at least 25 of the same individuals or residents over six months per year.

Region

1 - sero
2 - scro
3 - nro
4 - pcro

District

SCRO

1 - Anchorage
2 - MSDO-Wasilla
3 - Western-Unalaska
4 - Kenai
5 - Western-Kodiak
6 - Bristol Bay
7 - Western-Bethel
8 - Western-Interior/Remote Islands
9 - MSDO-Valdez/Cordova

NRO

1- Northern Alaska
2 - Nome
3 - Tok

SERO

1- Juneau
2- Ketchikan
3- Sitka

PCRO

District 20

STATUS

A- active
I- inactive (facility still exists)
D- deleted (facility no longer used and has been properly abandoned)

OWNER TYPE

1- federal gov't
2- private
3- state gov't
4- local gov't
5- mixed public/private
6- native American

GWUDISW - Groundwater under the direct influence of surface water

QUALIFIED OPERATOR

All surface water systems and GWUDISW systems must have a qualified operator. For systems serving 500 or more people, or 100 or more service connections, the operator must be certified

CT - mg/l residual disinfectant concentration (C) x minutes of disinfectant contact time (T)

SERVICE CATEGORY

BB- bed/breakfast
BP- bottling plant
BR- bar
CC- construction camp
CG- campground
CH- church
DC- day care center
DR- drilling rig
FP- food processor
FS- food service
IF- industrial facility
LC- logging camp
MH- mobile home park
MU- municipal
OF- office
PA- public accommodation
PF- public facility
RS- residential
SC- school
SD- subdivision
SF- seafood processor
SL- shower/laundry
WC- work camp
WH- water hauler
XX - other (explain in COMMENT section)

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4. CRITICAL SPARE PARTS (disinfection)
The following list is dependent upon the individual system, and should be used as a guide.

chlorinator booster pump
cylinder seal gaskets
chlorinator injector
chlorinator rebuild kit
tubing
chlorine flow meter

2. IN-LINE DISINFECTION
Disinfectant is directly injected into a water conveyance line as opposed to batch disinfection

SCBA
Self contained breathing apparatus

DISINFECTION REQUIREMENTS
Public Water System that are surface water or GWUDISW systems must meet the following requirements:

1. Entry point disinfectant residual must not go below 0.2 mg/l for more than four hours.
2. There must be a detectable disinfectant residual in the distribution system, measured at the same time and place as coliform sampling.

DETERMINING CT VALUES
Systems determining CT values must keep the following daily records:

pH at each residual sampling point
temperature at each residual sampling point
chlorine residual before or at first customer during peak hourly flow
contact time during peak hourly flow.

FILTRATION TREATMENT DESCRIPTIONS

APPROVED TECHNOLOGIES (these filtration treatment types meet SWTR requirements)

CONVENTIONAL - water passes through the following processes: coagulation, flocculation, sedimentation, filtration (rapid sand or multi-media)

DIRECT - water passes through the following processes: coagulation, flocculation, filtration (rapid sand, pressure sand, in-line, or multi-media)

SLOW SAND - passage of water through a bed of sand at slow (less than 0.4 m/hr) velocity.

DIATOMACEOUS EARTH - passage of water through a precoat cake of diatomaceous earth filter media, with additional filter media (body feed) added to

ALTERNATIVE TECHNOLOGIES (these filtration treatment types must be approved by DEC for the individual PWS in order to meet SWTR requirements)

PRESSURE SAND - passage of pressurized water through a multimedia filter, in which the entire filter apparatus is enclosed by a steel shell.

CARTRIDGE - water passes through cleanable ceramic, disposable polypropylene, or paper cartridges.

HIGH RATE FILTRATION - rates greater than rapid sand filtration or greater than 6 gpm/ft^2

ABSORPTION - purpose of media is to absorb rather than to filter.

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RECORD TYPE
E - entity - an entry point, or anything that is not a source
S - source - a water source such as a well, spring, lake, stream, or river

SOURCE TYPE
A - surface, permanent
B - surface, non-permanent
C - groundwater, permanent
D - groundwater, non-permanent

SOURCE TYPE
G - groundwater, non-purchased
P - surface, purchased
S - surface, non-purchased
W - groundwater, purchased
Y - GWUDISW, non-purchased
Z - GWUDISW, purchased

GPD - Gallons per day
GPM - Gallons per minute
GWUDISW - Groundwater under the direct influence of surface water

QUALIFIED OPERATOR
All surface water systems and GWUDISW systems must have a qualified operator. For systems serving 500 or more people or 100 or more service connections, operator must be certified.

TYPE OF WATERSHED (Surface Water Sources)
(can use combination of types)
glacial
mountainous
tundra
forested
coastal plain
river valley

INTAKE TYPE (surface water sources)

infiltration gallery	well points
concrete box	ranney well
metal box	multiple pipes at different levels
metal pipe	floating intake
plastic pipe	removable hose
French drain	well (GWUDISW)

TREATMENT OBJECTIVE
B - disinfection by-products control (THMs & HAAs)
C - corrosion control
D - disinfection
E - dechlorination
F - iron removal
I - inorganics removal
M - manganese removal
N - no treatment at source
O - organics removal
P - particulate removal
R - radionuclides removal
S - softening (hardness removal)
T - taste/odor control

LAT/LONG
The latitude and longitude should be as accurate as possible; in the format ± HHMMSSss for latitude and ± HHMMSSss for longitude; where (+) = north or east, (-) = south or west; where H = hours, M = minutes, S = seconds, s = decimal seconds.

TREATMENT METHOD

000	No treatment, not applicable	320	Electrodialysis	423	Hypochlorination, pre	623	Reducing agents, sodium bisulfate
100	Activated alumina	341	Filtration, cartridge/bag	441	Inhibitor, bimetallic phosphate	625	Reducing agents, sodium sulfate
121	Activated carbon, granular	342	Filtration, diatomaceous earth	443	Inhibitor, hexametaphosphate	627	Reducing agents, sulfur dioxide
125	Activated carbon, powered	343	Filtration, greensand	445	Inhibitor, orthophosphate	640	Reverse osmosis
141	Aeration, cascade	344	Filtration, pressure sand	447	Inhibitor, polyphosphate	660	Sedimentation
143	Aeration, diffused	345	Filtration, rapid sand	449	Inhibitor, silicate	680	Sequestration
145	Aeration, packed tower	346	Filtration, slow sand	460	Ion exchange	700	Sludge treatment
147	Aeration, slat tray	347	Filtration, ultrafiltration	500	Lime-soda ash addition	720	U.V.
149	Aeration, spray	348	Filtration	520	Microscreening	740	PH adjustment
160	Algae control	349	Successfully avoiding filtration	541	Ozonation, post	741	PH adjustment, post
180	Bone char	350	Unfiltered, required to filter	543	Ozonation, pre	742	PH adjustment, pre
200	Chloramines	351	Not subject to SWTR	560	Permanganate	996	Treatment applied by seller
220	Chlorine dioxide	360	Flocculation	580	Peroxide	997	Treatment applied at plant
240	Coagulation	401	Gaseous chlorination, post	600	Rapid mix	998	Treatment applied
300	Distillation	403	Gaseous chlorination, pre	620	Reducing agents		at point of entry

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C - groundwater, permanent
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P - surface, purchased
S - surface, non-purchased
W - groundwater, purchased
Y - GWUDISW, non-purchased
Z - GWUDISW, purchased

NATURE OF RECHARGE AREA
(Groundwater sources)
(can use combinations of types)
fractured
alluvial
glacial outwash
permafrost
bedrock
cavernous

FORMATION OR ROCK TYPE (if known)
igneous
(e.g., granite, basalt)
metamorphic
(e.g., schist, gneiss, slate)
sedimentary
(e.g., shale, limestone)
unconsolidated
(e.g., silt, clay, gravel, sand)

TREATMENT OBJECTIVE
B - disinfection by-products control (THMs & HAAs)
C - corrosion control
D - disinfection
E - dechlorination
F - iron removal
I - inorganics removal
M - manganese removal
N - no treatment at source
O - organics removal (color, THM's, VOC's)
P - particulate removal (turbidity reduction)
R - radionuclides removal
S - softening (hardness removal)
T - taste/odor control

LAT/LONG - The latitude and longitude should be as accurate as possible; in the format ±HMMSSss for latitude and ±HHMMSSss for longitude; where: (+)=north or east, (-)=south or west; H=hours, M=minutes, S=seconds, s=decimal seconds.

GWUDISW - Groundwater under the direct influence of surface water

GPM - Gallons per minute

GPD - Gallons per day

15. If horizontal distance between well casing and nearest surface water is less than 100 ft., system may need to be re-evaluated for GWUDISW. Please note on continuation sheet.

TREATMENT METHOD (TYPE)

000 No treatment, not applicable
100 Activated alumina
121 Activated carbon, granular
125 Activated carbon, powdered
141 Aeration, cascade
143 Aeration, diffused
145 Aeration, packed tower
147 Aeration, slat tray
149 Aeration, spray
160 Algae control
180 Bone char
200 Chloramines
220 Chlorine dioxide
240 Coagulation
300 Distillation
320 Electrodialysis
341 Filtration, cartridge/bag
342 Filtration, diatomaceous earth
343 Filtration, greensand
344 Filtration, pressure sand
345 Filtration, rapid sand
346 Filtration, slow sand
347 Filtration, ultrafiltration
348 Filtration
349 Successfully avoiding filtration
350 Unfiltered, required to filter
351 Not subject to SWTR
360 Flocculation
401 Gaseous chlorination, post
403 Gaseous chlorination, pre
421 Hypochlorination, post
423 Hypochlorination, pre
441 Inhibitor, bimetallic phosphate
443 Inhibitor, hexametaphosphate
445 Inhibitor, orthophosphate
447 Inhibitor, polyphosphate
449 Inhibitor, silicate
455 Iodination
460 Ion exchange
500 Lime-soda ash addition
520 Microscreening
541 Ozonation, post
543 Ozonation, pre
560 Permanganate
580 Peroxide
600 Rapid mix
620 Reducing agents
623 Reducing agent, sodium bisulfate
625 Reducing agent, sodium sulfate
627 Reducing agent, sulfur dioxide
640 Reverse osmosis
660 Sedimentation
680 Sequestration
700 Sludge treatment
720 U.V.
740 PH adjustment
741 PH adjustment, post
742 PH adjustment, pre
996 Treatment Applied by seller
997 Treatment Applied at plant
998 Treatment Applied at point of entry

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WATERSHED / WELLHEAD PROTECTION PROGRAM

Groundwater under the influence of SW and SW systems avoiding filtration must answer the following questions:

Does the system maintain a watershed/wellhead protection program?

What is the closest source of contamination? (fuel tanks, septic tanks, surface water, etc.)

When was the watershed/wellhead last inspected by the purveyor?

Is human activity restricted in watershed/wellhead area? (Logging, hunting, camping, boating, dogs, picnicking, hiking, etc.)

Are the waters entering the source free from sources of industrial, domestic, or other types of pollution?

Does the system have any control over future developments in the watershed/wellhead? (Ordinance, ownership, written agreements)

Brief description of geographical and physical features of watershed/wellhead (valley, alpine, lake, stream); describe stream flow

RESULTS OF OPERATOR DEMONSTRATION(S):

Operators of surface water systems, or GWUDISW systems must demonstrate turbidity reading, and disinfectant residual reading. Operators of systems avoiding filtration must demonstrate pH and temperature reading. Operators of the system adding fluoride to water must demonstrate fluoride reading. Operators of systems using corrosion monitoring/control must demonstrate pH and temperature of finished water.

TOTAL COLIFORM RULE SAMPLE SITING PLAN must include:

System map showing: water sources, treatment facilities, storage tanks, reservoirs, pressure stations, booster stations, pressure zones, routine sample sites, repeat sample sites.

Narrative description: PWS name, ID#, nonresidential and residential population, # service connections, # pressure zones, # monthly routine water samples, total # routine sample sites to cover all pressure zones and area served by each source or distribution system reservoir, location of all routine sample sites (can be marked on a map), # of daily, weekly, or biweekly samples, monthly rotation cycles, with an explanation of cycles.

For systems collecting less than 5 routine samples per month: location of additional 4 extra routine samples needed the month following a coliform positive routine sample.

System must assure that repeat sample sites are available and accessible for each regular sample site.

23. BACKFLOW PREVENTION DEVICE LOCATION

Wastewater treatment plants
Mortuary
Hospital
Industrial Buildings
Dentist Offices
Boilers
Backwash treatment station

19. SPARE PUMP PARTS

pump packing materials
pump seal materials
pump impellers
fully loaded pump assembly
check valve

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Use number to conserve space

STORAGE TYPE

1. cistern
2. reservoir
3. tank
4. above ground
5. below ground
6. standpipe
7. hydropneumatic
8. pressurized
9. vented

TYPE OF STORAGE MATERIAL

1. wood
2. metal
3. plastic
4. naturally contained
5. concrete

TYPE OF CORROSION CONTROL

1. anodes
2. coating
3. paint
4. non-corrosive material
5. flexible membrane liner