



Idaho Drinking Water Program System Classification Worksheet

All community, nontransient noncommunity, and surface water public water system owners or designees are required to submit proof of current conditions related to their system classification at least every 5 years (IDAPA 58.01.08.553.01). The classification is used to determine the required level of licensed operator(s). Work with your local DEQ or health district field office to complete this worksheet.

Public Water System No.: _____ System Name: _____

Contact Person: _____ Title: _____

Address: _____ City: _____ State: _____ Zip: _____

Business Phone: _____ Email: _____

Population served by this distribution system (number of people, not number of connections): _____

System Type (choose one): Community Nontransient Noncommunity Transient Noncommunity

Primary Source (choose one): _____

Complete the worksheet on the following pages, then return to Table 1 and select the classification(s) of the public water system (PWS) based on the outcome.

Table 1. System classification.

Distribution Classification: VSWS I II III IV or Not applicable	Treatment Classification: I II III IV or Not applicable
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Licensed Operator Requirements (IDAPA 58.01.08.554)

Community, nontransient noncommunity, and all systems supplied by surface water, including ground water under the direct influence of surface water, are required to be under the direct supervision of a properly licensed distribution and/or treatment operator licensed at the same level of system classification or higher.

Transient ground water systems are **only** required to be under the direct supervision of a properly licensed distribution or treatment operator if they are surface water or ground water under the direct influence of surface water.

Step 1—Very Small Water System (VSWS) Classification (Choose A or B)

Determine if your PWS is classified as a Very Small Water System (VSWS).

A VSWS is a community or nontransient noncommunity PWS that serves 500 persons or fewer and has no treatment other than disinfection or has only treatment that does not require any chemical treatment, process adjustment, backwashing, or media regeneration by an operator (e.g., calcium carbonate filters, granular-activated carbon filters, cartridge filters, or ion exchangers).

A. My system serves more than 500 people. If yes, **go to Step 2.**

B. My system serves 500 or fewer people. Select only one choice below (i, ii, or iii).

i. My system has a Primary Source of GW, GWP, GUP, SWP, and (choose one).

Is a Community or Nontransient Noncommunity system and has no treatment. On Table 1 (page 1), choose "VSWS" as the Distribution Classification and "Not Applicable" as the Treatment Classification. **Go to Step 4.**

Is a Transient Noncommunity System. On Table 1 (page 1), choose "Not Applicable" as the Distribution Classification and "Not Applicable" as the Treatment Classification. **Go to Step 4.**

ii. My Community or Nontransient Noncommunity system **only** has the following exempt treatment processes. Select all that apply (a full list of treatment processes is listed in Step 3), then choose "VSWS" as the Distribution Classification and "Not Applicable" as the Treatment Classification on Table 1 (page 1) and **go to Step 4.**

Process Code	Process	Process Code	Process
005	Point of Use (POU), Activated Carbon - Granulated	401/403	Gaseous Chlorination
010	Point of Use (POU), Ion Exchange	421/423	Sodium hypochlorite or calcium hypochlorite
015	Point of Use (POU), Reverse Osmosis	470	Exempt, Softening - VSWS (<i>Water softener</i>)
354	Exempt, Roughing Filter - VSWS	720	Ultraviolet Radiation
356	Exempt, Cartridge Filter - VSWS	800	Raw water, little or no variation
3614	Log Treatment of Viruses (<i>Ground Water System</i>)		

iii. My Community or Nontransient Noncommunity system has treatment other than what is listed above in B.ii. On Table 1 (page 1), choose "Not applicable" as the Distribution Classification.

Skip Step 2; go to Step 3.

Step 2—Distribution Classification

Choose the Distribution Classification based on the number of people (not connections) served by this public water system.

Distribution Classification	Population Served
Distribution Class I	501 to 1,500
Distribution Class II	1,501 to 15,000
Distribution Class III	15,001 to 50,000
Distribution Class IV	50,001 and greater

Enter the Distribution Classification in Table 1 (page 1).

To determine the treatment classification, **go to Step 3.**

Step 3—Treatment Classification Evaluation

Choose A, B, or C below and enter the information in Table 1 (page 1).

- A. This system has no treatment processes. Choose "Not Applicable" as the Treatment Classification in Table 1 (page 1) and **go to Step 4**.
- B. This system **only** has the following exempt treatment processes that will not require a Treatment Classification. Select all that apply, then choose "Not Applicable" as the Treatment Classification in Table 1 (page 1) and **go to Step 4**.

Process Code	Process	Process Code	Process
005	Point of Use (POU), Activated Carbon - Granulated	401/403	Gaseous Chlorination
010	Point of Use (POU), Ion Exchange	421/423	Sodium hypochlorite or calcium hypochlorite
015	Point of Use (POU), Reverse Osmosis	470	Exempt, Softening - VSWS (<i>Water softener</i>)
354	Exempt, Roughing Filter - VSWS	720	Ultraviolet Radiation
356	Exempt, Cartridge Filter - VSWS	800	Raw water, little or no variation
361	4-Log Treatment of Viruses(<i>Ground Water System</i>)		

- C. This system has treatment in addition to, or other than, the items in B. Review and enter the applicable point values in the "System Points" column for each applicable row of Table 2 to reflect system treatment processes.

Table 2. Treatment classification process and description.

Process Code	Item	Points	System Points
System Size — Population (all systems—choose one)			
—	Very Small (25-500)	1	
—	Small (501-3,300)	5	
—	Medium (3,301-10,000)	10	
—	Large (10,001-100,000)	15	
—	Very Large (100,001+)	20	
Water Supply Source (mark all that apply)			
—	Ground Water	0	
—	Surface Water or Ground Water Under the Direct Influence of Surface Water (GWUDI)	8	
361*/363	Required Contact Time (CT) - 4-log Treatment/ Removal of Viruses	2	
Raw Water Quality Variation (all systems--choose one)			
This designation reflects the effect of changing raw water quality on treatment process changes that would be necessary to achieve optimized performance.			
800*	Raw water, little or no variation	0	
805	Raw water, minor variation (consistently <10 NTU, treatment adjustments rarely made)	1	
810	Raw water, moderate variation (regular treatment adjustments made monthly)	3	
815	Raw water, significant variation (regular treatment adjustments made weekly)	5	
820	Raw water, severe variation (regular treatment adjustments made daily or source may be subject to nonpoint discharge, agricultural/urban stormwater runoff, or flooding)	7	
825	Raw water, quality subject to agriculture point sources or municipal wastewater point source discharges (within the mixing zone of an upstream municipal NPDES discharge)	8	
830	Raw water, quality subject to industrial wastewater pollution (within the mixing zone of an upstream industrial NPDES/IPDES discharge)	10	

Process Code	Item	Points	System Points
Raw Water Quality is Subject to: (mark all that apply)			
835	Raw water, taste/odor (treatment process adjustments are routinely made) ¹	2	
840	Raw water, color >15 Color Units (not due to precipitated metals): <i>"See exception in Table Note 1"</i>	3	
845	Raw water, iron and/or manganese >MCL: <i>See exception in Table Note 1</i>	3	
850	Raw water, algal growth (treatment process adjustments are routinely made) ¹	3	
Disinfection (mark all that apply)			
425	On-site generation of hypochlorite	1	
421*, 423*	Liquid chlorine (sodium hypochlorite) or in solid form (calcium hypochlorite tablets or powder)	5	
401*, 403*	Gaseous chlorination	8	
720*	Ultraviolet light	2	
541, 543	Ozonation	10	
200	Chloramines	10	
220	Chlorine dioxide	10	
190	Bromination	5	
455	Iodine	5	
Coagulation/ Flocculation (mark all that apply)			
240	Coagulation	6	
245	Coagulant aid	2	
360	Flocculation	2	
Clarification/Sedimentation (mark all that apply)			
660	Sedimentation/Clarification	4	
665	Sedimentation, Upflow Clarification (2 pts. flocculation + 4 pts. sedimentation/clarification) ²	6	
Filtration (mark all that apply)			
352	Prefiltration, roughing filter (staged cartridges, pressure sand w/o coagulation)	1	
341	Cartridge/bag filters	5	
342	Diatomaceous earth filters ³	10	
343	Greensand filtration	10	
344	Pressure sand filters	10	
345	Rapid sand filters	15	
346	Slow sand filters	5	
347	Membrane/Ultrafiltration	10	
350	Filter aid	2	
354*	Exempt—roughing filter (Very Small Water System only)	0	
356*	Exempt—cartridge filter (Very Small Water System only)	0	
Other Treatment Processes (mark all that apply)			
005*	Point of Use (POU), activated carbon-granular (point of use only)	0	
010*	Point of Use (POU), ion exchange (point of use only)	0	
015*	Point of Use (POU), reverse osmosis (point of use only)	0	
141	Aeration, cascade ³	3	
147	Aeration, slat tray ³	3	
149	Aeration, spray ³	3	
143	Aeration, diffused ³	5	
145	Aeration, packed tower ³	5	

Process Code	Item	Points	System Points
160	Algae control (surface water reservoir treatment)	3	
460	Ion exchange (softening, inorganic removal, radionuclides removal)	5	
470*	Exempt, softening (Very Small Water System only)	0	
100	Ion exchange, activated alumina	5	
121	Activated carbon, granular	5	
125	Activated carbon, powdered	2	
180	Bone char	5	
580	Peroxide	5	
560	Permanganate (oxidation)	4	
680	Sequestration (addition of a phosphate)	4	
380	Fluoridation	4	
300	Distillation	10	
640	Reverse osmosis ³	10	
320	Electrodialysis ³	15	
500	Lime-Soda Ash Addition	5	
741, 742	pH Adjustment	4	
Stability or Corrosion Control (mark all that apply)			
441	Inhibitor, Bimetallic Phosphate	4	
443	Inhibitor, Hexameta Phosphate	4	
445	Inhibitor, Orthophosphate	4	
447	Inhibitor, Polyphosphate	4	
449	Inhibitor, Silicate	4	
620	Reducing Agents	4	
Sludge/Backwash Water Disposal (mark all that apply)			
—	Sludge Treatment—Disposal to sanitary sewer or off watershed	0	
700	Sludge Treatment—On-site treatment of waste (e.g., sludge drying beds, discharge to lagoons and/or on-site disposal/land application)	3	
710	Backwash Water—Any water recycled to plant raw water influent	5	
Total System Treatment Points:			

* Exempt treatment processes.
See page 6 for table notes.

Add the total points and determine the system classification. Enter the classification in Table 1 (page 1). **Go to Step 4.**

Treatment Classification	System Points
Treatment Class I	30 or fewer
Treatment Class II	31-55
Treatment Class III	56-75
Treatment Class IV	76 or greater

Step 4—Sign and Send

Email or mail the completed, signed form to your regional Idaho Department of Environmental Quality or health district drinking water contact for system classification evaluation. Retain a copy of the original form for your files.

Signature

Date

Table Notes:

1. Raw water quality is subject to:

- Taste and/or odor (T&O) for which treatment process adjustments are routinely made (2 points): 1) T&O issue has been identified in a predesign report, etc., 2) a process has been installed to address, and 3) operational control adjustments are made at least seasonally. Do not give points for T&O when there is no specific additional impact on operation (e.g., if a system is already prechlorinating for disinfection, give no points for T&O).
- Color > 15 Color Units (CU) (not due to precipitated metals) (3 points) **with the following exceptions:** Color will be considered elevated and points assigned when levels exceed 75 Color Units (CU) for conventional filtration, 40 CU for direct filtration³, or 15 CU for all other technologies, **except** reverse osmosis (no points given for color for reverse osmosis).
- Iron (FE) and/or manganese (MN) > Maximum Contaminant Level (MCL): Fe (2 points), Mn (3 points) (3 points maximum allowed) **with the following exceptions:** Iron and manganese levels will be considered elevated and points assigned if they are greater than the MCL, **except** for applications of manganese greensand filters. For applications of manganese greensand filters, iron and manganese levels will be considered elevated when their combined level exceeds 1.0 mg/L (3 points allowed).
- Algal growths for which treatment process adjustments are routinely made (3 points): Raw water will be considered subject to algae growths when treatment processes are *specifically* adjusted due to the presence of high levels of algae on at least a weekly basis for at least 2 months each year.

2. Upflow clarification (sludge blanket clarifier) (6 points):

Also known as sludge blanket clarification. Includes such proprietary units as Super-Pulsator. These units include processes for flocculation and sedimentation. Important note: these are not the same as adsorption³ clarifiers.

3. Water Treatment Definitions

Definitions reprinted from “Master Glossary of Water and Wastewater Terms” (www.owp.csus.edu/glossary/index.php) with permission from Office of Water Programs, California State University, Sacramento.

- **Adsorption**
The gathering of a gas, liquid, or dissolved substance on the surface or interface zone of another material.
- **Aeration**
The process of adding air to water. Air can be added to water by passing air through water or passing water through air.
- **Diatomaceous earth**
A fine, siliceous (made of silica) “earth” composed mainly of the skeletal remains of diatoms.
- **Direct filtration**
A method of treating water that consists of the addition of coagulant chemicals, flash mixing, coagulation, minimal flocculation, and filtration. The flocculation facilities may be omitted, but the physical-chemical reactions will occur to some extent. The sedimentation process is omitted.
- **Electrodialysis**
The selective separation of dissolved solids on the basis of electrical charge, by diffusion through a semipermeable membrane across which an electrical potential is imposed.
- **Reverse osmosis**
The application of pressure to a concentrated solution that causes the passage of a liquid from the concentrated solution to a weaker solution across a semipermeable membrane. The membrane allows the passage of the water (solvent) but not the dissolved solids (solutes).