United States
Environmental Protection Agency

Preventive Maintenance for Small Public Water Systems Using Ground Water

An Interactive PDF with Suggested Preventive Maintenance Tasks and Logs

December O&M Task Lists & Logs

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Commonly Used Conversion Factors

When using this form as an interactive PDF: type a number into a light blue box in the Calculator Input column and hit your keyboard "enter" or "return" key to generate a value in the Calculator Output column.

Formulas	Calculator Input		Calculator Output
1 foot (ft) = 12 inches (in)		ft	in
1 pint (pt) = 16 fluid ounces (fl oz)		pt	fl oz
1 pound (lb)= 16 ounces (oz)		lb	oz
1 quart (qt) = 2 pints = 32 oz		qt	fl oz
1 gallon (gal) = 3.785 liters (L)		gal	L
1 L = .264 gal		L	gal
1 square foot (sq. ft.) = 144 square inches (sq. in.)		sq. ft.	sq. in.
1 cubic foot (cu. ft..) = 7.48 gallons (gal)		cu. ft.	gal
1 acre foot (ac. ft.) = 43,560 cu. ft. = 325,829 gal		ac. ft.	gal
1 gallon per min (gpm) = 1440 gallons per day (gpd)		gpm	gpd
1 cubic foot per second (cfs) = 646,272 gpd = 448.8 gpm		cfs	gpm
1 million gallons per day (MGD) = 1.55 cfs = 694.4 gpm		MGD	gpm
1 part per million (ppm) = 1 milligram per liter (mg/L) = 8.34 lbs per million gallons (lb/MG)		ppm	lb/MG
1.0 pounds per square inch (psi) = 2.31 feet of head		psi	ft. hd.
1.0 feet of head = 0.443 psi		ft. hd.	psi
1 horsepower (hp) = 550 foot-pounds per second		hp	ft.lb./s

Commonly Used Formulas

Formulas
Area = Length x Width
Chemical Dosage: pounds per day (lbs./day) = MGD x ppm x 8.34 lbs/gal
Circular Area = Pi x r^2 (where Pi = 3.14, and r = radius) OR Circular Area = 0.785 x D^2 (where D = diameter)
Volume (rectangular) = Length x Width x Height
Circular Volume = Circular Area x Height
Circumference = 2 x Pi x r (where Pi = 3.14 and r = radius) OR Pi x D (where D = diameter)
CT = Chlorine Concentration (mg/L) x time (in minutes)
Detention Time = tank volume (gal) / Flow (gpm or gpd)
Perimeter of Rectangle = (2 x Length) + (2 x Width)
Perimeter of other shapes = add lengths of all sides
Flow rate (Q, ft^3/sec) = Velocity (ft/sec) x Area(ft^2)
Force = Pressure (psi) x Area (in2)
Pounds per gallon (fluid not water) = Specific gravity x 8.34
Specific capacity = flow (gpm) / draw-down (ft)
Water horsepower = Q (flow in gpm) x H (feet of head) / 3960

Recommended Daily Operational Duties

	Check master meter and record water production.
	Check chemical solution tanks and record amounts used.
	Check and record water levels in storage tanks
	Inspect chemical feed pumps for proper operation.
	Check and record chlorine residual at the point of application using an EPA-approved field test kit.
	Check and record chlorine residual in different parts of the distribution system, using an EPA-approved field test kit, so that the entire system is represented weekly.
	Inspect booster and/or well pump stations
	Check and record fluoride concentration in the distribution system
	Record well pump running times and pump cycle starts
	Check instrumentation for proper signal input/output • *Chlorine residual* • *Fluoride*
	Investigate customer complaints. Use special “Telephone Threat” log to record threats or suspicious activity.
	Complete daily security check - evaluate grounds security and any threats to water quality and log completion of task. • *Check all windows, doors, latches, seals, and vents for evidence of vandalism or tampering.* • *Check all well caps, seals, and vents to ensure that they are intact and sealed.* • *Check all security lighting to ensure proper operation.*
	Check well house interior and grounds for general cleanliness and condition.
	Inspect well pumps, motors and controls.

Recommended Daily Operational Duties (continued)

	Record water flows.
	Record water pressures.
	Check water level indicators.
	Check bladder tanks for waterlogged condition - use manufacturers procedures.
	Check for leaks and fix or note for maintenance.
	Perform electrical inspection of wires, fuses.
	Perform mechanical inspection of piping motors and sumps.
	Perform physical inspection of pump, tubing, injection assembly.
	Inspect heater operation during winter months, inspect building temperatures to prevent freezing/overheating.
	Other:
	Other:
	Other:
	Other:
	Other:

Daily Water Production Log Well 1

Prior Month End Master Meter Reading:			
Date	Meter Reading	Amount of Water Used	Notes or Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			
	Total:	0	

Daily Water Production Log Well 2

Prior Month End Master Meter Reading:			
Date	Meter Reading	Amount of Water Used	Notes or Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			
	Total:	0	

Daily Water Production Log Well 3

Prior Month End Master Meter Reading:			
Date	Meter Reading	Amount of Water Used	Notes or Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			
	Total:	0	

Daily Water Production Log Well 4

Prior Month End Master Meter Reading:			
Date	Meter Reading	Amount of Water Used	Notes or Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			
	Total:	0	

Daily Water Production Log Well 5

Prior Month End Master Meter Reading:			
Date	Meter Reading	Amount of Water Used	Notes or Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			
	Total:	0	

Daily Water Production Log Well 6

Prior Month End Master Meter Reading:			
Date	Meter Reading	Amount of Water Used	Notes or Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			
	Total:	0	

Daily Chemical Solution Usage Log: Chlorine

(For center column to calculate, enter data in columns with *)

Chemical Pump Settings: Speed: _____ Stroke: _____

Date	Water Produced *	Chlorine Solution Used *	CL_2 per _____ gal water produced *	Any dosage failure & duration	Notes
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					
TOTAL:	0.00	0.00			

Daily Chemical Solution Usage Log: Fluoride

(For center column to calculate, enter data in columns with *)

Chemical Pump Settings: Speed: _____ Stroke: _____

Date	Water Produced *	Fluoride Solution Used *	F used per _____ gal water produced *	Any dosage failure & duration	Notes
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					
TOTAL:	0.00	0.00			

Daily Chemical Solution Usage Log: Other

(For center column to calculate, enter data in columns with *)

Chemical Pump Settings: Speed: _____ Stroke: _____ Chemical name: _____

Date	Water Produced *	Other Solution Used *	Amt per _____ gal water produced *	Any dosage failure & duration	Notes
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					
TOTAL:	0.00	0.00			

Daily Storage Tank Water Level Log - Tank 1

Normal Operational Range of Tank Levels: High: _____ Low: _____

Date	Water Level (ft)	System Pressure at Tank	Time of Reading	Action Taken	Notes
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					

Daily Storage Tank Water Level Log - Tank 2

Normal Operational Range of Tank Levels: High: _____ Low: _____

Date	Water Level (ft)	System Pressure at Tank	Time of Reading	Action Taken	Notes
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					

Daily Storage Tank Water Level Log - Tank 3

Normal Operational Range of Tank Levels: High: _____ Low: _____

Date	Water Level (ft)	System Pressure at Tank	Time of Reading	Action Taken	Notes
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					

Daily Storage Tank Water Level Log - Tank 4

Normal Operational Range of Tank Levels: High: _____ Low: _____

Date	Water Level (ft)	System Pressure at Tank	Time of Reading	Action Taken	Notes
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					

Daily Pressure Tank Water Level Log - Tank 1

Normal Operational Range of Tank Levels: High: _____ Low: _____

Date	Water Level (ft)	System Pressure at Tank	Time of Reading	Action Taken	Notes
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					

Daily Pressure Tank Water Level Log - Tank 2

Normal Operational Range of Tank Levels: High: _____ Low: _____

Date	Water Level (ft)	System Pressure at Tank	Time of Reading	Action Taken	Notes
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					

Daily Pressure Tank Water Level Log - Tank 3

Normal Operational Range of Tank Levels: High: _____ Low: _____

Date	Water Level (ft)	System Pressure at Tank	Time of Reading	Action Taken	Notes
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					

Daily Pressure Tank Water Level Log - Tank 4

Normal Operational Range of Tank Levels: High: _____ Low: _____

Date	Water Level (ft)	System Pressure at Tank	Time of Reading	Action Taken	Notes
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					

Daily Chemical Feed Pump Log - 1

Dosage Calculation = (a x b)/c = d (make sure to include units of measurement) Column (d) will calculate dosage value if (a), (b) and (c) have data.					
Date	(a) Solution Concentration	(b) Volume of Solution Pumped	(c) Volume of Water Treated	(d) Calculated Dosage	Expected Dosage
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					

Daily Chemical Feed Pump Log - 2

Dosage Calculation = (a x b)/c = d (make sure to include units of measurement) Column (d) will calculate dosage value if (a), (b) and (c) have data.					
Date	(a) Solution Concentration	(b) Volume of Solution Pumped	(c) Volume of Water Treated	(d) Calculated Dosage	Expected Dosage
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					

Daily Chemical Feed Pump Log - 3

Dosage Calculation = (a x b)/c = d (make sure to include units of measurement) Column (d) will calculate dosage value if (a), (b) and (c) have data.					
Date	(a) Solution Concentration	(b) Volume of Solution Pumped	(c) Volume of Water Treated	(d) Calculated Dosage	Expected Dosage
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					

Daily Chemical Feed Pump Log - 4

Dosage Calculation = (a x b)/c = d (make sure to include units of measurement) Column (d) will calculate dosage value if (a), (b) and (c) have data.					
Date	(a) Solution Concentration	(b) Volume of Solution Pumped	(c) Volume of Water Treated	(d) Calculated Dosage	Expected Dosage
1st					
2nd					
3rd					
4th					
5th					
6th					
7th					
8th					
9th					
10th					
11th					
12th					
13th					
14th					
15th					
16th					
17th					
18th					
19th					
20th					
21st					
22dn					
23rd					
24th					
25th					
26th					
27th					
28th					
29th					
30th					
31st					

Daily Chlorine Residual Log - Location 1

_____

Cl_2 Residual (in mg/L) at Point of Application Target Level: _____ mg/L to _____ mg/L.			
Date	Cl_2 Residual (in mg/L) at Point of Application	Cl_2 Residual (in mg/L) in Distribution System	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Chlorine Residual Log - Location 2

_____

Cl_2 Residual (in mg/L) at Point of Application Target Level: _____ mg/L to _____ mg/L.			
Date	Cl_2 Residual (in mg/L) at Point of Application	Cl_2 Residual (in mg/L) in Distribution System	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Chlorine Residual Log - Location 3

_____

Cl_2 Residual (in mg/L) at Point of Application Target Level: _____ mg/L to _____ mg/L.			
Date	Cl_2 Residual (in mg/L) at Point of Application	Cl_2 Residual (in mg/L) in Distribution System	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Chlorine Residual Log - Location 4

_____

Cl_2 Residual (in mg/L) at Point of Application Target Level: _____ mg/L to _____ mg/L.			
Date	Cl_2 Residual (in mg/L) at Point of Application	Cl_2 Residual (in mg/L) in Distribution System	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Fluoride Concentration Log - Location 1

_____

Predetermined Concentration: _____mg/L			
Date	Fluoride Concentration in Distribution System	Adjustment Needed +/-	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Fluoride Concentration Log - Location 2

_____

Predetermined Concentration: _____ mg/L			
Date	Fluoride Concentration in Distribution System	Adjustment Needed +/-	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Fluoride Concentration Log - Location 3

_____

Predetermined Concentration: _____ mg/L			
Date	Fluoride Concentration in Distribution System	Adjustment Needed +/-	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Fluoride Concentration Log - Location 4

_____

Predetermined Concentration: _____ mg/L			
Date	Fluoride Concentration in Distribution System	Adjustment Needed +/-	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Well Pump Log - Pump No. 1

Date	Running Time (in hrs)	Number of Cycle Starts	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Well Pump Log - Pump No. 2

Date	Running Time (in hrs)	Number of Cycle Starts	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Well Pump Log - Pump No. 3

Date	Running Time (in hrs)	Number of Cycle Starts	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Well Pump Log - Pump No. 4

Date	Running Time (in hrs)	Number of Cycle Starts	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Well Pump Log - Pump No. 5

Date	Running Time (in hrs)	Number of Cycle Starts	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Well Pump Log - Pump No. 6

Date	Running Time (in hrs)	Number of Cycle Starts	Other Notes/Comments
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			
10th			
11th			
12th			
13th			
14th			
15th			
16th			
17th			
18th			
19th			
20th			
21st			
22dn			
23rd			
24th			
25th			
26th			
27th			
28th			
29th			
30th			
31st			

Daily Booster Pump Log - Pump No. 1

Date	Are Pump Operating Times Equalized?	Meter Readings		Pressure Gauge Readings		
		Run Time	Starts	Suction Side	Discharge Side	Is Pump On or Off?
1st	Check Box if Operating Times are Equalized:					Check if Pump is ON:
2nd	Check Box if Operating Times are Equalized:					Check if Pump is ON:
3rd	Check Box if Operating Times are Equalized:					Check if Pump is ON:
4th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
5th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
6th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
7th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
8th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
9th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
10th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
11th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
12th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
13th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
14th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
15th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
16th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
17th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
18th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
19th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
20th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
21st	Check Box if Operating Times are Equalized:					Check if Pump is ON:
22dn	Check Box if Operating Times are Equalized:					Check if Pump is ON:
23rd	Check Box if Operating Times are Equalized:					Check if Pump is ON:
24th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
25th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
26th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
27th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
28th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
29th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
30th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
31st	Check Box if Operating Times are Equalized:					Check if Pump is ON:

Daily Booster Pump Log - Pump No. 2

Date	Are Pump Operating Times Equalized?	Meter Readings		Pressure Gauge Readings		
		Run Time	Starts	Suction Side	Discharge Side	Is Pump On or Off?
1st	Check Box if Operating Times are Equalized:					Check if Pump is ON:
2nd	Check Box if Operating Times are Equalized:					Check if Pump is ON:
3rd	Check Box if Operating Times are Equalized:					Check if Pump is ON:
4th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
5th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
6th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
7th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
8th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
9th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
10th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
11th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
12th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
13th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
14th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
15th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
16th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
17th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
18th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
19th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
20th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
21st	Check Box if Operating Times are Equalized:					Check if Pump is ON:
22dn	Check Box if Operating Times are Equalized:					Check if Pump is ON:
23rd	Check Box if Operating Times are Equalized:					Check if Pump is ON:
24th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
25th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
26th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
27th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
28th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
29th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
30th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
31st	Check Box if Operating Times are Equalized:					Check if Pump is ON:

Daily Booster Pump Log - Pump No. 3

Date	Are Pump Operating Times Equalized?	Meter Readings		Pressure Gauge Readings		
		Run Time	Starts	Suction Side	Discharge Side	Is Pump On or Off?
1st	Check Box if Operating Times are Equalized:					Check if Pump is ON:
2nd	Check Box if Operating Times are Equalized:					Check if Pump is ON:
3rd	Check Box if Operating Times are Equalized:					Check if Pump is ON:
4th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
5th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
6th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
7th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
8th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
9th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
10th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
11th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
12th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
13th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
14th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
15th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
16th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
17th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
18th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
19th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
20th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
21st	Check Box if Operating Times are Equalized:					Check if Pump is ON:
22dn	Check Box if Operating Times are Equalized:					Check if Pump is ON:
23rd	Check Box if Operating Times are Equalized:					Check if Pump is ON:
24th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
25th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
26th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
27th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
28th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
29th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
30th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
31st	Check Box if Operating Times are Equalized:					Check if Pump is ON:

Daily Booster Pump Log - Pump No. 4

Date	Are Pump Operating Times Equalized?	Meter Readings		Pressure Gauge Readings		
		Run Time	Starts	Suction Side	Discharge Side	Is Pump On or Off?
1st	Check Box if Operating Times are Equalized:					Check if Pump is ON:
2nd	Check Box if Operating Times are Equalized:					Check if Pump is ON:
3rd	Check Box if Operating Times are Equalized:					Check if Pump is ON:
4th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
5th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
6th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
7th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
8th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
9th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
10th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
11th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
12th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
13th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
14th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
15th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
16th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
17th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
18th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
19th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
20th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
21st	Check Box if Operating Times are Equalized:					Check if Pump is ON:
22dn	Check Box if Operating Times are Equalized:					Check if Pump is ON:
23rd	Check Box if Operating Times are Equalized:					Check if Pump is ON:
24th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
25th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
26th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
27th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
28th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
29th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
30th	Check Box if Operating Times are Equalized:					Check if Pump is ON:
31st	Check Box if Operating Times are Equalized:					Check if Pump is ON:

Daily Instrumentation Equipment Check Log - 1

Date	Equipment Type	Verify All Signals	Calibrate input/ output	Clean as recommended	Replace standby batteries (as needed)	Operation Manual Settings Notes
1st						
2nd						
3rd						
4th						
5th						
6th						
7th						
8th						
9th						
10th						
11th						
12th						
13th						
14th						
15th						
16th						
17th						
18th						
19th						
20th						
21st						
22dn						
23rd						
24th						
25th						
26th						
27th						
28th						
29th						
30th						
31st						

Daily Instrumentation Equipment Check Log - 2

Date	Equipment Type	Verify All Signals	Calibrate input/ output	Clean as recommended	Replace standby batteries (as needed)	Operation Manual Settings Notes
1st						
2nd						
3rd						
4th						
5th						
6th						
7th						
8th						
9th						
10th						
11th						
12th						
13th						
14th						
15th						
16th						
17th						
18th						
19th						
20th						
21st						
22dn						
23rd						
24th						
25th						
26th						
27th						
28th						
29th						
30th						
31st						

Daily Instrumentation Equipment Check Log - 3

Date	Equipment Type	Verify All Signals	Calibrate input/ output	Clean as recommended	Replace standby batteries (as needed)	Operation Manual Settings Notes
1st						
2nd						
3rd						
4th						
5th						
6th						
7th						
8th						
9th						
10th						
11th						
12th						
13th						
14th						
15th						
16th						
17th						
18th						
19th						
20th						
21st						
22dn						
23rd						
24th						
25th						
26th						
27th						
28th						
29th						
30th						
31st						

Daily Instrumentation Equipment Check Log - 4

Date	Equipment Type	Verify All Signals	Calibrate input/ output	Clean as recommended	Replace standby batteries (as needed)	Operation Manual Settings Notes
1st						
2nd						
3rd						
4th						
5th						
6th						
7th						
8th						
9th						
10th						
11th						
12th						
13th						
14th						
15th						
16th						
17th						
18th						
19th						
20th						
21st						
22dn						
23rd						
24th						
25th						
26th						
27th						
28th						
29th						
30th						
31st						

Daily Instrumentation Equipment Check Log - 5

Date	Equipment Type	Verify All Signals	Calibrate input/ output	Clean as recommended	Replace standby batteries (as needed)	Operation Manual Settings Notes
1st						
2nd						
3rd						
4th						
5th						
6th						
7th						
8th						
9th						
10th						
11th						
12th						
13th						
14th						
15th						
16th						
17th						
18th						
19th						
20th						
21st						
22dn						
23rd						
24th						
25th						
26th						
27th						
28th						
29th						
30th						
31st						

Daily Instrumentation Equipment Check Log - 6

Date	Equipment Type	Verify All Signals	Calibrate input/ output	Clean as recommended	Replace standby batteries (as needed)	Operation Manual Settings Notes
1st						
2nd						
3rd						
4th						
5th						
6th						
7th						
8th						
9th						
10th						
11th						
12th						
13th						
14th						
15th						
16th						
17th						
18th						
19th						
20th						
21st						
22dn						
23rd						
24th						
25th						
26th						
27th						
28th						
29th						
30th						
31st						

Daily Security Checklist / Log

	Ensure Closed and Locked:				Fences - intact	Well Caps, Seals, Vents intact & sealed	Signs - visible & in good repair	Lights On & Working	Alarms On & Working	Work needed:
Date	Hatches	Doors	Windows	Gates						
1st										
2nd										
3rd										
4th										
5th										
6th										
7th										
8th										
9th										
10th										
11th										
12th										
13th										
14th										
15th										
16th										
17th										
18th										
19th										
20th										
21st										
22dn										
23rd										
24th										
25th										
26th										
27th										
28th										
29th										
30th										
31st										

Other Notes and Comments Log

Date	Note/Comment

(Continued Next Page)

Other Notes and Comments Log

Date	Note/Comment

Recommended Weekly Operational Duties

	Check box and initial if task completed					
Task	Week 1	Week 2	Week 3	Week 4	Week 5	Note/Comment/Repairs/Changes
Inspect chlorine and fluoride testing equipment.						
Ensure all fire hydrants are accessible.						
Record pumping rate for each well our source water pump.						
Check water pressure in each well house and pump house.						
Conduct weekly security check. Are Security Measures in Good Condition?						
Inspect pump house plumbing for leaks.						
Check each backup power source to ensure it will operate when needed.						
Check and record water levels in hydro-pneumatic pressure tanks.						
Other: _____						
Other: _____						
Other: _____						
Other: _____						
Other: _____						
Other: _____						
Other: _____						

Weekly Chemical Equipment Testing Log

Equipment Name:_____

Week (Date)	Is Equipment Calibrated Properly? (Check box for “Yes”)	Are Reagents Clearly Marked and Safely Stored? (Check box for “Yes”)	Are Reagents Expired? (Check box for “Yes”)	Amount of Reagent on Hand	Initials of Recorder	Notes or Comments
1st						
2nd						
3rd						
4th						
5th						

Weekly Cleanliness Log

Week (Date)	Are Pump Houses and Grounds Clean? (Check box for “Yes”)	Are Fire Hydrants Accessible? (Check box for “Yes”)	Notes or Comments
1st			
2nd			
3rd			
4th			
5th			

Weekly Pumping Rate Log

Week (Date)	Well 1 Pumping Rate/Flow	Well 2 Pumping Rate/Flow	Well 3 Pumping Rate/Flow	Well 4 Pumping Rate/Flow	Well 5 Pumping Rate/Flow	Well 6 Pumping Rate/Flow	Notes/Comments
1st							
2nd							
3rd							
4th							
5th							

Weekly General Security Check Log

	Are Security Measures in Good Condition? (Check box for yes)						
Week (Date)	Location 1 _____	Location 2 _____	Location 3 _____	Location 4 _____	Location5 _____	Location 6 _____	Notes/Comments
1st							
2nd							
3rd							
4th							
5th							

Recommended Regular Monthly Operational Duties

Task	Completed (Check/Date)	Note/Comment
Read electric meter at pump house(s). Record results in ELECTRICITY USE section of Ongoing Logs File.		
Take appropriate monthly water quality samples. Record results in WATER QUALITY section of Ongoing Logs File.		
Check and record static and pumping levels of each well. Record results in PUMPING LEVELS Ongoing Logs File.		
Read all customer meters and compare against monthly total water production.		
Inspect well heads.		
Inspect and lubricate locks.		
Check on-site readings against lab results.		
Confirm submittal of monthly reports.		
Check sump pumps, and well and pump house flood prevention or detection systems.		
Verify 30 to 60 day supply of chlorine is available.		
Submit chlorination reports.		
Check well water levels if source capacity is marginal or there are drought conditions.		
Check area for excessive vegetation or dangerous conditions (uncut grass, brush, dead trees, fire hazards, etc.)		
Inspect fencing and gates.		
Check station alarms.		
Calibrate/standardize testing equipment.		
Other:		
Other:		

December Specific Task Log

Task	Date Competed	Initials	Notes or Comments
Contact an electrician to check running amps on well pumps. (if not done in September).			
Verify unnecessary equipment is properly decommissioned.			
Review source water quality tests for trends such as increasing nitrate or seasonal coliform			
Evaluate general source capacity to meet water system demand. Compare water use and production figures.			
Prepare a demand forecast for coming year.			
Other:			
Other:			

Other Tasks:	
Assemble data for annual water audit. (Task may be shifted to correspond with fiscal year if you choose.)	
Conduct Leak detection program:	
Maintenance Needs:	