

ASSET MANAGEMENT PROGRAM

Verde Glen POA

Asset management consists of the following five steps:

- 1. Taking an inventory.** Before you can manage your assets, you need to know what assets you have and what condition they are in. This information will help you schedule rehabilitations and replacements of your assets.
- 2. Prioritizing your assets.** Your water system probably has a limited budget. Prioritizing your assets will ensure that you allocate funds to the rehabilitation or replacement of your most important assets.
- 3. Developing an asset management plan.** Planning for the rehabilitation and replacement of your assets includes estimating how much money you will need each year to maintain the operation of your system each year. This includes developing a budget and calculating your required reserves.
- 4. Implementing your asset management plan.** Once you have determined how much money you will have to set aside each year and how much additional funding (if any) you will need to match that amount, you need to work with your management and customers and with regulators to carry out your plan and ensure that you have the technical and financial means to deliver safe water to your customers.
- 5. Reviewing and revising your asset management plan.** Once you have developed an asset management plan, do not stick it in a drawer and forget about it! Your asset management plan should be used to help you shape your operations. It is a flexible document that should evolve as you gain more information and as priorities shift.

You should reevaluate your plan every year, updating each of the worksheets provided in this file.

ASSET MANAGEMENT SYSTEM

Verde Glen POA

Worksheet #1: Asset Inventory, Condition, Useful Life and Service Required

(Date Worksheet Completed: 01/04/2024)

ASSET INVENTORY				ASSET CRITICALITY (1)			ASSET CONDITION		REMAINING USEFUL LIFE				SERVICE/ACTION REQUIRED	
ASSET	Asset Details	Year Installed	Service History	Capacity	Public Health	Criticality	Present Condition	Likelihood of Failure	Asset Age (Years)	Expected Life (Years) (2)	Adjusted Useful Life (Years)	Remaining Useful Life (Years)	Service	Priority
Booster Pump Station: VG1 - Pump 1	1.5 HP pump, 1.5" galvanized discharge piping, flow meter, psi gauge	2007	No service history	H	H	H	Poor	H	16	15	15	0	Plan for replacement; maintain as per manufacturer recommendations	H
Booster Pump Station: VG2 - Pump 1	1.5 HP pump, 1 1/4" galvanized discharge piping, flow meter, psi gauge	2014	No service history	H	H	H	Average	M	9	15	15	6	Purchase critical spare; maintain as per manufacturer recommendations	L
Building: VG2 Pumphouse	100 sq ft wood frame bldg, with water and electrical utilities	1963	No service history	M	M	M	Good	L	60	60	90	30	In very good condition despite age. Inspect regularly; maintain records	L
Building: VG1 Pumphouse	540 sq ft wood frame bldg, with water and electrical utilities.	1960	No service history	M	M	M	Good	L	63	60	90	27	In very good condition despite age. Inspect regularly; maintain records	L
Chlorine System	Sodium hypochlorite disinfection; one 3 gph peristaltic pump, automated	2022	Newly installed, no service history	L	H	H	Good	L	1	10	10	10	Purchase on-line chlorine analyzer; maintain as per manufacturer recommendations.	L
Distribution: Meters (services)	45 - 3/4" direct read meters	1997	No service history	M	L	M	Average	M	26	15	28	2	Plan for replacement; implement meter testing program	H
Distribution: Pipe	2" - 4" ABS and Sch 40 PVC; sections of well and pumpstation piping includes galvanized.	1970	No service history; approx 75% of pipe is from 1970	M	M	M	Average	M	53	40	57	4	Plan for replacement (including small sections of galvanized pipe); inspect pipe condition during main break events; track main break history	M
Distribution: Valves	One (1) 2" isolation valve	2021	No service history	M	M	M	Good	L	2	40	40	38	Implement valve exercise program; maintain records	L

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Distribution: Valves	<i>Two (2) 2" isolation valves</i>	2012	No service history	M	M	M	Good	L	11	40	40	29	Implement valve exercise program; maintain records	L
Equipment: Generator	<i>7550 watt Generac generator; powers well pump and booster pump at VG1 Pumphouse</i>	2012	No service history	M	M	M	Average	M	11	15	15	4	Plan for replacement; exercise/service as per manufacturer recommendations.	M
Facility Site: VG 1 Pumphouse	<i>Secured pumphouse, secured well head, no perimeter fence, no outdoor lighting; no facility ID signage.</i>	1960	Recently painted; new roof shingles	M	M	M	Good	L	63	60	90	27	Lifespan extended due to recent repainting, roof appears to be in good shape; Inspect regularly; maintain records	L
Facility Site: VG 2 Pumphouse	<i>Secured pumphouse, no perimeter fence, no facility ID signage.</i>	1963	Recently painted; roof in good condition	M	M	M	Good	L	60	60	90	30	Lifespan extended due to recent repainting and roof shingle replacement; Inspect regularly; maintain records	L
Pressure Tank: 1	<i>500 gal hydro tank. 1.5" galvanized inlet/outlet piping. Located inside VG2 pumphouse; fed by VG2 booster pump; automated.</i>	1959	Painted and refurbished in 2019	L	L	L	Average	M	64	60	70	6	Plan for future internal inspection; lifespan extended due to recent refurbishing.	L
Pressure Tank: 2	<i>115 gal bladder tank. 1 1/4" galvanized inlet/outlet piping.</i>	2019	No service history	L	L	L	Good	L	4	15	15	11	Inspect regularly; maintain records	L
Pressure Tank: 3	<i>115 gal bladder tank. 1 1/4" galvanized inlet/outlet piping.</i>	2019	No service history	L	L	L	Good	L	4	15	15	11	Inspect regularly; maintain records	L
Storage Tank: Tank 1	<i>10K gal above ground steel storage tank. 1" inlet, 2" outlet galvanized piping.</i>	2002	Refurbished in 2019	M	H	H	Good	L	21	60	60	39	Inspect regularly; maintain records	L

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ASSET INVENTORY				ASSET CRITICALITY (1)			ASSET CONDITION		REMAINING USEFUL LIFE				SERVICE/ACTION REQUIRED	
Storage Tank: Tank 2	10K gal above ground steel storage tank. 1" inlet, 2" outlet galvanized piping.	2002	Refurbished in 2019	M	H	H	Good	L	21	60	60	39	Inspect regularly; maintain records	L
Well (55-641886)	14 gpm well, 8" PVC casing, 1" galvanized discharge piping. No flow meter, feeds 10K gal storage tanks.	1962	Pump replaced in 2015. No video inspection records.	H	H	H	Average	M	61	35	65	4	Install flow meter on discharge line; plan for future inspection; add electrical junction box; lifespan extended due to recent pump replacement.	M

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ASSET INVENTORY	ASSET CRITICALITY (1)	ASSET CONDITION	REMAINING USEFUL LIFE	SERVICE/ACTION REQUIRED
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Notes:

(1) Asset Criticality (Consequence of Failure):

L - LOW - Minimal or no impact

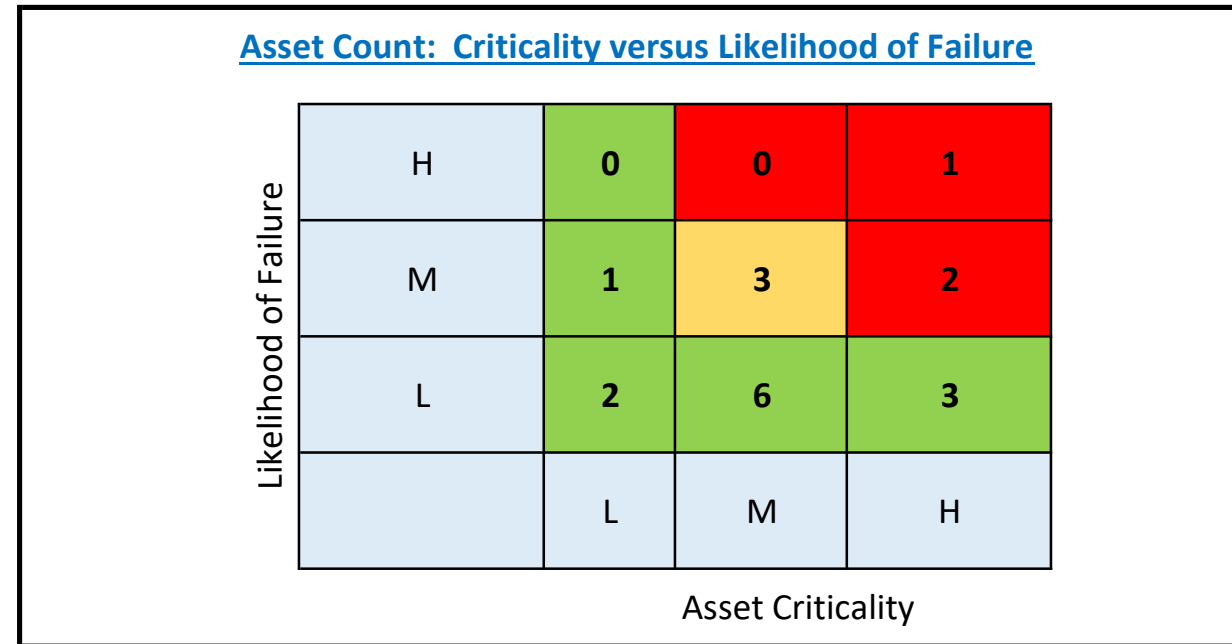
M - MODERATE - Some impact, limited persons impacted and/or short-duration of impact

H - HIGH - Widespread impact

(2) Expected Useful Life:

Asset	Expected Useful Life (in years)
Intake Structures	35-45
Wells and Springs	25-35
Galleries and Tunnels	30-40
Chlorination Equipment	10-15
Other Treatment Equipment	10-15
Storage Tanks	30-60
Pumps	10-15
Buildings	30-60
Electrical Systems	7-10
Transmission Mains	35-40
Distribution Pipes	35-40
Valves	35-40
Blow-off Valves	35-40
Backflow Prevention	35-40
Meters	10-15
Service Lines	30-50
Hydrants	40-60
Lab/Monitoring Equipment	5-7
Tools and Shop Equipment	10-15
Landscaping/Grading	40-60
Office Furniture/Supplies	10
Computers	5
Transportation Equipment	10

Note: These numbers are ranges of expected useful lives drawn from a variety of sources. The ranges assume that assets have been properly maintained.



Ref: Asset Management: A Handbook for Small Water Systems, USEPA

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Worksheet #2: Required Reserve

(Date Worksheet Completed: 01/04/2024)

Asset	Activity	Years Until Action Needed	Estimated Cost	Reserve Required Current Year
Short-term Projects (1-3 years):				
Booster Pump Station: VG1 - Pump 1	Replace 1.5 HP pump	1	\$ 1,500	\$ 1,500
Distribution: Mains - critical spare parts	Purchase critical spare parts for main breaks	1	\$ 5,000	\$ 5,000
Distribution: Meters (services)	Annual allowance: Replace 45 - 3/4" direct read meters (estimate provided by utility)	3	\$ 22,500	\$ 7,500
Electrical system: Well (55-641886)	Add electrical junction box; bring up to code	1	\$ 500	\$ 500
Facility Site: VG1	Add facility ID signage which includes emergency phone number; add No Trespassing signage	1	\$ 250	\$ 250
Facility Site: VG1	Add outdoor security lighting	1	\$ 250	\$ 250
Facility Site: VG2	Add facility ID signage which includes emergency phone number; add No Trespassing signage	1	\$ 250	\$ 250
Current year reserve requirement for short-term projects (\$/year):				\$15,250
Long-term Projects (>3 years):				
Booster Pump Station: VG2 - Pump 1	Replace 1.5 Hp pump	7	\$ 1,500	\$ 214
Distribution: Pipe	Annual allowance: Upgrades - 4" Water Lines VG3	5	\$ 250,000	\$ 50,000

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Worksheet #2: Required Reserve

(Date Worksheet Completed: 01/04/2024)

Asset	Activity	Years Until Action Needed	Estimated Cost	Reserve Required Current Year
Equipment: Generator VG1	Anticipated replacement of 7550 watt Generac generator at VG1	5	\$ 1,000	\$ 200
Equipment: Generator VG2	Purchase generator for VG2 pumphouse to power booster pump during emergency outage	5	\$ 1,000	\$ 200
Facility Equipment	Purchase alarm autodialer to monitor pump failures, storage levels, etc.	5	\$ 5,000	\$ 1,000
Pressure Tank 1: VG1	Inspect 500 gal pressure tank	7	\$ 500	\$ 71
Storage Tanks	Purchase level sensor for each tank	5	\$ 1,500	\$ 300
New Well	Install a new well as backup to Well #1	5	\$ 100,000	\$ 20,000
Well (55-641886)	Perform video inspection of well; add 1" flow meter to discharge line	5	\$ 5,000	\$ 1,000
Current year reserve requirement for long-term projects projects (\$/year):				\$72,986
TOTAL CURRENT YEAR RESERVE REQUIREMENT (\$/YEAR):				\$88,236

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Worksheet #3: Budgeting

(Date Worksheet Completed: 01/04/2024)

From 2021 Income/Loss Statement: 01/01/2023 - 12/31/23

Total Revenue:	\$37,001
Total Operating Expenses:	\$48,165
Operating Income / (Loss):	(\$11,164)
Other Income / (Expense)	(\$3,845)
Net Income/(Loss):	(\$15,009)
Reserve Carried Over from Previous Year:	\$9,362
Current Reserve:	(\$5,647)
Additional Reserves Needed:	
Total Required Reserves (from Worksheet #2):	\$88,236
Current Reserves:	(\$5,647)
Additional Reserves Needed, \$/year (Total Required Reserve - Current Reserve):	\$93,883