#### PUBLIC WATER SUPPLY **DISTRICT NO. 1** OF GASCONADE COUNTY MISSOURI PWSD NO. 1

#### POLICY MANUAL

DATE; april, 26 2019

APPROVED BY BOARD OF DIRECTORS

DATE:

CHANGE 1:

APPROVED BY BOARD OF DIRECTORS

DATE:

DATE: Ribert KAYSER Robul Kayse Mike Garlock Mike Garlock JIM VERHULST Jim Verhulit RANDY FULLER Rang Jull RAY OLDFATHER Rang Jull

## PUBLIC WATER SUPPLY DISTRICT No. 1 OF GASCONADE COUNTY MISSOURI (PWSD NO. 1) POLICY MANUAL SECTION 1 General Information

Policy: IA DEVELOPMENT

1. Time line for PWSD NO. 1

a. 1966 - Peaceful Valley Property Owners Association (PVPOA) was established for Peaceful Valley Lake (PVL) members by five business members of Owensville, Mo. Note-one of very few lake developments with central water and sewer systems.

b. 1970 – US Environmental Protection Agency (EPA) was established by the US Congress to protect the US environment.

c. 1970 – Mo. Public Service Commission (PSC) begins to set water and sewer rates to protect PVL members from excessive rates.

d.1972 – Peaceful Valley Service Company (PVSC) was established to maintain water and sewer system for PVL members. PVSC was owned by PVL members and governed by P.V.P.O.A. board of directors. PVSC established its own board of directors. The company at that time was a For Profit company.

e. 1974 – Missouri Department of Natural Resources (DNR) was established by Mo. Congress to enforce EPA regulations.

f. 1987 – DNR requires a certified operator to perform day to day operation of PVSC.

g. 2013 – EPA established limits on amount of ammonia that can be discharged from sewer lagoons into creeks to protect small living organisms under rocks from excessive ammonia in all Lagoons across the U.S.

h. 2013 - PVL lagoon is tested for ammonia discharge once a month. PVL lagoon discharge is out of new EPA ammonia limits.

i. 2013 – Engineering firms estimate approximately one million dollars to bring PVL lagoon ammonia discharge to meet EPA regulations.

J. 2014 – PVSC board of directors file for rate increase to build up funds to solve the problem.

k. 2015 – PSC denies rate increase. Their rules only allow funds to be recouped after they are spent.

l.2015 – Missouri Secretary of State approves PVSC request to become a Not For Profit Company to allow applying for grants.

m. May 4. 2016 - PVSC board of directors filed a motion in court to establish a Public Water Supply District to be able to set rates and obtain government grants without PSC rules.

n. May 20th 2016 - Court approves PVSC Motion. (see appendix I)

o. August 2, 2016 - PVL permanent home owners approve PWSD NO. 1 of Gasconade County.

p. August 26, 2016 Circuit Court of Gasconade County issues Decree of incorporation of Public Water Supply District No. 1 of Gasconade County. (see appendix II)

q. September 17, 2016 - PVSC Board of Directors issues a resolution authorizing the transfer of all assets of PVSC to PWSD NO. 1. (see appendix III)

r. PWSD NO. 1 is established in accordance with Missouri revised Statues, Section 247.040.1 "PUBLIC WATER SUPPLY DISTRICTS" DATED August 28, 2014 (approximately 15 pages)

s. October 2016 – PWSD NO. 1 is governed by a board of five directors per PWSD NO. 1 bylaws dated October 7, 2016

2. PWSD NO. 1 is subject to the latest Missouri sunshine law to govern open meetings and records law.

## POLICY 1B FACILITIES

## **1. SHARED FACILITIES**

PVPOA provides office space for PWSD NO. 1 in the lodge. PWSD NO. 1 pays 50% of the lodge electricity & propane bill.

2. PWSD NO. 1 FACILITIES OCCUPYING COMMON GROUND Easements are granted to PWSD NO. 1 by PVPOA for access to these items at no extra cost.

> a. Water Tank b. Water Pump and Well c. Pump House d. 60 PSI Pump & Pump House e. Parts in storage in lodge and maintenance shed. f. Sewer Lift Station g. Lagoon h. Water & Sewer Lines I. Sewer Manholes

#### APPROVED by PWSD NO. Board of Directors

Date: Table of Contents Policy: A. Annual Budget 2 B. Employee hiring, pay period & mileage reimbursement 3 C. New member application 5 7 D. Office hours & emergency contacts E. Fees & Billing (see also CUSI Procedure Book) 8 F. Inspection check list for water and sewer hookup for new homes 15 G. Authorized signatures 17 H. Purchasing 19 I. Clerk job description 21 J. Accounts receivable 25 K. Insurance & fire extinguisher 27 L. Board Meeting 29 M. Policy revisions & approvals 31 N. Members Complaints 33 O. Legal Proceedings 36

Policy A : Annual Budget

- 1. Description of Budgeting:
- 2. Process
  - a.) The Treasurer serves at the Chairman of the Budget Committee. The Committee shall present the proposed Budget for the next year to the PWSD NO> 1 Board at the January meeting.
  - b.) The Budget Committee shall present the proposed Budget for the next year to the PWSD NO. 1 Board at the January board meeting.
  - c.) If a water rate increase would be required the board would vote and report it to the member of the PWSD NO. 1. If a sewer rate increase is necessary, prior to establishing any such sewer charges, a public hearing shall be held thereon and at least thirty (30) days' notice shall be given thereof (R.S.M.O SECTION 250.233.)
- 3. At each monthly meeting the Clerk shall present a spread sheet showing monthly and year to date expenses for each budget item. Exhibit II A 1 is an example
- 4. Audit: An independent accountant verifies the monthly accounting practices. This is done again at the end of the year for presentation to the PWSD NO. 1 Board. If need arises, the State Auditor may audit the books.

Policy B: Employee hiring, pay periods, mileage reimbursement & special occasion expenses.

General Guidelines:

All prospective employees will be interviewed by the members of the PWSD NO. 1 Board of Directors. Consensus of the Board members is required. The prospective employee shall be given a copy of the job description with a full explanation of the duties required.

Employees, Salaries & Wages:

Salaries and wages will be paid in accordance with the local market rate. Overtime to be paid according to State & Federal regulations. Overtime to be approved by a director. PWSD NO. 1 SHALL PROVIDE NO BENEFITS. All employees shall be paid every two weeks. (Usually on Wednesdays)

Reviews of salary/wage adjustments and bonuses:

- a.) Since we do not have any full- time employees, no one is eligible for vacation or holiday pay.
- b.) Salary cap will be determined by the Board of Directors and reviewed annually.
- c.) Bonuses will be paid based on business results.

Typical employee hours:

- a.) Office: 4 hours per day 3 days per week.
- b.) Systems Operators: 10 hours per week. Hours may be divided as personnel desires.
- c.) Operator will receive a minimum of 2 hrs for Emergency response.
- d.) Employee will be paid for time invoiced for training and certification.

Mileage reimbursement will be based on the current IRS directive:

1. Read Meters and inspect5
2. Round trip mileage from the office to
a.) Bank9
b.) Post Office7
c.) Accountant8
d.) Wal-Mart10
e.) Pioneer8
f.) Washington82
g. Jefferson City97
h.) Warrenton110
i.) Wright City120
j.) Union78
k.) Hermann70
l.) Other @ current IRS Rates

Policy C: New Member Application (see next page exhibit II-A2

## EXHIBIT II-A2 Public Water Supply District No. 1 of Gasconade County 3408B Peaceful Valley Rd. Owensville, mo. 65066 (573) 437-7808

#### APPLICATION FOR WATER AND SEWER SERVICE

Lot Location	Example (EH 1 BLK 1 LOT 1)		
Service Address			
Previous Owner:		Acct #	
Primary Account Holder			
Name		S.S.#	
Address			
D.O.B			
	Cell Phone		
Email Address			
	Phone		
Employer Address			
Joint Account Holder (If Applicable)			
Name			
Address			
D.O.B	D.L.State:	Number	
Home Phone:	Cell Pho	ne	
Email Address			
Employer	Phone		
Employer Address			
Renter If Renter, please pro Owner			
Account Holder Signature		Date	
Joint Account Holder Signature			

Policy D: Office hours and emergency contacts

Office hours are: Monday-Wednesday-Friday from 9:00 a.m. – 1:00 p. m.

Emergency Contacts:

Operations Manager: Don Burrows: Cell 573-789-5051

Back up Operator: Dave Brown: Cell 573-259-8181

Clerk: Alma Zykan: Cell 573-259-0868

Section II Administration

Policy E: Fees & Billing

#### PUBLIC WATER SUPPLY DISTRICT NO. 1 OF GASCONADE COUNTY MISSOURI

POLICY MANUAL

Amendment no. 1 (dated 1/11/18)

The purpose of this Amendment is to clarify and update parts of the Policy Manual related to rates fees and customer service. If there is a conflict between on this Amendment and the Policy Manual, this Amendment will govern, We use the term "customer" and "homeowner" interchangeably. We acknowledge that we also have customers that are not homeowners and pay only for Water Availability or Spigots. Most of the information in this Amendment is for homeowners.

- 1. RATES AND FEES
- 2. BILLING AND NO PAYMENT
- 3. NEW CUSTOMERS/STATUS CHANGES FOR EXISTING CUSTOMERS

#### **1.RATES & FEES**

..

- a. Quarterly Rates
  - i. Sewer Service \$36.85
  - ii. Lagoon Project Surcharge \$140.00
  - iii. Water Service (home, PVPOA, spigots) \$48.45
  - iv. Water Availability \$15.00

A homeowner will pay 1,2,3, every quarter. There are also small taxes and DNR fees that are less than \$10.00 per year.

b. Fees (per person)

i. Water and Sewer tap-in/connection for new homes.

- 1. Cost varies depending on conditions
- 2. Homeowner pays all cost
- 3. Homeowner to meet with PWSD Operator prior to Construction to get an estimate of cost.
- 4. Inspection (first time) .....no charge
- 5. Re-Inspection.....\$30.00
- ii. Returned check (insufficient funds) .....\$30.00

iv. Water turn on ("reconnect") ...... \$30.00 (after bill is paid, or when a new customer applies for service)

v. Late payment (water, sewer) ...... \$20.00

vi. Late payment- Water Availability and spigots.......\$10.00

vii. Fees for copying public records are \$.10 per 8 ½ by 11 page plus cost of clerical time. Fees for photos, disc or other medium will be at cost to reproduce plus clerical time (RSMO section 610.206.1)

#### 2. BILLING AND NON- PAYMENT

a. Invoices are mailed January 1, April 1, July 1, October 1.

b. Payments are due the 21<sup>st</sup> of the month.

c. Of you pay with cash, you must get a receipt from the PWSD NO.1 office, not the PVPOA office.

d. If payment is not received by the 21<sup>st</sup> PWSD will mail a "disconnect: notice (copy attached).

e.) If payment (plus late fee of \$20.00 is not received by the 7<sup>th</sup> of the following month water will be shut off and service discontinued.

f.) To restore service, customer must pay:

i. Unpaid balance

ii. Water shut off

iii. Water turned on

iv. Late fee

g.) For Water Availability customers that don't pay on time, PWSD NO.! will use whatever legal means and efforts available to recover payment. Customer will also be responsible for the cost of those means and efforts.

## 3. NEW CUSTOMERS STATUS CHANGES FOR EXISTING CUSTOMERS

A. New home being built: Customer shall meet with the PWSD Operator in the earliest stages of their project to better understand the locations of existing water and sewer lines. This will allow the PWSD and customer to select the best possible connection locations that have the lowest cost to the customer and allow for access and maintenance by customer and PWSD. There are a wide range of conditions that can affect the cost of your connections. The best case is that both water and sewer lines are on or adjacent to your property. If this is not the case, the further they are from your property, the higher the cost. This cost can become prohibitive and affect the financial viability of your project. The PWSD Operator will provide and estimate of the connection

cost as quickly as possible, depending on the conditions. The customer also has other requirements by the PVPOA (Property owners Association) that must be satisfied prior to construction.

i. The PWSD (and/or its contractor) will:

1. The PWSD (and/or its contractor) will:

a. Locate excavate and expose the main.

b. Tap the main, install a service line and a shut-off valve, and leave the shut-off valve exposed for connection by the homeowner.

c. Backfill from main to shut-off valve.

d. Patch the road, if needed.

e. Inspect the homeowner's line from the shut-off valve to the house, prior to backfill. There is no charge for the first inspection.

f. The homeowner will reimburse the PWSD for all of these costs. There will be no mark-ups applied to these costs.

2. The homeowner (or his contractor) will:

a. Excavate from the shut-off to the house.

- b. Furnish and install the water line.
- c. Call PWSD to inspect prior to backfill.
- d. Backfill after approved.
- e. Be responsible for all of these costs.

3. This process will be different more complicated, and more expensive if lines are not on or adjacent to the property.

ii. Sewer connections for a new home.

- 1. The PWSD will:
  - a. Locate the main.

b. Furnish and install a connection fitting on the main (after excavated and exposed by the homeowner or his contractor).

c. Inspect the homeowner's line from the main to the house, prior to backfill.

- d. All of these costs will be billed to the homeowner.
- 2. The homeowner (or his contractor) will:

a. Excavate from the house to the main and expose the main at the connection point.

- b. Furnish and install the plpe from the house to the main.
- c. Call PWSD to inspect.
- d. Backfill the trench.
- e. Be responsible for all of these-cost.

3. This process will be different, more complicated and more expensive if lines are not on or adjacent to the property.

b. Buying an existing home. The buyer fills out an application and pays a "Water Turn-on" fee of \$30.00.

- c. Selling a home. The seller:
  - i. Request Water Shut-off date.
  - ii. Pays Water Shut-off fee \$30.00.

iii. Pays pro-rated quarterly fees for water and sewer to the shut-off date. The Lagoon Project Surcharge fee continues until the home is sold.

#### WATER AVAILABILITY FOR MULTIPLE LOTS

Property owners who own multiple lots will pay water availability on all lots. The rate will be as established by the PWSD NO. 1 Board of Directors. The only exception is the property owners who have legally combined lots. They will pay only one fee. Property owners must show proof of legally combined lots from the Gasconade County Court House.

#### PROCEDURE FOR DOING QUARTERLY BILLING

- A. Refer to the Continental Utilities Solution Inc. (CUSI) manual.
- B. Following these instructions will ensure billing is accurate and complete.
- C. If question arise you can call CUSI directly for Technical Assistance @ 1-800-240-1420

Section: II Administration

Policy F: Inspection Check List for New Homes Water & Sewer

# PWSD NO. 1 3408B PEACEFUL VALLEY RD. OWESVILLE, MO. 65066 PHONE (573) 437-7808

# INSPECTION CHECK LIST FOR WATER AND SEWER HOOK-UP

CUSTOMER NAME:					
ADDRESS:					
MEMBERSHIP#:					
WAER HOOK UP DATE:					
		-			
LOCATION OF WATER TIE IN	FT	FROM	PROP LINE		
SEWER HOOK UP DATE					
LOCATION OF SEWER TIE IN	FT	FROM	PROP LINE		
WORK PERFORMED BY		DATE			
INSPECTED BY		DATE			
APPROVED BY		DATE			
BE SURE TO TAKE APPROPIATE PHOTOGRAPHS AND SAVE THEM					
Material used					
Contractors cost					
Street repair					

Section II Administration

Policy G: Authorized Signatures

Certain documents and records require the signature of one or more officers/board members of the PWSD NO. 1. After election of new officers, the new board shall designate the authorized signers. New signature cards and documents shall be filled out and sent to the appropriate institutions. The following documents require signatures:

A. Checking Accounts, Money Market Accounts & Certificate of Deposit, three persons shall be authorized to sign checks.

- 1. President
- 2. Vice President
- 3. Clerk

Section II Administration

Policy H: Purchasing

#### Purchasing

General Guidelines:

1. If purchase is under \$1000 any board member, Systems Operator, or Clerk may authorize the expenditure.

2. Any check over \$1000 requires two (2) signatures President/Clerk or Vice President/Clerk.

3. If the purchase is \$1000-\$1999 the documentation of the two (2) written bids are required with the approval of the Board of Directors. If only one (1) bid can be obtained, the board members may approve the purchase provided the bid is reasonable.

4. If the purchase is \$2000 or more three (3) bids are required if possible and approval by the directors.

**5. EXCEPTION:** Urgent expenditures may be approved by the board members between meetings.

6. All board members or their designate shall be approved to make purchases within the above guidelines at the list of vendors below.

(see Clerk for list of vendors)

Section II Administration

Policy I: Clerk Job Description

#### CLERK

1. The duties of the Office Clerk each day is to see that PWSD NO. 1 is managed with precise and ultimate care.

2. Keep an accurate record of the Board Members names, addresses and telephone numbers.

3. The office clerk responsible for relaying any and all messages to Board Members and Systems Operator (s).

4. It is the responsibility of the clerk to see that the office is kept clean and to have office supplies such as stationary, envelopes, stamps, pens, etc. on hand to maintain the quality of work done each day.

5. It is the responsibility of the clerk to see that all lights and any running water is turned off before leaving the office. All doors leading to the lodge and /or office must be locked when leaving.

6. It is the responsibility of the clerk to report to the Board any offensive behavior (by any Individual).

7. It is the responsibility of the clerk to be polite when answering any questions that may be asked by members of Peaceful Valley Lake Estates.

8. As much information as possible should be stored in the computer and backed up each week. Backups should be kept in a safe place.

9. Any and all personnel information should be kept confidential. At no time should the Clerk give out social security numbers to any individual.

10. Clerk reports to the President and Vice President.

#### DAILY OFFICE PROCEDURES:

1. Office hours 9:00 a.m. to 2:00 pm (M W F)

2. Pick up mail at mailbox and check drop box outside the front door.

3. Turn on all machines, computer and typewriter.

4. Check for messages on answering machine, e-mail and respond to them in a prompt manner

5. Enter any payment into the computer.

6. File any bills in the "to be paid" slot in the file box. Check due date regularly and pay bills before due date.

7. Enter all written checks into Quick Books Pro. Be sure to code each with the appropriate expense account code. Three Rivers Electric Co-Op reads the electric meters. When the bills come in, the cost for the lodge is split with the PVPOA, PVPOA will give a copy of the bill to PWSD NO. 1 and check will be written out for our half of the bill and given to PVPOA.

8. Make sure all payments have been entered in members accounts.

- 9. Turn off all machines and lights and lock up.
- 10. Close office at 2;00 PM.
- 11. Lock all doors.
- 12. Drop off deposits at bank and mail all bills.

#### PAYROLL:

1. Payday is every other week on Wednesdays.

2. Figure all hours worked for the time period.

3.Calculate the payments for mileage for the month and add to check with wages included.

4. Subtract all taxes: (fica, federal, state or any garnishments)

5. Enter payroll in Quick Books and billing registry and code each entry with appropriate account number.

6. For online checks over \$1000 the invoice must be signed off by the President or Vice President.

#### PROCEDURE FOR END OF MONTH

1. Balance Sheet, Journal entries, General Ledger, Profit & Loss, Salary & Mileage and Bank Statements and e-mail them to Accountant.

2. Accountant figures financial statement and taxes.

3. Accountant sends back financials through Quick Books file, also copies of her Profit & Loss and Balance sheet.

4. Clerk incorporates accountants changes into our files.

5. Make enough copies of the previous month's minutes, agenda, bank statements, financials from accountant, copy of our Profit & Loss and Balance sheet and registry for each board member and employees attending the board meeting.

Section II: Administration

Policy J: Accountants payable and receivable

#### **General Guidelines**

a. All bills paid the previous month shall be presented to the Board for review at the monthly meeting.

b. All checks in the amount of \$1000 or more shall require the signature of the President or Vice President in addition to the clerk signature.

c. The Profit and Loss sheet from the accountant and our records should balance.

d. The office is to pay all bills before the due date and is to be paid through online banking at Legends Bank if possible.

e. It is the responsibility of the office to issue payroll checks to all employees. An accurate record of time cards must be kept with each employee file.

f. All cancelled checks receipts are to be filed in the file cabinet and must be accessible to any or all board members.

g. All paid bills must be filed in the appropriate file under the name of the recipient. Remember to put the date paid and check number on all checks.

h. All files are to be kept in order and easily accessible to any and all board members. At each year end, the files for that current year are then filed in a box labeled the year of its contents.

i. There are, at this time (3) Legends Visa cards issued to the office clerk, Operations Manager & Back Up Operator to be used when it is necessary to replenish supplies and equipment to run PWSD NO. 1.

Section II: Administration

Policy K: Insurance and fire extinguishers

#### GENERAL GUIDELINES:

The companies and types of insurance carried by PWSD NO.1 are listed below. This list will be revised as necessary when any listed criteria are changed.

Naught-Naught Policy CP0919511 INSURED DIRECTORS & OFFICERS, COMMERCIAL AND LIABILITY INSURANCE.

Missouri Employers Mutual (MEM) 1028711-07 WORK COMP INSURANCE

Policy to be reviewed annually.

#### FIRE EXTINGUISHERS:

Our liability insurance that we install and maintain fore extinguishers in the buildings they insure. The types of extinguishers, number and location will be determined by the local fire department. PWSD Nop.1 uses Franklin Fire Extinguisher Co. The fire extinguisher company must inspect fire extinguishers annually, we must inspect them monthly and record their condition.

Location of extinguishers: BOTH PUMP HOUSES AND LIFT STATION.

Section II: Administration

Policy L: Board Meetings

1. Board Meetings shall be held monthly on the 3<sup>rd</sup> Friday @ 5:30 PM in the Peaceful Valley Lake Lodge. Meeting time, place and date may change at the discretion of the Board.

2. Agenda shall be prepared by the Board President with input from other Board Members, Clerk and Operators. Agenda/board meetings have to be posted outside Lodge on bulletin board at least 24 hours prior to board meeting.

- 3. Clerk and Operators are expected to attend meeting.
- 4. Clerk shall prepare the following data for Board review.
  - a. Monthly financials report from accountant
  - b. Monthly budget update of expenses and income to date.
  - c. List of bills paid each month with short explanation.
  - d. Bank Statements.
- 5. Operator shall prepare the following data for board review:
  - a. List of repairs made.

Section II: Administration

Policy M: Policy Revisions and Approvals

#### **GENERAL GUIDELLNES**

The existing board policies were developed as a result of careful thought and study therefore, rules should not be changed arbitrarily without due diligence by the present board.

Therefore, the following procedure is established for modification to policies for PWSD NO> 1.

a. A proposal change can be suggested by any board member at a meeting. After discussion if the majority of the board agrees to consider the change it shall be put to a vote of the board at the following meeting.

b. If passed the new policy shall take effect immediately upon approval by the board.

EXCEPTION IN CASE OF EMERGENCY WHERE QUICK ACTION IS REQUIRED. THE PRESIDENT MAY CALL FOR A VOTE AT THE SAME MEETING PROVIDED A WRITTEN PROPSAL IS PRESENTED.

# PUBLIC WATER SUPPLY DISTRICT NO. 1 OF GASCONADE COUNTY MISSOURI PWSD NO. 1 POLICY MANUAL SECTION II ADMINISTRATION

Section II: Administration

Policy N: Complaints

### **GENERAL GUIDELINES**

a. In order for the complaints to be reviewed by the board of directors, a Formal Complaint Form must be filled out and presented to the board.

b. The board at the next meeting following receipt of the complaint form, will review the complaint.

- c. The member will be notified of the decision of the board as soon as possible after the meeting.
- d. The complaints will be kept on file at the office.

### COMPLAINT FORM: (SEE ATTACHED)

# PUBLIC WATER SUPPLY DISTRICT NO. 1 OF GASCONADE COUNTY 3408 B PEACEFUL VALLEY RD. OWENSVILLE, MO. 65066

### FORMAL COMPLAINT FORM

To: Board of Directors
Date of Occurance:
Description of Complaint;
Signed:
Date:
Account #:

## PUBLIC WATER SUPPLY DISTRICT NO. 1 OF GASCONADE COUNTY MISSOURI PWSD NO. 1 POLICY MANUAL SECTION II ADMINISTRATION

Section II: Administration

Policy O: Legal Proceedings

When legal action is taken by PWSD No. 1 for any reason, the filling shall include charges for:

Office time to prepare filing. Travel to/from court Summons service fee(s)

Monies due PWSD NO. 1 to include:

Past Due Charges Late Fees Court Cost Legal Fees Disconnect/reconnect fees Any other fees, which may arise due to filing and/or appearing in court for the case.

# Table of Contents

А	General	Page No.
A-1	System Operations	2
A-2	PVPOA Maintenance Agreement	6
A-3	Owensville Agreement	8
A-4	Safety	9
A-5	Outside Contractors	9
В	Water System	
B-1	Required DNR Testing	11
B-2	Well House Procedures and Records	15
B-3	Storage Tank	20
B-4	Pump House Procedures 60 PSI	21
B-5	Flushing of Mains	22
B-6	Procedure for Breaks and Repairs	24
B-7	New Service Connection	27
С	Sewer System	
C-1	Lagoon Permit and Testing	32
C-2	Lagoon Maintenance	37
C-3	Lift Station Operation and Maintenance	39
C-4	Manhole Inspection	43
C-5	Procedure for Breaks and Repairs	45
C-6	New Service Connections	46
C-6-A	Sewer Connection to lots having a sewer main adjacent to the Property	47
C-6-B	Sewer Connection to lots <u>NOT</u> having sewer main adjacent to Property	48

Section: III Operations Policy: III A General

Scope:

DNR requires that certain tests are performed and reports submitted and that the water and sewer systems are maintained adequately. They also require that the company employ a state certified operator to do this work this policy outlines the work of the operator. PWSD NO. 1 employs an Operations Manager (here in after called System Operator or Operator)

Section: III Operations Policy: III A-1 System Operator

Policy III-A-1 System Operator: Job description:

The system operator shall be responsible for the day to day operation and maintenance of the company sewer and water facilities. Operator shall hold water and sewer operations certification as required by the Missouri Department of Natural Resources. Company will pay cost of obtaining and maintaining these certifications.

## Assistant:

The Board of Directors may hire an Assistant Operator to insure 24/7 response to emergencies. Assistant is not required to hold certification but is encouraged to do so.

### Working Hours:

Normal working hours will be two hours per day, Monday, Wednesday, and Friday; one hour per day Tuesday, Thursday, Saturday and Sunday. Time may be split between the Operator and Assistant as required to maintain daily coverage. Established by the Board of Directors.

An Operator must be available 24 hours a day 7 days a week to handle emergencies. Presently we have an agreement with a contractor for emergency response. Operator will make decision of when to call contractor based on seriousness of problem. An Operator should be present to approve and document work when any contractor is on site. Operator will be paid for time spent with contractor.

Responsibilities of Operator:

1. Monitor well house, pump house, sewage lift station, sewage lagoon logging items as required by Section III-B, and III-C

2. Check office for critical phone messages, take action if necessary. This is necessary on days that office is not open.

3. Keep a daily log of problems, complaints, observations on daily activities report sheets.

Periodic:

1. Take or contract with vendor to take samples and do testing as required by DNR and outlined in Section III-A and III-B

1a. Drive all roads and look for signs of water leaks, manhole run over, and broken pipes or caps.

2. Fix minor problems with systems, contact vendors for repair of major problems, advise Board of major problems.

3. Perform preventive maintenance on systems as outlined in Section III-A, and III-B

4. Respond promptly to any problems, complaints, make arrangements to correct problems, advise Board of major problems.

5. Record time worked and daily mileage for Operator and Assistant in daily report sheets. Separate water and sewer labor. Certify and turn into office manager for preparation of payroll.

6. Monitor new construction:

6a. Meet with PVPOA building committee to review location of water and sewer lines

6b. Meet with owner as soon as possible to review regulations and establish water and sewer tap

in points.

6c. If extension of existing lines is required, Operator will contact contractor for pricing and advise customer of cost. Have work done and bill customer.

6d. Keep in contact with owner or contractor and arrange for tap in. Contractor will do work under supervision of Operator. Operator will take pictures of work done.

6e. Operator will complete inspection form and advise office that tap in is complete and quarterly billings can start.

7. Rules and regulations:

Operator shall keep current with all DNR and EPA rules and regulations and advise Board of any revisions that affect operations or budget.

8. Inspections:

Operator shall accompany DNR Inspectors on tour of facilities and advise Board of results.

9. Maintain excel program showing flow data using daily observations of water pumped, lagoon weir readings, lake level, lift station pot fires, and rain fall.

- 10. Inspect manholes periodically for leakage and heavy flow after rain event.
- 11. File water and lagoon reports required by DNR and post reports and notifications required.
- 12. Flush water lines as required to reduce brown water.

Section: III Operations Policy: III A-2 PWSD NO. 1 PVPOA Maintenance Agreement

Policy III A-2 PWSD NO. 1/PVPOA Maintenance Agreement

PWSD NO. 1 owns no tools or equipment, so in order to do some maintenance work an agreement with PVPOA that certain work requiring tools or equipment will be performed by the PVPOA maintenance personnel. Cost will be billed on an hourly basis.

PVPOA has an occasional need for maintenance work including:

- 1. mowing of grass at lagoon
- 2. mowing of grass at lift station
- 3. painting, etc

PVPOA has manpower and equipment necessary to do such work and has provided such service in the past.

Therefore:

The PWSD NO. 1 Operations Manager is authorized to generate work orders to PVPOA Site Manager to provide such work. Such work order shall be submitted to and approved by the PVPOA Maintenance Committee Chairman.

PWSD NO.1 will reimburse PVPOA for cost of labor at Site Managers wages as documented by completed work order.

Approved May 15, 2009 in the PVPOA Policy Manual signed by Jackie Dietrich and Tom Eilermann

# Addendum-A

Agreement between PVPOA and PWSD NO. 1 for the cutting of the grass and maintenance at lagoon

The cutting of the grass and any other maintenance which requires PVPOA equipment will be per Site Managers discretion. All labor of PVPOA maintenance personal will be turned into PVPOA Office Manager. Labor to be reimbursed to PVPOA by PWSD NO. 1.

Policy: III-A-3 Owensville Maintenance Agreement

Policy III-A-3 PWSD NO. 1/City of Owensville Maintenance Agreement

PWSD NO. 1 occasionally needs the use of heavy- duty sewer cleaning and inspection equipment and the city of Owensville has the proper equipment. PWSD NO. 1 has an agreement with the city to provide this service on an hourly basis. PWSD NO. 1 will reimburse the city for such services.

Section: III Operations Policy: III-A-4 Safety

Policy III-A-4 Safety

See Exhibit

A Safety Manual is in progress and will be attached at a later date. (see attached in hard copy of Policy Manual)

Section: III Operations Policy: III-A-5 Outside Contractors

Policy III-A-5 Outside Contractors PWSD NO. 1 uses contractors to assist with major problems

A. Qualified contractors are to repair breaks, make new connections and extend lines in both the water and sewer systems.

B. Qualified contractors are to do major maintenance on well house and pump house equipment.

C. Qualified contractors are to do major maintenance on lift station and do DNR testing of lagoon.

Operator may employ other contractors with board approval.

All contractors must have current certificates of insurance on file in the office.

Section III Operations III-B Water System Policy III-B-1 Required DNR Testing

## **III-B-1 REQUIRED TESTING AND RECORDS**

The operator shall insure that all water system tests required by the DNR are made and submitted and all records kept, these include:

Monthly DNR water sample, sample to be taken on Monday, Tuesday or Wednesday of each month. Sample must be received by DNR and tested within 30 hours of being taken.

Test procedure, DNR furnished sample bottles, lab form III-B-1A, mailing label, form <u>LAB-9</u> and return address labels are located in a box in office closet. Operator must reorder supplies from DNR when necessary.

Information to enter on Lab Form III-B-1A: Copy number from bottle and add to Form III-B-1A under Bottle # Write address in collection point space Write location # in sample location ID space Write in date (yyyy/mm/dd) time (24 hr. format) Write in your name (collected by) Write in your daytime phone number Collector signature Apply return address label to mailing label form

# SAMPLING PROCEDURE

Location of samples are determined by random selection. Operator is to select location from houses occupied full time.

Bleach and faucet shield located in Well House

Select faucet to sample, record location Apply shield Run water for 30 seconds Spray bleach around threads and inside of tap, wait 3 minutes Run water for 10 seconds Take sample, *DO NOT OVERFILL BOTTLE* Close bottle firmly, place in shipping box Ship to DNR (before 2:00 p.m.) Enter information on Form III-B-1B File copy of form in office

# **MATERIAL SPECIFICATION**

<u>ltem</u> Bleach	<u>Description</u> Spray Bottle	<u>Supplier</u> Wal-Mart	<u>Stock Amt</u> 1 Gal.
Forms & Mailers	DNR Package	DNR	10 in box reorder @3
Sample Di Bottles	NR Package	DNR	
Yearly Samples			
Package is Sample is Results re 2. <u>Sample analysi</u> Yearly (va Package is Sample is Results re 3. <u>Copper and Le</u>	aries by month) s furnished by DNR taken at Well House eported by FNR and filed in <u>is for Public Water Supplies</u> aries by month) s furnished by DNR taken at Well House eported by DNR and filed in <u>ad</u> r DNR requires testing and	office	

Order #: 8337		REPORT TO:	BILL	TO:					
Pages in Order: 1	of 1	2570	2961						
Containers in Ord	er: 1	GASCONADE PWSD #1 1689 LAKE SHORE DR OWENSVILLE, MO 65066-0000	1101	PARTMENT OF NATURAL SOURCES RIVERSIDE DRIVE RSON CITY, MO 65102					
		Requested	Analyses/Tests						
	PUBLIC DRINKING WATER BACTERIAL ANALYSIS								
F	Total Coliform Bacteria and E. coli (Present/Absent Test) PRINT LEGIBLY. Instructions for completing form are supplied in the Collection Kit. If desired, make a copy of the completed form for								
Environmental Sample Collection Form	your records. For compli- at (573) 751-5331 or you	ance monitoring questions, contact the M r regional office. For laboratory test resul 3334. To order additional collection kits, o pecimentestforms.php.	lissouri Department of Natu	ral Resources-Public Drinking Water Branch tact the Missouri State Public Health 751-4830 or visit the website at					
Col	Collected Date:		Collected Time:						
ele Env		yyyy-mas-dd	INTER DEPARTMENT & ENVIRONMENT CONTENTS	24 Peter Onicate States					
amp		MO6036015 MOastitetan	Facility Id:						
ő	Sample Type:	ioutine, repeat, special, replacement, source	Sample Collection Point	Service and the service of the servi					
	Location:	address or name of campling point	Collector:	best region is the entry					
	Collector Phone:	000/111-2222	Sample Category:						
	Repeat Location:		Bottle Number:						
	Free Chlorine:	upstream, downstream, original, source, other	Total Chlorine:						
		ng/L	nen er en	ang-2					
	Collector Signature:	attest the information provided is accurate.		GASCONADE					
Missouri Department of Health & Senior Services State Public Health Laboratory 101 N. Chestnut PO Box 570 Jefferson City, MO 65102 http://www.health.mo.gov/lab/index.php Bill Whitmar, Laboratory Director	Received By: Evidence of Tampering: Date Printed: 2017-01-11 Bottles Received:	Towns Towns	pH:	Cooling: Yes No					
SD 062015	BUILD ID	BUILD ID		PLACE THE PLANE OF THE SECTION LABEL WITHER RESERVEN					

DEC JULY JUNE NON OCT AUG SEP MAY APR MAR FEB JAN Date Location # Location address D.N.R. MONTHLY WATER TEST Sample Type 20 \_\_\_\_ (year) Time RESULT

FORM III-B-1B

WATER

Section 3-14

14

<u>Section: III Operations</u> <u>III-B Water Systems</u> <u>Policy: III-B-2 Well House Procedures and Records</u>

### **III-B-2 Well House Procedures and Records**

Maintenance For major problems Operator will decide steps to correct problem.

Monthly Maintenance- First week of month

Service tank level controls:

Turn pump control off Flush out line from tank to pump control Drain line by opening blue valve for 10 seconds

### **RECORD WORK ON FORM III-B-2B**

Monthly iron level test Iron meter is located on shelf by door along with packets, distilled water and sample bottle

- 1. Turn on meter
- 2. Remove cap
- 3. Insert distilled water into meter
- 4. Turn bottle until it drops into slot
- 5. Zero meter (calibrate)
- 6. Empty and rinse sample bottle
- 7. Pour one packet into bottle
- 8. Fill bottle from spigot on well discharge pipe to line on bottle
- 9. Cap and mix thoroughly, wipe bottle with clean cloth
- 10. Remove distilled water from meter and insert prepared water sample into meter.
- 11. Turn bottle until it drops into slot
- 12. Press direct read and record reading on Form III-B-2B

15

### DAILY METER READING

Each day at approximately the same time, read meter in Well House and record total gallons from meter on Form III-B-2A as today's reading. Copy yesterdays reading on the "Prev" line Subtract to determine today's usage.

Form remains in Pump House for 1 Month

At the end of the month enter pump hours for the month and water usage for month and file form in office. Start a new form.

At the end of the month fill out monthly water pumped report Form III-B-2C using data from Form III-B-2A and monthly electric bill Form III-B-2C is 12month annual record. At end of year start a new form and prepare annual report.

### **MATERIAL SPECIFICATION**

ITEM DESCRIPTION			SUPPLIER		STOCK AMT
METER				1	
OIL	3 IN 1 OIL		WALMART		1
PACKETS		HANNA INST.		25	
DISTILLED WATER			WALMART		1 GAL.
SAMPLE BOTTLE			REUSE		
FORM III-B-2A PUMP	CONTROL MAINTENANCE	OFFIC	E 12		
FORM III-B-2B DAILY	WATER PUMPED	OFFIC	E 12		
FORM III-B-2C	MONTHLY WATER PUMPED		OFFICE	12	

	FORM I WELL P	II-B-2A PUMP HOUSE		MONTH	1		YEAR	
DATE		GALLONS	DATE		GALLONS	DATE		GALLONS
	today		-	today _		_	today	
1	prev		12	prev		22	prev	
	total			total			total	
	today			today			today	
2	prev		13	prev		23	prev	
	total			total			total	
	today			today			today	
3	prev		14	prev		24	prev	
	total			total			total	
	today		-	today			today	
4	prev		15			25	prev	
	total			total			total	
	today			today			today	
5	prev		16	prev		26	prev	
	total			total			total	
	today			today			today	
6	prev		17			27	prev	
	total			total			total	
	today			today			today	
7	prev		18	prev		28	prev	
	total			total			total	
	today			today			today	
8	prev		19	prev		29	prev	
	total			total			total	
	today			today			today	
9	prev		20	prev		30	prev	
	total			total			total	
	today			today			today	
10	prev		21	prev		31	prev	
	total			total			total	

# FORM III-B-2B

Year	Date	Date	Iron	Test	Date Tank Control
	Tank Ran Over	Flushing	Date	Reading	Main.
JAN					
FEB					
MAR					
APR					
MAY					
JUNE					
JULY					
AUG					
SEP					
ОСТ					
NOV					
DEC					

# WATER PUMPED AT WELL FORM III-B-2C

	*						
YEAR	MONTHLY	ANNUAL	AVERAGE	**	PUMP	**	DOLLARS
	USAGE	RUNNING	DAILY	ELECTRIC	HOURS	KWH	INTO
	GALLONS	TOTAL	USAGE	BILL	MO. & TOTAL.	HOURS	GALLONS
JAN							
FEB							
MAR							
APR							
MAY							
JUNE							
JULY							
AUG							
SEP							
OCT							
NOV							
DEC							
TOTAL							
FOR							
YEAR							

Section: III Operations <u>III-B Water System</u> Policy III-B 3 Storage Tank

III-B-3 Storage Tank

<u>Daily</u>

Check tank level, level less than <u>20 ft.</u> indicates problem with Well Pump.

## <u>Monthly</u>

Overflow tank to remove floating scum and debris.

A. With tank full, turn pump switch in Well House to manual and run pump until water level reaches 31.4 ft., continue running for 2 minutes then turn pump switch back to auto. Water will run over for about 2 minutes. Observe effluent and note any problems.

B. Record date on FORM III-B-2B

C. Bottom Drain: Open once per year, observe effluent

### <u>Annually</u>

Inspect tank for rust or corrosion Draw down water and visually inspect interior, note any problems. Take photos for records

D. Capacity

Tank has a capacity of 86,400 gallons and is projected to meet needs of 216 houses. Average water usage 54.9 GPM. Tank capacity should be reviewed in 2020 or before if number of houses or average water usage exceeds the design criteria.

<u>Section: III Operations</u> <u>III-B Water System</u> <u>Policy: III-B-4 60 psi Pump House Procedures</u>

## III-B-4 60 psi Pump House Procedures

Pump House contains 2 VFD pumps with meters, Pressure Tank and a control system that maintains 60 psi pressure in the upper distribution system. The controller is set up so that one pump is primary and runs until demand exceeds capacity of one pump, then second pump comes on to meet demand.

## <u>Daily</u>

Check gage to insure system is holding 60 psi. If problem, operator decides steps to fix problem. Pump #1 on right Pump #2 on left

Read meter at each pump and record reading on Form III-B-4 for that pump. Calculate daily usage. Form is for one month. Form remains in Pump House. At end of month start new forms and file monthly form in office.

### <u>Weekly</u>

Normally one pump is adequate to meet demand. In order to equalize wear on pumps it is necessary to reverse primary and secondary pumps. For pump #1 push home, OK OK OK (primary set at 068 for secondary, set at 048) push ok, home for pump #2 primary push up arrow to light up4th light from bottom, for secondary push down arrow to light up second light from bottom).

	60 P.S.	I. PUMP #		MONT	Ц		YEAR	
DATE	1.0.	# GALLONS	DATE		GALLONS	DATE		GALLONS
	today			today			today	
1	prev		12	prev		22	prev	
	total			total			total	
	today			today			today	
2	prev		13	prev		23	prev	
_	total			total			total	
	today			today			today	
3	prev		14	prev		24	prev	
	total			total			total	
	today			today			today	
4	prev		15	prev		25	prev	
	total			total			total	
	today			today			today	
5	prev		16	prev		26	prev	
	total			total			total	
	today			today			today	
6	prev		17	prev		27	prev	
	total			total			total	
	today			today			today	
7	prev		18	prev		28	prev	
	total			total			total	
	today			today			today	
8	prev		19	prev		29	prev	
	total			total			total	
	today			today			today	
9	prev		20	prev		30	prev	
	total			total			total	
	today			today			today	
10	prev		21	prev		31	prev	
	total			total			total	
	today							
11	prev				Monthly Tot	al		
	total		FORM	III-B-4				

Section: III Operations III-B Water System Policy: III-B-5 Flushing of Mains

### **III-B-5 Flushing of Mains**

The hard water we have causes brown deposits in the mains, this comes loose and causes brown water in our system. To avoid this, it is necessary to flush all of our lines periodically. We have set up a procedure to do this flushing periodically. Residents will be notified of schedule.

A method for determining required flush time for each zone is attached.

Operator will mark a map showing valve location and setting for each segment. Flushing should proceed systematically starting at the well house.

The map and procedure is at the Well House

Section: III Operations III-B Water System Policy: III-B-6 Procedure for Breaks and Repairs

### **III-B-6 Procedure for Breaks and Repairs**

### Major Breaks

Major breaks are breaks that cause a continuous heavy flow of water and threaten to drain the water storage tank. These require immediate attention. Major breaks are normally noticed by residents and reported. Breaks in remote areas are detected by the operator when his/her daily inspection shows excessive water usage.

#### Procedure

- a. Alert contractor of problem.
- b. Isolate leak by shutting appropriate valves
- c. Assist in locating leak, setting up barricades, purchasing parts, etc.
- d. Document repair with report and pictures and list of material used, file in office.
- e. Advise customers of problem and procedure to follow when service is restored.
- f. Operator to approve invoice for payment and reorder any material used from stock.

#### Minor Break

Minor breaks are indicated by water running in ditches in dry weather or water seeping up thru pavement. These are either reported by residents or by operator on daily rounds.

## Procedure

- a. Schedule work within a few days.
- b. Set up barricades if required
- c. When work is being done, isolate leak by shutting appropriate valves.
- d. Assist locating leak, purchasing parts, etc
- e. Document repair with report and pictures and list of material used. File in office.
- f. Advise customers of problem and procedure to follow when service is restored.
- g. Operator to approve invoice for payment and reorder any material used from stock.

Section: III Operations III-B-Water System Policy: III-B-7 New Service Connection

**III-B-7 New Service Connection** 

a. Customer to fill out application for service form(s)

b. Follow procedure outlined in Section III-A-1, System Operator responsibilities of Operator item

6, monitor New Construction.

c. Complete and file inspection from. Tap location to be measured from nearest property line and street line.

Section: III Operations III-B-7 New Service Connection Water Approved by PWSD No. 1 Board of Directors Date: March/2017

### **III-B-7-A Water connection to lots having water availability**

Water availability means that there is a water main adjacent to the property and owner has been paying water availability charges.

a.1 Customer pays a tap on fee and an inspection fee

- a.2 Tap on fee includes the following
  - a.2.1 Excavation to uncover water main and install shut off valve.
  - a.2.2 Installation of pipe from main to shut off valve
  - a.2.3 Backfill with granular material
- a.2.4 Repair of damage to roadway, done at time of annual PVPOA roadwork If in the opinion of the Operator sufficient time for settlement has occurred

a.2.5 Cost of following material

- a.2.5.1 Water main tap in device
- a.2.5.2 Copper pipe from tap to shut off valve
- a.2.5.3 Shut off valve

a.2.5.4 Valve riser pipe and cap

- a.2.5.5 Granular backfill
- a.3 Shut off valve is located at property line.
- a.4 Above work is done by contractor
- a.5 PWSD No. 1 is responsible from main to shut off valve
- a.6 Homeowner is responsible for pipe from shut off valve to house
- a.7 Homeowner must install water shut off valve at point where water service enters house.

Section: III Operations III-B-7 New Service Connection Water

III-B-7-B Water connection to lots not having water availability. Lots beyond existing mains requiring extension of existing mains.

b.1Customer pays a tap on fee and an inspection fee

b.2 Tap on fee includes the following:

b.2.1Excavation to uncover water main and install shut off valve

b.2.2 Installation of pipe from main to shut off valve at property line

b.2.3 Backfill with granular material

b.2.4 Repair of damage to roadway, done at time of annual PVPOA roadwork if in the opinion of the operator sufficient time for settlement has occurred.

b.2.5 Cost of the following material:

b.2.5.1 Water main tap in device

b.2.5.2 Copper pipe from tap to shut off valve

b.2.5.3 Shut off valve

b.2.5.4 Valve riser pipe and cap

b.2.5.5 Granular backfill

b.3 Shut off valve is located at property line

b.4 Above work is done by contractor

b.5 PWSD No. 1 is responsible from main to shut off valve

b.6 Homeowner is responsible for pipe from shut off valve to house.

b. 7 Homeowner must install water shut off valve at point where water service enters house.

b. 8 In addition, the homeowner is responsible for the cost of extending the existing water main required to serve their property. PWSD No. 1 will determine size and location of new water main and let contractor do the work.

b.9 The owner is responsible for the cost of the following:

b.9.1 Excavation to uncover existing water main and install new main extension with shut off valve.

b.9.2 Installation of new pipe from existing main to new flush valve near new tap in

b.9.3 Backfill with granular material

b.9.4 repair of damage to roadway, work will be done at time of annual PVPOA roadwork if in the opinion of the operator sufficient time for settlement has occurred.

b.9.5 Cost of following material:

b.9.5.1 Water main fitting with main shut off valve

b.9.5.2 Minimum 3" PVC water main

b.9.5.3 Flush valve with valve riser pipe and cap

b.9.5.4 Granular backfill if in roadway

b.9.5.5 Miscellaneous costs chargeable to the project

b.10 Under certain conditions regulations allow for the customer to have his own contractor do this work under the supervision of PWSD NO. 1. Plans and specifications must be approved by Operator before work begins.

b.11 Water main becomes the property of the PWSD NO. 1

b.12 Regulations allow property owner to recoup some of the water main cost from adjacent owners who later tap into this water main extension.

# PUBLIC WATER SUPPLY DISTRICT NO. 1 OF GASCONADE COUNTY MISSOURI (PWSD NO. 1) POLICY MANUAL Section III

Section: III Operations Policy: III-C Sewer System

The sewer system is operated under the regulations of the Department of Natural Resources (DNR) & the Federal EPA Regulations also apply.

Section: III Operations III-C Sewer System Policy: III-C-1 Lagoon Permit and Testing Approved by PWSD No. 1 Board of Directors Date: March 2017

Our lagoon is designed to serve a population of 410 and is operated under DNR Permit <code>#MO-0041467</code>

DNR requires the following reports to be submitted monthly:

- 1. Ammonia
- 2. P.H.
- 3. Biochemical Oxygen Demand (BOD)
- 4. Total suspended Solids (TSS)

Operator will test for dissolved oxygen and ph and record lagoon conditions.

Procedure:

- a. Take sample from lagoon discharge pipe with cup on stick.
- b. While at lagoon, check water temperature and observe weather, record on Form III-C-1

c. Lagoon discharge: Read Lagoon Discharge on weir. (It is measured in tenths of a foot. record on Form III-C-5 (For Gal. per Min. and Gal per day, refer to table III-C-5A) Read rain gauge. (Located on post at right side of lagoon gate). Record on Form III-C-5 & empty gauge. Check lake level on gauge at ramp at lodge docks. If positive, record on Form III-C-5 in inches (for GPD refer to Table III-C-5B

d. Calibrate D.O. Meter per manual, check D.O. and record on Form III-C-1

e. Calibrate Ph Meter per manual using Ph buffer solution, check Ph of sample and record on Form III-C-1

ESA in Marthasville is contracted to take Lagoon water samples each month and test or B.O.D, T.S.S, and Ammonia when results are received from ESA record on Form III-C-1 and submit electronically to the DNR File copy in office.

## SEWER

## DAILY LAGOON READINGS

MONTH / YEAR	WEIR	RAIN	WATER OVER
	READING		SPILLWAY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			

32

### FORM III-C-5

### WEIR READINGS TO GALLONS PER DAY TABLE III C-5-A

	GΡ			GΡ	
WEIR	М	GPD	WEIR	М	GPD
0.1	4	5,760	0.46	161	231,840
0.11	5	7,200	0.47	170	244,800
0.12	6	8,640	0.48	179	257,760
0.13	7	10,080	0.49	189	272,160
0.14	9	12,960	0.5	198	285,120
0.15	10	14,400	0.51	208	299,520
0.16	12	17,280	0.52	219	315,360
0.17	14	20,160	0.53	229	329,760
0.18	17	24,480	0.54	240	345,600
0.19	19	27,360	0.55	252	362,880
0.2	22	31,680	0.56	263	378,720
0.21	24	34,560	0.57	275	396,000
0.22	26	37,440	0.58	288	414,720
0.23	30	43,200	0.59	300	432,000
0.24	34	48,960	0.6	313	450,720
0.25	37	53,280	0.61	326	469,440
0.26	40	57,600	0.62	340	489,600
0.27	44	63,360	0.63	354	509,760
0.28	48	69,120	0.64	368	529,920
0.29	54	77,760	0.65	382	550,080
0.3	58	83,520	0.66	397	571,680
0.31	63	90,720	0.67	412	593,280
0.32	68	97,920	0.68	428	616,320
0.33	74	106,560	0.69	444	639,360
0.34	80	115,200	0.7	460	662,400
0.35	85	122,400	0.71	477	686,880
0.36	90	129,600	0.72	494	711,360
0.37	98	141,120	0.73	511	735,840
0.38	105	151,200	0.74	528	760,320
0.39	112	161,280	0.75	547	787,680
0.4	118	169,920	0.76	565	813,600
0.41	126	181,440	0.77	584	840,960
0.42	130	187,200	0.78	602	866,880
0.43	140	201,600	0.79	622	895,680
0.44	148	213,120	0.8	642	924,480
0.45	152	218,880			

33

### WATER OVER SPILLWAY TABLE III C 5B

SPILLWAY				
OVER			GPD	
WATER IN		X 150 =		
INCES	COEF.	GPS	X 86.4 = GPD	
1/2"	0.05	7.5	648	
1"	0.11	16.5	1,425	
1 1/2"	0.19	28.5	2,462	
2"	0.27	40.5	3,499	150 FT. SPILLWAY
2 1/2"	0.35	52.5	4,536	CONCRETE SURFACE
3"	0.45	67.5	5,832	RECTANGULAR WEIR
3 1/2"	0.56	84	7,258	( HAZEN & WILLIAMS )
4"	0.67	100.5	8,683	
4 1/2"	0.79	118.5	10,238	INCHES WATER OVER SPILLWAY
				COEF. === G P S PER FT OF
5"	0.92	138	11,923	SPILLWAY
5 1/2"	1.1	163	14,164	
6"	1.23	184.5	15,941	
7"	1.62	240	21,000	
8"	2	300	26,000	
9"	2.25	340	29,000	
10"	2.6	390	33,000	
11"	3	450	38,000	
12"	3.5	520	45,000	
13"	4	600	52,000	
14"	4.6	690	60,000	
15"	5	750	64,000	
16"	5.5	820	71,000	
17"	6.1	920	79,000	
18"	6.7	1000	87,000	
19"	7.4	1100	96,000	
20"	8.1	1200	105,000	

### MONTHLY LAGOON TESTING WORKSHEET FORM III-C-1 EXAMPLE

SEWER

#### MONTHLY LAGOON TESTING

		,		YEAR 20						
Month	Time	Date	We Reading 1/10 Foot	ir GPD (form III c 1a)	P.H.	D.O.	Weather	Water Temp C"	Enviam Servic BOD	
JAN								Tempo	BOD	155
FEB										
MAR										
APR										
MAY										
JUNE										
JULY										
AUG										
SEP										
ОСТ										
NOV										
DEC										

35

Section: III Operations Section: III-C Sewer System Policy: III-C-2 Lagoon Maintenance

III-C-2 Lagoon Maintenance

PVPOA is contracted to keep banks of lagoon free of weeds and brush by mowing on an as needed basis. Operator is to inspect for erosion on both sides of bank and repair if necessary.

Annually measure depth of sludge in lagoon.

Procedure:

a. Borrow "Sludge Judge" from Owensville Water Department

b. Two people with life jackets take rowboat on lagoon and measure depth of water and depth of sludge at 8 points on rectangular grid. Record on Form III-C-2 (yearly Lagoon Sludge) File form in office.

Annually in late spring sludge in lagoon should be mixed as recommended in "Waste Water Lagoon Troubleshooting Manual" H&S Environmental 2003 Mesa Arizona. Procedure is to use boat to drag log chain behind boat around lagoon. This mixes the top layer of sludge and helps reduce the sludge blanket.

# YEARLY LAGOON SLUDGE

FORM III-C-2

	I I EFLUENT PIPE	DAM YEAR DATE	AR DATE
	WATER-DEPTH	WATER-DEPTH	PTH
D	SLUDGE-DEPTH	SLUDGE-DEPTH	PTH
I T C H	WATER-DEPTH	WATER-DEPTH	PTH
	SLUDGE-DEPTH	SLUDGE-DEPTH	PTH
	WATER-DEPTH	WATER-DEPTH	PTH
	SLUDGE-DEPTH O -INFLUENT PIPE	SLUDGE-DEPTH	PTH
	WATER-DEPTH	WATER-DEPTH	PTH
	SLUDGE-DEPTH	SLUDGE-DEPTH FORM III-C-2	

Section: III Operations III-C Sewer System Policy: III-C-3 Lift Station Operation and Maintenance <u>III-C-3 Lift Station Operation and Maintenance</u>

Lift station receives sewerage from the North side of the lake and approximately 10 houses on the South side. Sewerage is ejected thru a pressure discharge pipe to a point where it can flow by gravity to the lagoon.

Lift station is air operated by air stored in large above ground tank. Dual air compressors keep the tank pressurized. Main equipment is in underground pit.

Maintenance:

Daily Open Lift Station Record following on Form III-C-3A

- a. Hours compressor #1
- b. Hours compressor #2
- c. Cycles Pot #1
- d. Cycles Pot #2
- e. Air Pressure at Comp #2

This should be 55 psi or HIGHER

Bleed water from trap under panel by pressing nipple on bottom sideways until water stops running. This removes condensed water from air lines.

Bleed water from pipes by opening valve at floor level at left of lower level grate. Close valve after 5 seconds.

Turn on light in lower level and visually check for any signs of leaking and verify that sump pump is operating.

### <u>Weekly</u>

Check oil level in both compressors at sight glass. If low, fill with hydraulic oil, record amount added to each compressor on Form III-C-3A

### Every 6 Months

Pour one (1) gallon of degreaser into manhole on North side of Lift Station. Record on Form III-C-3B

Every 1000 hrs. of Compressor operation

- 1. Change oil, 5 Qts. Required for each compressor
- 2. Grease moving parts
- 3. Replace air filters
- Replace V-belts if required. Belts <u>are 54770.4 REQ'D.</u>

Record work including date and comp. operating hours on Form III-C-3B <u>Maintenance Materials:</u>

Operator shall insure supplies are reordered when stock is used.

<u>Item</u>	Description	<u>Supplier</u>	<u>Stock</u>
Oil	super tech R&O Anti-w	ear Wal-Mart	5 Qt.
Grease	Hydraulic Oil Lithium	Wal-Mart	1
Air Filters	AF158	American Auto 3	
V-Belts	5L0770	Pioneer HS 4	
Degreaser	Floating Lift Station	Quality Chemical ( 1-877-872-7778	Co. 6
Relay	ABB Alternating Relay APR 435	1	

# Lift Station Daily Log Form III-C-3A

MONTH	COMPRESSOR	1	HOURS	1	POT	CYC,ES	
	COM. # 1	OIL	COM # 2	OIL	POT # 1	POT # 2	Pressure
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							

### Lift Station Maintenance Form III-C-3B

SEWER

#### LIFT STATION MAINTENCE

#### EVERLY 1000 HOURS

COMPRESSOR #1	Date & Hours				
Change Oil					Date di Hours
Grease					the second second second second
Replace Air Filters					
Change V-Belts					

COMPRESSOR #2	Date & Hours				
Change Oil					Date & Hours
Grease					
Replace Air Filters					
Change V-Belts					

AIR VALVES (2)	Date	Date	Date	Date	Date
Disassemble &					Duto
ubricate					

#### EVERLY SIX MONTHS

Date	Date	Date	Date	Date	Date	Date	Date	Data	Data
			1	Duto	Duto	Date	Date	Date	Date
			1						
	Date	Date Date	Date Date Date	Date Date Date Date	Date Date Date Date Date	Date Date Date Date Date Date	Date Date Date Date Date Date Date	Date Date Date Date Date Date Date Date	Date Date Date Date Date Date Date Date

Section: III Operations III-C Sewer System Policy: III-C-4 Manhole Inspection <u>III-C-4 Manhole Inspection</u>

Operator shall maintain a map showing all manholes in the development and show a numbering system for them.

Manholes should be inspected annually and results recorded using Form III-C-4

Remove any roots that have penetrated joints.

Notify customers of any problem materials found in manholes.

In case of blockages contract equipment from city of Owensville to ream out lines.

		I	Manhole Iı Form I	II-C-4	
MANHOLE		PE	INVERT	DATE	REMARKS
NUMBER	BRICK	CONCRETE	DEPTH	INSPECTED	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

# 43

Section: III Operations III-C Sewer System Policy: III-C-5 Procedure for Breaks & Repairs

**III-C-5 Procedure for Breaks & Repairs** 

When problem is reported or observed evaluate problem.

If sewerage is leaking onto yards or lake notify contractor that immediate action is required. If minor problem schedule work within the next week.

Operator is to be present when repairs are made and will document repair with report and pictures and materials used. File report in office.

Operator will approve invoice for payment and reorder any material used from stock.

If sewage is leaking in lake, notify DNR.

SECTION III OPERATIONS III-C Sewer System Policy: III-C-6 New Service Connections

**III-C-6 New Service Connections:** 

- a. Customer to fill out application for service.
- b. Follow procedure outlined in: Section III-A-1 (Responsibilities of Operator) Item 6, Monitor new Construction
- c. Complete inspection form
- d. Tap location to be measured from nearest property line.

Section III Operations III-C-6 New Service Connection Sewer

#### III-C-6A Sewer Connection to lots having a sewer main adjacent to the property

A.1 Customer pays a tap on fee and an inspection fee

A.2 Tap on fee includes the following

A.2.1 Excavation to uncover sewer main and install fitting, this work will be done by contractor

A.2.2 If sewer is in roadway, backfill with granular material

A.2.3 Repair of damage to roadway within 2 ft. of sewer main. Work will be done at time of annual PVPOA roadwork if in the opinion of the operator sufficient time for settlement has occurred.

A.2.4 If line is in yard use clean dirt for backfill

A.2.5 Cost of following material

A.2.5.1 T or Y fitting or boot

A.2.6 If service pipe has to cross road the homeowner is responsible for backfilling and road repair at trench dug by his/her contractor. PWSD No. 1 is responsible for damage within 2 ft. of sewer main.

A.3 Owner is responsible for installation and maintenance of Min 4 in. PVC pipe from main to house.

Section: III Operations

III-C-6 New Service Connection Sewer

III-C-6-B Sewer connection to lots not having sewer main adjacent to property. Many lots at Peaceful Valley do not have a sewer line adjacent to the property even if they have water availability.

B.1 Customer pays a Tap On Fee and an inspection fee.

B.2 Tap On Fee includes the following:

B.2.1 Excavation to uncover sewer main and install fitting, this work will be done by contractor.

B.2.2 If sewer is in roadway, backfill with granular material.

B.2.3 Repair of damage to roadway within 2 ft. of sewer main work will be done at time of annual PVPOA roadwork if in the opinion of the operator sufficient time for settlement has occurred.

B.2.4 If line is in yard use clean dirt for backfill

B.2.5 Cost of following material:

B.2.5.1 T or Y fitting or boot.

B.2. If service pipe has to cross road the homeowner is responsible for backfilling and road repair at trench dug by his contractor PWSD. No. 1 is responsible for damage within 2 ft. of sewer main.

B.3 Owner is responsible for installation and maintenance of Minimum of 4 " PVC pipe from sewer main to house.

B.4 In addition the homeowner is responsible for the cost of extending the existing sewer main required to serve his/her property.

B.5 PWSD No. 1 will determine size and location of new sewer main and require PWSD. NO.1 contractor do the work and will provide customer with a written estimate of the cost.B.6 The owner is responsible for the cost of the following work that will be done by PWSD NO. 1 contractor.

B.6.1 Installation of new sewer pipe from existing main to cleanout fitting at property line.

B.6.2 Backfill with granular material if located in roadway. If not in roadway backfill with clean dirt.

B.6.3 Repair of damage to roadway, work will be done at time of annual PVPOA roadwork if in the opinion of the operator sufficient time for settlement has occurred.

B.6.4 Cost of following material:

B.6.4.1 Minimum 4 inch. PVC sewer main pipe and fittings

B.6.4.2 Cleanout with riser pipe and cap

B.6.4.3 Granular backfill if in roadway

B.6.4.4 Miscellaneous costs chargeable to the project

B.7 Sewer main becomes the property of the PWSD No. 1

B.8 Regulations allow property owner to recoup some of the sewer main cost from adjacent owners who later tap into this sewer extension.

B.9 Under certain conditions regulations allow for the customer to have his own contractor do this work under the supervision of the PWSD No. 1 plans and specifications must be approved by PWSD No. 1 before work begins.

### PUBLIC WATER SUPPLY DISTRICT NO. 1 OF GASCONADE COUNTY MISSOURI (PWSD NO. 1) POLICY MANUAL SECTION IV REGULATIONS

Approved by: PWSD NO. 1 Board of Directors Date:

- Policy Subject
- A Water System

Compliance with Gasconade County Required Backflow Devices Lead Solder Prohibited Pressure Reducing Valves Protection of Shut Off Valves Service Pipe to House Service Line Responsibility Water Conservation

B Sewer System

Requirements Storm Water Prohibited Prohibited Waste Manhole Location and Maintenance Piping Material

Section: IV Regulations Policy: IV-A Water System Approved by: PWSD NO. 1 Board of Directors Date: March/2017

#### Compliance with Gasconade County Plumbing Code

Since internal plumbing can affect the external water system all water systems connected to the water supply must be installed in conformance with the Gasconade County plumbing code.

#### Required Backflow Devices

Lawn sprinkler systems, pools, etc. are permitted but must be equipped with a backflow device. Device must be tested annually per owners- manual.

#### Lead Solder Prohibited

The use of lead solder on copper water pipe is prohibited in any residence at Peaceful Valley.

#### Pressure Reducing Valves

Water pressure at lake level is 85 psi. Recommended water pressure for residential use is 60 psi. therefore the installation of pressure reducing valves in new houses is recommended.

#### Protection of Shut Off Valves

Access to shut off values is provided by white PVC pipe with a white cap. This pipe must be protected from auto traffic an must never be buried by soil or covered by concrete. If relocation is required the cost of relocating value will be paid by customer. If it's necessary to have value in driveway, a special cast iron value cover is available.

#### Service pipe to House

PWSD No. 1 has had considerable problems with plastic water service lines. Therefore, service lines from main to house must be a minimum of <sup>3</sup>/<sub>4</sub>" DIA. copper tubing or PEX tubing is recommended.

#### Service Line Responsibility

PWSD No. 1 is responsible for the pipe from the main to the shut off valve including the valve. The homeowner is responsible for the pipe from the shut off valve to the house.

<u>Water Conservation</u> Our present water supply is very adequate but customers are encouraged to conserve water and promptly fix all leaks.

Section: Regulations Policy: IV-B Sewer System Approved by: PWSD NO. 1 Board of Directors Date: March/2017

#### STORM WATER PROHIBITED

The discharge of storm water, surface water or ground water into the sewer system is prohibited. Rain spouts or roof drains shall not be connected to the sewer system. Driveway or outside area drains shall not be connected to the sewer system. Foundation drains or sump pumps shall not be connected to the sewer system.

#### PROHIBITED WASTE

The flushing of baby wipes or other fibrous material into the sewer system is prohibited. Motor oil, grease or other chemicals shall not be discharged into the sewer system. Garbage that has not been thru a garbage disposal shall not be discharged into the sewer system.

#### **MANHOLE MAINTENANCE**

Manholes must remain accessible for inspection. Manholes must remain on the ground surface and never covered by dirt or thick vegetation. Manhole covers may be raised if necessary but customer will be responsible for cost.

#### **PIPING MATERIAL**

All piping shall be schedule 40 PVC pipe suitable for sewerage service. Glued or compression fittings are acceptable.