

TO: BOARD OF DIRECTORS  
FROM: BRUCE BUEL *BB*  
DATE: JANUARY 22, 2009

**AGENDA ITEM  
E-4  
JANUARY 28, 2009**

**REVIEW PHASE 1 REPORT ON OPERATIONS AND MAINTENANCE PROGRAM**

**ITEM**

Review Phase 1 Report on proposed Operations and Maintenance Program [PROVIDE POLICY GUIDANCE].

**BACKGROUND**

The District's 2007 Water and Sewer Master Plan Update indicated that the District "operates largely on a responsive basis, handling problems as they occur." As a result, it is difficult to assess overall service performance and in the event of a serious problem or series of problems, the District could be understaffed to maintain operations. The Water and Sewer Master Plan Update recommended that the District establish a preventative maintenance program for the District's facilities. The benefits of a proactive preventative maintenance plan include minimizing likelihood of problems occurring, problems are generally less severe, more staff is available when problems occur, and performance can be measured. In addition, the various regulatory agencies that oversee the District's water and sewer operations require that the District have a preventative maintenance program.

At the September 10, 2008 Board meeting, the Board authorized staff to retain Dennis Delzeit, a Civil Engineering consultant and former Public Works Director for the City of Pismo Beach, to assist the District to initiate the preparation of a preventative maintenance plan for the District's water and sewer facilities. The initial scope of work involved meeting with operations staff, visiting each water and sewer facility site, and data and information gathering on a time and materials basis not to exceed \$14,800. Those tasks were completed under budget and staff proceeded with the subsequent task that involved the preparation of the actual preventative maintenance plan.

Attached is the draft preventative maintenance plan that has evolved into the Operations and Maintenance Plan. The program was developed with input from Operations and Maintenance Staff, the District Engineer, and the District Superintendent. It is designed to track operational and maintenance tasks that need to get done on a regular basis. During the development of the program, it became clear, based on the District's current staffing structure, that maintenance functions are integrated into daily operations tasks performed by all Utility Department staff and thus the program evolved into a set of checklists for each major district facility that include both operational and maintenance tasks, the frequency that the tasks are to be performed and a verification form to track completion of the various tasks.

The next steps will be to begin implementation of the program using the paper checklist format and develop an RFP for procurement of a computerized maintenance management software package to facilitate and automate managing, scheduling and tracking of activities including time, cost and materials.

The FY 08-09 Budget includes \$50,000 in the Town Water Fund (Fund #120), Town Sewer Fund (Fund #130), Blacklake Water Fund (Fund #140), and Blacklake Sewer Fund (Fund #150) for establishing a preventative maintenance program with additional funding expected in FY 09-10.

**RECOMMENDATION**

Staff recommends that your Honorable Board review the draft Operations and Maintenance Program and provide comments.

**ATTACHMENTS**

- Draft Operations and Maintenance Program Dated January 22, 2009

***NIPOMO COMMUNITY SERVICES DISTRICT***

***Operations and  
Maintenance Program***

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***Prepared as a coordinated project by the  
Operations Staff, District Engineer and  
District Superintendent***

***Facilitated by:  
Dennis Delzeit  
California Professional Engineer  
Civil Engineer #22340  
January 22, 2009 (Draft)***

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### **EXECUTIVE SUMMARY**

The Water and Sewer Master Plan Update emphasizes the need for a Preventive Maintenance Program to minimize the occurrences of unexpected interruptions in service and costly repairs.

This Operations and Maintenance Plan was prepared as a cooperative effort by the District operation and maintenance staff, the District Engineer, and the District Superintendent with the organization and guidance of Dennis Delzeit, a professional engineering consultant.

The Plan contains a schedule of operations and maintenance activities for the water and wastewater system components as well as the Supervisory Control and Data Acquisition system and other closely related activities.

The District Board will receive a monthly progress report on the status of the program. Initially, it is planned that the activities will be tracked by the Superintendent with the use of *Microsoft Task Manager* and a "paper system". This program is currently installed on the District's computers. In the future the District may consider the acquisition of a specialized software program that is specifically written for operation and maintenance of water and wastewater systems. These commercialized software programs can efficiently track performance and also help to measure and monitor the productivity of the operation.

It is anticipated that the Operations and Maintenance Plan changes and updates will be made on a regular basis as the program is put into practice and experience is gained from the use of this Program.

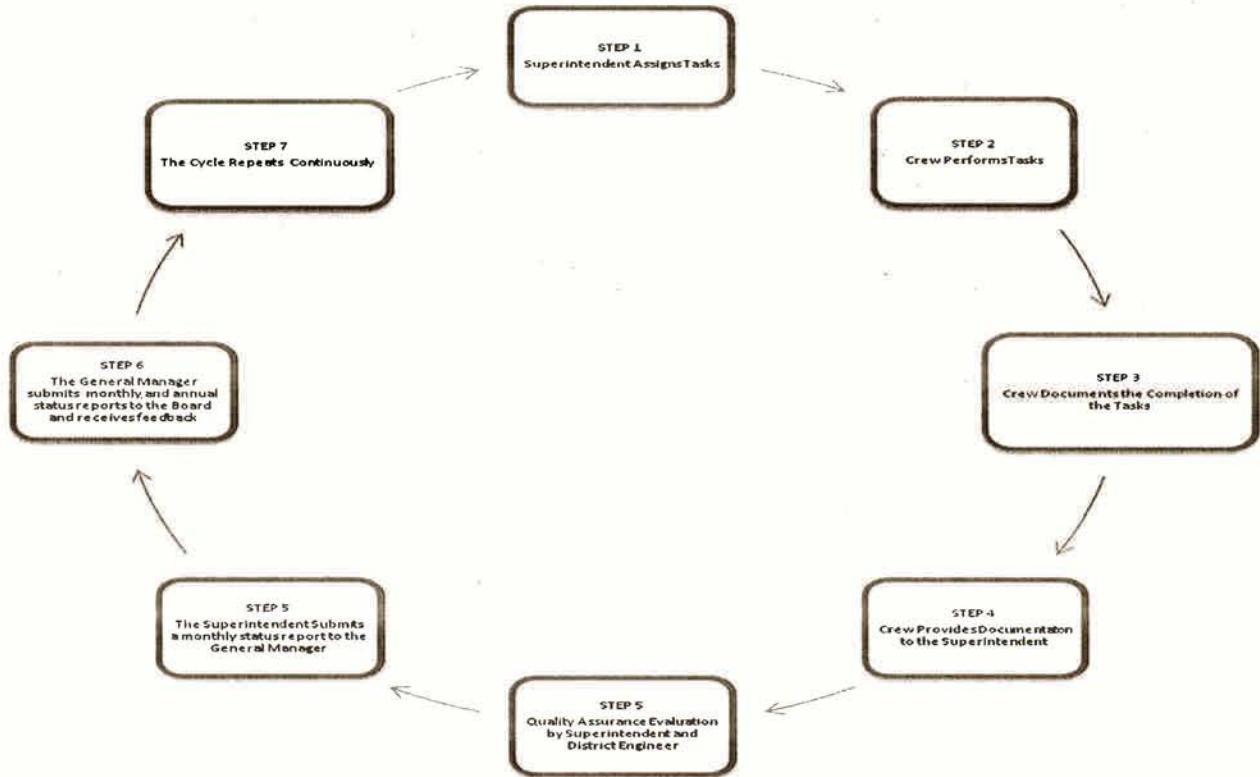
### ***IMPLEMENTATION PROCEDURE***

The creation of the checklists and verification lists are the foundation for the program. The success of the program is dependent upon an implementation procedure that is efficient. It must be designed to operate as simply as possible to get the job done.

Meetings and discussions with staff have evolved into a process that avoids paperwork, administrative duplication and provides maximum efficiency for the operations and maintenance staff to attend to their field duties. The implementation procedure is described below:

- The Office Assistant prepares the forms to be used on a quarterly (three months) basis. The assistant will fill in blanks on the forms, such as dates and other non technical information.
- The Office Assistant will distribute these completed forms to the appropriate operations personnel.
- Operations personnel will insert these forms in organized, labeled binders.
- Operations personnel will log information into these forms as they accomplish their works tasks.
- Operations personnel will turn in the forms to their supervisor on a weekly basis.
- Operations Supervisor will review the forms and forward them to the office assistant.
- The Operations Supervisor is also responsible for alerting the Superintendent of any unusual or noteworthy issues.
- The Office Assistant will enter the information onto computerized data spread sheets.
- The Office Assistant will generate a monthly report summarizing the noteworthy issues and submit this report to the Superintendent and Operations Supervisor.
- The forgoing report is the basis for the monthly report that is submitted by the Superintendent to the General Manager.

# REPORTING PROCEDURE-FLOW DIAGRAM



# NCSD Operations and Maintenance Program

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## **BLACKLAKE WASTEWATER TREATMENT PLANT CHECKLIST**

### ❖ DAILY

- ✓ Visual inspection
- ✓ Check Pond Level for 18-inch freeboard
- ✓ Be sure pumps are working
- ✓ Check flow meters, record flow data
- ✓ Check grinders
- ✓ Effluent settleable solids test
- ✓ Check chlorine residual, adjust dose if necessary, when discharging
- ✓ Collect sample for coliform analyses, when discharging
- ✓ Wash the influent channel
- ✓ Clean the screens in effluent contact chamber
- ✓ Notify the on-call operator of any abnormalities

### ❖ WEEKLY

- ✓ Wash and clean the grinder pumps
- ✓ Check all aerators to be sure they are not clogged
- ✓ Collect 24 hour effluent composite sample
- ✓ Clean the composite sampler
- ✓ Turn plant on Monday, off Friday
- ✓ Inspect check valves

### ❖ MONTHLY

- ✓ Check grinders for lubrication

### ❖ THREE MONTHS

- ✓ Grease the motors and grinders

### ❖ SIX MONTHS

- ✓ Replace the tubing in the chlorine pumps

### ❖ ANNUAL

- ✓ Inspect and rebuild the chlorine pump
- ✓ Measure the sludge depth in all three ponds
- ✓ Inspect the aeration pumps in all three ponds
- ✓ Inspect the cables that power the aeration pumps in all three ponds
- ✓ Inspect and replace, if necessary, the eight life rings



# NCSD Operations and Maintenance Program

## **BLACKLAKE WASTEWATER TREATMENT PLANT VERIFICATION**

Week of \_\_\_\_\_, 2009  
(Submit this document weekly)

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
<b>Daily Tasks</b>	Every day		
<b>Weekly Tasks</b>	Once each week		
<b>Three Months Tasks</b>	Last day of March, June, September & December		
<b>Six Month Tasks</b>	June 30th and December 31st		
<b>Annual</b>	December 31st		

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## SOUTHLAND WASTEWATER TREATMENT PLANT CHECKLIST

### ❖ DAILY

- ✓ Visual inspection
- ✓ Be sure pumps are working
- ✓ Record pump run times, flow meter data
- ✓ Check flow meter
- ✓ Check grinders
- ✓ Effluent settleable solids test
- ✓ Notify the on-call operator of any abnormalities

### ❖ WEEKLY

- ✓ Collect weekly samples Influent/Effluent
- ✓ Clean the composite sampler
- ✓ Check all aerators to be sure they are not clogged
- ✓ Inspect check valves

### ❖ MONTHLY

- ✓ Run and inspect the generator
- ✓ Record the generator data
- ✓ Grinder pump lubrication

### ❖ TWO MONTHS

- ✓ Change the carbon filters on the influent pump wet well

### ❖ SIX MONTHS

- ✓ Exercise all valves as needed-check with supervisor
- ✓ Rip the percolation ponds---after every application cycle

### ❖ ANNUAL

- ✓ Measure the sludge depth in all four ponds
- ✓ Inspect the aeration pumps in all four ponds
- ✓ Inspect the cables that power the aeration pumps in all four ponds
- ✓ Inspect and replace, if necessary, the life rings

# NCSD Operations and Maintenance Program

## **SOUTHLAND WASTEWATER TREATMENT PLANT VERIFICATION**

Week of \_\_\_\_\_, 2009

(Submit this document weekly)

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
Daily Tasks	Every day	_____	_____
Weekly Tasks	Once each week	_____	_____
Monthly Tasks	Last day of each month	_____	_____
Two Month Tasks	Last day of each evenly numbered month	_____	_____
Six Months	June 30th	_____	_____
Annual	December 31st	_____	_____

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## LIFT STATION CHECKLIST

### ❖ TWICE DAILY

- ✓ Check SCADA

### ❖ DAILY--- Tefft Street, Oak Glen, Nipomo Palms, Juniper

- ✓ Check the run times on the motors and identify any inconsistencies that could indicate a pump inefficiency or pending pump failure
- ✓ Clean the inside of the wet wells, including:
  - Floats – check if they actuate pumps on and off
  - and determine if it needs to be pumped
- ✓ Check the locks on the cabinets
- ✓ **All lift stations:** Notify on-call operator of any abnormalities

### ❖ MONDAY, WEDNESDAY, FRIDAY---Honey Grove, La Mirada, Tejas, Bracken, Gardenia, Woodgreen, The Oaks, Misty Glen

- ✓ Check the run times on the motors and identify any inconsistencies that could indicate a pump inefficiency or pending pump failure
- ✓ Clean the inside of the wet wells, including:
  - Floats – check if they actuate pumps on and off
  - and determine if it needs to be pumped
- ✓ Check the locks on the cabinets

### ❖ INTERIM---Check Maria Vista weekly until usage increases then Monday, Wednesday, Friday

### ❖ WEEKLY ---All lift stations

- ✓ Check float balls – high level, low level, pump on, pump off
- ✓ Inspect check valves

### ❖ THREE MONTHS

- ✓ Check the air tubing in the panels and replace if the tubing is brittle or has pinhole leaks
- ✓ Exercise all valves
- ✓ Check high wet well level alarm

### ❖ ANNUALLY

- ✓ Dewater the wet well and replace the bottom seals as necessary.
- ✓ Pull the pumps, hose them down and check the impeller gap (rebuild or replace if the gap exceeds the recommended tolerance)

# NCSD Operations and Maintenance Program

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## **LIFT STATION MAINTENANCE VERIFICATION**

Week of \_\_\_\_\_, 2009  
(Submit this document weekly)

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
<b>Daily Tasks</b>	Every day		
<i>Circle one: Tefft Street, Oak Glen, Nipomo Palms, Juniper</i>		_____	_____
<b>Monday, Wednesday, Friday Tasks</b>			
<i>Circle one: Honey Grove, La Mirada, Tejas, Bracken, The Oaks, Misty Glen, Woodgreen, Gardenia</i>		_____	_____
<b>Weekly Tasks</b>	Once each week		
		_____	_____
<b>Three Months Tasks</b>	Last day of each quarter		
		_____	_____
<b>Six Month Tasks</b>	June 30th and December 31st		
		_____	_____
<b>Annual</b>	December 31st		
		_____	_____

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## SEWER LINE AND MANHOLE CHECK LIST

- ❖ **NEAR TERM**
  - ✓ Implement the "Fats, Oils and Grease" (FOG) program.
- ❖ **QUARTERLY**
  - ✓ A list will be prepared to identify any sewer lines that may need to be cleaned by jetting or other means. Sewer lines that have a history of fats, oils, grease or sediment accumulation will be cleaned often so as to prevent plugging and resultant overflows.
  - ✓ Air & Vac Assemblies will be checked and serviced as needed.
- ❖ **ANNUALLY**
  - ✓ Manholes that are in need of rehabilitation will be identified and requested in the annual budget for outsourcing.
- ❖ **BI-ANNUALLY**
  - ✓ ½ of the District's collection system will be cleaned. Funding will be requested in the annual budget for outsourcing.

# NCSD Operations and Maintenance Program

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## **SEWER LINE AND MANHOLE VERIFICATION**

Quarterly Date: \_\_\_\_\_  
(Submit this document quarterly)

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
<b>Quarterly</b>	Last day of March, June, September and December	_____	_____
<b>Annual</b>	December 31st	_____	_____

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## WELL CHECKLIST

### ❖ DAILY

- ✓ Check SCADA twice daily
- ✓ Visit each well-that has been running in the last 24 hours
- ✓ Obtain readings
- ✓ Check Chlorine Residual
- ✓ Enter well production into the computer
- ✓ Check the locks on the cabinets
- ✓ Notify the on-call operator of any abnormalities

### ❖ WEEKLY

- ✓ Mondays: Fill chlorine tanks at wells
- ✓ Fridays: Fill chlorine tanks at wells
- ✓ Fridays: Fill shaft oil---Eureka, Via Concha & Bevington wells---All wells that are running
- ✓ Inspect check valves

### ❖ BI-WEEKLY

- ✓ Rake leaves and sweep well sites
- ✓ Clean Injection point on Wells #3 and #4

### ❖ MONTHLY

- ✓ Record well levels and report the data to the Superintendent
- ✓ Submit the end of month well production to the Superintendent
- ✓ Flush eye wash stations and shower

### ❖ SIX MONTHS (or as often as needed)

- ✓ Rebuild Stenner Pumps
- ✓ Order parts prior

### ❖ 500 HOURS

- ✓ Change engine oil at Sundale well

### ❖ 1000 HOURS

- ✓ Change gear oil on turbines at Sundale, Eureka, Bevington, Via Concha and B.L. Transfer
- ✓ Order oil prior

### ❖ ANNUALLY

- ✓ Change oil on turbines at BL Well No. 4, Knollwood, BL Well No. 3, and Olympic
- ✓ Change all gaskets on Cla-Valves
- ✓ Order parts prior



# NCS D Operations and Maintenance Program

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## **WELLS**

### **VERIFICATION**

CIRCLE ONE: Sundale, Eureka, Via Concha, BL Well No. 4, Bevington,  
Knollwood, BL Well No. 3, Olympic

Week of \_\_\_\_\_, 2009  
(Submit this document weekly)

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
<b>Daily</b>	(Submit weekly)		
<b>Weekly Tasks</b>	Once each week		
<b>Bi-Weekly</b>	Every other week		
<b>Monthly Tasks</b>	Last day of each month		
<b>Six Months</b>	Last day of June and December		
<b>500 Hours</b>	Record # of hours: _____		
<b>1000 Hours</b>	Record # of hours: _____		
<b>Annual</b>	December 31st		
<b>Every two years</b>	December 31, every two years		

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## STORAGE TANKS AND TANK SITES MAINTENANCE CHECKLIST

Reference: *Water and Sewer Master Plan Update*, page 52

### ❖ WEEKLY

- ✓ Remove any trash or debris and check for tampering
- ✓ Be sure the screens are in place
- ✓ Drive or walk the site for any problems such as fencing repair, weed abatement and similar items
- ✓ Make certain that all valves are chained and locked
- ✓ Record the time of day checked

### ❖ MONTHLY

- ✓ Cathodic Protection: Check the system at the cabinets

### ❖ ANNUALLY

- ✓ Cathodic Protection: Have the system checked by outside vendor
- ✓ Exercise the valves

### ❖ EVERY TWO YEARS

- ✓ Dive, inspect and clean the tanks.

# NCSD Operations and Maintenance Program

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## **STORAGE TANKS**

### **VERIFICATION**

CIRCLE ONE: Quad Tank (1), Quad Tank (2), Quad Tank (3), Quad Tank (4), Stand Pipe, Blacklake

Week of \_\_\_\_\_, 2009

(Submit this document weekly)

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
<b>Weekly Tasks</b>	Once each week	_____	_____
<b>Monthly Tasks</b>	Last day of each month	_____	_____
<b>Quarterly</b>	Last day of March, June, September and December	_____	_____
<b>Annual</b>	December 31st	_____	_____
<b>Every two years</b>	December 31st, every other year	_____	_____

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## AIR/VAC ASSEMBLY MAINTENANCE CHECKLIST

Reference: *Water and Sewer Master Plan Update*, page 52

### ❖ MONTHLY

There are 203 air/vac assemblies. Preventive maintenance of each assembly will require inspection of an average of 8 to 9 air/assemblies per month.

- ✓ Clean area around air can
- ✓ Check overall condition of cover and paint or replace if needed
- ✓ Operate control valve that services air/vac
- ✓ Check atlas and record when complete

# NCSD Operations and Maintenance Program

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## **AIR-VAC ASSEMBLIES VERIFICATION**

Month of \_\_\_\_\_, 2009  
(Submit this document monthly)

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
<b>Monthly Tasks</b>	Last day of each month	_____	_____
	Goal: An average of 9 assemblies. # of assemblies serviced: _____		

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## **BLOW-OFF ASSEMBLY MAINTENANCE CHECKLIST**

Reference: *Water and Sewer Master Plan Update*, page 52

### ❖ MONTHLY

There are 175 blow-off assemblies. Every two years each blow-off assembly is to be receiving preventive maintenance. **Note: Dead end blow-offs must be flushed annually.**

Accomplishment of this task will require inspection of an average of 7 to 8 blow-off assemblies per month.

- ✓ Clean out box
- ✓ Install blow off pipe
- ✓ Operate valve: Open and close; note the ease of operation
- ✓ Flush until water is clear and clean
- ✓ Check atlas and record when complete

# NCSO Operations and Maintenance Program

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## **BLOW OFF ASSEMBLY VERIFICATION**

Month of \_\_\_\_\_, 2009  
(Submit this document monthly)

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
Monthly Tasks	Last day of each month	_____	_____

**Note: All dead ends must be flushed annually.**

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## **VALVE MAINTENANCE CHECKLIST**

Reference: Water and Sewer Master Plan Update, page 52

Note: This function may be contracted out.

### ❖ **EVERY TWO YEARS**

There are 1840 valves. The accomplishment of this task requires an average of 76 valve inspections and maintenance per month.

- ✓ Clean out valve box
- ✓ Operate valve: Note the number of turns; note the ease of operation
- ✓ Paint the valve box lid: Blue for main lines; white for laterals
- ✓ Replace any broken or cracked lids
- ✓ Check atlas and record when complete



# NCSD Operations and Maintenance Program

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## **VALVE MAINTENANCE VERIFICATION**

Month of \_\_\_\_\_, 2009  
(Submit this document Monthly)

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
<b>Monthly Tasks</b>	Last day of each month	_____	_____
	An average of 76 valves must be exercised monthly. Number of valves this month: _____	_____	_____

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## **SYSTEM FLUSHING MAINTENANCE CHECKLIST**

Reference: *Water and Sewer Master Plan Update*, page 52

Note: Dead end blow-offs must be flushed annually.

### ❖ **ONE SECTION PER YEAR, MINIMUM**

- ✓ The system will be divided into sections
- ✓ The flushing will take place in the late fall or early winter, when system demands are at the annual minimum
- ✓ Check atlas and record when complete
- ✓ Estimate gallons flushed

# NCSD Operations and Maintenance Program

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## **SYSTEM FLUSHING VERIFICATION**

LATE FALL OR EARLY WINTER

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
<b>Annually</b>	When water demands are low: Late Fall/Early Winter	_____	_____

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## **METER REPLACEMENT AND REPAIRS MAINTENANCE CHECKLIST**

Reference: *Water and Sewer Master Plan Update*, page 52

### ❖ **THE LIFESPAN OF A METER IS ESTIMATED AT 15 TO 20 YEARS FOR DEPENDABLE ACCURACY**

- ✓ Develop meter replacement policy.
- ✓ Five percent of the meters must be replaced each year to attain a replacement frequency of 20 years; 6.7% of the meters must be replaced to attain a replacement frequency of 15 years.
- ✓ Note: The American Water Works Association standard is replacement every 10 years, which translates into replacement of 10% of the meters every year.
- ✓ Document old meter number and final read.
- ✓ Document new meter number and final read.
- ✓ Confirm address.

# NCSD Operations and Maintenance Program

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## **METER REPLACEMENT VERIFICATION**

Month of \_\_\_\_\_, 2009  
(Submit this document monthly)

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
<b>Monthly Tasks</b>	Last day of each month		
	<i>Number of meters replaced:</i>		
	<i>Document the Location of the meters that were replaced:</i>		

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## **FIRE HYDRANT MAINTENANCE CHECKLIST**

Reference: *Water and Sewer Master Plan Update*, page 52

### ❖ MONTHLY

There are 660 fire hydrants. Each is to receive preventive maintenance once each year. This task will require inspection and maintenance of an average of 55 hydrants per month.

- ✓ Clear around heads
- ✓ Operate hydrant: Open and close outlets; Note ease of operation
- ✓ Paint and number
- ✓ Operate the gate valve that services the hydrant
- ✓ Lubricate the cap covers
- ✓ Check the atlas and record when complete
- ✓ Fire hydrants, shut off valves and runs that are in need of replacement will be identified and a budget request will be made to outsource the replacement of these facilities.

# NCSD Operations and Maintenance Program

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## ***FIRE HYDRANTS VERIFICATION***

Month of \_\_\_\_\_, 2009  
(Submit this document monthly)

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
<b>Monthly Tasks</b>	Last day of each month	_____	_____
The goal is 55 hydrants per month.			
How many hydrants were serviced this month? _____			

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## SAMPLING STATION CHECKLIST

### ❖ MONTHLY

- ✓ Flush the sampling station
- ✓ Clean the sample station can and sample taps
- ✓ Check turn off valves, and clean out valve cans
- ✓ Check atlas and record when complete

### ❖ REPLACE AND REBUILD ALL OLD METAL SAMPLE STATIONS

- ✓ Replace piping and all metal covers
- ✓ Check atlas and record when complete



# NCSD Operations and Maintenance Program

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## **SAMPLING STATION**

### **VERIFICATION**

Month of \_\_\_\_\_, 2009

(Submit this document monthly)

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
Monthly Tasks	Last day of each month	_____	_____

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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## NCSD Operations and Maintenance Program

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### **SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) SYSTEM CHECKLIST**

#### ❖ DAILY

- ✓ Check the alarm. Simulate troublesome situations and be sure the system is responding.
- ✓ Check the locks on the cabinets.
- ✓ Check the website to be sure it is responding. The on-call person is responsible.

#### ❖ MONTHLY

- ✓ Check the antennas. (Note: This is currently outsourced.)
- ✓ Check the back-up batteries.

# NCSD Operations and Maintenance Program

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## ***SUPERVISORY CONTROL AND DATA ACQUISITION***

### ***VERIFICATION***

Month of \_\_\_\_\_, 2009

(Submit this document monthly)

	<u><b>Date Due</b></u>	<u><b>Date Completed</b></u>	<u><b>Signature</b></u>
<b>Monthly Tasks</b>	Last day of each month	_____	_____

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## **BUILDINGS AND GROUNDS MAINTENANCE CHECKLIST**

Reference: *Water and Sewer Master Plan Update*, page 52

### ❖ **Weekly**

- ✓ Remove trash and debris from around each site
- ✓ Clean inside of well buildings: mop, sweep and clean walls as needed
- ✓ Note items that need attention such as painting or repairs
- ✓ Keep weeds in check: spray or weed whack as needed

# NCSD Operations and Maintenance Program

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## **BUILDINGS AND GROUNDS MAINTENANCE VERIFICATION**

	<u>Date Due</u>	<u>Date Completed</u>	<u>Signature</u>
<b>Weekly Tasks</b>	Once each week	_____	_____

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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## NCSD Operations and Maintenance Program

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### ON CALL DUTY WEEKEND/HOLIDAY CHECK LIST

- ❖ Check SCADA
- ❖ Check the 4 main lift stations (Tefft, Oakglen, Nipomo Palms, Juniper)
  - ✓ Log hour meter readings
- ❖ Check Blacklake Wastewater Plant
  - ✓ Grinders
  - ✓ Influent flows
  - ✓ Security
- ❖ Check Southland Wastewater Plant
  - ✓ Imhoff cone test
  - ✓ Perc pond depths
  - ✓ Grinders
  - ✓ Influent flows
  - ✓ Security
- ❖ Blacklake Wells #3 and #4
  - ✓ Security
  - ✓ Cl2 residual if running
- ❖ Blacklake Water Plant
  - ✓ Pump operating?
  - ✓ Cl2 residual and tank level
- ❖ All wells that have run within the last 24 hours
  - ✓ Security
  - ✓ Cl2 residual
- ❖ Southland Utility Yard
  - ✓ Security (lab and office)
- ❖ Check SCADA before you go home

# NCSD Operations and Maintenance Program

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## **WEEKEND DUTY VERIFICATION**

<u>Date Due</u>		<u>Date Completed</u>	<u>Signature</u>
<b>Submit at the completion of each weekend duty</b>			
Time In _____	Time Out _____	_____	_____
Time In _____	Time Out _____	_____	_____
Time In _____	Time Out _____	_____	_____
Time In _____	Time Out _____	_____	_____

**Notes: Identify any observations that need follow-up attention such as maintenance or safety items.**

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# NCSD Operations and Maintenance Program

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## NIPOMO COMMUNITY SERVICES DISTRICT

### MONTHLY SAFETY CHECK

DATE \_\_\_\_\_

EQUIP/MV NUMBER	TYPE	Mileage or Hour Reading	First-Aid Kit	Fire Extinguisher	Sign Tag	Eye Wash Shower
	00 Chevy 4x4					
#6	04 Ford					
#5	04 Ford					
	04 Chevy					
	07 Escape					
	06 Ford Dump					
	07 Ford Diesel 4x4					
	08 Ford					
	09 Ford					
	09 Ford 4x4					
	02 Toyota					
	Case Tractor					
	Ford Tractor					
	John Deere Tractor					
	Bevington					
	Blacklake #3					
	Blacklake #4					
	Eureka					
	Knollwood					
	Olympic					
	Sundale					
	Via Concha					
SL- WWTP		NA				
BL-WWTP		NA				
lab area		NA				
shop		NA				
office		NA				