

**Dhaka Water Supply and Sewerage Authority**

**Financial and Capacity Building Consultancy**  
**of**  
**Dhaka Water Supply Sector Development Project**

# OPERATION MANUAL

**Volume - 3**

**Sewage Lift Station**

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### Sewage Lift Station Identity

Name of the Lift Pump Station : .....

Reference Number (if any) : .....

Type of Pump  
(Submersible/Centrifugal) : .....

Operators must carry out the following activities daily

Daily Activities		
1	Security	Check security of the station, report any defect
2	Shifting	Change over duty/standby pumps to match hours run for each pump
3	Record	Record hours run
4	Equipment	Check that all equipment is working as necessary following the manufacturer's instructions
5	Dry well	Check the condition of dry well, pump glands, report as necessary
6	Total plant	Check for any defect, and report if necessary
7	Cleanliness	Clean the station
8	Lubrication	Lubricate as necessary
9	Sewage level	Visually check sewage levels in wet well every 15 minutes throughout daylight and 30 minutes at night. Switch on extra pump as required. As level falls reduce pumping.
10	Screen	If differential of more than 9" exists across screen either switch on mechanical screen or manually remove screening. Caution – wet wells are dangerous. Men should be safe before entering and forced draft ventilation may be used.
11	Wet well	Remove grit from the wet well once it has reached 400 mm depth.
12	Lighting	Check all external and internal lighting, replace as necessary.
13	Building	Check outside of the building, report if any defect is seen
14	Ground maintenance	Keep the compound clean and tidy.

Daily log noting activities and pump runs should be recorded on Proforma – S1

## Sewage Lift Station Log

Lift Station Name :

Reference No:

Date	Purpose of Visit	Pump Run Hours (P1)	Pump Run Hours (P2)	Pump Run Hours (P3)	Pump Run Hours (P4)	Work carried out/Problem Found

(Note: Where there are more than 4 pumps, pump no. 5 shall be recorded in another column)

Purpose :

- E – Emergency Call Out
- M – M & E Maintenance
- O – Other Maintenance
- R – Routine Maintenance
- W – Well Cleaning

## Operational Maintenance

Weekly Maintenance								
1	Drive shaft to Centrifugal Pumps	Check and lubricate						
Date of Work								
Next Date								
Monthly Maintenance								
1	Non-return valves, air valves	Inspect, clean, check operation and record defects, if any. Manufacturer's instructions must also be followed.						
2	Grit traps	Check and empty as necessary						
Date of Work								
Next Date								
Quarterly Maintenance								
1	Starters, Motors and Generators	Inspect, clean, check operation and record defects, if any.						
2	Mechanical Screens	Inspect, clean, check operation and record defects, if any.						
3	Siphons	Check and clear						
4	Fire Extinguisher	Check for date of expiry, reorder as necessary						
5	Oil / Petrol Interceptors	Clean						
6	Pen stocks, Sluice, and Gate Valves	Check and exercise to keep the spindle free						
7	Grills	Clear. During rainy season frequency of cleaning should be more depending on need.						
Date of Work								
Next Date								
Half yearly Maintenance								
1	Transformers, Circuit breakers and lighting	Inspect, clean, check operation and record defects, if any.						
2	Submersible Pumps & Centrifugal pumps	Inspect, clean, check operation and record defects, if any.						
3	Weirs	Check						
4	Glass panes	Replace broken glass panes						
Date of Work								
Next Date								
Yearly Maintenance								
1	Painting	Paint internally						
2	Vent Column	Check						
Date of Work								
Next Date								
Every Two Yearly Maintenance								
1	Transformer	Change oil or check oil sample and change as necessary						
2	Painting	Paint externally						
Date of Work								
Next Date								

## Emergencies and Contingency Plans

SI	Type of Emergency	Contingency Plan Reaction
1	Power failure due to supply Interruptions	Contact electricity office or start standby generator
2	Power failure due to system break down.	<ol style="list-style-type: none"> <li>1) Start standby generator</li> <li>2) Inform office</li> <li>3) Provide tankering away, or pump to nearest canal if possible</li> </ol>
3	Rising main damaged, burst, blocked or leaking	<ol style="list-style-type: none"> <li>1) Shut down lift station, provide tankering away, etc.</li> <li>2) Inform office</li> <li>3) Keep records of men, time, plant, equipment and material used</li> <li>4) Asses why it happened and take measures so that it does not occur again</li> </ol>
4	Pump or component failure	Inform office