GREEN DROP REQUIREMENTS

Green Drop Training 28th June

KRA 8: ASSET MANAGEMENT

green drop
CERTIFICATION
waste water service
REGULATION

Department of Water Affairs
Directorate: Water Services Regulation
Solomon Makate
Technical Regulation

water affairs
Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

Background

- To re-enforce the crucial importance of effective Asset Management
- Ensure that the treatment and collection capacity risks are mitigated and that artificial loading on WWTWs are minimised.
- Objective to prolong the functionality of assets and management thereof in a cost effective manner
- These assets represent major public investment
- Assets provide an essential customer service

1. Annual Process Audit

- Each WWT facility subjected to a technical assessment by a technically

competent person e.g Process Engineer.

- To evaluate if the plant is capable of achieving what it was designed to do.

Including:

-Performance assessment (compare raw & final effluent)

-Unit process evaluation with focus on size, structural &mechanical integrity.

-design assessment of each unit process, spare capacity, chemical storage,

disinfection efficiency, etc., and

-operational assessment (monitoring efficiency and PC competence and knowledge

2. Sewer Main Inspection

- Assess condition of the system and recommend where refurbishment are necessary.
- Inspection need to include entire collector system-

It may be the capacity, pump stations, topography and materials (uPVC/AC piping) and availability of manhole covers.

- Flow/water balances for indication of % sewage received at the works.

3. Asset register

Asset register -record of information on each asset that supports the effective financial and technical management of the assets, and meets statutory requirements.

Requirements are as follows:
-Asset Description
-location of assets preferably GPS coordinates
-condition of assets
-The remaining life of assets
-acquisition (transaction date, amount, supplier/contractor, reference .e.g. contract, order, invoice number)

Asset register is guided by MFMA (LG Capital Asset Management Guideline), GAMAP and GRAP principles specifically define the content of an asset register. GDC process is not prescriptive on the format of these registers but information should satisfy the requirements of the Department of Treasury guideline.

4. Maintenance Budget

WSIs are required to present budget and expenditure detail for the financial year prior the assessment period.

- Operating expenditure includes
  - ✓ Electricity cost
  - ✓ Chemical cost
  - ✓ Staff cost
  - ✓ Maintenance and replacement cost
  - ✓ Sludge disposal and transport
  - ✓ Administration cost
- Operation and maintenance budget and comparative expenditure detail must show:

✓ Wastewater treatment (in cents/kl);

✓ Collection system (R/kl)

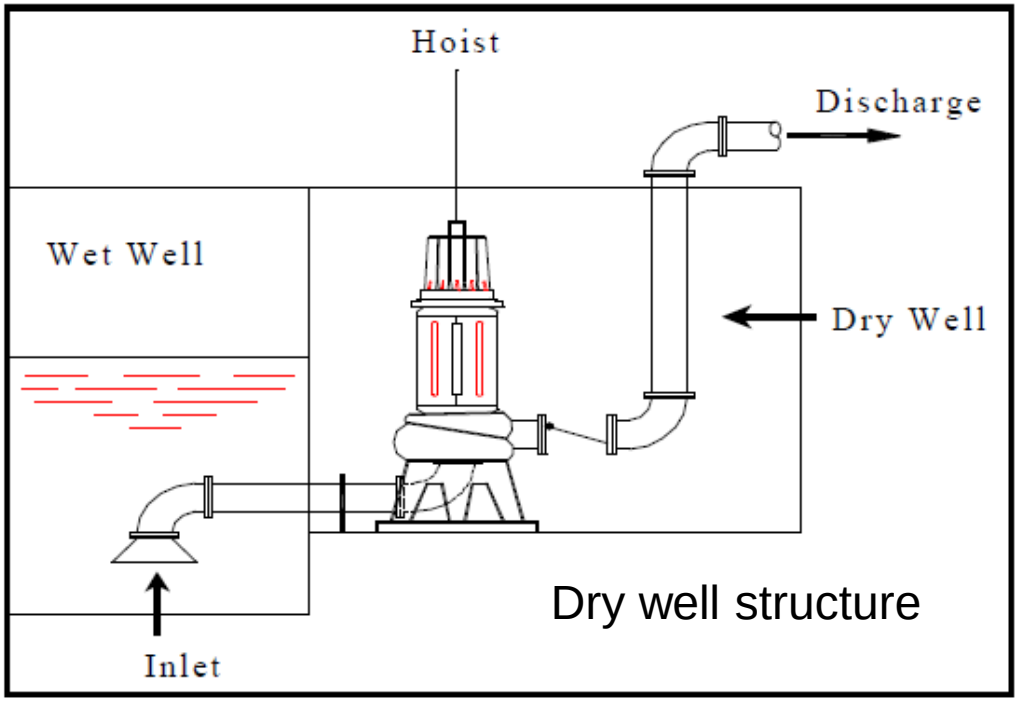
5. Pump Station Maintenance Records

- Pumpstation forms vital part of wastewater collector system and may vary: Dry Well or Wet Well.

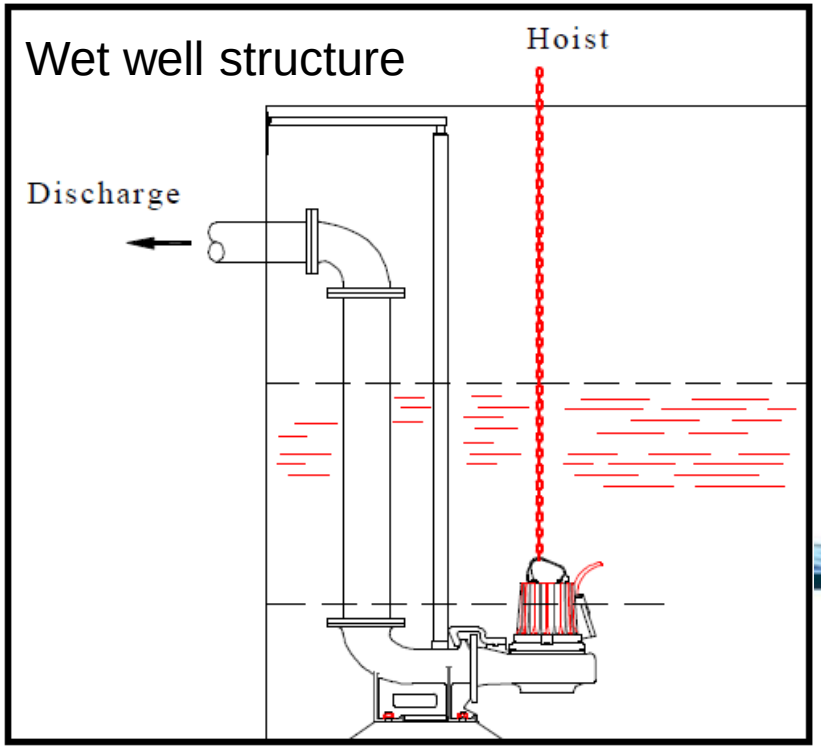
Key elements of pump stations include

- wastewater receiving well (wet-well), often
- equipped with a screen or grinding to remove coarse material
- pumps and piping with associated valves; motors; a power supply system;
- equipment control and alarm system; and an odor control system and ventilation system.

All the above mentioned elements require maintenance (routine/preventative)



Dry well structure



Wet well structure

Dysfunctional inlet works-resulting in short circuiting

Grass overgrowth in the ponds = reduced capacity

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1.) PROCESS AUDIT	(a) Process Audit reporting (evidence required of audit findings and recommendations) on treatment facility efficacy. The audit to include the (design) capability of the plant to meet compliance standards, as well as actual performance of plant. Should've been done between July 2010 and June 2012. (b) Evidence/plan of implementation of findings during year following Audit Report required.
2.) SEWER MAIN INSPECTION	(c) Site inspection of sewer reticulation network and pump-station/s. Provide evidence in form of capacity and condition assessment and recommendations of system. Report to include flow balance that provides evidence which % of total sewage is received at treatment plant. Note: both the process audit and sewer network report could serve as baseline to the W2RAP (may run concurrently with "system description and risk identification/rating)
3.) WASTEWATER ASSET REGISTER	(d) Updated sanitation / wastewater Infrastructure Asset Register 1. Proof of Asset Register, evidence to be submitted. Asset register to include movable equipment and immovable infrastructure / assets with matching detail. The asset register must detail : a) relevant equipment and infrastructure b) indicate asset description c) location d) condition (remaining life) e) replacement value
4.) O&M BUDGET + EXPENDITURE	(e) Operation and maintenance budget and comparative expenditure detail for: 1. wastewater treatment (in cents/m3), and 2. collection system (R/m3) The assessor will require the WSI to explain how these figures compare or are benchmarked to determine whether budget is (in)sufficient NOTE: Indicate whether WSI could only provide global figures or system specific figures.

5.) PUMP STATION MAINTENANCE	Proof of maintenance work done on mechanical, electrical, civil per pump station

Thanks