

smartPOND Inlet Valve System

-Operation, Inspection & Maintenance-

Operation

The smartPOND inlet valve configuration includes a weatherproof and lockable control cabinet housing all actuators and electronics, which is mounted directly above a double-screened inlet riser and butterfly valve assembly. Manual control, real time remote control, and pre-programmed automated functions are all standard options with this free-standing and solar or house powered device.

Periodic inspection and maintenance is required to guarantee proper functioning and optimal performance of the device. This document will detail those procedures.

Inspection

Environmental conditions on site as well as device condition must be inspected regularly. Inspection frequency of your system must be determined based on the contributing drainage area of the site, as well as each respective site's design and environmental conditions, but should never exceed one year between inspections (six months during the first year of operation).

Inspections may be required more frequently for active construction sites which still have disturbed soils in the stormwater basin. Preventative measures must be taken to avoid sediment buildup around the perforated inlet riser screen. Accumulation of garbage and debris must also be monitored and cleared on an as-needed basis per site conditions.

With the right equipment, your inspection and measurements can be accomplished from the surface without physically entering any confined spaces. If your inspection does require confined space entry, consideration of all local/regional requirements as well as OSHA standards should be given.

smartPOND inlet valve systems feature a unique hardware solution that places the self-contained valve and control assembly on the inlet end of the drainage pipe of a stormwater impoundment. The inspector should always conduct a visual inspection of the condition of the valve assembly, control cabinet, and solar panel—as well as the perforated inlet riser screen.

If sediment buildup or debris is observed around the inlet riser, the depth of the material should be determined. This is typically accomplished with a stadia rod.

Maintenance

Sediment or debris buildup around the perforated inlet riser screen should be removed when it reaches depth of six inches or more from the base of the screen. Follow local guidelines to dispose of or relocate the sediment as allowed.

The basin should be well vegetated to prevent erosion and sediment accumulation around the device. Any damage or gaps in the vegetation in the basin should be repaired and re-planted as needed.

Ideally, appropriate vegetation should be established before installation of the smartPOND inlet valve in order to avoid excess sediment buildup around the inlet riser screen. If the system is installed in disturbed-soil conditions, proper sediment control measures should be taken, such as a silt fence around the unit until the soil is stabilized and vegetated.

The hardware of the smartPOND inlet valve must be maintained as well—including conditions of the inlet riser, butterfly valve assembly, control box, and solar panel assembly. Check for signs of tampering or vandalism, ensure no components are missing, and confirm that the control cabinet door is locked and secured.

Step-by-step Inspection and Maintenance Routine

1. Inspection

a. Pond conditions

- i. Inspect the conditions of vegetation and note any exposed or disturbed soils.
- ii. Inspect for signs of erosion on pond slopes
- iii. Inspect condition of silt fence, if applicable
- iv. Identify any significant accumulation of garbage or debris in the basin or around the perforated inlet riser
- v. Use a stadia rod or tape measure to measure depth of any accumulated sediment at the base of the perforated inlet riser

b. Butterfly Valve Assembly

- i. Inspect that the valve is in the correct position and no debris is blocking the valve from operating. Inspect for any damage to the valve.

c. Control Cabinet

- i. Ensure cabinet is mounted securely above the inlet screen assembly and door is locked in the closed position
- ii. Inspect for any signs of damage or vandalism

d. Solar Panel

- i. Ensure panel is clean of debris
 - ii. Ensure panel is fastened securely and facing SOUTH
 - iii. Ensure panel wires are connected and undamaged
- e. Inlet riser structure
 - i. The inlet riser screen structure which supports the control cabinet and solar assembly should be secured to a concrete pad with $\frac{3}{8}$ " concrete anchors securing the structure to the pad. Inspect the condition of the concrete anchors and ensure the structure is securely fastened.

2. Maintenance

- a. Use appropriate means to remove accumulated sediment around perforated inlet riser
- b. Use shovels and hand tools closest to the riser to avoid damage by large equipment.
- c. Stabilize soil and re-plant slopes and sump of basin as needed
- d. Clean solar panel and secure in the south-facing position
- e. If maintenance or repairs are required, please contact Convergent's manufacturing partner, Autoflow LLC (Ph: 601.842.6806, watson@autoflowllc.com or henri@autoflowllc.com) to receive a Field Maintenance Request Form to discuss pricing and a service call to the device.