

## **OPERATIONS AND MAINTENANCE**

### **Jensen Precast High Velocity Interceptor/Horizontal Flow Clarifier (JPHV)**

There are no moving or mechanical parts in the *JPHV* Stormwater Interceptors, so there is nothing that needs to be done operationally once the unit has been installed and hooked-up. There are, however, several very important maintenance functions that must be performed periodically to insure efficient operation of the interceptor.

#### **STORMWATER SYSTEM MAINTENANCE RECOMENDATIONS**

Each site will experience differences in sediment and pollutant loads that can lead to a variation in inspection intervals and cleaning schedules. Generally, the unit should be inspected at least twice (2x) per year and cleaned out as necessary. Regular cleaning at prescribed intervals is necessary to maintain the efficiency of the interceptor. *JPHV* stormwater interceptors are designed to be cleaned using a vacuum truck. *JPHV* maintenance procedures should be in accordance with the guidelines stated below and as set forth by the owner and regulators.

The time span of when each interceptor will need to be pumped will vary from interceptor to interceptor, and will also depend on the frequency and volume of stormwater flowing through the interceptor. Generally, the interceptor should be cleaned whenever the solids in the first compartment build up to a level approaching the midpoint of the distance between the floor and the bottom of the first baffle, which is around 12”.

This level can be determined by removing the inlet side access opening, and using a probe to determine the depth of solids build up. The dimensional drawing of your interceptor should be kept for reference when determining the depth of the solid build up.

Once a frequency of pumping is determined, it should remain constant relative to the number of storms since the last cleaning. It is very important that the interceptor be maintained so that new storms do not flush material out of the interceptor.

#### **JENSEN PRECAST STORMWATER INTERCEPTOR OPERATION AND MAINTENANCE GUIDELINES.**

After the accumulated sand/oil and waste materials have been removed, the interceptor should be checked thoroughly to make certain that the inlet, outlet, and air relief ports (if available) are clear of obstructions. Accumulated sand/oil and debris may impair the performance of the interceptor by reducing the internal volume of the interceptor thereby reducing detention time

and increase flow through velocity. Deferred maintenance could produce a hydraulic condition in which some materials may be re-suspended in subsequent storms.

The maintenance frequency should be reevaluated on any system that has become clogged. Storm water interceptors are subject to variable flow rates and changes in influent quality. Consequently, reevaluations of maintenance frequencies are common practice for stormwater mitigation systems.

### **RECOMMENDED INTERCEPTOR MAINTENANCE PROCEDURE:**

Observation and maintenance procedures are outlined below:

1. Record sediment depth from several locations in each chamber. Accumulated floating debris and sediments should be removed as required. The greatest amount of debris and sediments should collect in the first chamber. The sediment level can be determined by using a probe to determine the depth of solids build up. It may be unnecessary to remove the entire water volume from the interceptor. “Jetting” or removal of the bottom sediments and floating debris is required to maintain an effectively operating interceptor.
2. Jensen Precast recommends that a professional pumping contractor trained and licensed to remove and dispose of captured sediment material shall perform this task. Sand, oil, and other waste material that has been removed from the interceptor should not be introduced into any drain, sewer, or natural body of water. All material should be disposed of according to applicable regulations.
3. Observe hydrocarbon absorbent mats. The Jensen Precast *JPHV* stormwater interceptor is equipped with Rubberizer®, a Sorbent Solidifier™ that transforms spilled hydrocarbons into a rubber-like solid upon contact. Rubberizer® sorbent pillows or mats should be observed for color change. These units will be solid white when they are initially installed and will darken as they absorb oils. They are capable of retaining up to five times their weight in hydrocarbons; therefore, as they absorb oil they will darken in color from the bottom up. When the mats or pillows are floating low in the water and are solid dark brown or black they need to be replaced. Refer to Rubberizer’s maintenance guidelines for further information. Often the mats will collect some sediments and dust. By pulling on the attachment lanyard and dunking the mats in the water, it can be observed if the mats are dirty or are saturated with oil and grease.
4. To remove the mats or pillows, find the lanyards attached underneath the access cover or pull the mats out utilizing a “sewer hook” or similar rod. Care should be taken while removing the saturated mats out of the access way as they may weigh up to five times the

replacement mats. Many state and local agencies have their own regulations regarding used oil and oil containing devices. Any material determined to be hazardous waste must be disposed of per applicable EPA Regulatory Citation, Statutory Citation (RCRA) requirements. Replacement mats or pillows can be obtained from the nearest Jensen Precast office.

**WARNING:** Entry into the vault is not recommended or required for normal maintenance. If entry is necessary, follow all OSHA confined space entry procedures.

# **Appendix A**

## Annual Record of Operations & Maintenance

And

Clean Out Sketch



**JPHV**

ANNUAL RECORD OF OPERATION AND MAINTENANCE

**OWNER** \_\_\_\_\_  
**ADDRESS** \_\_\_\_\_  
**OWNER REPRESENTATIVE** \_\_\_\_\_ **PHONE** \_\_\_\_\_

**JPHV INSTALLATION:**  
 MODEL DESIGNATION \_\_\_\_\_ DATE \_\_\_\_\_  
 SITE LOCATION \_\_\_\_\_  
 DEPTH FROM COVER TO BOTTOM OF SUMP (SUMP INVERT) \_\_\_\_\_  
 VOLUME OF SUMP \_\_\_\_\_ CUYD VOLUME/INCH DEPTH \_\_\_\_\_ CUFT  
 VOLUME/FOOT DEPTH \_\_\_\_\_ CUYD

**INSPECTIONS:**

DATE/INSPECTOR	SCREEN/INLET INTEGRITY	FLOATABLES DEPTH	DEPTH TO SEDIMENT (inches)	SEDIMENT VOLUME* (CUYDS)	SORBENT DISCOLORATION

\*Calculate Sediment Volume = (Depth to Sump Invert – Depth to Sediment)\*(Volume/inch)

OBSERVATIONS OF FUNCTION: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**CLEANOUT:**

DATE	VOLUME FLOATABLES	VOLUME SEDIMENTS	METHOD OF DISPOSAL OF FLOATABLES, SEDIMENTS, DECANT AND SORBENTS

OBSERVATIONS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**SEDIMENT CHAMBER MAINTENANCE:**

DATE OF POWER WASHING, INSPECTION AND OBSERVATIONS: \_\_\_\_\_  
 \_\_\_\_\_

CERTIFICATION: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

# **Appendix B**

## Site Location Plans

# Appendix C

## Plan & Profile Drawings