

**SNAP-TITE®
CULVERT LINING
SYSTEMS
FOR LEVEES, DIKES
AND DAMS**

SnapTite®



The problem.



The U.S. Army Corps of Engineers, local sponsors, and other levee and dam stakeholders are facing a critical problem to our Nation's flood control infrastructure. Culverts installed forty to fifty years ago are failing at an alarming rate nationwide. Thousands of corrugated metal drainage culverts in levees, dikes, and dams are so significantly rusted that a danger of sink holes, voids, or even breach exists. Concrete culverts have cracked or pulled apart at the joints, creating similar dangerous scenarios. Conventional repair methods of the past have been to dig and replace the failed pipe. There is a critical need to find a solution that is economically feasible, quick, and does not compromise the structural integrity of the levee, dike, or dam.

The no-dig trenchless solution

SnapTite®

The SnapTite® is ideal for concrete

Today, there's an economical, no-dig solution — with the Snap-Tite® Culvert.

Using solid wall high density polyethylene pipe (HDPE), a Snap-Tite® system actually outperforms the pipe it replaces. HDPE's smooth interior surface delivers better flow characteristics – and with the inclusion of a gasket, assures a water-tight seal at all joints, meeting ASTM D3212 requirements as well as AASHTO M328-08 requirements.

Snap-Tite's® patented male/female double-grooved connections at each end of the HDPE allows it to be 'snapped' together, piece by piece, and pushed into the full length of the existing pipe. It is available in lengths from 2 feet (for gate house installations) to 50 feet long, and is available for existing culverts with diameters from 8 inches

Flow Comparison Snap-Tite vs. Corrugated Metal

Existing CMP	15" I.D.	18" I.D.	21" I.D.	24" I.D.	30" I.D.
O.D. Snap-Tite	12.75" O.D.	14" O.D.	18" O.D.	20" O.D.	24" O.D.
% of Flow	142%	112%	145%	135%	121%

n CMP = 0.024, n Snap-Tite® = 0.00914 Other size Snap-Tite

olution.

Snap-Tite® HDPE Lining System for failing metal and concrete drainage pipes.

Best solution being used by the industry that rehabilitation is a better than Invert Lining System.

up to 84 inches. The annular space between the host pipe and the liner is filled with a low density cellular grout, which also fills any voids outside of the host pipe, delivering a truly 'rehabbed' culvert.

Snap-Tite® is easy to install. Nearly all the culvert rehabilitation can be done with minimum levee disturbance, without compromising the structural integrity. Most jobs can be completed with a backhoe, shovels, a come-a-long and chains – without the need for special training or specialized equipment.



THE BOTTOM LINE...

Snap-Tite® is the better solution for three key reasons:

1. The rehabilitated culvert will have the same – or greater flow – than the existing culvert. This is a true 'rehab' since the space between the host pipe and the Snap-Tite® pipe, as well as any voids outside of the host pipe, is filled with cellular grout.
2. Installation is easier, safer and less disruptive to the stability of the structure.
3. Existing crews can be used without the need for special training or specialized equipment. The joints are watertight and secure, and the HDPE delivers a nearly indefinite service life.

Pipe	I.D.=Interior Dimension		O.D.=Outer Dimension			
36" I.D.	42" I.D.	48" I.D.	54" I.D.	60" I.D.	72" I.D.	84" I.D.
32" O.D.	36" O.D.	42" O.D.	48" O.D.	54" O.D.	63" O.D.	63" O.D.
160%	145%	154%	160%	166%	154%	102%

Snap-Tite® liners are available for the existing sizes above.

A Snap-Tite® installation.

Faster. Easier. Safer.

Although every project is different depending on location of the drainage pipe and condition of materials in place, almost any culvert can be rehabbed using the Snap-Tite® Culvert Lining System.



A typical deteriorated culvert in failure mode, proving a danger to the integrity of the flood control structure.



The first piece of Snap-Tite® HDPE is lowered into position and inserted into the host pipe.



A gasket is installed on the next piece of pipe, assuring a watertight seal when connected, meeting ASTM D3212 requirements.



The second piece of pipe is lowered into position, and lined up with the first piece.



Using chains and come-a-longs, the two pieces of pipe are 'snapped' together. The process is repeated until connected sections of Snap-Tite® are pushed through the entire length of the culvert.



Different length PVC pipe that will deliver the grout flow are installed, and both ends are sealed using concrete bulkheads



The low density cellular grout that will be pumped into the pipe is prepared.



The grout is pumped into the entire length of the pipe, filling in the annular space between the new and host pipe, and the voids outside of the host pipe.



The totally rehabbed Snap-Tite® culvert. Nearly all the work was completed off-road in the culvert itself.

Make the connection! For more information visit www.culvert-rehab.com or call us at

1-800-CULVERT

