



# CASE STUDY: FLOWTITE® FRP REALIZES BIG SAVINGS OVER PVC/HDPE

## THE PORT OF MORROW REGIONAL WATER RECYCLE AND RE-USE PROJECT

- Lower headloss, lower pumping costs, lower operating costs
- Longer pipe lengths saves significant installation time and money
- Operating savings up to 50% compared to other pipe options

## CHALLENGE

- Winter installation in freezing conditions
- Highly corrosive process water
- Installation and operating costs

The Port of Morrow is located in Morrow County, Oregon, where winter temperatures can often drop below freezing for several months a year. The Regional Water Recycle and Re-Use Project required more than 15 miles of direct-bury pressure pipe. Installation was scheduled during the tough winter months. Pipe options included PVC, HDPE and FRP.

## SOLUTION

The mechanical properties of the glass used in Flowtite® FRP gives outstanding pressure resistance with a thinner pipe wall. The resulting larger inner diameter (ID) gives improved flow. In this case, the resulting drop in headloss eliminated the need for one pumping station, a direct savings of over \$500,000. Further, Flowtite® was supplied in 40' lengths — twice the length of PVC/HDPE pipe — which reduced the number of joints needed by more than 2,000 and enabled a faster installation. FRP performs well in cold climates and doesn't become brittle. The contractor, Tapani Inc, achieved a remarkable 1,500 LF per day in severe winter conditions.

## OUTCOME

The choice of Flowtite® FRP pipe with all-FRP fittings makes the whole pipe practically impervious to corrosion, an important factor where the process water is highly corrosive due to nearby agricultural processing. Non-ferrous pipe and fittings eliminate the need for cathodic protection, with its associated costs.

Fewer pumping stations and faster installation provided immediate savings. Additionally, the greater ID reduced annual operating and maintenance costs by 25% as compared with PVC, and 50% as compared with HDPE.



▲ FLOWTITE® FRP PIPE WITHSTANDS THE RIGORS OF SUB-ZERO WINTERS.



▲ PUSH ON JOINTS IN LENGTHS UP TO 40' ALLOW FOR FAST INSTALLATION. NO NEED TO PROTECT JOINTS AFTER INSTALL SINCE THEY ARE CORROSION RESISTANT.



▲ EASIER TO HANDLE ONSITE THAN CONCRETE OR FERROUS OPTIONS.