Industrial Case Study

Protecting Paradise:
How IPEX supplied over 100,000 feet of piping for the construction of Florida's new C-43 West Basin Storage Reservoir

This large-scale project is part of the Comprehensive Everglades Restoration Plan (CERP) to support a sustainable future for local habitats and wildlife

PROJECT CHALLENGE

More than 100,000 feet of PVC piping required

Large-diameter fittings need to be fabricated

Logistical challenges to transport to the work site and to meet the tight deadline

IPEX Solution

Xirtec® PVC Schedule 80

THE CHALLENGE

The Florida Everglades is the largest subtropical wilderness in the United States, boasting a rich tapestry of biodiverse habitats, and a stunning array of wildlife, many of which are endangered.

In 2000, congress authorized the Comprehensive Everglades Restoration Plan (CERP): a 20-year, $10 billion project to "restore, preserve, and protect the south Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection."

A significant part of this large-scale federal restoration plan was the construction of the Caloosahatchee River (C-43) West Basin Storage Reservoir, which sits on a 10,500-acre parcel of land and will store 55 billion gallons of water.

This new above-ground reservoir would capture both excess stormwater runoff from the C-43 basin and contaminated water discharged from nearby Lake Okeechobee. That water would then be used to either irrigate nearby agricultural areas or maintain salinity levels in the nearby Caloosahatchee Estuary through a controlled release.

IPEX by aliaxis

See Next Page

> Our relationship with IPEX was the deciding factor here — it gave us all the confidence in the world that this project would go as smoothly as it did.

Mark Stefanacci, Sales Manager
Ferguson

Crucially, the reservoir will help reduce the volume of discharges from Lake Okeechobee to the Caloosahatchee Estuary during the wet season and provide a source of freshwater flow to the estuary during the dry season. This C-43 reservoir would effectively bring water where it's needed when it's needed, and also limit the water's escape to problematic areas.

This construction of the C-43 Reservoir, led by the United States Army Corps of Engineers, is a huge undertaking. It will require more than 100,000 feet of PVC piping to capture, treat and transport the water.

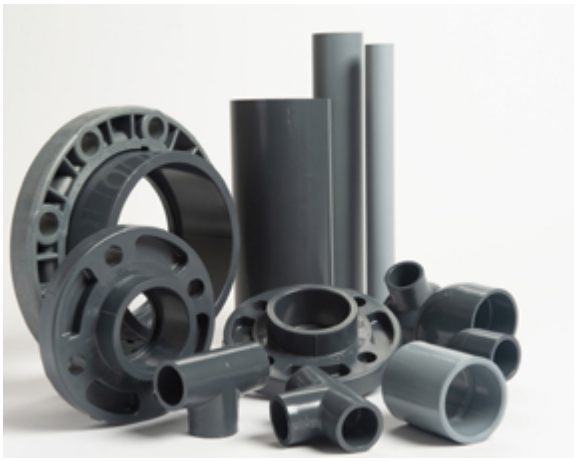
This large-scale build also presents a number of logistical challenges and tight deadlines that added to the overall complexity of the project.

THE SOLUTION

To support the construction of the new reservoir, the distributor working on the project, Ferguson, needed to source over 100,000 feet of large-diameter Schedule 80 pipe. They also needed to source large-diameter fittings, some of which would need to be custom fabricated.

Ferguson has been working with IPEX on construction projects across Florida and the US for more than 30 years. They trusted the quality of IPEX's piping and fitting products and their track record of providing superior customer service.

Ferguson knew IPEX could handle the scale of the order and ensure the products arrived on-site and on time. Ferguson ultimately chose the 6" through 18" Xirtec® PVC Schedule 80 pipe and fittings for the C-43 Reservoir project. The 12" and 18" fittings were custom-fabricated at our facility in Utah.



See Next Page

Xirtec®

- Extended life with low maintenance
- Operating temperature range up to 140°F
- Easy and reliable solvent weld joining method
- Outstanding resistance to photodegradation, creep stress, and immunity to oxidation
- Suited for use with a wide range of acids

IPEX high-performance vinyl systems with Xirtec® PVC schedule 80 pipes provide exceptional performance in demanding industrial applications, like the C-43 West Basin Storage Reservoir. This complete piping system offers a number of benefits, including an extended, low-maintenance service life, an easy and reliable solvent weld joining method and outstanding resistance to photodegradation, creep stress, and immunity to oxidation.

> "IPEX products are top-notch. We had no issues with the quality. The engineering firm, state-level agencies and the U.S. Army Corps of Engineers were all involved in the submittal process and reviewing and inspecting the products when they got to the job site. Everything met their requirements."
>
> **Mark Stefanacci, Sales Manager**
> Ferguson

One logistical challenge with the project was that the pipes needed to be perforated before being installed. What's more, the perforation needed to be completed at a special fabrication facility and follow a unique pattern designed by the engineering department of the Southwest Florida Water Management District. Perforated pipe is frequently used in underground drainage systems like the C-43 West Basin Storage Reservoir due to its ability to better absorb and drain water.

Getting these pipes perforated meant they would need to be shipped from the IPEX warehouse in Pineville, North Carolina, to the fabricator in Manhattan, Kansas, and then to the work site at Labelle, Florida, to be installed. This required shipping 100,000 feet of pipe to three destinations covering more than 2,600 miles on a tight deadline.

Thankfully, the IPEX team was able to manage the journey with speed and efficiency. They communicated clearly and often about how the order was progressing, providing detailed tracking information, including how much product had been shipped, where each shipment was and whether they were on track to meet the project deadlines.

This level of communication enabled the Ferguson team to coordinate deliveries with their fabrication team, so they were ready with the right equipment and storage space when the pipes arrived on site. The IPEX team was also incredibly responsive when it came to fulfilling back orders, which were frequent during the extended timeline of the project.

THE RESULTS

Construction of the C-43 Reservoir is now in its third year, and the pipe installation is scheduled to be completed by the end of 2023. So far, the installation has gone seamlessly.

Although the amount of pipe which needs to be installed is considerable, the process is fairly simple and straightforward, given the ease of assembling and laying the Xirtec® product.

After testing and quality assurance is complete, the reservoir is expected to be operational by mid-2024.

IPEX by aliaxis