

FOCUS: SEWER

FROM MAINS TO MANHOLES

A comprehensive cleaning, inspection and rehabilitation program helps a small Michigan community control severe I&I problems

By Mary Shafer

Positioned between Lansing and Saginaw in central Michigan, Corunna was a small town with big problems. For more than 30 years, its sewer system was burdened by stormwater, infiltration and illicit connections. By 2003, something had to give.

Flows exceeding 110 percent of contract capacity at the Owosso Mid-Shiawassee County Wastewater Treatment Plant had contributed

to peak flows of 15 times the daily average. During wet-weather events, more than half this flow came from inflow and infiltration. Sanitary sewer overflows and residential backups occurred.

As one of four municipalities contributing just over 9 percent of the plant's flows, Corunna was placed under a building moratorium. "For years, we weren't allowed to extend sewer infrastructure," recalls city manager Joe Sawyer. "We have industrial and retail

acreage, but we're only about half-way built out."

City council members understood that the collection system problems were a serious impediment to growth. Finally, a state administrative consent order demanded that Corunna address the I&I issue. Director of public works Tim Crawford knew that inaccurate flow reporting accounted for some of the extreme flows figures, but he was sure the aging sewers needed serious repair.

In the end, the city attacked its problem with a thorough system inspection and evaluation, followed by a rehabilitation program that covered sewer mains and manholes and will soon extend to sewer laterals. Rehabilitation included cured-in-place lining for mains and various sealing, grouting and rebuilding methods for manholes.

To date, the program has reduced I&I by an estimated 20 to 30 percent and has enabled the city to lift its building moratorium.



Manhole rehabilitation and replacement was an important part of the City of Corunna's campaign against I&I. (Photos courtesy of City of Corunna)



PROFILE:
City of
Corunna, Mich.

CUSTOMERS:
850

AREA SERVED:
One square mile

EMPLOYEES:
6 full-time, 2 part-time

INFRASTRUCTURE:
18 miles of collector sewer,
1 mile of sewer force main,
300 manholes, 1 pump
station, 4 lift stations

ANNUAL BUDGET:
\$1.8 million general, \$650,000
wastewater collection

WEB SITE:
www.corunna-mi.gov