**Cheeney Creek Wastewater Treatment Plant**

**Headworks Odor and Corrosion Control**

Total Treated Flow of 5.1 MGD

Reference:
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**Project Description**

Cheeney Creek Wastewater Treatment Plant is located in an upscale residential area of Fishers, a fast growing Indianapolis suburb. Odor from the headworks and odor from the nearby Allisonville Road lift station were sources of frequent complaints.

After a pilot demonstration in 2001, the ECO$_2$ SuperOxygenation system was installed upstream at three lift stations to pretreat all plant influent to prevent the formation of hydrogen sulfide at the headworks.

Successful performance of the ECO$_2$ SuperOxygenation system is evidenced by typical D.O. levels of about 5 mg/L entering the Cheeney Creek WWTP. Added benefits of ECO$_2$ SuperOxygenation are BOD reduction and protection of capital investment from corrosion in the pipelines. Technical data and a schematic diagram of the system are included on the reverse side of this profile.

**Town of Fishers, Indiana**

Fishers is located in Hamilton County, one of the fastest growing counties in the United States.

Rapid growth necessitated a comprehensive infrastructure plan including wastewater treatment. The Cheeney Creek Wastewater Treatment Plant was built in 1994 and in 2002 completed its third phase expansion to 8 MGD. The capital plan focused on treatment quality, innovation and economics and includes the ECO$_2$ SuperOxygenation technology throughout the collection system.
**Project Objectives**

The Town of Fishers wanted to address odor complaints and be a good neighbor to its residents that lived and traveled in the areas surrounding their wastewater treatment plant and lift stations.

**ECO2 SuperOxygenation** was chosen to supersede gas scrubber technology because of its environmentally friendly process. In addition, operating costs were expected to be less than alternative chemical treatments.

Overall project goals included:

- Ensure there were no dissolved sulfides and maintain a positive D.O. in plant influent.
- Reduce wet well odors at the Allisonville Lift Station.
- Reduce corrosion problems associated with presence of hydrogen sulfides in force mains.

**ECO2 SuperOxygenation systems** for water and wastewater treatment are designed and produced by Eco-Oxygen Technologies, LLC headquartered in Indianapolis, Indiana. The technology is the pioneering effort of Dr. Richard Speece, Centennial Professor Emeritus of Civil and Environmental Engineering at Vanderbilt University.

The **ECO2 oxygenation method** is a simple process based upon the scientific principle of Henry’s Law. No chemicals and no moving parts other than standard industrial water pumps are used. The result is a robust, reliable, economically competitive and environmentally friendly technology.

In municipal applications, **ECO2 technology** eliminates hydrogen sulfide odor and corrosion by dissolving pure oxygen in wastewater at high concentrations (50-75 mg/l) which prevents the formation of hydrogen sulfide and the associated “rotten-egg” odor. This approach saves money on alternative chemicals, provides pretreatment and does not increase total dissolved solids.

**ECO2 engineers** are presently focused on wastewater projects in Maine, Indiana, California, Kentucky and Texas.