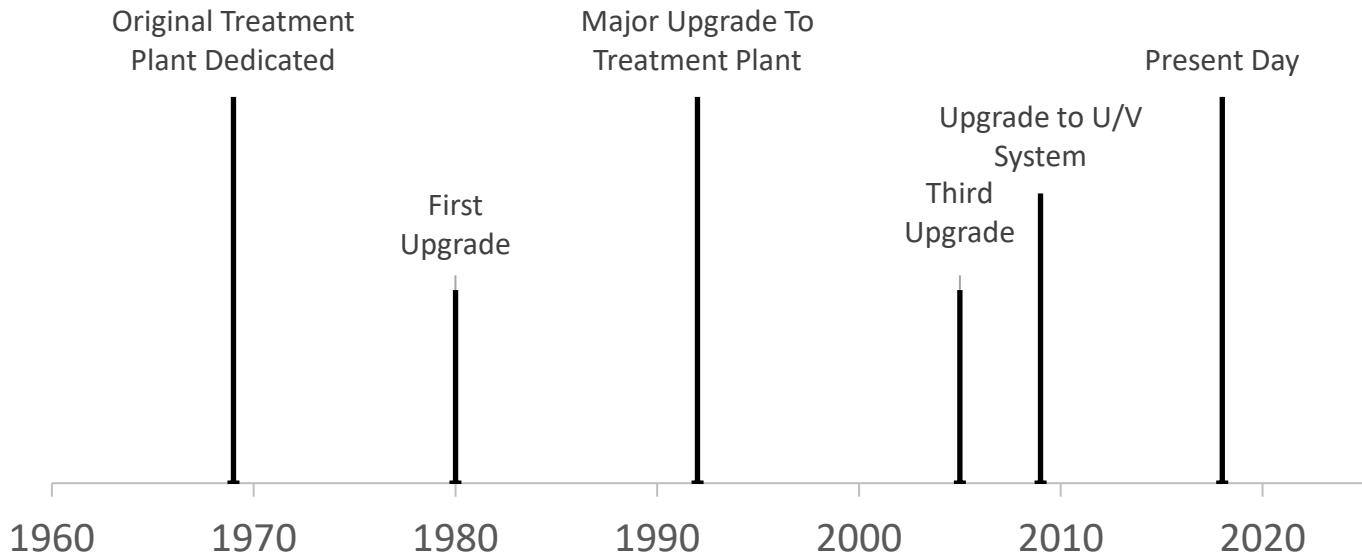


Hebron Wastewater Treatment Plant Timeline



1969	Hebron's original Treatment Plant was dedicated. Headworks, 2 Spirogesters (clarifier-digester), one biological trickling filter, one final clarifier and a chlorine contact tank for disinfection. There was a small control room/laboratory in between the spirogesters and a small sludge drying bed.
1980	The 1980 upgrade included a new laboratory building (still in use) and a recirculation pumping station for the Trickling Filter. It also included new walkways around the Spirogesters.
1992	1992 was a major upgrade. Limits on our discharge (of Ammonia) to Cobb Creek caused Hebron to expand the Treatment Plant. Using the infrastructure, we had in place, the engineers design added 2 Bio-towers (for ammonia removal) with a pumping station and 2 new Clarifiers (settling tanks). For added capacity a new headworks building was installed and a new pumping station. A third clarifier-digester and updates to the 2 original ones. A new pumping station for the trickling filter was added and the filter itself had a new distributor arm installed. The Chlorine disinfection system was abandoned and a U/V system was installed. With these additions new sludge drying beds were added.
2005	The upgrade for 2005 included new pumps for both the Headworks and the Bio-towers. A third final clarifier was also added.
2009	The U/V system was upgraded.
2018	The present-day treatment plant is still using the original 1969 Spirogesters (clarifier-digesters) and all of the equipment from the 1992 upgrade. The 38-year-old lab is still in use with all the original equipment. The Trickling Filter is original from 1969 and the one clarifier is also. A major equipment failure in one of the Bio-towers caused the distributor arm to stop turning (cost of repair is estimated at over \$100,000). All major pieces of equipment are at the end of their service life. The technology of Hebron' Waste Water Treatment Plant is obsolete. Modern treatment options are more energy efficient and more biologically efficient.

Hebron Wastewater Treatment Plant Timeline

Facts and History

FACT	Waste Water Treatment Plant mechanical equipment service life is 15- 25 years if maintained properly.
FACT	Electrical equipment (motors, generators, motor control centers, lighting, conduit, etc.) useful life is 20 years.
FACT	Control systems (computers, SCADA, PLCs, programing) useful life is 10 years.
FACT	Buildings (includes all substantial above ground structures or enclosures) useful life is 40 years.
FACT	Pumping stations mechanical and electrical useful life is 15 years.
FACT	Concrete structures useful life is 50 years
Source: EPA The Clean Water and Drinking Water Infrastructure Gap Analysis EPA 816-R-02-020 September 2002 FAILURE TO ACT: The Economic Impact of Current Investment Trends in Water and Wastewater Infrastructure Copyright© by the American Society of Civil Engineers	

HISTORY

THE HEADWORKS. Removes inorganic solids and grit. The mechanical equipment and electrical equipment are 26 years old and at the end of their serviceable life. One major equipment failure caused raw sewage to be deposited on the floor. The lighting and controls are deteriorating. The structure is too small for our needs and also deteriorating. The pumping station is 13 years old. There have been numerous pump failures.

THE SPIROGESTER'S. They provide primary treatment and digestion to the sewage entering the plant. Designed and built in the 1960's the concrete still has a useful life and will be reused. The process is obsolete (very few of this type of treatment is still in use, it was designed for very small utilities). The mechanical equipment has deteriorated beyond being serviceable. The old control/ lab has deteriorated, but the structure is still usable.

TRICKLING FILTER and INTERMEDIATE CLARIFIER. This is the main Biological treatment process. Designed and built in the 1960's. They also are at the end of there useful life. The pumping station has had numerous pump and control failures. The mechanical and electrical equipment is deteriorating, a major failure would cause a complete upset in downstream equipment and a discharge of pollutants to Cobb Creek.

BIO-TOWERS. These remove the ammonia from the wastewater. They were built in 1992 and have reached the end of there useful life. One major equipment failure caused pollutants to reach Cobb Creek, the estimated cost of repair is well over \$100.000, the town has improvised a temporary fix. The mechanical and electrical is deteriorating. The structure has deteriorated. The pumping station has had numerous pump failures.

FINAL CLARIFIERS. These are settling tanks. Two of the three are in need of rehabilitation. They will be reused.

U/V DISINFECTION. Removes pathological pollutants. This equipment is still serviceable and will be reused.

LABORATORY. Required for testing of pollutants. The structure is sound, but not energy efficient. Being 38 years old the infrastructure is deteriorating and obsolete.

Hebron Wastewater Treatment Plant Timeline

HISTORY

ELECTRICAL EQUIPMENT. The main service and MCC, provides power to all plant operations. The main service and MCC are from the 1992 upgrade, being outside they have deteriorated and are obsolete. Parts are unavailable. The emergency generator is no longer usable, a temporary generator is supplying back-up power. Almost all exposed conduit has deteriorated, and power distribution centers are at the end of their useful life.

