



Customer Success Story

Customer Details



Client: Eden Valley Institute of Wellness
Location: Larimer County - Loveland, CO
Application: Upgrade – Existing Tank
Product: LemTec™ Moving Bed BioReator



About Our Customer

Eden Valley Institute is a natural remedies treatment center and school nestled in a quiet valley among the foothills of the Colorado Rockies. The community consists of a group of homes, an organic farm, a lifestyle center, and a church. Five hundred fifty acres of forested mountains, meadows, and farm and combine in a setting of beauty and tranquility for staff, students, and guests.

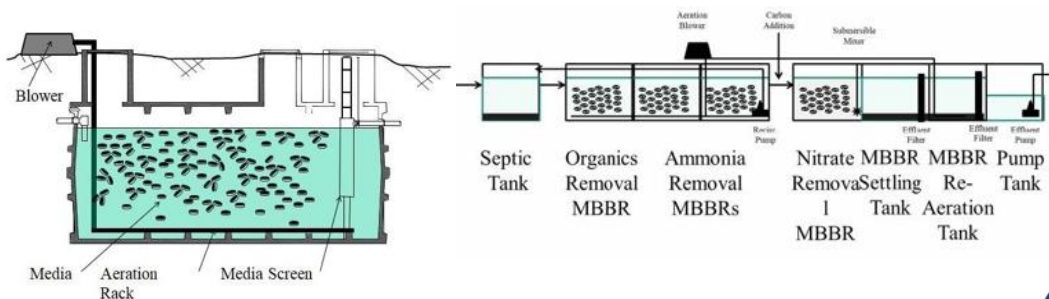
Customer Problem

The Eden Valley Institute of Wellness community was faced with the decision that they needed to upgrade or replace their existing treatment plant to meet more stringent effluent requirements. To achieve this required a cost-effective technology that could be simple to operate, providing effective ongoing treatment for many years to come.

Our Recommendation: LemTec™ Moving Bed BioReactor Process (MBBR)

Taking into consideration the unique objectives of Eden Valley Institute of Wellness, LET tailored a custom design based on their parameters. Using process modeling and our comprehensive approach of integrating technologies and over 30 years' experience, the result is that LET is able to provide the total solution to meet their needs. This solution is custom designed by LET Engineering to deliver exactly what Eden Valley needed and was

looking for: A wastewater treatment system to upgrade or replace what they had in place that was no longer able to meet regulatory requirements. Our recommendation the exclusive LET LemTec™ Moving Bed BioReactor Process (MBBR) system, which would meet every objective and protect water resources for them now and for years to come.



Design Parameters

| Constituent | Concentration (mg/L) | Maximum Month Loading (lbs/d) |
|----------------|----------------------|-------------------------------|
| 5-day BOD | 248 | 31.0 |
| TSS | 276 | 34.5 |
| Ammonia | 24 | 3.0 |
| TKN | 40 | 5.0 |
| Total P | 10 | 1.3 |
| Oil and Grease | 90 | 11.3 |

| | Influent Quality | | Effluent Quality | |
|----------------------------------------|------------------|------|------------------|------|
| Design Flow | 15,000 | gpd | | |
| Maximum Day Flow | 25,000 | gpd | | |
| Peak Instantaneous Flow | 40,000 | gpd | | |
| Carbonaceous Biochemical Oxygen Demand | 248 | mg/L | 30 | mg/L |
| Total Suspended Solids | 216 | mg/L | 30 | mg/L |
| Total Nitrogen | 40 | mg/L | - | mg/L |
| Ammonia | 24 | mg/L | <4.3 | mg/L |

Results

The MBBR installed at Eden Valley Institute of Wellness is an effective, reliable, and affordable treatment process capable of achieving year-round effluent limits as low as 10 mg/l BOD, 10 mg/l TSS and 2 mg/l NH₃-N at a fraction of the cost of a mechanical system.

The sampling results from the facility have been excellent and are summarized in effluent data graphs for the levels of BOD, TSS and Ammonia following the installation of their LET MBBR System.

With a reduced footprint, a process that is extremely reliable, and simple to operate, the MBBR is the highest performance package in the world. The LET MBBR System offers numerous advantages over other systems, including lower capital and operating costs, expandability, and low maintenance.

The community is now able to confidently discharge to the local stream, knowing that they now meet their permit requirements while protecting their natural resources now and for generations to come.

Data

