CASE STUDY

ASCEND water works

TREATMENT: ALMOLOYA DEL RIO LAGOONS, MEXICO

INDUSTRY:
Municipal
Agriculture
Irrigation

APPLICATION:
Contaminated source water

LOCATION:
Mexico State Municipality

DATE:
August 2019

CHALLENGE

Urban and Industrial wastewater flows directly into the Almoloya Del Río Lagoons and the Lerma River drastically deteriorating the quality and volume of available fresh water. The results of this; a significant decrease in lake, fluvial and riparian life in the regions. Out of necessity, large amounts of untreated wastewater are currently used in surrounding agricultural irrigation, raising concerns for public health and the environment.

BACKGROUND SUMMARY

- Primary river pollutants are organics, coliform bacteria, oil, and grease.
- Analysis results obtained in Mexico State from testing stations located along the Upper Lerma River show the water is heavily polluted and is inadequate for public water supply, recreation, fish, and aquatic life.

OBJECTIVE

- Effectively treat wastewater from the Almoloya Del Rio Lagoons ; providing adequate, clean water that is suitable for irrigation and municipal services.
- Reduce and eventually eliminate public health and environmental concerns provoked by water supply.

SOLUTION

- A “Jar Test” was performed on the Almoloya Del Rio Lagoons wastewater, producing evidence that the wastewater could be effectively treated utilizing our NFD technology to recover the water and the waste by-product.
- Utilizing Ascend’s Physical Process Integration system, a custom designed field-testing Wastewater Processing Unit was manufactured and deployed to Almoloya Del Rio, Mexico to begin operations.
- In conjunction with our WPU, NFD technology was implemented within our system to recover the water and separate the waste-by product efficiently and effectively.

TREATMENT RESULTS

- Approximately 80m3 of Almoloya Del Rio’s wastewater was processed over a 30-day period using our Wastewater Processing Unit and high-performance NFD technology.
- Samples of the treated and recovered water were sent to laboratories for analysis which produced excellent results.
- The analysis provided evidence that our NFD technology was effective in treating wastewater for the recovery of water for reuse in agriculture and municipal services.

CONCLUSION

Test results provided definitive evidence that our low-cost, high-performance NFD Technology is effective within the Primary treatment process. NFD enabled the wastewater to be continually used for irrigation and town services. With additional Secondary and Tertiary processing, the treated water can be delivered as potable.