# Case Study: Dugout Treatment at Clearview Colony

This case study highlights the effectiveness of the Purifico Ozone S160 unit and nanobubble injectors in improving water quality at Clearview Colony near Hussar, Alberta. Within only two weeks of treating the dugout water, a drastic improvement in water quality was observed in the reservoir and in downstream applications. Water is at the heart of life on Clearview Colony for its people, livestock and crops. Purifico Ozone is providing this hard-working community with the equipment needed to be healthy and thrive with a pure, clean, reliable water supply.

## Colony Information

Name: Clearview Hutterite Colony

Water Usage: Dairy, Chickens, Swine, Field Crops, Drinking Water

Location: Central Alberta

## Project Details

Objective: Treat and maintain dugout water quality

Equipment:

* Purifico Ozone S-160 Ozone Generator
* AirSep AS-B Oxygen Concentrator
* Nanobubble Injection

Treatment Configuration: Recirculating into the dugout with single inlet and outlet. Intake from 45 feet deep in middle of reservoir, and return about 30 feet from water’s edge.

Diffusion Method: Nanobubbles

Previous Treatment:

* Conventional Aeration
* Chemicals (if applicable)

## Water Consumption

Daily Use: Approximately 70,000 gallons

Dugout Volume: 30,000,000 gallons

Flow Rate: Continuous at 50 GPM

## Results and Observations – The Dugout

ORP Improvement: Within two weeks, the Oxidation-Reduction Potential (ORP) increased by approximately 350mV, from -100mV to 250mV.

Algae Reduction: Previously, there was a 1-inch thick layer of algae on the edge of the pond; now, only a thin layer of sand remains.

Foam Reduction: There used to be an abundance of foam collecting on the edge of the pond; now there is very little.

Water Clarity: The water, once greenish and opaque, is now a shimmering blue and highly transparent.

## Cistern Observations

Water clarity has significantly improved, allowing visibility to the bottom of the cistern, which was previously obscured by algae and other contaminants.

## Filtration Performance

* Filter performance has greatly improved since introducing ozone to the dugouts.
* Small particulate and dissolved organic matter are being effectively flocculated, allowing filters to capture more material.
* By eliminating small particulate, less material escapes past the filters resulting in cleaner water.

## Additional Benefits

* The brown ring that used to form in residential drains and tubs is no longer occurring.

