

# NU CHEM Central Ferry Unwanted Water Softener Waste

## Introduction

**Goal:** Stop NU CHEM from discharging water softener brine to the soils adjacent to the Snake River and find a cost effective alternative for the company to manage its waste stream. Dirt road application as a dust suppressant was the answer.

## Problem

For an unknown number of years this facility used water softening as part of its daily routine. Past practice was to convey the water softener brine underground to a drywell embedded in the dirt in a corner of the property. During the production season, this site discharged approximately 4,000 gallons of saltwater per day to the ground, for 120 days each season. This facilitated disposal but allowed 480,000 gallons of process water to infiltrate and possibly affect ground water. Washington State Department of Ecology's Industrial Stormwater Inspector, Ted Hamlin, was concerned that this infiltration could also impact the Snake River.



NU CHEM's Central Ferry Facility

## Project goal



Brine disposal device

This facility must meet the requirements of the state's Industrial Stormwater General Permit. The permit does not allow infiltration of a potential pollutant if there is a possibility of impacting ground water or surface water. In this case, the pollutant may be transferred to the Snake River by means of hydraulic continuity. Hydraulic continuity is the movement of water between ground water and surface water. It was obvious this practice needed to stop and an acceptable alternative found to manage the waste water. A fix for this required cooperation between multiple parties. Ecology worked with the NU CHEM company manager, Ron Wachter, its consultant, Richard D. Rice P.E., and the Garfield County Road Maintenance Department Supervisor,

John Apple, to develop a solution.

With only 3000 residents, Garfield County has a limited road maintenance budget. This also means it has a high percentage of dirt roads. With an average of 17 inches of precipitation per year, dust could be a constant problem in the dry months. Could we marry the two issues and come out with a happy ending? The saline solution at this facility is acceptable as a dust suppressant if applied in a manner that did not allow infiltration or runoff to waters of the state. The multiple partners determined an appropriate rate that would allow NU CHEM, in cooperation with Garfield County, to apply its waste water onto dirt roads.

## Milestones and outcomes

In 2008, NU CHEM and the county road department applied the waste brine water to Garfield County roads. Based on a conversation with the General Manager of NU CHEM, the concept is working great. NU CHEM captures all of its brine water in aboveground storage and daily, trucks it to specified dirt roads for application at appropriate rates.

## Project highlights

NU CHEM needed to find an alternative to discharging its brine water to ground. In cooperation with two government agencies, it was able to come up with a beneficial use for its waste water and, at the same time, did it in a very economical manner.



*New brine storage tank*

## Funding

The beauty of this fix is that NU CHEM was able to utilize existing equipment to capture, contain, and apply the waste brine. It already had a tanker. It adapted a spraybar it already owned to the tanker. Its entire capital investment of \$2,000 was used to purchase a pump and install power to run the pumping system for the storage tank.

## Partners

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*Brine application tanker truck*

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