

CALDWELL, IDAHO WATER POLLUTION CONTROL FACILITY

Client: City of Caldwell, ID

Project Manager:
Daniel J. Coughlin, P.E.



This 7.8 MGD municipal trickling filter wastewater treatment plant was having frequent process upsets resulting in poor treatment and in discharge permit non-compliance. The Caldwell treatment facility received flows from the abutting residential community as well as from dairy and industrial dischargers. Mr. Coughlin's services were solicited by the City's contract operators to review operational methods and evaluate the facilities original process design criteria to identify any limitations and deficiencies, and to devise a method to allow the facility to meet permit limits and potentially to increase capacity within tight fiscal constraints.

Mr. Coughlin's review of the wastewater facility and past process monitoring data indicated that organic loadings periodically exceeded the facilities design criteria limiting treatment performance. The site was insufficiently sized to accommodate an additional trickling filter, so an enhancement to the existing process was devised using the "solids contact" premise for preliminary treatment. Through this process modification, periodic high strength influent wastewater would be blended with process solids and sludge to enhance carbonaceous BOD removal. The "solids contact" process provided a quick reduction in the high strength BOD and also helped to "jump start" the biological degradation of the wastewater dissipating shock loadings, helping to moderate process performance and increase the plant's biological treatment capacity. Design criteria and layouts, operational parameters and cost estimates were also provided.

The total value of proposed facilities was over \$1,200,000.



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