

# Projects

ERRG was chosen to provide construction services for the renovation of the existing 0.75 acre wastewater lagoon at Carbonado, Washington which is at the foothills of Mt. Rainer. The project involved the bypassing of the current wastewater flow into a temporary treatment lagoon, bypass pumping systems, removal and disposal of biosolids and existing Hypalon geomembrane liners from the wastewater treatment lagoon and the installation of a smooth HDPE geomembrane liner and reinstallation of existing aerators and baffle curtains. The new liner installation consisted of one layer of 60-mil smooth geomembrane with a strip drain vent system. As part of the renovation of the facility, approximately 40 cubic yards of contaminated subgrade soil was excavated and removed from the site. Time allowed under contract for this work was 68 working days.

ERRG utilized some innovative approaches due to the small footprint of the site and available lay down area. The use of dedicated Baker tanks for temporary storage of current and future wastewater provided an environmentally sensitive way to manage wastewater when the main lagoon is off line.



The dewatering process was assisted by an innovative pump float that allowed free liquids to be pumped and bypass the main wastewater treatment lagoon. The bypass pumping system was built in redundancy utilizing a diesel powered backup pump with an auto start and

auto dial alarm system to notify project personnel in the event of a primary pump failure was installed and in use during bypass operations. During biosolids pumping and pressing operations 24-hour staffing of the temporary treatment lagoon was required to manage and process the additional wastewater generated during the critical liquid draw down and filter press process.

Sludge material was dredged and processed through a belt filter press to remove the liquids and to allow the most cost effective disposal option of the lagoon biosolids.

## Carbonado Wastewater Lagoon Liner Replacement

### SUMMARY

**Owner**

Town of Carbonado

**Location**

Carbonado, WA

**Award Date**

October 2006

**Actual Completion Date  
or Projected Completion Date**

November 2009

**Award Amount**

\$282,955

**Final Contract Price**

\$303,505

**Services Provided**

Demolition  
Temporary Holding Pond  
Construction  
Site Preparation  
Pump Replacement  
Landscaping  
Fencing  
Dewatering  
Disposal of Solids  
Wastewater Management  
Recycling of Materials



**Engineering/Remediation Resources Group, Inc.**

Office Locations > Martinez, San Francisco, Los Angeles, Tustin, Seattle, Portland, Honolulu  
Website > [www.errg.com](http://www.errg.com)