

BULLETIN

News from SubTerra, Inc.®

Mine Permitting (SEPA) and Reclamation Planning (WADNR) (ACE) Dickey Gravel Mine Silverdale, Washington

SubTerra, Inc. was retained by Ace Paving Company to permit an expansion at their gravel mine near Silverdale, WA and to secure required reclamation permits. The expansion permit required completion of an expanded checklist under SEPA with supporting hydrology, drainage, and slope stability studies. **SubTerra** completed this work in conjunction with one of its teamed subconsultants, ABC Consultants.

As the lead project consultant **SubTerra** was responsible for:

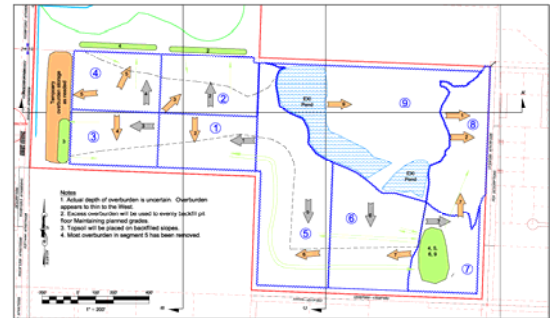
1. Preparing SEPA documents.
2. Preparing a highwall reclamation design and associated slope stability analyses.
3. Completing hydrology and drainage reports.
4. Preparing the WADNR Reclamation Plan.



Above: The central pit area from the southern highwall.

Grading plans were developed to expand the pit towards the west as shown in the

Reclamation Sequence Map below.



The Washington Department of Natural Resources requested that a 140-ft highwall near the eastern project boundary be backfilled and permanently reclaimed.

Below: The eastern highwall looking from the west.



Slope stability was evaluated using the program XSTABL to perform two dimensional limit equilibrium analysis using simplified Bishop and Janbu methods.

A majority of the work was accomplished in two months with permit comments finalized at the end of month four.