

## ***Aggregate Mining Industry Services***

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Anderson Consulting Engineers' ***aggregate mining*** experience includes permitting efforts and litigation support for in-channel and off-channel mining operations. Our staff has been involved in numerous projects throughout the west which required solutions to complex environmental, technical, and political issues. These projects range in scope from mine plan development to assistance with hydraulic, hydrologic, geomorphic, environmental, or permitting tasks.

### **Our aggregate mining services include:**

- Mine planning and pit progression
- Substitute water supply planning
- Evaluation of water rights impacts due to mining operation and development of substitute water supply plans and augmentation plans for mitigation
- Planning for post mining environmental enhancement, wetland banking, recreation, or development
- Estimation of gravel rejuvenation rates
- Determination of the potential for stream capture by off channel pits
- Determination of river buffer limits
- Evaluation of wetland impacts, mitigation and restoration
- Preparation, negotiation, and procurement of environmental permits, including CWA 404, FEMA and various state and county permitting requirements for mining operations

As part of these studies, ACE has predicted long-term channel stability and geomorphic trends, addressed fish migration, habitat and capture issues, sediment loading to adjacent waters and dewatering impacts to adjacent wetlands. ACE has prepared permits, mine and reclamation plans for upland rock quarries as well as in-stream and off-channel mining operations.



Active Gravel Mining Operation, Fort Collins, Colorado