



## **PLAN OF OPERATIONS**

**RUSS #1 QUARRY  
CA MINE ID #91-12-0065**

**(Humboldt County)**

**October 2010**

**Amended January 2011**

**Amended October 2025**

**Prepared by:**

**Humboldt County Public Works Department**

**Natural Resources Division**

**1106 Second Street**

**Eureka, CA 95501**

**(707) 445-7741**

## TABLE OF CONTENTS

GENERAL INFORMATION .....	3
INTRODUCTION .....	3
LOCATION .....	3
PAST MINING ACTIVITIES .....	3
PROPOSED MINING ACTIVITIES .....	4
Air Quality & Natural Occurring Asbestos.....	4
Dust Suppression .....	4
Noise .....	4
Access Roads .....	5
Traffic Control .....	5
Quarrying .....	5
Aggregate Processing.....	5
Fueling and Maintenance .....	5
Hazardous Material Management .....	6
Annual Winterization .....	6
Regular Monitoring and Reporting .....	6
INTERIM RECLAMATION .....	6

## GENERAL INFORMATION

<b>Project:</b>	Russ #1 Quarry – California Mine ID # 91-12-0065 Renewal of Permit # CUP-46-94/SMP-08-94
<b>Applicant:</b>	Humboldt County Public Works Department (HCPW) 1106 Second Street Eureka, CA 95501
<b>Parcel:</b>	Assessor Parcel #313-132-001 (623.00 acres)
<b>Owner/Surface Rights:</b>	James & Katie Russ PO Box 235 Ferndale, CA 95536
<b>Production:</b>	Estimated Annual: <25,000 cubic yards (yd <sup>3</sup> ), occurring every 3-7 years Estimated Total: Maximum of 30,000 yd <sup>3</sup> over 15 years
<b>Acres:</b>	Permitted: 3.5 acres Proposed: 3.5 acres

## INTRODUCTION

The purpose of this project is to continue quarrying, crushing/sorting, and stockpiling of aggregate at the Russ #1 Quarry for Humboldt County Department of Public Works (HCPW) road maintenance and road repair projects. This permit application proposes extraction of a total 30,000 yd<sup>3</sup> of aggregate over the life of the permit. Mining may consist of a single 25,000 yd<sup>3</sup> extraction, or smaller extractions, as frequently as every 3-7 years, totaling 30,000 yd<sup>3</sup> over 15 years. See Reclamation Plan, attached maps.

## LOCATION

Russ #1 Quarry is located ten miles south of Highway 299 and 7.75 miles southeast of Korbel on Snow Camp Road, ½ mile south of Ward Road (County). The site lies 400 feet (ft) west of the County road and is accessed via a private, gated road. The quarry is located in Section 15, Township 5 North, Range 3 East, H.B. & M. and can be seen on the Maple Creek 7.5' USGS quadrangle map. The quarry is located within Assessor Parcel #313-132-001. See Reclamation Plan, attached maps.

## PAST MINING ACTIVITIES

The quarry was originally developed in an open prairie from a naturally occurring 65 ft high rock outcropping near the top of Snow Camp Ridge. The ridge separates Maple Creek on the west from High Prairie Creek on the east. Maple Creek is a tributary to the Mad River, whereas High Prairie Creek is a tributary to Redwood Creek. Although the extent of the deposit is unknown, it is estimated that mining by the landowner (Russ Family) prior to HCPW operations netted 10,000-20,000 (yd<sup>3</sup>), resulting in the quarry floor and face that existed when the site was first permitted in 1995. Currently, the quarry face is approximately 300 ft long x 13 ft high. Due to the inconsequential height of the existing face, a catch bench has not been installed. The quarry floor is about 1.33 acres in size, and of that area, the combined area of gravel stockpiles is about 0.32 acres. The current area of disturbance associated with this project is 2.93 acres.

As mentioned above, the site was mined in the past and was already partially developed. A berm was constructed around the project area to control stormwater onsite. Records indicate that HCPW quarried and processed aggregate for the first time in 1998 resulting in two existing stockpiles, one located near the extreme southwest side and another near the northwest corner of the site. The quarry floor has been designed to course stormwater towards the center of the quarry. During large storm events, stormwater does not have the opportunity to percolate into the ground and stands near the face until it saturates into the ground or evaporates.

## **PROPOSED MINING ACTIVITIES**

HCPW proposes to quarry and process a maximum of 25,000 yd<sup>3</sup> once every 3-7 years, for a total of 30,000 yd<sup>3</sup> over the life of the proposed permit (15 years). Processing, sorting, and stockpiling are included in the proposed activities. See Reclamation Plan, attached Site Plan for proposed limits of operation.

### Air Quality & Natural Occurring Asbestos

In 2002 the California Air Resources Board approved an Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations (Final Regulation Order Section 93105). The Russ #1 Quarry is not located in an ultramafic rock unit and does not appear to contain asbestos, serpentine, or ultramafic rock although an area close by, and to the east is known to contain Naturally Occurring Asbestos (NOA). If in the event NOA is discovered at the site, the North Coast Unified Air Quality Management District will be notified/consulted immediately. Stringent dust control measures will be applied during quarrying, processing/sorting, and stockpiling operations and during activities associated with final reclamation. If NOA is left exposed it will be encapsulated by re-soiling during final reclamation.

The North Coast Unified Air Quality Management District is in non-attainment for Particulate Matter smaller than 10 microns in diameter (PM10) according to State of California Standards. Sources of PM10 in the project vicinity are from road and natural airborne dust, vehicle emissions, forest fires, and fires associated with forest management.

### Dust Suppression

The method of wetting the quarry access road and quarry floor with water (supplied from an offsite source) will be utilized to control fugitive dust. An equipment dust suppression system is utilized during crushing operations. The system includes a large water storage tank located adjacent to the equipment. Offsite water is delivered to the storage tank via a water truck. Refilling is based on demand, typically every 2-3 days. An electric or portable gas-powered pump supplies water to strategically placed misters installed at the screen deck and conveyor head-pulleys. Misters may also be utilized on the cone and/or jaw, depending on the volume of dust generated by the material being processed.

### Noise

Ambient noise levels in the quarry vicinity range from 30 to 80 dBA, and result from wind, birds, livestock, logging equipment, and vehicular traffic (Jake Brakes) on Snow Camp Road. Noise contribution from quarry activities are in the low-80s dBA range, which is typical for this type of activity, with the loudest noise resulting from equipment backup horns, dump truck tailgates, and crushing equipment.

### Access Roads

The access road leading into the quarry is approximately 1,600 ft in length and averages 12-14 ft in width. Line of sight exists along the entire roadway when traveling in either direction. The elevation of the quarry floor is approximately 50 ft lower than the intersection of the access road with Snow Camp Road, resulting in a slight gradient to the road for most of its length. The access road is ditched, with ditch-relief culverts installed at two locations. The entire length of the road is surfaced with hard-packed base rock. When quarrying is being performed, the road will be wetted during hours of operation to enhance surface armoring and to minimize the accumulation of dust. The road is gated and locked when the site is not in use. Visibility is satisfactory in both directions when leaving the quarry and entering the County Road.

### Traffic Control

Traffic control will consist of placing warning signs along Snow Camp Road in both directions from the quarry access road. It will not be necessary to detour or otherwise restrict traffic. Minor traffic delays may occur when vehicles encounter trucks leaving or entering the quarry. Incidental delays will be temporary, ending when extraction and processing activities are completed and trucks/equipment are removed from the site.

### Quarrying

The mining method proposed is identical in nature to operations conducted by HCPW over the past 15 years (2010 permit period). Extraction will occur by ripping and breaking up the rock with a bulldozer or excavator. The material will then be pushed into temporary surge piles for processing. In the event localized hard rock is encountered, small-scale separation with charges may be performed. The quarry face will be maintained at a minimum of 1:1 slope, with a maximum height of 23 ft. The proposed mining activity will include the retreat of the working face to the northeast approximately 122 ft. The alignment of the quarry face will remain consistent.

Mining and crushing will occur during daylight hours (sunrise to sunset), primarily on weekdays. The average time period from extraction to stockpiling will be about 6-8 weeks.

### Aggregate Processing

A portable crusher assembly, consisting of jaw and cone crushers, conveyors, and a generator trailer will be temporarily located on the quarry floor. Quarried rock will be transported to the crusher via a front-end loader. Processed rock will be sorted and placed onsite in stockpiles and will later be utilized for road maintenance and winter storm damage repair projects. Once crushing activities are completed, the crusher assembly will be dismantled and removed from the area.

### Fueling and Maintenance

All fueling, lubing, and equipment maintenance will be performed in a responsible manner. The designated staging/storage area for equipment, fuels, lubricants, and solvents related to quarrying activities will be restricted to a single location within the quarry site. Equipment will be inspected for leaks prior to starting each shift, following lunch breaks, and at end of shift each workday. Maintenance involving the removal/repair of hydraulic cylinders/hoses or of reservoirs containing hazardous products will be performed over impervious fabric resistant to Total Petroleum Hydrocarbons (TPH). A minimum of two sealed 5-gallon spill kits will be kept onsite at all times during extraction/processing operations. One sealed 5-gallon spill kit will be kept onsite during off-haul activities from the stockpile area. All activities related to fueling, lubing, and maintenance will be performed in the designated staging area unless equipment has been immobilized due to a mechanical failure. In these instances, every effort will be made to guard against and control spills. The functional condition of fuel transfer pumps, hose assemblies, and emergency shutoff switches will be evaluated prior to usage. Personnel tasked with

fueling will remain near the emergency shutoff switch during fueling operations. Topping off of fuel tanks will not occur. Fuels and lubricants will not be stored onsite after-hours or on weekends.

Either an electric or gasoline powered water pump may be used to supply water to the crushing equipment, dust suppression system. When a gasoline powered water pump is utilized, it will be situated over a drip pan or impervious fabric resistant to TPH and will be securely stored or removed from the site at end of shift each workday.

#### Hazardous Material Management

If leaks or spills occur in the area of operation during any extraction, processing, or stockpiling activities, they will be controlled immediately. All contaminated soil will be recovered from the site and stored in DOT approved containment vessels. All stored contaminated/hazardous material will be removed in a timely manner and disposed of at an approved disposal facility.

#### Annual Winterization

The access road will be graded to course stormwater towards the inboard side of the road each fall prior to the commencement of winter rains. Roadside ditches will be cleared of rocks and organic matter to assure functionality of two ditch relief culverts. The quarry floor will be finish graded to control stormwater by diverting it towards the center of the site. A trench will be constructed at the toe of the quarry face to enhance percolation and/or evaporate onsite stormwater. Each end of the trench will be finish graded to a 10:1 slope to create escape routes for livestock and animals that may become trapped. If the existing stormwater containment berm around the exterior of the site becomes damaged or is breached during extraction or end-haul activities, it will be reconstructed as necessary to control stormwater runoff prior to the commencement of winter rains. Any rebuilt sections of berm will be straw mulched to eliminate the potential for discharge of fine sediment. Stormwater will be controlled onsite to the greatest extent possible.

#### Regular Monitoring and Reporting

Monitoring will consist of regular visual inspections of the quarry by HCPW personnel for slope stability, stormwater management, berm integrity, and maintenance of the access road. Humboldt County Planning Division staff will inspect the quarry annually. Reporting will consist of annual reports to the local lead agency and CA Department of Conservation as required by the Surface Mining and Reclamation Act.

### **INTERIM RECLAMATION**

As of fall, 2025, no reclamation has been undertaken due to the diminutive size of the site and the frequency of excavation and end-haul events. Since quarrying activities have generated little topsoil, interim efforts will be made to import local material to offset the need to import soil from outlying areas following end-of-project and final reclamation. The County's interim reclamation activities are detailed in the Amended Reclamation Plan (Rev-B) submitted as a supporting document to this amended Plan of Operations. Final reclamation will be undertaken following termination of HCPW quarrying operations.