

**Attachments to Accompany
Water Right Application
West Coast Aggregates, Inc.**

Attachment No. 1

3. Project Description

This Application proposes to appropriate water for the purpose of fish and wildlife enhancement in connection with the proposed Pilarcitos Quarry Expansion project in San Mateo County. The proposed project involves the diversion of wet-season flows from Nuff Creek and an unnamed tributary thereto for storage and subsequent release to Nuff Creek thence Pilarcitos Creek during the dry season.

Water diversion will commence in Phase II of the quarry expansion project. A gravity-flow diversion facility will be constructed on Nuff Creek (POD 1) at the upper end of an existing 60-inch diameter culvert that presently conveys all Nuff Creek flows through the quarry site. Quarry operations within an unnamed tributary to Nuff Creek will create a mine pit that will be converted to a water storage reservoir (POD 2) having a surface area of approximately 3.85 acres, a depth of about 50 feet, and a total storage capacity of about 147 acre-feet. A 24-inch diameter gravity-flow diversion pipeline will convey flows from POD 1 to storage at the POD 2 reservoir site. The POD 1 diversion facility will be designed to bypass all Nuff Creek flows up to 2 cfs, and will have a diversion capacity of about 20 cfs.

The POD 2 reservoir will have a gravity-release usable storage capacity of 80 acre-feet. During the dry season stored water will be released via a gravity-flow outlet for enhancement of downstream instream flows. The storage reservoir will have a dead-pool storage capacity of 67 acre-feet, which will be released by pumping if necessary for additional enhancement.

Attachment No. 2

6. Water Availability

California Water Code Section 1260(k) requires that every application for a permit to appropriate water shall include “sufficient information to demonstrate a reasonable likelihood that unappropriated water is available for the proposed appropriation.” This narrative and accompanying calculations provide the required information.

The subject Application proposes a point of diversion on Nuff Creek (POD 1) to offstream storage at a reservoir to be constructed on an unnamed stream tributary to Nuff Creek (POD 2), all in San Mateo County. Diversion of up to 147 acre-feet is proposed for storage at the onstream reservoir at POD 2. The proposed season of diversion is November 1 to May 31. According to State Water Resources Control Board Order WR 98-08, the Pilarcitos Creek watershed is fully appropriated from June 1 to October 31. The diversion season proposed by this Application conforms to Order WR 98-08.

The hydrology of the Nuff Creek watershed was evaluated in a 2011 report by Balance Hydrologics, Inc., in support of the Draft Environmental Impact Report for the Applicant’s Pilarcitos Quarry Expansion project.¹ The Nuff Creek watershed reckoned above the confluence with Pilarcitos Creek is approximately 688 acres (1.1 square miles). The drainage area reckoned at POD 1 is about 438 acres. Per Balance Hydrologics, mean annual runoff for the Nuff Creek watershed is estimated to be approximately 12 inches, or 0.88 cfs per square mile, based on regional regressions. Balance Hydrologics used mean monthly unit discharge at the U.S. Geological Survey Pilarcitos Creek gage at Half Moon Bay and the mean annual runoff estimate for Nuff Creek to calculate mean monthly discharge for Nuff Creek. Per Appendix C of Balance Hydrologics’ report, the estimated mean monthly runoff for the entire Nuff Creek watershed during the proposed season of diversion is watershed is shown in the attached Table 1. Table 1 also shows the estimated average monthly runoff at PODs 1 and 2 based on adjustment of drainage area. As shown, in an average year about 422 acre-feet is estimated to accrue at POD 1 during the period of November 1 to May 31, and about 52 acre-feet is estimated to accrue at POD 2. The total estimated seasonal amount available in an average year is about 474 acre-feet. The SWRCB’s eWRIMS data base shows that there are no diverters of record above PODs 1 and 2.

Based on the forgoing there is a reasonable likelihood that water is available for the subject Application.

¹ CEQA Level Hydrologic Evaluation of the Pilarcitos Quarry Master Expansion and Water Resources Project: Mining and Reclamation Plan, San Mateo County, California, Balance Hydrologics, Inc., April 2011. Included as Appendix F in the Draft EIR for the Pilarcitos Quarry Expansion project, May 2011.

**Table 1
Nuff Creek Hydrology**

Location ²	Units	Estimated Runoff							
		Nov	Dec	Jan	Feb	Mar	Apr	May	Total
Nuff Creek above Pilarcitos Creek ¹	cfs/sq. mi.	0.28	0.98	2.5	2.9	2.2	1.1	0.37	-
	acre-feet	17.9	64.8	165.2	174.7	145.4	70.4	24.5	662.9
Nuff Creek at POD 1	acre-feet	11.4	41.2	105.2	111.2	92.6	44.8	15.6	422.0
Unnamed Stream at POD 2	acre-feet	1.4	5.1	13.0	13.7	11.4	5.5	1.9	52.0

Notes:

1. Unit runoff per Appendix C of CEQA Level Hydrologic Evaluation of the Pilarcitos Quarry Master Expansion and Water Resources Project: Mining and Reclamation Plan, San Mateo County, California, Balance Hydrologics, Inc., April 2011.
2. Drainage areas as follows:
 Nuff Creek above Pilarcitos Creek = 688 acres
 Nuff Creek at POD 1 = 438 acres
 Unnamed Stream at POD 2 = 54 acres

Attachment No. 3

7. Place of Use

The sole purpose of use for this Application is fish and wildlife enhancement. Water diverted from the Nuff Creek watershed during the wet season will be stored and released to Nuff Creek thence Pilarcitos Creek for enhancement of fish and wildlife habitat during the dry season. Accordingly, the proposed place of use is the reach of Nuff Creek below the project site, and Pilarcitos Creek between its confluence with Nuff Creek and the Pacific Ocean, as shown on the map accompanying this application.

The portion of Nuff Creek on the Applicant's property that will be enhanced is situated on APNs 048-350-020, 048-350-070, and 056-380-030. Below the Applicant's property Nuff Creek and Pilarcitos Creek flow through numerous other parcels owned by others.

Attachment No. 4

9. Justification of Amounts Requested

k. Fish and Wildlife Preservation and/or Enhancement

Competing uses for water and loss of habitat due to channelization and rural and urban residential, agricultural, and commercial influences have significantly altered Pilarcitos Creek. Various studies have identified loss of riparian habitat, migration barriers, sedimentation of stream channels, proliferation of non-native vegetation, and reduced stream flows as principal problems in the watershed that affect the health of the Creek's ecosystem. Pilarcitos Creek is also identified as critical habitat for the recovery of Central California Coast ESU of steelhead, federally listed as threatened. In October 2008 an Integrated Watershed Management Plan (IWMP) was prepared by the Pilarcitos Creek Restoration Workgroup to address the actions necessary and other species of concern that depend on aquatic and riparian habitats throughout the Pilarcitos Creek watershed. One of the key goals in the IWMP is "*Protect and recover federally-listed steelhead trout and other native species that depend on aquatic and riparian environments by providing habitat sufficient for sustainable population levels*".

The proposed Pilarcitos Quarry Expansion project includes a water storage component that will contribute to stream flows, water quality, and habitat values downstream of the quarry for the benefit of steelhead and other aquatic species in the Pilarcitos Creek drainage. Extremely low flows and high stream temperatures during the summer exert a substantial negative influence steelhead and other aquatic species in Pilarcitos Creek. On average, measured summer low flows in lower portions of the creek are below 1 cubic foot per second (cfs), and in dry years low or no flow can occur for several months.¹ A water storage reservoir will be established within 6 to 10 years from the commencement of mining in the expansion areas. This reservoir pond will have a total storage capacity of approximately 147 acre feet and a usable, gravity-fed volume of 80-acre feet. This is enough water to provide supplemental dry season flow of 0.5 cfs for 80 days or 0.25 cfs for 160 days (0.25 cfs is about double the estimated late dry-season base flow in Nuff Creek during a year with wetter-than-normal rainfall).² The reservoir will provide an additional 67 acre-feet of dead-pool storage capacity that can be released by pumping if necessary for additional enhancement.

Presently, Nuff Creek is contained within a 5-foot diameter culvert, approximately 1,400 feet long, through the existing quarry site. The initial phase of the proposed quarry project includes the removal of the downstream 350 feet of the culvert and restoration of this reach of Nuff Creek. Upon completion of quarry activities, the reclamation plan calls for removal of the remaining reach of culvert in Nuff Creek (about 1,050 feet) and full restoration of the Nuff Creek channel through the quarry site.

¹ Section 4.7 of Pilarcitos Quarry Master Expansion and Water Resource Project Mining and Reclamation Plan, LSA Associates, Inc. August 13, 2009.

² Page IV.C-26 of Pilarcitos Quarry Expansion Draft Environmental Impact Report, May 2011.

Attachment No. 5

Map to Accompany Water Right Application

Attachment No. 6

The County of San Mateo Planning and Building Department's Letter of Decision, Findings and Conditions of Approval, and Findings of Fact dated January 15, 2013, are provided on the attached CD.

Attachment No. 7

17b. Other State/Federal permits required

See pages III-41 and -42 of the DEIR.

17c. Construction or grading-related activity that has significantly altered or would significantly alter the bed, bank, or riparian habitat of any stream or lake

Past quarry activities have included 1) the installation of a 60-inch diameter culvert pipe, approximately 1,400 feet long, within Nuff Creek for conveyance of Nuff Creek flows through the existing quarry site, and 2) the construction of a tailings dam in the unnamed stream at proposed POD 2, the deposition of tailings upstream of the tailings dam, and the installation of a culvert through the tailings impoundment for passage of stream flows into the aforementioned Nuff Creek culvert.

The proposed project involves the following activities related to streams and lakes:

Phase I – The lower 350 feet of the Nuff Creek culvert will be removed and Nuff Creek will be restored in this reach.

Phase II – The Nuff Creek diversion facility will be constructed at the upper end of the existing Nuff Creek culvert. The tailings impoundment in the unnamed stream will be removed, and the site will be excavated to create a 147-acre-foot storage reservoir. Wet season flows diverted from Nuff Creek will be conveyed to and stored in the reservoir for dry-season releases for fish and wildlife enhancement in Nuff Creek and Pilarcitos Creek.

Attachment No. 8

Provided on Attached CD:

- Pilarcitos Quarry Expansion Draft Environmental Impact Report, May 2011
- Pilarcitos Quarry Expansion Final Environmental Impact Report, December 2011
- Pilarcitos Quarry Expansion CEQA Guidelines Appendix D: Notice of Determination, January 9, 2013