

**Attachment 4.A**

**Reclamation Plan revised December 1, 2023**

# **RECLAMATION PLAN**

## **Blue Lake Gravel Bar**

Revised December 1, 2023

### INTRODUCTION

GLJ Construction (GLJ) is applying for a fifteen (15) year extension of the Reclamation Plan (SMR-08-91) covering the existing Blue Lake gravel extraction site on the Mad River in Humboldt County, California. The County of Humboldt (Case #SMR-08-91; File #312-161-07) permits this project per a (50,000 CY) Vested Rights Determination. Since the project operates under a vested right, it is expected to operate in perpetuity. However, SMARA requires identification of a “proposed termination date” of the surface mining operation. Accordingly, the proposed termination date of the Reclamation Plan, December 31, 2025. Additional permits associated with this operation include NCRWQCB Certification (General Order #R1-2005-0011, WDID #1B02120WNHU), USACOE 404 Individual Permit (Permit #27426N), and DFG 1600 (Agreement # 1600-2004-0391).

### GENERAL INFORMATION

Operator:

GLJ Construction

PO Box 922

Blue Lake, CA 9525

Owner:

CWDT: APN 313-231-003

Gary Johnston: APNs 312-161-007, 312-161-020, 313-231-001, and 313-231-002

Project:

Blue Lake Gravel Bar

CA Mine ID 91-12-0032

Operational History:

The Blue Lake Gravel Bar is an in-stream gravel mine. Geology of the Mad River is composed of late Pleistocene and Holocene fluvial and marine terraces. Natural stream processes, the advent of annual high water flowing over the bar, accomplish reshaping and replenishing of gravel annually.

The historic operation involves the removal of aggregate from exposed bar surface, the construction of temporary haul roads, and in most years, construction of a summer

low flow channel crossing of the main-stem, Mad River. Extraction occurs between July 1 and October 15 annually, based on market demands.

#### Future Mining and Proposed End Use:

Reclamation of the property would not preclude future mining if it is determined that mining of the site is permissible and economically viable. The proposed use of the property after reclamation is essentially open space, with continued benefit as riparian in-stream wildlife habitat. Measures to achieve

and this will be implemented, as required by permitting agencies overseeing the site.  
Biological Setting:

The site is located in the lower reaches of the Mad River watershed system. The river channel is defined by 15-25 foot vertical banks cut through agricultural lands with some residences nearby. The upper terraces are covered with a mixture of vegetation. Groundwater is at river level except during winter when it raises due to seasonal rainfall. The climate is temperate and rainfall in the area averages 30-40 inches per years. See list of specific plants/animals in attached Biological Assessment.

#### RECLAMATION PLAN

Blue Lake Bar (Section 30, T6N, R2E and portions of Sections 24 and 25, T6N, R1E, H.B. & M., and APN 313-231-001, 002, 003; 312-161-007, 020) is approximately 180 acres in size. The land use designations for the above-mentioned parcels are as follows: Rural, Improved; Rural, Vacant; Rural, Industrial. Most of the surrounding land use is industrial, agricultural, rural, and rural-improved. The property(s) is located immediately downstream (west) of the Mad River Bridge on Hatchery Road, near the City of Blue Lake, Humboldt County, California, see Attachment C (Site Map). Primary access to the site is off a private drive at the end of Taylor Way accessing Hatchery Road (5L015) approximately 800 feet north of Hatchery Bridge. It should also be noted that the bar is situated just downstream of the confluence of the Main Stem, Mad River and the North Fork, Mad River. Ancillary areas are located upland from the bar, which include various access and haul roads, aggregate stockpile staging and storage areas, equipment storage, maintenance, and fueling, office space, and parking. Following extraction, aggregate material is separated into four different grades of rock. No waste material is generated during the extraction process.

#### Ancillary Areas

- 1) Northern, central, eastern, and southern portions of APN 313-231-001 and entirety of APN 313-231-002: This area includes existing haul roads and other

access roads, office space, equipment storage, maintenance and fueling, and stockpile staging and storage areas.

- a. Existing haul roads located outside the active channel (upper terrace) essentially stay in place to allow access to Mad River. The existing access roads to the bar are permanent and have a hardened surface that is resistant to erosion. There is typically no topsoil to replace over the temporary portion of haul roads on the gravel bars themselves. GLJ intends to decommission various interior roads prior to end-of-project by scarifying as described in the Department of Fish and Game Lake or Streambed Alteration Agreement ("LSAA"), included as Attachment D.
- b. Management and reclamation of the stockpile staging and storage areas will be completed as described in the LSAA.
- c. The upland area used for office space and equipment storage, maintenance, and fueling, will remain in use in support of GLJ construction related operations, even in the event that GLJ terminates gravel extraction operations along the gravel bar. As a result, reclamation of these activities is not addressed within this plan.

2. APN 313-213-003: Existing haul road traverse the southern and northern portions of the parcel, and cross onto adjacent parcels. See 1)a) above for a description of reclamation activities. Various other existing access roads are located on the parcel, which are not used in relation to extraction activities.

#### Extraction Area

Extraction activities typically occur in areas adjacent to the wetted channel, but equal to or above the 35% exceedance flow elevation. This typically results in extraction floor elevations approximately 24 inches above the live channel during summer low-flow conditions and with a minimum ten-foot buffer from the live channel. These benchmark elevations are re-established annually during spring surveys. They are located longitudinally down the length of the bar and at a minimum of each monitoring cross-section. Occasionally (2-3years), extraction occurs in a portion of the long, narrow overflow channel located against the north bank side of the main channel. The subject gravel bar is essentially an open active bar without topsoil or significant amounts of vegetation. Of the 333 acres included in the site, rarely are more than 15 acres disturbed in any one season.

Natural bedload transport processes will be the major factor that will accomplish yearly reclamation with the advent of annual high velocity flows over the bar and reshaping and replenishing gravel and vegetation. However, annual site reclamation consist of finish grading gravel bars following extraction of sand and gravel to leave them shaped in a configuration consistent with permitted design criteria imposed by the U.S. Army Corps of Engineers, CA Department of Fish and Game, North Coast Regional Water Quality Control Board, and NOAA Fisheries.

Annual surveying, monitoring, approval process and oversight:

As per the Corps 404 Individual Permit, NCRWQCB 401 Certification, CDFG 1600 Agreement, and NOAA Fisheries Biological Opinion, there are a number of conditional requirements governing mining activities at this site. The following is a summary of events that take place throughout the mining season:

### **Pre-Extraction Procedures and Review Process:**

Initially, in the spring as the river recedes and when the flow reaches approximately 900 CFS, the wetted stream elevation (WSE) is marked by either staking or painting the water's edge at increments longitudinal to the bar. The elevation of these points are then measured at the same time the spring monitoring cross-section (MSL) surveys are performed, as discussed later in this section. NOAA Fisheries has developed a spreadsheet based on ten-years of flow data. Flow, date and elevation information is then plugged into the worksheet resulting in an elevation corresponding to the 35% exceedance flow, or the minimum skim floor elevation currently allowed on any lower Mad River extraction.

Annual planning begins in April of each year with the scheduling of a spring photographic series of the river. Once winter flows recede and stabilize, during late April or May, the aerial photographic series is taken. Photo coverage includes annual operation areas, the bankfull channel, adjacent riparian corridor and project reach limits. The stereoscopic color photographs are utilized as base mapping for the annual extraction activities and biological monitoring. At the time of the photographic series, site features must be visible so the haul roads, extraction areas, related line work can be identified and displayed.

For purposes of the aerial photography and monitoring, the project reach is defined as the length of stream subject to potential extraction by GLJ plus one-half this length both upstream and downstream of the limits of the extraction reach. In the late spring, when the river level drops to a point where gravel deposits become exposed, GLJ and representatives of the regulatory agencies conduct a site review of the extraction reach to evaluate extraction potential.

Following the site review, GLJ or its consultant surveys proposed extraction site(s) and develops annual extraction plan(s) from the topographic data, site-review field notes and photographic information. The extraction designs, consisting of surveyed cross-section of the proposed extraction area(s), surveyed monitoring cross-sections, extraction narrative, extraction plan photograph and volume calculations are submitted to the Corps, CHERT, NOAA Fisheries, and CDFG for review and approval. GLJ then incorporates Corps, CHERT, NOAA Fisheries, and CDFG recommendations and conditions, if any, into the final extraction plan. Extraction commences only upon approval from the Corps.

In general, permitted design criteria include the following:

- **Narrow Skim Method:** Where skimming is proposed adjacent to the low-flow channel, skim widths would be no greater than one-half the exposed bar width. The narrow skims would follow the shape of the bar feature and trend in the general direction of stream flow. These skims would maintain a vertical offset corresponding to the discharge at 35% exceedence level, or 900 cubic feet per second (cfs) for the Mad River. Finished skims would be free draining and slope either toward the low-flow channel or in a downstream direction. Furthermore, these skims would avoid the head of the bar, defined as the upstream one-third of the exposed bar surface. This buffer may be decreased on a case-by-case basis provided the extraction area narrows, tapering smoothly to a point and remains below the upstream crossover riffle.
  
- **Secondary Channel Skim Method:** Skimming of gravel may occur in secondary, or overflow channels away from the low-flow channel. These channels are dry during the extraction period and provide an extraction opportunity that is removed from the low-flow channel while avoiding higher elevation portions of the bar. A minimum vertical offset of one foot from the secondary channel thalweg may be necessary to allow for fish passage during higher winter flows when the channel is inundated. Finished skim floors would be left in a free draining condition and slope either toward that low-flow channel and/or downstream. Furthermore, extraction will not intrude into the upper portion of the secondary channel where the elevation control exists. In other words, the extraction along secondary channels will not increase the frequency at which flows overtop the upstream control and begin flowing into the channel. In addition to these measures, the overall width of the skim will not exceed one-half of the exposed bar width as measured at the widest point of the bar. The exposed bar surface is that area subject to annual flow inundation and active sediment transport and replenishment cycles, lacking transitional vegetation colonization, grasses and shrubs. The exposed bar may contain sparse patches or widely scattered individual woody plants.
  
- **Inboard Skim Method:** This method is similar to the horseshoe in that it maintains horizontal and vertical offsets from the low flow channel, and an opening to the channel at the most downstream end of the excavation. These areas are excavated to a depth above the water table, with steeper (3:1) slopes on the sides, and gentler (6:1) slopes at the head of the excavation. The horizontal and vertical offsets are intended to remove the excavation area away from frequent flow inundation and are intended to minimize effects to listed salmonid species by disconnecting the mined surface from frequent flow inundation. The excavation may extend into the upper 1/3 head of bar buffer if sufficient rationale is provided to show that protection of the upstream riffle is maintained.
  
- **Alcove Excavation Method:** Extraction method designed by NOAA Fisheries to minimize changes to bar geomorphology. Alcove extractions are generally located at the downstream end of point or side channel bars where naturally occurring features form, providing velocity refuge during high flows and thermal refuge during summer base flow. Alcove extractions are irregularly shaped to avoid disturbance to

riparian vegetation and are open to the low-flow channel at the downstream end to avoid stranding of juvenile and adult salmonids. Alcoves may be extracted to depths above or below the water table, and are typically small in area and volume, relative to other extraction methods.

- **Oxbow Extraction Method:** Narrow (average low-flow channel or less), linear, off-channel excavations along historic channel locations, typically defined on aerial photographs by curvilinear vegetation colonization, muted secondary channels, or as the toe of a moderate to high terrace or valley margin. Extraction shall be located where a future channel would be desired in contrast to present channel pattern. Features should be located in the downstream half of bar to minimize channel capture and shall not be excavated deeper than the adjacent thalweg. Oxbow extractions located below the two-year flood terrace will be free draining so as not to impede fish passage, or they can be located on the two to five year flood terrace, similar to wetland pits.
- **Horseshoe Extractions Method:** This extraction technique involves removing material from the downstream interior portion of a bar, leaving a horizontal and vertical buffer along the low-flow channel. The horizontal buffer provides confinement of low to moderate flows. Horseshoe extractions would avoid intersecting secondary channels and would not intrude into the head of the bar buffer as described above. Extraction slopes on the sidewalls would be at least 6:1 to minimize headcutting.
- **Wet Terrace Pit Method:** Wetland pits are irregularly shaped excavations (to avoid excavating riparian vegetation) located on the one to three year floodplain surface. An excavator digs out the sediment below the water table and leaves the sides of the pit sloped. Wetland pits allow for gravel extraction away from frequently inundated gravel bar surfaces, and most salmonid habitat features. Wetland pits will fill with sediment only during high flow events, approximately every one to three years, and typically over a multi-year period. Wetland pits may have vegetation, either existing or planted, around their perimeter, and may contain some type of cover elements, such as woody debris. Lower elevation wet pits may have a connection to the low flow channel or other frequently inundated secondary channel to reduce salmonid entrapment potential.
- **Dry Terrace Pit Method:** Dry terrace pits are irregularly shaped excavations (to avoid excavating riparian vegetation) located on the two to five year floodplain surface away and are not connected to the low flow channel by any secondary channels. An excavator digs out the sediment and leaves the sides of the pit sloped. The floor of the pit may either stay above or extend into the groundwater table. Dry terrace pits allow for gravel extraction away from frequently inundated gravel bar surfaces, and most salmonid habitat features. Dry terrace pits will only fill with sediment during high flow events, on the order of every two to five years, and typically over a multi-year period. Dry terrace pits may have vegetation, either

existing or planted, around their perimeter, and may contain some type of cover elements, such as woody debris.

### **Biological Monitoring:**

Habitat mapping shall be conducted based upon the protocol developed for the Mad River as described in the biological monitoring section of "Monitoring for Habitat Quality Indicators" authored by NOAA Fisheries and release in the fall of 2005. Annual data submissions should include the aerial photographs with the habitat units clearly delineated, summary tables including descriptions of the proportional area of each habitat type, the distribution of habitat measurements (e.g. pool depths), species identification and mapping, and a narrative describing the habitat conditions in the reach. In addition, the photographs should provide a clear link to the associated cross sections and, in the case of the Mad River, the modified longitudinal profile.

A biological survey report shall be submitted to the Corps, CHERT, NOAA Fisheries, and CDFG by January 15 of each year.

### **Post-Extraction Procedures:**

When the operator has completed extraction and site grooming, the Corps, CHERT, NOAA Fisheries, and CDFG are notified and a final site review is scheduled. The purpose of the final review is to assess the site for additional end-of-season reclamation. Reclamation grading is performed on the affected bars to: remove isolated pits and/or depressions that could otherwise entrap salmonids during subsequent high-flow events; establish a longitudinal slope approximating the gradient of the adjacent low-flow channel; and to establish a 6:1 (horizontal to vertical) transitional cut slope between the head of bar buffer and the excavation area, and a 2:1 transitional cut slope between the lateral buffers and the excavation area. Disturbed areas of the outer bank are restored to the approximate contour elevation and condition that existed prior to the yearly excavation.

Post-extraction surveys of the site are conducted following extraction to generate comparative sets of monitoring and extraction cross-sections depicting pre- and post-extraction topography and degree of extraction plan compliance. The comparative cross-sections are utilized for the identification and minimization of short-term effects caused by extraction processes. The cross-sections are also utilized to calculate extracted aggregate volumes and evaluate replenishment of material in the proceeding year. Pre- and post-extraction surveying/monitoring is certified by a licensed California surveyor per USACOE 404 permit conditions to verify extraction cross-sections and volumes.

Large woody debris, when present in an extraction area, is retained to the maximum extent possible, and is redistributed in a manner that provides structure and cover during storms when the extraction site is over-topped.



In August or September, a second aerial photographic series is taken. This late season stereoscopic photograph series captures the river channel at its lowest flow and provides an aerial view of annual extraction works. The stereoscopic photos are used for biological resource and habitat mapping, evaluation of extraction limits, assessment of vegetative units, monitoring and study of river morphology as well as for future project planning and archival purposes. The late season photographic coverage is equal to or greater than the coverage provided by the spring photographic series.

No additional reclamation measures are required and/or anticipated on the subject gravel bar.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE  
REGION 1 - NORTHERN  
619 SECOND STREET  
EUREKA, CALIFORNIA, 95501

RECEIVED



AUG 28 2014

D. F. G. – EUREKA

**STREAMBED ALTERATION AGREEMENT**  
NOTIFICATION NO. 1600-2014-0113-R1  
MAD RIVER

**MAD RIVER SAND AND GRAVEL**  
BLUE LAKE GRAVEL BAR EXTRACTION PROJECT  
1 ENCROACHMENT

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and Gary Johnston (Permittee) as represented by Mr. Travis Schneider (agent).

## RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) Section 1602, Permittee notified CDFW on May 20, 2014 that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC Section 1603, CDFW has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

## PROJECT LOCATION

The project is situated on the Mad River, a tributary to the Pacific Ocean. The project is located in County of Humboldt, State of California; Section 30, Township 6 North, Range 2 East, Humboldt Base and Meridian; Arcata North U.S. Geological Survey 7.5-minute quadrangle; Assessor's Parcel Numbers 313-231-03, 313-161-07, and 313-231-01; latitude 40° 52' 48" N and longitude 124° 00' 04" W (stockpile area).

## PROJECT DESCRIPTION

The project is limited to one encroachment for aggregate extraction from the channel of the Mad River for commercial purposes. The Permittee proposes to extract up to **50,000 cubic yards** of gravel annually from the Blue Lake bar. Federal permit restrictions on the annual volume of gravel extracted were implemented based on a flow-based analysis of

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE  
REGION 1 - NORTHERN  
619 SECOND STREET  
EUREKA, CALIFORNIA, 95501

RECEIVED



AUG 28 2014

D. F. G. – EUREKA

**STREAMBED ALTERATION AGREEMENT**  
NOTIFICATION NO. 1600-2014-0113-R1  
MAD RIVER

**MAD RIVER SAND AND GRAVEL**  
BLUE LAKE GRAVEL BAR EXTRACTION PROJECT  
1 ENCROACHMENT

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and Gary Johnston (Permittee) as represented by Mr. Travis Schneider (agent).

## RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) Section 1602, Permittee notified CDFW on May 20, 2014 that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC Section 1603, CDFW has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

## PROJECT LOCATION

The project is situated on the Mad River, a tributary to the Pacific Ocean. The project is located in County of Humboldt, State of California; Section 30, Township 6 North, Range 2 East, Humboldt Base and Meridian; Arcata North U.S. Geological Survey 7.5-minute quadrangle; Assessor's Parcel Numbers 313-231-03, 313-161-07, and 313-231-01; latitude 40° 52' 48" N and longitude 124° 00' 04" W (stockpile area).

## PROJECT DESCRIPTION

The project is limited to one encroachment for aggregate extraction from the channel of the Mad River for commercial purposes. The Permittee proposes to extract up to **50,000 cubic yards** of gravel annually from the Blue Lake bar. Federal permit restrictions on the annual volume of gravel extracted were implemented based on a flow-based analysis of

gravel replenishment. On average over the last four years (2010 thru 2013), the annual extraction volumes have been 19,783 cubic-yards. No extraction was conducted at this bar in 2009.

Aggregate extraction consists of removal of flood-washed alluvial material using heavy equipment (e.g., belly-scrapers, loaders, excavators, bulldozers, and dump trucks) from the Mad River channel. Aggregate extraction methods and volumes are consistent with the approved annual extraction work plans. Extraction occurs during the summer low-flow period when alluvial deposits are exposed. Occasionally, fisheries enhancement or off-channel extractions may be included that involve connection of extraction areas to the wetted channel or removal of established woody riparian vegetation. Temporary crossings of the wetted channel may be needed to access gravel deposits. Timing of the installation and removal of these crossings is conducted to avoid periods of peak flows and salmonid migration and spawning. Crossings are also designed to minimize the extent of channel disturbance and avoid sensitive aquatic habitat.

## PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include, but not limited to: **Chinook salmon (*Oncorhynchus tshawytscha*)**, **coho salmon (*O. kisutch*)**, **steelhead trout (*O. mykiss*)**, **coastal cutthroat trout (*O. clarki clarki*)**, **green sturgeon (*Acipenser medirostris*)**, **eulachon (*Thaleichthys pacificus*)**, **Pacific lamprey (*Entosphenus tridentatus*)**, **willow flycatcher (*Empidonax traillii*)**, **bank swallow (*Riparia riparia*)**, **northern red-legged frog (*Rana aurora*)**, **foothill yellow legged frog (*Rana boylei*)**, and **western pond turtle (*Emys marmorata*)**, aquatic invertebrates, and other aquatic and riparian species.

The adverse effects the project could have on the fish or wildlife resources identified above include: direct and/or incidental take, indirect impacts, cumulative impacts, impediment of up- or down-stream migration, damage to salmonid spawning and/or rearing habitats, water quality degradation, damage to aquatic habitat and function, disturbance of nesting birds, colonization of invasive plants or animals, and impacts to riparian vegetation, habitat, and function.

## MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

### 1. Administrative Measures

Permittee shall meet each administrative requirement described below.

- 1.1 Legal Entitlement for Gravel Extraction. Gravel shall only be removed from those areas where the Permittee has secured legal entitlement to such gravel. For the purposes of this Agreement, the term *legal entitlement* is defined as all project conditions, methods, place of operation, and project descriptions contained within the

gravel replenishment. On average over the last four years (2010 thru 2013), the annual extraction volumes have been 19,783 cubic-yards. No extraction was conducted at this bar in 2009.

Aggregate extraction consists of removal of flood-washed alluvial material using heavy equipment (e.g., belly-scrapers, loaders, excavators, bulldozers, and dump trucks) from the Mad River channel. Aggregate extraction methods and volumes are consistent with the approved annual extraction work plans. Extraction occurs during the summer low-flow period when alluvial deposits are exposed. Occasionally, fisheries enhancement or off-channel extractions may be included that involve connection of extraction areas to the wetted channel or removal of established woody riparian vegetation. Temporary crossings of the wetted channel may be needed to access gravel deposits. Timing of the installation and removal of these crossings is conducted to avoid periods of peak flows and salmonid migration and spawning. Crossings are also designed to minimize the extent of channel disturbance and avoid sensitive aquatic habitat.

## PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include, but not limited to: **Chinook salmon (*Oncorhynchus tshawytscha*)**, **coho salmon (*O. kisutch*)**, **steelhead trout (*O. mykiss*)**, **coastal cutthroat trout (*O. clarki clarki*)**, **green sturgeon (*Acipenser medirostris*)**, **eulachon (*Thaleichthys pacificus*)**, **Pacific lamprey (*Entosphenus tridentatus*)**, **willow flycatcher (*Empidonax traillii*)**, **bank swallow (*Riparia riparia*)**, **northern red-legged frog (*Rana aurora*)**, **foothill yellow legged frog (*Rana boylei*)**, and **western pond turtle (*Emys marmorata*)**, aquatic invertebrates, and other aquatic and riparian species.

The adverse effects the project could have on the fish or wildlife resources identified above include: direct and/or incidental take, indirect impacts, cumulative impacts, impediment of up- or down-stream migration, damage to salmonid spawning and/or rearing habitats, water quality degradation, damage to aquatic habitat and function, disturbance of nesting birds, colonization of invasive plants or animals, and impacts to riparian vegetation, habitat, and function.

## MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

### 1. Administrative Measures

Permittee shall meet each administrative requirement described below.

- 1.1 Legal Entitlement for Gravel Extraction. Gravel shall only be removed from those areas where the Permittee has secured legal entitlement to such gravel. For the purposes of this Agreement, the term *legal entitlement* is defined as all project conditions, methods, place of operation, and project descriptions contained within the

project's Vested Rights Determination and Reclamation Plan that have been approved by the County of Humboldt.

- 1.2 Conformance with Other Permits, Approvals, and Environmental Plans. All mining shall be in conformance with Humboldt County's Surface Mining Ordinance (No. 2117), Extraction Review Team (CHERT) approved annual Pre-extraction Plan, and Programmatic Environmental Impact Report (PEIR, State Clearing House No. 1992083049 Mad River), and any subsequent Supplement. All mining shall be in conformance with the United States Army Corps of Engineers (ACOE) 2009 Letter of Permission (LOP) and subsequent renewals, and the North Coast Regional Water Quality Control Board (NCRWQCB) Clean Water Act Section 401 Water Quality Certification.
- 1.3 Notification of Conflicting Provisions. Permittee shall notify CDFW if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, CDFW shall contact Permittee to resolve any conflict.
- 1.4 Documentation at Project Site. Permittee shall make the Agreement including extensions and amendments to the Agreement, and all related notification materials readily available at the project site during all periods of active work, and upon request shall be presented to CDFW personnel. Copies of these Agreement materials shall be provided to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.5 Project Site Entry. Permittee agrees that CDFW personnel may enter the project site with 48-hour notice to verify compliance with the Agreement. This condition does not apply to CDFW enforcement.
- 1.6 CDFW Notification of Work Initiation and Completion. The Permittee shall contact CDFW within the 7-day period preceding the beginning of the work permitted by this Agreement. Information to be disclosed shall include Agreement number, and the anticipated start date. Subsequently, the Permittee shall notify CDFW no later than 7 days after the work is fully completed.

## **2. Avoidance and Minimization Measures**

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

- 2.1 Permitted Project Activities. All work shall be conducted as specified in the Agreement Notification, approved annual Pre-extraction Plan, and all other supporting environmental documents, except where otherwise stipulated in this Agreement.

## 2.2 Summary of Project Timelines:

*January 15* - Permittee's annual Post-extraction Submittal shall be submitted to CDFW for review and archival purposes (see Measure 2.12.4).

*February* - CHERT's annual Post-extraction Report is typically completed and shall be submitted to CDFW for review and archival purposes (see Measure 2.12.5).

*March thru May* – Annual pre-extraction cross-sectional surveys and spring aerial photograph series shall be taken. Timing of aerial photographs shall be dependant upon long-range weather forecast and river stage (see Measure 2.4.1).

*May 31 or soon thereafter* - A mutually agreeable field review of proposed extraction sites shall be scheduled with CDFW, CHERT, and other gravel review agencies. The Permittee shall submit a draft Pre-extraction Plan to CDFW, CHERT, and other gravel review agencies for review and comment. Subsequently, a final Pre-extraction Plan shall be submitted to CDFW for review and written approval (see Measure 2.4).

*June 15 thru October 15* - Gravel shall be extracted during this period unless a time extension is approved in writing by CDFW (see Measure 2.5).

*June 30* - Approved temporary wet stream channel crossings may be constructed (see Measure 2.8).

*August thru October* – Annual post-extraction aerial photograph series tied to the fall low flow period shall be taken. When practicable, fall photographs shall be taken to closely coincide with the completion of extraction activities (see Measure 2.12.2).

*September 15* - All temporary wet stream channel crossings shall be removed unless a time extension is granted by CDFW (see Measure 2.8.1).

*October 1 thru 15* - Seasonal reclamation activities shall commence, and all stockpiled material shall be removed from bars daily and extraction sites smoothed to reclaimed condition at the end of each work day (see Measure 2.11).

*October 15*- All gravel extraction activities shall be completed and extraction areas reclaimed, unless extraction activities are continuing under an approved extension (see Measure 2.11.1).

## 2.3 Annual Cross-sectional Surveys:

- 2.3.1 *Cross-sectional Survey Protocols.* Surveying, data collection, and reporting procedures shall be consistent with the requirements of Appendix C of the 2009 ACOE LOP *Procedure for Gravel Mining Activities within Humboldt County*, and any subsequent renewals, extensions, and amendments. Cross-sectional surveys, maps, and associated calculations (e.g., replenishment and extraction volumes) shall be prepared under the direction and certification of a State of California Licensed Land Surveyor or Professional Engineer.
- 2.3.2 *Cross-sectional Surveys.* Cross-sectional surveys shall be conducted to generate comparative sets of the full-channel and pre- and post- extraction sites that depict the topography of the project reach and extraction sites. Full-channel monitoring with permanent cross-sections spaced throughout the project reach shall be surveyed annually. Temporary cross-sections that pass through gravel extraction sites shall be surveyed prior to and after extraction activities.
1. *Full-channel Cross-sectional Monitoring Surveys.* The full-channel cross-sectional surveys provide a fixed and annual picture of stream bed elevation and geomorphic changes within the project reach, and allow for the assessment of long-term trends and changes associated with flood events and extraction operations. The monitoring cross-sections shall be developed from annual surveys of the full channel area when river conditions allow. The monitoring lines shall have permanently monumented end points outside of the channel area and shall be referenced to common horizontal and vertical survey control grids, so the lines can be relocated and resurveyed if a significant flow event erodes the banks and removes the monuments.
  2. *Gravel Extraction Area Cross-sectional Surveys.* The gravel extraction cross-sectional surveys may vary seasonally in location, are shorter in length, and are more closely spaced. The cross-sectional surveys shall be used to provide a detailed topographic relationship of the pre- and post-extraction areas, the wetted channel, and other features surrounding the extraction site. The temporary cross sections shall be used for extraction planning, reporting, and monitoring (see measures 2.4.2 and 2.12.3).
- 2.4 Annual Pre-extraction Procedures. Prior to conducting annual gravel extraction activities covered by this Agreement the following steps shall be conducted.
- 2.4.1 *Pre-extraction Photographs.* In spring once winter high flows recede



and stabilize (March - May), stereoscopic color aerial photograph series shall be taken. Photograph coverage shall include the annual operation areas, bank-full channel, adjacent riparian corridor, and project reach limits. The aerial photographs shall be utilized as the base map for the annual extraction activities planning, reporting, and monitoring. At the time of the photographic series, site features shall be visible so that haul roads, extraction areas, temporary crossing locations, restoration or enhancement areas, and related line work can be identified and displayed.

For purposes of the aerial photography and monitoring, the project reach shall be defined as the length of stream subject to potential extraction by the Permittee plus one-half this length both upstream and downstream of the limits of the extraction reach.

- 2.4.2 *Pre-extraction Cross-Sectional Surveys.* Pre-extraction cross-sectional surveys that pass through the proposed gravel extraction sites shall be conducted according to protocols outlined in the ACOE 2009 LOP (see Measure 2.3.1). Pre-extraction cross-sectional surveys shall be used for topographic reference, extraction planning (e.g., extent and volume of excavation), grade control placement during excavation, and reference data for the annual Pre-extraction Plan and Post-extraction Report. Extraction areas less than 500 feet in length shall have a minimum of three cross-sections, and extraction areas greater than 500 feet in length shall require a minimum of five cross-sections.
- 2.4.3 *Extraction Area Delineation.* The listed conditions below shall be followed for the delineation of gravel extraction areas, and are not inclusive of other procedures and protections identified within the Agreement that may also apply in the determination of extraction sites.
1. *Flow-based Delineation of the Extraction Area.* The minimum skim floor elevation shall be the elevation equivalent to the elevation of the 35 percent exceedence flow at the project site, based on stream flow at the U.S. Geological Survey gauge for the Mad River near Arcata, California (USGS #11481000). The 35 percent exceedence flow elevation shall be marked in the field at the extraction site as required by current ACOE and NMFS protocols.
  2. *Minimum Head of Bar Buffer.* The upstream end of the gravel bar shall not be used for gravel extraction to protect the stream flow alignment. The head of bar buffer shall be defined as that portion of the bar that extends from at least the upper third of the bar to the

upstream end of the bar exposed during summer low flows. Exceptions may be proposed based on extraction methods that provide protection of the adjacent cross-over riffle with approval from CDFW, CHERT, NMFS and other gravel review agencies.

3. *Extraction Restrictions Near Stream Banks.* A minimum horizontal offset of 10-feet shall be maintained between all excavation activities and the outermost stream banks, and shall be measured from the base of the bank if unvegetated or drip-line of associated riparian vegetation. If extraction activities will occur nearby a stream bank, a protection buffer shall be clearly marked in the field by flagging, staking, or other acceptable means throughout the extraction season.
- 2.4.4 *Review of Proposed Extraction Sites.* In the late spring when the stream level drops to a point where gravel deposits become exposed, the Permittee and gravel review team members and agencies such as CDFW, CHERT, NCRWQCB, ACOE, and National Marine Fisheries Service (NMFS) may conduct a field review to evaluate potential extraction sites. A mutually agreeable field review date shall be scheduled by the Permittee or CHERT with at least a 5 working-day notice to CDFW.
  - 2.4.5 *Pre-extraction Plan Submittal.* The Permittee shall develop a Pre-extraction Plan that provides an extraction narrative based on extraction goals, pre-extraction survey and aerial photographic information, and field review observations and recommendations of gravel review team members and agencies. A draft pre-extraction Plan shall be submitted to CDFW, CHERT, and other gravel review agencies for review and approval as early in the season as possible. A final extraction plan shall follow that incorporates the gravel review team members and agencies recommendations and conditions, and shall be submitted at least two weeks prior to proposed extraction activities. Gravel extraction under this Agreement may commence upon written approval (letter, e-mail, or fax) from CDFW.

The Annual Pre-Extraction Plan shall include the following:

1. The name, address, and telephone number of the Permittee.
2. The location of the extraction operation, its name, its legal description or latitude and longitude, and boundaries of the extraction operation marked on a U. S. Geological Survey 7.5 minute quadrangle map or scaled aerial photograph.

3. Ownership of the property, including government agencies if applicable, and the Assessor's Parcel Number.
4. Anticipated beginning and ending dates of the proposed work period.
5. A description of the approved and quantifiable procedure used for determining the upcoming season's extraction volume estimates. The Permittee or his appropriately-licensed agent shall certify that such an estimate is accurate to the best of their ability.
6. An estimate of gravel replenishment volume or bed degradation in cubic-yards from the previous extraction determined by comparison and overlay of post-extraction cross sections from the last extraction with current pre-extraction cross sections.
7. Any observable channel changes from the preceding year.
8. The method of extraction (skimming, trenching, wetland pit, etc.) and type of equipment that will be used.
9. Any biological or hydrological assessments or reports needed for approval of extraction activities, and any additional documentation needed to describe the proposed extraction activities.
10. A scaled color aerial photograph containing the information detailed below (more than one photograph may be used of the same area if needed to include all the information):
  - a. A delineation of all extraction areas with the exact location and limits of each extraction site.
  - b. The location of monitoring and extraction cross-sectional survey transects.
  - c. The existing and proposed access and/or haul road locations.
  - d. The location, number and type of stream crossings (e.g., dry channel crossing, temporary bridge wet channel crossing), installation and removal dates, and a plan view and cross-section drawings of typical or specific crossings (include the dimensions of major components of installation).

- e. The location of equipment storage, and permanent and temporary stockpile areas.
- f. The location of perennial wetlands, and wetland removal or restoration areas.
- g. The location of established riparian vegetation, and woody vegetation removal or revegetation areas.
- h. Aquatic or riparian enhancement or restoration areas.
- i. A legend including the date of the photograph, stream flow and stage, name of operation and stream, scale, north arrow, and preparer's name.

2.4.6 *Pre-Extraction Willow Flycatcher Surveys.* If extraction or other disturbance project activities will occur before August 15 within 300 feet of potential willow flycatcher (*Empidonax traillii*) habitat (shrubby riparian vegetation), a qualified wildlife biologist shall assess, survey, and document if suitable habitat is occupied by willow flycatcher. The survey shall follow guidelines found in the *A Willow Flycatcher Survey Protocol for California* (Bombay, et al. 2003), which can be obtained at this website:

[http://www.dfg.ca.gov/wildlife/nongame/survey\\_monitor.html](http://www.dfg.ca.gov/wildlife/nongame/survey_monitor.html).

CDFW shall receive a report for review and concurrence summarizing survey results at least one week before extraction activities are to take place. If willow flycatchers are observed, the qualified wildlife biologist shall design appropriate extraction buffer widths and operational restrictions, and forward the operational report to CDFW for review and approval. Extraction activities shall not commence until CDFW has approved the operational report. CDFW shall strive to make the determination within 4 working-days of receiving the operational report.

2.4.7 *Pre-Extraction Nesting Bird Surveys.* If extraction or other disturbance project activities will occur before August 15, a qualified wildlife biologist shall assess, survey, and document if gravel bar nesting birds such as killdeer (*Charadrius vociferous*) and spotted sandpiper (*Actitis macularius*), or other riparian nesting birds are in or adjacent to the extraction areas. Pursuant to FGC Section 3503, it is unlawful to destroy the nest or eggs of any bird.

If nesting birds are detected, the qualified wildlife biologist shall design appropriate extraction buffer widths and operational restrictions, and forward the operational report to CDFW for review and approval. Extraction activities shall not commence until CDFW has approved the operational report. CDFW shall strive to make the

determination within 4 working-days of receiving the operational report.

2.5 Seasonal Restrictions on Gravel Extraction Activities. The gravel extraction work period in the stream corridor, as defined by the 100-year floodplain, shall be confined to the period June 15 to October 15, unless a written authorization to extend the work period is received from CDFW.

2.5.1 *Extension of the Work Period.* If weather conditions permit, and the Permittee wishes to extend the work period after October 15, a written request shall be made to CDFW at least 5-working days before the proposed work period variance. Written approval (letter, e-mail, or fax) for the proposed time extension must be received from CDFW prior to extraction activities continuing past October 15. An extension beyond October 15 will require the coordination and approval with other gravel review team members and agencies.

2.6 Water Quality Protections:

2.6.1 *Emergency Spill Response Plan.* An emergency spill response plan shall be prepared and submitted to CDFW for review and approval prior to the start of gravel extraction activities, except if plan has been previously submitted and no subsequent changes have been made. The plan shall identify the materials to be used and the actions that will be taken in the event of spill of petroleum products, fine sediment, or any other deleterious material harmful to aquatic or riparian life. The emergency response materials shall be kept at the project site to allow the rapid containment and clean-up of any spilled material.

2.6.2 *Emergency Spill Response.* Clean-up of all spills that could be hazardous or toxic to aquatic or riparian life shall begin immediately. The Permittee shall immediately notify the California Emergency Management Agency (Cal EMA) at 1-800-852-7550. CDFW shall be notified by the Permittee within 24 hours at 707-445-6493 and consulted regarding clean-up procedures.

2.6.3 *Location of Gravel Processing Activities:*

1. *Plant Operations.* No washing, crushing, screening, or other plant operations shall occur within the stream channel, including the riparian vegetation buffer zone along the stream banks. All plant operations shall be located a minimum of 25 feet from existing riparian vegetation and shall not encroach into the existing riparian vegetation.

2. *Staging and Storage of Work Materials.* All staging and storage areas for mobile equipment, fuels, lubricants, and solvents shall be located above and outside of the active channel of the stream. Stationary equipment such as motors, pumps, generators, compressors, and welders located within a dry portion of the stream channel or adjacent to the stream channel shall be positioned over drip pans or other devices (e.g., absorbent blankets, sheet barriers or other materials) as needed to prevent soil and water contamination.
3. *Gravel Stockpiles.* Gravel may be temporarily stockpiled in the dry stream channel during extraction activities, and these areas shall be designated in the annual Pre-extraction Plan. Stockpiles shall be managed to minimize water and wind erosion. After October 1 temporary stockpiles shall be removed from the channel by the end of each workday. All stockpiles in the channel shall be permanently removed by October 15.

Permanent gravel stockpiles shall be located a minimum of 25 feet from the existing riparian vegetation to maintain a riparian vegetation buffer zone. Adequacy of the riparian buffer zone width shall be determined in consultation with CDFW. Any portion of a gravel stockpile within the riparian buffer zone shall be removed, unless consultation with CDFW concurs with a site specific variance. A variance would include terms to offset the riparian buffer with riparian enhancement. The area required for enhancement in lieu of the riparian buffer would be the product of the buffer (25 feet) by the length of the buffer encroachment within the 100 year flood zone.

Any encroachment or disturbance by gravel processing activities within the riparian buffer zone shall be restored through the facilitation of natural recruitment (e.g., removal of stock piles, decompaction of soils), or planting with regionally appropriate native riparian trees. A plan shall be prepared and submitted to CDFW for review and approval (see Measure 2.7.7). The restoration of the riparian buffer zone shall commence no later than two years from the identification of encroachment or disturbance by gravel processing activities.

4. *Contaminant Storage.* Any water containing chemical contaminants from the gravel processing activities shall be immediately pumped into a holding tank or into a settling pond with impermeable lining. These holding tanks or settling ponds shall be

located outside the 100-year floodplain and riparian buffer zone.

5. *Construction Debris.* The Permittee shall not store or dispose of any litter or construction debris within the 100-year floodplain and riparian buffer zone. All debris and associated work materials (e.g., stakes, flagging, spray paint cans) shall be removed annually from the 100-year floodplain and riparian buffer zone.
- 2.6.4 *Use of Fill Materials.* No fill material shall be allowed to enter the live stream, other than clean river gravel as covered in this Agreement, and CDFW approved additions of LWD and large rock.
- 2.6.5 *Vehicle and Equipment Use.* Any vehicles or equipment driven or operated in stream channel and riparian buffer zone shall be checked and maintained daily to prevent leaks of deleterious materials that could be introduced into the stream. All mobile equipment maintenance, lubrication, and refueling shall be done outside of the stream channel and riparian buffer zone.
- 2.6.6 *Pesticides and Herbicides.* No pesticides or herbicides shall be used in the stream channel and riparian buffer zone without prior written approval of CDFW. Only pesticides or herbicides registered with and approved for use in or near water sources by the California Department of Pesticide Regulation (DPR) shall be used, and shall be applied in accordance with regulations set by DPR. Use of pesticides or herbicides may require additional approval with other local, state or federal agencies or entities.
- 2.6.7 *Beneficial Uses of Water.* Gravel extraction activities shall be conducted to protect on-site and downstream beneficial uses of surface water, and shall be in compliance with the Porter-Cologne Water Quality Control Act (Water Code Section 13000 et seq.), and the Federal Clean Water Act (33 U.S. Code Section 1251 et seq.).
- 2.6.8 *Siltation of Streams.* To minimize siltation of the stream, erosion and sedimentation shall be controlled during all phases of the gravel extraction activities, including final reclamation and closure.
- 2.6.9 *Wet Areas.* No vehicles or equipment shall be operated in the wetted stream channel, pools, or other perennial wet areas with surface water without prior approval of CDFW, except where otherwise stipulated in this Agreement.
- 2.6.10 *Natural Drainages.* No natural drainages shall be covered, restricted, rerouted, or otherwise impacted by the extraction activities without

prior approval of CDFW.

## 2.7 Riparian and Stream Habitat Protections:

### 2.7.1 *Restrictions on Riparian Vegetation Removal:*

1. *Removal of Vegetation and Overburden in Extraction Sites.* Any removal of native riparian vegetation and overburden (e.g., rock or soil spoils) in advance of the extraction activities shall be kept to a minimum.
2. *Removal of Vegetation Outside the Extraction Sites.* Native riparian vegetation outside of the delineated extraction sites shall not be removed or damaged without prior CDFW approval.
3. *Relocation of Vegetation.* Native woody riparian vegetation that is approved for removal from the extraction area shall be transplanted as feasible to locations pre-approved by CDFW. These locations shall be indicated on the annual Pre-extraction Plan map.
4. *Removal of Vegetation on Stream Banks.* No native riparian vegetation shall be removed from the bank of the stream, except where authorized for the construction of single-lane haul roads. Trees may be pruned where necessary along the haul roads to provide vehicle clearance and to prevent undue damage to the tree from vehicle traffic.
5. *Cutting of Trees.* Any trees that are CDFW approved for removal shall be cut at ground level and the root mass left in place to allow resprouting, maintain bank stability, and provide woody debris and habitat.

### 2.7.2 *Protection of Riparian Trees:*

1. *Tree Protection Specifications.* Native trees that exceed 4 inches diameter at breast height (DBH), and clusters of smaller native trees or shrubs shall not be removed or damaged except by prior approval of CDFW. If removal of trees over 4-inches DBH or clumps of smaller trees and shrubs, defined as part of a contiguous 1/8 acre complex or greater than 2-inches DBH, is part of the Pre-extraction Plan, a revegetation plan shall be prepared by a qualified botanist or restoration ecologist with expertise in northwest California native plant communities and revegetation techniques (see Measure 2.7.7).



2. *Extraction Activities Restrictions near Protected Trees or Groups of Trees.* A buffer zone from within which no gravel may be extracted shall be established around the protected native trees and smaller groups of trees and shrubs. The buffer zone shall have a minimum horizontal width of 10 feet measured outward from the drip-line, and shall be visibly maintained with staking or flagging. A minimum of a 3:1 slope (horizontal over vertical rise) shall be maintained around the outward edge of this buffer zone.

2.7.3 *Aquatic or Riparian Restoration and Enhancement.* Aquatic or riparian restoration and enhancement activities shall be implemented to minimize seasonal and cumulative extraction impacts, and to compensate for unavoidable impacts of gravel extraction and processing activities within the stream corridor. Aquatic or riparian restoration or enhancement activities shall be included in the Pre-extraction Plan with review and approval by CDFW. A requirement to establish approximately 4.4 acres of riparian by ripping and abandoning OHV roads was not accomplished by the end of the last Agreement. Approximately 0.9 acres of riparian enhancement was completed in another area of the ownership. Therefore, the balance of riparian enhancement required is 3.5 acres and shall be completed within three years of the effective date of this agreement.

Aquatic or riparian restoration or enhancement activities include but are not limited to, alcove creation or maintenance for off-channel habitat, LWD or boulder placements, gravel extraction designed for riparian or wetland vegetation establishment, riparian or wetland revegetation, footprint reduction (e.g., relocating permanent stockpiles or other processing facilities), vehicular traffic barriers, decommissioning access roads, invasive plant or animal removal, or non-project related trash removal.

2.7.4 *Invasive Plant and Noxious Weed Management.* Highly invasive plants or A-rated noxious weeds as identified in by California Invasive Plant Council's *California Invasive Plant Inventory Database* (<http://www.cal-ipc.org/paf/>) and California Department of Food and Agriculture's *Encycloweedia* ([http://www.cdfa.ca.gov/plant/ipc/weedinfo/winfo\\_table-commname.htm](http://www.cdfa.ca.gov/plant/ipc/weedinfo/winfo_table-commname.htm)) shall be eradicated or controlled to prevent infestations and spread to new areas associated with disturbance and equipment traffic from gravel extraction activities in the stream channel, and riparian habitat. Pre- and post-extraction site visits with agencies, CHERT, consultants, and operators may be utilized to assess invasive or noxious weed presence and need for removal, and riparian enhancement activities may include invasive

plant removal or control.

2.7.5 A-rated noxious weeds are subject to a State enforced action involving eradication, quarantine regulation, containment, rejection, or other holding action, and the California Department of Food and Agriculture's Humboldt County Commissioner is to be contacted and will act as the state agent for removal.

2.7.6 *Maintenance of In-channel Roughness Elements:*

1. *Maintenance of In-stream Roughness Elements.* Removal or disturbance of natural in-channel roughness elements such as large woody debris (LWD) and boulders outside the extraction sites shall be avoided.
2. *Large Downed Trees and LWD.* Large downed trees and LWD within the stream channel or on the banks shall only be removed with the prior approval by CDFW. LWD or trees that have been approved for removal by CDFW shall be temporarily stockpiled. After completion of operations, the LWD shall be re-distributed at the direction of CDFW. LWD or trees greater than 12-inches in diameter and 20-feet in length shall be covered with streambed gravel to discourage the cutting or collection for use as firewood or lumber.
3. *Addition of In-channel Roughness Elements.* With prior approval of CDFW, the addition of LWD or other roughness elements (e.g., boulders or engineered log jams) may be introduced into the extraction sites or general project area to improve habitat. This activity shall be included in the Pre-extraction Plan, and may require the coordination and approval of other gravel review team members and agencies.

2.7.7 *Stream Bank Stabilization.* Stream bank stabilization projects shall be submitted to CDFW in a written plan for review and approval at least 30-calendar days prior to the proposed implementation date. The written plan shall include a project description with the proposed method, type and size of material to be used, biological assessments (e.g., listed or sensitive species surveys), and a site map showing specific locations. Streambank stabilization projects shall be disclosed or included with the Pre-extraction Plan, and may require the coordination and approval with other gravel review members or other local, state, or federal entities and agencies.

2.7.8 *Revegetation Plan:*

1. *Submittal of a Revegetation Plan.* A revegetation plan shall be submitted to CDFW for review and approval prior to commencement of any significant established riparian vegetation removal, or prior to implementation of riparian habitat restoration or enhancement activities.
2. *Revegetation Plan Contents.* The Revegetation Plan shall at a minimum include the following elements:
  - a. Revegetation goals (e.g., self-sustaining native riparian vegetation) with quantifiable objectives.
  - b. The identification and area of the vegetation type(s) that will be impacted or restored.
  - c. A planting design appropriate to the vegetation type, cover, stratum, and level of biodiversity (i.e., species richness and composition). Use of a reference site is recommended.
  - d. A replacement ratio of 3:1 for all native trees removed over 4-inches DBH.
  - e. Use of regionally appropriate native plants for the vegetation type. The derivation of plant material such as containers, plugs, cuttings, divisions, or seeds from coastal Humboldt County.
  - f. Cuttings of willows, cottonwoods conducted when dormant. Collection of cuttings within an area dispersed to maintain genetic and sexual diversity, and to avoid adversely impact existing riparian vegetation. Cuttings hydrated between harvesting and planting (e.g., soak cuttings in water several days to a week to stimulate rooting prior to planting). Cuttings planted to depth of 75 percent of their length with buds pointing up and bottom of cutting in moist soil or water.
  - g. Planting conducted after the first seasonal rains have saturated soils beyond the first several inches (November/December) and before April.
  - h. No application of fertilizer on plants or chemical controls on weeds.
  - i. Soil stabilization where necessary to control erosion or establish plants. Application of native or non-invasive seeds, and clean/weed-free and biodegradable mulch or soil stabilization materials.
  - j. Maintenance of the plantings such as watering, weeding, protection, and replacement. Initial watering at time of planting for container plants, divisions, or plugs is recommended to settle air pockets around the roots and prevent desiccation. Subsequent watering is also recommended through first dry

season (if plantings have no contact with moist soil or the water table) with weeding around plantings to improve plant survival.

- k. Measurable success criteria based on plant survival, density, or cover.
- l. Monitoring for a minimum of three years to determine whether the revegetation goals and objectives have been met. Remedial measures if revegetation goals and objectives are not met.
- m. Reproducible photo points with landmarks taken after planting and during monitoring.
- n. Annual status report on the revegetation effort to CDFW in the spring of each year following initial planting for the length of the monitoring period.

## 2.8 Temporary Wet Stream Channel Crossings:

- 2.8.1 *Time Restrictions:* Temporary wet stream channel crossings shall be installed no earlier than June 30 and shall be removed no later than September 15 unless an extension has been approved by CDFW in writing. An extension beyond September 15 will require the approval of other gravel review team members and agencies. New crossings shall not be installed within an approved gravel extraction extension period.
- 2.8.2 *Number and Type.* The size and number of wet stream channel crossings shall be kept to a minimum. No more than two temporary bridge crossings shall be installed per year. All main channel crossings shall be spanned to the maximum length possible using either a railroad flatcar or bridge span. Culverts may be used in secondary channels with approval by CDFW.
- 2.8.3 *Crossing Locations.* Temporary wet stream channel crossing locations shall be situated to avoid sensitive salmonid habitat (e.g., known spawning areas and pools), disclosed and mapped in the annual Pre-extraction Plan, and approved by CDFW prior to placement.
- 2.8.4 *Heavy Equipment Use.* Heavy equipment trips across the wetted stream channel to install and remove crossings shall be kept to a minimum, and shall be limited to two passes to install and two to remove a bridge.
- 2.8.5 *Construction of Bridge Abutments.* Bridge abutments shall be constructed from washed/clean cobbles, logs, large concrete block or other appropriate materials that can be placed and removed with

road surfaces, removal of spilled gravel from road surfaces, and frequent application of water for dust abatement during extraction activities.

## 2.10 Excavation of Wetland Pits and Point Bar Alcoves

2.10.1 *Wetland Pits*. If wetland pits are proposed as an excavation method, an excavation design and monitoring plan, and a wetland pit and channel reclamation plan shall be submitted to CDFW for review and written approval at least 30 calendar-days prior to commencing excavation activities. The design and monitoring plan should include at minimum the following conditions:

1. *Location of Wetland Pits*. Wetland pits or oxbow excavations shall be located on surfaces that are subject to flow recurrence intervals of greater than 2 years, and downstream of the upper third of the exposed bar or terrace surface delineated on the aerial photograph accompanying the annual Pre-extraction Plan. Pit extractions shall be located so as to conform to natural openings in perennial vegetation and to limit disturbance to established riparian vegetation.
2. *Wetland Pit Size*. Wetland pit size shall be limited to approximately 10 percent of the exposed bar feature or contiguous terrace area as defined on the annual pre-extraction aerial photograph.
3. *Wetland Pit Shape*. The shape of the wetland pit shall follow existing topography or existing vegetation patterns such that the shape is irregular. The side slopes of the pit from ground level to the water level at time of extraction shall not exceed 3:1 (horizontal over vertical rise) to facilitate colonization by aquatic and riparian life, and the side slopes below the water level at time of extraction shall not exceed 2:1.
4. *Wetland Pit Depth Restriction*. The depth of the pit shall not exceed the maximum stream channel depth (thalweg) of the adjacent stream channel, unless approval is obtained in writing from CDFW. If extraction is proposed below the summer dry season capillary fringe elevation, a bullfrog (*Lithobates catesbeianus*) management plan shall be submitted to CDFW for review and approval prior to the extraction taking place. If bullfrog management cannot be undertaken, wetland pit extraction shall not extend below the capillary fringe.
5. *Habitat Enhancement of Wetland Pits*. Logs or LWD shall be

placed in the pits to provide resting places for birds, amphibians, and aquatic reptiles. The woody debris shall be placed below, and at least partially above the water surface elevation of the pit.

6. *Monitoring and Fish Rescue Plan.* Fish can become trapped in wetland pits during high flows. Pre-extraction plans that propose wetland pits shall provide a CDFW approved fish rescue plan to identify and mitigate potential impacts to listed or sensitive fishes stranded in the pits. The plan shall include one of the following measures with the first being the preferred measure: 1) a connection to the low flow channel at the downstream end for fish passage at close of the extraction season; or 2) snorkel surveys to monitor for juvenile fish stranding after flows that inundate the wetland pit have receded. If stranded Federal- and/or State-listed fish species (i.e., coho salmon) are located and will require capture and relocation, a qualified fisheries biologist with the proper state and federal take permits must relocate the fish. Mining of any wetland pit that becomes habitat for Federal-listed species will require additional contact with the NMFS or the U.S. Fish and Wildlife Service (USFWS).

#### 2.10.2 Point Bar Alcoves:

1. *Use as Aquatic Habitat Enhancement.* Point bar alcove extractions may be proposed or maintained with gravel extraction activities as aquatic habitat enhancement or restoration to provide off-channel habitat complexity and connectivity for fish and other aquatic species seeking food or refugia.
2. *Location of Alcoves.* Alcove extractions shall be located at the downstream end of the gravel bar, and shall avoid or minimize disturbance to established riparian vegetation.
3. *Alcove Size and Shape:* The alcove shape shall be designed to conform to natural topography and vegetation patterns such that the shape is irregular. The alcove shall be open to the low flow channel at the downstream end for fish passage at close of extraction season and after any resulting turbidity in the water from extraction has been allowed to settle out. The slopes of the alcove shall not exceed 3:1 (horizontal over vertical rise).
4. *Enhancement of Point Bar Alcoves.* Logs or LWD shall be placed in the alcoves as available to provide cover for fish and resting places for birds and amphibians. The woody debris shall be placed at least partially above the water surface elevation of the alcove.

2.11 Post-extraction Site Reclamation. Post-extraction reclamation activities include but are not limited to, removing gravel stockpiles from the stream channel, filling in low areas and depressions that may trap fish, reshaping gravel bars to meet the prescribed post-extraction slopes, removing constructed berms, re-contouring stream banks, and removing all work materials and debris. The following conditions shall apply:

2.11.1 *Seasonal Reclamation Time Period*. The gravel extraction areas shall be reclaimed beginning October 1 and finished by October 15.

Extraction sites shall be left in a reclaimed condition at the end of each work day for activities occurring after October 1. If an extension has been approved by CDFW in writing to extract gravel after October 15, the extraction area shall be left in a reclaimed condition at the end of each work day. In accordance with the conditions of this Agreement, CDFW shall be notified when the annual extraction and site reclamation activities have been completed (see Measure 1.6).

2.11.2 *Temporary Gravel Stockpiles*. Gravel stockpiles temporarily located within an extraction area shall be removed at the end of each work day for operations occurring between October 1 and October 15. All temporary stockpiles shall be removed from the stream channel by the end of the seasonal reclamation period of October 15.

2.11.3 *Longitudinal and Cross-Sectional Slopes of Extraction Sites*. Post-extraction gravel bar surfaces shall be left in a free draining condition; maintaining either a downstream slope, cross slope, or compound slope complimentary to the wetted main channel or secondary channel.

2.11.4 *Finished Bar Surfaces*. Extraction activities shall not result in a feature that will allow for the ponding of water or isolation of fish or other aquatic species from the main channel during high flows. The gravel extraction sites, temporary stockpile areas, and haul roads in the stream channel shall be left smooth with no pot holes or depressions. Natural features of streambed topography outside of the extraction site shall not be backfilled.

2.11.5 *Cut-bank Slopes*. Cut-bank slopes shall be re-contoured with stable slope profiles that conforms to the natural topography, and if adjacent to the flowing water of the active stream, re-contoured to be compatible with the local stream dynamics of the site.

2.12 Annual Post-extraction Procedures:

- 2.12.1 *Notification and Site Review.* When seasonal gravel extraction and reclamation activities have been completed, CDFW, CHERT, and other gravel review agencies shall be notified. A final field review may be conducted to assess the extraction sites for Pre-extraction Plan and post-extraction reclamation compliance. A mutually agreeable field review date shall be scheduled by the Permittee or CHERT with at least a 5 working-day notice to CDFW.
- 2.12.2 *Post-extraction Aerial Photography.* During the months of August through October, after seasonal extraction and reclamation activities are completed, a post-extraction stereoscopic color aerial photography series shall be taken at a scale of approximately 1:12,000 to capture the stream channel at its lowest flow and to provide an aerial view of extraction sites. Photographs may be used for verifying compliance with Pre-extraction Plan, assessing geomorphic or biological effects, fisheries habitat mapping, extraction monitoring, and for archival purposes. The fall photographic coverage shall be equal to or greater than the coverage provided by the spring photographic series.
- 2.12.3 *Post-extraction Cross-Sectional Surveys.* After seasonal extraction and reclamation activities are completed, post-extraction cross-sectional surveys shall be conducted using pre-extraction cross-sectional transect placement (see Measure 2.3.1), and need only be re-surveyed through the portion of the transect altered by extraction, temporary stockpiles, construction of roads, and equipment storage areas. The cross-sectional surveys shall be used to generate comparative sets of extraction cross-sections depicting pre- and post-extraction topography, and volume estimates of material removed. The pre- and post-extraction cross-sectional survey information and analysis shall be incorporated into the Post-extraction Report submitted to CDFW.
- 2.12.4 *Annual Post-extraction Submittal.* Permittee shall submit to CDFW by January 15 of each year a Post-extraction submittal that shall include extraction methods and volumes, restoration or enhancement activities, pre- and post- extraction survey profiles depicting original ground and volume calculations, full-channel survey profiles, hard copies of post-extraction aerial photographs, and any biological assessments and monitoring reports.
- 2.12.5 *CHERT's Annual Post-extraction Report Submittal.* Upon completion of CHERT's annual Post-extraction Report in February of each year or prior to the next annual extraction season, a copy shall be submitted to CDFW for review and archival purposes. The Post-extraction Report may be based in part on the Permittee's Post-extraction Submittal.



## **CONTACT INFORMATION**

Written communication that Permittee or CDFW submits to the other shall be delivered to the address below unless Permittee or CDFW specifies otherwise:

To Permittee:

Mr. Gary Johnston  
GLJ Construction  
1325 G Street  
Eureka, CA 95501

To CDFW:

Department of Fish and Wildlife  
Region 1 - Northern  
619 2<sup>nd</sup> Street  
Eureka, CA 95501  
Attn: Lake and Streambed Alteration Program  
Notification #1600-2014-0113-R1  
Fax: (707) 441-2021  
Email: david.manthorne@wildlife.ca.gov

## **LIABILITY**

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute CDFW's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

## **SUSPENSION AND REVOCATION**

CDFW may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before CDFW suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke pursuant to California Code of Regulations (CCR), Title 14, Section 783.7. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before CDFW suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused CDFW to issue the notice.

## **ENFORCEMENT**

Nothing in the Agreement precludes CDFW from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects CDFW's enforcement authority or that of its enforcement personnel.

## **OTHER LEGAL OBLIGATIONS**

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 et seq. (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

## **AMENDMENT**

CDFW may amend the Agreement at any time during its term if CDFW determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by CDFW and Permittee. To request an amendment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in CDFW's current fee schedule (see Cal. Code of Regs., title 14, Section 699.5).

## **TRANSFER AND ASSIGNMENT**

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective,

unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter CDFW approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in CDFW's current fee schedule (see Cal. Code of Regs., Title 14, Section 699.5).

## **EXTENSIONS**

In accordance with FGC Section 1605(b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to CDFW a completed CDFW "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in CDFW's current fee schedule (see Cal. Code of Regs., title 14, Section 699.5). CDFW shall process the extension request in accordance with FGC Section 1605(b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (FGC Section 1605 subd. (f)).

## **EFFECTIVE DATE**

The Agreement becomes effective on the date of CDFW's signature, which shall be: 1) after Permittee's signature; 2) after CDFW complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC Section 711.4 filing fee listed at [http://www.dfg.ca.gov/habcon/ceqa/ceqa\\_changes.html](http://www.dfg.ca.gov/habcon/ceqa/ceqa_changes.html).

## **TERM**

This Agreement becomes effective on the date of CDFW's signature and terminates at the end of **5 years from the effective date**, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC Section 1605(a)(2) requires.

## **AUTHORITY**

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's

behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

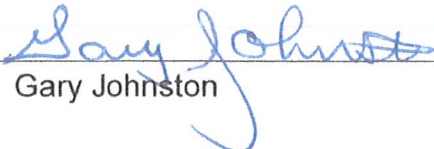
### AUTHORIZATION


This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify CDFW in accordance with FGC Section 1602.

### CONCURRENCE

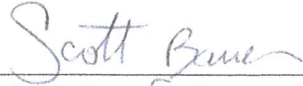
The undersigned accepts and agrees to comply with all provisions contained herein.

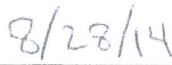
### FOR GLJ CONSTRUCTION

  
\_\_\_\_\_  
Gary Johnston

  
\_\_\_\_\_  
Date

### FOR DEPARTMENT OF FISH AND WILDLIFE

  
\_\_\_\_\_  
Gordon Leppig *for*  
Senior Environmental Scientist (Supervisor)

  
\_\_\_\_\_  
Date

**Notice of Determination**

**TO:**  Office of Planning and Research    **FROM:** Department of Fish and Wildlife  
 Northern Region  
 619 Second Street  
 Eureka, CA 95501  
 Contact: David Manthorne  
 Phone: (707) 441-5900

*For U.S. Mail:*  
 P.O. Box 3044  
 Sacramento, CA 95812-3044

*Street Address:*  
 1400 Tenth Street  
 Sacramento, CA 95814

**LEAD AGENCY (if different from above):**  
 County of Humboldt  
 Planning and Building Department  
 3015 H Street  
 Eureka, CA 95501  
 Contact: Michael Wheeler  
 Phone: (707) 268-3730

**SUBJECT: Filing of Notice of Determination pursuant to § 21108 of the Public Resources Code**  
 State Clearinghouse Number: 1992083049

Project Title: Lake or Streambed Alteration Agreement No. 1600-2014-0113-R1 – Blue Lake Gravel Bar Extraction Project.

Project Location: The project is situated on the Mad River, a tributary to the Pacific Ocean. The project is located in County of Humboldt, State of California; Section 30, Township 6 North, Range 2 East, Humboldt Base and Meridian; Arcata North U.S. Geological Survey 7.5-minute quadrangle; Assessor's Parcel Numbers 313-231-03, 313-161-07, and 313-231-01; latitude 40° 52' 48" N and longitude 124° 00' 04" W (stockpile area).

Project Description: The project is limited to one encroachment for aggregate extraction from the channel of the Mad River for commercial purposes. The Permittee proposes to extract up to **50,000 cubic yards** of gravel annually from the Blue Lake bar. Federal permit restrictions on the annual volume of gravel extracted were implemented based on a flow-based analysis of gravel replenishment. On average over the last four years (2010 thru 2013), the annual extraction volumes have been 19,783 cubic-yards. No extraction was conducted at this bar in 2009.

This is to advise that the Department of Fish and Wildlife (CDFW), acting as  the lead agency /  a responsible agency approved the above-described project and has made the following determinations:

1. The project  will /  will not have a significant effect on the environment. (This determination is limited to effects within CDFW's jurisdiction when CDFW acts as a responsible agency.)
2.  A program environmental impact report /  A negative declaration /  A timber harvesting plan was prepared for this project pursuant to CEQA.
3. Mitigation measures  were /  were not made a condition of CDFW's approval of the project.
4. A Statement of Overriding Considerations  was /  was not adopted by CDFW for this project.
5. Findings  were /  were not made by CDFW pursuant to Public Resources Code § 21081(a). CDFW did, however, adopt findings to document its compliance with CEQA.
6. Compliance with the environmental filing fee requirement at Fish and Game Code § 711.4 (check one):
  - Payment is submitted with this notice.
  - A copy of a receipt showing prior payment is on file with CDFW.
  - A copy of the CEQA Filing Fee No Effect Determination Form signed by the Department is attached to this notice.
- Lead Agency certification: CDFW, as Lead Agency, has made the final PEIR with comments and responses and record of project approval, or the Negative Declaration, available to the General Public at the CDFW office identified above.
- Responsible Agency statement: The final PEIR that was prepared by the Lead Agency for this project is available to the General Public at the office location listed above for the Lead Agency. CDFW's CEQA Findings are available at the CDFW office identified above.

Signed: Scott Bauer for      Date: 3/28/14  
 Gordon Leppig, Senior Environmental Scientist (Supervisor)  
 Date Received for filing at OPR:



DEPARTMENT OF FISH AND GAME

<http://www.dfg.ca.gov>

601 Locust Street  
Redding, California 96001  
(530) 225-2367



NOTIFICATION NO. R1-04-0391

Page 1 of 20

**AGREEMENT REGARDING PROPOSED STREAM OR LAKE ALTERATION  
FISH AND GAME CODE SEC. 1600 ET SEQ**

**THIS AGREEMENT**, entered into between the State of California, Department of Fish and Game, hereinafter called the Department, and Mr. Jordan Main, representing Granite Construction Company, hereinafter jointly and severally called the **Responsible Party**, is as follows:

**WHEREAS**, pursuant to Section 1602 of the California Fish and Game Code, the Responsible Party notified the Department on June 30, 2004 that they intend to substantially divert or obstruct the natural flow of, or substantially change the bed, channel, or bank of, or use material from the streambed of, the following water: Mad River (Blue Lake Bar), tributary to the Pacific Ocean in the County of Humboldt. Section 30, Township 6 North, Range 2 East.

This Agreement provides for aggregate extraction from the channel of the Mad River (Blue Lake Bar) for commercial purposes. The Responsible Party shall remove gravel only from those areas where the Responsible Party has secured legal entitlement to such gravel. For the purposes of this Agreement, the term legal entitlement is defined as all project conditions, methods, place of operation, and project descriptions contained within the project's Conditional Use Permit (CUP) or vested rights determination, and reclamation plan that have been approved by Humboldt County. All work shall be as specified in the Responsible Party's notification, pre-extraction plan (reviewed and approved by County of Humboldt Extraction Review Team (CHERT) and the Department); and all other supporting environmental documents, except as otherwise indicated in the Project Conditions of this Agreement.

Aggregate extraction consists of the annual removal up to 50,000 cubic yards (cy) of flood-washed alluvial material from the Mad River (Blue Lake Bar). Aggregate extraction methods and volumes would be consistent with the approved annual extraction work plans. Extraction would occur during the summer low-flow period when alluvial deposits are exposed. Occasionally, fisheries enhancement, or off-channel extractions may be included that involve connection of extraction areas to the wetted channel or removal of sparse woody riparian vegetation. Temporary summer crossings might be needed and may be proposed to access gravel deposits. Timing of the installation and removal of these crossings is designed to avoid periods of peak salmonid migration and Chinook salmon spawning. Installation and removal techniques are designed to reduce the amount of channel disturbance and avoid sensitive aquatic habitat. In addition, the proposed project shall include annual monitoring and reporting of the extraction site area.

**WHEREAS**, the Department has determined that the activities proposed in the Responsible Party's notification may substantially adversely affect existing fish and wildlife resources including: coho and chinook salmon, steelhead trout, aquatic habitat and other associated fishes, wildlife, riparian habitat, riparian dependant plant and animal species and aquatic macro invertebrates.

**THEREFORE**, the Department hereby proposes measures to protect fish and wildlife resources during the Responsible Party's work. The Responsible Party hereby agrees to accept the following measures/conditions as part of the proposed work.

**THEREFORE, IT IS AGREED THAT:**

1. This Agreement is not intended to represent the Department's recommendations to, or imply that the Responsible Party has complied with, the requirements of the California Environmental Quality Act (CEQA). Any representations to that effect shall result in the immediate termination of this Agreement.
2. If this Agreement is found to be in conflict with any other provision of law or general conditions of public safety, the Agreement is void, unless the Agreement is amended by mutual Agreement of the Responsible Party and the Department to eliminate such conflict.
3. This Agreement does not constitute or imply the approval or endorsement of a project, or of specific project features, by the Department of Fish and Game, beyond the Department's limited scope of responsibility, established by Code Sections 1600 et seq. This Agreement does not therefore assure concurrence by the Department with the issuance of permits from this or any other agency. Independent review and recommendations will be provided by the Department as appropriate on those projects where local, State, or Federal permits or environmental reports are required.
4. To the extent that the provisions of this Agreement provide for activities that require the Responsible Party to trespass on another owner's property, they are agreed to with the understanding that the Responsible Party possesses the legal right to so trespass. In the absence of such right, the Agreement is void.
5. This Agreement does not constitute nor imply the issuance of a water right by the Department. To the extent that the provisions of this Agreement provide for the diversion of water, they are agreed to with the understanding that the Responsible Party possesses the right to so divert such water. In the absence of such right, this Agreement is void.
6. To the extent that the provisions of this Agreement provide for activities that are subject to the authority of other public agencies, such as CUPs, said activities are agreed to with the understanding that all appropriate permits and authorizations will be obtained prior to commencing agreed activities. In the event that the Project scope, nature, or environmental impact is altered by the imposition of subsequent permit conditions by any lead agency, special district or Federal regulatory authority, an amendment of this agreement may be required.

The Department may not condition an Agreement based on the receipt of any other permit or entitlement (Fish and Game Code, Section 1606). Nevertheless, if the Department determines the activities are potentially subject to the jurisdiction of another agency such as U.S. Army Corps of Engineers (USACOE), National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), Regional Water Quality Control Board (RWQCB), it may initiate compliance with this jurisdiction by requiring that the Responsible Party inform the agency of their intentions to commence the activity. The Department cannot *require* this type of notification. In the event that an Responsible Party chooses not to agree to comply with the notification condition, the Department may independently notify other agencies of the proposed activity.

If the NMFS and/or the USFWS issue a Biological Opinion (BO) on the Responsible Party's project, the Responsible Party shall ensure that the Department receives a copy of this document within 30 working days of the Responsible Party's receipt of the BO. The Terms and Conditions contained within the BO shall become in their entirety part and parcel to this Agreement by this reference. If the terms and conditions of this Agreement are inconsistent with the terms and conditions of the BO, the Responsible Party shall comply with the most restrictive of those terms and conditions or be subject to suspension or cancellation of this Agreement.

7. A copy of this Agreement must be provided to all contractors and subcontractors, and the Responsible Party's Project supervisors. Copies of this Agreement shall be available at the Project site during all periods of active work, and must be presented to Department personnel upon demand until the Project is completed. Department personnel and their agents shall be allowed onto the work site at any time during the period covered by this Agreement, to the extent practicable, for the purposes of verifying compliance with this Agreement.
8. Responsible Party, contractor, or subcontractors are jointly and severally liable for compliance with the provisions of this Agreement. If the Responsible Party's work changes from that stated in the notification specified above, the Agreement is no longer valid and a new notification shall be submitted to the Department. Upon the Department's determination of a violation of the terms of this Agreement, this Agreement shall be suspended or canceled, at the discretion of the Department and all activity must immediately stop until another Agreement is made. Failure to comply with the provisions of this Agreement and with other pertinent Code sections, including but not limited to Fish and Game Code sections 2081, 3503, 3503.5, 5650, 5652, 5901, 5937 and 5948 may result in prosecution.
9. It is understood that the Department enters into this Agreement for purposes of establishing protective features for fish and wildlife, in the event that a project is implemented. The decision to proceed with the Project is the sole responsibility of Responsible Party, and is not required by this Agreement. It is agreed that all liability and/or incurred costs related to or arising out of Responsible Party's Project and the fish and wildlife protective conditions of this Agreement, remain the sole responsibility of Responsible Party. Responsible Party agrees to hold harmless and defend the State of California and the Department against any related claim made by any party or parties for personal injury or other damage.
10. The notification, together with all supporting documents (Project environmental documents, reclamation plan, proposed extraction plan, descriptions, photos, and drawings) submitted with the notification, are hereby incorporated into this Agreement to describe the location and features of the proposed Project. Responsible Party agrees that all work shall be done as described in the notification and supporting documents, incorporating all Project modifications, wildlife resource protection features, mitigative measures, and provisions as described in this Agreement. Responsible Party further agrees that all additional work plans required by this Agreement to be submitted prior to construction, and requiring Department approval prior to construction, shall be implemented as described in the approved plans and in this Agreement. The Responsible Party shall notify the Department in writing of any modifications made to the Project plans submitted to the Department.
11. Modification to the project plans may require an amendment to this Agreement. Provisions of the Agreement may be amended or the Agreement may be terminated at any time provided such amendment and/or termination is agreed to in writing by both



parties. Failure to notify the Department of changes to the original plans and any subsequent amendments to this Agreement may result in the Department suspending or canceling this Agreement. The Responsible Party must then submit a new notification. Mutually approved amendments become part of the original Agreement and are subject to all previously negotiated provisions. Title 14, California Code of Regulations, Section 699.5(g) requires the Responsible Party to submit the sum equal to 50 percent of the fee of the existing Agreement to amend an existing Agreement. If the Agreement is terminated, new notification for an amended project may then be appropriate.

12. Except as otherwise stipulated, the implementation of the provisions of this Agreement and any incurred costs related to these activities are the responsibility of the Responsible Party.

### **PROVISIONS/CONDITIONS:**

The Department cannot issue a Streambed Alteration Agreement for gravel extraction unless the applicant already has a legal entitlement from the local lead agency to extract gravel. In addition, we cannot issue an Agreement for amounts that exceed the maximum identified quantity or using an extraction method that is inconsistent with legal entitlements, reclamation plans and Project environmental documents.

### **Summary of Timelines**

January 15 - Annual Post-extraction Report shall be due, and shall include biological reports and monitoring data submitted to the Department and USACOE. (See Section 5.2)

March-May - Pre-extraction aerial photograph series to be taken. Timing of aerial photograph shall be dependant upon long-range weather forecast and river stage. (See Section 1)

May 31 or soon thereafter - Final pre-extraction plan shall be submitted to the Department, CHERT, and USACOE for review and approval. Submittal of pre-extraction plans to the Department will depend upon preliminary plan reviews, other agency permit authorizations, and weather and river conditions. (See Section 1)

June 30 - Approved temporary crossings may be constructed. (See Section 9.1.1)

August-October - Fall stereoscopic series tied to fall low-flow period shall be taken. When practicable, fall photographs shall be taken to closely coincide with the completion of extraction activities. Photographs may be used for verifying compliance with terms and conditions of the project, assessing potential environmental impacts, fisheries habitat mapping and for archival purposes. (See Section 12)

September 15 - All summer crossings shall be removed from the Mad River (October 15 for all other rivers in Humboldt County), unless a time extension is granted by the Department. (See Section 9.1.2)

October 1 - Seasonal reclamation shall commence; all stockpiled material to be removed from bars daily, sites to be smoothed to reclaimed condition at the end of each work day. (See Section 11.2)

November 1 - All operations shall be complete and sites reclaimed.

December 1 - Post-extraction cross sections and extraction volume calculations shall be completed and submitted to the Department and USACOE, unless operations are continuing under an approved extension.

The Department hereby proposes measures to protect fish and wildlife resources during the Responsible Party's work. The Responsible Party hereby agrees to accept the following measures/conditions as part of the proposed work:

#### **1. ANNUAL SUBMITTAL of a DEPARTMENT APPROVED PRE-EXTRACTION PLAN**

Prior to commencement of extraction activities of any year covered by this Agreement, the Responsible Party shall provide the Department a Pre-extraction Plan that clearly identifies the areas of the extraction and specific extraction methods to be utilized. This plan shall be approved by the Department in writing prior to onset of extraction activities. The plan shall include upcoming season's extraction volume estimates. If the required permanent transects for monitoring purposes are too widely spaced to provide an adequate estimate of extraction volumes, it will be the responsibility of the applicant to ensure additional transects are made using a scientifically acceptable method for making this estimate with reasonable accuracy and precision. In addition, volume estimates shall be reviewed, stamped and signed by a licensed engineer or surveyor.

##### **1.1 Content of the Annual Pre-extraction Plan**

Annual planning for the upcoming extraction season begins in April of each year with the scheduling of a spring photographic series of the river. Once winter flows recede and stabilize, during late April or early May, the aerial photographic series shall be taken. Photo coverage includes annual operation areas, the bankfull channel, adjacent riparian corridor and project reach limits. The stereoscopic color photographs are utilized as base mapping for the annual extraction activities and biological monitoring. At the time of the photographic series, site features must be visible so that haul roads, extraction areas, proposed crossing locations and related line work can be identified and displayed.

For purposes of the aerial photography and monitoring, the Project reach shall be defined as the length of stream subject to potential extraction by the Responsible Party plus one-half this length both upstream and downstream of the limits of the extraction reach. In the late spring, when the river level drops to a point where gravel deposits become exposed, the Responsible Party and consultant shall conduct a site review of the extraction reach to evaluate extraction potential. During the site review, potential extraction sites shall be identified on the spring aerial photograph.

Following the site review, the proposed extraction sites shall be surveyed and extraction plans developed from the topographic data, site review field notes and photographic information. The extraction designs, consisting of surveyed cross-sections of the proposed extraction area(s), surveyed monitoring cross-sections, extraction narrative, extraction plan photograph and volume calculations are submitted to the Department, USACOE and CHERT for review and approval by May 31, or as soon as possible thereafter. The Responsible Party or his consultant shall incorporate Department, CHERT and USACOE recommendations and conditions into the final extraction plan. Extraction may commence upon written approval from the Department.

*The Annual Pre-extraction Plan shall include the following:*

1. The name, address, and telephone number of the person, company, or other owner of the mining operation.
2. The name and location of the extraction operation and name of the watercourse; section, township and range; or latitude and longitude.

3. The type of extraction operation (skimming, trenching, wetland pit, etc.) and type of equipment that will be used. A copy of any biologic or hydrologic reviews needed for approval of alternative extractions. Other documentation as needed to describe the proposed operations of the submitted proposal.
4. Beginning and ending dates of the proposed work period.
5. The approximate permitted size of the extraction operation, in acres.
6. An estimate of gravel replenishment volume or bed degradation in cubic yards from the previous winter shall be determined by comparison of cross sections taken in the fall (at the end of the mining season) or successive digital terrain models (DTMs) with those taken the following spring (following the winter recruitment period).
7. *Aerial Photograph*: Scaled aerial photograph(s) (1"=500') Aerial photographs (photograph) shall be submitted to the Department and contain the information as detailed below (more than one photograph may be used of the same area if needed to include all the information):
  - a. Delineation of all extraction work areas with the location and limits of the proposed gravel operation.
  - b. Location of monitoring and extraction survey transects.
  - c. Existing and proposed access and/or haul road locations.
  - d. Stream crossings: On a map or aerial photograph show the locations and type (dry channel crossing, temporary culvert crossing and/or temporary bridge crossing). In the Annual Pre-extraction Plan narrative, give the proposed installation and removal dates, and the number and type of proposed crossing(s). Include cross section and plan view drawings of typical or specific crossings. Drawings shall include dimensions of major components of installation.
  - e. Location of equipment storage and stockpile areas.
  - f. The location of all wetlands within the project area.
  - g. The location of established riparian vegetation, and any vegetation proposed for removal or transplant.
  - h. Temporary stockpile areas.
  - i. The photograph shall also contain a legend including the date of the photograph, river flow and stage, name of operation and river, scale, north arrow and preparer's name.

**Note:** Subsequent reports shall include only changes in information submitted for the items described above.

### **1.2 Delineation of the Work Area**

The proposed areas described in the pre-extraction plan shall be identified and detailed on the project maps and air photos.

**Note:** See Section 12.1 for details on cross section survey protocols, and the numbers and locations of cross sections

### **1.3 Post-Extraction Survey Transects**

Post-extraction (fall) transects need only be resurveyed through the portion of the transect altered by extraction, temporary stockpiles or construction of roads and equipment storage areas. Post-extraction transects shall overlay the pre-extraction transects

**Note:** Details on the types and number of survey transects required are outlined in Section 12.

## **2. PROJECT CONDITIONS for TIME RESTRICTIONS on SEDIMENT EXTRACTION ACTIVITIES**

**2.1 Work in the Stream Corridor**

Work associated with the extraction plan, shall be confined to the period June 1 to October 15 unless an extension is obtained in writing from the Department. Seasonal reclamation activities shall be completed prior to October 15 unless an extension of the work period is obtained in writing from the Department. Extraction sites shall be left in a reclaimed condition at the end of each work day for extended work period operations occurring after October 1. Reclamation activities include, but are not limited to, removal of gravel stockpiles, the filling of depressions that may trap fish and the reshaping of bars to meet the prescribed post-extraction slopes.

**3. PROJECT CONDITIONS for VARIANCES from CORE OPERATING TIME PERIODS****3.1 Extension of the Work Period**

If weather conditions permit, and the Responsible Party wishes to begin work before June 1 or after October 15, a written request shall be made to the Department at least 14 days before the proposed work period variance. Written approval for the proposed time extension must be received from the Department before work begins.

**3.2 Annual Reclamation Period**

Between October 1 and October 15, extraction site reclamation shall occur. Reclamation activities include, but are not limited to, removing sediment stockpiles, filling in low areas and depressions that may trap fish, and reshaping bars to meet the prescribed post-extraction slopes. The Responsible Party may request, in writing, an extension from the Department to continue to extract gravel after October 1 as long as the extraction area is left in a reclaimed condition at the end of each work day.

**4. PROJECT CONDITIONS for DELINATION OF THE EXTRACTION AREA****4.1 Flow-based Delineation of the Extraction Area in the Field**

The minimum skim floor elevation shall be the elevation equivalent to the elevation of the 35% exceedence flow at the project site, corresponding to the 900 cfs flow at the USGS, Arcata (ARC) gauge (for the Mad River). The 35% flow elevation shall be marked at the site as required by current USACOE and NOAA Fisheries protocols.

**4.2 Limitations on the Longitudinal and Cross-Sectional Slopes of Post-Extraction Areas**

Post-extraction cross bar surfaces shall be left in a free draining condition, maintaining a either a downstream slope, cross slope, or compound slope complimentary to the wetted or secondary channel.

**4.3 Limitations on Extraction Activities on or near Stream Banks**

A minimum horizontal offset of 10 feet shall be maintained between all excavation activities and the outermost stream bank and its associated riparian habitat (See Section 7).

**5. PROJECT CONDITIONS for POST-EXTRACTION REPORT REQUIERMENTS****5.1 Post-Extraction Procedures**

When the Responsible Party has completed extraction and site grooming, the Department, the USACOE and CHERT shall be notified and a final site review shall be scheduled. The purpose of the final review is to assess the site for additional end-of-season reclamation and recommend minor grading to ensure site drainage compliance with the approved extraction plan.

## **5.2 Post-Extraction Reporting Requirements**

Post-extraction surveys of the site shall be conducted following extraction to generate comparative sets of monitoring and extraction cross-sections depicting pre- and post-extraction topography and degree of extraction plan compliance. The comparative cross-sections are utilized for the identification and minimization of short-term effects caused by extraction processes. The cross-sections are also utilized to calculate extracted aggregate volumes and evaluate replenishment of material in the proceeding year.

1. During the months of August through October, or after extraction and reclamation is completed, a second aerial photographic series shall be taken. This late season stereoscopic photograph series captures the river channel at its low flow and provides an aerial view of annual extraction works. The stereoscopic photos are used for biological resource and habitat mapping, evaluation of extraction limits, assessment of vegetative units, monitoring and study of river morphology as well as for future project planning and archival purposes. The late season photographic coverage shall be equal to or greater than the coverage provided by the spring photographic series.
2. Post-extraction cross-section data and biological monitoring information shall be submitted to the Department by January 15 of each year. The Post-extraction report shall include:
  - a. Plots of all site monitoring cross-sections showing pre-extraction and post-extraction conditions if mining altered the cross-sectional area.
  - b. Post-extraction mining plan and aerial photograph(s), depicting original ground, proposed extraction and post-extraction conditions, and extracted volume calculations.

## **6. PROJECT CONDITIONS to PROTECT WATER QUALITY**

### **6.1 Emergency Response Plan**

#### **6.1.1 Emergency Plan**

An emergency response plan shall be prepared and submitted to the Department for review and approval prior to the start of construction or sediment removal activities. The plan shall identify the materials to be used and the actions that will be taken in the event of spill of petroleum products, fine sediment or any other material harmful to aquatic or plant life. The emergency response materials shall be kept at the site to allow the rapid containment and clean-up of any spilled material.

#### **6.1.2 Emergency Response**

Emergency clean up of all spills shall be done immediately. As soon after the initial clean up as possible, the Responsible Party will notify the Department that a spill has occurred, and will consult with the Department regarding final clean-up procedures.

### **6.2 Location of Gravel Processing Activities**

#### **6.2.1 Plant Operations**

No washing, crushing, screening or other plant operations shall occur within the bed and banks of the stream channel or within the area of riparian vegetation along the stream unless the activity is currently approved and permitted. As Required, Responsible Parties shall comply with the requirements and conditions of the California Regional Water Quality Control Board, North Coast Region, General Waste Discharge Requirements and Water Quality Certification for Discharges Related to Sand and Gravel Mining, Excavation and Processing Activities, Including Asphalt and Concrete Operations on Non-Federal Lands in the North Coast Region, Order No.R1-2005-0011, or individual site Waste Discharge Requirements.

**6.2.2 Staging and Storage of Materials in the Stream Channel**

All staging/storage areas for equipment, fuels, lubricants and solvents shall be located above and outside of the stream's bed and banks. Stationary equipment such as motors, pumps, generators, compressors and welders located within a dry portion of the stream channel shall be positioned over drip pans.

**6.2.3 Seasonal Staging and Storage of Materials in the Stream Channel**

Materials placed in seasonally dry portions of the active stream channel that could be deleterious to aquatic life, wildlife or riparian habitat and that could be washed downstream during higher flow events shall be removed from the project site prior to October 15.

**6.2.4 Sediment Detention Basins/Settling Ponds**

Settling ponds shall be located at elevations above the ordinary high water mark of the stream and as approved in lead agency and responsible agency permits.

**6.2.5 Construction Debris**

The Responsible Party shall not store or dispose of any litter or construction debris within the active stream channel. All debris and associated materials shall be removed from the work site upon completion of this project. After the final inspection, materials (stakes, flagging) used to delineate the low-flow channel and the horizontal extent of the extraction boundary shall be removed from the active channel at the end of each extraction season.

**6.3 Use of Fill Materials****6.3.1 Clean Gravel and Woody Debris**

No fill material, other than clean river gravel except as covered in this Agreement and Department approved additions of large wood debris, shall be allowed to enter the live stream.

**6.4 Project Conditions for Vehicle and Equipment Use****6.4.1 Maintenance Activities**

Any vehicles or equipment driven and/or operated adjacent to the stream shall be checked daily and maintained to prevent leaks of materials that if introduced into the stream or its banks that could be deleterious to wildlife.

**6.4.2 Location of Maintenance Activities**

All equipment maintenance, lubrication and refueling shall be done outside of the bed and banks of the stream channel.

**6.5 Performance Standards for Protection of Water Quality****6.5.1 Protection of Streams from Siltation**

To minimize siltation of the watercourse, erosion and sedimentation shall be controlled during all phases of the extraction activities, including reclamation and closure.

**6.5.2 Protection of Natural Drainages**

No natural drainages shall be covered, restricted, rerouted or otherwise impacted by the extraction activities without prior approval of the Department

**7. PROJECT CONDITIONS for the PROTECTION of RIPARIAN VEGETATION****7.1 Limitations on the Removal of Riparian Vegetation**

**7.1.1 Removal of Riparian Vegetation Outside the Extraction Area**

Riparian vegetation outside of the delineated extraction area shall not be removed or damaged.

**7.1.2 Relocation of Riparian Vegetation**

Riparian vegetation that is approved for removal from the extraction area shall be transplanted to locations pre-approved by the Department. These locations shall be indicated on map attached to the Pre-extraction Plan.

**7.1.3 Limitations on the Removal of Riparian Vegetation on Stream Banks**

No riparian vegetation shall be removed from the bank of the stream, except where authorized for the construction of single lane access roads. The access roads shall be limited to a width of 20 feet. The alignment of the road shall be approved by the Department prior to construction. Trees shall be pruned where necessary along the access road to prevent undue damage due to truck traffic.

**7.1.4 Limitations on the Cutting of Trees**

Any trees that are approved for removal shall be cut at ground level and the root mass left in place to maintain bank stability or to allow resprouting.

**7.2 Protected Trees****7.2.1 Protection of Trees of a Specified Size**

Trees that exceed 4 inches diameter at breast height (DBH) and clusters of smaller trees (part of a contiguous 1/8 acre complex, or greater than 2 inches DBH) shall not be removed or damaged except by prior approval of the Department.

**7.2.2 Limitations on Extraction Activities Near Protected Trees, or Other Native Riparian Vegetation**

A buffer zone from within which no gravel may be extracted shall be established around protected trees and streamside riparian vegetation. The buffer zone shall have a minimum width of 10 feet measured outward from the drip line, and shall be visibly maintained with staking, flagging or paint line. A minimum of a 3:1 slope shall be maintained along the outward edge of this buffer zone.

**7.2.3 Minimum Horizontal Setback from the Stream Bank**

Where trees or other riparian vegetation no longer exist, a minimum horizontal setback of 10 feet shall be maintained between extraction activities and the outermost stream bank.

**7.3 Maintenance of Large Woody Debris (LWD)****7.3.1 Maintenance of Instream Roughness Elements**

Removal or disturbance of Large Woody Debris (LWD) during sediment removal activities shall be avoided.

**7.3.2 Replacement of LWD**

LWD or trees that have been approved for removal by the Department shall be temporarily stockpiled. After completion of operations, the LWD shall be *randomly* re-distributed so that it is accessible to the river at higher flows as it moves through the extraction area. LWD greater than 12 inches in diameter and 20 feet in length shall be covered with stream bed gravel to discourage the cutting and/or collection for use as firewood.

### **7.3.3 Addition of LWD or Other Channel Roughness Elements**

With prior approval of the Department, the addition of LWD or other roughness elements – such as large boulders – may be imported into extraction areas to improve habitat. This activity, if considered, may require the coordination with and approval by other State and Federal agencies.

## **7.4 Revegetation Plan**

### **7.4.1 Submittal of a Department-Approved Revegetation Plan**

If removal of trees over 4-inches DBH or clumps of smaller trees, defined as part of a contiguous 1/8 acre complex, or is greater than 2-inches DBH, is part of the pre-extraction plan, a revegetation plan shall be prepared by a qualified botanist with expertise in northern California ecosystems and native plant revegetation techniques. Currently available research addressing revegetation methods and the selection of species having good survival characteristics for the topography and climate of the mined area shall be used. This plan shall be submitted to the Department for review and approval prior to commencement of vegetation removal activities.

### **7.4.2 Contents of the Revegetation Plan**

The plan shall include the following elements:

1. Identification and quantities and types of the native and non-native plant communities that will be impacted by the extraction operation.
2. Utilization of a native plant pallet of species currently or historically present in the work area. Seeds, cuttings and divisions of locally-collected native plants are recommended.
3. Planting design specifications and schedule, maintenance plan, erosion control and irrigation plans as necessary. Planting shall be conducted during the most favorable period of the year for plant establishment. Approval in writing of the revegetation plan by the Department shall provide permission for the applicant to conduct the replanting activities specified within the revegetation plan.
4. Designated photo points shall be established for monitoring planting success following guidelines from the current literature on the topic of photo point monitoring. For example: *Photo Point Monitoring, Frederick C. Hall, PNW-GTR-526, USFS, March 2002.*
5. Restoration of native plants at a ratio of 3:1 or with a planting density typical of historic conditions or at a level that will facilitate natural recruitment and recovery of the native riparian species.
6. If an exotic plant species is present and a native plant community does not exist or exists in combination with exotic plant species, the plan shall address the removal of the exotic species.
7. A description of how planting success will be determined. The criteria for success shall be 80 percent survival with 75 percent coverage after five years.
8. A post-extraction monitoring plan of plant survival and coverage requirements. The content requirements of the plan are outlined in Section 11.1.4.
9. An exotic /invasive species eradication and maintenance plan.

## **7.5 Performance Standard for Revegetation**

### **7.5.1 Vegetative Cover**

A vegetative cover suitable for the proposed end use and capable of self-regeneration without continued dependence on irrigation, soil amendments or fertilizer shall be established on disturbed land unless an artificially maintained landscape is consistent with the approved reclamation plan.



**7.5.2 Vegetative Cover or Density and Species Richness**

A vegetative cover or density, and species-richness shall be, where appropriate, sufficient to stabilize the surface against the effects of long-term erosion and shall be similar to naturally occurring habitats in the surrounding area. The vegetative density, cover and species richness of naturally occurring habitats shall be documented in baseline studies carried out and approved for adequacy by the Department prior to the initiation of extraction activities. However, for areas that will not be reclaimed to prior conditions, the use of data from reference areas in lieu of baseline site data is permissible.

**7.5.3 Fertilization**

When native plant materials are used, preference shall be given to slow-release fertilizers, including mineral and organic materials that mimic natural sources, and shall be added in amounts similar to those found in reference soils under natural vegetation of the type being reclaimed.

**7.5.4 Use of Native Plant Species**

Native plant species shall be used for revegetation except when introduced species are necessary to meet the end uses specified in the reclamation plan. Plant materials proposed for use in site revegetation shall be approved in advance by the Department.

**7.5.5 Soil Stabilization and Irrigation**

Soil stabilization practices shall be used where necessary to control erosion and for successful plant establishment. Irrigation may be used when necessary to establish vegetation.

**7.5.6 Plant Protection Measures**

Protection measures, such as fencing of revegetated areas or placement of cages over individual plants, shall be used in areas where grazing, trampling, herbivory, or other causes threaten the success of the proposed revegetation. Fencing shall be maintained until revegetation efforts are successfully completed and the lead agency authorizes its removal.

**8. PROJECT CONDITIONS for PROTECTION of WETTED AREAS****8.1 Limitations on Vehicle and Equipment Use****8.1.1 Department Approval of Vehicle and Equipment Use in the Live Stream Channel**

No vehicles or equipment shall be operated in the live stream channel without prior approval of the Department.

**9. PROJECT CONDITIONS for TEMPORARY and PERMANENT CROSSING****9.1 Time Restrictions****9.1.1 Installation of Crossings**

Bridge locations shall be sited to avoid sensitive salmonid habitat. Crossings shall be installed no earlier than June 30 and shall be removed no later than September 15 for the Mad River and October 15 for all other rivers unless an extension has been requested by the Responsible Party and approved by the Department in writing.

If encroachment into the low flow channel is necessary to span the wetted channel, the access side abutment would be constructed by placing brow logs, concrete blocks or other approved stabilizing material, into the river edgewater, followed by filling behind the approved stabilizing material with washed gravel or cobble to an elevation above the water surface at date of installation. The far side abutment would be constructed of river-run gravel excavated from

the adjacent bar surface. Native gravel can be used if the bridge will span the wetted channel, and all abutment materials will be removed from the site upon bridge removal.

### **9.1.2 Removal of Crossings**

Temporary crossings shall be removed within 10 days after sediment extraction operations cease and no later than September 15 for the Mad River and October 15 for all other rivers unless specifically authorized by the Department. Following summer crossing removal, the bridge site will be reclaimed to approximate pre-construction topography.

## **9.2 Culverts**

### **9.2.1 Installation for Access and Haul Roads**

With Department approval, culverts may be installed in the low-flow channel to accommodate the use of access and haul roads. Pursuant to Fish and Game Code Section 5901, the culvert shall be sufficiently large and of a suitable length such that velocities through the pipe do not impede the passage of aquatic species through the project area.

Fill material associated with culvert installations shall be from clean on-site gravel or other materials approved by the Department. All temporary culverts shall be removed prior to September 15.

### **9.2.2 Culvert Grade**

The bottom of the culvert shall be placed at or below stream grade.

### **9.2.3 Culvert Grade on Streams with Migratory Aquatic Species**

Culvert/corrugated metal pipe (CMP) crossings shall be of sufficient size so as to not impound anticipated seasonal high flows upstream of the culvert. Placement of CMPs in fish bearing streams shall be below grade, at a depth equal to or greater than 20 percent of the pipe diameter. Crossing structures shall be constructed/sized/placed so as not to impede, or tend to impede, the passage of fish, pursuant to Fish and Game Code Section 5901, and so as to avoid impedance of any existing flows to maintain aquatic life downstream. It is the responsibility of the Responsible Party to maintain the integrity of the crossing and the associated channel at all times.

### **9.2.4 Culvert Size**

Culverts shall be sized to handle the highest flow that is likely to occur while the culvert is in place without the pipe becoming pressurized.

## **9.3 Bridges**

### **9.3.1 Number of Crossings**

The size and number of stream crossings shall be kept to a minimum. All main channel crossings must be spanned to the maximum length possible using either a railroad flatcar, bridge span, or other design approved by the Department.

### **9.3.2 Elevation of Bridge Deck Above Water Surface**

Bridges must maintain a minimum elevation of two feet above the water surface at time of installation.

### **9.3.3 Construction of Bridge Abutments**

Bridge abutments shall be constructed from washed cobbles, logs, large concrete block or other appropriate materials that can be placed and removed with minimal adverse effects. Native gravel can be used for: bridge abutments and placed behind abutment stabilizing structures; for building bridge approaches, or for the construction of the far side bridge

abutment. All imported abutment materials shall be removed from the site upon bridge removal. Bridge locations shall be approved by the Department before placement.

#### **9.4 Haul Road Maintenance**

At the commencement of the extraction season, the site Responsible Party grades the existing haul roads providing access to the approved extraction sites. Within some sites, temporary haul routes cross unmined bar surfaces for access to approved extraction sites. These temporary access routes may require periodic grading to maintain safe and efficient travel.

The grading of haul roads within the boundary of bank-full elevation consists of minor filling of cut banks scoured by winter high flow, or the excavation of deposited sediment from haul road surfaces to ensure safe, efficient travel. Periodic grading of the haul road surfaces may be needed to maintain a smooth travel way during operations.

Operations will utilize existing established haul routes to the maximum extent possible, except for portions of haul roads crossing regularly inundated bar surfaces. New haul roads being proposed through areas containing significant riparian vegetation will require mitigation to compensate for temporary or permanent loss of habitat. Vegetated areas shall be evaluated by a qualified botanist and compensatory mitigation shall be included with the accompanying pre-extraction proposal. New haul roads and compensatory mitigation shall be approved by the Department and permitting agencies prior to the applicant conducting the clearing and grading activity. Addition of new haul roads through riparian vegetation or wetlands is prohibited without review and approval from the Department.

### **10. PROJECT CONDITIONS for EXCAVATION of WETLAND PITS and POINT BAR ALCOVES**

#### **10.1 Wetland Pits**

If wetland pits are proposed as the method of excavation, the Responsible Party shall submit a final excavation design and monitoring plan for Department review and written approval at least 60 days prior to commencing project activities. The plan should include at minimum:

##### **10.1.1 Location of Wetland Pits**

Wetland pits, or oxbow excavations shall be located on surfaces that are subject to flow recurrence intervals of greater than 2 years and located downstream of the upper third of the exposed bar or terrace surface delineated on the aerial photograph accompanying the pre-extraction plan. Pit excavations shall be located so as to conform to natural openings in perennial vegetation and to limit disturbance to existing riparian vegetation. The depth of pit excavations shall not exceed the thalweg elevation of the adjacent stream channel, unless approval is obtained in writing from the Department.

##### **10.1.2 Wetland Pit Size**

Wetland pit size shall be limited to approximately 10% of the exposed bar feature or contiguous terrace area as defined on the pre-extraction aerial photograph.

##### **10.1.3 Wetland Pit Shape**

The depth, side slopes and shape of the wetland pit shall be submitted for Department approval in writing prior to excavation.

**10.1.4 Enhancement of Wetland Pits as Short-Term Wetland and Riparian Habitat**

Woody debris shall be placed in the pits to provide resting places for bird and amphibians. The woody debris shall be placed below, and at least partially above the water surface elevation of the pit.

**10.1.5 Monitoring and Fish Rescue Plan**

Fish interactions are less frequent on the Q<sub>2</sub> floodplain than when located within the bankfull channel, but fish can become trapped in pits. Extraction plans that propose to utilize isolated wetland pits shall provide a Department approved fish rescue protocol that identifies and mitigates impacts to listed fishes stranded in the pits. The plan shall include snorkel surveys to monitor for juvenile stranding after flows that inundate the wetland pit have receded. Mining of any alcove that may become a habitat for any federally listed species shall require the Responsible Party to contact NMFS or the USFWS as necessary. If this provision requires capture and relocation of state listed species (i.e. coho) then an incidental take permit must be obtained by the applicant pursuant to Fish and Game Code section 2081(b).

**10.1.6 Channel Restoration and Retirement of Wetland Pits Plan**

The Responsible Party shall provide the Department with a wetland pit and channel restoration plan for approval in writing separately from the state reclamation fund requirements.

**10.2 Point Bar Alcoves****10.2.1 Location of Point Bar Alcoves**

Alcove extractions shall be located at the downstream end of the gravel bar. The alcoves shall be located so as to conform to natural openings in perennial vegetation and to limit disturbance to existing riparian vegetation.

**10.2.2 Alcove Size and Shape**

1. The depth of the alcove shall be no greater than 30 percent of the maximum channel depth (thalweg) at the site.
2. The alcove must be open to the low flow channel at the downstream end for fish passage, and the slopes of the alcove shall not exceed 3:1.
3. The shape of the alcove shall be designed to follow any existing vegetation patterns such that the shape of the alcove is irregular and bounded by existing vegetation.

**10.2.3 Enhancement of Point Bar Alcoves as Short-Term Wetland and Riparian Habitat**

Woody debris shall be placed in the alcoves to provide cover for fish and resting places for birds and amphibians. The woody debris shall be placed at least partially above the water surface elevation of the pit.

**11. PROJECT CONDITIONS for SEASONAL POST-EXTRACTION SITE RECLAMATION and MONITORING****11.1 Riparian Vegetation****11.1.1 Work According to the Revegetation Plan**

All revegetation work shall be done according to the revegetation plan prepared by the Responsible Party or their consultant that has been reviewed and approved by the Department. The Responsible Party shall notify the Department of any modifications made to this revegetation plan. Modifications to the revegetation plan must be reviewed and approved by the Department prior to their implementation.

**11.1.2 Criteria for Revegetation Success**

To ensure a successful revegetation effort, all plants shall be monitored and maintained as necessary for five years. All plantings shall have a minimum of 80 percent survival at the end of five years and shall attain 75 percent coverage after five years. If the survival and/or cover requirements specified are not met, the Responsible Party is responsible for replacement planting, or other practice necessary to achieve these requirements. Replacement plants shall be monitored for survival and growth requirements for two years after planting and shall attain a survival rate of 80 percent after two years.

**11.1.3 Variance from the Revegetation Success Criteria**

If the project applicant can demonstrate that a lower success rate is due to high flows sufficient to have removed similar acreage of naturally established riparian vegetation on the stream within two miles of the project site, the lower success rate shall be accepted as compliant with this condition. A lower success rate attributed to inundation with sediment or lack of water shall not be accepted.

**11.1.4 Annual Status Report on the Performance of the Revegetation Plan**

An annual status report on the revegetation effort shall be provided to the Department by January 15 of each year for period of five years or until a survival rate of 80 percent for two consecutive years is achieved. This report shall include:

1. Survival, percent cover, and height of both tree and shrub species;
2. Number of species of plants replaced;
3. Overview of the revegetation effort, and the method used to assess these parameters; and
4. Photos from the designated photo stations.

**11.2 Gravel Bars and Channel Slopes****11.2.1 Reclamation Time Period**

Unless an extension of the work period is obtained, the extraction area shall be reclaimed, (site groomed or finish graded) beginning October 1 and finished by October 15, to those dimensions as described in the Pre-extraction Plan attached to this Agreement, and in accordance with the conditions of this Agreement. When the Responsible Party has completed extraction and site grooming, the Department, the USACOE and CHERT shall be notified and a final site review will be scheduled. The purpose of the final review is to assess the site for additional end-of-season reclamation and recommend minor grading to ensure site drainage compliant with the approved extraction plan.

**11.2.2 Sediment Stockpiles**

During excavation, aggregate is sometimes moved from one location within an extraction area and piled temporarily until transport to the processing facility can be coordinated. Temporary on-bar stockpiling is permitted to occur in areas designated in the approved annual pre-extraction proposal. Stockpiles consist of homogenous, river-run gravels. All temporary stockpiles shall be removed by the end of the seasonal reclamation period. Temporary stockpiles shall be removed at the end of each work day for operations occurring after October 1, consistent with USACOE LOP 2004-1.

**11.2.3 Cut Bank Slopes**

Cut bank slopes that will be adjacent to the flowing water of the active stream, shall be contoured to be compatible with the local stream dynamics of the site.

**11.2.4 Finished Bar Surfaces**

Operations shall not result in a feature that will allow for the ponding of water or isolation of aquatic species in a location separate from the main channel during high flows. The gravel

bar in the sediment removal area shall be left smooth with no pot holes or depressions that can trap salmonids. Natural features of streambed topography outside of the extraction work area shall not be backfilled.

## **12. PRE- and POST-EXTRACTION SURVEY TRANSECTS (Cross-Sections)**

Surveying, data collection and drafting procedures shall be consistent with the requirements of Appendix C of the 2004 USACOE Letter of Permission Procedure for Gravel Mining Activities within Humboldt County (LOP 2004-1) and subsequent extensions and amendments thereto.

Full-channel monitoring cross-sections spaced through the project reach are surveyed annually. The full-channel monitoring cross sections provide an annual picture of bed elevation and geomorphic changes within the project reach and permit the assessment of long-term trends and changes associated with flood events and extraction processes. Temporary cross sections that pass through extraction areas are surveyed prior to and after extraction activities in order to show extent of excavation and provide a volume estimate of material removed.

The monitoring cross-sections comprise the basis for the physical monitoring element of extraction operations. They are developed from annual surveys of the full channel area. The monitoring lines have permanently-monumented end points out of the channel area, referenced to common horizontal and vertical survey control grids. The lines can be relocated and resurveyed if a significant flow event erodes the banks and removes the monuments. Monitoring cross-section plots contain notation of water surface elevations, vegetation limits, survey control points, thalweg, silt line and annual high water line, if visible at the time of survey.

Extraction cross sections are generally shorter, more closely spaced, temporary cross-sections used to provide an enhanced topographic relationship of the proposed extraction area, the wetted channel and features surrounding the extraction site. They are used for extraction planning and later during excavation for placement of grade control and Responsible Party reference to the approved extraction plan. Extraction areas less than 500 feet in length shall have a minimum of three cross-sections for extraction plan development and grade control. Extraction areas greater than 500 feet in length shall require a minimum of five cross-sections.

### **12.1 Project Conditions for Data Collection and Pre and Post Extraction Transects (Cross-Sections)**

1. Surveys shall be conducted under the supervision or direction of a licensed surveyor in compliance with California State Law and accepted published protocols for procedures and accuracy, and with reference to a permanent geodetic datum.
2. Vertical control surveys for establishing elevations on the project control, photogrammetric control and cross section end points shall be established in accordance with Third-Order or higher standards, and referenced to the North American Vertical Datum of 1988 (NAVD88).
3. Horizontal control surveys for establishing State Plane Coordinates on the project control, photogrammetric control and cross section end points shall be based on at least Third-Order Class I standards and tied to a second order, or better, horizontal control station referenced to the National Spatial Reference System (NSRS) or the California High Precision Geodetic Network (HPGN), both of which are based upon the same North American Datum of 1983 (NAD 83).

**Note:** HPGN control stations are placed by Caltrans throughout California along major transportation corridors at an interval of approximately 40 miles. Caltrans has densified the NSRS with supplemental HPGN stations at an interval of

approximately 10 miles in most areas of the state. NSRS and HPGN data are available from the National Geodetic Information Center and local Caltrans District Survey offices. The Governor's Geographic Information Systems (GIS) Task Force has recommended that the California HPGN be used as the foundation for the production of all future GIS data.

4. Data points shall include high water marks for the past season's peak flow (where discernable), gravel bar features, established riparian vegetation, trees, roads, ponded areas, and similar features. Additionally, cross section data points are to note the water's edge (which will portray the water surface elevation) and include the river bottom (most critically the deepest point, or thalweg location).
5. The date of the water surface reading shall be recorded during the cross section surveys.
6. Cross section end points shall be documented and clearly marked in the field.
7. Survey control points for project control and cross section end points shall be permanently monumented using either commercial monuments, rebar, or 3/4" diameter (or larger) galvanized pipe. To ensure point survival, consideration shall be given to typical site hazards such as flooding and mining activities. Reference points or other precautionary measures shall be established to enable the direct replacement of the survey control points or cross section end points in three dimensions to the same degree of accuracy as the original survey point was placed.
8. Cross section lines shall extend beyond the active channel width and onto a terrace flooded by a 100-year event. (After the primary survey is completed, significantly less width will require re-surveying.) The end points shall begin and end on stable banks where disturbance and bank erosion is unlikely to occur. Cross section lines shall be oriented normal (perpendicular) to the active channel and the direction of water flow.
9. Cross sections shall be drafted at a readable scale, with a vertical exaggeration appropriate to the dimensions of the site. The cross sections shall be submitted on 11" by 17" or larger, 10 squares per inch grid, reproducible medium. The drafted cross sections shall be labeled with the project name, date.
10. Cross sections shall be drafted consistently so that the right bank (RB) of the river is at the right side of the drafted cross section. Zero (0) distance in cross sections is at the left bank (LB) end point. By convention, the right bank is to the right as one faces downstream. The original location of the left end point shall maintain the zero distance throughout the period of site monitoring. If the original left end point is removed by bank erosion, or other forces, all measurements to the left of the original left end point shall be negative distances beginning at the location of the original left end point.
11. Pertinent features such as gravel bars, established riparian vegetation, trees, roads, ponded areas, high water mark indicators, etc. are to be clearly labeled on the drafted cross section.
12. Responsible Parties shall have their final post-extraction transect (fall) measurements taken during the reclamation period, or soon thereafter, so that they have adequate time to reclaim the site should the transects show unanticipated problems such as unacceptable depressions or incorrect post-extraction slopes.
13. Responsible Parties shall keep existing transects – particularly those located near structures – and read them every year even if they do not meet the specified guidelines. Such transects will be in addition to the specific number and location of transects prescribed in the guidelines. When requested, the Department will consider alternative transect protocols that approximate the guidelines.
14. Along with a hard copy, all data shall be submitted as a digital file on a 3.5 inch diskette or compact disk.

## **12.2 Survey Frequency**

Twice-annual surveys of extraction area and monitoring transects shall be conducted – one in the fall after seasonal extraction has ended and prior to the rainy season and one in the spring,

prior to the initiation of extraction activities. Monitoring and extraction cross-sections not affected by extraction operations shall be surveyed once during the annual extraction season. Extraction sections are specific to the annual area of extraction, which may change over time and are not required to be resurveyed in the same location each year.

### **13. SUSPENSION AND CANCELLATION OF AGREEMENT AND WORK ACTIVITIES**

The Responsible Party is liable for compliance with the terms of this Agreement, including violations committed by the contractors and/or subcontractors. The Department reserves the right to suspend or cancel Agreement and instruct the Responsible Party to stop all operations if it becomes apparent that any of the conditions of this Agreement are not being met or that other circumstances warrant.

#### **13.1 Circumstances That Might Warrant Suspension or Cancellation of Agreement and Work Activities**

The circumstances that might warrant suspension or cancellation include, but are not limited to, the following:

1. Failure by the Responsible Party, or his employees, agents, representatives, contractors, and/or subcontractors, to comply with any of the terms and conditions of this Agreement.
2. The Department determines that the information that the Responsible Party provided to the Department to develop this Agreement, or the information contained in a notification, is incomplete or inaccurate.
3. The Department obtains new information that shows the work authorized by this Agreement could substantially adversely affect fish and wildlife resources, notwithstanding the Responsible Party's compliance with the Agreement.
4. The Department determines that measures to protect fish and wildlife resources different from those included in this Agreement are necessary to protect those resources.
5. There is a substantial change in conditions. For purposes of this Agreement, a substantial change in conditions shall mean one or more of the following: 1) the work described in this Agreement is substantially changed; 2) conditions affecting fish and wildlife resources substantially change; and/or 3) the work conducted under this Agreement have adversely affected, or will adversely affect, fish and wildlife resources, notwithstanding that the Responsible Party has complied, or will comply with, the terms and conditions of this Agreement.
6. If substantial change in conditions occur, the Responsible Party shall notify all State and Federal agencies having jurisdiction on their project of the substantial change in conditions.

##### **13.1.1 Scope of Suspension**

At the discretion of the Department, any action to suspend this Agreement may be limited in scope to address the specific problem or problems resulting in the suspension. Hence, the Department may limit the suspension to specified work or specified areas. The Department shall notify the Responsible Party of any suspension of the Agreement, or any part thereof, in writing. Any suspension shall take effect immediately upon receipt of such notice by the Responsible Party, or in accordance with the instructions contained in the notice. Such notice will identify the reason or reasons for the suspension, the actions necessary to correct the problem, and the scope of the suspension.

##### **13.1.2 Reinstatement Following Suspension**

The Department may lift any suspension when it has determined that the Responsible Party has adequately addressed the problem or problems resulting in the suspension and that reinstatement of the Agreement will not cause harm to fish and wildlife resources.



Any violation of the terms of this Agreement may result in the project being stopped, a citation being issued, or charges being filed with the District Attorney. Contractors and subcontractors may also be liable for violating the conditions of this Agreement.

**13.2 Resumption of Work Activities**

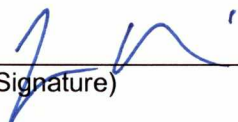
The resumption of construction activities shall be allowed by the Department once the violation of the Agreement condition has been resolved to the Department's satisfaction.

**This Agreement becomes effective on the date of the Department's signature and expires on December 31, 2008.** The Responsible Party may request one extension of this Agreement. To renew the Agreement beyond the expiration date, a written request for a renewal must be submitted to the Department 1600 Program, 601 Locust Street, Redding, California 96001 for consideration before the Agreement expiration date. A renewal requires a fee. The Fee Schedule can be obtained at [www.dfg.ca.gov/1600](http://www.dfg.ca.gov/1600) or by phone at (530) 225-2367. Renewals of the original Agreement are issued at the discretion of the Department. The Department cannot renew Agreements after the expiration date.

CONCURRENCE

RESPONSIBLE PARTY

CALIFORNIA DEPARTMENT OF FISH AND GAME

  
\_\_\_\_\_  
(Signature)

  
\_\_\_\_\_  
**DONALD B. KOCH**  
Regional Manager  
Northern California - North Coast Region

Jordan Main  
\_\_\_\_\_  
(Print Name)

7/5/06  
\_\_\_\_\_  
(Date)

Material Resources Manager / Granite  
\_\_\_\_\_  
(Title/Organization)

06/07/06  
\_\_\_\_\_  
(Date)