FOR CONTRACT NO.: 02-2C1124

INFORMATION HANDOUT

MATERIALS INFORMATION

FOUNDATION REPORT
NORTH FORK MILL CREEK BR. No. 08-0166 (dated May 25, 2011)

STRUCTURES HYDARULICS AND HYDROLOGY FINAL HYDRAULIC REPORT
N.Branch N.Fork Mill Creek (dated April 14, 2011)

STRUCTURES HYDARULICS AND HYDROLOGY ADDENDUM TO THE FINAL HYDRAULIC REPORT
N.Branch N.Fork Mill Creek (dated September 13, 2011)

PERMITS

U.S. ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT

CALIFORNIA DEPARTMENT OF FISH AND GAME STREAMBED ALTERATION AGREEMENT (1601)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD (401)

TEHAMA COUNTY AIR POLLUTION CONTROL DISTRICT- FUGITIVE DUST INFORMATION AND PERMIT APPLICATION

State of California
Department of Transportation

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: MR. JOSEPH E. DOWNING
Branch Chief
Bridge Design Branch 3
Office of Bridge Design North

Date: May 25, 2011

File: 02-The-99-PM14.0
EA 02-2C1121
Project Number: 02000000163
North Fork Mill Creek
Bridge (Replace)
Br. No. 08-0166

Attention: Mr. Lewis Shen

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES – MS 5

Subject: Foundation Report for North Fork Mill Creek (Br. No. 08-0166)

Introduction/Scope of Work

Per your request, the Office of Geotechnical Design-North (OGD-N) has prepared this Foundation Report for the North Fork Mill Creek Bridge replacement. The existing bridge number is 08-0009 and the new bridge number is 08-0166. This report is based on field investigation (including two soil test borings drilled in the summer 2010), evaluation of the data from the investigation, and review of the existing bridge files.

Project Description

The bridge is located on State Highway 99, approximately two miles north of Los Molinos in Tehama County. The existing two-span bridge was built in 1921, and widened in 1952. The existing bridge is approximately 39.75 feet long and approximately 42.5 feet wide. The existing bridge was classified as a scour critical bridge and proposed to be replaced by a 65 feet long and 45 feet wide single span bridge.

The vertical datum used in this report is NAVD88. An additional 2.11 feet needs to be added to the NGVD 29 vertical datum elevations to convert these elevations to vertical datum NAVD 88.

Field Investigation

Two soil test borings were drilled to depths of approximately 101.5 feet at Boring R-10-001 and 85.3 feet at Boring R-10-002 during the field investigation in August 2010.

"As-Built" Log of Test Borings (LOTBs) dated September 17, 1951 indicate four 1-inch sample borings were driven to a depth approximately 27 feet in April 1951.

Site Geology and Subsurface Conditions

The subject site is located in the northern part of the Great Valley geomorphic province of California. The Geologic Map of California, Redding Sheet (DMG, 1962) scale 1:250,000, indicate the site is underlaid by recent stream channel deposits (Qsc) and recent alluvial fan deposits (Qf), which consist of sand, gravel, silt, and minor clay.

"As-Built" LOTBs indicate that the soils encountered were silt, coarse sand and gravel, and clay.

The materials encountered in the 2010 investigation consisted of sand, silty sand, gravel with cobbles, and silt. The relative density of the soil encountered varies from loose to very dense (see LOTBs for details). Gravel and cobbles with a silt and clay matrix are exposed on the north bank and along the ditch cut parallel to Highway 99 on the north side of the creek. Boulder size rock slope protection (RSP) is visible on the Abutment 1 slope and in the channel. The RSP was not encountered in the borings but may be encountered during construction.

Groundwater depth was not shown in the "As Built" LOTBs. A temporary piezometer was installed in Boring R-10-001 to monitor the ground water. Ground water was measured at elevation 232.9 feet in Boring R-10-001 on August 19, 2010.

Scour

Based on the "Structure Hydraulics & Hydrology Final Hydraulic report for North Branch North Fork Mill Creek" dated April 14, 2011, the current channel thalweg elevation is 234.0 feet and the channel "long-term degradation over the life of the new structure is estimated to be 1 foot." Contraction scour is negligible. According to the scour history

of the creek, the report recommended "the Abutment 1 foundation should be designed for some loss of lateral support."

The report also states that "The potential local scour depth for the proposed 2-foot-diameter Abutment 1 foundation is estimated to be 8.0 feet. This corresponds to Elevation 226.0 feet. The Abutment 2 foundation should be designed for scour to Elevation 234.0 feet."

Corrosivity

Representative samples taken during the recent foundation investigation were tested for corrosion potential. The results of the laboratory tests indicate this site is not corrosive to foundation elements. Table 1 presents a summary of the results.

Table 1. Soil Corrosion Test Summery

Location	SIC Number	Sample Depth (ft)	Minimum Resistivity (ohm-cm)	pH	Sulfate Content (ppm)	Chloride Content (ppm)
R-10-001	C709280	11-15	2973	7.47	N/A	N/A
R-10-001	C709281	30-33	6566	7.26	N/A	N/A
R-10-002	C709282	80-83	7689	7.73	N/A	N/A

Note: Caltrans currently considers a site to be corrosive to foundation elements if one or more of the following conditions exist: Chloride concentration is greater than or equal 500 ppm, sulfate concentration is greater than or equal 2000 ppm, or the pH is 5.5 or less.

Seismic Recommendations

In accordance with the Caltrans 2009 Seismic Design Procedure, the nearest active fault to the site is Great Valley Fault 1, Fault ID No. 20, with a Mmax of 6.7. This fault is located south of the proposed bridge location, and is referred as a reverse fault. The closest distance from the project location to the fault rupture plane is measured to be 28 miles.

The design Acceleration Response Spectrum (ARS) curve is based on the USGS 5% probability of exceedance in 50 years (corresponds to a 975 year return period) with an estimated shear wave velocity of 890 feet per second as determined from the LOTBs. The design ARS curve with an estimated peak ground acceleration of 0.25g is attached (Figure 1).

Based on liquefaction analysis, the liquefaction potential is considered to be insignificant.

Surface fault rupture is defined as displacement that occurs along the surface trace of a fault. There are no known active faults crossing beneath or extending directly toward the site. Therefore, the potential hazard due to ground rupture is considered to be very low.

As-Built Foundation Data

The "As-Built" Plans indicated that spread footings support the existing bridge foundations. According to the "As Built" data, the bottom of the spread footing elevation for the existing original bridge was approximately +232.2 feet for Abutment 1, +231.2 feet for Pier 2, and +231.6 feet for Abutment 3. The "As Built" General Plan for "Widening of Bridge Across North Mill Creek Overflow (Br. No. 08-0009)" circa 1970, indicate the elevation of the bottom of the spread footings for the bridge widening was approximately +229.0 feet at all support locations.

Please note that all elevations used for As-Built Foundation data were based on the NAVD 29 vertical datum. An additional 2.11 feet needs to be added to the NGVD 29 vertical datum elevations to convert these elevations to the NAVD 88 vertical datum.

Foundation Recommendations

24-inch diameter opened-end steel pipe piles were selected as the foundation elements to support the proposed bridge. Axial nominal geotechnical resistance of the steel pipe piles was calculated using the American Petroleum Institute (API) Method (July 1993) and the results were checked using FHWA Driven Program 1.2.

The following tables present our foundation pile tip elevation recommendations.

Table 2. Foundation Recommendations for Abutments

Abutment Foundations Recommendations									
Support Location	Pile Type	Cut-off Elevation (ft)	LRFD Service-I Limit State Load per Support (kips)		LRFD Service-I Limit State Total Load (kips) per Pile	Nominal Resistance (kips)	Estimated Pile Elevation (ft)	Specified Tip Elevation[5] (ft)	Nominal Driving Resistance Required (kips)
			Total	Permanent	Compression				
Abut. 1	CISS NPS 24"x0.5"	241.15	810	606	150	300	172.0 (a), 196.0(b)	172.0	420
Abut. 2	CISS NPS 24"x0.5"	241.85	810	606	150	300	185.0(a), 196.0 (b)	185.0	490

Notes:

1) *Design tip elevations are controlled by: (a) Compression, and (b) Lateral Load, respectively.*
2) *Lateral Load controlled tip elevation was provided by Structure Design.*
3) *The specified tip elevation shall not be raised above the design tip elevations for lateral.*
4) *Unsuitable soil layers (scourable) that do not contribute to the design nominal resistance at Abutment 1 extend to elevation 226.0 feet and at Abutment 2 extend to elevation 234.0 feet.*

Table 3. Pile Data Table

Pile Data Table						
Support Location	Pile Type	Nominal Resistance (kips)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Nominal Driving Resistance (kips)
		Compression	Tension			
Abut. 1	CISS NPS 24"x0.5"	300	0	172.0(a), 196.0(b)	172.0	420
Abut. 2	CISS NPS 24"x0.5"	300	0	185.0(a), 196.0(b)	185.0	490

Notes:

1) *Design tip elevations for Abutments are controlled by: (a) Compression, (b) Lateral Load*
2) *Lateral Load controlled tip elevation was provided by Structure Design.*
3) *The specified tip elevation shall not be raised above the design tip elevations for lateral.*
4) *Unsuitable soil layers (scourable) that do not contribute to the design nominal resistance at Abutment 1 extend to elevation 226.0 feet and at Abutment 2 extend to elevation 234.0 feet.*
5) *The depth of the soil plug clean out should not exceed 36 feet from the pile cut off elevation.*

Approach Fill Earthwork

There are no major new fills planned to be placed for the approach embankment. Therefore, this report does not analyze any geotechnical issues related the approach embankment.

Construction Considerations

1. It is not anticipated that groundwater will be encountered for the abutment footing excavations if the excavations for the foundations occur during the dry season or when the water level in the creek channel is low.

2. Hard driving of the steel pipe piles should be anticipated through the dense to very dense gravel and cobble layers encountered at the site.

3. Equipment or methods used for cleaning out the shells shall not cause quick soil conditions or cause scouring or caving around or below the pile tip. The depth of the soil plug clean out should not exceed 36 feet from the pile cut off elevation.

4. Prior to installing any driven piling, the Contractor shall provide a pile driving system submittal. All proposed driving systems (i.e. each hammer that may be brought onto the site) must be included in the submittal for Caltrans review.

PROJECT INFORMATION

Standard Special Provisions S5-280, "Project Information," discloses to bidders and contractors a list of pertinent information available for their inspection prior to bid opening. The following is an excerpt from SSP S5-280 disclosing information originating from Geotechnical Services. Items listed to be included in the Information Handout will be provided in Acrobat (.pdf) format to the addressee(s) of this report via electronic mail.

Data and information attached with the project plans are:

A. Log of Test Borings for North Fork Mill Creek Bridge, Bridge Number 08-0166.

Data and information included in the Information Handout provided to the bidders and contractors are:

A. Foundation Report for North Fork Mill Creek Bridge, Bridge Number 08-0166, dated May 25, 2011.

Data and information available for inspection at the District Office:
None

Data and information available for inspection at the Transportation Laboratory:
None

If you have any questions regarding this report, please contact Xing Zheng at 227-1036 or Reza Mahallati at 227-1033.

REGISTERED GEOLOGIST
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Steve Ng-Structure Hydraulics (E-copy)
GDN File
GS File Room

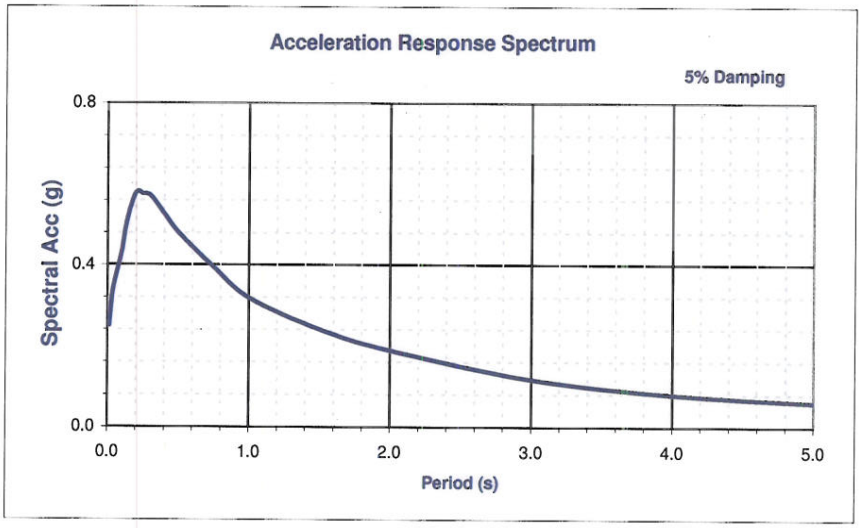
North Fork Mill Creek Bridge

Bridge No. 08-0166
EA No. 02-2C1121

Latitude 40.0531
Longitude -122.1004

Control **Probabilistic**

Period (s)	Sa(g)
0.010	0.250
0.020	0.287
0.030	0.325
0.050	0.363
0.075	0.401
0.100	0.439
0.120	0.486
0.150	0.533
0.200	0.579
0.250	0.575
0.300	0.572
0.400	0.525
0.500	0.479
0.750	0.394
1.000	0.318
1.500	0.240
2.000	0.188
3.000	0.117
4.000	0.080
5.000	0.061



Deterministic Procedure Data

Fault	Great Valley Fault 1	
Fault ID	20	
Style	R	
Mmax	6.7	
Dip	15	deg
Z_{TOR}	7	km

R_{rup}	45	km
R_{jb}	45	km
R_x	19	km
V_{S30}	270	m/s
$Z_{1.0}$	320	m
$Z_{2.5}$	2.00	km

Notes

Please note the Design ARS curve is based on the USGS 5% probability of exceedance in 50 years.

Final

Design Response Spectrum

STRUCTURE HYDRAULICS & HYDROLOGY
FINAL HYDRAULIC REPORT

N. Branch N. Fork Mill Creek

Located approximately two miles north of the town of Los Molinos
on State Route 99 over the N. Branch of the N. Fork of Mill Creek in Tehama County

JOB:
Bridge No. 08-0009 (Existing)
Bridge No. 08-0166 (Replacement)

LOCATION:
02-Teh-99-PM14.05

EA: 02-2C1121

WRITTEN BY:
Diane O'Brien

DATE:
April 14, 2011

REVIEWED BY:
Ronald McGaugh

DATE:
April 14, 2011

NBNF Mill Creek
Br. No. 08-0166
02-Teh-99-PM14.05
EA 02-2C1121

Hydrology/Hydraulics Report

General

It is proposed to replace the existing scour critical structure over the North Branch of the North Fork of Mill Creek (Bridge No. 08-0009). The SM&I Scour Evaluations Section identified the existing structure as scour critical in January of 2002. The site has experienced contraction scour and local scour resulting in footing exposure at the pier and both abutments. There is also medium potential for debris blockages.

The existing structure is two spans, with a total length of 38.7 feet and a total width of 42.7 feet. The original reinforced concrete girder bridge (1921) was widened on both sides (reinforced concrete slab) in 1952. The bridge is founded on a reinforced concrete pier and wing abutments, all on spread footings. The existing reinforced concrete girder bridge has a structure depth of 2' 7".

The proposed new structure, Bridge No. 08-0166, is a single span precast, prestressed, voided slab with a structure depth of 2'-2". The proposed abutment foundations are 2-foot-diameter CISS piles. The new structure will have a total length of 65 feet and a total width of 45 feet.

All calculated elevations in this report are based on the Vertical Datum NAVD88.

Basin

Mill Creek flows southwest from the slopes of Mount Lassen to its confluence with the Sacramento River near the town of Los Molinos. Approximately two miles upstream of the Sacramento River, the North Fork of Mill Creek diverges from the South Fork. The South Fork currently carries the majority of the discharge and flows under Route 99 at Mill Creek Bridge (No. 08-0160). The North Branch of the North Fork of Mill Creek flows under Route 99 about three-quarters of a mile north of the South Fork Bridge and approximately one-half mile upstream of its confluence with the Sacramento River.

Elevations within the 130 mi^2 watershed upstream of the bridge range from over 8000 feet to approximately 250 feet at the bridge site. The mean annual precipitation for the basin is 53 inches. Flow is from both rainfall and snowmelt. There are no storage dams or reservoirs on Mill Creek, but there are several diversion structures after it reaches the Sacramento Valley that are used for irrigation. These diversion structures were ignored in estimating the Design and Base Floods at the bridge site.

The North Fork is a natural distributary of Mill Creek. The elevation of the North Fork channel bed is currently 4-5 feet higher than the current main channel (South Fork) at the present bifurcation. According to the field reconnaissance and historical analysis of aerial photography conducted for the Fluvial Geomorphic Study of Mill Creek for the US Fish and Wildlife Service (Reference 1), between 1938 and 1947 the main Mill Creek channel shifted and occupied what had been the upper portion of the North Fork and moved the bifurcation about 1200 feet downstream to its present location. Local channel downcutting in the South Fork from 1947-1970, in combination with the initial effect of channel shifting, caused the elevation of the North Fork channel bed to be higher in relation to the elevation of the South Fork channel bed than it had been in the 1930s and 1940s. These changes have reduced the percentage of Mill Creek flow that can currently enter the North Fork.

Federal and local agencies have controlled the flow into the North Branch of Mill Creek since 1954-55 with dikes and a weir. In 1954-55 the California Department of Fish and Game (CDFG) constructed the original weir across the inlet of the North Fork. High flows destroyed the dikes and weir in 1956, 1965 and 1997. The present weir crest was rebuilt in 1997 by Tehama County and the overflow elevation is at the channel bed elevation of the North Fork. The beginning of the North Fork is about a quarter mile east of Shasta Blvd., a County road, which is parallel to and about a half mile east of State Route 99. Downstream from Shasta Avenue, the North Fork splits into two channels. The South Branch of the North Fork goes under Bridge No. 08-0008 and the North Branch of the North Fork continues to this bridge. The South Branch receives less flow, is poorly defined, and shares the same floodplain with the North Branch. Therefore, for the purpose of this study, all flow was assumed to go toward the North Branch Bridge.

Discharge

Mill Creek is a gauged (USGS 11381500) watershed with 81 years of record. PKFQWin Version 5.2.0, a flood-frequency computation program following procedures recommended in Bulletin 17B of the Interagency Advisory Committee on Water Data (1982), was used to estimate the Q100 and Q50 discharges at the stream gage located about three and one half miles upstream of the beginning of the North Fork. The Q100 and Q50 discharges for Mill Creek upstream at the location of the stage gage are 25,200 cfs and 20,840 cfs, respectively.

A one-dimensional water surface profile program, HEC-RAS 4.0, was used to estimate what percentage of this discharge would flow into the North Fork. Based on the relative stream bed elevations and channel geometry, it was estimated that the Q100 and Q50 North Fork Discharges are 3000 cfs and 2000 cfs, respectively.

Stage

The flood of December 11, 1937 is the largest on record, 36,400 cfs at the upstream gauge. At that time the North Fork apparently received as much of the flood flow as the South Fork. The high water recorded at the North Branch North Fork Mill Creek Bridge on Dec. 11 1937 was 2.3' above the bottom of the girder at the center of the bridge, according to a December 1941 Bridge Report. For the reasons detailed earlier in this report, a discharge of this magnitude on the North Fork is not expected to reoccur.

Approximately 180 lineal feet of pavement washed out in December 1937. High water during February 1940, March 1940, February 1942 and December 1964 also washed out a large portion of the road adjacent to the southerly end of the structure and between the South Branch North Fork (08-0008) and North Branch North Fork (08-0009) bridges. Historic records provided by District 2 also show that SR 99 was overtopped in 1960 when the ditch along SR99 was unable to convey the additional flow coming from the east down Wilson Ave. due to the County's upsizing of culverts on Wilson Ave. This water sheet flowed north to south over the bridge to the other side.

HEC-RAS version 4.0 was used to model the flow for the Q100 and Q50 through the bridge opening. The Manning's roughness coefficient used was 0.045. The maximum water surface elevations computed are 246 feet and 243.8 feet for the Q100 and Q50, respectively. There is a high potential for drift at the bridge site due to large amounts of vegetation upstream. Therefore a minimum freeboard of 3 feet above the Q50 is recommended. This corresponds to a minimum soffit elevation of 246.8 feet.

Velocity

The water surface elevations and velocities corresponding to the 100-year discharge were computed using HEC-RAS version 4.0. The Manning's roughness coefficient used to represent the creek was 0.045. During the 100-year flood event the average velocity approaching the upstream face of the bridge at the cross-section where the Q100 water surface elevation was chosen is about 6 fps. However, there is a very rapid increase in velocity through the bridge opening with average velocities of 15 fps.

Streambed

The streambed is composed of active alluvium in between banks of older cemented gravel. This material is scourable and subject to erosion. The current thalweg Elevation of 234 feet was measured in the field by SM&I Hydraulics Branch staff on October 21, 2008. This elevation was adjusted from NGVD29 to NAVD88 using the vertical datum transformation of +2.11 feet provided by Preliminary Investigations.

Due to the history of the roadway between this bridge and the South Branch North Fork Bridge (08-0008) being overtopped, and the frequent loss of the embankment and roadway fill between these two structures and at the south abutment, the Abutment 1 foundation should be designed for some loss of lateral support. Abutment 2 is on a natural ridge and the roadway will not over top here. However, since it is on the outside of a curve and the thalweg is currently on the north side of the channel, the foundation depth should account for some channel migration in that direction.

Contraction scour is negligible. The long-term degradation over the life of the new structure is estimated to be 1 foot.

The potential local scour depth for the proposed 2-foot-diameter Abutment 1 foundation is estimated to be 8.0 feet. This corresponds to Elevation 226.0 feet. The Abutment 2 foundation should be designed for scour to Elevation 234.0 feet.

Demolition and Regrading Channel

The foundation of the existing bridge including the entire abutment and pier spread footings should be removed.

Debris

There is high debris potential at this bridge. The single span design is an improvement. Adequate freeboard should be provided.

Bank Protection

Bank protection at the abutments should be determined by the District. The south approach to the bridge has a history of flood damage. Both the south abutment fill and large portions of the roadway have washed out in the past. Rock rip rap under the bridge must not reduce the flow area that was depicted on the grading plan supplied to Structure Hydraulics.

References

1. Fluvial Geomorphic Study of Mill Creek, Tehama County, California, G. Mathias Kondolf, Matthew Smeltzer, John G. Williams, Neil Lassettre, Final report submitted to US Fish and Wildlife Service, Stockton, CA, 08 May 2001.

2. North Fork Mill Creek Bridge (Replace) General Plan No. 1 and No. 2, Unchecked Details Printed 01/31/11.

3. 2002 hydraulic model of the Upper Sacramento River developed by The California State Department of Water Resources, Division of Planning and Local Assistance, Northern District, for the US Army Corps of Engineers' Sacramento and San Joaquin River Basins Comprehensive Study.

4. Caltrans Bridge Maintenance Records.

Summary Information for the Bridge Designer

Below is a summary of key design parameters based on the hydrologic and hydraulic analysis performed for this structure:

Minimum Soffit Elevation	246.8 ft
Potential Scour Elevation at Abutments 1	226.0 ft
Potential Scour Elevation at Abutment 2	234.0 ft
Average Velocity	15 ft/sec
Peak Velocity	16 ft/sec

HYDROLOGIC AND HYDRAULIC SUMMARY			
Drainage Area: See "Basin" paragraphs			
	Design Flood	Base Flood	
Frequency	50-year	100-year	
Discharge	2000 cfs	3000 cfs	
Water Surface Elevation at Bridge	243.8 ft	246.0 ft	
Flood plain data are based upon information available when the plans were prepared and are shown to meet federal requirements. The accuracy of said information is not warranted by the State and interested or affected parties should make their own investigation.			

ALL CALCULATED ELEVATIONS IN THIS REPORT ARE BASED ON THE VERTICAL DATUM NAVD88.

NBNF Mill Creek
Br. No. 08-0166
02-Teh-99-PM14.05
EA 02-2C1121

This report has been prepared under my direction as the professional engineer in responsible charge of the work, in accordance with the provisions of the Professional Engineers Act of the State of California.

Diane K. O'Brien

REGISTERED CIVIL ENGINEER (SIGNATURE)

REGISTRATION NUMBER C 48483 DATE: June 30, 2012

STRUCTURE HYDRAULICS & HYDROLOGY ADDENDUM
TO THE FINAL HYDRAULIC REPORT

N. Branch N. Fork Mill Creek

Located approximately two miles north of the town of Los Molinos
on State Route 99 over the N. Branch of the N. Fork of Mill Creek in Tehama County

JOB:
Bridge No. 08-0009 (Existing)
Bridge No. 08-0166 (Replacement)

LOCATION:
02-Teh-99-PM14.05

EA: 02-2C1121

WRITTEN BY:
Diane O'Brien

DATE:
September 13, 2011

REVIEWED BY:
Ronald McGaugh

DATE:
September 13, 2011

NBNF Mill Creek
Br. No. 08-0166
02-Teh-99-PM14.05
EA 02-2C1121

Introduction

This report is an Addendum to the Final Hydraulic Report (FHR) dated April 14, 2011. It contains updated velocity and maximum water surface elevations using the final grading plan depicted on Sheet C-1, Construction Details, Preliminary Plans dated 08/09/11. The changes to the grading plan were made to improve flow conditions. The result is some reduction in the velocities under the bridge with the highest velocities occurring immediately downstream of the bridge. This also resulted in a reduction of the maximum water surface elevation and increase in the freeboard.

The only data updated in this report are the velocity and maximum water surface elevations.

Velocity

The Q100 discharge approaching the bridge is subcritical before accelerating through the bridge opening. A hydraulic jump occurs near the downstream face of the bridge and the creek temporarily flows supercritical. This is also the existing condition. The water surface elevations and velocities corresponding to the 100-year and 50-year discharges using the final grading plan were computed using HEC-RAS version 4.0. The Manning's roughness coefficient used to compute the velocities for this Addendum was 0.04. During the 100-year flood event the average velocity approaching the upstream face of the bridge before it accelerates through the bridge opening is approximately 5 fps. The rapid increase in velocity and drop in water surface elevation through the bridge opening results in velocities of approximately 9.5 fps at the upstream face of the bridge and 12.4 fps at the downstream face of the bridge.

Bank Protection

Bank protection at the abutments should be determined by the District. The scour depths for the bridge foundation assume loss of lateral support to a depth not dependent on maintaining the embankment protection.

Stage

HEC-RAS version 4.0 was used to model the flow for the Q100 and Q50 through the bridge opening using the final grading plan. The Manning's roughness coefficient used to calculate the updated maximum water surface elevations was 0.04. The updated Q100 and Q50 maximum water surface elevations are 245 feet and 242.8 feet, respectively. These are lower than the values reported in the FHR and will result in an increase in freeboard. The freeboard of 3 feet above the Q50 recommended in the FHR now corresponds to a minimum soffit elevation of 245.8 feet.

The existing streambed under the roadway creates a depression deep enough to cause a natural hydraulic jump in the channel. This jump has been in place for at least as long as the existing bridge (90 years). The proposed new bridge opening and regrading maintains the hydraulic jump with an improvement in conveyance resulting in the lowering of the Q100 water surface elevation upstream of the bridge. The proposed Q100 water surface elevation modeled in HEC-RAS is approximately 1 foot lower than for the existing conditions near the upstream face. The decrease is about 0.5 feet lower than existing at the cross-section 530 feet further upstream where the HEC-RAS model ends. However, due to the extensive floodplain between the North Branch and the South Branch (#08-0008) bridges, there will be flow leaving the system and not going under the North Branch Bridge. As stated in the original FHR, for the purpose of this study all flow was assumed to go toward the North Branch Bridge. For this reason the drop in water surface elevation cannot be precisely computed.

Downstream of the bridge the Q100 water surface elevation for the proposed new bridge will be increased by about 0.5 feet over the existing conditions at the downstream face tapering down to return to existing conditions approximately 150 feet further downstream. The area downstream of the bridge is already a floodplain that receives the discharge from the South Branch Bridge after it flows over Fox St. into the North Branch.

Summary Information

Below is a summary of the updated velocity and water surface elevations based on the final grading plan:

Minimum Soffit Elevation	245.8
Average Velocity	varies

HYDROLOGIC AND HYDRAULIC SUMMARY		
	Design Flood	Base Flood
Frequency	50-year	100-year
Discharge	2000 cfs	3000 cfs
Water Surface Elevation at Bridge	242.8 ft	245 ft
Flood plain data are based upon information available when the plans were prepared and are shown to meet federal requirements. The accuracy of said information is not warranted by the State and interested or affected parties should make their own investigation.		

ALL CALCULATED ELEVATIONS IN THIS REPORT ARE BASED ON THE VERTICAL DATUM NAVD88.

NBNF Mill Creek
Br. No. 08-0166
02-Teh-99-PM14.05
EA 02-2C1121

This report has been prepared under my direction as the professional engineer in responsible charge of the work, in accordance with the provisions of the Professional Engineers Act of the State of California.

REGISTERED CIVIL ENGINEER (SIGNATURE)

REGISTRATION NUMBER C 48483 DATE: June 30, 2012

Only the highlighted text applies to this project.

U S Army Corps of Engineers
Sacramento District

Nationwide Permit Summary

33 CFR Part 330; Issuance of Nationwide Permits – March 19, 2007 includes corrections of May 8, 2007 and addition of regional conditions December 2007

3. Maintenance.

(a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable, structure, or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This NWP authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

~~(b) This NWP also authorizes the removal of accumulated sediments and debris in the vicinity of and within existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) and the placement of new or additional riprap to protect the structure. The removal of sediment is limited to the minimum necessary to restore the waterway in the immediate vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend further than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an upland area unless otherwise specifically approved by the district engineer under separate authorization. The placement of riprap must be the minimum necessary to protect the structure or to ensure the safety of the structure. Any bank stabilization measures not directly associated with the structure will require a separate authorization from the district engineer.~~

~~(c) This NWP also authorizes temporary structures, fills, and work necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.~~

~~(d) This NWP does not authorize maintenance dredging for the primary purpose of navigation or beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.~~

~~**Notification**: For activities authorized by paragraph (b) of this NWP, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 27). Where maintenance dredging is proposed, the pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Sections 10 and 404)~~

Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act Section 404(f) exemption for maintenance.

A. Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

☐ ~~**1. Navigation.**~~

☐ ~~(a) No activity may cause more than a minimal adverse effect on navigation.~~

☐ ~~(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.~~

☐ ~~(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made~~

~~against the United States on account of any such removal or alteration.~~

☐ **2. Aquatic Life Movements**. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

☐ **3 Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

☐ **4. Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

☐ ~~**5. Shellfish Beds**. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.~~

☐ **6. Suitable Material**. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

☐ ~~**7. Water Supply Intakes**. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.~~

☐ ~~**8. Adverse Effects From Impoundments**. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.~~

☐ **9. Management of Water Flows**. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

☐ **10. Fills Within 100-Year Floodplains**. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

☐ **11. Equipment**. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

☐ **12. Soil Erosion and Sediment Controls**. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

☐ **13. Removal of Temporary Fills**. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

☐ **14. Proper Maintenance**. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

☐ ~~**15. Wild and Scenic Rivers**. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).~~

☐ **16. Tribal Rights**. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

☐ **17. Endangered Species**.

☐ (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

☐ (b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

☐ ~~(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have~~

"no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

☐ (d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

☐ (e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at http://www.fws.gov/ and http://www.noaa.gov/fisheries.html respectively.

☐ **18. Historic Properties**.

☐ (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

☐ (b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

☐ (c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

☐ (d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

☐ (e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

☐ **19. Designated Critical Resource Waters.** Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

☐ (a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and

50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

☐ (b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

☐ **20 Mitigation.** The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

☐ (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

☐ (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

☐ (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

☐ (d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

☐ (e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

☐ (f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

☐ (g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

☐ (h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

☐ **21. Water Quality.** Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

☐ **22. Coastal Zone Management.** In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

☐ **23. Regional and Case-By-Case Conditions.** The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

☐ **24. Use of Multiple Nationwide Permits.** The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit

of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3 acre.

☐ **25. Transfer of Nationwide Permit Verifications**. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____

(Transferee)

_____

(Date)

☐ **26. Compliance Certification**. Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

☐ (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;

☐ (b) A statement that any required mitigation was completed in accordance with the permit conditions; and

☐ (c) The signature of the permittee certifying the completion of the work and mitigation.

☐ **27. Pre-Construction Notification.**

☐ (a) **Timing**.. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

☐ (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

☐ (2) Forty-five calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

☐ (b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

☐ (1) Name, address and telephone numbers of the prospective permittee;

☐ (2) Location of the proposed project;

☐ (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

☐ (4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must

be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

☐ (5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

☐ (6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

☐ (7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

☐ (c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

☐ (d) Agency Coordination:

☐ (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

☐ (2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

☐ (3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

☐ (4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

☐ (5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

☐ (e) In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and

conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

☐ **(a) 28. Single and Complete Project.** The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

B. Regional Conditions:

I. Sacramento District (All States, except Colorado)

1. When pre-construction notification (PCN) is required, the prospective permittee shall notify the Sacramento District in accordance with General Condition 27 using either the South Pacific Division Preconstruction Notification (PCN) Checklist or a completed application form (ENG Form 4345). In addition, the PCN shall include:

a. A written statement explaining how the activity has been designed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States;

b. Drawings, including plan and cross-section views, clearly depicting the location, size and dimensions of the proposed activity. The drawings shall contain a title block, legend and scale, amount (in cubic yards) and size (in acreage) of fill in Corps jurisdiction, including both permanent and temporary fills/structures. The ordinary high water mark or, if tidal waters, the high tide line should be shown (in feet), based on National Geodetic Vertical Datum (NGVD) or other appropriate referenced elevation; and

c. Pre-project color photographs of the project site taken from designatedlocations documented on the plan drawing.

2. The permittee shall complete compensatory mitigation required by special conditions of the NWP verification before or concurrent with construction of the authorized activity, except when specifically determined to be impracticable by the Sacramento District. When project mitigation involves use of a mitigation bank or in-lieu fee program, payment shall be made before commencing construction.

3. The permittee shall record the NWP verification with the Registrar of Deeds or other appropriate official charged with the responsibility for maintaining records of title to or interest in real property against areas (1) designated to be preserved as part of mitigation for authorized impacts, including any associated covenants or restrictions, or (2) where structures such as boat ramps or docks, marinas, piers, and permanently moored vessels will be constructed in or adjacent to navigable waters (Section 10 and Section 404). The recordation shall also include a map showing the surveyed location of the authorized structure and any associated areas preserved to minimize or compensate for project impacts.

4. The permittee shall place wetlands, other aquatic areas, and any vegetative buffers preserved as part of mitigation for impacts into a separate "preserve" parcel prior to discharging dredged or fill material into waters of the United States, except where specifically determined to be impracticable by the Sacramento District. Permanent legal protection shall be established for all preserve parcels, following Sacramento District approval of the legal instrument.

5. The permittee shall allow Corps representatives to inspect the authorized activity and any mitigation areas at any time deemed necessary to determine compliance with the terms and conditions of the NWP verification. The permittee will be notified in advance of an inspection.

6. For NWPs 29, 39, 40, 42, 43, 44, and 46, requests to waive the 300 linear foot limitation for intermittent or ephemeral waters of the U.S. shall include an evaluation of functions and services provided by the waterbody taking into account the watershed, measures to be implemented to avoid and minimize impacts, other measures to avoid and minimize that were found to be impracticable, and a mitigation plan for offsetting impacts.

7. Road crossings shall be designed to ensure fish passage, especially for anadromous fisheries. Permittees shall employ bridge designs that span the stream or river, utilize pier or pile supported structures, or involve large bottomless culverts with a natural streambed, where the substrate and streamflow

conditions approximate existing channel conditions. Approach fills in waters of the United States below the ordinary high water mark are not authorized under the NWPs, except where avoidance has specifically been determined to be impracticable by the Sacramento District.

8. For NWP 12, clay blocks, bentonite, or other suitable material shall be used to seal the trench to prevent the utility line from draining waters of the United States, including wetlands.

9. For NWP 13, bank stabilization shall include the use of vegetation or other biotechnical design to the maximum extent practicable. Activities involving hard-armoring of the bank toe or slope requires submission of a PCN per General Condition 27.

10. For NWP 23, the PCN shall include a copy of the signed Categorical Exclusion document and final agency determinations regarding compliance with Section 7 of the Endangered Species Act, Essential Fish Habitat under the Magnussen-Stevens Act, and Section 106 of the National Historic Preservation Act.

11. For NWP 44, the discharge shall not cause the loss of more than 300 linear feet of streambed. For intermittent and ephemeral streams, the 300 linear foot limit may be waived in writing by the Sacramento District. This NWP does not authorize discharges in waters of the United States supporting anadromous fisheries.

12. For NWPs 29 and 39, channelization or relocation of intermittent or perennial drainage, is not authorized, except when, as determined by the Sacramento District, the relocation would result in a net increase in functions of the aquatic ecosystem within the watershed.

13. For NWP 33, temporary fills for construction access in waters of the United States supporting fisheries shall be accomplished with clean, washed spawning quality gravels where practicable as determined by the Sacramento District, in consultation with appropriate federal and state wildlife agencies.

14. For NWP 46, the discharge shall not cause the loss of greater than 0.5 acres of waters of the United States or the loss of more than 300 linear feet of ditch, unless this 300 foot linear foot limit is waived in writing by the Sacramento District.

15. For NWPs 29, 39, 40, 42, and 43, upland vegetated buffers shall be established and maintained in perpetuity, to the maximum extent practicable, next to all preserved open waters, streams and wetlands including created, restored, enhanced or preserved waters of the U.S., consistent with General Condition 20. Except in unusual circumstances, vegetated buffers shall be at least 50 feet in width.

16. All NWPs except 3, 6, 20, 27, 32, 38, and 47, are revoked for activities in histosols and fens and in wetlands contiguous with fens. Fens are defined as slope wetlands with a histic epipedon that are hydrologically supported by groundwater. Fens are normally saturated throughout the growing season, although they may not be during drought conditions. For NWPs 3, 6, 20, 27, 32, and 38, prospective permittees shall submit a PCN to the Sacramento District in accordance with General Condition 27.

17. For all NWPs, when activities are proposed within 100 feet of the point of groundwater discharge of a natural spring, prospective permittees shall submit a PCN to the Sacramento District in accordance with General Condition 27. A spring source is defined as any location where ground water emanates from a point in the ground. For purposes of this condition, springs do not include seeps or other discharges which lack a defined channel.

II. California Only

1. In the Lake Tahoe Basin, all NWPs are revoked. Activities in this area shall be authorized under Regional General Permit 16 or through an individual permit.

2. In the Primary and Secondary Zones of the Legal Delta, NWPs 29 and 39 are revoked. New development activities in the Legal Delta will be reviewed through the Corps' standard permit process.

III. Nevada Only

1. In the Lake Tahoe Basin, all NWPs are revoked. Activities in this area shall be authorized under Regional General Permit 16 or through an individual permit.

IV. Utah Only

1. For all NWPs, except NWP 47, prospective permittees shall submit a PCN in accordance with General Condition 27 for any activity, in waters of the United States, below 4217 feet mean sea level (msl) adjacent to the Great Salt Lake and below 4500 feet msl adjacent to Utah Lake.

2. A PCN is required for all bank stabilization activities in a perennial stream that would affect more than 100 linear feet of stream

3. For NWP 27, facilities for controlling stormwater runoff, construction of water parks such as kayak courses, and use of grout or concrete to construct in-stream structures are not authorized. A PCN is required for all projects exceeding 1500 linear feet as measured on the stream thalweg, using in stream structures exceeding 50 cubic yards per structure and/or incorporating grade control structures exceeding 1 foot vertical drop. For any stream restoration project, the post project stream sinuosity shall be appropriate to the geomorphology of the surrounding area and shall be equal to, or greater than, pre project sinuosity. Sinuosity is defined as the ratio of stream length to project reach length. Structures shall allow the passage of aquatic organisms, recreational water craft or other navigational activities unless specifically waived in writing by the District Engineer.

V. Colorado Only

1. Final Regional Conditions Applicable to Specific Nationwide Permits within Colorado.

   a. Nationwide Permit Nos. 12 and 14, Utility Line Activities and Linear Transportation Projects. In the Colorado River Basin, utility line and road activities crossing perennial water or special aquatic sites require notification to the District Engineer in accordance with General Condition 27 (Pre-Construction Notification).

   b. Nationwide Permit No. 13 Bank Stabilization. In Colorado, bank stabilization activities necessary for erosion prevention in streams that average less than 20 feet in width (measured between the ordinary high water marks) are limited to the placement of no more than 1/4

cubic yard of suitable fill* material per running foot below the plane of the ordinary high water mark. Activities greater than 1/4 cubic yard may be authorized if the permittee notifies the District Engineer in accordance with General Condition 27 (Pre-Construction Notification) and the Corps determines the adverse environmental effects are minimal. [* See (g) for definition of Suitable Fill]

c. Nationwide Permit No. 27 Aquatic Habitat Restoration, Establishment, and Enhancement Activities.

(1) For activities that include a fishery enhancement component, the Corps will send the Pre-Construction Notification to the Colorado Division of Wildlife (CDOW) for review. In accordance with General Condition 27 (Pre-Construction Notification), CDOW will have 10 days from the receipt of Corps notification to indicate that they will be commenting on the proposed project. CDOW will then have an additional 15 days after the initial 10-day period to provide those comments. If CDOW raises concerns, the applicant may either modify their plan, in coordination with CDOW, or apply for a standard individual permit.

(2) For activities involving the length of a stream, the post-project stream sinuosity will not be significantly reduced, unless it is demonstrated that the reduction in sinuosity is consistent with the natural morphological evolution of the stream (sinuosity is the ratio of stream length to project reach length).

(3) Structures will allow the upstream and downstream passage of aquatic organisms, including fish native to the reach, as well as recreational water craft or other navigational activities, unless specifically waived in writing by the District Engineer. The use of grout and/or concrete in building structures is not authorized by this nationwide permit.

(4) The construction of water parks (i.e., kayak courses) and flood control projects are not authorized by this nationwide permit.

d. Nationwide Permits Nos. 29 and 39; Residential Developments and Commercial and Institutional Developments. A copy of the existing FEMA/locally-approved floodplain map must be submitted with the Pre-Construction Notification. When reviewing proposed developments, the Corps will utilize the most accurate and reliable FEMA/locally-approved pre-project floodplain mapping, not post-project floodplain mapping based on a CLOMR or LOMR. However, the Corps will accept revisions to existing floodplain mapping if the revisions resolve inaccuracies in the original floodplain mapping and if the revisions accurately reflect pre-project conditions.

2. Final Regional Conditions Applicable to All Nationwide Permits within Colorado

e. Removal of Temporary Fills. General Condition 13 (Removal of Temporary Fills) is amended by adding the following: When temporary fills are placed in wetlands in Colorado, a horizontal marker (i.e. fabric, certified weed-free straw, etc.) must be used to delineate the existing ground elevation of wetlands that will be temporarily filled during construction.

f. Spawning Areas. General Condition 3 (Spawning Areas) is amended by adding the following: In Colorado, all Designated Critical Resource Waters (see enclosure 1) are considered important spawning areas. Therefore, In accordance with General Condition 19 (Designated Critical Resource Waters), the discharge of dredged or fill material in not authorized by the following nationwide permits in these waters: NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50. In addition, in accordance with General Condition 27 (Pre-Construction Notification), notification to the District Engineer is required for use of the following nationwide permits in these waters: NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37 and 38".

g. Suitable Fill. In Colorado, use of broken concrete as fill material requires notification to the District Engineer in accordance with General Condition 27 (Pre-Construction Notification). Permittees must demonstrate that soft engineering methods utilizing native or non-manmade materials are not practicable (with respect to cost, existing technology, and logistics), before broken concrete is allowed as suitable fill. Use of broken concrete with exposed rebar is prohibited in perennial waters and special aquatic sites.

h. Invasive Aquatic Species. General Condition 11 is amended by adding the following condition for work in perennial or intermittent waters of the United States: If heavy equipment is used for the subject project that was previously working in another stream, river, lake, pond, or wetland within 10 days of initiating work, one the following procedures is necessary to prevent the spread of New Zealand Mud Snails and other aquatic hitchhikers:

(1) Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and keep the equipment dry for 10 days. OR

(2) Remove all mud and debris from Equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with either a 1:1 solution of Formula 409 Household Cleaner and water, or a solution of Sparquat 256 (5 ounces Sparquat per gallon of water). Treated equipment must be kept moist for at least 10 minutes. OR

(3) Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with water greater than 120 degrees F for at least 10 minutes.

3. Final Regional Conditions for Revocation/Special Notification Specific to Certain Geographic Areas

i. Fens: All Nationwide permits, except permit Nos. 3, 6, 20, 27, 32, 38 and 47, are revoked in fens and wetlands adjacent to fens. Use of nationwide permit Nos. 3, 20, 27 and 38, requires notification to the District Engineer, in accordance with General Condition 27 (Pre-Construction

~~Notification), and the permittee may not begin the activity until the Corps determines the adverse environmental effects are minimal. The following defines a fen:~~

> ~~Fen soils (histosols) are normally saturated throughout the growing season, although they may not be during drought conditions. The primary source of hydrology for fens is groundwater. Histosols are defined in accordance with the U.S. Department of Agriculture, Natural Resources Conservation Service publications on Keys to Soil Taxonomy and Field Indicators of Hydric Soils in the United States (http://soils.usda.gov/technical/classification/taxonomy).~~

~~j. Springs: Within the state of Colorado, all NWPs, except permit 47 (original 'C'), require preconstruction notification pursuant to General Condition 27 for discharges of dredged or fill material within 100 feet of the point of groundwater discharge of natural springs. A spring source is defined as any location where groundwater emanates from a point in the ground. For purposes of this regional condition, springs do not include seeps or other discharges which do not have a defined channel.~~

~~4. Additional Information~~

~~The following provides additional information regarding minimization of impacts and compliance with existing general Conditions:~~

~~a. Permittees are reminded of the existing General Condition No. 6 which prohibits the use of unsuitable material. Organic debris, building waste, asphalt, car bodies, and trash are not suitable material. Also, General Condition 12 requires appropriate erosion and sediment controls (i.e. all fills must be permanently stabilized to prevent erosion and siltation into waters and wetlands at the earliest practicable date). Streambed material or other small aggregate material placed along a bank as stabilization will not meet General Condition 12. Also, use of erosion control mates that contain plastic netting may not meet General Condition 12 if deemed harmful to wildlife.~~

~~b. Designated Critical Resource Waters in Colorado. In Colorado, a list of designated Critical Resource Waters has been published in accordance with General Condition 19 (Designated Critical Resource Waters). This list will be published on the Albuquerque District Regulatory home page (http://www.spa.usace.army.mil/reg/)~~

~~c. Federally-Listed Threatened and Endangered Species. General condition 17 requires that nod-federal permittees notify the District Engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project. Information on such species, to include occurrence by county in Colorado, may be found at the following U.S. Fish and Wildlife Service website: http://www.fws.gov/mountain%2Dprairie/endspp/name_county_search.htm~~

.C. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project.

D. Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration, establishment (creation), enhancement, or preservation of aquatic resources for the purpose of compensating for unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Discharge: The term "discharge" means any discharge of dredged or fill material.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the

project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of waters of the United States.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at 33 CFR 328.3(b). Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas (see 33 CFR 328.3(e)).

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects waterbodies with their adjacent uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 20.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete project: The term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or

partnership or other association of owners/developers. A single and complete project must have independent utility (see definition). For linear projects, a "single and complete project" is all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a wetland (i.e., water of the United States) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line, which is defined at 33 CFR 328.3(d).

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a jurisdictional water of the United States that, during a year with normal patterns of precipitation, has water flowing or standing above ground to the extent that an ordinary high water mark (OHWM) or other indicators of jurisdiction can be determined, as well as any wetland area (see 33 CFR 328.3(b)). If a jurisdictional wetland is adjacent--meaning bordering, contiguous, or neighboring--to a jurisdictional waterbody displaying an OHWM or other indicators of jurisdiction, that waterbody and its adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of "waterbodies" include streams, rivers, lakes, ponds, and wetlands.

CALIFORNIA ENVIRONMENTAL QUALITY ACT
NOTICE OF EXEMPTION

To: Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, California 95814

Date: February 7, 2012

From: California Department of Fish and Game
Northern Region
601 Locust Street
Redding, California 96001

Project Title: Issuance of Streambed Alteration Agreement No. **1600-2011-0272-R1**, North Branch, North Fork, Mill Creek Bridge Replacement Project.

Project Location (Specific): Approximately 0.85 mile upstream from the confluence with the Sacramento River, Latitude 40.053064° North, Longitude 122.100729° West.

Project Location (City and County): Work will take place at the State Route 99 Bridge over the North Branch, North Fork, Mill Creek, approximately 2.2 miles north of the community of Los Molinos, Tehama County.

Description of Project: See Attached Agreement.

Name of Public Agency Approving Project: California Department of Fish and Game.

Name of Agency Carrying Out Project: California Department of Transportation.

Exempt Status (Class and Guidelines Section): **Categorical Exemption: Class 2, Section 15302** – Replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced.

Reasons Why Project is Exempt: The project proposes to replace the existing SR 99 bridge with a new single span structure. There will be no removal of healthy, mature, scenic trees as a result of this project. The project will have no significant effect on the environment.

Lead Agency Contact Person: Craig Martz **Phone**: (530) 225-2281

Signature: Donna L. Cobb **Date**: 02/07/12
Title: for Habitat Conservation Program Manager
[X] Signed by Lead Agency **Date received for filing at OPR**:
[ ] Signed by Applicant

CALIFORNIA DEPARTMENT OF FISH AND GAME
NORTHERN REGION
601 LOCUST STREET
REDDING, CA 96001

STREAMBED ALTERATION AGREEMENT
NOTIFICATION NO. 1600-2011-0272-R1
North Branch North Fork Mill Creek

CALIFORNIA DEPARTMENT OF TRANSPORTATION
NORTH BRANCH NORTH FORK MILL CREEK BRIDGE REPLACEMENT

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Game (DFG) and the California Department of Transportation (Permittee) as represented by Mr. Steve Rogers.

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified DFG on October 13, 2011 that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1603, DFG 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 located at the Highway 99 crossing of the North Branch, North Fork Mill Creek, tributary to the Sacramento River, in the County of Tehama, State of California; Latitude 40.053064° North, Longitude 122.100729° West.

PROJECT DESCRIPTION

The project is limited to the replacement of the Highway 99 bridge (Bridge No. 08-0009) at the crossing of the North Branch, North Fork of Mill Creek (Post 14.05), located north of the community of Los Molinos in Tehama County. The existing bridge is 40 feet long and 42 feet wide, and is supported by a center pier in the active channel of the creek. The new bridge will be 65 feet long and 45 feet wide, and will span the entire channel.

Specific construction activities include:

- Replacing the existing bridge with a new, single span structure using half-width construction methods to maintain a single lane of traffic during construction,
- Establishing equipment and material staging areas,
- Removing vegetation from the work area beneath and immediately adjacent to the existing bridge,
- Constructing a clear water diversion and clean, washed gravel work pad beneath the existing bridge,
- Installing temporary traffic signals at each end of the bridge and placing a concrete barrier down the center line of the bridge to create a single traffic lane,
- Constructing temporary falsework to support the existing bridge deck while half of the bridge deck and supporting pier and footings are removed,
- Constructing new abutments founded on six, 2-foot diameter cast in steel shell (CISS) piles (three piles per lane) driven to suitable bearing depths,
- Attaching one half of a pre-cast concrete abutment to the top of the piles and setting pre-cast box girders in place to support a 5-inch concrete slab bridge deck,
- Repeating the demolition and construction process on the second half of the bridge and then joining the two halves of the structure with a final concrete pour to create a smooth bridge deck, and lastly
- Removing the temporary clear water diversion and any excess gravel from the creek bed and restoring the channel and banks as close as possible to their original condition.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: beaver (*Castor canadensis*), nesting resident and migratory birds such as spotted towhee (*Pipilo maculatus*), ash-throated flycatcher (*Myiarchus cinerascens*) and black phoebe (*Sayornis nigricans*), as well as other aquatic and riparian species.

The adverse effects the project could have on the fish or wildlife resources identified above include: direct mortality of nesting birds through vegetation removal and construction disturbance, as well as injury to fish and benthic invertebrates through sediment transport and deposition, chemical pollution, and/or physical disturbance of the stream channel and adjacent riparian habitat

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1 Administrative Measures

Permittee shall meet each administrative requirement described below.

1.1 Documentation at Project Site. Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification

materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to DFG personnel, or personnel from another state, federal, or local agency upon request.

1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement 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.

1.3 Notification of Conflicting Provisions. Permittee shall notify DFG 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, DFG shall contact Permittee to resolve any conflict.

1.4 Project Site Entry. Permittee agrees that DFG personnel may enter the project site at any time to verify compliance with the Agreement.

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.

PROJECT TIMING

2.1 All work within the stream channel shall be confined to the period commencing June 15 and ending October 15, of any year in which this Agreement is valid. Work on the stream banks may occur between April 15 and November 1 provided the banks are dry. If weather conditions permit, Permittee may perform work on the stream banks after November 1 provided a written request is made to the Department at least 5 days before the proposed work period variance. Written approval from the Department for the work period variance must be received by the Permittee prior to the start or continuation of work after November 1.

2.2 If work is performed on the stream banks after November 1, the Permittee shall do all of the following:

a. Stage erosion and sediment control materials at the work site.

b. Monitor the seventy-two (72) hour forecast from the National Weather Service.

c. When the 72-hour forecast indicates a probability of precipitation of 60% or greater, or at the onset of any precipitation, ground disturbing activities shall cease and erosion control measures shall be implemented to stabilize exposed soils and

prevent the mobilization of sediment into the stream channel or adjacent wetland or riparian areas.

HABITAT AND SPECIES PROTECTION

2.3 This Agreement does not authorize the take of any State threatened or endangered species. If the project could result in the "take" of a state listed threatened or endangered species, the Permittee has the responsibility to obtain from the Department, a California Endangered Species Act Permit (CESA 2081 Permit). The Department may formulate a management plan that will avoid or mitigate take. If appropriate, contact the Department CESA coordinator at (530) 225-2300.

2.4 Prior to initiating vegetation- or ground-disturbing Project activities, Permittee shall clearly delineate the limits of the work area. Permittee shall restrict all Project activities to the designated work area and shall maintain all fencing, stakes and flags until the completion of Project activities.

2.5 All riparian vegetation and elderberry shrubs located adjacent to the work area shall be protected as Environmentally Sensitive Areas (ESAs) and shall be off limits to construction equipment and personnel.

2.6 ESA fencing shall be installed as the first order of work. The placement of ESA fencing shall be inspected and approved by DFG prior to the initiation of work. Permittee shall provide written notification for inspection a minimum of 5 working days prior to beginning work. If DFG is unable to conduct a site inspection during this period, the inspection may be conducted by the Environmental Construction Liaison and the results forwarded to DFG for approval.

2.7 ESA fencing shall consist of temporary orange construction fence or other highly visible material that clearly delineates the limits of the work area. Environmentally Sensitive Areas shall be clearly shown on the Project plans and drawings. The Permittee shall ensure that the contractor, subcontractors, and all personnel working on the Project are instructed on the purpose of the ESA fencing and understand the limits of the work area.

2.8 Removal of existing vegetation shall not exceed the minimum necessary to complete operations. Whenever possible, riparian trees or shrubs shall be trimmed or topped to provide construction access, leaving root systems intact.

2.9 Removal/trimming of woody riparian vegetation shall take place between September 1 and February 15 to avoid impacts to nesting birds.

2.10 To avoid impacts to nesting swallows, Permittee shall implement one of the following strategies:

- Removal of bridge deck shall take place between September 1 and February 15, or

- Existing swallow nests shall be removed prior to February 15 and swallows shall be excluded from nesting on the bridge between February 15 and September 1, or

- Existing swallow nests shall be removed prior to February 15 and new nest materials shall be removed at regular intervals to prevent nest completion between February 15 and September 1.

2.11 In no case shall completed nests with eggs or young be removed from the existing structure.

2.12 If water is drafted from a fish-bearing stream, water drafting operations shall conform to the NOAA Fisheries *Water Drafting Specifications* dated August 2001.

CONSTRUCTION DEWATERING AND TEMPORARY STRUCTURES

2.13 All work within the channel or on the banks shall be performed when the stream is at low flow. If water is present during construction, all work shall be performed in isolation from surface or subsurface flow.

2.14 If surface flow is present, a temporary stream diversion shall be constructed to isolate the work area from flow. Temporary diversions may be constructed using gravel berms, clean washed spawning gravels, sand bags, K-rail, plastic sheeting, or a combination of these materials upstream from the work area. Flows will then be diverted into a temporary culvert, pipe, or conduit and released downstream from the work area.

2.15 The clear water diversion shall be adequately sized to accommodate the full range of flows that may occur during the diversion period without overtopping into the work area.

2.16 Dewatering shall be done in a manner that prevents the discharge of material that could be deleterious to fish, plants or other aquatic life and maintains adequate flows to downstream reaches during all times natural flow would have supported aquatic life.

2.17 If subsurface flow is present, any turbid water pumped from the work area shall be used for construction purposes (compaction, dust abatement, etc.) or properly disposed of in an upland area where it will not drain to surface waters or wetlands.

2.18 A temporary culvert and gravel work pad may be installed beneath the existing structure to facilitate construction activities. The gravel work pad shall consist of clean, pre-washed, uncrushed natural river rock. Gravel must be washed at least once and have a cleanliness value of 85 or higher (California Test No. 227).

Particle size shall be graded with 95-100% passing a 4- or 5-inch screen, 75-85% passing a 2-inch screen, 40-50% passing a 1-inch screen, 25-35% passing a ¾-inch screen, 10-20% passing a ½-inch screen, and 0-5% passing a ¼-inch screen (% by dry weight) or approved by DFG. Gravel must be completely free of oils or any other petroleum based material, clay, debris, and other types of organic matter. Gravel may be stockpiled on site, but mixing with any earthen material is prohibited.

2.19 Clean, washed gravel used for the temporary work pad may be left in the channel following construction provided it is spread to a depth less than 6 inches and does not impede the movement of fish or other aquatic organisms, or redirect stream flows.

2.20 All other temporary structures and construction materials shall be removed from the stream channel prior to November 1.

2.21 RSP and energy dissipation materials shall consist of clean rock, competent for the application, sized and properly installed to resist washout. RSP slopes shall be supported with competent boulders keyed into a footing trench with a depth sufficient to properly seat the footing course boulders and prevent instability (typically at least 1/3 diameter of footing course boulders). Excavation spoils shall not be side-cast into the channel nor is any manipulation of the substrate of the channel authorized except as herein expressly provided.

PETROLEUM, CHEMICAL AND OTHER POLLUTANTS

2.22 All construction-related materials and equipment shall be stored in designated staging areas outside of the floodplain.

2.23 Refueling and vehicle maintenance shall be performed at least 100 feet from streams or other water bodies unless approved in writing by DFG.

2.24 No equipment or machinery shall be operated within any flowing stream.

2.25 Stationary equipment such as motors, pumps, generators, and welders that contain deleterious materials, located adjacent to the stream channel shall be positioned over drip pans.

2.26 Water that has been in contact with uncured concrete shall be contained in a concrete washout facility, Baker tank, or other impervious container and shall not be discharged to surface or ground waters.

2.27 All construction activities performed in or near the stream shall have absorbent materials designated for spill containment and clean up activities on-site for use in an accidental spill. In the event of a discharge, the Permittee shall immediately notify the California Emergency Management Agency at 1-800-852-7550 and

immediately initiate clean up activities. DFG shall be notified by the Permittee and consulted regarding clean-up procedures

2.28 No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, asphalt, paint or other coating material, oil or petroleum products or other organic or earthen material from any construction, or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into, waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream or lake.

EROSION AND SEDIMENT CONTROL

2.29 The project shall at all time feature adequate erosion and sediment control devices to prevent the degradation of water quality.

2.30 Soils exposed by project operations shall be treated to prevent sediment runoff and transport. Erosion control measures shall include the proper installation and maintenance of approved Best Management Practices (BMPs) and may include applications of seed, certified weed-free straw, compost, fiber, commercial fertilizer, stabilizing emulsion and mulch, or combinations thereof.

2.31 Permittee shall use only certified weed-free erosion control materials to prevent the spread of invasive plant species.

2.32 Soils adjacent to the stream channel that are exposed by project operations shall be adequately stabilized when rainfall is reasonably expected during construction, and immediately upon completion of construction, to prevent the mobilization of such sediment into the stream channel or adjacent riparian areas. National Weather Service forecasts shall be monitored by the Permittee to determine the chance of precipitation.

2.33 Following construction, all disturbed upland areas shall be stabilized and reseeded with a regionally appropriate native seed mix.

2.34 Following construction, all removed riparian vegetation shall be replaced by replanting with native riparian species at a 3:1 planting ratio.

Item 2.33 and item 2.34 will be performed by Caltrans

CONTACT INFORMATION

Any communication that Permittee or DFG submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or DFG specifies by written notice to the other.

To Permittee:

Mr. Steve Rogers
Department of Transportation
Post Office Box 496073
Redding, CA 96049-6073
Fax: (530) 225-3019
Email: steve_rogers@dot.ca.gov

To DFG:

Department of Fish and Game
Northern Region
601 Locust Street
Redding, CA 96001
Attn: Lake and Streambed Alteration Program – Craig Martz
Notification #1600-2011-0272-R1
Fax: (530) 225-2267
Email: cmartz@dfg.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 DFG'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

DFG 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 DFG suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before DFG 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 DFG to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes DFG 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 DFG'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

DFG may amend the Agreement at any time during its term if DFG 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 DFG and Permittee. To request an amendment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the

corresponding amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 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 DFG 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 DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 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 DFG a completed DFG "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). DFG shall process the extension request in accordance with FGC 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 (Fish & G. Code, § 1605, subd. (f)). .

EFFECTIVE DATE

The Agreement becomes effective on the date of DFG's signature, which shall be: 1) after Permittee's signature; 2) after DFG 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.

TERM

This Agreement shall expire on December 31, 2015, 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.

EXHIBITS

The document listed below is included as an exhibit to the Agreement and incorporated herein by reference.

A. Exhibit 1. *Natural Environment Study for the proposed North Branch North Fork Mill Creek Bridge Replacement Project*. Caltrans. January 27, 2011.

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 DFG in accordance with FGC section 1602.

CONCURRENCE

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

FOR DEPARTMENT OF TRANSPORTATION

2-1-12

Steve Rogers
Project Manager

Date

FOR DEPARTMENT OF FISH AND GAME

Donna L. Cobb

02/07/12

for Curt Babcock
Habitat Conservation Program Manager

Date

Prepared by: Craig Martz, Staff Environmental Scientist

California Regional Water Quality Control Board
Central Valley Region
Karl E. Longley, ScD, P.E.,Chair

415 Knollcrest Drive, Suite 100, Redding, California 96002
(530) 224-4845 • FAX (530) 224-4857
http://www.waterboards.ca.gov/centralvalley

Matthew Rodriquez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

22 February 2012

Mr. Andre' Benoist
Caltrans
1657 Riverside Drive, MS 30
Redding, CA 96001

CLEAN WATER ACT §401 TECHNICALLY CONDITIONED WATER QUALITY CERTIFICATION FOR DISCHARGE OF DREDGED AND/OR FILL MATERIALS FOR THE NORTH BRANCH, NORTH FORK, MILL CREEK BRIDGE REPLACEMENT PROJECT (WDID#5A52CR00116), LOS MOLINOS, TEHAMA COUNTY

ACTION:

1. ☐ Order for Standard Certification
2. ■ Order for Technically-conditioned Certification
3. ☐ Order for Denial of Certification

WATER QUALITY CERTIFICATION STANDARD CONDITIONS:

1. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to §13330 of the California Water Code and §3867 of Title 23 of the California Code of Regulations (23 CCR).

2. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

3. The validity of any non-denial certification action shall be conditioned upon total payment of the full fee required under 23 CCR §3833, unless otherwise stated in writing by the certifying agency.

4. Certification is valid for the duration of the described project. This certification is no longer valid if the project (as currently described) is modified, or coverage under Section 404 of the Clean Water Act has expired.

ADDITIONAL TECHNICALLY CONDITIONED CERTIFICATION CONDITIONS:

In addition to the four standard conditions, Caltrans shall satisfy the following:

1. Caltrans shall notify the Central Valley Regional Water Quality Control Board (Central Valley Water Board) in writing 7 days in advance of the start of any in-water activities.

2. Except for activities permitted by the U.S. Army Corps under §404 of the Clean Water Act, soil, silt, or other organic materials shall not be placed where such materials could pass into surface water or surface water drainage courses.

3. All areas disturbed by project activities shall be protected from washout or erosion.

4. Caltrans shall maintain a copy of this Certification and supporting documentation (Project Information Sheet) at the Project site during construction for review by site personnel and agencies. All personnel (employees, contractors, and subcontractors) performing work on the proposed project shall be adequately informed and trained regarding the conditions of this Certification.

5. An effective combination of erosion and sediment control Best Management Practices (BMPs) must be implemented and adequately working during all phases of construction.

6. All temporarily affected areas will be restored to pre-construction contours and conditions upon completion of construction activities.

7. Caltrans shall perform surface water sampling: 1) When performing any in-water work; 2) In the event that project activities result in any materials reaching surface waters or; 3) When any activities result in the creation of a visible plume in surface waters. The following monitoring shall be conducted immediately upstream out of the influence of the project and 300 feet downstream of the active work area. Sampling results shall be submitted to this office within two weeks of initiation of sampling and every two weeks thereafter. The sampling frequency may be modified for certain projects with written permission from the Central Valley Water Board.

Parameter	Unit	Type of Sample	Frequency of Sample
Turbidity	NTU	Grab	Every 4 hours during in water work
Settleable Material	ml/l	Grab	Same as above.
Visible construction related pollutants	Observations	Visible Inspections	Continuous throughout the construction period

8. Activities shall not cause turbidity increases in surface water to exceed:

   (a) where natural turbidity is less than 1 Nephelometric Turbidity Units (NTUs), controllable factors shall not cause downstream turbidity to exceed 2 NTU;
   (b) where natural turbidity is between 1 and 5 NTUs, increases shall not exceed 1 NTU;
   (c) where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent;
   (d) where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs;
   (e) where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.

   Except that these limits will be eased during in-water working periods to allow a turbidity increase of 15 NTU over background turbidity as measured in surface waters 300 feet downstream from the working area. In determining compliance with the above limits, appropriate averaging periods may be applied provided that beneficial uses will be fully protected. Averaging periods may only be assessed by prior permission of the Central Valley Water Board.

9. Activities shall not cause settleable matter to exceed 0.1 ml/l in surface waters as measured in surface waters 300 feet downstream from the project.

10. The discharge of petroleum products or other excavated materials to surface water is prohibited. Activities shall not cause visible oil, grease, or foam in the work area or downstream. Caltrans shall notify the Central Valley Water Board immediately of any spill of petroleum products or other organic or earthen materials.

11. Caltrans shall notify the Central Valley Water Board immediately if the above criteria for turbidity, settleable matter, oil/grease, or foam are exceeded.

12. Caltrans must comply with all requirements of U.S. Army Corps of Engineers Nationwide Permit Number 3 (Maintenance), and special conditions for the project.

13. Caltrans shall comply with all of the conditions of the California Department of Fish and Game Lake or Streambed Alteration Agreement for the project.

14. The California Department of Transportation shall comply with their General NPDES Permit Order No 99-06-DWQ (NPDES No. CAS 000003) issued by the State Water Resources Control Board.

15. The Conditions in this water quality certification are based on the information in the attached "Project Information." If the information in the attached Project Information is modified or the project changes, this water quality certification is no longer valid until amended by the Central Valley Water Board.

16. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process, or sanctions as provided for under State law and section 401 (d) of the federal Clean Water Act. The applicability of any State law authorizing remedies, penalties, process, or sanctions for the violation or threatened violation constitutes a limitation necessary to ensure compliance with this Order.

    a. If Caltrans or a duly authorized representative of the project fails or refuses to furnish technical or monitoring reports, as required under this Order, or falsifies any information provided in the monitoring reports, the applicant is subject to civil monetary liabilities, for each day of violation, or criminal liability.

    b. In response to a suspected violation of any condition of this Order, the Central Valley Water Board may require Caltrans to furnish, under penalty of perjury, any technical or monitoring reports the Central Valley Water Board deems appropriate, provided that the burden, including cost of the reports, shall be in reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

    c. Caltrans shall allow the staff of the Central Valley Water Board, or their authorized representative, to enter the project premises for inspection, including taking photographs and securing copies of project-related records, for the purpose of assuring compliance with this certification and determining the ecological success of the project.

17. Caltrans shall provide a Notice of Completion (NOC) no later than 30 days after the project completion. The NOC shall demonstrate that that the project has been carried out in accordance with the project's description (and any amendments approved). The NOC shall include a map of the project location and representative pre and post construction; photographs. Each photograph shall include a descriptive title, date taken, photographic site, and photographic orientation.

ADDITIONAL STORM WATER QUALITY CONDITIONS:

Caltrans shall also satisfy the following additional storm water quality conditions:

1. During the construction phase, Caltrans must employ strategies to minimize erosion and the introduction of pollutants into storm water runoff. These strategies must include the following: WPCP OK per Andre Benoist

    (a) the Storm Water Pollution Prevention Plan (SWPPP) must be prepared during the project planning and design phases and before construction;

    (b) an effective combination of erosion and sediment control Best Management Practices (BMPs) must be implemented and adequately working prior to the rainy season and during all phases of construction.

2. Caltrans must minimize the short and long-term impacts on receiving water quality from the Mill Creek Bridge Replacement Project by implementing the following post-construction storm water management practices:

   (a) minimize the amount of impervious surface;
   (b) reduce peak runoff flows;
   (c) provide treatment BMPs to reduce pollutants in runoff;
   (d) ensure existing waters of the State (e.g., wetlands, vernal pools, or creeks) are not used as pollutant source controls and/or treatment controls;
   (e) preserve and, where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones;
   (f) limit disturbances of natural water bodies and natural drainage systems caused by development (including development of roads, highways, and bridges);
   (g) use existing drainage master plans or studies to estimate increases in pollutant loads and flows resulting from projected future development and require incorporation of structural and non-structural BMPs to mitigate the projected pollutant load increases in surface water runoff;
   (h) identify and avoid development in areas that are particularly susceptible to erosion and sediment loss, or establish development guidance that protects areas from erosion/ sediment loss;
   (i) control post-development peak storm water run-off discharge rates and velocities to prevent or reduce downstream erosion, and to protect stream habitat.

3. Caltrans must ensure that all development within the project provides verification of maintenance provisions for post-construction structural and treatment control BMPs. Verification shall include one or more of the following, as applicable:

   (a) the developer's signed statement accepting responsibility for maintenance until the maintenance responsibility is legally transferred to another party; or
   (b) written conditions in the sales or lease agreement that require the recipient to assume responsibility for maintenance; or
   (c) written text in project conditions, covenants and restrictions for residential properties assigning maintenance responsibilities to a home owner's association, or other appropriate group, for maintenance of structural and treatment control BMPs; or
   (d) any other legally enforceable agreement that assigns responsibility for storm water BMP maintenance.

4. Staff of the Central Valley Water Board has prepared total maximum daily load (TMDL) allocations that, once approved, would limit methylmercury in storm water discharges to the Sacramento-San Joaquin Delta. The Central Valley Water Board has scheduled these proposed allocations to be considered for adoption. When the Central Valley Water Board adopts the TMDL and once approved by the Environmental Protection Agency, the discharge of methylmercury may be limited from the proposed project. The

purpose of this condition is to provide notice to Caltrans that methylmercury discharge limitations and monitoring requirements may apply to this project in the future and also to provide notice of the Central Valley Water Board's TMDL process and that elements of the planned construction may be subject to a TMDL allocation.

REGIONAL WATER QUALITY CONTROL BOARD CONTACT PERSON:

Scott A. Zaitz, R.E.H.S., Redding Branch Office, 415 Knollcrest Drive, Suite 100, Redding, California 96002, szaitz@waterboards.ca.gov, (530) 224-4784

WATER QUALITY CERTIFICATION:

I hereby issue an order certifying that any discharge from Caltrans, North Branch, North Fork Mill Creek Bridge Replacement Project (WDID# 5A52CR00116) will comply with the applicable provisions of §301 ("Effluent Limitations"), §302 ("Water Quality Related Effluent Limitations"), §303 ("Water Quality Standards and Implementation Plans"), §306 ("National Standards of Performance"), and §307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Resources Control Board Water Quality Order No. 2003-0017 DWQ "Statewide General Waste Discharge Requirements For Dredged Or Fill Discharges That Have Received State Water Quality Certification (General WDRs)."

Except insofar as may be modified by any preceding conditions, all certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with Caltrans's project description and the attached Project Information Sheet, and (b) compliance with all applicable requirements of the Water Quality Control Plan *for the Sacramento River and San Joaquin River*, Fourth Edition, revised September 2009.

(for) Pamela C. Creedon
Executive Officer

Enclosure: Project Information

SAZ: wrb/jmtm

cc: Mr. Matt Kelley, U.S. Army Corp of Engineers, Redding
U.S. Fish and Wildlife Service, Sacramento
Ms. Donna Cobb, Department of Fish and Game, Region 1, Redding
Mr. Bill Jennings, CALSPA, Stockton

cc by email: Mr. Dave Smith, U.S. EPA, Region 9, San Francisco
Mr. Bill Orme, SWRCB, Certification Unit, Sacramento

PROJECT INFORMATION

Application Date: 13 October 2011

Applicant: Caltrans, Attn: Mr. Andre' Benoist

Project Name: North Branch, North Fork Mill Creek Bridge Replacement Project

Application Number: WDID No. 5A52CR00116

Type of Project: Replacement of existing bridge over the north branch of the north fork of Mill Creek.

Project Location: Township 25 North, Range 2 West, MDB&M.
Latitude: 40°03'45.33" and Longitude: -122°14'15.32"

County: Tehama County

Receiving Water(s) (hydrologic unit): North Branch, North Fork of Mill Creek, which is tributary to Sacramento River. Tehama Hydrologic Unit-Red Bluff Hydrologic Area No. 504.20

Water Body Type: Wetlands, Streambed, Riparian

Designated Beneficial Uses: The Water Quality Control Plan *for the Sacramento River and San Joaquin River*, Fourth Edition, revised September 2009, has designated beneficial uses for surface and ground waters within the region. Beneficial uses that could be impacted by the project include: Municipal and Domestic Water Supply (MUN); Agricultural Supply (AGR); Industrial Supply (IND), Hydropower Generation (POW); Groundwater Recharge, Water Contact Recreation (REC-1); Non-Contact Water Recreation (REC-2); Warm Freshwater Habitat (WARM); Cold Freshwater Habitat (COLD); and Wildlife Habitat (WILD).

Project Description (purpose/goal): The North Branch, North Fork Mill Creek Bridge Replacement Project consists of removing the existing 2-lane bridge and replacing it with a new, longer, clear-span 2-lane bridge. The existing bridge is 40-feet long and 42-feet wide and is supported by a pier in the middle of the span. The pier is in the active stream channel of the creek. The new bridge will be 65-feet long and 45-feet wide, and will span the creek without the use of a pier.

A clear-water diversion will be constructed to convey any water that may be present through the construction area. The clear-water diversion will consist of drain pipe and clean, washed gravel. The drain pipe will be set at the low point of the channel and will be covered with a thick layer of clean, washed gravel. The gravel will protect the pipe from getting crushed by construction equipment and will also serve as a work-pad for construction activities. The work-pad will protect the creek from sedimentation caused by construction equipment, and it will prevent construction equipment from getting stuck in the creek.

A temporary support structure or scaffolding may be needed to support the remaining portion of the existing bridge deck, while the first half of the bridge is being removed. The temporary support structure would be set up at the existing pier location near the center line of the bridge and would be removed with demolition of the second half of the bridge.

After the first half of the bridge is removed, temporary sheet piles would be driven next to the centerline of the road to support the lane used for traffic. Minor excavation would take place behind each existing abutment, to prepare the site for the new piles and abutments. The abutments would be constructed one-half at a time, similar to the bridge deck. Each half of the abutment would require 3 piles. The piles are 2-foot-diameter, hollow steel cases that would be set approximately 36 feet deep, 10-feet behind the existing abutments. Driving the piles would take between 1 and 3 days to complete, per abutment. After the piles are set to the correct depth, the soil would be augured out so concrete can be poured inside. After the concrete has cured, one-half of a precast abutment would be attached to the top of the piles.

When the abutments are finished, a crane would set the precast box girders into place. Then a five-inch concrete slab would be placed on top of the pre-cast box girders. After the slab is installed, a traffic barrier would be formed and placed on top of the new edge-of-deck along with metal beam guard rail. At the end of the project, the temporary culverts and any excess gravel and cobble would be removed from the creek. A thin layer of gravel and cobbles will remain in the creek bottom to be spread out and make a smooth transition into the rest of the creek bed upstream and downstream of the bridge. The temporary access road would be removed and the shape of the creek bank would be restored as close as possible to its original condition. All disturbed areas will be reseeded by the contractor with appropriate vegetation.

Preliminary Water Quality Concerns: Construction activities may impact surface waters with increased turbidity and settleable matter.

Proposed Mitigation to Address Concerns: Caltrans will implement Best Management Practices (BMPs) to control sedimentation and erosion. All temporary affected areas will be restored to pre-construction contours and conditions upon completion of construction activities. Caltrans will conduct turbidity and settleable matter testing during in-water work, stopping work if Basin Plan criteria are exceeded or are observed.

Fill/Excavation Area: Project implementation will permanently impact 0.005 acres of riparian, 0.001 of jurisdictional wetland, and 0.02 acres of un-vegetated streambed and temporarily impact 0.08 acres of riparian, 0.05 of jurisdictional wetland, and 0.07 acres of un-vegetated streambed.

Dredge Volume: Not Applicable

Possible Listed Species: None

U.S. Army Corps of Engineers Permit Number: Nationwide Permit #3

California Department of Fish and Game Lake and Streambed Alteration Agreement: Caltrans applied for a Streambed Alteration Agreement in October 2011 (Lake & Streambed Alteration Agreement Number: 1600-2011-0272-R1).

Status of CEQA Compliance: The California Department of Transportation signed a Notice of Exemption on 28 January 2011 approving a Categorical Exemption pursuant Class 2, §15302 which states exemption for activities resulting in replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will not have substantially the same purpose and capacity as the structure replaced.

Compensatory Mitigation: The applicant must comply with the U.S. Army Corps of Engineers' requirements for compensatory mitigation for the impacts to jurisdictional waters if required.

Application Fee Provided: On 13 October 2011 a certification application fee of $1,920.00 was submitted as required by 23 CCR §3833b(3)(A) and by 23 CCR §2200(e). A remaining certification fee of $2,528 was received on 17 February 2012 as required by 23 CCR §3833b(2)(A) and by 23 CCR § 2200(e).

STATE WATER RESOURCES CONTROL BOARD

WATER QUALITY ORDER NO. 2003 - 0017 - DWQ

STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR DREDGED OR FILL DISCHARGES THAT HAVE RECEIVED STATE WATER QUALITY CERTIFICATION (GENERAL WDRs)

The State Water Resources Control Board (SWRCB) finds that:

1. Discharges eligible for coverage under these General WDRs are discharges of dredged or fill material that have received State Water Quality Certification (Certification) pursuant to federal Clean Water Act (CWA) section 401.

2. Discharges of dredged or fill material are commonly associated with port development, stream channelization, utility crossing land development, transportation water resource, and flood control projects. Other activities, such as land clearing, may also involve discharges of dredged or fill materials (e.g., soil) into waters of the United States.

3. CWA section 404 establishes a permit program under which the U.S. Army Corps of Engineers (ACOE) regulates the discharge of dredged or fill material into waters of the United States.

4. CWA section 401 requires every applicant for a federal permit or license for an activity that may result in a discharge of pollutants to a water of the United States (including permits under section 404) to obtain Certification that the proposed activity will comply with State water quality standards. In California, Certifications are issued by the Regional Water Quality Control Boards (RWQCB) or for multi-Region discharges, the SWRCB, in accordance with the requirements of California Code of Regulations (CCR) section 3830 et seq. The SWRCB's water quality regulations do not authorize the SWRCB or RWQCBs to waive certification, and therefore, these General WDRs do not apply to any discharge authorized by federal license or permit that was issued based on a determination by the issuing agency that certification has been waived. Certifications are issued by the RWQCB or SWRCB before the ACOE may issue CWA section 404 permits. Any conditions set forth in a Certification become conditions of the federal permit or license if and when it is ultimately issued.

5. Article 4, of Chapter 4 of Division 7 of the California Water Code (CWC), commencing with section 13260(a), requires that any person discharging or proposing to discharge waste, other than to a community sewer system, that could affect the quality of the waters of the State,[1] file a report of waste discharge (ROWD). Pursuant to Article 4, the RWQCBs are required to prescribe waste discharge requirements (WDRs) for any proposed or existing discharge unless WDRs are waived pursuant to CWC section 13269. These General WDRs fulfill the requirements of Article 4 for proposed dredge or fill discharges to waters of the United States that are regulated under the State's CWA section 401 authority.

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[1] "Waters of the State" as defined in CWC Section 13050(e)

6. These General WDRs require compliance with all conditions of Certification orders to ensure that water quality standards are met.

7. The U.S. Supreme Court decision of *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) (the *SWANCC* decision) called into question the extent to which certain "isolated" waters are subject to federal jurisdiction. The SWRCB believes that a Certification is a valid and enforceable order of the SWRCB or RWQCBs irrespective of whether the water body in question is subsequently determined not to be federally jurisdictional. Nonetheless, it is the intent of the SWRCB that all Certification conditions be incorporated into these General WDRs and enforceable hereunder even if the federal permit is subsequently deemed invalid because the water is not deemed subject to federal jurisdiction.

8. The beneficial uses for the waters of the State include, but are not limited to, domestic and municipal supply, agricultural and industrial supply, power generation, recreation, aesthetic enjoyment, navigation, and preservation and enhancement of fish, wildlife, and other aquatic resources.

9. Projects covered by these General WDRs shall be assessed a fee pursuant to Title 23, CCR section 3833.

10. These General WDRs are exempt from the California Environmental Quality Act (CEQA) because (a) they are not a "project" within the meaning of CEQA, since a "project" results in a direct or indirect physical change in the environment (Title 14, CCR section 15378); and (b) the term "project" does not mean each separate governmental approval (Title 14, CCR section 15378(c)). These WDRs do not authorize any specific project. They recognize that dredge and fill discharges that need a federal license or permit must be regulated under CWA section 401 Certification, pursuant to CWA section 401 and Title 23, CCR section 3855, et seq. Certification and issuance of waste discharge requirements are overlapping regulatory processes, which are both administered by the SWRCB and RWQCBs. Each project subject to Certification requires independent compliance with CEQA and is regulated through the Certification process in the context of its specific characteristics. Any effects on the environment will therefore be as a result of the certification process, not from these General WDRs. (Title 14, CCR section 15061(b)(3)).

11. Potential dischargers and other known interested parties have been notified of the intent to adopt these General WDRs by public hearing notice.

12. All comments pertaining to the proposed discharges have been heard and considered at the November 4, 2003 SWRCB Workshop Session.

13. The RWQCBs retain discretion to impose individual or general WDRs or waivers of WDRs in lieu of these General WDRs whenever they deem it appropriate. Furthermore, these General WDRs are not intended to supersede any existing WDRs or waivers of WDRs issued by a RWQCB.

IT IS HEREBY ORDERED that WDRs are issued to all persons proposing to discharge dredged or fill material to waters of the United States where such discharge is also subject to the water quality certification requirements of CWA section 401 of the federal Clean Water Act (Title 33 United States Code section 1341), and such certification has been issued by the applicable RWQCB or the SWRCB, unless the applicable RWQCB notifies the applicant that its discharge will be regulated through WDRs or waivers of WDRs issued by the RWQCB. In order to meet the provisions contained in Division 7 of CWC and regulations adopted thereunder, dischargers shall comply with the following:

1. Dischargers shall implement all the terms and conditions of the applicable CWA section 401 Certification issued for the discharge. This provision shall apply irrespective of whether the federal license or permit for which the Certification was obtained is subsequently deemed invalid because the water body subject to the discharge has been deemed outside of federal jurisdiction.

2. Dischargers are prohibited from discharging dredged of fill material to waters of the United States without first obtaining Certification from the applicable RWQCB or SWRCB.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on November 19, 2003.

AYE: Arthur G. Baggett, Jr.
Peter S. Silva
Richard Katz
Gary M. Carlton
Nancy H. Sutley

NO: None.

ABSENT: None.

ABSTAIN: None.

Debbie Irvin
Clerk to the Board

COUNTY OF TEHAMA
Tehama County Air Pollution Control District
ALAN ABBS
AIR POLLUTION CONTROL OFFICER
1750 Walnut Street * Red Bluff, California 96080
Phone: (530) 527-3717
Fax: (530) 527-0959

COMPLIANCE ASSISTANCE BULLETIN
FUGITIVE DUST

Fugitive Dust Control at Construction Sites

Rule 4:24, Fugitive Dust Emissions; of the District's Rules and Regulations apply to many activities that generate fugitive dust, and particularly to construction sites.

Fugitive dust is emitted into the air by activities that disturb the soil, such as earthmoving and vehicular/equipment traffic on unpaved surfaces. Windblown dust is also of concern where soil has been disturbed at construction sites.

The District adopted Rule 4:24 in 1987 and its most recent amendments became effective on February 5, 2008. This is a basic summary of the regulation's requirements as they apply to construction sites.

These regulations affect all workers at a construction site, including everyone from the landowner to the subcontractors. Violations of Rule 4:24 are subject to enforcement action including fines.

Visible Dust Emissions (VDE) may not exceed 20% opacity during periods when soil is being disturbed by equipment or by wind at any time. Visible Dust Emissions opacity of 20% means dust that would obstruct an observer's view of an object by 20%. District inspectors are state certified to evaluate visible emissions. Dust control may be achieved by applying water before/during earthwork and onto unpaved traffic areas, phasing work to limit dust, and setting up wind fences to limit wind blown dust.

Soil Stabilization is required at construction sites after normal working hours and on weekends and holidays. This requirement also applies to inactive construction areas such as phased projects where disturbed land is left unattended. Applying water to form a visible crust on the soil and restricting vehicle access are often effective for short-term stabilization of disturbed surface areas. Long-term methods include applying dust suppressants and establishing vegetative cover.

Carryout and Trackout occur when materials from emptied or loaded vehicles falls onto a paved surface or shoulder of a public road or when materials adhere to vehicle tires and are deposited onto a paved surface or shoulder of a public road. Should either occur, the material must be cleaned up at least daily, and immediately if it extends more than 50 feet from the exit point onto a paved road. The appropriate clean-up methods require the complete removal and cleanup of mud and dirt from the paved surface and shoulder. Using a blower device or dry sweeping with any mechanical device other than a PM10-efficient street sweeper is not effective. Larger construction sites, or sites with a high amount of traffic on one or more days, must prevent carryout and trackout from occurring by installing gravel pads, grizzlies, wheel washers, paved interior roads, or a combination thereof at each exit point from the site. In many cases, cleaning up track-out with water is also prohibited as it may lead to plugged storm drains and raise turbidity levels in nearby waterways. Prevention is the best method.

Unpaved Access and Haul Roads, as well as unpaved vehicle and equipment traffic areas at construction sites must have dust control. Speed limit signs limiting vehicle speed to 15 mph or less at construction sites should be posted every 500 feet on uncontrolled and unpaved roads.

Storage Piles and Bulk Materials have handling, storage, and transportation requirements that include applying water when handling materials, wetting or covering stored materials, and installing wind barriers to limit VDE. Also, limiting vehicle speeds, loading haul trucks with a freeboard of six inches or greater along with applying water to the top of the load, and covering the cargo compartments are effective measures for reducing VDE and carryout from vehicles transporting bulk materials.

Demolition activities require the application of water to the exterior of the buildings, debris piles, and to unpaved surfaces where materials may fall. A Dust Control Plan will be required for large demolition projects. Consider all structures built before 1988, slated for demolition as possibly being regulated due to potential asbestos. Contact the District for more information concerning asbestos.

Dust Control Plans identify the dust sources and describe the dust control measures that will be implemented before, during, and after any dust generating activity for the duration of the project. Owners or operators are required to submit plans to the District at least 30 days prior to commencing the work for the following:

- Residential developments of one hundred or more acres of disturbed surface area.
- Non-residential developments of five or more acres of disturbed surface area.
- The relocation of more than 7,700 cubic yards per day of materials on at least three days.

Operations may not commence until the District has approved the Dust Control Plan. A copy of the plan must be on site and available to workers and District employees. **All work on the site is subject to the requirements of the approved dust control plan. A failure to abide by the plan by anyone on site may be subject to enforcement action.**

Exemptions exist for several activities. District Rule 4:24 *Fugitive Dust Emissions*, exempts the following construction and earthmoving activities:

- Movement of less than 2,000 cubic yards of soil.
- Maintenance or remodeling of existing buildings less than 10,000 square feet.
- Additions to single family dwellings.
- The disking of weeds and vegetation for fire prevention.
- Spreading of daily landfill cover to preserve public health and safety and to comply with California Integrated Waste Management Board requirements.

Nuisances are prohibited at all times because District Rule 4:4 – *Nuisance* applies to all construction sources of fugitive dust, whether or not they are exempt from Rule 4:24. It is important to monitor dust-generating activities and implement appropriate dust control measures to limit the public's exposure to fugitive dust.

Fugitive Dust Permits can be obtained from the District office located at 1750 Walnut Street, Red Bluff, CA. Permit Fees total $144.00 and the permit is valid for one year, from the date of issuance, at the designated permit location. For more information please contact the District at 530-527-3717.

Print Form

Submit by Email

TEHAMA COUNTY AIR POLLUTION CONTROL DISTRICT

1750 Walnut Street (P.O. Box 8069), Red Bluff, CA 96080
Phone: (530) 527-3717 Fax: (530) 527-0959

Fugitive Dust Permit Application Permit Fee: $144.00 ❑

and/or

Land Clearing Burn Permit Application Permit Fee: $56.50 ❑

APPLICANT INFORMATION

Please specify the legal name and address of the partnership, company, corporation or agency to be named on the permit.

Company: _____ Contact: _____

Phone: _____ Fax: _____ Email: _____

Address: _____

City/St/Zip: _____

PROJECT INFORMATION

Project Name: _____

Address: _____ City: _____

Nearest Cross Street: _____

Project Duration: _____

Project Description: _____

Other Information:

Sources of Fugitive Emissions:

_____

Distance to Nearest Sensitive Receptor (If Applicable):

_____

Description of Receptor:

_____

Type of Burn (Grass, trees, brush, etc.)

_____

Amount (acres)

_____

(A Sensitive Receptor is Defined as a School, Hospital, Recovery Center, Outpatient Care Center, Hospice, Childrens Day Care Center, Retirement Home, or Any other site that may contain persons sensitive to Fugitive Dust or Smoke emissions.)

Signature: _____ Title: _____

(Signature of responsible official, partner, or sole proprietor. Original signature required NO photocopies.)

Print Name: _____ Date: _____