

INFORMATION HANDOUT

WATER QUALITY

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

PERMITS

**STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME
NOTIFICATION NO. 1600-2009-0220-R2**

**UNITED STATES ARMY CORPS OF ENGINEERS
NON-REPORTING NATIONWIDE 404 PERMIT**

PHOTOGRAPHS

ROUTE: 03-ED-50 19.4/45.4



California Regional Water Quality Control Board Central Valley Region

Karl E. Longley, ScD, P.E., Chair



Linda S. Adams
Secretary for
Environmental
Protection

11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • FAX (916) 464-4645
<http://www.waterboards.ca.gov/centralvalley>

Arnold
Schwarzenegger
Governor

25 January 2010

Pat Kelley
Caltrans
703 B Street
Marysville, CA 95901

CLEAN WATER ACT §401 TECHNICALLY CONDITIONED WATER QUALITY CERTIFICATION FOR DISCHARGE OF DREDGED AND/OR FILL MATERIALS FOR THE ED-50 CULVERT REHABILITATION PROJECT (WDID#5A09CR00100), EL DORADO COUNTY

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 This certification is no longer valid if the project (as described) is modified, or coverage under Section 404 of the Clean Water Act has expired. Caltrans shall notify the Central Valley Water Board in writing within 7 days of project completion.

ADDITIONAL TECHNICALLY CONDITIONED CERTIFICATION CONDITIONS:

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

1. Caltrans shall notify the 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.

California Environmental Protection Agency

3. All areas disturbed by project activities shall be protected from washout or erosion.
4. An effective combination of erosion and sediment control Best Management Practices (BMPs) must be implemented and adequately working during all phases of construction.
5. All temporarily affected areas will be restored to pre-construction contours and conditions upon completion of construction activities.
6. 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

7. 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.

8. 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.

9. 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.
10. Caltrans shall notify the Central Valley Water Board immediately if the above criteria for turbidity, settleable matter, oil/grease, or foam are exceeded.
11. Caltrans shall comply with all Department of Fish and Game 1600 requirements for the project.
12. Caltrans must obtain coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction Activities issued by the State Water Resources Control Board for any project disturbing an area of 1 acre or greater.
13. 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.
14. 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 into 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, 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(s) of the Central Valley Water Board, or an authorized representative(s), upon the presentation of credentials and other documents, as may be required by law, 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.

REGIONAL WATER QUALITY CONTROL BOARD CONTACT PERSON:

Daniel Worth, Environmental Scientist
11020 Sun Center Drive #200
Rancho Cordova, California 95670-6114
dworth@waterboards.ca.gov
(916) 464-4709

WATER QUALITY CERTIFICATION:

I hereby issue an order certifying that any discharge from Caltrans, ED-50 Culvert Rehabilitation 03-3M4701 (WDID#5A09CR00100) 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. 2008-0182 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 Regional Water Quality Control Board's Water Quality Control Plan (Basin Plan).


Pamela C. Creedon
Executive Officer

Enclosure: Project Information

cc: See enclosure, page 7

PROJECT INFORMATION

Application Date: 30 October 2009

Applicant: Pat Kelley, Project Manager
Caltrans
703 B Street
Marysville, CA 95901

Applicant Representatives: Maureen Doyle, Biologist
Caltrans
703 B Street
Marysville, CA 95901

Project Name: ED-50 Culvert Rehabilitation 03-3M4701

Application Number: WDID#5A09CR00100

U.S. Army Corps File Number: Nationwide Permit 14

Type of Project: Culvert replacement and repair

Project Location: Section 25, Township 11 North, Range 14 East, MDB&M.
Latitude: 38.7667° and Longitude: -120.3557°

County: El Dorado County

Receiving Water(s) (hydrologic unit): Unnamed tributary of the South Fork of the American River, Sacramento Hydrologic Basin, American River Hydrologic Unit #514.35, Kyburz HSA

Water Body Type: Streambed

Designated Beneficial Uses: The Basin Plan for the Central Valley Water Board 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 ED-50 Culvert Rehabilitation 03-3M4701 project consists of rehabilitation of four culverts located at post miles (PM) 19.45, 45.37 (two culverts at this location), and 45.40 along State Route 50. The rehabilitation of the culverts will include the replacement of the headwalls at PM 45.37 and 45.40, and culvert lining at PM 19.45, 45.40 and 45.37.

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: Approximately 16 cubic yards of clean rock rip rap and concrete will be placed into 0.0002 acre of un-vegetated streambed and the adjacent upland area.

Dredge Volume: None

U.S. Army Corps of Engineers Permit Number: Nationwide Permit 14

Department of Fish and Game Streambed Alteration Agreement: The California Department of Fish and Game issued a Streambed Alteration Agreement for this project on 12 January 2010 (# 1600-2009-0210R2).

Possible Listed Species: None

Status of CEQA Compliance: The California Department of Transportation (Caltrans) approved the Categorical Exemptions for this project on 1 June and 22 June 2009.

Compensatory Mitigation: None

Application Fee Provided: Total fees of \$641.00 have been submitted as required by 23 CCR §3833b(3)(A) and by 23 CCR §2200(e).

DISTRIBUTION LIST

U.S. Army Corp of Engineers
Sacramento District Office
Regulatory Section, Room 1480
1325 J Street
Sacramento, CA 95814-2922

Dave Smith
Wetlands Section Chief (W-3)
United States Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

United States Fish & Wildlife Service
Sacramento Fish & Wildlife Office
2800 Cottage Way
Sacramento, CA 95825

Jeff Drongesen
Department of Fish and Game
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

Bill Orme
State Water Resources Control Board
401 Certification and Wetlands Unit Chief
P.O. Box 100
Sacramento, CA 95814

Bill Jennings
CA Sportfishing Protection Alliance
3536 Rainier Avenue
Stockton, CA 95204

Maureen Doyle, Biologist
Caltrans
703 B Street
Marysville, CA 95901

AGREEMENT REGARDING PROPOSED STREAM ALTERATION

THIS AGREEMENT, entered into between the State of California, Department of Fish and Game, hereinafter called the Department, and California Department of Transportation of Marysville, State of California, hereafter called Caltrans, is as follows:

WHEREAS, pursuant to California Fish and Game Code, Section 1602, Caltrans, on November 2, 2009, notified the Department that it intends to substantially divert or obstruct the natural flow of, or substantially change the bed, channel, or bank of, or use material from the streambed of, the following waterways: unnamed tributaries to Hangtown Creek and the South Fork American River, in the County of El Dorado, State of California, Section 9, Township 10N, Range 11E, USGS Map Placerville MDB&M and Section 25, Township 11N, Range 14E, USGS Map Kyburz MDB&M.

WHEREAS, the Department, represented by Gary Hobgood, has determined that such operations may substantially adversely affect existing fish and wildlife resources including: various life stages of fish, other forms of vertebrate and invertebrate aquatic life, amphibians, reptiles and nesting birds and riparian plant species.

THEREFORE, the Department hereby proposes measures to protect fish and wildlife during Caltrans' work. Caltrans hereby agrees to accept the following recommendations as part of his work:

Project Description: The scope of the project is to rehabilitate three culverts at PM 19.45, 45.37, 45.40 along State Route 50. The rehabilitation of the culverts will include the replacement of the headwall at PM 45.37 & 45.40, culvert lining at PM 45.40 & 45.37 and invert paving at PM 19.45.

Stream Zone Defined: All components of a stream, including the channel, bed, banks, and floodplains. The Stream Zone is the land, including vegetation, that bounds the channel of a stream and that defines the lateral extent of their waters.

1. The notification, together with all supporting documents submitted with the notification, is hereby incorporated into this agreement to describe the location and features of the proposed project. Caltrans agrees that all work shall be done as described in the notification and supporting documents, incorporating all project modifications, wildlife resource protection features, mitigation measures, and provisions as described in this agreement. Where apparent conflicts exist between the notification and the provisions listed in this agreement, Caltrans shall comply with the provisions listed in this agreement. Caltrans further agrees to notify the Department of any modifications made to the project plans submitted to the Department. At the discretion of the Department, this agreement will be amended to accommodate modifications to the project plans submitted to the Department and/or new project activities. Please see the current fee schedule to determine the appropriate amendment fee.
2. Documents, plans, surveys, notifications, and requests pertaining to this project or required by this agreement may be sent via email to Gary Hobgood at ghobgood@dfg.ca.gov or delivered to the Department of Fish and Game at 1701 Nimbus Road, Suite A, Rancho Cordova, CA 95670. Refer to Notification Number 1600-2009-0210-R2 when submitting documents to the Department.
3. The time period for completing the work within the stream zone of the unnamed tributaries to

Hangtown Creek and the South Fork American River shall be restricted to periods of low or no stream flow and dry weather and shall be confined to the period of May 15 to October 31. Construction activities shall be timed with awareness of precipitation forecasts and likely increases in stream flow. Construction activities within the stream zone shall cease until all reasonable erosion control measures, inside and outside of the stream zone, have been implemented prior to all storm events. Revegetation, restoration and erosion control work is not confined to this time period.

4. If Caltrans finds more time is needed to complete the authorized activity, Caltrans shall submit a written request for a work period time extension to the Department. The work period extension request shall provide the following information: 1) Describe the extent of work already completed; 2) Provide specific detail of the activities that remain to be completed within the stream zone; and 3) Detail the actual time required to complete each of the remaining activities within the stream zone. The work period extension request should consider the effects of increased stream conditions, rain delays, increased erosion control measures, limited access due to saturated soil conditions, and limited growth of erosion control grasses due to cool weather. Photographs of the work completed and the proposed work areas are helpful in assisting the Department in its evaluation. Time extensions are issued at the discretion of the Department. The Department will review the written request to work beyond the established work period. The Department will have ten calendar days to approve the proposed work period extension. The Department reserves the right to require additional measures designed to protect natural resources.
5. This Agreement does not relieve Caltrans or any person acting on behalf of Caltrans, including its officers, employees, representatives, agents or contractors and subcontractors, from complying with other applicable statutes in the Fish and Game Code, including, but not limited to, sections 2050 et seq. (California Endangered Species Act), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5931 (fish passage over/around dam), 5937 (sufficient water for fish), and 5948 (obstruction of stream). Caltrans is responsible for obtaining all required permits and authorizations from local, state and federal agencies. Caltrans shall notify the Department where conflicts exist between the provisions of this agreement and those imposed by other regulatory agencies. Unless otherwise notified, Caltrans shall comply with the provision that offers the greatest protection to water quality, species of special concern and/or critical habitat.
6. If a private contractor is used for this project, the contractor shall sign Caltrans' copy of this agreement prior to working within the stream zone. A copy of this agreement and a copy of the original notification, including the project description, as submitted to the Department, must be available upon request at the work site. The contractor or a designated crew supervisor shall be on site the entire time a work crew is working near the stream zone. The supervisor shall be completely familiar with the terms and conditions of this agreement and shall ensure compliance with all terms and conditions. The Department reserves the right to inspect the project site to ensure that there is compliance with the terms/conditions of this Agreement.
7. Caltrans shall notify the Department within two working days of beginning work within the stream zone of the unnamed tributaries to Hangtown Creek and the South Fork American River. Upon completion of the project activities described in this agreement, the work area within the stream zone shall be digitally photographed. Photographs shall be submitted to the

Department within two days of completion. Photographs and project commencement notification shall be submitted as instructed in item number 2 above.

8. The work area shall be dewatered as shown in the "Temp Dewatering Detail" submitted with the notification. No other diversion method shall be used without prior authorization by the Department. If another diversion method is preferred, Caltrans must submit a plan detailing the desired diversion method. Authorization of any other diversion method shall be at the discretion of the Department.
9. It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by the Fish and Game Code. No trees that contain active nests of birds shall be disturbed until all eggs have hatched and young birds have fledged without prior consultation and approval of a Department representative.
10. Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. No native trees with a trunk diameter at breast height (DBH) in excess of four (4) inches shall be removed or damaged without prior consultation and approval of a Department representative. Using hand tools (clippers, chain saw, etc.), trees may be trimmed to the extent necessary to gain access to the work sites. All cleared material/vegetation shall be removed out of the riparian/stream zone.
11. Precautions to minimize turbidity/siltation shall be taken into account during project planning and implementation. This may require the placement of silt fencing, coir logs, coir rolls, straw bale dikes, or other siltation barriers so that silt and/or other deleterious materials are not allowed to pass to downstream reaches. Passage of sediment beyond the sediment barrier(s) is prohibited. If any sediment barrier fails to retain sediment, corrective measures shall be taken. The sediment barrier(s) shall be maintained in good operating condition throughout the construction period and the following rainy season. Maintenance includes, but is not limited to, removal of accumulated silt and/or replacement of damaged silt fencing, coir logs, coir rolls, and/or straw bale dikes. Caltrans is responsible for the removal of non-biodegradable silt barriers (such as plastic silt fencing) after the disturbed areas have been stabilized with erosion control vegetation (usually after the first growing season). Upon Department determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation shall be halted until effective Department approved control devices are installed or abatement procedures are initiated.
12. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, resulting from project related activities, shall be prevented from contaminating the soil and/or entering the waters of the state. Any of these materials, placed within or where they may enter a stream or lake by Caltrans or any party working under contract or with the permission of Caltrans, shall be removed immediately. The Department shall be notified immediately by Caltrans of any spills and shall be consulted regarding clean-up procedures.
13. During construction, the contractor shall not dump any litter or construction debris within the stream zone. All construction debris and associated materials shall be removed from the work site upon completion of this project.

14. All exposed/disturbed areas and access points within the stream zone left barren of vegetation as a result of the construction activities shall be restored using locally native grass seeds, locally native grass plugs and/or a mix of quick growing sterile non-native grass with locally native grass seeds. Seeded areas shall be covered with broadcast straw and/or jut netted (monofilament erosion blankets are not authorized).
15. This agreement is not valid and work may not begin until the agreement is signed by a representative of the Department of Fish & Game. Stream alteration work authorized by this agreement expires on December 31, 2014. This agreement shall remain in effect for that time necessary to satisfy all required mitigation and monitoring measures.
16. Requests for Extensions (agreement renewal), Minor Amendments, and Major Amendments must be submitted in writing prior to expiration of the agreement or commencement of work on modified project plans. Extensions and Amendments are issued at the discretion of the Department. Please see the current fee schedule to determine the appropriate fee.
17. The Department may take enforcement action and reserves the right to suspend and/or revoke this agreement if the Department determines that the circumstances warrant. The circumstances that could require these Department actions include, but are not limited to, the following: A) Failure to comply with the terms/conditions of this agreement. B) The information provided by Caltrans in support of the agreement/notification is determined by the Department to be incomplete, or inaccurate. C) When new information becomes available to the Department representative(s) that was not known when preparing the original terms/conditions of this agreement. D) The project as described in the notification, agreement, or amendment has changed, or conditions affecting fish and wildlife resources change.
18. If, in the opinion of the Department, conditions arise or change in such a manner as to be considered deleterious to aquatic life, operations shall cease until corrective measures are taken.
19. It is understood that the Department enters into this agreement for purposes of establishing protective features for fish and wildlife, in the event that a project is implemented. The decision to proceed with the project is the sole responsibility of Caltrans, and is not required by this agreement. It is agreed that all liability and/or incurred costs related to or arising out of Caltrans' project and the fish and wildlife protective conditions of this agreement, remain the sole responsibility of Caltrans. Caltrans agrees to hold harmless and defend the State of California and the Department of Fish and Game against any related claim made by any party or parties for personal injury or other damage.

SIGNATURE PAGE

Caltrans, as designated by the signature on this agreement, shall be responsible for the execution of all elements of this agreement. A copy of this agreement must be provided to contractor and subcontractors and must be in their possession at the work site.

Failure to comply with the provisions of this agreement and with other pertinent Code Sections, including but not limited to Fish and Game Code Sections 5650, 5652 and 5948, may result in prosecution.

Nothing in this agreement authorizes Caltrans to trespass on any land or property, nor does it relieve Caltrans of responsibility for compliance with applicable federal, state, or local laws or ordinances.

This agreement is not valid and work may not begin until the agreement is signed by a representative of the Department of Fish & Game.

Caltrans Representative: Pat Kelley Pat Kelley
Please print and sign name

Date 12-17-09

Contractor: _____ Date _____

Title: _____

Company: _____

Department Representative: Kent Smith, Acting Regional Manager Date _____

U.S. Army Corps of Engineers South Pacific Division



Nationwide Permit Pre-Construction Notification (PCN) Form

This form integrates requirements of the Nationwide Permit Program within SPD, including General and Regional Conditions. Please consult instructions prior to completing this form.

Box 1 Project Name El Dorado 50 - Culvert Rehabilitation Project			
Applicant Name Pat Kelley		Applicant Title Project Manager	
Applicant Company, Agency, etc. California Dept. of Transportation		Applicant's internal tracking number (if any) 03-3M4701	
Mailing Address 703 B Street Marysville, Ca 95901			
Work Phone with area code 530-741-4319	Home Phone with area code	Fax # with area code 530-741-4457	E-mail Address pat_kelley@dot.ca.gov
Relationship of applicant to property: <input type="checkbox"/> Owner <input type="checkbox"/> Purchaser <input type="checkbox"/> Lessee <input checked="" type="checkbox"/> Other: Project Manager			
Application is hereby made for verification that subject regulated activities associated with subject project qualify for authorization under a Corps nationwide permit or permits as described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. I hereby grant to the agency to which this application is made, the right to enter the above-described location to inspect the proposed, in-progress or completed work. I agree to start work <u>only</u> after all necessary permits have been received.			
Signature of applicant <i>m. Patricia Kelley</i>			Date (m/d/yyyy) 10/28/2009

Box 2 Authorized Agent/Operator Name <i>(If an agent is acting for the applicant during the permit process)</i> Maureen Doyle			
Agent/Operator Title Environmental Planner, NS		Agent/Operator Company, Agency, etc. California Dept. of Transportation	
Mailing Address 703 B STREET MARYSVILLE, CA 95901			
Work Phone with area code 530-741-4470	Home Phone with area code	Fax # with area code 530-741-4457	E-mail Address maureen_doyle@dot.ca.gov
I hereby authorize the above named authorized agent to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application. I understand that I am bound by the actions of my agent and I understand that if a federal or state permit is issued, I, or my agent, must sign the permit.			
Signature of applicant <i>m. Patricia Kelley</i>			Date (m/d/yyyy) 10/28/2009
I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief, such information is true, complete, and accurate.			
Signature of authorized agent <i>[Signature]</i>			Date (m/d/yyyy) 10/12/2009

Box 3 Name of Property Owner(s), if other than Applicant:	
Owner Title	Owner Company, Agency, etc.
Mailing Address	
Work Phone with area code	Home Phone with area code

Box 4 Name of Contractor(s) (if known):	
Contractor Title	Contractor Company, Agency, etc.
Mailing Address	
Work Phone with area code	Home Phone with area code

Box 5 Site Number <u>1</u> of <u>1</u>. Project location(s), including street address, city, county, state, zip code where proposed activity will occur: THE PROJECT IS LOCATED ON INTERSTATE 50 IN EL DORADO COUNTY BETWEEN POSTMILES (PM) 19.45, NEAR THE TOWN OF PLACERVILLE, AND PM 45.40, APPROXIMATELY 3.6 MILES WEST OF KYBURZ.	
Waterbody (if known, otherwise enter "an unnamed tributary to"): An unnamed tributary to the South Fork of the American River	
Tributary to what known, downstream waterbody: South Fork of the American River	
Latitude & Longitude (D/M/S, DD, or UTM): 38.7667°N, 120.3557°W	Zoning Designation (no codes or abbreviations):
Assessors Parcel Number:	Section, Township, Range: Sections 25 of Township 11N Range 14E
USGS Quadrangle map name: Kyburz	
Watershed and other location descriptions, if known: South Fork of the American River	
Directions to the project location: From Sacramento, drive east on Interstate 50 to PM 45.37 / 45.40	

Nature of Activity (Description of project, include all features, see instructions):

THE SCOPE OF THE PROJECT IS TO REHABILITATE FOUR CULVERTS AT PM 19.45, 45.37, 45.40, AND 45.43 ALONG STATE ROUTE 50. OF THESE FOUR CULVERTS, THE TWO AT PM 45.37 AND 45.40 CONVEY WATER FROM TWO BRANCHES OF A PERENNIAL STREAM ACROSS SR 50 AND INTO THE SOUTH FORK OF THE AMERICAN RIVER. THE REHABILITATION OF THE CULVERTS WILL BE DONE BY INSERTING LINERS INTO THE CULVERTS. THE LINERS WILL BE INSTALLED USING THE CIPP PROCESS.

Project Purpose (Description the reason or purpose of the project, see instructions):

AS PART OF MAINTAINING THE HIGHWAY, CALTRANS IS PROPOSING TH EREHABILITATION OF FOUR CULVERTS THAT HAVE REACHED THEIR SERVICE LIFE ALONG STATE ROUTE 50 IN EL DORADO COUNTY, BETWEEN POST MILES 19.45 AND 45.43.

Use Box 6 if dredged and/or fill material is to be discharged:

Box 6 Reason(s) for Discharge into waters of the United States:

THERE IS ANTICIPATED TO BE NO DISCHARGE INTO WATERS OF THE U.S.

Type(s) of material being discharged and the amount of each type in cubic yards:

Culvert liner

Total surface area in acres of wetlands or other waters of the U.S. filled (see instructions):

None

Indicate in ACRES and LINEAR FEET (where appropriate) the proposed impacts to **waters of the United States**, and identify the impact(s) as permanent and/or temporary for each water body type listed below:

Water Body Type	Permanent		Temporary	
	Acres	Linear feet	Acres	Linear feet
Wetland				
Riparian streambed				
Unveg. streambed			.0002	30
Lake				
Ocean				
Other				
Total:				

Potential indirect and/or cumulative impacts of proposed discharge (if any):

None

Required drawings (see instructions):

Vicinity map: Attached (or mail copy separately if applying electronically)

To-scale Plan view drawing(s): Attached (or mail copy separately if applying electronically)

To-scale elevation and/or Cross Section drawing(s): Attached (or mail copy separately if applying electronically)

Has a wetlands/waters of the U.S. delineation been completed?

Yes, Attached (or mail copy separately if applying electronically) No

If a delineation has been completed, has it been verified in writing by the Corps?

Yes, Date of approved jurisdictional determination (m/d/yyyy): _____ Corps file number: _____ No

Please attach¹ one or more color photographs of the existing conditions (aerials if possible).

¹or mail copy separately if applying electronically

Dredge Volume: Indicate in CUBIC YARDS the quantity of material to be dredged or used as fill: 0

Indicate type(s) of material proposed to be discharged in waters of the United States:

Culvert liner

For proposed discharges of dredged material into waters of the U.S. (including beach nourishment), please attach² a proposed Sampling and Analysis Plan (SAP) prepared according to Inland Testing Manual (ITM) guidelines (including Tier I information, if available).

²or mail copy separately if applying electronically

Is any portion of the work already complete? YES NO

If yes, describe the work:

Box 7 Intended NWP number (1st)³: 14

Intended NWP number (2nd):

Intended NWP number (3rd):

³Enter the intended permit type(s). See NWP regulations for permit types and qualification information (http://www.usace.army.mil/inet/functions/cw/cecwo/reg/nationwide_permits.htm).

Box 8 Authority:

Is Section 10 of the Rivers and Harbors Act applicable?: YES NO

Is Section 404 of the Clean Water Act applicable?: YES NO

Box 9 Is the discharge of fill or dredged material for which Section 10/404 authorization is sought part of a larger plan of development?: YES NO

If discharge of fill or dredged material is part of development, name and proposed schedule for that larger development (start-up, duration, and completion dates):

This project is not part of a development

Location of larger development (If discharge of fill or dredged material is part of a plan of development, a map of suitable quality and detail of the entire project site should be included):

Total area in acres of entire project area (including larger plan of development, where applicable):
< 1 acre

Box 10 Threatened or Endangered Species

Please list any federally-listed (or proposed) threatened or endangered species or critical habitat within the project area (use scientific names (e.g., Genus species), if known):

- a. None
- b.
- c.
- d.
- e.
- f.

Have surveys, using U.S. Fish and Wildlife Service/NOAA Fisheries protocols, been conducted?

Yes, Report attached (or mail copy separately if applying electronically) No

If a federally-listed species would be impacted, please provide a description and a biological evaluation.

Yes, Report attached (or mail copy separately if applying electronically) Not attached

Has the USFWS/NOAA Fisheries issued a Biological Opinion?

Yes, Attached (or mail copy separately if applying electronically) No

If yes, list date Opinion was issued (m/d/yyyy):

Has Section 7 consultation been initiated by another federal agency?

Yes, Initiation letter attached (or mail copy separately if applying electronically) No

Has Section 10 consultation been initiated for the proposed project?

Yes, Initiation letter attached (or mail copy separately if applying electronically) No

Box 11 Historic properties and cultural resources:

Please list any historic properties listed (or eligible to be listed) on the National Register of Historic Places:

- a.
- b.
- c.
- d.
- e.
- f.

Are any cultural resources of any type known to exist on-site?

Yes No

Has an archaeological records search been conducted?

Yes, Report attached (or mail copy separately if applying electronically) No

Has a archaeological pedestrian survey been conducted for the site?

Yes, Report attached (or mail copy separately if applying electronically) No

Has a Section 106 MOA been signed by another federal agency and the SHPO?

Yes, Attached (or mail copy separately if applying electronically) No

If yes, list date MOA was signed (m/d/yyyy):

Has Section 106 consultation been initiated by another federal agency?

Yes, Initiation letter attached (or mail copy separately if applying electronically) No

Box 12 Measures taken to avoid and minimize impacts to waters of the United States (if any):

- Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations.
- Restoration shall include erosion control treatment of stripped or exposed areas.
- No equipment will be operated in live stream channels.
- The project will be scheduled to take place when no water is flowing
- No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, 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. Other construction BMPs that will minimize impacts include proper vehicle maintenance and spill prevention practices.
- Exposed soil will be stabilized with mulching and seeding after work is completed.

Include multiple copies of Box 13 for separate sites.

Box 13 Proposed Compensatory Mitigation (site ___ of ___) related to fill/excavation and dredge activities. Indicate in ACRES and LINEAR FEET (where appropriate) the total quantity of waters of the United States proposed to be created, restored, enhanced and/or preserved for purposes of providing compensatory mitigation. Indicate water body type (wetland, riparian streambed, unvegetated streambed, lake, ocean, other) or non-jurisdictional (uplands⁵). Indicate mitigation type (on- or off-site by applicant, mitigation bank, in-lieu fee program):

Water Body Type	Created	Restored	Enhanced	Preserved	Mitigation type
Example: wetland	0.8 acre	0.2 acre	-	-	On-site by app
Example: riparian stream	-	-	3.0 acres/1300 lf	-	ILFP
Totals:					

⁵ For uplands, please indicate if designed as an upland buffer.

If no mitigation is proposed, provide detailed explanation of why no mitigation would be necessary:

To minimize the loss of waters of the U. S. through permanent and temporary impacts and avoid potential impacts to water quality, erosion control and soil stabilization measures will be implemented in accordance with Caltrans' Best Management Practices (BMPs). Disturbed soils will also be treated with an appropriate erosion control seed mixture.

Has a draft/conceptual mitigation plan been prepared in accordance with the Army Corps of Engineers District guidelines? Yes, Attached (or mail copy separately if applying electronically) No

Mitigation site Latitude & Longitude (D/M/S, DD, or UTM):

USGS Quadrangle map name:

Assessors Parcel Number:

Section, Township, Range:

Other location descriptions, if known:

Directions to the mitigation location:

Box 14 Water Quality Certification (see instructions):

Applying for certification? Yes, Attached (or mail copy separately if applying electronically) No

Certification issued? Yes, Attached (or mail copy separately if applying electronically) No

Exempt? Yes No

If exempt, state why: Agency concurrence? Yes, Attached No

Box 15 Coastal Zone Management Act (see instructions):

Is the project located within the Coastal Zone? Yes No

If yes, applying for a coastal commission-approved Coastal Development Permit?

Yes, Attached (or mail copy separately if applying electronically) No

If no, applying for separate CZMA-consistency certification?

Yes, Attached (or mail copy separately if applying electronically) No

Permit/Consistency issued? Yes, Attached (or mail copy separately if applying electronically) No

Exempt? Yes No

If exempt, state why:

Box 16 List of other certifications or approvals/denials received from other federal, state, or local agencies for work described in this application:

Agency	Type Approval ⁴	Identification No.	Date Applied	Date Approved	Date Denied
Department of Fish and Game	1602 Streambed Alteration Agreement			Applied / Pending	

⁴ Would include but is not restricted to zoning, building, and flood plain permits

NWP General Conditions (GC) checklist:

1. Navigation:

Project would be in compliance with GC? Yes No

Explain:

2. Aquatic Life Movements:

Project would be in compliance with GC? Yes No

Explain:

3. Spawning Areas:

Spawning areas present? Yes No

Project would be in compliance with GC? Yes No

Explain:

4. Migratory Bird Breeding Areas:

Migratory bird breeding areas present? Yes No

Project would be in compliance with GC? Yes No

Explain:

5. Shellfish Beds:

Shellfish beds present? Yes No

Project would be in compliance with GC? Yes No

Explain:

6. Suitable Material:

Project would be in compliance with GC? Yes No

Explain:

7. Water Supply Intakes:

Project would be in compliance with GC? Yes No

Explain:

8. Adverse Effects From Impoundments:

Project would be in compliance with GC? Yes No

Explain:

9. Management of Water Flows:

Project would be in compliance with GC? Yes No

Explain:

10. Fills Within 100-Year Floodplains:

Project would be within 100-year floodplains? Yes No

If yes, project would be in compliance with GC? Yes No

Explain:

11. Equipment:

Project would be in compliance with GC? Yes No

Explain:

12. Soil Erosion and Sediment Controls:

Project would be in compliance with GC? Yes No

Explain:

13. Removal of Temporary Fills:

Project would be in compliance with GC? Yes No

Explain:

14. Proper Maintenance:

Project would be in compliance with GC? Yes No

Explain:

15. Wild and Scenic Rivers:

Project would be within a National Wild and Scenic River System (including proposed system)?

Yes No

Project would be in compliance with GC? Yes No

Explain:

16. Tribal Rights:

Project would be in compliance with GC? Yes No

Explain:

17. Endangered Species: see Box 10 above.

18. Historic Properties: see Box 11 above.

19. Designated Critical Waters (check those that apply)

Includes:

- 1) NOAA-designated marine sanctuaries,
- 2) National Estuarine Research Reserves,
- 3) State natural heritage sites,
- 4) Officially designated waters

Applicant is aware of the restrictions a) and b) below? Yes No

a) NWP 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50: No NWP can be authorized.

b) NWP 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38: Notification is required.

20. Mitigation: see Box 13 above.

21. Water Quality (401 Certification): see Box 14 above.

22. Coastal Zone Permit: see Box 15 above.

23. Regional and Case-By-Case Conditions:

Complete the Regional Conditions checklist below.

Project would be in compliance with any Case-by-case conditions? Yes No

Explain:

24. Use of Multiple Nationwide Permits:

Applicant is aware that if total proposed acreage of impact exceeds acreage limit of NWP with highest specified acreage, no NWP can be issued? Yes No

25. Transfer of Nationwide Permit Verifications:

Applicant is aware of this permit transfer requirement? Yes No

26. Compliance Certification:

Applicant is aware of this post-construction requirement? Yes No

27. Pre-Construction Notification:

If a PCN is required, the PCN includes: *(check those that apply)*

Delineation of wetlands and other waters of the U.S.

If project results in the loss of greater than 1/10 acre of wetlands, a compensatory mitigation plan or statement describing how the mitigation requirement will be satisfied

For non-Federal applicants, a list of threatened or endangered species or designated critical habitat that might be affected by the proposed work

For Federal applicants, documentation demonstrating compliance with the Endangered Species Act

For non-Federal applicants, a list of historic properties listed on, or determined eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places that may be affected by the proposed work; or a vicinity map indicating the location of the historic property

For Federal applicants, documentation demonstrating compliance with the National Historic Preservation Act

28. Single and Complete Project:

Project would be in compliance with GC? Yes No

Explain:

NWP Regional Conditions (RC) checklist:

II. Sacramento District (SPK) in California, Nevada, and Utah:

SPK Regional conditions to be applied across the entire Sacramento District including California, Nevada, and Utah (except Colorado):

1. Is pre-construction notification (PCN) required? Yes No

If yes, notification pursuant to General Condition 27 is required 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 designated locations documented on the plan drawing.

2. Will mitigation be completed before or concurrent with construction of the project? Yes No

Compensatory mitigation shall be completed as 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. Does the project have property which will be preserved as part of mitigation for authorized impacts?
 Yes No

If yes, the NWP verification shall be recorded against the preserved property with the Registrar of Deeds or other appropriate official charged with the responsibility for maintaining records of title to or interest in real property.

Will structures, including boat ramps or docks, marinas, piers, and permanently moored vessels, be constructed in or adjacent to navigable waters? Yes No

If yes, the NWP verification shall be recorded against the area with the Registrar of Deeds or other appropriate official charged with the responsibility for maintaining records of title to or interest in real property. 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. Will any wetlands, other aquatic areas, and/or any vegetative buffers be preserved as part of mitigation for impacts? Yes No

If yes, these areas shall be placed 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. Is a waiver of the 300 linear foot limitation for intermittent and ephemeral streams requested? Yes No

If yes, an analysis of the impacts to the stream environment, measures taken to avoid and minimize losses, other project alternatives that were considered (but were found not to be practicable), and a mitigation plan describing how the unavoidable losses will be offset, must be included.

7. Is a road crossing proposed? Yes No

If yes, road crossings shall be designed to ensure fish passage, especially for anadromous fish. 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 shall be employed.

Is an approach fill proposed? Yes No

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. Are trenching activities proposed under NWP 12? Yes No

If yes, 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. Are activities involving hard-armoring of the bank toe or slope proposed under NWP 13? Yes No

If yes, notification pursuant to General Condition 27 is required. Bank stabilization shall include the use of vegetation or other biotechnical design to the maximum extent practicable.

10. Is the activity proposed under NWP 23? Yes No

If yes, notification pursuant to General Condition 27 is required. 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. Are activities which will result in the loss of greater than 300 linear feet of streambed proposed under NWP 44? Yes No

If yes, the discharge shall not cause the loss of more than 300 linear feet of streambed unless the 300 linear foot limit is waived in writing by the Sacramento District for intermittent and ephemeral streams only. Loss of more than 300 linear feet of perennial streambed is not authorized.

Is the activity proposed within a water of the United States supporting anadromous fisheries? Yes No

This NWP does not authorize discharges in waters of the United States supporting anadromous fisheries.

12. Is channelization or relocation of an intermittent or perennial drainage proposed under NWPs 29 and/or 39? Yes No

If yes, 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. Are temporary fills for construction access in waters of the United States supporting fisheries proposed under NWP 33? Yes No

If yes, 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. Are activities which will result in the loss of greater than 0.5 acre of waters of the United States or the loss of more than 300 linear feet of ditch proposed under NWP 46? Yes No

If yes, the loss of greater than 0.5 acre of waters of the United States is not authorized. The discharge shall not cause the loss of more than 300 linear feet of ditch, unless the 300 foot linear foot limit is waived in writing by the Sacramento District.

15. Are any waters of the United States, including created, restored, or enhanced waters of the United States proposed for preservation under NWPs 29, 39, 40, 42, and/or 43? Yes No

If yes, upland vegetated buffers shall be established and maintained in perpetuity, to the maximum extent practicable, adjacent 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. Is the proposed project located with a histosol, fen, or wetland contiguous with a fen? Yes No

If yes, all NWP's except 3, 6, 20, 27, 32, 38, and 47, are revoked. 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 NWP's 3, 6, 20, 27, 32, and 38, notification pursuant to General Condition 27 is required.

17. Are activities proposed within 100 feet of the point of groundwater discharge of a natural spring? Yes No

If yes, notification pursuant to General Condition 27 is required. 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.

SPK Regional conditions to be applied **only in California:**

1. Is the project located within Lake Tahoe Basin? Yes No

All NWP's within the Lake Tahoe Basin are revoked. Activities in this area shall be authorized under Regional General Permit 16 or through an individual permit.

2. Is the project located within the Primary and Secondary Zones of the Legal Delta? Yes No

NWP's 29 and 39 within the Primary and Secondary Zones of the Legal Delta are revoked. New development activities in this area will be reviewed through the Corps' standard permit process.

SPK Regional conditions to be applied **only in Nevada:**

1. Is the project located within Lake Tahoe Basin? Yes No

All NWP's within the Lake Tahoe Basin are revoked. Activities in this area shall be authorized under Regional General Permit 16 or through an individual permit.

SPK Regional conditions to be applied **only in Utah:**

1. Is the project located below 4217 feet mean sea level (msl) adjacent to the Great Salt Lake or below 4500 feet msl adjacent to Utah Lake? Yes No

For all NWP's in this area, except NWP 47, notification pursuant to General Condition 27 is required.

2. Will the project include bank stabilization activities that will affect more than 100 linear feet of perennial stream? Yes No

If yes, notification pursuant to General Condition 27 is required.

3. Will the project require NWP 27 authorization? Yes No

If yes, 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.

Will the project exceed 1500 linear feet (as measured on the stream thalweg), use in stream structures exceeding 50 cubic yards per structure, and/or incorporate grade control structures exceeding 1 foot vertical drop?

Yes No

If yes, notification pursuant to General Condition 27 is required.

Will the project involve stream restoration? Yes No

If yes, 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.

Culverts
ED-50-
3m4701

Location PM 19.45

photo by: Dan Walker
Date 5-08-08
Page 1 of 3



Existing 54" CMP looking back towards outlet



Inlet on north side of freeway- looking upstream



Inlet on north side of freeway



Area around inlet on north side of freeway



Looking north @ outlet beneath frontage road



@ outlet looking east on frontage road



Chris Brackman observing inlet



Roadway @ inlet- looking west



Area @ inlet



Outfall- note headwall and water pipe



Outfall- looking down from roadway



Outfall

Culverts
ED-50-
3m4701

Location PM 45.40

photo by: Walker/Wulff
Date 4-03-08 & 5-06-08
Page 3 of 3



@ inlet of 45.40 looking upstream



Roadway @ inlet of 45.40- looking west



Area @ inlet of 45.40 showing headwall



Roadway @ inlet of 45.40 looking east



Outfall of 45.40



Outfall of 45.40 again- note surveyor @ ep



Looking east @ inlet



Looking west @ inlet



Inlet close up



Looking towards outlet from roadway



View of outlet from below



Close up of outlet