WATER QUALITY CERTIFICATION AND/OR
WASTE DISCHARGE REQUIREMENTS (Dredge/Fill Projects)

What is it? A Clean Water Act Section 401 Water Quality Certification (401 Certification) is an order issued by the State Water Resources Control Board and Regional Water Quality Control Boards that certifies a project will meet water quality requirements. The 401 certification order is a conditional permit. Applicants for federal permits that involve dredge or fill activities within waters of the United States, including wetlands, are required to obtain this certification from the state. Most of these federal permits are referred to as federal Clean Water Act Section 404 permits issued by the Army Corps of Engineers (Army Corps). Other types of federal license or permits that authorize activities that result or may result in discharges to waters of the United States and are required to obtain state certification include Federal Energy Regulatory Commission (FERC) hydropower licenses and Rivers and Harbors Act Section 9 and 10 permits. A 401 Certification is an order certifying that the proposed project will comply with CWA Sections 301 (Effluent Limitation), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance) and 307 (Toxic Pretreatment Effluent Standards), applicable state laws, and will be protective of beneficial uses identified within the region's basin plan. In accordance with section 404(b)(1) of the Clean Water Act (33 U.S.C. 1344) and the California Environmental Quality Act (CEQA) the discharge of dredge or fill materials and the design and implementation of any project that requires a 401 Certification shall avoid, minimize, and mitigate impacts to aquatic resources and the environment. Where impacts are determined to be unavoidable mitigation projects are required to compensate for the loss of aquatic resources. Under the California Water Code Section 13260, Waste Discharge Requirements (WDRs) are necessary for any persons discharging or proposing to discharge waste, including Dredge and/or Fill materials that could affect the quality of the waters of the State. Projects that receive a 401 Certification are also granted general WDRs.

Who Needs It? Anyone proposing to conduct a project that requires a federal permit or may result in a discharge to waters of the United States and/or waters of the State, including wetlands (all types), rivers, streams (including perennial, intermittent, and ephemeral streams) lakes, estuaries, harbors, bays, and the Pacific Ocean.

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

How do you get it? Submit a complete application requesting Water Quality Certification /Waste Discharge Requirements application packet to:

North Coast Regional Water Quality Control Board
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403
(707) 576-2672

What happens to your application? Your application is reviewed, staff determine if it is complete, and you will be contacted within 30 days of submittal if the application is found to be incomplete. Staff will then continue the review process and be available to answer any questions you may have.

Application for 401 Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill) under Order No. WQ-2015-0023-DWQ

The following application must be submitted to the Regional Water Quality Control Board for dredge/fill projects that require Water Quality Certification and/or Waste Discharge Requirements. Submit this application and the appropriate documentation* to:

North Coast Regional Water Quality Control Board
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403

*Clarification of information may be requested by Regional Water Quality staff during application review.

For Internal Office Use Only
WDID# Check # $

SECTION ONE – Applicant Information & Agent Authorization

Important Note! The applicant listed shall be the party responsible for compliance with the Clean Water Act, California Water Code, Basin Plan, and 401 Certification Conditions and is typically the property/facility owner. The authorized agent is the individual or team that is authorized to provide information to the Regional Water Board on behalf of the application (responsible party).

APPLICANT/PROPERTY OWNER(S) NAME	AUTHORIZED AGENT NAME AND TITLE (an agent is not required)
APPLICANT/PROPERTY OWNER(S) MAILING ADDRESS	AUTHORIZED AGENT MAILING ADDRESS
APPLICANT/PROPERTY OWNER(S) PHONE & FAX NUMBERS	AUTHORIZED AGENT PHONE & FAX NUMBERS
APPLICANT/PROPERTY OWNER(S) EMAIL	AUTHORIZED AGENT EMAIL

STATEMENT OF AUTHORIZATION (Required when applicant is designating an authorized agent)

I hereby authorize _____ to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.
Signature of Applicant or agent is also required on page 11.

_____
PRINT NAME OF APPLICANT (NOT THE AUTHORIZED AGENT)

_____ _____
SIGNATURE OF APPLICANT (NOT THE AUTHORIZED AGENT) DATE

SECTION TWO – Project Information

Please refer to the attached Project Plan Checklist (Attachment A) for guidance and attach additional supporting documentation as necessary. When attaching supporting documentation, the pertinent information shall be clearly identified by corresponding tabs, page numbers, etc., such that pertinent information is easily located. Please do not indicate "see attached" without identifying the attached document and the specific location within the document. Supplying detailed information will aid the review process; however, a complete application for water quality certification need not contain unnecessarily duplicative information. Applications containing multiple descriptions with conflicting data or other conflicting information will delay processing and may result in denial without prejudice. Including an electronic copy of the

required information may reduce the review process time. Required contents of a complete application can found in the California Code of Regulations (CCR) Title 23, Section 3856 CCR https://govt.westlaw.com/calregs/Document/I966B2410D45B11DEA95CA4428EC25FA0?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)

PROJECT NAME OR TITLE	
PROJECT STREET ADDRESS (if applicable)	**PROJECT LOCATION** (Attach a site location map) **COUNTY** **CITY/TOWN (nearest)**
CITY/STATE/ZIP (or nearest city/town)	**LATITUDE (Decimal Degrees)** **LONGITUDE (Decimal Degrees)**
ASSESSORS PARCEL NUMBER(S)	**SECTION, TOWNSHIP, RANGE, USGS QUADRANGLE MAP (Optional Information)**
DIRECTIONS TO THE SITE	
PROJECT PURPOSE AND FINAL GOAL OF ENTIRE ACTIVITY (See Project Planning Checklist -Attachment A for guidance. Attach additional information as necessary.	
TYPE OF INSTREAM WORK (Select all relevant boxes) ☐ Culvert Replacement, Installation, Maintenance, or Removal ☐ Non-Culvert Stream Crossing Replacement, Installation, Maintenance, or Removal ☐ Pond In-Flow or Out-Flow Replacement, Installation, Maintenance, or Removal ☐ Stream Restoration or Work in a Stream ☐ Pond Restoration or Work in a Pond ☐ Wetland Restoration or Work in a Wetland ☐ Diversion Point Replacement, Installation, Maintenance, or Removal	

PROJECT DESCRIPTION See Project Planning Checklist - Attachment A for guidance. Provide a full, technically accurate description of the entire activity and associated environmental impacts. Please do not indicate "see attached" without identifying the attached document and the specific location within the document. Attach additional pages as necessary.

PROPOSED START AND END DATES	**ESTIMATED DURATION**	Will any project activity take place during the wet season months of October 15 through May 15? ☐ YES ☐ NO If YES, please discuss the proposed winterization strategies on Page 6, Avoidance of Indirect Impacts.

SECTION THREE – Additional Documentation Required (CCR Title 23, Section 3856)

Provide copies of any final and signed federal, state, and local licenses, permits, and agreements (or copies of the draft documents, if not finalized) that will be required for any construction, operation, maintenance, or other actions associated with the activity. If no final or draft document is available, a list of all remaining agency regulatory approvals being sought shall be included.

FEDERAL PERMIT(S) OR COMPLETED FEDERAL APPLICATIONS

U.S. Army Corps of Engineers - Staff Contact Information: Name Ph. # E-mail
☐ Individual Permit
☐ Nationwide Permit Number _____ ☐ Non-Reporting or ☐ Reporting
☐ Regional General Permit / Number_____

U.S. Fish and Wildlife Service - Staff Contact Information: Name Ph. # E-mail
☐ Biological Assessment
☐ Biological Opinion

U.S. National Marine Fisheries Service - Staff Contact Information: Name Ph. # E-mail
☐ Biological Assessment
☐ Biological Opinion

STATE PERMIT(S) OR COMPLETED STATE APPLICATION (A COPY OF EITHER OF THESE MUST BE SUBMITTED WITH THIS APPLICATION (applied for or approved, i.e. Lake or Streambed Alteration Agreement (1600-1608) or Coastal Development Permit)

STATE PERMIT TITLE	FILE DATE	FILE NUMBER
STATE PERMIT TITLE	FILE DATE	FILE NUMBER

NCRWQCB Revised September 20, 2018. Questions, contact the Cannabis Cultivation Regulatory Program at (707) 576-2676.
To download this form in Microsoft Word visit https://www.waterboards.ca.gov/northcoast/water_issues/programs/cannabis/

LOCAL PERMIT(S) (applied for or approved, i.e. grading permit, building permit)

PERMIT TITLE	FILE DATE	FILE NUMBER

CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE (The project must comply with California Environmental Quality Act (CEQA) before a Water Quality Certification Order may be issued unless an exemption pursuant to CEQA is applicable. Although final CEQA documentation is not required for a complete application, the Regional Water Board shall be provided with a completed, approved, and/or certified CEQA documentation prior to issuing a Water Quality Certification Order. In accordance with the Permit Streamlining Act Section 65952 Final action must be taken on a 401 Certification project within (1) 180 days from when the CEQA lead agency approves the project, or (2) 180 days of the date the application was deemed "complete" by the SWRCB/RWQCB; whichever is longer)

TYPE OF CEQA DOCUMENT (EIR, Negative Declaration, Notice of Exemption)	**LEAD AGENCY**

STATE CLEARING HOUSE NUMBER	**STATUS** (pending, complete, etc.)	**DATE COMPLETED** (or anticipated date)

CUMULATIVE IMPACTS (List and describe other projects implemented within the past 5 years or planned within the next five years that are related to the proposed project, or that may impact the same watershed. Attach additional pages as necessary.)

PROJECT NAME	DESCRIPTION	DATE IMPLEMENTED/PLANNED

SECTION Four – Affected Waters and Mitigation

Please refer to the provided Project Plan Checklist for guidance and attach additional supporting documentation as necessary. Supplying detailed information will aid in expediting the review process.

WETLAND DELINEATION INFORMATION	
NAME OF PERSON DELINEATING EXTENT OF WETLANDS	DATE(S) OF WETLAND DELINEATION
TITLE	DATE OF WETLAND VERIFICATION BY U.S. ARMY CORPS
AFFILIATION	Is a wetland delineation required for your project? □ YES □ NO If no, please submit the appropriate documentation. If a wetland delineation has been verified by the U.S. Army Corps, please submit the verification letter as well as a verified wetland delineation map. If the Corps did not assume jurisdiction over the wetlands present, please submit the denial letter.

PROJECT HYDROLOGIC INFORMATION
Receiving Water(s):
Hydrologic Unit(s):
Water Body Type(s):

Hydrologic Unit Information can be found at: http://www.water-programs.com/wqpt.htm; or http://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/083105-bp/03_bu.pdf

DESIGNATED BENEFICIAL USES(s) Please check all that apply.											
AGR		CUL		GWR		NAV		REC-2		WET	
AQUA		EST		IND		POW		SAL		WILD	
ASBS		FISH		MAR		PRO		SHELL		WQE	
COLD		FLD		MIGR		RARE		SPWN			
COMM		FRSH		MUN		REC-1		WARM			

Beneficial Uses are listed within the North Coast Regional Water Quality Control Board Basin Plan available at: http://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/

POTENTIAL FOR IMPACTS TO THREATENED AND ENDANGERED SPECIES (Attach all Biological Assessments, Surveys, Formal Consultation Determination letters, and Mitigation Proposals as necessary.)			
SPECIES AND/OR HABITAT	**BIOLOGICAL ASSESSMENT (Y/N)**	**SURVEY CONDUCTED (Y/N)**	**DATES OF SURVEY CONDUCTED**

DREDGE AND FILL INFORMATION (The following must be completed for each action where dredging activities, fill material or other activities (e.g. excavation) will result in disturbance and/or discharge to a wetland or other waterbody. Add rows for multiple types of disturbance within the same waterbody type. Attach additional pages as necessary. Provide maps showing the location of project and of all impacts with the corresponding impacts in the format below. Provide all temporary and permanent impacts to waters of the U.S. and waters of the State.)

TYPE OF WATERBODY (i.e. stream, wetland, ephemeral drainage)	**Coordinates LATITUDE AND LONGITUDE (DECIMAL DEGREES)**	**FILL and/or EXCAVATION VOLUME AND TYPE (CUBIC YARDS)**	**FILL and/or EXCAVATION SURFACE AREA (SQUARE FEET OR ACRE)**	**FILL and/or EXCAVATION LENGTH (LINEAR FEET)**	**DREDGE VOLUME (CUBIC YARDS)**	**TYPE OF IMPACT** (Temporary or Permanent)
Waters of the U.S.						
☐ Wetland						
☐ Streambed (OHWM and below)						
☐ Lake/Reservoir						
☐ Ocean/Estuary/Bay						
☐ Other						
Sub-total Waters of the U.S.						
Waters of the State						
☐ Riparian						
☐ Stream channel/bank (Above OHWM)						
☐ Vernal Pool						
☐ Spring/Seep/Headwaters						
☐ Other						
Sub-total Waters of the State						
Total Waters of U.S. and State						
SAMPLE (delete prior to submittal):						
Waters of the U.S.						
■ *Wetland*	*(38.5957888, - 121.2801024)*	*25 cubic yards of gravel for access*		*0.005 (200 sq f)t*	*20 linear feet*	Temporary
■ *Streambed (below OHWM)*	*(38.5957882, -121.2801028)*	*35 cubic yards of rock rip rap*		*0.001 acres (43.56 sq ft)*	*15 linear feet*	P*ermanent*
Waters of the State						
■ *Riparian Area*	*(38.5957875, - 121.2801020)*	*200 cubic yards for Bridge abutment*		*0.029 acres (1,250 sq ft)*	*50 linear ft*	*Permanent*
■ *Isolated Vernal Pool*	*(38.5957648, - 121.2890479)*	*10 cubic yards for building foundation*		*0.1 acres (4,356 sq ft)*	*400 linear feet*	*Permanent*
IMPACT TOTALS		*260 cubic yards*		*0.035 (1,494 sq ft)*	*485 linear ft*	

WATER QUALITY IMPACT DESCRIPTION

(Report the nature and extent of temporary and permanent impacts to waters of the U.S. and/or State, such as turbidity, settleable matter, other pollutants, and beneficial uses associated with the proposed project. Attach a map that clearly depicts the anticipated area of direct impact and indirect disturbances)

AVOIDANCE OF DIRECT IMPACTS (Attach additional information if necessary)
Describe the efforts to **avoid** and **minimize direct impacts** to waters of the U.S. and State pursuant to Title 40 CFR Part 230 Section 404 (b)(1). See checklist for guidance. Attach additional pages as necessary.

ALTERNATIVES ANALYSIS

Has an Alternatives Analysis been prepared? ☐ YES ☐ NO If YES, please submit the appropriate documentation

AVOIDANCE OF INDIRECT IMPACTS (Attach additional information if necessary)

(1) Describe efforts to **avoid** and **minimize potential indirect impacts** to waters of the U.S. and State which might affect water quality.

(2) Describe the methods proposed for erosion control and re-vegetation proposals, including winterization strategies to stabilize all bare soils.

(3) Submit a map indicating the approximate locations and area of soil, land, and vegetation disturbance and proposed best management practices.

(4) Describe the methods proposed to reduce sources of pollutants such as petroleum hydrocarbons, oil and grease, fertilizers, pesticides, sediment, etc., from entering the water system

MITIGATION INFORMATION (Pursuant to Executive Order W-59-93, the wetlands "No Net Loss Policy", the Regional Water Board requires a mitigation plan for all temporary and permanent impacts to wetlands. Mitigation is required when permanent and temporary impacts to Wetlands occur. Address all project impacts in the Dredge and Fill Table and describe the applicable mitigation. Provide the location, size, type, functions, and values of the proposed mitigation. Describe success criteria, monitoring, long-term funding, management, and site protection instrument for the mitigation site. Attach Mitigation Bank Bills-of-Sale for purchase credits if needed. For guidance on a complete mitigation plan see Attachment B- Stream and Riparian Area Mitigation Checklist and Attachment C - Wetland Mitigation Checklist. If application check lists are not completed or incorporated into the mitigation plans the application may be deemed incomplete or denied.

Does the project impact wetlands? ☐ YES ☐ NO
(If yes complete mitigation information table Option 1 and/or Option 2, and attach mitigation plan or bank credit bill of sale).

Does the project impact waters of the State? ☐ YES ☐ NO
(If yes complete mitigation information table Option 1 and/or Option 2, and attach mitigation plan)

Are you proposing Compensatory mitigation for this project? ☐ YES ☐ NO
(If yes, provide summary of compensatory mitigation below, and attach in mitigation plan)

MITIGATION SUMMARY (Provide brief summary of mitigation proposal, references attached documents, sections, page numbers, etc.)

Mitigation Site Location(s):

Mitigation Site Lat/Long(s):

Name of Watershed & Hydrologic Unit:

Mitigation Site City and County:

Mitigation Project Summary:

Option 1 - Proponent Provided Mitigation Information

Waterbody Type	Acres / Linear Feet Established		Acres / Linear Feet Restored		Acres / Linear Feet Enhanced		Acres / Linear Feet Preserved	
Wetland								
Stream								
Riparian								
Vernal Pool								
Lake								
Other								

Option 2 - Mitigation Bank Credits

Waterbody Type	Acres / Linear Feet Established		Acres / Linear Feet Restored		Acres / Linear Feet Enhanced		Acres / Linear Feet Preserved	
Wetland								
Stream								
Riparian								
Vernal Pool								
Lake								
Other								
Mitigation Site Name:								
Name of Mitigation Site Operator:								

SECTION FIVE – Low Impact Development

The State Water Resources Control Board Resolution (SWRCB) No. 2008-0030 "Directs Water Boards' staff to require sustainable water resources management such as Low Impact Development (LID) and climate change considerations, in all future policies, guidelines, and regulatory actions." For reference please refer to the SWRCB LID webpage at http://www.swrcb.ca.gov/water_issues/programs/low_impact_development/index.shtml
For LID design goals, tools, and example BMPs see Attachment D – Storm Water and Low Impact Development

SUB-SECTION (A)
DOES THE PROPOSED PROJECT:

1) Increase the area of impervious surface? ☐ NO ☐ YES – Total_____ (If yes complete sub-section B)

2) Replace approximately 5,000 square feet of impervious surface? ☐ NO ☐ YES – Total_____ (If yes provide a post-construction storm water treatment BMP feasibility analysis.)

3) Discharge to an Area of Special Biological Significance? ☐ NO ☐ YES (If yes complete sub-section B)

4) Discharge to a water body listed as impaired on the Clean Water Act 303 (d) list? ☐ NO ☐ YES (If complete to sub-section B)

5) Discharge within a watershed with a total daily maximum load (TMDL)? ☐ NO ☐ YES (If yes complete sub-section B)

6) Disturb 1 acre (43,560 square feet) or more of soil? ☐ NO ☐ YES – Total_____ (If yes you may need to obtain coverage under the Construction Storm Water Program)

SUB-SECTION (B)
POST-CONSTRUCTION STORM WATER TREATMENT REQUIREMENT
Provide a summary for staff review of the methods proposed to treat and retain storm water runoff volume from the project site prior to entering the storm drainage system and/or waters of the State. Attach detailed responses to the question below and design information.

1) Include proper design calculations to indicate that the proposed methods will treat runoff from the 85th percentile/24-hour storm event, or one-inch of rainfall/24-hours, or
2) Use the City of Santa Rosa Storm Water Calculator, design criteria, and approved BMPs at **www.srcity.org/stormwaterLID**.
3) Provide maps that illustrate the project drainage and overall design details of the appropriate storm water treatment BMPs.
4) Provide the dimensions of the BMPs selected (slopes, width, length, depth) and specific calculations for velocity, volume treated, residence time, depth of flow, etc.
5) Provide information on the soil type underlining the treatment BMP and the vegetation to be used in the BMP.
6) Provide the BMP maintenance plan.

Treatment BMP Summary:

SUB-SECTION (C)
HYDROMODIFICATION IMPACTS (Changes in the land use can alter the natural hydrograph.)

1) Does the proposed project result in an increase of impervious surface of one acre or more?
☐ NO ☐ YES – Total Area _____ (if yes continue to question 2, and explain below)

2) Does the post-project hydrograph exceed the pre-project hydrograph by 10 percent or more for, for the 2-year 24/hour storm event:
- Volume, and/or
- Time of concentration?

☐ YES ☐ NO (If no the project may require LID features which correct the hydrograph, or require additional mitigation for impacts to waters of the State)

SECTION SIX – Waste Disposal

Pursuant to California Water Code 13260 and California Code of Regulations Title 27, which regulate land disposal activities, the Regional Water Board requires proof that placing non-hazardous waste or inert materials (which may include discarded product or recycled materials) will not result in degradation of water quality, human health or the environment. Degradation of water quality can be defined in terms of beneficial uses and/or in terms of numerical or narrative limits adopted to protect those uses.

DESCRIBE THE TYPE OF WASTE GENERATED BY THE PROPSED PROJECT (such as dredge spoils, excess soil, construction and demolition debris, excess slurries, grindings, concrete contact water, etc.)
PROPOSED WASTE DISPOSAL (Describe the methods proposed to handle and dispose non-hazardous and hazardous materials, or present plan to reincorporate or recycle excess materials)

SECTION SIX – Application Signature

Application is hereby made for a permit or permits to authorize the work described in this application. I certify, under penalty of perjury, that this application is complete and accurate to the best of my knowledge. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant. In addition, I certify property owner responsibility and liability for compliance with permit conditions issued for this project for compliance with any future authorization or amendments thereto.

PRINT NAME AND TITLE OF APPLICANT (OR AGENT)

SIGNATURE OF APPLICANT (OR AGENT) DATE

PRINT NAME AND TITLE OF LANDOWNER (OR AGENT)

SIGNATURE OF CONSTRUCTION OVERSIGHT MANAGER (OR AGENT) DATE

Attachment A - Project Plan Checklist

A detailed project plan is required with every application. Clarification of information may be requested by Regional Water Quality Control Board (Regional Water Board) staff during application review. This checklist is provided to aid applicants in providing a thorough project plan. Not all items on the checklist apply to each and every project, rather they are to be used as general guidelines for required information to be included. In addition, there may be items not covered on this checklist that may be requested on a project by project basis.

Project Description

- ☐ Project Description
- ☐ Summary of overall project area (i.e., housing subdivision, highway widening)
  - Size and description of project area; type(s) of receiving water body(ies); brief list/description of applicant's previous and future projects related to the proposed activity or that may impact the same receiving water body(ies)
- ☐ Responsible Parties
  - Names and phone numbers of anyone participating in the project
- ☐ Jurisdictional Waters to be impacted
  - Include a detailed site plan clearly indicating proposed impacts and mitigation site areas, including acreages
- ☐ Type(s) of water body, flow duration (i.e. intermittent/perennial), inundation period, functions and values
- ☐ Location and size of project area
- ☐ Project map with a satellite imagery base layer and topographic lines, showing proposed project areas, areas disturbed and restored by instream work, borrow pits, disposal locations, etc.
- ☐ Species present within project site and/or upstream/downstream
- ☐ Threatened or endangered species present
- ☐ Existing functions, values, and condition of resources
  - Physical, hydrologic, and biological attributes, substrate composition and condition, complexity, effective shade, canopy cover,
- ☐ Current conditions at the site (mostly natural, degraded, heavily impacted)
- ☐ Construction methods to be used
  - Include specific design specifications, calculations, and drawings for all engineered features (i.e. culverts, fords, stream crossings, ponds etc.). Copies or references to standard construction guidelines
- ☐ Adverse impacts
  - Include whether the adverse impacts will be temporary or permanent, and include amount of area to be affected (acres or linear feet)
- ☐ Schedule of construction activities
  - Include start and end dates for proposed activities
- ☐ Stockpile summary
  - Include amount of stockpile and proposed areas for storage
- ☐ Best management practices
  - Include references to specific Appendix B Best Management Practices and other management practices that go above-and-beyond Appendix B to be used at each project location
- ☐ Site dewatering
- ☐ Solid waste disposal for dredged or excess construction/demolition materials
- ☐ Mitigation and monitoring plans (refer to Stream, Riparian, and Wetland Mitigation Checklists) Revegetation plan if needed.

Attachment B - Stream and Riparian Mitigation Checklist

If it is determined that a watercourse (intermittent and/or perennial) or vegetation within the riparian area will be affected by the proposed project, mitigation will likely be necessary to preserve the function and beneficial uses of the site. Clarification of information may be requested by Regional Water Board staff during application review. This checklist is intended to aid applicants in submitting complete and proper information regarding mitigation plans, to enable staff to effectively evaluate the project for Water Quality Certification or Waste Discharge Requirements. Not all items on the checklist apply to each and every project, rather they are to be used as general guidelines for needed information to be included. In addition, there may be items not covered on this checklist that may be requested on a project by project basis.

1) Goals of Mitigation

- ☐ Variety of habitats to be created/restored
  - Pools, rearing sites, spawning sites, riparian habitat, etc.
- ☐ Functions and values of habitat to be created
  - Wetted channel width, pool/riffle ratio, mean/maximum depths, complexity, substrate composition, effective shade, canopy cover, large woody debris recruitment, etc.
- ☐ Other mitigation steps taken
  - Avoid, minimize, compensate
- ☐ Functions and values of the created/restored habitat
  - Wildlife habitat, streambank stabilization through riparian habitat establishment, water quality improvement, etc.
- ☐ Schedule for mitigation implementation, monitoring and reporting
- ☐ Work plan
  - Project start date; length mitigation activities will take place; specific work to be done at particular times, area of stream-channel profile receiving mitigation

2) Proposed Mitigation Site

- ☐ Location and size of mitigation area
- ☐ Include site map and regional map of mitigation project
- ☐ Existing functions and values
- ☐ Current conditions at the site (mostly natural, degraded, heavily impacted)
- ☐ If the site is degraded, explain past uses and land stressors leading to degradation
- ☐ Present and proposed uses of mitigation area
  - Provide habitat for flora/fauna (plants/animals), recreation, open space, etc.
- ☐ Current uses of the area
  - Agriculture, development, recreation, open space, etc.

3) Implementation Plan

- ☐ Responsible Parties
- ☐ Rationale for expecting success
- ☐ Site Preparation Plan
- ☐ Planting Plan
  - Dates of proposed plantings, native species to be planted, density of plantings, etc.
- ☐ Irrigation Plan (if applicable)

4) Maintenance During Monitoring Period

- ☐ Responsible Parties

- ☐ Maintenance activities
- ☐ Names and phone numbers of anyone performing maintenance activities at or near the site
- ☐ Schedule

5) Monitoring Plan

- ☐ Responsible Parties
- ☐ Names and phone numbers of individuals/contractors performing monitoring duties
- ☐ Performance Criteria
  - Physical, hydrologic, and biotic attributes, plant survival, plant health, percent native and/or invasive, increase in percent effective shade, substrate composition and/or condition,
- ☐ How will success be judged?
  - Increase in pool depths, decreased erosion rates, establishment of riparian species, recruitment of flora and fauna, increased pool/riffle ratio, increased shade, decreased water temperatures, increased water quality, increase in biotic diversity or structure, hydrologic improvements, and/or improvements in physical structure condition, etc.
- ☐ Is there a reference site?
  - If a reference site is incorporated in the plan, include where it is located and what the current conditions are (see performance criteria above)
- ☐ Monitoring methods
  - Describe in detail how the site will be monitored
- ☐ Reports
  - Detail a reporting program and schedule
- ☐ Schedule
  - How often will the site be monitored? How long will the site be monitored?

6) Completion of Mitigation

- ☐ Notice of completion (i.e. agencies to be contacted)
- ☐ Regional Board confirmation

7) Final Success Criteria

- ☐ Target functions and values achieved
  - Ultimate target functions and values or condition of the mitigation (i.e. wetted channel width, pool/riffle ratio, complexity, canopy cover, effective shade, flora/fauna recruitment, physical structure, biotic structure, hydrology, etc.)
- ☐ Target hydrologic scheme achieved
  - Wetted width, bankfull width, mean/maximum depths, flow regime, etc.
- ☐ What are the ultimate hydrologic conditions for the site?
  - Based on conditions prior to any degradation or human impacts (best case scenario)
- ☐ Target jurisdictional acreage created/restored
- ☐ Total acres restored or created through mitigation project
- ☐ Establishment of native riparian species
  - Based on monitoring, reviewed after determined number of years

Attachment C - Wetland Mitigation Checklist

Wetlands should not be disturbed if at all possible. If it is determined that a wetland will be affected by the proposed development, mitigation will need to be done on at least a 1:1 ratio to preserve the function and values of the wetland and its associated beneficial uses. Clarification of information may be requested by Regional Water Board staff during application review. This checklist is intended to aid applicants in submitting complete and proper information regarding mitigation plans, to enable staff to effectively evaluate the project. Not all of the items on the checklist will apply to each and every project, rather they are to be used as general guidelines for needed information to be included. In addition, there may be items not covered on this checklist that may be requested on a project by project basis.

1) Goals of Mitigation

- ☐ Variety of habitats to be created/restored
  - What type of wetland will be created/restored? (i.e. seasonal, freshwater, saltwater, swale, vernal pool, etc.)
- ☐ Functions and values and/or condition of habitat to be created
  - What are the functions and values and/or of the created/restored wetland? (i.e. wildlife habitat, native plant communities, increased water quality, physical structure, biotic structure, etc.)
- ☐ Other mitigation steps taken: **avoid**, minimize, compensate
- ☐ Time schedule for mitigation
- ☐ Work plan
  - Project start date; length mitigation activities will take place; specific work (exotic species removal, native species plantings, etc.) to be conducted during particular times of the year

2) Proposed Mitigation Site

- ☐ Location and size of mitigation area
- ☐ Include site map and regional map of mitigation project
- ☐ Existing functions and values
  - What are the functions and values and/or of the created/restored wetland? (i.e. wildlife habitat, native plant communities, increased water quality, physical structure, biotic structure, etc
  - Include a copy of delineation report of mitigation site
- ☐ Current conditions at the site (mostly natural, degraded, heavily impacted)
- ☐ If the site is degraded explain past uses and current land stressors leading to degradation
- ☐ Present and proposed uses of mitigation area
  - Provide habitat for flora/fauna, recreation, open space, etc.
- ☐ Current uses of the area

3) Implementation Plan

- ☐ Responsible Parties
- ☐ Rationale for expecting success
- ☐ Site Preparation Plan
- ☐ Planting Plan
  - Dates of proposed plantings, native species to be planted, density of plantings, etc.
- ☐ Irrigation Plan (if applicable)

4) Maintenance During Monitoring Period

- ☐ Responsible Parties
- ☐ Maintenance activities
- ☐ Names and phone numbers of anyone performing maintenance activities at or near the site
- ☐ Schedule

5) Monitoring Plan

- ☐ Responsible Parties
- ☐ Names and phone numbers of individuals/contractors performing monitoring duties
- ☐ Performance Criteria
  - Percent native species duration and season of water inundation, hydrology, physical structure, biotic structure, percent native/invasive, etc.
- ☐ How will success be judged?
  - Establishment of native flora/fauna, ponding of water during appropriate portion of season, increased water quality, improvement of condition, etc.
- ☐ Is there a reference site?
  - If a reference site is incorporated in the plan, include where it is located and what the current conditions are (see performance criteria above)
- ☐ Monitoring methods
  - Describe in detail how the site will be monitored
- ☐ Reports
  - Detail a reporting program and schedule
- ☐ Schedule
  - How often will the site be monitored? How long will the site be monitored?

6) Completion of Mitigation

- ☐ Notice of completion (i.e. agencies to be contacted)
- ☐ Regional Board confirmation

7) Final Success Criteria

- ☐ Target functions and values
  - Ultimate target functions and values and/or condition of the mitigation (i.e. native flora/fauna recruitment, inundation of water during appropriate season, biodiversity, special species habitat)
- ☐ Target hydrologic scheme
  - Inundation period of area
- ☐ What are the ultimate target conditions for the site?
  - Percent native species duration and season of water inundation, hydrology, physical structure, biotic structure, percent native/invasive, water quality improvement, etc.
- ☐ Target jurisdictional acreage to be created/restored
- ☐ Total acres restored or created through mitigation project
- ☐ Establishment of native wetland species
  - Based on monitoring, reviewed after determined number of years

Attachment D - Storm Water and Low Impact Development

The Regional Water Board requires the use of Low Impact Development (LID) and best management practices (BMPs) that treat and retain (infiltrate, capture, evapotranspirate and store) storm water runoff on the project site. If on-site treatment is not feasible, off-site mitigation may be required for projects that result in a net increase of impervious surface.

LID is a development site design strategy with a goal of maintaining or reproducing the pre-development hydrologic system through the use of design techniques to create a functionally equivalent hydrologic setting. LID emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. Hydrologic functions of storage, infiltration, and ground water recharge, as well as the volume and frequency of discharges, are maintained through the use of integrated and distributed storm water retention and detention areas, reduction of impervious surfaces, and the lengthening of flow paths and runoff time. LID seeks to mimic the pre-development site hydrology through infiltration, interception, reuse, and evapotranspiration. LID requires that the storm water runoff volume from small storms be retained onsite.

Other LID strategies include the preservation and protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, valuable trees, flood plains, woodlands, native vegetation and permeable soils. Natural vegetation and soil filters storm water runoff and reduces the volume and pollutant loads of storm water runoff. Other benefits from LID implementation include reducing global warming impacts from new development (preserving carbon sequestering in native soils and retaining native vegetation), increasing water supply (by encouraging ground water recharge) and reducing energy consumption.

LID requires the use of landscape-based BMPs that filter storm water runoff using vegetation and amended soil prior to infiltration. Examples of these types of BMPs are rain gardens and vegetated swales. LID BMPs need to be sized to treat the storm water runoff from all impervious surfaces (e.g. roads, roofs, walkways, patios) using the following sizing criteria:

1. The volume of runoff produced from the 85th percentile of 24-hour rainfall event, as determined from the local historical rainfall record; or

2. The volume of runoff produced by the 85th percentile 24-hour rainfall event, determined using the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, p. 170-178 (1998); or

3. The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in California Storm Water Best Management Practices Handbook-Industrial/Commercial (1993).

BMPs to prevent erosion and the release of sediment or hazardous materials during construction activities should be included in the project to prevent sediment and other pollutants reaching surface waters or leaving the site in storm water runoff. These can include scheduling grading to take place during the dry season, identifying staging areas for work vehicles that are separated from sensitive areas, training employees in procedures for cleaning up spills of hazardous materials, and erosion and sediment control techniques.

Low Impact Development Resources

Santa Rosa's Storm Water Program and LID Technical Manual (in development with the North Coast Regional Water Board):
www.srcity.org/stormwaterLID

Low Impact Development Center: http://www.lowimpactdevelopment.org/