Whither California's Wetlands? – Probable Net Loss of Wetland Functions Due to Water Board Staff Inattention, and a Modest Solution

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Capstone Project Submitted in Partial Fulfillment of Requirements for
Master of Advanced Studies Degree
Scripps Institution of Oceanography
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EXECUTIVE SUMMARY

According to the IPCC, anthropogenic greenhouse CO2 is most likely responsible for recent global warming.

California's coastal and sea grass wetlands sequester large amounts of CO2--between 9 and 35 metric tons/acre/year over 2.9million acres of salt marsh, riverine and upland wetlands, for totals of 26.1million to 101.5 million tons sequestered CO2.

The 1972 Federal Clean Water Act required the implementation federal and state regulations and boards to ensure that there would be "no net loss of wetlands."

Under the Federal Clean Water Act and the California Porter-Cologne Act, the State Water Resources Control Board and its Regional Boards have the duty to review proposed development or discharge projects which require Section 401 Certifications (permits) to insure that there is "no net loss of wetlands." If a jurisdictional wetland is affected or impacted by the proposed development, the Water Board is required to compel the developer to provide a "compensatory mitigation wetland," either onsite or at an agreed offsite location.

The Water Board enforces the "no net loss of wetlands" requirement by simply ensuring that the acreage of the compensatory wetland equals or marginally exceeds the acreage of the impacted wetland, while largely ignoring the post-construction health of mitigation wetland functions.

Professor Richard Ambrose of UCLA performed two studies of California compensatory wetlands in the 2000s, including one report commissioned by the State Water Resources Control Board. His first survey in Orange County found that 75-86% of as-built compensatory wetlands failed in at least one important function category, and that 25-33% of wetlands in the second statewide study fell below par for wetlands standards. In a 2015 summary report based on his studies of California's compensatory mitigation wetlands, Ambrose concluded that 81% of the files studied displayed "Sub-

Optimal, Marginal or Poor" conditions, while only 19% displayed "Optimal" conditions compared to Reference Site wetlands data.[1]

This Capstone project began in an effort to standardize permit conditions and to objectify evaluation standards for post-construction mitigation wetlands. Permit conditions in fact employed by the Region 9 Water Resources Control Board ("Water Board") do address performance standards and California Rapid Assessment Method (CRAM) baseline and as-built scores to evaluate wetland performance functions.

However, because of "workload", Region 9 Water Board staff has largely failed to review post-construction evaluation reports for mitigation wetlands.

Applying the Ambrose failure percentage to un-reviewed post completion reports since 2014 (when the Water Board required electronic submission of reports), shows that California has effectively experienced a net loss of wetlands due to the percentage failure of the mitigation wetlands functions discovered in the Ambrose studies.

This Capstone project morphed to provide both a tickler system to alert Water Board staff when Annual Reports are due, to send reminder letters to project developers

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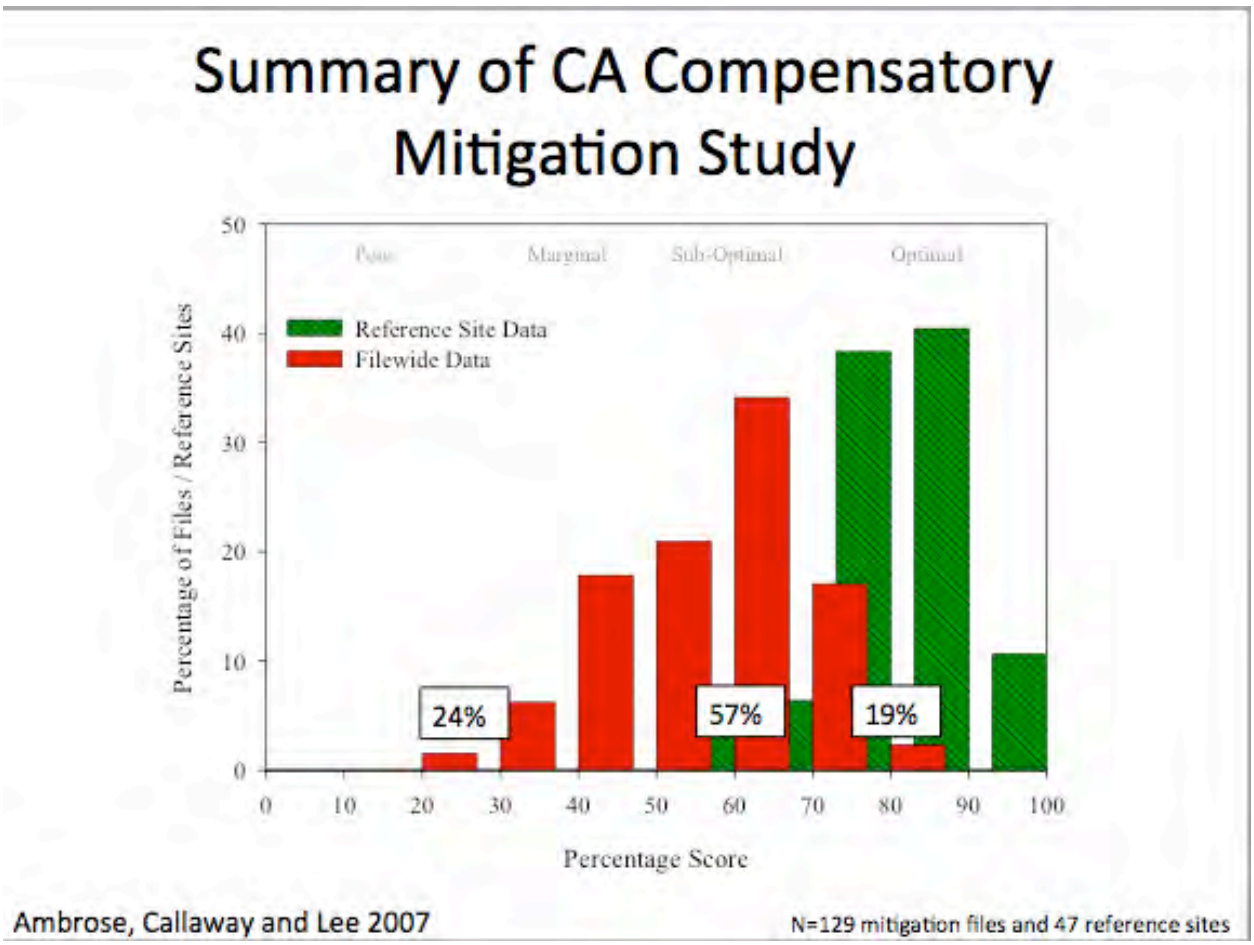


that the reports are due, then to send enforcement letters if the Annual Reports are simply not filed by project developers.

Additionally, this Capstone project created a "Top Sheet" to guide Water Board student interns in a preliminary review of any post-completion mitigation wetland reports, in order to red flag failing wetlands for more detailed review by professional staff.

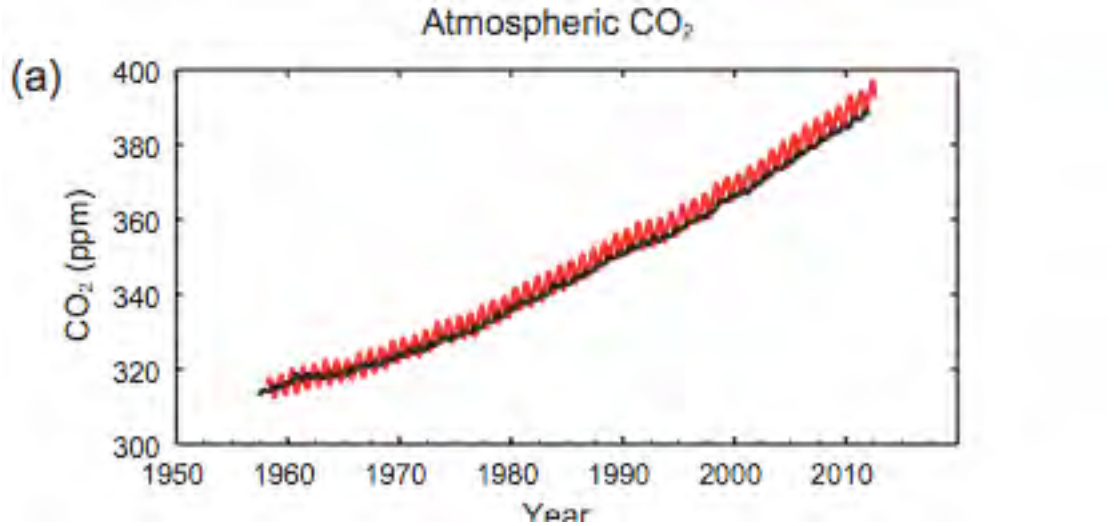
Finally, the time records kept by the Capstone project students in reviewing the Annual Reports and post-completion reports will offer evidence for the Region 9 Water Board to request additional personnel and resources from the State Board to accomplish a timely review of the compensatory wetland evaluation reports.

SCIENCE

The Intergovernmental Panel on Climate Change (IPCC) recently concluded that it is 95% certain that the increased global warming in the last 30 years is most likely due to the increase of anthropogenic greenhouse gas CO2 in our atmosphere[2]. According to the late Scripps Institution of Oceanography scientist David Keeling, the Keeling Curve shows atmospheric CO2 has increased sharply since 1955.[3] Climate scientists

[2] Total radiative forcing is positive, and has led to an uptake of energy by the climate system. The largest contribution to total radiative forcing is caused by the increase in the atmospheric concentration of CO2 since 1750 (see Figure SPM.5). {3.2, Box 3.1, 8.3, 8.5}, https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SummaryVolume_FINAL.pdf p.13.

[3] See Keeling CO2 curve:
https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SummaryVolume_FINAL.pdf p. 12.:



suggest immediate measures should be taken by human populations to reduce anthropogenic GHGs, especially carbon dioxide.[4]

Coastal wetlands serve many functional purposes for our environment[5], including sequestration of large amounts of CO2[6]. Coastal wetlands and sea grass in California sequester between 9 to 35 metric tons of CO2 per acre per year.[7] NOAA studies claim that nationwide, coastal wetlands and sea grasses sequester approximately 547 metric tons of CO2 equivalent per acre per year.[8] California has already lost approximately 91 percent of its wetlands due to conversion to agricultural land, and to coastal and riverine development for the state's increased population.[9] In 2010, California had 2.9million acres of functional salt marsh, riverine and upland wetlands, according to a California Coast Keeper study.[10]

Besides the CO2 sequestration and runoff water filtration functions of wetlands described above, in low-lying coastal areas of the states bordering the Gulf of Mexico and along the east coast of the United States, wetlands provide a buffer against global warming's increased storm surges, such as those encountered in Hurricane Katrina in New Orleans and Superstorm Sandy in the New York/New Jersey/Connecticut tri-state area.

LAW AND ADMINISTRATIVE POLICIES ON WETLANDS IN CALIFORNIA

In 1972 President Nixon signed into law the Clean Water Act.[11] Besides section 401's requirement that the country and its states limit the discharge into the "waters of the United States" TMDLs (total maximum daily loads) of specific substances listed in the administrative regulations, the second object of the law's policy, was that there be "no net loss, or if possible gain" of wetlands.[12] This rule applies to the administration of

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[4] "Stabilizing greenhouse gas concentrations in the atmosphere requires emissions reductions from energy production and use, transport, buildings, industry, land use, and human settlements. Land is a key component for the 2°C goal. Slowing deforestation and planting forests have stopped or even reversed the increase in emissions from land use. Through afforestation, land could be used to draw carbon dioxide from the atmosphere." IPCC 2014- Synthesis Report: <http://www.un.org/climatechange/the-science/>

[5] http://water.usgs.gov/nwsum/WSP2425/hydrology.html
[6] http://www.habitat.noaa.gov/coastalbluecarbon.html
[7] Miller, Robin L., 2011 carbon gas fluxes in Re – Established Wetlands on Organic Soils differ relative to plant community and hydrology, Wetlands DOI 10.1007/s13157-011-0215-2.
[8] www.habitat.noaa.gov/coastalbluecarbon.html
[9] http://geochange.er.usgs.gov/sw/impacts/hydrology/wetlands/
[10] http://d3n8a8pro7vhmx.cloudfront.net/coastkeeper/pages/170/attachments/original/1401223161/state-of-wetlands.pdf?1401223161 at p.6.
[11] 33 U.S.C. §1251 et seq. (1972)
[12] https://en.wikipedia.org/wiki/No_net_loss_wetlands_policy. (This policy was first annunciated by the George H.W. Bush administration, and reinforced during the Clinton administration in 1998. By his 1993 Executive Order W-59-92, the Governor of California adopted for the State a "no net loss and net gain" policy, and ordered that CA's government programs and policies which affect wetlands be coordinated to ensure no overall net loss and long term net gain in the quantity, quality, and permanence of wetland acreage and values in a manner that fosters creativity, stewardship, and respect for private property. See,

section 404 Army Corps of Engineers jurisdictional decisions, and to section 401 Certifications (permits) issued by California's State and Regional Water Quality Control Boards, which are empowered by the state to administer the Clean Water Act.[13]

California's State Water Resources Control Board was created by the legislature in 1967. In 1970 the Porter-Cologne Act combined the State Water Rights Board with the State Water Resources Control Board, and created its subordinate nine Regional Water Quality Control Boards for the various regions of this large state[14].

The way the implemented Clean Water Act system works in California is that the federal Army Corps of Engineers (ACOE) delineates areas it determines are jurisdictional "waters of the United States" (which means any flowing or ephemeral tributaries that eventually drain into United States bays, rivers or ocean waters). When a developer seeks to develop a property that encompasses an area designated by ACOE as affecting the jurisdictional waters of the United States, the Regional or State Water Board must evaluate the developer's plan to assure: first, that there are no point source discharges that exceed the listed TMDLs (total maximum daily loads) of various elements, compounds, materials or biotics specified in administrative regulations; and second, that the development will not impact or affect any wetland within those jurisdictional boundaries. If a jurisdictional wetland is encompassed within the proposed development project, the Water Board in issuing its Section 401 Certification (permit), must determine whether that wetland will be affected, and if so, the developer is required in the 401 Certification (permit) to reestablish a "compensatory mitigation wetland." In practice, the developer must either create or rehabilitate a wetland within the boundaries of his project, make an agreement with the Water Board to create a compensatory mitigation wetland at some offsite location, or pay a huge in-lieu cash mitigation fee.

Generally the Region 9 Water Board attempts to insure that the mitigation wetland is at least as large in acreage, or marginally larger than the wetland acreage affected by the development project. The Region 9 Water Board apparently views this practice as meeting its responsibility to enforce the "no net loss of wetlands" requirement of the Clean Water Act. In fact, acreage size is of little import if the wetland's functions are impaired or fail.

The Water Board requires the developer to submit a "Mitigation Plan" prepared by professional consultants which explain the proposed physical parameters and functions of the compensatory mitigation wetland-- how it will be built, how its hydrology, biology and plant animal habitat will work, and how its other functions are projected to behave. The Mitigation Plan often contains "performance standard" goals in each of the relevant wetlands function categories that the Mitigation Plan suggests the compensatory mitigation wetland will implement. So despite the Water Board's mere calculation of compensatory wetland acreage as compliance with the "no net loss of

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<http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/wrapp2008/executive_order_w59_93.pdf>)

[13] Ibid.

[14] http://www.waterboards.ca.gov/publications_forms/publications/factsheets/docs/region_brds.pdf

wetlands" doctrine, the Regional Boards' 401 Certification (permit) requirements acknowledge the necessity of the mitigation wetland's functional performance.

The 401 Certification (permit) contains mandatory conditions required of the project developer. One is that the developer must submit to the Water Board an "Annual Report" describing the stage of completion of the project and the stage of completion of the compensatory mitigation wetland. As the project progresses, the Annual Reports should reflect the progress of both the development project and the mitigation wetland. Upon completion of the mitigation wetland, the project applicant is required to provide a report to the Water Board every year for 5 years after completion to show the wetlands health with respect to its primary functions and performance standards.

Traditionally these post-completion wetland reports have been subjective reports prepared by the developer's consultant, but in recent years the employment of the "California Rapid Assessment Method" (CRAM[15]) of wetland health has added to the objectivity of this assessment. The requirement in the 401 Certification process that a CRAM baseline study be done before the project is begun, and that CRAM scores be reported to the Water Board in each of the five annual post-completion reports, is designed to take the pulse of the mitigation wetland to assure that it continues to function properly. By comparing wetland CRAM scores and performance functions before and after project completion to those proposed by the developer in his Mitigation Plan, the Water Board judges whether the constructed mitigation wetland is in fact behaving as a wetland should in terms of its multiple functions toward clean water. If the wetland is failing in wetland functions, the Water Board under its 401 Certification powers can compel the developer to correct the wetland's shortcomings.

Of course, this process assumes that the Water Board actually reviews the post-completion reports on wetlands health to assure that the wetlands are performing the functions they are expected to perform as a contribution to clean water. The assurance of wetland performance is one of the elements the Water Quality Control Boards are supposed to monitor on behalf of the public in their compliance with the Clean Water Act's "no net loss of wetlands" requirement. So if the post-construction mitigation wetlands are not performing as proposed, California has in fact had a "net loss" of wetlands due to the failing functions of the compensatory wetlands.

THE AMBROSE REPORTS

In the decade of the 2000s, UCLA Professor Richard Ambrose, a PhD in environmental studies, undertook two field research projects to evaluate the functions of post-construction mitigation wetlands. The first study in 2002 focused on as-built mitigation wetland sites in Orange County, California[16]. The second study in 2007, on commission from the State Water Resources Control Board, was undertaken within the

[15] http://www.cramwetlands.org/; http://www.cramwetlands.org/sites/default/files/2008-11_Calif%20CRAM%20Factsheet%20Nov10%20HiRes.pdf

[16] Sudol, M. F. Ambrose, R. F. The US Clean Water Act and habitat replacement: Evaluation of mitigation sites in Orange County, California, USA. Environmental Management. 2002; 30(5): 727-734.

jurisdictions of all nine Regional Water Resources Control Boards in California[17]. The Orange County/southern California study showed in sum, that between 75 and 85 percent of the constructed compensatory mitigation wetlands at time periods between 3 and 10 years after construction, failed in one or more of the major categories of wetland functions. The 2007 Statewide study concluded: "We found that permittees are largely following their permit conditions (although one-quarter to one third of the time these are not met), but the resulting compensatory mitigation projects seldom result in wetlands with optimal condition."[18] In a 2015 summary report based on his studies of California's compensatory mitigation wetlands, Ambrose concluded that 81% of the files studied displayed "Sub-Optimal, Marginal or Poor" conditions, while only 19% displayed "Optimal" conditions compared to Reference Site wetlands data.[19]

Ambrose's major conclusions were that the failures were due to inconsistent permit conditions as between individual permitting agencies (individual Regional Water Boards and the municipalities within their jurisdiction), and the lack of any uniform objective standards by which to evaluate post-construction mitigation wetlands. In both studies, Professor Ambrose discovered that many of the records necessary to evaluate a post-construction wetland-- including the Mitigation Plan, and the post-completion evaluation reports-- could not be located in the Water Board's archives.

THIS CAPSTONE PROJECT AND INVESTIGATION

I was provided access to the Region 9 Water Board's executive director and various staff personnel in office meetings, under the auspices of Professor Henry Abarbanel, a senior physics professor at University of California San Diego and Scripps Institution of Oceanography, who happens at present to serve as the appointed Chairman of the Region 9 Water Quality Control Board[20].

The original goal of this Capstone project was to attempt to provide the Region 9 Water Board (San Diego watershed region) with procedures to effect uniform permit conditions and a uniform system of evaluation for post-construction mitigation wetlands. The Region 9 Water Board has already installed procedures to insure 401 Certifications (permits) contain requirements for baseline and post-construction wetland CRAM studies and performance standards for comparative evaluations of wetlands health[21]---- if those reports are actually reviewed by staff.

My early meetings with staff suggested that everything was fine at the Water Board and all its bases were covered for issuance of Section 401 Certifications

[17] http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/mitigation_finalreport_wo_app081307.pdf

[18] http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/mitigation_finalreport_wo_app081307.pdf

[19] See footnote 1 above; Ambrose, Calloway and Lee (2007).

[20] All meetings with Region 9 Water Board staff discussed herein were conducted by the author from DEC 2015 through May 2016. HLS Capstone Timeline of staff interviews and activities is attached hereto as Appendix A.

[21] Author interviews with Region 9 Water Board staff DEC 2015-MAY 2016.

(permits), and to evaluate Annual Reports and post-completion reports for mitigation wetlands. Initially, I encountered some bureaucratic resistance from several civil service staff members of the Region 9 Water Board, especially those who had recently served as chiefs of the Enforcement Division – – those who should have reviewed and evaluated post-construction mitigation reports and undertaken enforcement efforts if those reports showed failing wetlands[22].

Eventually staff suggested that they had a problem staying on top of the post-construction mitigation wetland reports, and Annual Reports in general, and that they were unsure they could find any Annual Reports or post-construction mitigation reports prior to 2014, at which time the Water Boards required all reports be submitted electronically.

Then staff suggested that they really had no way to know if a required Annual Report or post-construction report had even been filed by the developer, even though those reports are mandatory permit conditions of 401 Certifications[23].

In response to that revelation I suggested that by utilizing computer science and engineering students at UCSD, we could construct for the Water Board a tickler system that would notify them every week which project Annual Reports were due so the staff could send a courtesy letter reminding the developer that the report would be due in 60 days. We constructed that tickler system, I drafted a reminder form letter to be sent to project applicants 60 days before their Annual Reports are due. Then I prepared an enforcement letter to be sent 30 days after the developer fails to file his Annual Report. The enforcement letter contains a formal Notice of Violation and asserting the potential penalty powers of the Water Board including daily fines of up to $10,000.00[24].

Staff initially objected to the implementation of this system on the basis that they already had a state computer system theoretically capable of providing tickler reminders (although not used by staff), so it would be unnecessary to have a separate tickler system. This was after I and my student employees had already created the Excel spread sheet tickler system for the Water Board.

Next, our liaison to the Water Board put us in touch with their state computer system ("CIWQS") on-site expert to show us how the state system could be used to provide these tickler functions for the mandatory reports. That meeting showed us that the state computer system was "klugey"-- unwieldy and difficult to navigate if one were not already familiar with the dropdown menus and the organization of the program.

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[22] Ibid.

[23] A list of all 82 active Region 9 Water Board sect. 401 Certifications is attached hereto as Appendix B. An exemplar of a recent typical Region 9 sect. 401 Certification (permit) for the Belle Terre project is attached here to as Appendix C. HLS memo of that 401 Certification's 37 specific mandatory reporting requirement dates is attached hereto as Appendix D.

[24] The Excel spreadsheet "tickler" program, and draft form reminder and enforcement letters designed for Water Board staff are attached hereto as Appendices E (available from author), F and G.

After we crossed that hurdle we discovered that since 2014 all Annual Reports for the Region 9 Board were arbitrarily designated to be due on March 1 of every year, and that Water Board intake personnel received and sorted incoming electronic documents including Annual Reports, then diverted them to the responsible staff individual for each particular project. It also came to our attention that often the post-completion mitigation wetland reports were not necessarily so identified, but might arrive designated as an "Annual Report."

It became obvious to us that the sorters of these electronic documents received by the Water Board could easily copy and direct any submitted Annual Report to a FTP folder for me and my students to review. We requested that the Water Board do this and the Water Board staff quickly agreed to create an FTP folder outside the state system in which to deposit Annual Reports for our review.

We discovered there was a substantial backlog of Annual Reports that had not been reviewed by Water Board staff because there was not enough staff time, or staff personnel, or money from the State Water Board for the Region 9 staff to perform those reviews.[25] Since these Annual Reports would be available to us on an FTP site for review, we offered the students' services to review the entire substantial backlog of Annual Reports of the Region 9 Water Board to cull out post-completion mitigation wetlands reports. The students would perform a "preliminary review" in accordance with a "Top Sheet[26]" that provided guidance what to quickly look for in the post-completion reports. This preliminary review would enable the Water Board's regular student interns to "red flag" reports of failing or potentially failing mitigation wetlands.

It was agreed with Water Board that as a pilot project we would evaluate all the Annual Reports from 2014 forward to clear the Water Board's backlog of un-reviewed reports. The Region 9 Water Board has 82 active 401 Certification (permit) projects, so for the three, one year periods from 2014 to 2016 there should have been at least 246 Annual Reports in the FTP folder. After the first upload of Annual Reports to the FTP folder, only 13 Annual Reports were found by the Region 9 Water Board. That means there are 233 Annual Reports which are missing or misplaced. Water Board liaison has directed staff to contact each of the 82 active permitees to determine whether they sent in their Annual Reports, whether the reports were misplaced, or whether the permittees simply did not file their mandatory Annual Reports. [This state of facts contradicts the Water Board staff's initial assertion that they had the Annual Report receipt and review procedure under control.]

[25] Professor Ambrose, who has been dealing with the Water Boards since the early 1990s, observed that while in fact they are understaffed, the Water Boards' civil service staff had been voicing the same excuses for 25 years, covering almost three generations of Water Board staff civil service employees. [Email to HLS from Prof. Ambrose to HLS 5/1/16.]

[26] The Top Sheet form was designed by the author based on discussions with and input from Prof. Richard Ambrose, and focuses on easy to locate information in the post-completion reports. A Top Sheet form is attached hereto as Appendix H.

WHERE THE CAPSTONE PROJECT STANDS NOW

Assuming the Water Board is able to find the missing 233 reports, my students and I should be able to eliminate the backlog of un-reviewed Annual Reports, and more specifically to identify and review the post-construction mitigation wetlands evaluation reports in order to red flag any wetlands that may be failing or on the verge of failing. I have made arrangements with UCSD and the engineering and computer science students to fund the project till September 18, 2016-- assuming more Annual Reports are found—in order to complete the parsing of the backlog of Annual Reports and to review the post-completion mitigation wetland evaluation reports.

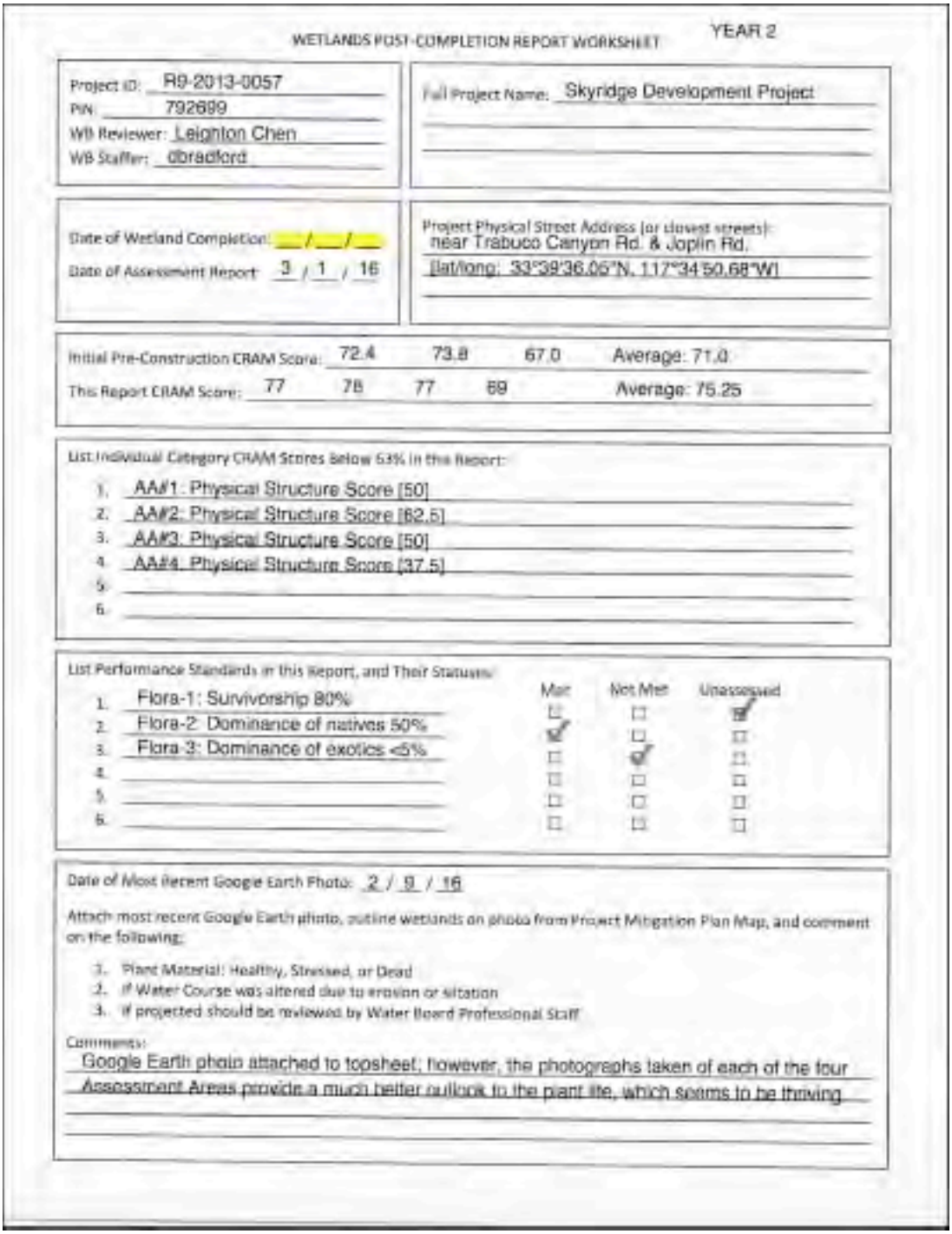
CONCLUSIONS AND DELIVERABLES

1. The startling aspect of these discoveries is that the Water Board staff had reported to us they typically receive 110 applications for 401 Certifications (permits) every calendar year. But even assuming only 82 active 401 Certifications per year, applying that number to Ambrose's Orange County report of 75 to 85 percent of post-construction wetlands failing in some major function category, or his statewide report of 25-33% permit conditions not being met by 401 Certification permittees, or 81% of the studied wetlands being "Sub-Optimal, Marginal or Poor," California has effectively lost wetlands functions over the last 25 years. This loss contradicts the Clean Water Act's and California's executive order imperatives of "no net loss of wetlands."

2. If the Region 9 Water Board is able to locate or compel filing of the missing Annual Reports, and we are able to review the backlog to red flag potentially failing wetlands, in the future the Water Board could employ our spreadsheet tickler system and preliminary review Top Sheets to tell them when Annual Reports are due, prepare a reminder form letter to developers 60 days before the report is due, then follow up with a strong enforcement letter 30 days after the due date if the Annual Report is not filed. Our system should be self-tending with student intern manpower, which the Water Board has regularly available each year. The student interns could manage the tickler system and form letters, perform preliminary reviews, and a top sheet evaluation[27] of

[27] The Top Sheet works! Our top sheet evaluation of the Skyridge project report (below), one of the 13 project reports produced by the WB, shows that our top sheet preliminary review works. It shows four of the project's Physical Structure CRAM scores falling below 63% in all four Assessment Areas, and "Not Met" and "Unassessed" check marks for the Flora 1 and Flora 3 performance standards. That means an intern would red flag this project for referral to a professional Water Board staff member for further inquiry and review.

any post-construction wetlands mitigation reports that are filed on their watch. Our system, if allowed to be implemented, should take care of the problem of post-construction wetlands reports being ignored by the Region 9 Water Board, and possibly serve as a template for the other Regional Water Boards that are likely experiencing the same problem.



WETLANDS POST-COMPLETION REPORT WORKSHEET YEAR 2

Project ID: R9-2013-0057
PIN: 792699
WB Reviewer: Leighton Chen
WB Staffer: dbradford

Full Project Name: Skyridge Development Project

Date of Wetland Completion: ___ / ___ / ___
Date of Assessment Report: 3 / 1 / 16

Project Physical Street Address (or closest streets):
near Trabuco Canyon Rd. & Joplin Rd.
(lat/long: 33°39'36.06"N, 117°34'50.68"W)

Initial Pre-Construction CRAM Score: 72.4 73.8 67.0 Average: 71.0
This Report CRAM Score: 77 78 77 69 Average: 75.25

List Individual Category CRAM Scores below 63% in this Report:

1. AA#1: Physical Structure Score [50]
2. AA#2: Physical Structure Score [62.5]
3. AA#3: Physical Structure Score [50]
4. AA#4: Physical Structure Score [37.5]
5.
6.

List Performance Standards in this Report, and Their Statuses:

		Met	Not Met	Unassessed
1.	Flora-1: Survivorship 80%	☐	☐	☑
2.	Flora-2: Dominance of natives 50%	☑	☐	☐
3.	Flora-3: Dominance of exotics <5%	☐	☑	☐
4.		☐	☐	☐
5.		☐	☐	☐
6.		☐	☐	☐

Date of Most Recent Google Earth Photo: 2 / 9 / 16

Attach most recent Google Earth photo, outline wetlands on photo from Project Mitigation Plan Map, and comment on the following:

1. Plant Material: Healthy, Stressed, or Dead
2. If Water Course was altered due to erosion or siltation
3. If projected should be reviewed by Water Board Professional Staff

Comments:
Google Earth photo attached to topsheet; however, the photographs taken of each of the four Assessment Areas provide a much better outlook to the plant life, which seems to be thriving.

3. In the unlikely event that it takes an excessive amount of time to parse out, then preliminarily review the post-completion wetland reports, the time records kept by my student employees to perform the reviews will serve as support for the Region 9 Water Board to request additional personnel to accomplish these important reviews and to assure “no net loss” of wetland functions in California.

APPENDICES

A. HLS CAPSTONE RESEARCH TIMELINE

B. LIST OF ACTIVE SECTION 401 CERTIFICATIONS AT SAN DIEGO REGION 9 WATER QUALITY CONTROL BOARD MAY 2016

C. EXEMPLAR: BELLE TERRE PROJECT SETION 401 CERTIFICATION (PERMIT) DOCUMENT

D. HLS TIMELINE OF 37 REPORT DUE DATES IN BELLE TERRE SECTION 401 CERTIFICATION

E. MS EXCEL SPREADSHEET "TICKLER" PROGRAM FOR ANNUAL REPORT DUE DATES FOR SECTION 401 CERTIFICATION PROJECTS

F. DRAFT COURTESY REMINDER LETTER OF ANNUAL REPORT DUE DATE FROM WB TO PROJECT APPLICANT

G. DRAFT ANNUAL REPORT PAST-DUE ENFORCEMENT LETTER FROM WB TO PROJECT APPLICANT

H. FORM: EVALUATION "TOP SHEET' FOR WB STUDENT INTERNS TO EVALUATE POST-COMPLETION MONITORING REPORTS FROM PROJECT APPLICANTS

APPENDIX A

TO: Prof. Lynn Russell; Prof. Henry Abarbanel; Ellie Farahani

FROM: H. Lawrence Serra

DATE: May 24, 2016

SUBJECT: HLS Capstone Project Timeline

☐ September through December 2015. Numerous office conferences and emails to Professor Henry Abarbanel at UCSD/SIO Physics Department on refining Capstone project objectives at San Diego Water Control Assurance Board.

☐ January 12, 2016. All day meeting at San Diego Water Board with executive director David Gibson and five staff members.

☐ February 2, 2016. HLS travel to Costa Mesa for office conference with Eric Stein of SCCWRP re wetlands mitigation project assessment and various matters; attend webinar on protocols to evaluate compensatory mitigation wetlands.

☐ February 9, 2016. All-day travel to UCLA; long conference Professor Richard Ambrose of UCLA re evaluation of performance standards of constructed wetlands mitigation projects and suggestions to increase follow-up monitoring success.

☐ February 23, 2016. Luncheon conference Professor Henry Abarbanel re progress on Capstone project and revisions of San Diego Regional Water Board tracking procedures for follow-up mitigation assessment.

☐ March 1, 2016. Half-day meeting with Exec. Dir. David Gibson of San Diego Water Board, Eric Becker, Enforcement Div. engineer, and Jimmy Smith, Chief Enforcement officer, re tracking project for follow-up wetlands assessment reports.

☐ March 30, 2016. Review and brief 41pp Water Board 401 Certification (permit) for Belle Terre project to identify 37 separate Water Board due dates within the permit document.

☐ March 31, 2016: Prepare memorandum to Eric Becker at SD Water Board re choosing Plans A, B and C—what reference dates to use for programming timeline of the 37 Water Board permit due dates.

☐ April 1, 2016. Meeting with Dale Tubat and Leighton Chen, engineering and computer science students (hereafter "CS students") at UCSD, re employment as programmers and report reviewers for San Diego Water Board follow-up assessment report tracking system.

☐ April 2. Dictate memorandum to SIO/UCSD administration for authorization of funding for programming tasks for UCSD computer science students Tubat and Chen.

☐ First week April 2016: Obtain funding approval from UCSD to seek employment of engineering and computer science student programmers; communicate with San Diego Water Board about form of revised "Business Rules" to permit installation of reports' due dates tracking program.

☐ April 2-10, 2016. Draft various emails to SIO/UCSD staff re funding proposal to hire two CS students to program Excel spreadsheet for WB monitoring report due dates.

☐ April 9, 2016. Draft approaching due date courtesy form letter for Water Board to send to project applicants 60 days before Annual Report is due. Draft enforcement form letter for late Annual Report at 30 days after report due date.

☐ April 10, 2016. Various commuications with Prof. Abarbanel about delay of processing of CS student funding by UCSD staff, delay in meetings with Water Board personnel, and Capstone project timeline.

☐ April 10, 2016. Receive tentative approval for CS student funding from UCSD student employment office.

☐ April 10, 2016. Draft emails to CS students with instructions and parameters to begin coding of timeline spreadsheet for due dates of follow-up monitoring reports to Water Board.

☐ April 18, 2016. Draft agenda and prepare relevant documents for April 21 meeting with SD Water Board staff, including:

- Agenda document;
- Memo on CIWQS Business Rules F and H which support computer coding of timeline project;
- Exhibits: CIWQS Business Rules F and H;
- Memo on 37 timeline due dates contained in SD Water Board's Belle Terre 401 Certification/Permit;
- Courtesy reminder form letter of Annual Report Due Date from SD Water Board to Applicant;
- For applicant's failure to file Annual Report: Enforcement letter and Notice of Violation from SD Water Board to Applicant.

☐ April 19, 2016. Meet with CS students to review work to date on coding Water Board Annual Report deadlines tickler software in MS Excel spreadsheet.

☐ April 21, 2016. After UCSD funding approved for CS students, seek approval of Plan A, B or C by San Diego Water Board re organization of timeline tracking program. Inquire about SD Water Board's untended GIS report website re CS students reinvigotating it.

☐ April 21, 2016. Meeting with WB liaison engineer Eric Becker and WB staff reprepsentative Nicole Gergans.

- Becker very cooperative, Gergans very resistant, acting like civil service employees union "shop steward"—paraphrased: Everything is fine, no change in our procedures is possible or necessary.

- Gergans says (and Becker confirms) follow-up monitoring reports are not keyed off project completion dates, but all are due March 1st every year, whether completed or not, after a 401 Certification is issued to project by Water Board. (CS students spread sheet program will be reconstructed to accommodate March 1 due dates.) Becker said GIS information not a priority right now.

- Becker will provide HLS with actual CIWQS "Business Rules" which are available only on WB internal computer system. After receipt and review HLS will meet with Kimberly (CIWQS person on WB staff) to demonstrate CS students program already complies with CIWQS Business Rules so she can inititate request to CIWQS to implement CS students monitoring reports spread sheet program.

- Becker and HLS suggest that CS students can assist WB's "science helper" intern to enter into their spread sheet program the required project identifying information for hundreds of projects since 2014 which have submitted follow-up monitoring reports, but which reports are not catalogued or actually reviewed by WB staff. Becker needs permission from WB executive director to permit the CS students to participate with science intern, and will get back HLS ASAP re permission.

- WB staff member Gergans displayed constant resistance to any suggestion that the follow-up mointoring reports be identified, catalogued and assembled for review, taking the position that: 1. It would be burdensome to WB staff members because follow-up monitoring reports are sent individually to staff members responsible for the projects, so they would have to spend a week of time going through their computer queues to identify and copy the projects' monitoring reports to a computer bin where they could be identified and catalogued. (Becker thought this could in fact be accomplished and that Gergans estimate of required staff time was exaggerated.); and 2. It would be a useless act to identify and bin

Annual Monitoring Reports because those reports may have been initially erroneously coded and misidentified by the individual staff members. Becker said he thought the identification and binning of the reports was possible without undue burden on staff; and 3. Gergans reverses her original position, now says all Annual reports are not due on March 1st, but she meant all Annual Reports are due on March 1st except the ones that are due on other dates, so the tickler program wouldn't work. (CS students' program already accommodates any due date.) Becker says to use March 1 due date in tickler program.

- To Do:

  1. HLS to receive CIWQS Business Rules, meet with Kimberly to generate offcial request to state CIWQS administrators to permit CS program to ID and catalogue Annual Moniotoring Reports;

  2. Becker to obtain WB permission for CS to sudents to help enter backlog of hundreds of Annual Monitoring Report data in their spread sheet 'tickler" program;

  3. CS students to reprogram spread sheet to reflect a uniform March 1 due date for all projects' Annual Monitoring reports, and assist in data entry of hundreds of uncatalogued, unidentified, and unread Annual Monitoring Reports.

- HLS sent follow-up email to Becker, WB Exec. Dir. Gibson and Chmn/Prof. Abarbanel saying:

"It is apparent that some of the younger staff members do not appreciate that when mitigation wetlands fail in some significant category after installation, the Water Board's mission of assuring water quality is impaired, and there could potentially be significant civil liability if the problem is left unattended. You realize that because you are a smart engineer.

My hope is with the addition of the available computer science and engineering manpower of the CS students we will leave the San Diego Water Board with a useful tool to track and assess wetland monitoring failures, and-- if useful to the San Diego Board-- to assist it to gain state approval for additional personnel time to substantively review the post-construction monitoring reports."

Prof. Abarbanel's email response: "Right on!"

☐ April 28, 2016. Waiting for response from Becker re WB Ex. Dir. allowing CS students to work with WB's "science intern" on the project.

☐ April 28, 2016. HLS and CS students held 2.5 hour meeting with attorney Kimberly McMurray-Cathcart, San Diego Water Board's CIWQS Business Rules expert, re project requirements and CIWQS permissions:

- KCM is very helpful and meeting very productive as to CIWQS issues, and more importantly the fact that the WB 401 Certification projects

identification information are all public information and open source. She is checking whether Annual Reports and Mitigation Plans are public information.

- HLS suggested a pilot project for a preliminary review of wetlands post-completion reports, without requiring change of CIWQS Business Rules:

- HLS requested that low level WB personnel who initially in-process electronic documents be directed to simply send a copy of each Annual Report (which include post-completion wetlands reports) to a folder accessible by HLS and CS students. CS students with WB "science intern" will then review all reports to cull out the small percentage of wetland post-completion reports, and conduct a preliminary review of those reports in accordance with a simple review "top sheet" drafted by HLS with Prof. Richard Ambrose's assistance.

- Top sheet review will consist of a template with the project identifying information, a template to evaluate the wetland's CRAM score, a recent Google Earth photo of the project (to determine if the plant material is stressed, has died and whether the watercourse has been damaged by erosion or siltation), and an evaluation of the performance standards reported by the project applicant compared to the project's Mitigation Plan filed with its 401 Certification application.

- This simple review by student interns (who are assigned to the WB regularly each year) will enable them to "red flag" any potentially failing wetland and refer it to WB professional staff for further investigation and to compel the applicant to correct any deficiencies.

- This simple system will at least subject the wetland post-completion reports to some scrutiny, rather than the reports being completely ignored as they have been in the past, which resulted in the Ambrose-discovered wetlands function failures.

- This system will in my opinion at least partially shield the WB from possible legal scrutiny and liability for simply not enforcing the second major objective of the Clean Water and Porter-Cologne Acts— to assure that there be "no net loss" of wetlands. (If 401 Certified, post-construction wetlands are failing in some category in 75-86%, or even 25-33% of studied cases, there is in fact a "net loss of wetlands" functions in violation of the Acts, for which the WB could be legally responsible, or at least compelled to correct the shortcomings by inspectors general, attorneys general and courts of law. The traditional WB excuse for 25 years of "not enough personnel or money" for its non-feasance is inadequate, but with

at least some review of the reports the WB will be attempting to do its job with the resources available.)

- HLS communications with Prof. Ambrose: He is on-board and thinks the preliminary review proposal pilot project is a good idea to enable some WB review of potentially failing mitigation wetlands. Prof. Ambrose added items to the preliminary review top sheet template. [Ambrose reports that since the early 1990s when he started the wetlands review project (now more than 25 years), the WBs have been asserting "not enough personnel or money" as a defense to why they are not monitoring post-completion wetlands reports.]

To Do:

1. HLS waiting for at least tacit approval and cooperation of WB to create a folder of all incoming "Annual Reports" for this preliminary review pilot project.

2. HLS creating an evaluation top sheet for unskilled personnel to perform preliminary review of post-completion wetlands reports.

☐ May 3, 2016. Water Board approves the HLS Capstone program to establish a preliminary review process by interns to red flag potentially failing, as-built mitigation wetlands for more intensive staff investigation and corrective measures, and the data structure to support it.

☐ May 3, 2016. HLS requests Water Board IT to provide public document Annual Reports to be made available in a portable hard drive for CS students to be able to perform preliminary reviews away from WB site. [Presently, public record Annual Reports are only available on a single public computer terminal at WB premises during WB business hours.]

☐ HLS and CS students complete drafting a single page "top sheet" evaluation form to guide WB's student interns to perform preliminary reviews of post-completion mitigation wetland reports.

☐ May 9, 2016. Water Board agrees to segregate all 2014-2016 Annual Reports and make then digitally available to HLS and Capstone project students to download from and FTP site. Also, WB changes its CIWQS Rules to direct copies of all Annual Reports received to a "Queue" (a digital bin or folder) so they can be parsed for post-completion reports, then preliminarily evaluated by student interns with guidance of a review "top sheet."

☐ May 10, 2016. HLS meeting with CS students to:

1. Prepare a budget of time necessary for student interns to review 246 Annual Reports (= 3 yrs x 82 Certifications), and a smaller fraction of

wetlands post-completion reports, and to fill out preliminary review top sheets by student interns.

2. Revise top sheeet review form to include additional WB PIN numbers, and other suggestions from WB staff.

3. HLS provided CS students with 1 Terabyte outboard drive to download Annual Reports when made available by WB.

4. CS students and HLS waiting for WB to open FTP site containing all 2014-presnt Annual Reports for parsing out post-completion reports and performing preliminary reviews. CS students commit to working remotely on reviews of post-completion reports over the summer if required to process the backlog of post completion reports 2014-present.

☐ May 16, 2016.

- All Region 9 Water Board Annual Reports, including post-construction reports, are due March 1 of every year. Since the WB required electronic submission of reports beginning in 2014, and there are 82 active permits, there should be 246 Annual Reports in WB's electronic folders.

- Chairman Abarbanel, the Region 9 Exec. Dir. and our Enforcement Div. engineer liaison went to great effort to have the state computer system configured to place all the Annual Reports in the FTP site for us to review. But rather than collecting 246 Annual Reports, only 13 were located and deposited at the FTP site, and only one report appears to be a post-construction report.

- Our liaison engineer Eric Becker of WB Enforcement Div. is trying to determine whether the 246 Annual reports were even filed permittees, or misplaced, since the timely delivery of these reports is often completely ignored and unmonitored by WB staff. (You'll remember my original objective was to establish a tickler system for WB staff to remind permittees that their reports were due, then send formal enforcement letters if the reports were not filed.)

- Bringing the process for review of post-completion reports up to speed and working is important for the Water Board and the State. Prof. Ambrose has been dealing with this issue at the Water Boards for the last 26 years, well before his early 2000s Orange County study which showed that 75%-86% of post-construction mitigation wetlands permitted by the Water Boards had failed in one or another major category of wetland functional performance. If you apply those percentages to 26 years of WB neglect of post-construction reports, the conclusion is that the WB has failed to assure the second major objective of the Clean Water Act-- that there be "no net loss of wetlands" in the permitting process (401 Certifications). This total non-compliance, if not corrected, suggests

issues that might demand investigation by state or federal Inspectors General, and Attorneys General, and possibly expose the WB to litigation to correct this non-feasance by the Water Board staff.

☐ May 24, 2016. Complete draft Capstone report on WB's failure to review post-completion mitigation wetlands evaluation reports. Still waiting for communication from Region 9 Water Board on its efforts to locate the missing 233 Annual Reports.

☐ By September 1, 2016. Implement revised program to track due dates of compensatory wetlands mitigation project follow-up monitoring reports; finalize standardized form enforcement letters for use by Water Board for noncompliant project applicants; HLS and CS students review 246 Annual Reports to parse out post-construction mitigation wetlands "health" reports, and red-flag those wetlands failing or on the verge of failing, for further investigation by WB professional staff.

APPENDIX B

401 Certification List From January 2014 to Present	
Date Issued	Project Name
1/17/14	Passerelle, LLC - Campus Park
2/18/14	Fender Replacement Project Pier 4 & 6
2/28/14	Soledad Canyon/Sorrento Creek & Flintkote Channel Maintenance Project
3/10/14	Romeria Street Drainage Improvement Project
3/20/14	Olive Hill Project
3/27/14	Saddle Crest
4/11/14	Chollas Creek BMP Retrofit Project-Phase II
4/21/14	Murphy Canyon Road Trunk Sewer Manhole Access and Pipe Joint Repair Project
4/22/14	Shelter Island Boatyard Crane Replacement and Pier Addition Project
5/7/14	Monarch Beach Management Plan (MBMP)
6/13/14	Escondido Boulevard Apartments Project
6/27/14	Gonzalez-Zavalegui Residence Dock Improvement Project
7/1/14	Terracina Project
7/1/14	Skyridge Development Project
7/1/14	Pacific Landing Apartments Project
7/3/14	Portola Center Project
7/8/14	Atherton Tract 32627 Project
7/8/14	Tract 32535 North Ranch Residential Development Project
7/17/14	San Onofre Nuclear Generatg Statn(SONGS)Unit Intake & Discharge Conduit
8/8/14	Water Tank Ravine Burn Dump Restoration Project
8/14/14	Coronado Cays Channel Berm Maintenance Project
8/15/14	San Luis Rey Mitigation Bank
8/26/14	Distrito La Novia/San Juan Meadows Project
8/29/14	Demolition of Below Ground Structures at the South Bay Power Plant
9/5/14	San Diego Gas & Electric Company (SDG&E)(Pole Replacement)
10/7/14	SR 371 Shoulder Widening
10/7/14	Dana Point Harbor Maintenance Dredging Project
10/13/14	Sweetwater Phase III Trails
10/16/14	Sycamore Landfill Master Plan Project
10/16/14	Dana Point Harbor Sport Fishing Docks Pile Sleeving Project
10/21/14	Bay Cafe Demolition and Platform Resurfacing Project
10/21/14	Jeff Valley Spillway Repair Project
11/7/14	Storm Water Facility Maintenance (San Marcos City)
11/12/14	Staver Road Project
11/14/14	Murphy Canyon Creek Maintenance Project
11/18/14	Encinitas Creek Channel Drainage Improvement
11/25/14	Hallmark West Mitigation Site Project
11/26/14	Quarry Creek Master Plan
12/2/14	Blessed Teresa of Calcutta Parish
12/3/14	880 Harbor Island Drive
12/8/14	Long Canyon (Road) Project
12/8/14	Rancho Costera Development
12/9/14	TRVRP Trails and Habitat Enhancement Project
12/19/14	South Bay Substation Relocation Project
12/22/14	The Elms and The Ivy Development Project
1/14/15	Bridge 243.0 Scour Repair Project

1/14/15	Crystal Pier Maintenance and Repair Project
1/16/15	Lilac Del Cielo Project
2/26/15	Inland Rail Trail Project, San Marcos to Vista Segment
3/5/15	Routine Maintenance of Storm Water Facilities
3/24/15	Kona Kai Seawall Repair Project
3/24/15	Sweetwater Authority
4/2/15	El Camino Real Southbound Widening Project
4/9/15	Alvarado Channel Restoration Project
4/20/15	State Route 11 and the Otay Mesa East Port of Entry Project
6/4/15	"F" Street from "A" Street to Oso Parkway
6/26/15	Tierra Del Rey Residential Development Project
7/10/15	La Costa 49 Preserve Rehabilitation
7/24/15	City of Escondido Channel Maintenance Activities
7/31/15	Briarwood Community (TTM 36497)
8/5/15	Marriott Marquis San Diego Marina - Dock Repair Project
8/11/15	Elvira to Morena Double Track Project
8/11/15	El Camino Executive Center
8/20/15	Wet Weather Intermitten Stream Discharge Project
9/8/15	Belle Terre Residential Development Project
9/18/15	Old Otay Mesa Road Improvements Project
9/22/15	Routine Maintenance of Alvarado Creek storm water channels
9/23/15	Paradise Creek Restoration Project
9/23/15	French Valley South Tentative Tract 30837 Project
10/19/15	Hanson El Monte Pond Flood Control, Restoration and Recharge Project
10/23/15	Orange Cnty Public Works (Camino Del Rio Extension Project)
11/23/15	Brook Forest Mitigation Bank
11/23/15	State Route 74 Shoulder Widening Project
12/18/15	Meritage Homes (Sugarbush Residential Development)
1/7/16	Wildomar City (Wildomar Master Drainage Plan Lateral C-1 Storm Drain Project)
1/7/16	South Orange County Wastewater Authority (Coastal Treatment Plant Export Sludg
1/22/16	Pier 1 North Dry Dock Project
2/17/16	US Army Corps of Engineers Los Angeles (Encinitas-Solana Beach Coastal Storm Da
3/15/16	Ca Dept of Transportation District 11 (I-5 North Coast Corridor Project - Phase 1)
4/22/16	Willows Road Bridge Scour Project
4/29/16	Arroyo Trabuco Creek Pole Replacement Project
4/29/16	SONGS Large Organism Exclusion Device (LOED) Project (Southern California Edisor

Cert #	PIN
12C-048	782211
R9-2013-0151	799427
R9-2013-0116	795829
10C-093	757527
R9-2013-0160	799983
12C-060	783565
R9-2013-0193	802201
R9-2013-0192	802076
R9-2013-0194	802270
R9-2013-0126	797087
R9-2013-0191	802026
R9-2013-0184	801466
R9-2013-0008	788045
R9-2013-0057	792699
R9-2013-0157	799923
R9-2013-0113	795519
R9-2012-0075	789098
R9-2013-0140	798578
R9-2013-0071	793178
R9-2014-0003	802444
R9-2014-0025	804217
R9-2013-0050	792351
R9-2013-0098	794321
R9-2014-0028	802907
R9-2013-0183	801362
R9-2014-0039	804750
R9-2014-0053	805802
R9-2014-0029	804408
09C-076	259854
R9-2014-0089	807899
R9-2014-0075	807648
R9-2014-0057	806055
11C-063	769488
R9-2014-0061	806919
R9-2013-0124	796913
10C-076	756308
R9-2014-0113	809015
R9-2013-0101	794332
R9-2013-0082	793552
R9-2014-0093	807947
R9-2014-0118	809407
R9-2013-0044	792053
R9-2014-0100	808555
11C-107	775144
R9-2014-0056	805975
R9-2014-0132	810389

R9-2014-0014	802570
R9-2014-0015	803032
R9-2014-0128	810067
R9-2014-0077	807678
R9-2014-0060	806903
R9-2014-0087	807873
R9-2013-0045	792117
R9-2014-0135	810596
R9-2013-0182	801231
R9-2014-0144	811287
R9-2014-0126	810058
R9-2014-0048	805409
R9-2013-0072	793183
R9-2015-0028	812536
R9-2015-0085	815279
R9-2015-0053	813867
07C-033	648897
12C-081	786931
R9-2014-0040	804752
R9-2014-0115	809183
R9-2015-0102	815856
R9-2015-0075	815021
R9-2014-0088	807879
R9-2014-0064	807111
R9-2013-0111	795363
R9-2015-0099	815681
R9-2014-0127	810065
R9-2014-0124	809913
R9-2015-0159	818543
R9-2015-0033	812895
R9-2015-0080	815101
R9-2015-0038	813377
R9-2015-0090	815436
R9-2015-0147	818146
R9-2016-0109	823352
R9-2016-0013	820684

APPENDIX C

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

2375 Northside Drive, Suite.100, San Diego, CA 92108
Phone (619) 516-1990 • Fax (619) 516-1994
http://www.waterboards.ca.gov/sandiego/

Clean Water Act Section 401 Water Quality Certification
and Waste Discharge Requirements
for Discharge of Dredged and/or Fill Materials

PROJECT: **Belle Terre Residential Development Project**
Certification Number R9-2014-0040
WDID: 9000002707

Reg. Meas. ID: 395396
Place ID: 804752
Party ID: 545751
Person ID: 545752

APPLICANT: **Regent French Valley, LLC**
11990 San Vicente Boulevard, Suite 200
Los Angeles, CA 90049

ACTION:

☐ Order for Low Impact Certification	☐ Order for Denial of Certification
☑ Order for Technically-conditioned Certification	☐ Enrollment in Isolated Waters Order No. 2004-004-DWQ
☑ Enrollment in SWRCB GWDR Order No. 2003-017-DWQ	

PROJECT DESCRIPTION

An application dated March 17, 2014 was submitted by Regent French Valley, LLC (hereinafter Applicant), for Water Quality Certification pursuant to section 401 of the Clean Water Act (33 U.S.C. § 1341) for the proposed Belle Terre Residential Development Project (Project). The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) deemed the application to be complete on November 17, 2014. The Applicant proposes to discharge dredged or fill material to waters of the United States and/or State associated with construction activity at the Project site. The Applicant has also applied for a Clean Water Act section 404 permit from the United States Army Corps of Engineers for the Project (USACE File No. SPL-2013-00468-PJB).

The Project is located within unincorporated Riverside County (French Valley), California, east of Washington Street, west of the Municipal Water District San Diego Aqueduct, south of Keller Road. The Project center reading is located at latitude 33.620450 and longitude -117.081342. The Applicant has paid all required application fees for this Certification in the amount of $69,188.00. On an annual basis, the Applicant shall also pay all active discharge fees and post discharge monitoring fees, as appropriate[1]. On March 19, 2014, the San Diego Water

[1] The Applicant shall pay an annual active discharge fee each fiscal year or portion of a fiscal year during which discharges occur until the regional board or the State Board issues a Notice of Completion of Discharges Letter to the discharger. Dischargers shall pay an annual post-discharge monitoring fee each fiscal year or portion of a fiscal year commencing with the first fiscal year following the fiscal year in which the regional board or State Board issued a Notice of Completion of Discharges Letter to the discharger, but continued water quality monitoring or compensatory mitigation monitoring is required. Dischargers

(footnote continued on next page)

Board provided public notice of the Project application pursuant to California Code of Regulations, title 23, section 3858 by posting information describing the Project on the San Diego Water Board's web site and providing a period of twenty-one days for public review and comment. No comments were received.

The Applicant proposes to construct a 342-acre residential community of up to 1,282 homes, which vary from 0.5 to 14 dwelling units per acre. Additionally, the Project will include recreational areas, open spaces, streets, and other infrastructure. The Project, as designed, will retain approximately 106 acres for preservation in perpetuity as an Open Space Conservation Area.

The Project will convert approximately 106.10 acres of pervious ground cover to impervious surfaces. Runoff leaving the developed Project area would be significantly greater in volume, velocity, peak flow rate, and duration than pre-development runoff from the same area without mitigation. Post-construction best management practices (BMPs) to manage and control the effects of these runoff increases will consist of 8 extended detention basins that will detain runoff and volume associated with the development, thus reducing the potential for erosion and flooding downstream. Additionally, 11 sand filter basins will be installed to treat the onsite flows for water quality purposes. These BMPs will be designed, constructed, and maintained to meet Riverside County's Low Impact Development (LID) Capture Volume and hydromodification treatment requirements.

The Project application includes a description of the design objective, operation, and degree of treatment expected to be attained from equipment, facilities, or activities (including construction and post-construction BMPs) to treat waste and reduce runoff or other effluents which may be discharged. Compliance with the Certification conditions will help ensure that construction and post-construction discharges from the Project will not cause on-site or off-site downstream erosion, damage to downstream properties, or otherwise damage stream habitats in violation of water quality standards in the *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan).

Project construction will permanently impact 0.33 acre (5,125 linear feet) of streambed waters of the United States and/or State. The Applicant reports that the Project purpose cannot be practically accomplished in a manner which would avoid or result in less adverse impacts to aquatic resources considering all potential practicable alternatives, such as the potential for alternate available locations, designs, reductions in size, configuration or density.

The Applicant reports that compensatory mitigation for the permanent loss of 0.33 acre (5,125 linear feet) of jurisdictional waters will be achieved through the establishment of 2.62 acres (5,491 linear feet) of waters of the United States and/or State. The project completely avoids impacts to on-site wetlands. Impacts are limited to degraded ephemeral drainages that have been disked for years. No waters of the United States and/or State shall receive temporary discharges of fill associated with the Project. Mitigation for discharges of fill material to waters

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(footnote continued from previous page)
shall pay the annual post-discharge monitoring fee each fiscal year until the regional board or the State Board issues a Notice of Project Complete Letter to the discharger. Additional information regarding fees can be found electronically at the following location: http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/dredgefillcalculator.xlsx

of the United States and/or State will be completed by the Applicant on-site within the 106-acre Open Space Conservation Area located in the Murrieta Creek hydrologic sub-area (HSA 902.32) at a minimum compensation ratio of 7.94:1 (area mitigated:area impacted).

Detailed written specifications and work descriptions for the compensatory mitigation project including, but not limited to, the geographic boundaries of the project, timing, sequence, monitoring, maintenance, ecological success performance standards and provisions for long-term management and protection of the mitigation areas are described in the *Draft Habitat Mitigation and Monitoring Plan for Impacts to Areas Within the Jurisdiction of the United States Army Corps of Engineers Pursuant to Section 404 of the Clean Water Act and California Regional Water Quality Control Board Pursuant to Section 401 of the Clean Water Act and Section 13260 of the California Water Code and the California Department of Fish and Wildlife Pursuant to Chapter 6, Section 1602 of the Fish and Game Code, Belle Terre Property, Unincorporated Riverside County, California* (Mitigation Plan), dated January 30, 2014. San Diego Water Board acceptance of the Mitigation Plan applies only to the Project described in this Certification and must not be construed as approval for other current or future projects that are planning to use additional acreage at the site for mitigation. The Mitigation Plan is incorporated in this Certification by reference as if set forth herein. The Mitigation Plan provides for implementation of compensatory mitigation which offsets adverse water quality impacts attributed to the Project in a manner that protects and restores the abundance, types and conditions of aquatic resources and supports their beneficial uses. Implementation of the Mitigation Plan will reduce significant environmental impacts to resources within the San Diego Water Board's purview to a less than significant level. Based on all of these considerations, the Mitigation Plan will adequately compensate for the loss of beneficial uses and habitat within waters of the United States and/or State attributable to the Project.

Additional Project details are provided in Attachments 1 through 5 of this Certification.

TABLE OF CONTENTS

Attachments:

1. **Definitions**
2. **Project Location Maps**
3. **Project Site Plans**
4. **Mitigation Figures**
5. **CEQA Mitigation Monitoring and Reporting Program**

I. STANDARD CONDITIONS

Pursuant to section 3860 of title 23 of the California Code of Regulations, the following three standard conditions apply to all water quality certification actions:

A. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the Water Code and chapter 28, article 6 (commencing with title 23, section 3867), of the California Code of Regulations.

B. This Certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to California Code of Regulations title 23, section 3855 subdivision (b), and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

C. This Certification action is conditioned upon total payment of any fee required under title 23, chapter 28 (commencing with section 3830) of California Code of Regulations and owed by the applicant.

II. GENERAL CONDITIONS

A. **Term of Certification**. Water Quality Certification No. R9-2014-0040 (Certification) shall expire upon a) the expiration or retraction of the Clean Water Act section 404 (33 USC Title 33, section1344) permit issued by the U.S. Army Corps of Engineers for this Project, or b) five (5) years from the date of issuance of this Certification, whichever occurs first.

B. **Duty to Comply.** The Applicant must comply with all conditions and requirements of this Certification. Any Certification noncompliance constitutes a violation of the Water Code and is grounds for enforcement action or Certification termination, revocation and reissuance, or modification.

C. **General Waste Discharge Requirements**. The requirements of this Certification are enforceable through Water Quality Order No. 2003-0017-DWQ, *Statewide General Waste Discharge Requirements for Discharges of Dredged or Fill Material that have Received State Water Quality Certification* (Water Quality Order No. 2003-0017-DWQ). This provision shall apply irrespective of whether a) the federal permit for which the Certification was obtained is subsequently retracted or is expired, or b) the Certification is expired. Water Quality Order No. 2003-0017-DWQ is accessible at:

http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/go_wdr401regulated_projects.pdf.

D. **Project Conformance with Application.** All water quality protection measures and BMPs described in the application and supplemental information for water quality

certification are incorporated by reference into this Certification as if fully stated herein. Notwithstanding any more specific conditions in this Certification, the Applicant shall construct, implement and comply with all water quality protection measures and BMPs described in the application and supplemental information. The conditions within this Certification shall supersede conflicting provisions within the application and supplemental information submitted as part of this Certification action.

E. **Project Conformance with Water Quality Control Plans or Policies**. Notwithstanding any more specific conditions in this Certification, the Project shall be constructed in a manner consistent with the Basin Plan and any other applicable water quality control plans or policies adopted or approved pursuant to the Porter Cologne Water Quality Act (Division 7, commencing with Water Code Section 13000) or section 303 of the Clean Water Act (33 USC section 1313). The Basin Plan is accessible at:

http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

F. **Project Modification**. The Applicant must submit any changes to the Project, including Project operation, which would have a significant or material effect on the findings, conclusions, or conditions of this Certification, to the San Diego Water Board for prior review and written approval. If the San Diego Water Board is not notified of a significant change to the Project, it will be considered a violation of this Certification.

G. **Certification Distribution Posting**. During Project construction, the Applicant must maintain a copy of this Certification at the Project site. This Certification must be available at all times to site personnel and agencies. A copy of this Certification shall also be provided to any contractor or subcontractor performing construction work, and the copy shall remain in their possession at the Project site.

H. **Inspection and Entry**. The Applicant must allow the San Diego Water Board or the State Water Resources Control Board, and/or their authorized representative(s) (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents as may be required under law, to:

1. Enter upon the Project or Compensatory Mitigation site(s) premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Certification;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Certification;

3. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Certification; and

4. Sample or monitor, at reasonable times, for the purposes of assuring Certification compliance, or as otherwise authorized by the Clean Water Act or Water Code, any substances or parameters at any location.

I. **Enforcement Notification**. In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under State law. For purposes of section 401(d) of the 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 assure compliance with the water quality standards and other pertinent requirements incorporated into this Certification.

J. **Certification Actions**. This Certification may be modified, revoked and reissued, or terminated for cause including but not limited to the following:

1. Violation of any term or condition of this Certification;

2. Monitoring results indicate that continued Project activities could violate water quality objectives or impair the beneficial uses of French Valley Creek or its tributaries;

3. Obtaining this Certification by misrepresentation or failure to disclose fully all relevant facts;

4. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and

5. Incorporation of any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.

The filing of a request by the Applicant for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Certification condition.

K. **Duty to Provide Information**. The Applicant shall furnish to the San Diego Water Board, within a reasonable time, any information which the San Diego Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Certification or to determine compliance with this Certification.

L. **Property Rights**. This Certification does not convey any property rights of any sort, or any exclusive privilege.

M. **Petitions**. Any person aggrieved by this action of the San Diego Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with the California Code of Regulations, title 23, sections 3867 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Certification. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

III. CONSTRUCTION BEST MANAGEMENT PRACTICES

A. **Approvals to Commence Construction**. The Applicant shall not commence Project construction until all necessary federal, State, and local approvals are obtained.

B. **Personnel Education.** Prior to the start of the Project, and annually thereafter, the Applicant must educate all personnel on the requirements in this Certification, pollution prevention measures, spill response measures, and BMP implementation and maintenance measures.

C. **Spill Containment Materials.** The Applicant must, at all times, maintain appropriate types and sufficient quantities of materials on-site to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reach waters of the United States and/or State.

D. **General Construction Storm Water Permit.** Prior to start of Project construction, the Applicant must, as applicable, obtain coverage under, and comply with, the requirements of State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, the *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activity*, (General Construction Storm Water Permit) and any reissuance. If Project construction activities do not require coverage under the General Construction Storm Water Permit, the Applicant must develop and implement a runoff management plan (or equivalent construction BMP plan) to prevent the discharge of sediment and other pollutants during construction activities.

E. **Waste Management.** The Applicant must properly manage, store, treat, and dispose of wastes in accordance with applicable federal, state, and local laws and regulations. Waste management shall be implemented to avoid or minimize exposure of wastes to precipitation or storm water runoff. The storage, handling, treatment, or disposal of waste shall not create conditions of pollution, contamination or nuisance as defined in Water Code section 13050. Upon Project completion, all Project generated debris, building materials, excess material, waste, and trash shall be removed from the Project site(s) for disposal at an authorized landfill or other disposal site in compliance with federal, state and local laws and regulations.

F. **Waste Management**. Except for a discharge permitted under this Certification, the dumping, deposition, or discharge of trash, rubbish, unset cement or asphalt, concrete, grout, damaged concrete or asphalt, concrete or asphalt spoils, wash water, organic or earthen material, steel, sawdust or other construction debris waste from Project activities directly into waters of the United States and or State, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited.

G. **Downstream Erosion.** Discharges of concentrated flow during construction or after Project completion must not cause downstream erosion or damage to properties or stream habitat.

H. **Construction Equipment**. All equipment must be washed prior to transport to the Project site and must be free of sediment, debris, and foreign matter. All equipment used in direct contact with surface water shall be steam cleaned prior to use. All equipment using gas, oil, hydraulic fluid, or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (e.g., motors, pumps, generator, etc.) shall be positioned over drip pans or other types of containment.

I. **Process Water.** Water containing mud, silt, or other pollutants from equipment washing or other activities, must not be discharged to waters of the United States and/or State or placed in locations that may be subjected to storm water runoff flows. Pollutants discharged to areas within a stream diversion must be removed at the end of each work day or sooner if rain is predicted.

J. **Surface Water Diversion.** All surface waters, including ponded waters, must be diverted away from areas of active grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of the receiving water quality objectives. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.

K. **Re-vegetation and Stabilization.** All areas that have 14 or more days of inactivity must be stabilized within 14 days of the last activity. The Applicant shall implement and maintain BMPs to prevent erosion of the rough graded areas. After completion of grading, all areas must be re-vegetated with native species appropriate for the area. The re-vegetation palette must not contain any plants listed on the California Invasive Plant Council Invasive Plant Inventory, which can be accessed at http://www.cal-ipc.org/ip/inventory/.

L. **Hazardous Materials.** Except as authorized by this Certification, substances hazardous to aquatic life including, but not limited to, petroleum products, unused cement/concrete, asphalt, and coating materials, must be prevented from contaminating the soil and/or entering waters of the United States and/or State. BMPs must be implemented to prevent such discharges during each Project activity involving hazardous materials.

M. **Vegetation Removal.** Removal of vegetation must occur by hand, mechanically, or through application of United States Environmental Protection Agency (USEPA) approved herbicides deployed using applicable BMPs to minimize adverse effects to beneficial uses of waters of the United States and/or State. Discharges related to the application of aquatic pesticides within waters of the United States must be done in compliance with State Water Resources Control Board Water Quality Order No. 2004-0009-DWQ, the *Statewide General National Pollution Discharge Elimination System Permit for the Discharge of Aquatic Weed Control in Waters of the United States,* and any subsequent reissuance as applicable.

N. **Limits of Disturbance.** The Applicant shall clearly define the limits of Project disturbance to waters of the United States and/or State using highly visible markers such as flag markers, construction fencing, or silt barriers prior to commencement of Project construction activities within those areas.

O. **On-site Qualified Biologist.** The Applicant shall designate an on-site qualified biologist to monitor Project construction activities within or adjacent to waters of the United States and/or State to ensure compliance with the Certification requirements. The biologist shall be given the authority to stop all work on-site if a violation of this Certification occurs or has the potential to occur. Records and field notes of the biologist's activities shall be kept on-site and made available for review upon request by the San Diego Water Board.

P. **Beneficial Use Protection**. The Applicant must take all necessary measures to protect the beneficial uses of waters of French Valley Creek and its tributaries. This Certification requires compliance with all applicable requirements of the Basin Plan. If at any time, an unauthorized discharge to surface waters (including rivers or streams) occurs or monitoring indicates that the Project is violating, or threatens to violate, water quality objectives, the associated Project activities shall cease immediately and the San Diego Water Board shall be notified in accordance with Notification Requirement VII.A of this Certification. Associated Project activities may not resume without approval from the San Diego Water Board.

Q. **Groundwater Dewatering.** If groundwater dewatering is required for the Project, the Applicant shall enroll in and comply with the requirements of San Diego Water Board Order No. R9-2008-0002 NPDES No. CAG919002, *General Waste Discharge Requirements For Groundwater Extraction Waste Discharges From Construction, Remediation, and Permanent Groundwater Extraction Projects to Surface Waters within the San Diego Region Except for San Diego Bay* or its successor permit.

IV. POST-CONSTRUCTION BEST MANAGEMENT PRACTICES

A. **Post-Construction Discharges.** The Applicant shall not allow post-construction discharges from the Project site to cause or contribute to on-site or off-site erosion or damage to properties or stream habitats.

B. **Storm Drain Inlets.** All storm drain inlet structures within the Project boundaries must be stamped or stenciled (or equivalent) with appropriate language prohibiting non-storm water discharges.

C. **Post-Construction BMP Design.** The Project must be designed to comply with the most current Standard Storm Water Mitigation and Hydromodification Plans for the County of Riverside. Post-construction BMPs are described in the *Preliminary Water Quality Management Plan For: Belle Terre Specific Plan* (SWMP).

D. **Post-Construction BMP Implementation.** All post-construction BMPs must be constructed, functional, and implemented prior to completion of Project construction, occupancy, and/or planned use, and maintained in perpetuity. The post construction BMPs must include those described in the SWMP, dated January 15, 2013 (Revised

July 15, 2013 & December 4, 2013), prepared on behalf of the Applicant by JLC Engineering and Consulting, Inc.; or any subsequent version of the SWMP approved by the County of Riverside.

E. **Post-Construction BMP Maintenance.** The post construction BMPs must be designed, constructed, and maintained in accordance with the most recent California Storm Water Quality Association (CASQA)[2] guidance. The Applicant shall:

1. No less than two times per year, assess the performance of the BMPs to ensure protection of the receiving waters and identify any necessary corrective measures;

2. Perform inspections of BMPs, at the beginning of the wet season no later than October 1 and the end of the wet season no later than April 1, for standing water, slope stability, sediment accumulation, trash and debris, and presence of burrows;

3. Regularly perform preventative maintenance of BMPs, including removal of accumulated trash and debris, as needed to ensure proper functioning of the BMPs;

4. Identify and promptly repair damage to BMPs; and

5. Maintain a log documenting all BMP inspections and maintenance activities. The log shall be made available to the San Diego Water Board upon request.

F. **Stream Crossing Structures.** Bridges, culverts, dip crossings, or other stream crossing structures shall be designed and installed in a manner that will not cause scouring of the stream bed and/or erosion of the banks in the vicinity of the Project. Storm drain lines/culverts and other stream crossing structures shall be designed and maintained to accommodate at least a 100-year, 24-hour storm event, including associated bedload and debris, with a similar average velocity as the upstream and downstream sections of the affected water body. Bottoms of temporary culverts shall be placed at stream channel grade and bottoms of permanent culverts shall be open bottom or embedded and backfilled below the grade of the stream greater than or equal to a depth of 1 foot.

V. PROJECT IMPACTS AND COMPENSATORY MITIGATION

A. **Project Impact Avoidance and Minimization**. The Project must avoid and minimize adverse impacts to waters of the United States and/or State to the maximum extent practicable.

[2] California Storm Water Quality Association (*California Storm Water BMP Handbook, New Development and Redevelopment 2003*), available on-line at: http://www.cabmphandbooks.org/ [Accessed on January 15, 2012]

B. **Project Impacts and Compensatory Mitigation.** Unavoidable Project impacts to French Valley Creek and its tributaries within the Santa Margarita Watershed must not exceed the type and magnitude of impacts described in the table below. At a minimum, compensatory mitigation required to offset unavoidable permanent Project impacts to waters of the United States and/or State must be achieved as described in the table below:

	Impacts (acres)	**Impacts** (linear ft.)	**Mitigation for Impacts** (acres)	**Mitigation Ratio** (area mitigated :area impacted)	**Mitigation for Impacts** (linear ft.)	**Mitigation Ratio** (linear feet mitigated :linear feet impacted)
Permanent Impacts						
Streambed	0.33	5,125	2.62 Establishment[1]	7.94:1	5,491 Establishment	1.07:1
Temporary Impacts[2]	None					

1. Streambed establishment on-site within the 106-acre Open Space Conservation Area.
2. No waters of the United States and/or State shall receive temporary discharges of fill associated with the Project.

C. **Compensatory Mitigation Plan Implementation.** The Applicant must fully and completely implement the Mitigation Plan; any deviations from, or revisions to, the Mitigation Plan must be pre-approved by the San Diego Water Board.

D. **Performance Standards.** Compensatory mitigation required under this Certification shall be considered achieved once it has met the ecological success performance standards contained in the Mitigation Plan (Section VII, page 27) to the satisfaction of the San Diego Water Board.

E. **Compensatory Mitigation Site Design.** The compensatory mitigation site(s) shall be designed to be self-sustaining once performance standards have been achieved. This includes minimization of active engineering features (e.g., pumps) and appropriate siting to ensure that natural hydrology and landscape context support long-term sustainability in conformance with the following conditions:

1. Most of the channels through the mitigation sites shall be characterized by equilibrium conditions, with no evidence of severe aggradation or degradation;

2. As viewed along cross-sections, the channel and buffer area(s) shall have a variety of slopes, or elevations, that are characterized by different moisture gradients. Each sub-slope shall contain physical patch types or features that contribute to irregularity in height, edges, or surface and to complex topography overall; and

3. The mitigation sites shall have a well-developed plant community characterized by a high degree of horizontal and vertical interspersion among plant zones and layers.

F. **Temporary Project Impact Areas.** The Applicant must restore all areas of temporary disturbance which could result in a discharge or a threatened discharge of pollutants to waters of the United States and/or State. Restoration must include grading of disturbed areas to pre-project contours and re-vegetation with native species. The Applicant must implement all necessary BMPs to control erosion and runoff from areas associated with the Project.

G. **Long Term Management and Maintenance.** The compensatory mitigation site(s), must be managed, protected, and maintained, in perpetuity, in conformance with the long term management plan and the final ecological success performance standards identified in the Mitigation Plan. The aquatic habitats, riparian areas, buffers and uplands that comprise the mitigation site(s) must be protected in perpetuity from land-use and maintenance activities that may threaten water quality or beneficial uses within the mitigation area(s) in a manner consistent with the following requirements:

1. Any maintenance activities on the mitigation site(s) that do not contribute to the success of the mitigation site(s) and enhancement of beneficial uses and ecological functions and services are prohibited;

2. Maintenance activities must be limited to the removal of trash and debris, removal of exotic plant species, replacement of dead native plant species, and remedial measures deemed necessary for the success of the compensatory mitigation project;

3. The Mitigation site(s) must be maintained, in perpetuity, free of perennial exotic plant species including, but not limited to, pampas grass, giant reed, tamarisk, sweet fennel, tree tobacco, castor bean, and pepper tree. Annual exotic plant species must not occupy more than 5 percent of the mitigation site(s); and

4. If at any time a catastrophic natural event (e.g., fire, flood) causes damage(s) to the mitigation site(s) or other deficiencies in the compensatory mitigation project, the Applicant must take prompt and appropriate action to repair the damage(s) including replanting the affected area(s) and address any other deficiencies. The San Diego Water Board may require additional monitoring by the Applicant to assess how the compensatory mitigation site(s) or project is responding to a catastrophic natural event.

H. **Timing of Mitigation Site Construction.** The construction of proposed mitigation must be concurrent with project grading and completed no later than 9 months following the start of Project construction. Delays in implementing mitigation must be compensated for by an increased mitigation implementation of 10% of the cumulative compensatory mitigation for each month of delay.

I. **Mitigation Site(s) Preservation Mechanism. Within 90 days from the issuance of this Certification**, the Applicant must provide the San Diego Water Board a draft preservation mechanism (e.g. deed restriction, conservation easement, etc.) that will protect all mitigation areas and their buffers in perpetuity. **Within one year of the start of Project construction**, the Applicant must submit proof of a completed final

preservation mechanism that will protect all mitigation areas and their buffers in perpetuity. The conservation easement, deed restriction, or other legal limitation on the mitigation properties must be adequate to demonstrate that the sites will be maintained without future development or encroachment on the sites which could otherwise reduce the functions and values of the sites for the variety of beneficial uses of waters of the United States and/ or State that it supports. The legal limitation must prohibit, without exception, all residential, commercial, industrial, institutional, and transportation development, and any other infrastructure development that would not maintain or enhance the wetland and streambed functions and values of the sites. The preservation mechanism must clearly prohibit activities that would result in soil disturbance or vegetation removal, other than the removal of non-native vegetation. Other infrastructure development to be prohibited includes, but is not limited to, additional utility lines, maintenance roads, and areas of maintained landscaping for recreation.

VI. MONITORING AND REPORTING REQUIREMENTS

A. **Representative Monitoring**. Samples and measurements taken for the purpose of monitoring under this Certification shall be representative of the monitored activity.

B. **Monitoring Reports**. Monitoring results shall be reported to the San Diego Water Board at the intervals specified in section VI of this Certification.

C. **Monitoring and Reporting Revisions**. The San Diego Water Board may make revisions to the monitoring program at any time during the term of this Certification and may reduce or increase the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.

D. **Records of Monitoring Information.** Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;

2. The individual(s) who performed the sampling or measurements;

3. The date(s) analyses were performed;

4. The individual(s) who performed the analyses;

5. The analytical techniques or methods used; and

6. The results of such analyses.

E. **California Rapid Assessment Method.** California Rapid Assessment Method (CRAM)[3] monitoring must be performed to assess the current and potential ecological conditions (ecological integrity) of the impact site and proposed compensatory

[3] The most recent versions of the California Rapid Assessment Method (CRAM) for Wetlands and additional information regarding CRAM can be accessed at http://www.cramwetlands.org/

mitigation site(s). These conditions reflect the overall level of ecological function of an aquatic resource. Prior to initiating Project construction, the Applicant shall develop a monitoring plan to implement California Rapid Assessment Method (CRAM) monitoring. The Applicant must conduct a quantitative function-based assessment of the health of streambed habitat to establish pre-project baseline conditions, set CRAM success criteria, and assess the mitigation site(s) progress towards meeting the success criteria. CRAM monitoring must be conducted prior to the start of Project construction authorized under this Certification and annually following construction completion for a period of 5 years. The annual CRAM monitoring results shall be submitted with the Annual Project Progress Report. An evaluation, interpretation, and tabulation of all CRAM assessment data shall be submitted with the Final Project Completion Report.

F. **Discharge Commencement Notification**. The Applicant must notify the San Diego Water Board in writing **at least 5 days prior to** the start of Project construction.

G. **Geographic Information System Data.** The Applicant must submit Geographic Information System (GIS) shape files of the Project impact sites within 30 days of the start of project construction and GIS shape files of the Project mitigation sites within 30 days of mitigation installation. All impact and mitigation site shape files must be polygons. Two GPS readings (points) must be taken on each line of the polygon and the polygon must have a minimum of 10 points. GIS metadata must also be submitted.

H. **Annual Project Progress Reports.** The Applicant must submit annual Project progress reports describing status of BMP implementation, compensatory mitigation, and compliance with all requirements of this Certification to the San Diego Water Board prior to **March 1** of each year following the issuance of this Certification, until the Project has reached completion. The Annual Project Progress Reports must contain compensatory mitigation monitoring information sufficient to demonstrate how the compensatory mitigation project is progressing towards accomplishing its objectives and meeting its performance standards. Annual Project Progress Reports must be submitted even if Project construction has not begun. The monitoring period for each Annual Project Progress Report shall be January 1st through December 31st of each year. Annual Project Progress Reports must include, at a minimum, the following:

1. **Project Status and Compliance Reporting.** The Annual Project Progress Report must include the following Project status and compliance information:

   a. The names, qualifications, and affiliations of the persons contributing to the report;

   b. The status, progress, and anticipated schedule for completion of Project construction activities including the installation and operational status of best management practices project features for erosion and storm water quality treatment;

   c. A description of Project construction delays encountered or anticipated that may affect the schedule for construction completion; and

d. A description of each incident of noncompliance during the annual monitoring period and its cause, the period of the noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

2. **Compensatory Mitigation Monitoring Reporting.** Mitigation monitoring information must be submitted as part of the Annual Project Progress Report for a period of not less than five years, sufficient to demonstrate that the compensatory mitigation project has accomplished its objectives and met ecological success performance standards contained in the Mitigation Plan. Following Project implementation the San Diego Water Board may reduce or waive compensatory mitigation monitoring requirements upon a determination that performance standards have been achieved. Conversely the San Diego Water Board may extend the monitoring period beyond five years upon a determination that the performance standards have not been met or the compensatory mitigation project is not on track to meet them. The Annual Project Progress Report must include the following compensatory mitigation monitoring information:

   a. Names, qualifications, and affiliations of the persons contributing to the report;

   b. An evaluation, interpretation, and tabulation of the parameters being monitored, including the results of the Mitigation Plan monitoring program, and all quantitative and qualitative data collected in the field;

   c. A description of the following mitigation site(s) characteristics:

      i. Detritus cover;
      ii. General topographic complexity;
      iii. General upstream and downstream habitat and hydrologic connectivity; and
      iv. Source of hydrology

   d. Monitoring data interpretations and conclusions as to how the compensatory mitigation project(s) is progressing towards meeting performance standards and whether the performance standards have been met;

   e. A description of the progress toward implementing a plan to manage the compensatory mitigation project after performance standards have been achieved to ensure the long term sustainability of the resource in perpetuity, including a discussion of long term financing mechanisms, the party responsible for long term management, and a timetable for future steps;

   f. Qualitative and quantitative comparisons of current mitigation conditions with pre-construction conditions and previous mitigation monitoring results;

   g. Stream photo documentation, including all areas of permanent and temporary impact, prior to and after mitigation site construction. Photo documentation must be conducted in accordance with guidelines posted at

http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/401c/401PhotoDocRB9V713.pdf. In addition, photo documentation must include Geographic Positioning System (GPS) coordinates for each of the photo points referenced;

h. A qualitative comparison to adjacent preserved streambed areas;

i. The results of the California Rapid Assessment Method (CRAM) monitoring required under section VI.E of this Certification;

j. As-built drawings of the compensatory mitigation project site(s), no bigger than 11"X17"; and

k. A survey report documenting boundaries of the compensatory mitigation site(s).

I. **Final Project Completion Report.** The Applicant must submit a Final Project Completion Report to the San Diego Water Board **within 30 days of completion of the Project.** The final report must include the following information:

1. Date of construction initiation;

2. Date of construction completion;

3. BMP installation and operational status for the Project;

4. As-built drawings of the Project, no bigger than 11"X17";

5. Photo documentation of implemented post-construction BMPs and all areas of permanent and temporary impacts, prior to and after project construction. Photo documentation must be conducted in accordance with guidelines posted at http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/StreamPhotoDocSOP.pdf. In addition, photo documentation must include Global Positioning System (GPS) coordinates for each of the photo points referenced; and

6. An evaluation, interpretation, and tabulation of all California Rapid Assessment Method (CRAM) assessment data collected throughout the term of Project construction in accordance with section VI.E of this Certification.

J. **Reporting Authority.** The submittal of information required under this Certification, or in response to a suspected violation of any condition of this Certification, is required pursuant to Water Code section 13267 and 13383. Civil liability may be administratively imposed by the San Diego Water Board for failure to submit information pursuant to Water Code sections 13268 or 13385.

K. **Electronic Document Submittal.** The Applicant must submit all reports and information required under this Certification in electronic format via e-mail to SanDiego@waterboards.ca.gov. Documents over 50 megabytes will not be accepted via e-mail and must be placed on a disc and delivered to:

California Regional Water Quality Control Board
San Diego Region
Attn: 401 Certification No. R9-2014-0040: 804752:dbradford
2375 Northside Drive, Suite 100
San Diego, California 92108

Each electronic document must be submitted as a single file, in Portable Document Format (PDF), and converted to text searchable format using Optical Character Recognition (OCR). All electronic documents must include scanned copies of all signature pages; electronic signatures will not be accepted. Electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: Certification No. R9-2014-0044: 804752:dbradford.

L. **Document Signatory Requirements**. All applications, reports, or information submitted to the San Diego Water Board must be signed as follows:

1. For a corporation, by a responsible corporate officer of at least the level of vice president.

2. For a partnership or sole proprietorship, by a general partner or proprietor, respectively.

3. For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.

4. A duly authorized representative may sign applications, reports, or information if:

   a. The authorization is made in writing by a person described above.

   b. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.

   c. The written authorization is submitted to the San Diego Water Board Executive Officer.

If such authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the Project, a new authorization satisfying the above requirements must be submitted to the San Diego Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative.

M. **Document Certification Requirements**. All applications, reports, or information submitted to the San Diego Water Board must be certified as follows:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

VII. NOTIFICATION REQUIREMENTS

A. **Twenty Four Hour Non-Compliance Reporting.** The Applicant shall report any noncompliance which may endanger health or the environment. Any such information shall be provided orally to the San Diego Water Board within **24 hours** from the time the Applicant becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Applicant becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The San Diego Water Board, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

B. **Hazardous Substance Discharge**. Except for a discharge which is in compliance with this Certification, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, shall as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the County of Riverside, in accordance with California Health and Safety Code section 5411.5 and the California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.17), and immediately notify the State Water Board or the San Diego Water Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of section 13271 of the Water Code unless the Applicant is in violation of a Basin Plan prohibition.

C. **Oil or Petroleum Product Discharge.** Except for a discharge which is in compliance with this Certification, any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.1). This

requirement does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Clean Water Act section 311, or the discharge is in violation of a Basin Plan prohibition.

D. **Anticipated Noncompliance**. The Applicant shall give advance notice to the San Diego Water Board of any planned changes in the Project or the Compensatory Mitigation project which may result in noncompliance with Certification conditions or requirements.

E. **Transfers.** This Certification is not transferable in its entirety or in part to any person or organization except after notice to the San Diego Water Board in accordance with the following terms:

1. **Transfer of Property Ownership:** The Applicant must notify the San Diego Water Board of any change in ownership of the Project area. Notification of change in ownership must include, but not be limited to, a statement that the Applicant has provided the purchaser with a copy of the Section 401 Water Quality Certification and that the purchaser understands and accepts the certification requirements and the obligation to implement them or be subject to liability for failure to do so; the seller and purchaser must sign and date the notification and provide such notification to the San Diego Water Board **within 10 days of the transfer of ownership.**

2. **Transfer of Mitigation Responsibility:** Any notification of transfer of responsibilities to satisfy the mitigation requirements set forth in this Certification must include a signed statement from an authorized representative of the new party (transferee) demonstrating acceptance and understanding of the responsibility to comply with and fully satisfy the mitigation conditions and agreement that failure to comply with the mitigation conditions and associated requirements may subject the transferee to enforcement by the San Diego Water Board under Water Code section 13385, subdivision (a). Notification of transfer of responsibilities meeting the above conditions must be provided to the San Diego Water Board **within 10 days of the transfer date.**

3. **Transfer of Post-Construction BMP Maintenance Responsibility:** The Applicant assumes responsibility for the inspection and maintenance of all post-construction structural BMPs until such responsibility is legally transferred to another entity. At the time maintenance responsibility for post-construction BMPs is legally transferred the Applicant must submit to the San Diego Water Board a copy of such documentation and must provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer specifications. The Applicant must provide such notification to the San Diego Water Board within **10 days** of the transfer of BMP maintenance responsibility.

Upon properly noticed transfers of responsibility, the transferee assumes responsibility for compliance with this Certification and references in this Certification to the Applicant will be interpreted to refer to the transferee as appropriate. Transfer of responsibility does not necessarily relieve the Applicant of responsibility for compliance with this Certification in the event that a transferee fails to comply.

VIII. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE

A. The County of Riverside is the Lead Agency under the California Environmental Quality Act (CEQA) (Public Resources Code section 21000, et seq.) section 21067, and CEQA Guidelines (California Code of Regulations, title 14, section 15000 et seq.) section 15367, and has filed a Notice of Determination dated December 10, 2014 for the Final Environmental Impact Report (FEIR) titled Final Environmental Impact Report (EIR531); Belle Terre Specific Plan (State Clearing House Number 2012111070). The Lead Agency has determined the Project will have a significant effect on the environment and mitigation measures were made a condition of the Project.

B. The San Diego Water Board is a Responsible Agency under CEQA (Public Resources Code section 21069; CEQA Guidelines section 15381). The San Diego Water Board has considered the Lead Agency's FEIR and finds that the Project as proposed will have a significant effect on resources within the San Diego Water Board's purview.

C. The San Diego Water Board has required mitigation measures as a condition of this Certification to avoid or reduce the environmental effects of the Project to resources within the Board's purview to a less than significant level.

D. The Lead Agency has adopted a mitigation monitoring and reporting program pursuant to Public Resources Code section 21081.6 and CEQA Guidelines section 15097 to ensure that mitigation measures and revisions to the Project identified in the FEIR are implemented. The Mitigation Monitoring and Reporting Program (MMRP) is included and incorporated by reference in Attachment 5 to this Certification. The Applicant shall implement the Lead Agency's MMRP described in the FEIR, as it pertains to resources within the San Diego Water Board's purview. The San Diego Water Board has imposed additional MMRP requirements as specified in sections V and VI of this Certification.

E. As a Responsible Agency under CEQA, the San Diego Water Board will file a Notice of Determination in accordance with CEQA Guidelines section 15096 subdivision (i).

IX. SAN DIEGO WATER BOARD CONTACT PERSON

Darren Bradford, Environmental Scientist
Telephone: (619) 521-3356
Email: darren.bradford@waterboards.ca.gov

X. WATER QUALITY CERTIFICATION

I hereby certify that the proposed discharge from the **Belle Terre Residential Development Project** (Certification No. R9-2014-0040) will comply with the applicable provisions of sections 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 Board Order No. 2003-0017-DWQ, "*Statewide General Waste Discharge Requirements for Dredged or Fill Discharges that have Received State Water Quality Certification (General WDRs)*," which requires compliance with all conditions of this Water Quality Certification. Please note that

enrollment under Order No. 2003-017-DWQ is conditional and, should new information come to our attention that indicates a water quality problem, the San Diego Water Board may issue individual waste discharge requirements at that time.

Except insofar as may be modified by any preceding conditions, all Certification actions are contingent on (a) the discharge being limited to, and all proposed mitigation being completed in strict compliance with, the applicants' Project description and/or the description in this Certification, and (b) compliance with all applicable requirements of the Basin Plan.

I, David W. Gibson, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of Certification No. R9-2014-0040 issued on September 8, 2015.

David W. Gibson

DAVID W. GIBSON
Executive Officer
San Diego Water Board

8 Sept. 2015
Date

ATTACHMENT 1

DEFINITIONS

Activity - when used in reference to a permit means any action, undertaking, or project including, but not limited to, construction, operation, maintenance, repair, modification, and restoration which may result in any discharge to waters of the state.

Buffer - means an upland, wetland, and/or riparian area that protects and/or enhances aquatic resource functions associated with wetlands, rivers, streams, lakes, marine, and estuarine systems from disturbances associated with adjacent land uses.

California Rapid Assessment Method (CRAM) - is a wetland assessment method intended to provide a rapid, scientifically-defensible and repeatable assessment methodology to monitor status and trends in the conditions of wetlands for applications throughout the state. It can also be used to assess the performance of compensatory mitigation projects and restoration projects. CRAM provides an assessment of overall ecological condition in terms of four attributes: landscape context and buffer, hydrology, physical structure and biotic structure. CRAM also includes an assessment of key stressors that may be affecting wetland condition and a "field to PC" data management tool (eCRAM) to ensure consistency and quality of data produced with the method.

Compensatory Mitigation Project - means compensatory mitigation implemented by the Applicant as a requirement of this Certification (i.e., applicant -responsible mitigation), or by a mitigation bank or an in-lieu fee program.

Discharge of dredged material – means any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States and/or State.

Discharge of fill material – means the addition of fill material into waters of the United States and/or State.

Dredged material – means material that is excavated or dredged from waters of the United States and/or State.

Ecological Success Performance Standards – means observable or measurable physical (including hydrological), chemical, and/or biological attributes that are used to determine if a compensatory mitigation project meets its objectives.

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

Establishment – means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist. Creation results in a gain in aquatic resource area.

Fill material – means any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a water body.

Isolated wetland – means a wetland with no surface water connection to other aquatic resources.

Mitigation Bank – means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing mitigation for impacts authorized by this Certification.

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

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

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

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

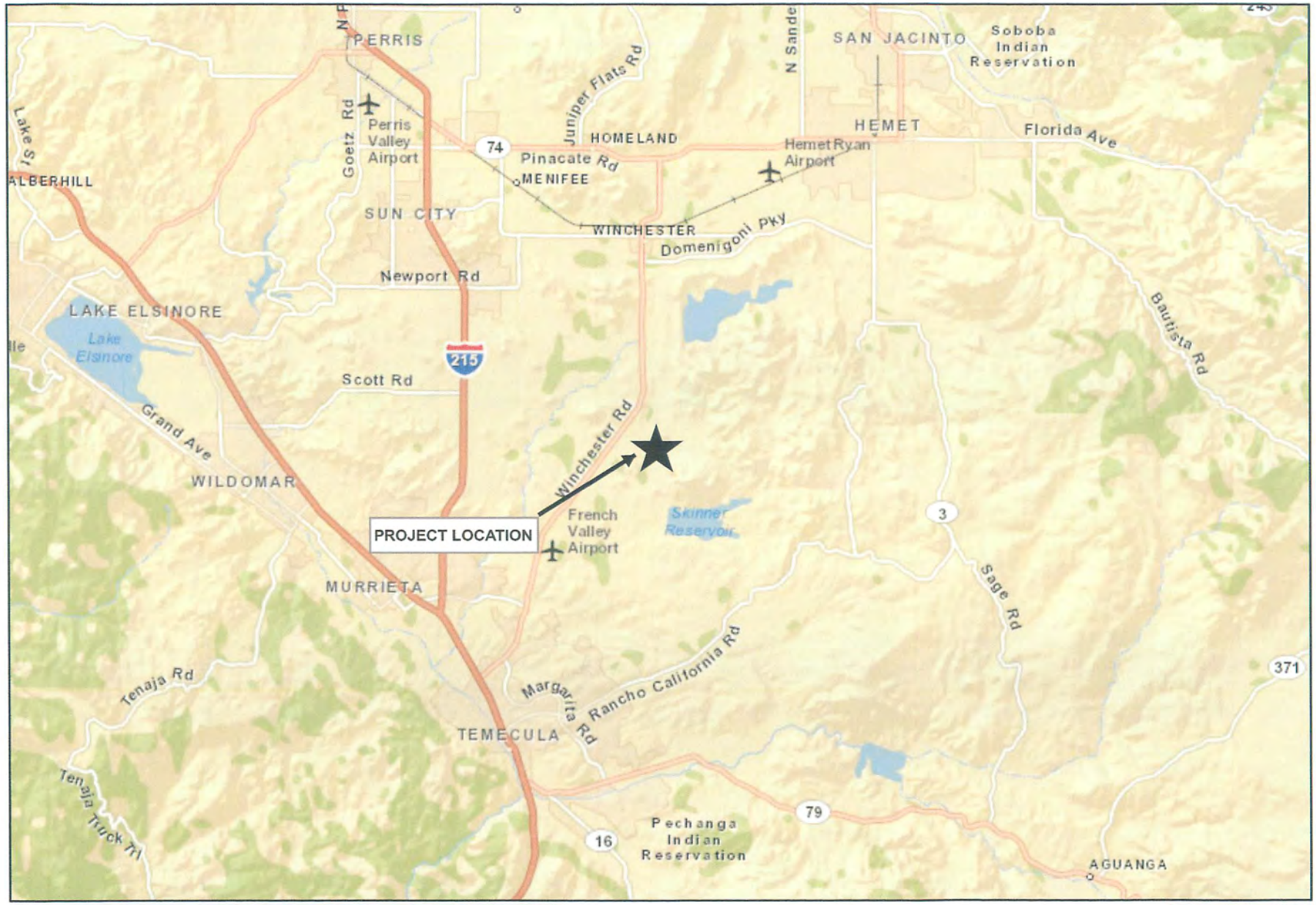
Start of Project Construction - For the purpose of this Certification, "start of Project construction" means to engage in a program of on-site construction, including site clearing, grading, dredging, landfilling, changing equipment, substituting equipment, or even moving the location of equipment specifically designed for a stationary source in preparation for the fabrication, erection or installation of the building components of the stationary source within waters of the United States and/or State.

Uplands - means non-wetland areas that lack any field-based indicators of wetlands or other aquatic conditions. Uplands are generally well-drained and occur above (i.e., up-slope) from nearby aquatic areas. Wetlands can, however, be entirely surrounded by uplands. For example, some natural seeps and constructed stock ponds lack aboveground hydrological connection to other aquatic areas. In the watershed context, uplands comprise the landscape matrix in which aquatic areas form. They are the primary sources of sediment, surface runoff, and associated chemicals that are deposited in aquatic areas or transported through them.

Water quality objectives and other appropriate requirements of state law – means the water quality objectives and beneficial uses as specified in the appropriate water quality control plan(s); the applicable provisions of sections 301, 302, 303, 306, and 307 of the Clean Water Act; and any other appropriate requirement of state law.

Regent French Valley, LLC
Belle Terre Residential Development Project
Certification No. R9-2014-0040

ATTACHMENT 2
PROJECT LOCATION MAPS



Source: ESRI World Street Map

N

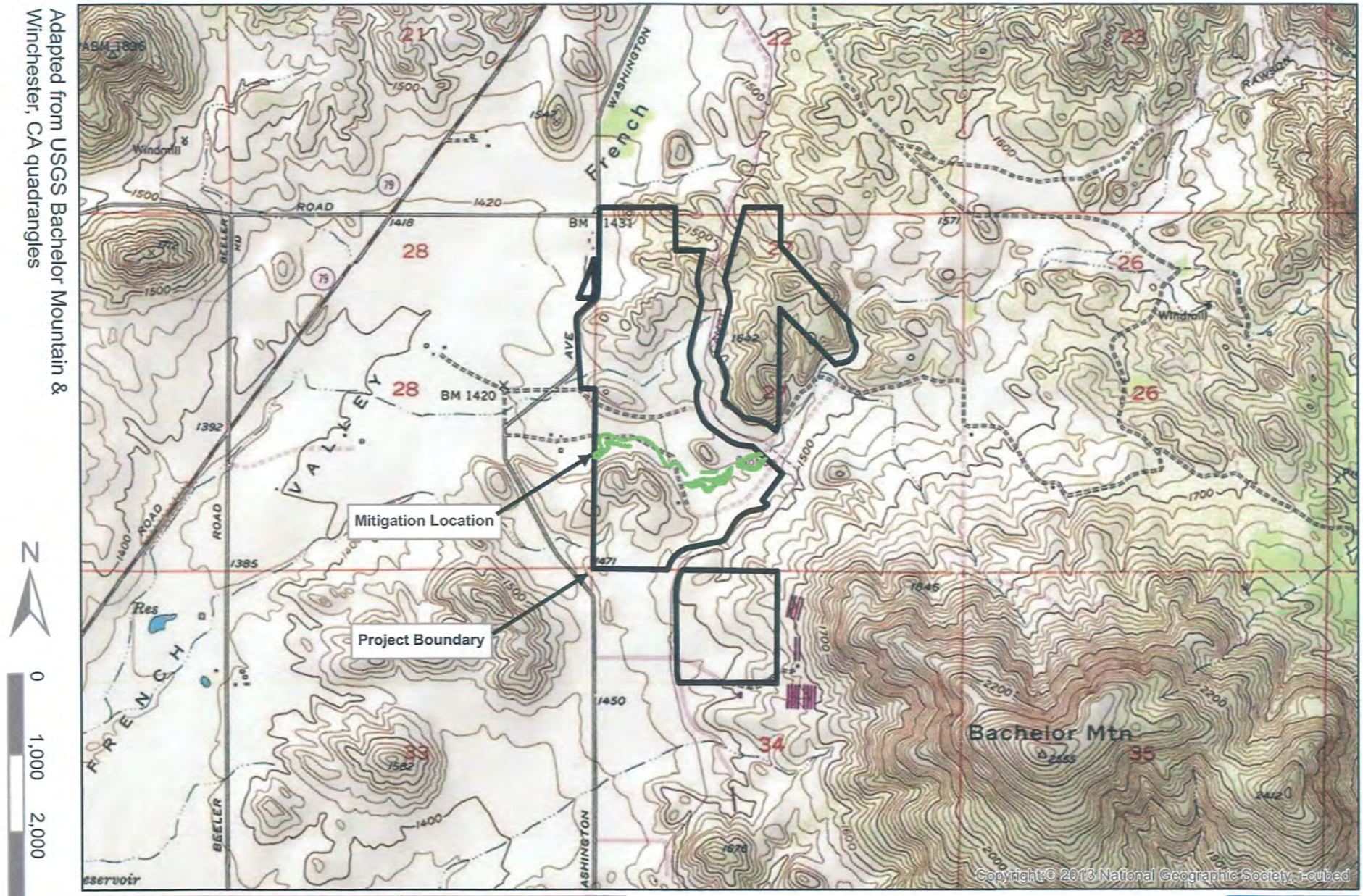
0 2 4 8 Miles

BELLE TERRE PROJECT

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1

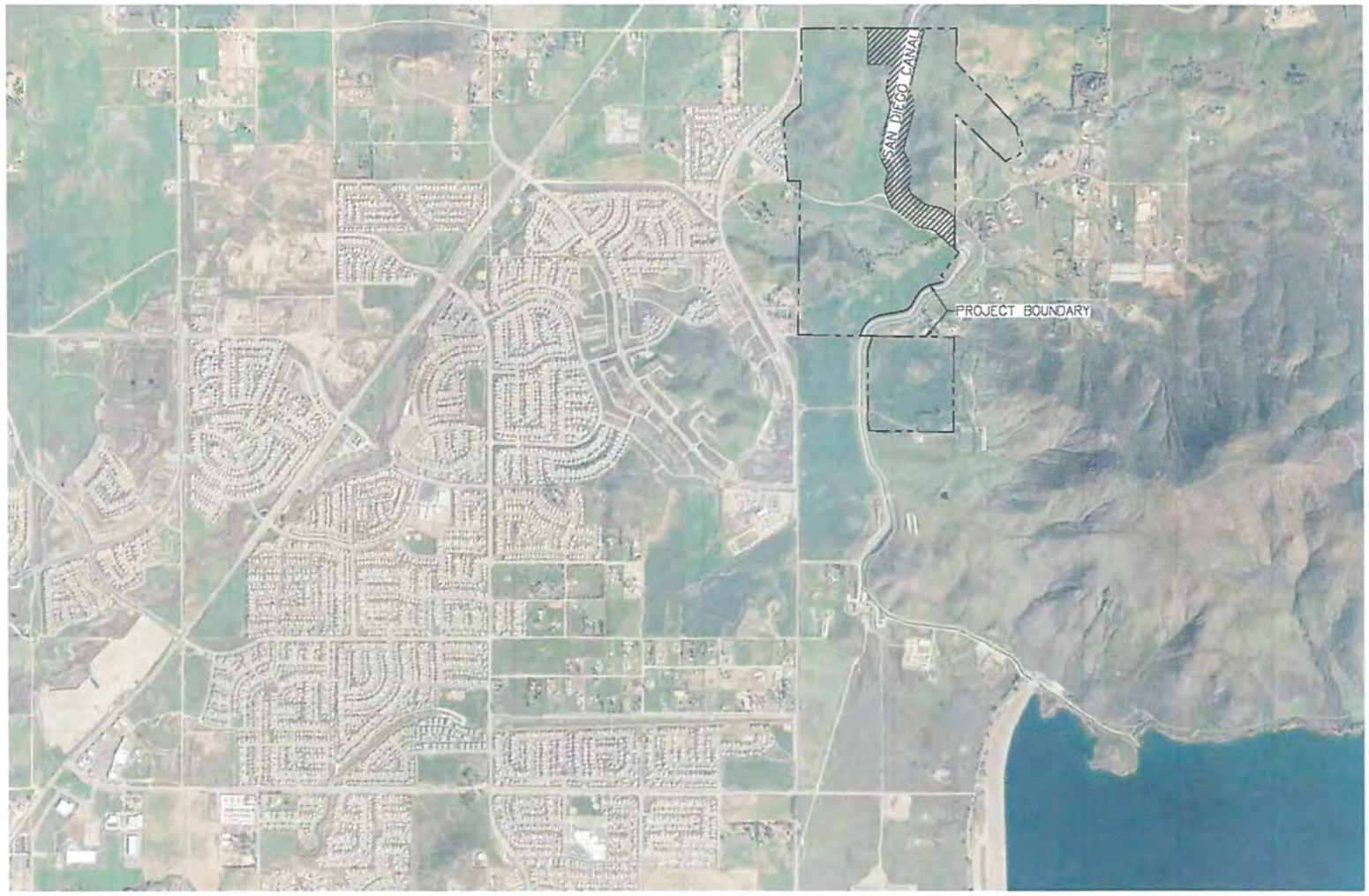


BELLE TERRE PROJECT

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



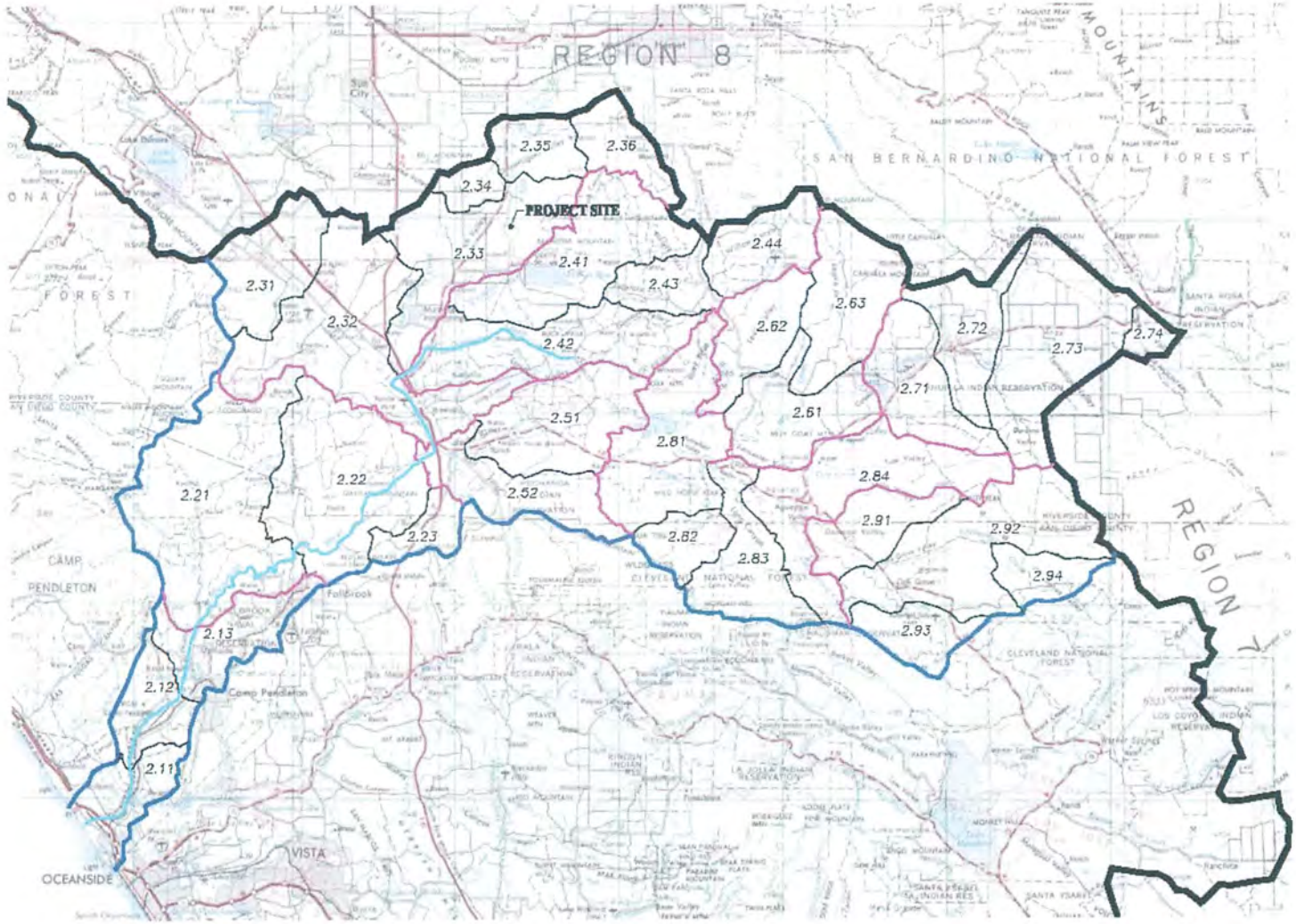
BELLE TERRE SPECIFIC PLAN RECEIVING WATERS MAP

N

JLC Engineering & Consulting, Inc.
36263 CALLE DE LOBO
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

FIGURE 1

Drawing Name: C:\Users\jcarver\Documents\Drawing4.dwg
Last Opened: Jan 20, 2013 - 1:15pm by jcarver



BELLE TERRE SPECIFIC PLAN RECEIVING WATERS MAP

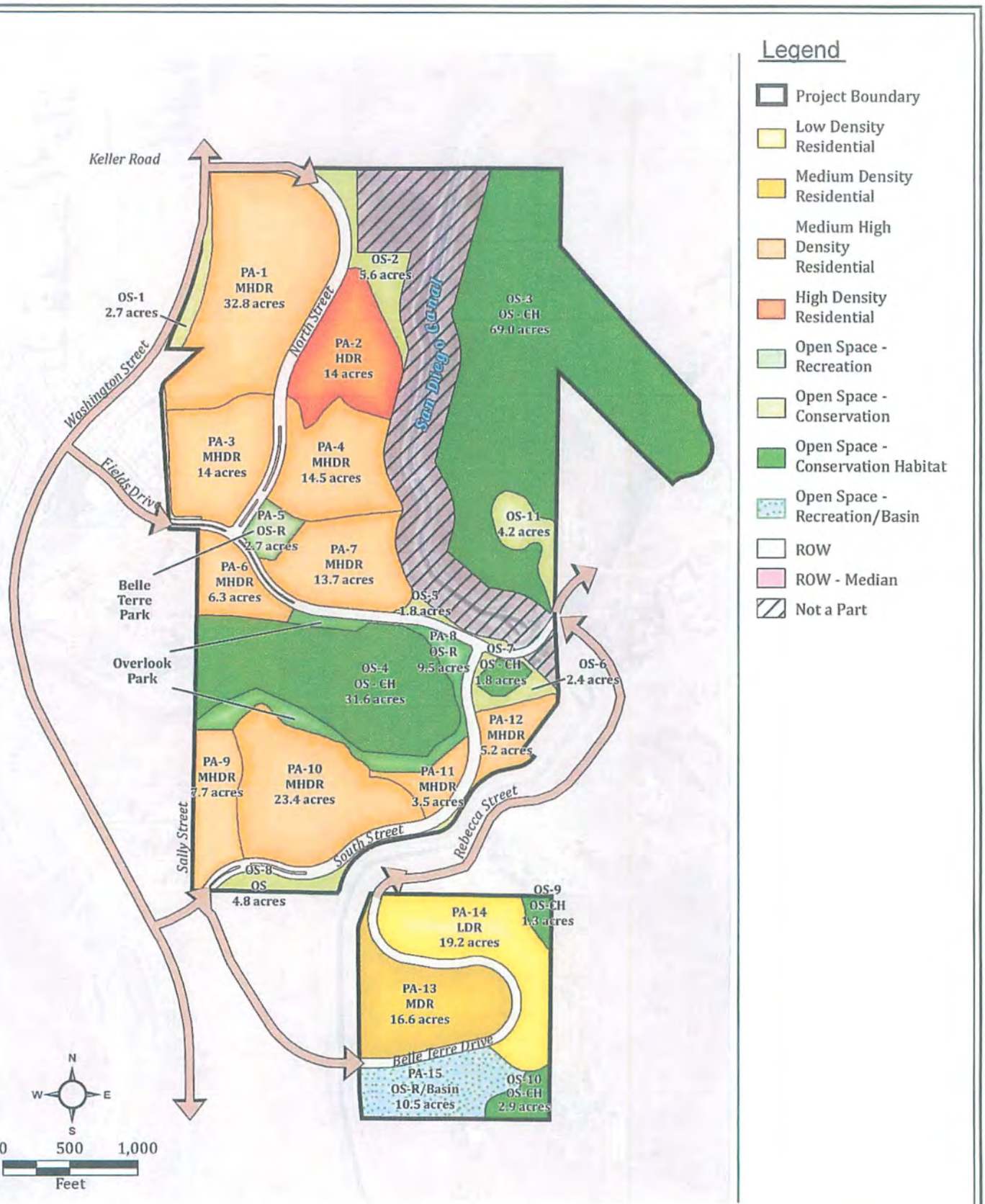
JLC Engineering & Consulting, Inc.
36263 CALLE DE LOBO
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

FIGURE 2

Drawing Name: O:\174.02.12\Engineering\WQMP\Appendix B – Exhibits\Receiving waters and vicinity map_recover.dwg
Last Opened: Jan 20, 2013 – 12:17pm by jcarver

Regent French Valley, LLC
Belle Terre Residential Development Project
Certification No. R9-2014-0040

ATTACHMENT 3
PROJECT SITE PLANS



Source: County of Riverside, 2012; ESRI Imagery, 2010, and Albert A. WEBB Associates, 2013.

CAJA Environmental Services, LLC

Figure III-1
Land Use Plan

Source: ESRI Imagery, 2010, and Albert A. WEBB Associates, 2013.

CAJA Environmental Services, LLC

Figure III-2
Open Space and Recreation Map

SHEET 1 OF 1

BELLE TERRE

COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

WQMP SITE PLAN

LEGEND:

X.X / XX.X SUB AREA ACRES	WQ BASIN B1-1
EXISTING STORM DRAIN	WQ BASIN B2-1
WATERSHED BOUNDARY	WQ BASIN B3-1
PROPOSED OFFSITE STORM DRAIN	WQ BASIN B-4
PROPOSED ONSITE STORM DRAIN	WQ BASIN E-1
WQ BASIN A-1	WQ BASIN F-1
WQ BASIN A-2	WQ BASIN F-2
WQ BASIN H-1	
WQ BASIN H-2	

GRAPHIC SCALE
300' 0 150' 300' 600'
1" = 300'

FIGURE 3

BELLE TERRE

WQMP
SITE PLAN

JLC Engineering & Consulting, Inc.
40040 COLISEUM WAY
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

Regent French Valley, LLC
Belle Terre Residential Development Project
Certification No. R9-2014-0040

ATTACHMENT 4
MITIGATION FIGURES

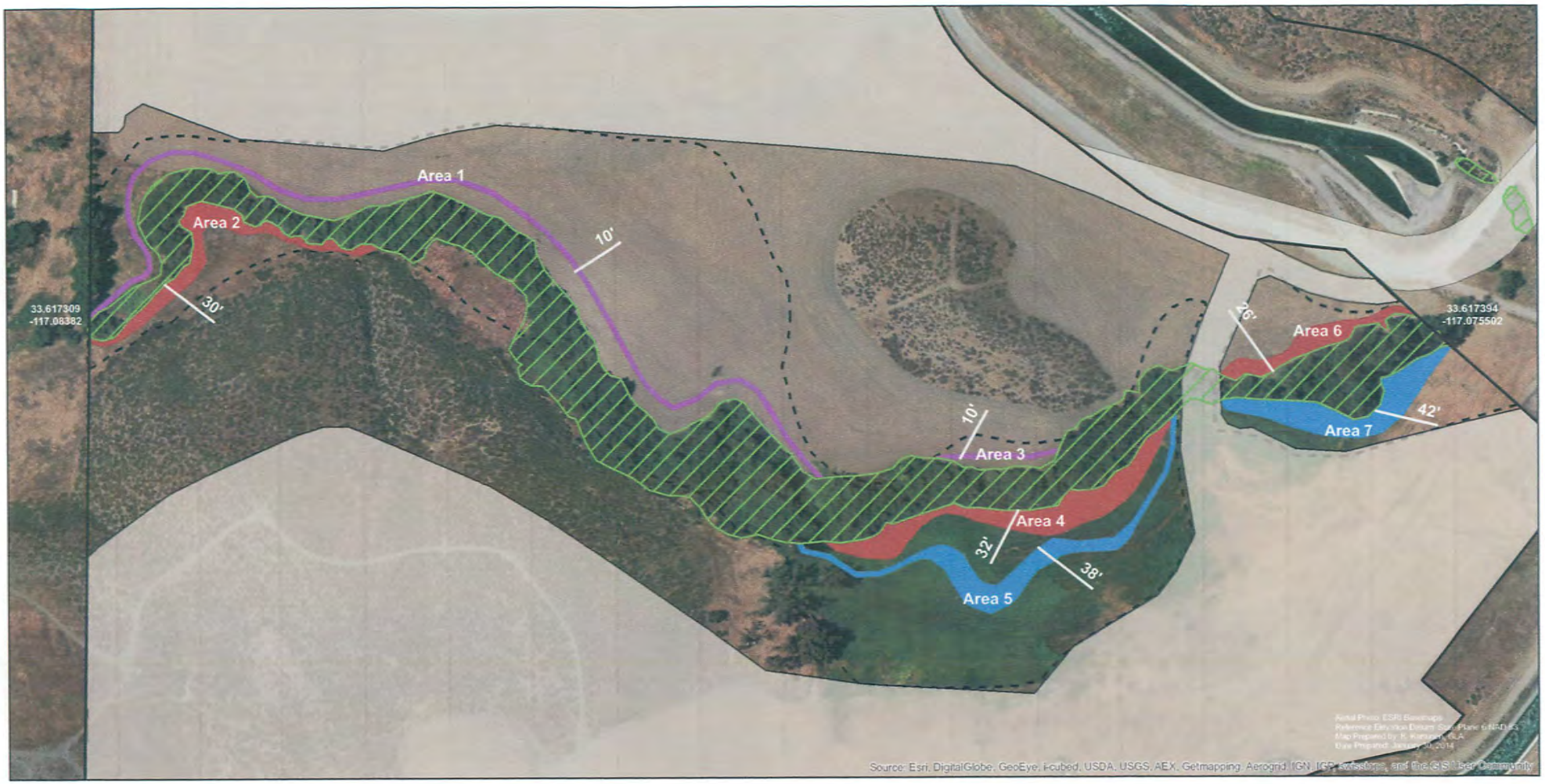
Project Boundary
Onsite Impact Boundary
Offsite Impact Boundary
Corps Non-Wetland Waters
Corps Wetlands
RWQCB Non-Federal Waters
OHWM Width in Feet

BELLE TERRE PROJECT

RWQCB Jurisdictional Delineation/Impact Map

GLENN LUKOS ASSOCIATES

X:\0363-THE REST\1080-02TERR\1080-2_GIS\ImpactsGIS\REV1\1080-2 RWQCB Impact REV1.mxd



Legend

- Project Boundary
- Impact Boundary
- Post-Project Floodplain
- Exisiting CDFW Riparian
- Alkali Marsh/Meadow
- Mulefat Scrub
- Vegetated Swale/Grassland
- 10' Average Width of Mitigation Area

Area	Habitat	Acreage	Linear Feet
Area 1	Vegetated Swale/Grassland	0.44	1,926
Area 2	Southern Willow/Mulefat Scrub	0.36	676
Area 3	Vegetated Swale/Grassland	0.05	221
Area 4	Southern Willow/Mulefat Scrub	0.59	777
Area 5	Alkali Marsh/Meadow	0.49	975
Area 6	Southern Willow/Mulefat Scrub	0.24	407
Area 7	Alkali Marsh/Meadow	0.45	509
Total		2.62	5,491

N

0 62.5 125 250

Feet

1 inch = 175 feet

BELLE TERRE PROJECT

Proposed Mitigation Map

GLENN LUKOS ASSOCIATES

Exhibit 5

X:\0363-THE REST\1080-02TERR\1080-2_GIS\MitigationGIS\1080-2MitigationGIS.mxd
August 30, 2013

Regent French Valley, LLC
Belle Terre Residential Development Project
Certification No. R9-2014-0040

ATTACHMENT 5
CEQA MITIGATION MONITORING AND REPORTING PROGRAM

MMRP Table

Mitigation Measure	Timing/Schedule	Implementation Responsibility	Implementation and Verification	
			Action	Date Completed
D-20: The Project shall incorporate light-colored paving and roofing materials.	Prior to issuance of certificate of occupancy	County of Riverside – Building and Safety Division		
D-21: Prior to issuance of a certificate of occupancy, the County Building and Safety Department shall ensure that electric or propane outlets are provided for barbecues in residential areas.	Prior to issuance of certificate of occupancy	County of Riverside – Building and Safety Division		
D-22: Prior to issuance of a certificate of occupancy, the County Planning Department shall ensure that that the Project's Homeowner's Association enforces the use of electric lawn mowers and leaf blowers.	Prior to issuance of a certificate of occupancy	County of Riverside – Planning Division		
IV.E Biological Resources				
Mitigation Measure E-1: MSHCP Local Development Mitigation Fee Payment Prior to issuance of a grading permit, the Project Applicant shall pay MSHCP Local Development Mitigation fees as established and implemented by the County.	Prior to issuance of grading permit	County of Riverside – Environmental Programs Division		
Mitigation Measure E-2: SKR HCP Fee Assessment Area Fee Payment Prior to issuance of a grading permit, the Project Applicant shall pay the fees pursuant to County Ordinance 663.10 for the Riverside County SKR HCP Fee Assessment Area as established and implemented by the County.	Prior to issuance of grading permit	County of Riverside – Environmental Programs Division		
Mitigation Measure E-3: Burrowing Owl Prior to issuance of a grading permit, a 30-day burrowing owl preconstruction survey shall be conducted immediately prior to the initiation of ground-disturbing construction to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP. The survey shall be conducted in compliance with both MSHCP	Prior to issuance of any grading permit	County of Riverside – Environmental Programs Division		

MMRP Table

Mitigation Measure	Timing/Schedule	Implementation Responsibility	Implementation and Verification	
			Action	Date Completed
and CDFW guidelines. A report of the findings prepared by a qualified biologist shall be submitted to the County prior to any permit or approval for ground disturbing activities. If burrowing owls are detected on-site during the 30-day preconstruction survey, during the breeding season (February 1 to August 31), then construction activities shall be limited to beyond 300 feet of the active burrows until a qualified biologist has confirmed that nesting efforts are compete or not initiated. In addition to monitoring breeding activity, if during the breeding season, a burrowing owl mitigation plan shall be developed based on the County EPD, CDFW, and USFWS requirements for the active relocation of individuals to the Lake Mathews Preserve.				
Mitigation Measure E-4: Migratory Bird Treaty Act Mitigation for potential direct/indirect impacts to common and MSHCP covered sensitive passerine and raptor species shall require compliance with the federal MBTA. Construction outside the nesting season (between September 1 and January 31) does not require pre-removal nesting bird surveys. If construction is proposed between February 1 and August 31, a qualified biologist shall conduct a nesting bird survey(s) no more than fourteen days prior to initiation of grading to document the presence or absence of nesting birds within or directly adjacent (100 feet) to the Project site. The survey(s) shall focus on identifying any raptors and/or passerines nests that could be directly or indirectly affected by construction activities. If active nests are documented, species-specific measures shall be prepared by a qualified biologist and implemented to prevent abandonment of the active nest. At a minimum, grading in the vicinity of a nest shall be deterred until the young birds have fledged. A minimum exclusion buffer of 100 feet shall be maintained during construction, depending on the	Prior to issuance of any grading permit	County of Riverside – Environmental Programs Division		

MMRP Table

Mitigation Measure	Timing/Schedule	Implementation Responsibility	Implementation and Verification	
			Action	Date Completed
species and location. The perimeter of the nest setback zone shall be fenced or adequately demarcated with stakes and flagging at 20-foot intervals, and construction personnel and activities restricted from the area. A survey report by a qualified biologist verifying that no active nests are present, or that the young have fledged, shall be submitted to the County prior to initiation of grading in the nest-setback zone. The qualified biologist shall serve as a construction monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests occur. A report of the findings prepared by a qualified biologist shall be submitted to the County prior to construction that has the potential to disturb any active nests during the nesting season. Any nest permanently vacated for the season would not warrant protection pursuant to the MBTA.				
Mitigation Measure E-5: MSHCP Proposed Conservation Area Prior to issuance of a grading permit, the Project Applicant shall provide the RCA or similar entity with fee title/ownership and management responsibilities for the 106.85-acre MSHCP Proposed Conservation Area designated by the County of Riverside EPD as illustrated on Figure III-1 (refer to Section III [Project Description]).	Prior to issuance of grading permit	County of Riverside – Environmental Programs Division		
Mitigation Measure E-6: Riparian/Riverine/Vernal Pool Resources To meet the criteria of a biologically equivalent or superior alternative, the Project Applicant shall offset impacts to 1.29 acre of MSHCP riparian/riverine habitat by restoring 2.58 acres of non-riparian/riverine habitat as directed by the RCA, USFWS, CDFW, USACE, and RWQCB. The 2.58 acres of mitigation lands shall be identified, restored and located adjacent to the existing, on-site riparian corridor. Specifically, the proposed restoration shall occur within the on-site MSHCP Proposed Conservation Area, which shall have been conveyed in fee title, or by	Prior to the issuance of grading permit	County of Riverside – Environmental Programs Division		

MMRP Table

Mitigation Measure	Timing/Schedule	Implementation Responsibility	Implementation and Verification	
			Action	Date Completed
conservation easement, to the RCA. An MSHCP DBESP shall be prepared and submitted to the County, RCA, and wildlife agencies for review and approval prior to issuance of a grading permit.				
Mitigation Measure E-7: Riparian/Riverine/Vernal Pool Resources Prior to issuance of a grading permit, the Project Applicant shall obtain a 404 Nationwide Permit from the USACE, 1602 SAA from CDFW, and a 401 Certification issued by the RWQCB pursuant to the California Water Code Section 13260. During the permit process a Habitat Mitigation Monitoring Plan (HMMP) shall be developed and approved by the County EPD, RCA, and applicable regulatory and wildlife agencies. As outlined in E-6, mitigation ratios and restoration efforts shall occur on-site within the MSHCP Proposed Conservation Area adjacent to the riparian corridor (French Valley Creek). A total of 2.58 acres shall be restored.	Prior to issuance of a grading permit	California Department of Fish and Wildlife Regional Water Quality Control Board County of Riverside – Environmental Programs Division		
IV.F Cultural Resources				
Mitigation Measure F-1: Cultural Resources Prior to the issuance of a grading permit for any Project construction, the Project Applicant shall retain a County-qualified archaeologist to monitor all ground-disturbing activities in an effort to identify any unknown historic archaeological resources. During all earthmoving activities, the archaeological monitor should be present to monitor all previously undisturbed soils and to identify, document, and evaluate any potential historic, archaeological, or cultural resources that may become unearthed. This would include field and laboratory analysis of any artifacts that are recovered during the fieldwork. The locations of any new discoveries shall be plotted on a site map and described in detail in the archaeological monitoring report and updated I the appropriate existing or new DPR form. Further comparative analysis of the recovered artifacts from CA-RIV-10949/H with other historic-age farmstead sites in the region and	Prior to issuance of any grading permit	County of Riverside – Planning Department Pechanga Tribe or Soboba Band		

APPENDIX D

TO: FILE

FROM: HLS

DATE: March 29, 2016

RE: TIMELINE OF THE 37 WATER BOARD 401 CERTIFICATION REPORT DUE DATES

SUBJECT: REGENT FRENCH VALLEY LLC BELLE TERRE RESIDENTIAL DEVELOPMENT PROJECT, SAN DIEGO, WATER BOARD CERTIFICATION NO. R9-2014-0040 SEPTEMBER 8, 2015

Page 8

III. CONSTRUCTION BEST MANAGEMENT PRACTICES:

B. Personnel Education:

"Prior to the start of the Project, and annually thereafter" the Applicant must educate all personnel on the requirements of this Certification, pollution prevention measures, spill response measures, and BMP implementation and maintenance measures.

Page 8

III.

D. General Construction Storm Water Permit:

"Prior to start of Project construction" the Applicant must obtain a general storm water permit.

Page 8, Paragraph III

E. Waste Management:

"Upon Project completion" all Project debris, materials, waste, etc. shall be removed from the Project.

Page 9

III.

H. Construction Equipment:

"Prior to transport" all construction equipment must be washed and free of sediment debris, etc.; and **"prior to use"** all equipment shall be inspected for leakage.

Page 9

III.

I. Process Water:

"At the end of each workday or sooner if rain is predicted" pollutants discharged to areas within a stream diversion must be removed.

Page 9

III.

J. Surface Water Diversion:

"Immediately upon completion of work" normal flows must be restored to the affected stream at the diversion location.

Page 9

III.

K. Re: Vegetation and Stabilization:

"Within 14 days of the last activity" all areas that have 14 or more days of inactivity must be stabilized; **"after completion of grading"** all areas must be revegetated as appropriate.

Page 10

III.

O. Onsite Qualified Biologist:

"During the entire course of construction" the applicant shall designate an onsite-qualified biologist to monitor Project construction activities.

Page 10

III.

P. Beneficial Use Protection:

"At any time" if an unauthorized discharge to surface waters occurs, Project activities shall cease immediately and the San Diego Water Board shall be notified. In accordance with the Notification Requirement VII.A of the Certification.

Page 10

IV. POST-CONSTRUCTION BEST MANAGEMENT PRACTICES:

D. Post-Construction BMP Implementation:

"Prior to completion of Project construction, occupancy, and/or planned use, and maintained in perpetuity" all post-construction BMPs must be constructed, functional and implemented.

Page 11

IV.

E. Post-Construction BMP Maintenance:

1. **"No less than two times per year"** Applicant will assess the performance of the BMPs to ensure projection of the receiving waters and identify any necessary corrective measures;

2. **"At the beginning of the wet season no later than October 1 and the end of the wet season no later than April 1,"** the Applicant shall perform inspections of BMPs for standing water, slopes stability, sediment accumulation, trash and debris, and presence of burrows.

3. **"Regularly perform"** preventative maintenance of BMPs.

V. PROJECT IMPACTS AND COMPENSATORY MITIGATION:

H. Timing of Mitigation Site Construction:

"No later than 9 months following the start of Project construction" the proposed mitigation must be concurrent with Project grading and completed.

V.

I. Mitigation Sites Preservation Mechanism:

"Within 90 days from the issuance of this Certification" Applicant must provide the San Diego Water Board a draft preservation mechanism (EGD restriction, conservation easement, etc.) that will protect all mitigation areas and their buffers in perpetuity; **"Within 1 year of the start of Project construction"** Applicant must submit proof of a completed final preservation mechanism.

Page 14

VI. MONITORING AND REPORTING REQUIREMENTS:

B. Monitoring Reports.

"At the intervals specified in Section VI of this Certification" monitoring results shall be reported to the San Diego Water Board.

Page 14

VI.

E. California Rapid Assessment Method (CRAM):

1. **"Prior to initiating Project construction"** Applicant shall develop a monitoring plan to implement CRAM monitoring.

2. **"Prior to the start of Project construction authorized under this Certification"** CRAM monitoring must be conducted; [and] **"Annually following construction completion, for a period of 5 years"** CRAM monitoring must be conducted and the annual CRAM monitoring results shall be submitted with the Annual Project Progress Report and with the Final Project Completion Report.

Page 15

VI.

F. Discharge Commencement Notification:

"At least 5 days prior to the start of Project construction" Applicant must notify the San Diego Water Board of its discharge commencement notification.

Page 15

VI.

G. Geographic Information System:

Annually "within 30 days of the start of Project construction" Applicant must submit Geographic Information System (GIS) shape files of the Project impact sites; **"within 30 days of mitigation installation"** Applicant must submit GIS shape files of the Project mitigation sites.

Page 15

VI

H. Annual Project Progress Reports:

1. **"Annual Project Progress Reports must be submitted yearly prior to March 1 of each year following the issuance of the Certification until the Project has reached completion." NB: Annual Project Progress Reports must be submitted even if Project construction has not begun.**

Page 16

VI.

H.

2. Compensatory Mitigation Monitoring Reporting:

"For a period of not less than 5 years" mitigation monitoring information must be submitted as part of the Annual Project Progress Report, unless the San Diego Water Board reduces, waives or extends the monitoring period beyond 5 years.

Page 17

VI.

I. Final Project Completion Report:

"Within 30 days of completion of the Project" Applicant must submit a Final Project Completion Report to the San Diego Water Board.

Page 19

VII. NOTIFICATION REQUIREMENTS [IRREGULAR REPORTING]:

A. Twenty-Four Hour Non-Compliance Reporting:

"Within 24 hours from the time the Applicant becomes aware of the circumstances of non-compliance," the Applicant shall report any non-compliance which may endanger health or the environment.

Page 19

VII.

B. Hazardous Substance Discharge:

Any person [including Applicant] aware of circumstances of a hazardous substance discharge shall **"immediately notify"** the County of Riverside and the State Water Board or the San Diego Water Board of any discharge not in compliance with this Certification.

Page 19

VII.

C. Oil or Petroleum Product Discharge:

"Any person [including Applicant] shall as soon as notification can be provided, **"immediately notify"** California Office of Emergency Services of any petroleum product discharge.

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VII.

D. Anticipated Non-Compliance:

The Applicant **"shall give advance notice"** to the San Diego Water Board of any changes in the Project or compensatory mitigation which may result in non-compliance with Certification conditions or requirements.

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VII.

E. Transfers:

1. Transfer of Property Ownership:

"Within 10 days of the transfer of ownership" Applicant must notify San Diego Water Board of any change of ownership of the Project area.

2. Transfer of Mitigation Responsibilities:

"Within 10 days of the transfer date" Applicant buyer and seller must provide notification of transfer of mitigation responsibility to the San Diego Water Board.

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VII.

E. Transfers:

3. **"Within 10 days of the legal transfer of BMP maintenance responsibility"** for post-construction BMPs, Applicant must submit to the San Diego Water Board a copy of such documentation and provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer's specifications, and it understanding and acceptance by transferee.

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VIII. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE [CEQA COMPLIANCE]:

D.

The Mitigation Monitoring and Reporting Program (MMRP) contains the San Diego Water Board additional MMRP requirements as specified in Sections Paragraphs V and VI of this Certification and incorporate them by reference.

ATTACHMENT 5 CEQA MITIGATION MONITORING AND REPORTING PROGRAM:

[These CEQA requirements contain three reporting requirements to County of Riverside **"prior to issuance of certificate of occupancy"**; and eight conditions to be satisfied to County of Riverside **"prior to issuance of any grading permits."** The Water Board is not the lead agency on these conditions so I do not think it should be included in the Water Board's timeline of monitoring and reporting dates.]

APPENDIX E

Annual Report Due Date

"Tickler" Program is Available by Email to hlserra@gmail.com

APPENDIX F

[SDRWQCB letterhead]

[Date]

[Applicant name and address]

Subject: Reminder of upcoming Annual Monitoring Report due date

Dear [Applicant]:

This letter is a courtesy reminder that your follow-up Annual Monitoring Report is due on [project completion date plus 300 days] under the Conditions of your Clean Water Act § 401, Water Quality Certification No. [Project 401 Certification number].

This courtesy notice is for the purpose of reminding you of your obligations under the mandatory Conditions of your 401 Certification. Our object at the Water Board is to ensure for all Californians water quality that is safe, and of which we can be proud. Your timely compliance with follow-up monitoring will help your Water Board meet those goals, but your failure to comply will result in vigorous enforcement actions. So please respond directly or contact your environmental consultant to timely file a complying follow-up Annual Monitoring Report.

SUMMARY OF POTENTIAL ENFORCEMENT ACTIONS

Your failure to timely submit the Annual Report will subject you to enforcement actions under the California Water Code and the federal Clean Water Act.

Your failure to submit a timely Annual Report will result in enforcement by the San Diego Water Board or state Water Resources Control Board including a potential civil liability assessment of $10,000.00 per day of violation (Water Code § 13385) and/or any of the following enforcement actions:

Other potential enforcement actions	Applicable Water Code Section
Technical or investigative order	13267
Cleanup and abatement order	13304 (Amendment of existing

CAO No. R9-2005-0259)

Cease and desist order	13301 – 13303
Time schedule order	13300, 13308

In addition the San Diego Water Board may consider revising or rescinding applicable waste discharge requirements, if any, referring the matter to other resource agencies, referring the matter to the State Attorney General for injunctive relief, and/or referral to the municipal or District Attorney for criminal prosecution.

RESPONSE FORMAT:

Please submit all responses and information in electronic format via email to SanDiego@waterboards.ca.gov. Documents over 50 megabytes will not be accepted via email and must be placed on a disk and delivered to the San Diego Water Board, 2375 Northside Drive, San Diego, California 92108. Each electronic document must be submitted as a single file, in Portable Document Format (PDF) format, and converted to text searchable format using Optical Character Recognition (OCR). All electronic documents must include scanned copies of all signature pages; electronic signatures will not be accepted. Electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: [Here list certification file number information].

In the subject line of any response, please include the information located in the heading of this letter: "In reply refer to." For questions pertaining to the subject matter, contact [enforcement officer email at Water Board].

Yours truly,

Eric Becker, PE

Senior Water Resources Control Engineer

San Diego Water Board

cc: "Tech Staff info and use information"

APPENDIX G

[San Diego Regional Water Quality Control Board letterhead.]

May 23, 2016

IN REPLY REFER TO:
R9-201x-xxxx:xxxxxx:xxxxxxxx

Mr. _____

CERTIFIED MAIL –
RETURN RECEIPT REQUESTED
Article No.: xxxxxxxxx

Subject: Notice of Violation No. R9-201x-xxxx

Dear Mr. xxxx:

Ninety days ago we sent you a courtesy notice that 60 days thereafter your follow-up Annual Monitoring Report on Clean Water Act Section 401 Certification No. **[xxxx]** must be filed as described in your CWA Section 401 certification conditions, or the San Diego Water Board would commence enforcement and penalty proceedings. You have failed to file that follow-up monitoring report in timely fashion.

Enclosed is Notice of Violation (NOV) No. R9-201x-xxxx issued to you for violations of Clean Water Act Section 401 Water Quality Certification No. R9-20xx-xxxx. As described in the NOV, the violations may subject you to

further enforcement pursuant to the California Water Code (WC). The San Diego Water Board reserves the right to take any enforcement action authorized by law.

In making the determination of whether and how to proceed with further enforcement action, the San Diego Water Board will consider the severity and effect of the violation, the level of cooperation, the time it takes to correct the identified violations, and the sufficiency of the corrections.

Please submit all responses and information to this NOV in electronic format via email to SanDiego@waterboards.ca.gov. Documents over 50 megabytes will not be accepted via email and must be placed on a disk and delivered to the San Diego Water Board, 2375 Northside Drive, San Diego, California 92108. Each electronic document must be submitted as a single file, in Portable Document Format (PDF) format, and converted to text searchable format using Optical Character Recognition (OCR). All electronic documents must include scanned copies of all signature pages: Electronic signatures will not be accepted. Electronic documents submitted to the San Diego Water Board must include the following identifications numbers in the header or subject line:

R9-201x-xxxx:xxxxxx:xxxxxxxx.

For questions pertaining to the subject matter, please contact Darren Bradford at 619-521-3356 or darren.bradford@waterboards.ca.gov.

Respectfully,

Eric Becker, P.E.
Senior Water Resources Control Engineer
San Diego Water Board

Enclosures:
Notice of Violation R9-201x-xxxx with attachments.

APPENDIX H

WETLANDS POST-COMPLETION REPORT WORKSHEET

Project ID: _____
PIN: _____
WB Reviewer: _____
WB Staffer: _____

Full Project Name: _____

Date of Wetland Completion: ___ / ___ / ___

Date of Assessment Report: ___ / ___ / ___

Project Physical Street Address (or closest streets):

Initial Pre-Construction CRAM Score: _____

This Report CRAM Score: _____

List Individual Category CRAM Scores Below 63% in this Report:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

List Performance Standards in this Report, and Their Statuses:

	Met	Not Met	Unassessed
1. _____	☐	☐	☐
2. _____	☐	☐	☐
3. _____	☐	☐	☐
4. _____	☐	☐	☐
5. _____	☐	☐	☐
6. _____	☐	☐	☐

Date of Most Recent Google Earth Photo: ___ / ___ / ___

Attach most recent Google Earth photo, outline wetlands on photo from Project Mitigation Plan Map, and comment on the following:

1. Plant Material: Healthy, Stressed, or Dead
2. If Water Course was altered due to erosion or siltation
3. If projected should be reviewed by Water Board Professional Staff

Comments:

_____
_____
_____
_____