STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING OF MARCH 5-6, 2020
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ITEM NUMBER: **12**

SUBJECT: **Clean Water Act Section 401 Water Quality Certification Program Update**

STAFF CONTACTS: **Phil Hammer, (805) 549-3882,**
Phillip.Hammer@waterboards.ca.gov

KEY INFORMATION

Key Function:	Minimize and mitigate impacts to waterbodies resulting from projects involving work within waterbodies
Key Roles:	Issue requirements to ensure projects working in waterbodies comply with water quality standards and mitigate impacts; monitor compliance during project construction; monitor success of mitigation following project construction; pursue enforcement for failure to comply with requirements and/or failure to obtain authorization for impacts
Projects in Region 3:	An average of approximately 112 applications and/or enrollments received annually over each of the last five years; approximately 322 currently active projects
Program Staff:	3 Environmental Scientists; 1 Senior Environmental Scientist

ACTION: **Information/Discussion**

SUMMARY

The Clean Water Act Section 401 Water Quality Certification Program (401 program) regulates projects placing dredged or fill material in waters of the state. The discharge of fill material is essentially any activity that alters the bottom elevation of a waterbody or otherwise substantially relocates sediment and other material within a waterbody. Typical types of projects regulated by the 401 program include transportation, flood control, and development projects. The primary goal of the 401 program is to protect beneficial uses from impacts resulting from projects occurring within waterbodies, with a focus on protection of wetland, riparian, and aquatic habitat. Staff achieves this goal by working with applicants to first avoid and minimize direct impacts to waterbodies, since leaving waterbodies unaltered is generally the most effective way to protect them. Once impacts have been avoided and/or minimized, staff focuses on mitigation of remaining impacts, typically requiring establishment or restoration of waterbody habitat equivalent to that which was impacted. This staff report discusses 401 program goals and

objectives, regulatory processes, regulatory prioritization, program workload and resources, and future program plans.

DISCUSSION

Under section 401 of the federal Clean Water Act, federal agencies may not issue a permit or license to conduct any activity that may result in any discharge into waters of the United States unless states issue a certification verifying that the activity is in compliance with all state water quality standards. To implement Clean Water Act section 401, the Central Coast Water Board issues regulatory orders typically referred to as Water Quality Certifications or 401s (Certifications). The Central Coast Water Board most commonly issues these Certifications when the U.S. Army Corps of Engineers (Corps) is issuing a federal permit under Clean Water Act section 404 for the discharge of fill material to waters of the United States. Fill material discharges are generally those that alter the bottom elevation of a waterbody or mechanically move sediment and other material within a waterbody. While a federal 404 permit is limited to activities in waters of the United States, a Certification is not, since it addresses waters quality standards for waters of the state, which are often more expansive than waters of the United States. As a result, when permit issuance by the Corps under section 404 is triggered, the Central Coast Water Board will issue a Certification that addresses the entirety of the activity or project, including resulting impacts to both waters of the United States and waters of the state. In summary, when the Central Coast Water Board issues a Certification, it is certifying that an entire project will comply with state water quality standards for water quality and beneficial use protection.

Similarly, if a project involves the discharge of fill material only to waters of the state, and not to waters of the United States, the Central Coast Water Board will issue waste discharge requirements under the California Water Code, rather than Clean Water Act section 401. The goals of these waste discharge requirements are the same as for Certifications: water quality and beneficial use protection. For simplicity, this staff report focuses on Certifications, as opposed to waste discharge requirements for impacts to state waters, since Certifications are the more common regulatory order that is issued. The discussion of Certifications and their implementation generally applies to waste discharge requirements issued for discharge of fill material as well.

Types of Projects Regulated and Impacts to State Waters

The types of projects regulated by the 401 program are wide-ranging. Most common are projects related to transportation and flood control, such as culvert and bridge repair and replacement, road widening, stream bank stabilization adjacent to roadways, and vegetation and sediment removal from waterbodies. Regulation of new development projects, such as for commercial or residential purposes, is also common. In addition to issuing Certifications for these types of individual projects, staff also issues “programmatic” Certifications regulating on-going, long-term flood control and stream maintenance programs. Examples of these programs include Monterey County Water Resources Agency’s Salinas River stream maintenance program, Santa Clara Valley

Water District's stream maintenance program, and the Santa Barbara Flood Control District's annual routine maintenance program.

Projects subject to regulation by the 401 program can result in significant impacts to water quality and beneficial uses. In the 401 program, direct impacts refer to those impacts caused by activities that occur directly within a waterbody, while indirect impacts are caused by activities outside the waterbody. The principal direct impacts the 401 program regulates result from projects that place permanent fill in waterbodies, causing a permanent reduction in waterbody area providing beneficial uses. For example, a flood control project proposing to convert a portion of a stream into a trapezoidal concrete channel causes a permanent physical loss of beneficial uses in that location. Other more pervasive projects that directly impact beneficial uses, but which are less harmful, are those projects that alter waterbody form and degrade habitat quality. For example, a rip-rap stream bank stabilization project can directly degrade aquatic habitat quality by replacing once vegetated areas with hardscape. Such projects can also cause indirect downstream impacts by altering stream meander patterns, resulting in downstream erosion and degradation of water quality and beneficial uses. Projects subject to Certifications may also alter watershed processes, such as by limiting infiltration and groundwater recharge due to construction of new impervious surfaces. While these examples are common types of impacts resulting from 401 projects, they are just a small portion of potential impacts considered by staff when issuing Certifications.

Program Goals and Objectives

The primary goal of the 401 program is to protect beneficial uses from impacts resulting from projects occurring within waterbodies, with a focus on protection of wetland, riparian, and aquatic habitat. Objectives for achieving this goal include avoiding and minimizing direct and indirect impacts to waterbodies, while optimizing mitigation for unavoidable impacts. The concept of avoidance of impacts to waterbodies is critical to the 401 program, since healthy waterbodies are best protected when they are left in place and unaltered. Staff prioritizes working with applicants to achieve projects that avoid direct impacts. For those direct impacts that cannot be totally avoided, staff then pursues minimizing the size of the impacts occurring directly within waterbodies. Once direct impacts have been minimized, staff works with applicants to develop compensatory mitigation that will replace waterbody area and function to offset any remaining direct impacts.

To help maintain focus on these impact avoidance and mitigation objectives and assess program performance, staff has developed various performance measures. The most valuable of these performance measures assess direct environmental outcomes resulting from 401 program implementation. Specifically, for each Certification issued, staff compares the acreage of direct impact to waterbodies, as initially proposed by the applicant, versus the acreage of direct impact to waterbodies that is ultimately authorized in the Certification. Likewise, staff also compares the initial proposed acreage of mitigation versus the acreage of mitigation eventually required in the issued Certification. In this way, staff can quantitatively measure how much direct impacts have

been decreased, and how much mitigation has been increased, due to staff's regulation of 401 projects.

From fiscal year 2011/2012 through 2017/2018, staff's regulation of standard 401 projects has resulted in a reduction of temporary and permanent impact area by approximately 10.6 acres. During that same time, staff has increased mitigation for permanent impacts by approximately 12.3 acres. This analysis considers typical individual 401 projects only and does not take into account larger long-term ongoing projects. For example, the Monterey County Water Resources Agency Salinas River Stream Maintenance Program originally proposed no mitigation in 2009, but the Certification issued in 2016 ultimately required mitigation for impacts to early- and mid-successional perennial riparian habitat and all riparian trees throughout the near 100-mile length of the project. Likewise, the Certification for the County of San Luis Obispo's Arroyo Grande Creek Channel Waterway Management Program required approximately 6.4 acres of additional mitigation over the mitigation acreage originally proposed in the application.

Staff also tracks its efficiency in processing applications. In fiscal year 2017/18, staff took initial action on applications received within an average of six days. Staff issued certifications following receipt of all supplemental application information within an average of 10 days. Both of these rates were the quickest amongst all Regional Water Boards.

Regulatory Process

The process for issuing Certifications is well defined. Upon receipt of an application, staff determines the appropriate regulatory route – issuance of an individual certification or enrollment under a general certification. There are general certifications that offer a streamlined application process for particular categories of projects, such as emergency and restoration projects. If the application is for an individual Certification, which is most common, staff will review it for completeness. If the application is incomplete, staff notifies the applicant of the remaining information that is needed. If the application is complete, staff will begin a more detailed review of the typically lengthy application.

It is at this point that the majority of the work in the 401 program occurs. Following a detailed application review, staff will ask the applicant for supplemental information to augment the application and address staff's questions and concerns. As discussed above, staff's review focuses on avoidance and minimization of direct impacts to waterbodies first and foremost. During review, staff considers project alternatives that could achieve the project purpose while avoiding or minimizing direct waterbody impacts and pursues those alternatives with the applicant. This approach is in alignment with State of California Executive Order W-59-93 (the "No Net Loss" or "Wetland Policy"), which states the objective to "ensure no net loss and long-term gain in the quantity, quality, and permanence of wetlands acreage and values in California […]" Avoidance and minimization of impacts is also in accordance with implementation of the State Water Board's pending *State Wetland Definition and Procedures for Discharges of*

Dredged or Fill Material to Waters of the State, which will outline procedures for applying impact avoidance and minimization in Certifications.

In addition to lessening direct impact area, staff seeks to lessen impact magnitude. Staff will pursue project designs that better preserve the function and value of the waterbody. For example, staff may ask the applicant to assess the feasibility of using bioengineering to stabilize a streambank, as opposed to lining the streambank with rip rap.

Once staff confirms that direct impacts to waterbodies have been avoided and/or minimized, staff will then review any compensatory mitigation proposal to determine its adequacy to offset proposed impacts. Among the factors staff considers when assessing the adequacy of a compensatory mitigation proposal are the following: habitat quality and value of the impact site; endangered species presence at the impact site; type of waterbody impacted compared to type of waterbody mitigated; type of mitigation (establishment, re-establishment, restoration, enhancement, or preservation); location of mitigation relative to impact site; likelihood of mitigation survival and success; mitigation ratio; mitigation monitoring; mitigation success criteria; and other factors.

Staff will further consider other aspects of the project that could indirectly impact water quality and beneficial uses, such as changes in the geomorphology of a waterbody, changes in watershed processes at the project site, post-construction stormwater management, and construction stormwater management. Staff develops project-specific Certification conditions to ensure project design and implementation addresses these issues as necessary.

Following resolution of impact avoidance and minimization, mitigation, and other water quality factors, staff issues the Certification. The Executive Officer is authorized to issue Certifications for the Central Coast Water Board.

After issuance of a Certification, the oversight stage of staff's involvement with the project begins. Oversight is generally composed of annual report reviews and compliance inspections. Starting in 2014, staff commenced with requiring all 401 projects to provide an annual report, regardless of whether project construction has started. This was an important step in Certification compliance assessment, since up to that point, annual reports were only required after project construction was completed. That approach was problematic, because staff often did not know project construction status and therefore did not know when projects should be reporting. As a result, annual reports were oftentimes not submitted and mitigation was not effectively tracked by staff. The current annual reporting requirements rectify this deficiency and allow for staff to closely track mitigation success, a critical factor for the 401 program. Central Coast Water Board staff was the first to implement this reporting approach, which has since been adopted by several other regions in the state.

Staff also frequently conducts compliance inspections of 401 projects. These inspections can occur during the construction phase of the project, or more commonly, following project construction and mitigation installation. Inspections during the

construction phase focus on the projects being constructed as described in the application, while ensuring waterbody impact areas are limited to those authorized in the Certification. Inspections conducted following project construction and mitigation installation typically assess compliance of mitigation design and installation, as well as mitigation progress towards achieving success criteria, such as plant survival and lack of invasive species.

Once a project is completed, all monitoring has been conducted, and mitigation has achieved its success criteria, the applicant will submit a final report requesting Certification termination. Staff reviews the report to confirm mitigation success and compliance with all Certification requirements. If necessary, staff will perform a final compliance inspection. Upon confirmation of compliance with all Certification requirements, staff then terminates the Certification.

Workload, Resources, and Prioritization

The workload for the 401 program is constantly changing, because it is dependent upon external factors such as strength of the economy, rates of development, municipal infrastructure maintenance funding, and weather. However, in general, there are approximately 300-400 active 401 projects within the region at any given time. Currently, there are approximately 260 active individual certifications and approximately 60 active general order enrollments. In terms of applications received, over the last five years an average of 112 applications were submitted annually.

Currently, about 3.3 personnel years are expended within the program annually. Environmental Scientists Kim Sanders and Mark Cassady work in the 401 program full time. Environmental Scientist Kathleen Hicks works in the 401 program at a 90 percent time base. Senior Environmental Scientist Phil Hammer supervises the program currently with about 40 percent of his time. Staff is generally assigned 401 projects according to geographic assignment areas. Kim Sanders oversees projects in Santa Cruz, San Mateo, and Monterey counties. Mark Cassady oversees 401 projects in Santa Barbara and Santa Clara counties. Kathleen Hicks oversees 401 projects in San Luis Obispo and San Benito counties. Geographic areas of responsibility are assigned to balance workload amongst staff.

Staff prioritizes its work within staff geographic assignment areas. Primary factors staff takes into consideration during prioritization are size of direct impact, type of direct impact (permanent or temporary), quality of habitat impacted, and size of mitigation area. Generally, projects with over 0.1 of permanent impacts and/or over 0.3 acre of mitigation are considered high priority, while projects with less than 0.1 acre of mitigation are considered low priority. Due to size of impact, project types that are commonly high priority include on-going flood control and stream maintenance programs, large scale transportation projects, and large residential development projects. Project types that are commonly considered lower priority include restoration projects, survey projects, and minor maintenance projects.

Prioritization helps dictate the level of staff's project oversight, both before and after issuance of a Certification. While all applications receive a baseline level of review, staff more closely reviews applications and negotiates Certification conditions for high priority projects. High priority projects also receive detailed annual report reviews and compliance inspections. Conversely, low priority projects may only receive an initial application review, screening level annual report reviews, and no compliance inspections.

The following are examples of high priority projects staff is currently working on:

- San Luis Obispo Urban Streams Routine Maintenance, City of San Luis Obispo - This project consolidates permitting for over a dozen sites requiring frequent channel sediment and debris removal, vegetation control, rehabilitation of bank protection structures, construction of new bank protection, and flood control channel modifications. Staff is working with the City to address the sources of sedimentation, such as areas experiencing excessive stream bank erosion, so that maintenance frequency may be reduced. Staff is also negotiating a mitigation plan that will allow for meaningful mitigation that addresses watershed priorities, as opposed to small dispersed mitigation projects at various locations.
- Route 46 Corridor Improvement, Caltrans - This project covers the current phase of widening Highway 46, an ongoing phased project involving staff since 2007. Staff is working with Caltrans to identify viable mitigation options for upcoming project phases, as well as previous phases having difficulty achieving mitigation success in some locations. Staff and Caltrans are working with the City of Paso Robles and the Upper Salinas-Las Tablas Resource Conservation District to use restoration of Centennial Creek to partially or fully meet remaining mitigation needs.
- Salinas River Fire Risk Reduction and Flood Control Vegetation Management, City of Paso Robles - The City of Paso Robles plans to conduct ongoing vegetation management for both fire risk reduction and flood control in the Salinas River and other streams within the City. Staff is negotiating with the City to determine the flood and fire risk reduction objectives and define how the City will quantitatively determine the minimum amount of work needed to achieve those objectives. Staff is also working with the City to plan for (1) mitigation due to the loss of aquatic resource function; (2) long-term best management practices (BMP) implementation; and (3) monitoring of project impacts.
- Santa Clara Valley Water District Stream Maintenance Program 2019-2023, Santa Clara Valley Water District - This is a renewal of an on-going stream maintenance program. Staff is currently working with the District to update its stream maintenance program manual, which has been in effect since 2014. The manual describes the overall maintenance program, authorized activities, maintenance planning processes, impact avoidance measures, best management practices, and mitigation approaches. Staff is negotiating updates to the manual, including refining mitigation for the use of rock slope protection, analysis of alternative maintenance approaches, and optimization of environmental value while still achieving the District's flood control objectives.

- Strauss Wind Energy, Strauss Wind, LLC - This project aims to install 30 wind turbines south of the City of Lompoc with an electrical generating capacity of 102 megawatts. Staff has been working with the applicant to ensure that temporary and permanent impacts to state waters resulting from access roads are appropriately identified and minimized or mitigated where necessary. Staff has proposed onsite re-establishment of a stream channel and riparian habitat that has previously been cut off and diverted.
- Carpinteria Salt Marsh Routine Maintenance, Santa Barbara County Flood Control District - This is a renewal of a Certification for the District's ongoing flood control work at the Carpinteria Salt Marsh. The District is proposing new activities, including discharging dredged materials at two locations for beach nourishment. Staff is working with the District to ensure that potential impacts from the discharge of fine-grained sediment onto the beach and into the surf zone are adequately identified, assessed, and mitigated, if necessary. Staff and the District are discussing a potential pilot project to study beach placement of such material. Staff is also negotiating with the District on re-establishment of additional salt marsh as mitigation for impacts.

Future Program Plans

Staff is continually working to improve the effectiveness and efficiency of the 401 program. The following are areas staff plans to focus on over the next one to two years:

- Various agencies within the region conduct routine maintenance in waterbodies, typically for flood control purposes. Some of these agencies, such as the Santa Barbara County Flood Control District and the Santa Clara Valley Water District, have programmatic Certifications that cover a range of their activities, so that individual Certifications are often not needed for specific projects. The programmatic Certifications ultimately reduce time spent on permitting for both staff and applicants, while also allowing for issues to be addressed wholescale, rather than on a case by case basis. Staff has recently collaborated with the City of San Luis Obispo to develop a programmatic Certification for the City's routine maintenance activities. Staff plans to pursue similar efforts with other appropriate agencies within the region.
- Applicants can often have difficulty locating suitable and available locations for mitigation. Small dispersed mitigation sites can be difficult for applicants to manage and for staff to track, reducing the likelihood of mitigation success. Staff has worked with various organizations, such as the Land Conservancy of San Luis Obispo County and the Upper Salinas-Las Tablas Resource Conservation District, to receive and use mitigation funds for larger scale consolidated mitigation projects. Staff plans to continue to identify and pursue opportunities for these types of third-party mitigation arrangements.
- All projects with Certifications are required to submit annual reports, regardless of project status. While staff ultimately is able to elicit submittal of close to 100 percent of annual reports through a combination of reminders and informal enforcement actions, the effort often requires several notifications. This results in a substantial commitment of staff's resources. To obtain an improved annual

report submittal compliance rate at the initial due date, staff plans to forego repeated reminders and instead initiate enforcement more rapidly.

CLIMATE CHANGE

401 program staff currently incorporates climate change adaptability requirements into Certifications. To account for the increased likelihood of more extreme dry weather periods, staff is closely assessing water supply for mitigation projects. In addition, staff is allowing the use of reference sites to determine mitigation success. With this approach, as conditions at reference sites adjust in response to climate change, the expectations for mitigation site success change accordingly. Staff also continues to require low impact development approaches to post-construction stormwater management in new and redevelopment projects, helping ensure natural groundwater recharge and stream baseflows are maintained – conditions that may become increasingly critical during times of drought.

When issuing Certifications, 401 program staff also considers the potential for increasingly severe and more frequent storm events. Staff seeks setbacks for new development from waterbodies, to better protect both waterbodies and property, thereby reducing the need for further stabilization within the waterbodies in the future. Staff has also required some applicants to begin undertaking efforts for planned retreat as part of Certifications for some shoreline stabilization projects.

While staff has been incorporating climate change adaptability concepts into Certifications on an ongoing basis, addressing climate change adaptability in Certifications will likely become more rigorous in the near future. State Water Board staff has recently released draft guidance titled “Climate Change Assessment Framework for Aquatic Resource Compensatory Mitigation Plans.” All 401 program staff will attend training on this guidance when it is finalized and staff intends to implement the guidance upon finalization.

HUMAN RIGHT TO WATER

California Water Code section 106.3(a) states it is “policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitation purposes.” While the 401 program does not specifically focus on drinking water quality or human health issues, it is inherently aligned with the Water Boards’ Human Right to Water Policy because it conditions projects so that they maintain watershed processes that are critical to water supply. The 401 program also applies requirements to protect water quality so that projects are compliant with water quality standards, including beneficial uses related to drinking water.

DISADVANTAGED COMMUNITIES

401 projects occur throughout the region, including in disadvantaged communities. Due to regulatory process requirements, all 401 applications must receive detailed review and oversight from 401 program staff, regardless of project location. Staff strives for

mitigation to occur in locations near impacts, so that one area or community does not disproportionately bear the burden of impacts to waterbodies while not benefitting from the waterbodies' restoration or other mitigation.

CONCLUSION

The ultimate goal of the 401 program is protection of beneficial uses from projects occurring in waterbodies, with a focus on protection of wetland, riparian, and aquatic habitat. Staff will continue to focus on the highest priority sites with the objective of being able to quantitatively demonstrate program success through reduced direct impacts to waterbodies and increased mitigation to offset remaining impacts. Staff will pursue program improvements by implementing the activities identified in this report, while consistently looking for new opportunities to increase program effectiveness.