THE CITY OF SAN DIEGO

M E M O R A N D U M

DATE: June 20, 2016

TO: Helene Deisher, Development Project Manager II, Development Services Department

FROM: Genene Lehotsky, Senior Planner, Transportation & Storm Water Department

SUBJECT: Smythe Channel (MMP Map 130) Emergency Maintenance Substantial Conformance Review Submittal

REFERENCE: Emergency Permit PTS #464339; Permit # 1624456; Job Order # 21003732

This memorandum and attached documents are being submitted as supplements to the After-the-Fact Substantial Conformance Review (SCR) of the City of San Diego (City) Master Storm Water System Maintenance Program (MMP) Program Environmental Impact Report (PTS# 42891/SCH 2004101032) and the associated Amended Site Development Permit 1134892. Maintenance began on February 3, 2016 following notification of the required regulatory agencies. Work was completed on April 21, 2016.

The project involved emergency repair and protection activities at the Smythe Channel MMP Map 130 segment. This channel was maintained under emergency permit authorization and is also an identified channel under the City MMP. Therefore, mitigation measures and other requirements of the MMP were followed; however, certain requirements in the MMP could not be directly adhered to in order to conduct the work under emergency circumstances and reduce the existing threat from flooding to adjacent properties.

This emergency channel maintenance segment is located south of CA-905, west of Picador Boulevard, east of Del Sur Boulevard, and north of Shooting Star Drive. The maintenance area extends west from a three-box culvert outlet under Picador Boulevard approximately 1,392 linear feet from east to a below-grade single box-culvert under Del Sur Boulevard (MMP 130). The channel segment has an earthen bottom and bottom width of approximately 20 feet and an average top width of 47 feet. Assessments by City staff conducted on November 13th and December 17th, 2015 determined that accumulated sediment, freshwater marsh, and riparian scrub (southern willow scrub) vegetation had accumulated throughout the length of the channel and were contributing to flood risk and reduced capacity of the channel. Prior to maintenance, City engineers estimated the pre-maintenance capacity of the channel was at a 2-year storm capacity, whereas the as-built condition is 25-year capacity.

Due to the emergency nature of the project, individual technical studies could not be conducted for the project including an Individual Maintenance Plan (IMP), Individual Hydrologic and Hydraulic Assessment (IHHA), Individual Water Quality Assessment (IWQA), Individual Historic Assessment (IHA), or Individual Noise Assessment (INA); however, a site-specific analysis for each is given below. An Individual Biological Assessment is provided as Attachment 1.

Individual Maintenance Plan

In lieu of an IMP, please find the following description of the maintenance that was performed along with associated Best Management Practices (BMPs). The project was designed by City crews and the project biologist to conform to the MMP, while allowing the work to be conducted in an expeditious manner to address the immediate emergency. The project included maintenance activities and associated Best Management Practices (BMPs) to avoid and/or minimize biological, water quality and other resource impacts.

Emergency maintenance of the channel consisted of the removal of all accumulated sediment and vegetation along the entire 1,392 feet length of the channel area (MMP Map 130; Figure 3). Land covers and vegetation impacted by the project included 0.39 acres of riparian scrub (southern willow scrub) and 0.20 acres of freshwater marsh. Total impacts to ACOE/RWQCB/CDFW jurisdictional areas was 0.59 acre (1,392 linear feet) of wetland waters of the U.S. within the emergency maintenance section (MMP Map 130; Figure 3). There was an additional 0.38 acre of riparian scrub (southern willow scrub) removed that was above the Ordinary High Water Mark (OHWM) and under CDFW jurisdiction only. In addition to these jurisdictional impacts, 0.59 acre of disturbed land, 0.08 acre of ornamental/non-native vegetation, and 0.03 acre non-native grassland (non-jurisdictional uplands) were cleared to access and re-establish the channel. As a result of maintenance activities, the channel was restored to its 25-year storm, as-built capacity, which is the minimum necessary capacity for this channel in order to prevent damage from flooding of properties adjacent to this channel.

Access was taken from both Del Sur Boulevard and Picador Boulevard along the cleared access road on the north side of the channel segment (MMP Map 130; Figure 3). The Tracksteer/Bobcat, Loader, Gradall/Excavator, extended-arm Gradall, hand-operated chainsaws, and dump trucks were the primary tools used to remove material from the channel. An earthen berm was built directly downstream of the three box culvert outlet on the east end of the channel in order to stop downstream flows from entering the work area. A pump diversion system was then installed to allow these flows to be diverted along the channel bank and downstream of the maintenance work. The Loader began by clearing vegetation from the access road along the north bank of the channel. Hand crews entered and began cutting down the trees and vegetation along the bottom and banks of the channel. The Gradall/Excavator and extended-arm Gradall then worked from the northern bank

access road and reached into the channel to clear sediment, remaining vegetation, and debris and loaded it directly into dump trucks. Once the material was loaded into dump trucks, it was taken directly to Miramar Landfill for disposal.

Following initial sediment and vegetation removal from the channel, a contractor was hired by the City to remove debris from the upstream three-box culvert using hand tools and vactor trucks. Prior to the end of the 90-day RGP 63 authorization period, the Contractor conducted final minor grading to create positive downstream flow in the east end of the channel from the three-box culvert outlet to the first grade control structure (concrete energy-dissipator). All work was monitored by a qualified biologist as well as a Native American monitor and archaeologist, as needed. All equipment was removed from the site at the end of the project.

All adjacent access/staging areas were located in existing developed or disturbed areas. Adequate BMPs (i.e. steel plates, fiber rolls, water diversion, etc.) were placed in those areas in order to prevent sedimentation and erosion. All work was conducted under dry conditions.

Hydrologic and Hydraulic Assessment

No final quantitative hydrologic or hydraulic studies (e.g., modeling) were completed for this channel. Investigations conducted by City staff the week of November 13, and December 17, 2015, determined that significant accumulation of sediment and vegetation in the channel was causing an imminent threat of flood damage to residential properties located adjacent to the channel. Sediment and vegetation accumulation had caused constriction points and slowing of flows downstream. Uneven sediment accumulation had raised surface water elevations so that even moderate flow volumes posed an imminent flood threat to adjacent properties. Further, part of the bank located directly behind 3770 Shooting Star Drive had eroded. These conditions combined with future heavy rains anticipated for the 2015-2016 El Nino winter, led the City to conclude that there was an imminent threat to public health and safety that constituted an emergency situation requiring immediate action. This information, in lieu of an IHHA, was presented to the U.S. Army Corps of Engineers (ACOE) and Regional Water Quality Control Board (RWQCB) to supplement the application for use of Regional General Permit (RGP) 63 to conduct emergency channel maintenance. The ACOE, with RWQCB concurrence, granted authorization under RGP 63.

City engineers estimated that prior to maintenance, the channel capacity was approximately equivalent to the 2-year event. The as-built channel conveyance capacity is the 25-year storm event. Therefore, it was determined that removal of all existing vegetation and sediment in the channel was required to restore the minimum channel capacity necessary to reduce flood risk to the adjacent residential properties. As vegetation and sediment was being removed from the channel, it was discovered that the three-box culvert under Picador Boulevard was also innundated with debris and sediment which required immediate attention and maitenance began on the culvert, as well. Some minor grading within the

eastern section of the earthen channel was conducted to create positive downstream flows from the culvert outlet downstream to the first grade control structure.

Water Quality Assessment

Due to the emergency nature of the maintenance activities, a comprehensive water quality assessment was not conducted prior to work. The MMP provides a quantitative framework for assessing maintenance-related water quality impacts by evaluating the potential pollutant removal capacity of a channel (in the pre-maintenance condition) with the potential benefits or impacts resulting from channel maintenance (i.e., removal of sediment and vegetation). This quantitative framework however was subject to legal challenge, and while it provides information regarding water quality impacts/benefits of maintenance, it can no longer be utilized as the basis to evaluate maintenance impacts. Since a full pre-maintenance water quality assessment could not be performed, and since the prior quantitative MMP framework can no longer be relied upon, a qualitative assessment of potential water quality impacts resulting from emergency maintenance activities in the Smythe Channel is presented here based on an evaluation of pre- and post-maintenance vegetation surveys, and BMPs implemented during maintenance.

The Smythe Channel is tributary to the Tijuana River within the Tijuana River Watershed Management Area. A lawsuit was filed regarding the MMP (San Diegans for Open Government et al v. City of San Diego, San Diego Superior Court Case No. 37-2011-00101571), and the City entered into a settlement agreement (Settlement Agreement), which requires the City to implement one of four water quality improvement options for each channel maintained. Water quality mitigation for emergency maintenance-related impacts may be achieved through a combination of mitigation for wetland impacts and implementation of watershed-based water quality improvement strategies identified in the Settlement Agreement.

Evaluation of the existing wetlands and water quality functions they provide (prior to maintenance) in the emergency maintenance area was made on November 13, 2015 by Dudek biologist Scott Gressard. Below the OHWM, there were 0.39 acres of riparian scrub (southern willow scrub), and 0.20 acres of freshwater marsh (ACOE, RWQCB, CDFW, and City jurisdiction) impacted as part of emergency maintenance activities.

The capacity of the Smythe Channel to uptake pollutants in the pre-maintenance condition is unknown. Generally, earthen facilities may be expected to have some potential pollutant removal capability due to the presence of vegetation and some natural substrate. The presence of riparian scrub (southern willow scrub) and freshwater marsh vegetation may provide some potential for pollutant uptake. The capacity of the plant and sediment community to adsorb and retain pollutants is also a function of retention time. Pollutant uptake occurs when flows and velocities are low enough to allow for sufficient retention time. As velocities increase during storm events, retention times decrease and the capacity of

the system to adsorb and retain pollutants may be significantly reduced. Smythe Channel is subject to intermittent flows during storm events which generally have relatively low retention times. Vegetation can also act as a pollutant source when plants die off or are dislodged during high flow conditions and transported downstream along with the retained pollutants.

The MMP's Programmatic Environmental Impact Report (PEIR) identifies wetland mitigation implementation that is designed to offset not only biological impacts but also potential water quality and other impacts associated with wetland habitat values, functions and services. Mitigation for wetland impacts will be implemented in the form of wetland creation/establishment and wetland enhancement within the same watershed as the impacts but, in some cases, offsite. The mitigation ratios applied to the MMP include accounting for habitat, water quality, and other impacts. In general, these processes work to improve water quality by cycling of nutrients; removal of elements or compounds; retention of particulates; export of organic carbon; and/or maintenance of plant and animal communities (USACOE South Pacific Division, Standard Operations Procedure for Determination of Mitigation Ratios, 2012).

The City regulates wetland impacts and requires compensatory mitigation pursuant to the mitigation ratios specified in Site Development Permit (SDP) 1134892 for the MMP. The SDP incorporates mitigation language from the Coastal Development Permit (CDP) 714392. Given that the emergency maintenance conducted for the Smythe Channel is a one-time authorization, impacts could be considered as either temporary or permanent under the SDP requirements. If impacts are considered temporary, mitigation would be required at a 1:1 ratio for impact to 0.20 acres of freshwater marsh and 0.77 acres of riparian scrub (southern willow scrub), which are above the OHWM and under CDFW and City jurisdiction only. A total of 0.97 acres of mitigation is required to mitigate for these one-time temporary impacts.

As an alternative, the City may choose to provide mitigation for permanent impacts, such that future maintenance within this area would not require additional mitigation. Mitigation for permanent impacts would total 3.11 acres.

Total project mitigation of 0.97 acres for impacts to riparian habitat and freshwater marsh is required for emergency maintenance conducted in the Smythe Channel.

In addition to the construction-related BMPs discussed in the maintenance description section, the following BMPs were implemented during and following work in order to minimize impacts to water quality to the maximum extent practicable; there were no discharges or releases of sediment in the channel due to emergency maintenance activities.

1. Appropriate materials were kept on site to contain potential spills. No spills occurred.

2. Fueling, vehicle maintenance, storage, etc. were located outside of waters of the state and did not result in any discharges.

3. No spills occurred and therefore no notification to the RWQCB was required.

4. All construction materials and debris were removed or stockpiled outside of the waters of the state following completion of the emergency action. The City performed street sweeping in the area after emergency maintenance work was complete.

5. The water diversion activities did not result in degradation of beneficial uses. Placement of temporary dams caused little or no siltation. Normal flows were restored to the stream upon completion of work.

6. All necessary BMPs to control erosion and runoff from staging and access areas were employed. BMPs and slope conditions continue to be monitored and hydroseeding may occur if necessary.

7. No invasive species have been used or will be used including in any future revegetation which is implemented.

Additional water quality mitigation for MMP channels is achieved through implementation of one of the four options under the Settlement Agreement in the Watershed Management Area, for each channel maintained. The options include: 1) landscape retrofits to reduce runoff in residential areas, 2) additional/modified street sweeping, 3) implementation of LID features and 4) increased frequency of catch basin inspection and cleaning. The first three options are based on the linear feet of vegetation removed as part of the project (not including areas of invasive species, such as Arundo-dominated areas); the project removed approximately 1,392 linear feet of vegetation (not including invasive species areas).

For each 100 linear feet of vegetation removed, the City may implement landscape retrofits at one residential property within the WMA, such as rainwater harvesting, replacement of grass turf, and irrigation equipment upgrades.

For every 400 linear feet of vegetation removed, the modified street sweeping option targets additional pollutant load removal through vacuum-assisted sweeping of medians and increased sweeping frequency. Under this option, sweeping within the drainage area where maintenance was performed would be increased to quarterly on commercial routes and median sweeping would target areas not regularly swept for one calendar year after maintenance.

For every 200 linear feet of vegetation removed, 100 square feet of LID features such as vegetated swales, biofiltration systems, permeable pavement, or restored wetlands may be constructed and maintained.

Under the fourth option, the City would increase the frequency of catch basin inspection and cleaning, if necessary, of every catch basin within 100 feet of the maintained segment every 3 months for a year after maintenance is performed.

Implementation of the specific water quality improvement strategy selected from the Settlement Agreement options will be finalized to satisfy the terms of the legal agreement and potentially improve water quality conditions entering the maintained channel area.

Historical Assessment

A records search was conducted at the South Coastal Information Center for the Smythe Channel and a ¼-mile radius around the channel. The records search identified 24 studies which have been performed within ½ mile of the Smythe Channel Map 130 channel, two of which address the channel. These two studies are the initial study (Affinis 2008) and EIR for the Storm Water System Maintenance Program. Two cultural resources have been identified within ½ mile of the channel. These resources are a historic railroad located south of the channel and a historic road. A small portion of the original alignment of the historic road is mapped within the APE, but was destroyed during construction of the surrounding neighborhood and the channel. Records search results are included separately as Attachment 6.

This channel was rated as moderate sensitivity for cultural resources by Affinis in 2008. Smythe Channel Map 130 is an earthen channel. All sediments in the channel are present in the channel as a result of deposition during previous rainstorms, and therefore do not contain intact archaeological deposits. Prior to emergency maintenance work, a pedestrian survey was performed by Dudek archaeologist Angela Pham and Native American Monitor Rachael Smith, from Red Tail Monitoring and Research, Inc., on January 28, 2016. No cultural resources were identified during the survey. However, ground visibility was severely restricted by dense vegetation, so monitoring was recommended during vegetation removal to determine if any cultural resources are present adjacent to the berm and to determine if intact native sediments with the potential to contain cultural resources are present.

Archaeological and Native American monitors were present for initial ground disturbance and vegetation removal for seven days from February 3 to February 9, 2016. Sediments impacted by maintenance activities were previously disturbed fill which comprised the banks of the channel and the sediments deposited in the channel during previous rainstorms. No intact native sediments were impacted, and none were observed during monitoring. No cultural resources were identified during monitoring.

Noise Assessment

Consistent with the requirements of the MMP PEIR, because work was conducted after January 15th, raptor nesting surveys were conducted daily prior to emergency maintenance. No nests were found within 500 feet of the maintenance area nor were any encountered during the maintenance period. A technical study for noise impacts from maintenance was not conducted for the Smythe Channel (MMP Map 130) due to the emergency nature of the project. In addition, the PEIR identifies sensitive avian species as the only sensitive noise

receptors for channel maintenance activities and the surveys for nesting raptors and sensitive avian species were negative.

Conclusion

Please find the attached documents submitted for the SCR application of the Smythe Channel (MMP Map 130) emergency channel maintenance project. If you have any questions or concerns regarding the emergency maintenance activities or associated documentation, please call me at (619) 527-7507.

Sincerely

Genene Lehotsky
Senior Planner

Attachments:

1 – Individual Biological Assessment (Dudek, June 14, 2016)
2 – Public Notice Figure & Parcel List Supplemental Discretionary Project Application (Form DS-3035)
3 – Storm Water Applicability Checklist (Form DS-560)
4 – Substantial Conformance Review Checklist
5 – General Application Form (Form DS-3032)
6 – Records Search Summary
7 – Regulatory Permits
8 – Mitigation Memo
9 - California Natural Diversity Database List

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