THE CITY OF SAN DIEGO

M E M O R A N D U M

DATE: May 4, 2016

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

FROM: Stephanie Bracci, Senior Planner, Transportation & Storm Water Department

SUBJECT: Auburn Creek Map 77 Emergency Maintenance Substantial Conformance Review Submittal

REFERENCE: Emergency Permit PTS #477038 Permit # 1625569; Job Order # 21003732

This memorandum is being submitted as a supplement 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. The project involves emergency repair and protection activities at the Auburn Creek Channel MMP Map 77 segment within the City. This channel (MMP Map 77; Figure 3) 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 as quickly as possible and reduce the existing threat to the street and sidewalk.

The emergency channel maintenance area is 0.17 acres, located along the western side of 3940 Federal Boulevard, which stretches approximately 360 feet from northeast to southwest along Home Avenue. Auburn Creek (Map 77) has an earthen bottom and mostly earthen sides, although portions of the banks also have rip rap and concrete. Two large-diameter rounded culverts empty into the channel from the northeast and the channel conveys flows adjacent to several public agency and commercial properties down to a box culvert, with winged concrete headwalls, underneath Federal Boulevard. Adjacent to the culvert, a sidewalk was undermined and additional damage to the sidewalk, and potentially the road, was a concern. Assessments by City staff conducted on February 19, 2016 determined that repair to the eroded eastern bank of the channel was necessary to prevent further erosion and undermining of Federal Boulevard and associated sidewalk, and minimize the risk of flooding adjacent roads and property. Excavation and removal of the

vegetation, sediment, and debris that had unevenly accumulated and likely caused the bank erosion was required as well. With the immediate forecast of rain and given the strong El Nino weather pattern, . immediate action was required. Work began on March 4, 2016 and was completed on March 5, 2016.

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 an attachment.

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 3 components along a total length of approximately 270 linear feet (MMP Map 77; Figure 3). A slope repair and installation of rip rap on the eastern bank of the channel began from the Federal Boulevard culvert inlet and continued 125 linear feet upstream. This segment of the channel, along with an additional 110 linear feet upstream of the slope repair, was cleared (sediment and vegetation removal) as part of this emergency maintenance within the approximately 23-foot channel bed width. Within an additional 35 linear feet upstream of the channel maintenance area, debris and two large uprooted trees were accessed and removed (no sediment or living vegetation was removed). Only the slope repair and channel maintenance area (vegetation and sediment removal) resulted in impacts; the additional debris removal did not result in any loss of vegetation or stream function and therefore is not included in the impact totals, but is depicted in the figures in the Individual Biological Assessment.

The emergency slope repair and channel maintenance areas supported 0.03 acre of disturbed southern willow scrub and 0.12 acre of natural flood channel; for a total of 0.15 acre (235 linear feet) of wetland and non-wetland waters of the U.S. An additional 0.03 acre of disturbed land (non-jurisdictional) area was affected by the slope repair work. City crews repaired the eroded eastern bank of the channel by placing 1/4-ton rip-rap and clean fill dirt along the bank, up to the wingwall of the Federal Boulevard culvert.

Access was taken from Home Avenue and down the western bank of the channel. A dozer/tracksteer was used to push accumulated sediment and vegetation to the

gradall/excavator that was staged outside/above the channel bank on Home Avenue. The gradall/excavator then scooped the materials from the channel and loaded dump trucks stationed on Home Avenue. Equipment also operated upstream of this area to remove debris, including uprooted trees. Sediment, vegetation, and debris from the channel was then taken to the Miramar Landfill for disposal. All work was monitored by a qualified biologist and equipment was removed from the site at the end of the project.

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

No sandbag berms or pumping equipment were used during maintenance as the channel remained dry during all work. Any work with potential to exposed or disturb cultural resources was monitored by a qualified archaeologist and native American monitor. All channel work was monitored by a qualified biologist and all equipment and materials were removed following completion of work.

Hydrologic and Hydraulic Assessment

No quantitative hydrologic or hydraulic studies (e.g., modeling) were completed for this channel. Instead, City crews performed an inspection at the channel on February 19, 2016 and observed significant erosion of the eastern bank of the channel, and undermining of the existing sidewalk and pedestrian railing along Federal Boulevard. During the assessment, City staff determined that additional erosion could damage the adjacent property (owned by the City and occupied by the Police Department), further undermine the sidewalk and potentially the roadway, and cause channel flows to be diverted onto Federal Boulevard, resulting in a hazard to vehicles traveling the roadway. Accumulated sediment and vegetation in the channel were causing flows to be directed towards the eastern bank, resulting in the observed erosion. In addition, City staff observed two large uprooted trees in the channel which had the potential to block flows, and thus increase flood risks to adjacent properties. The observed channel conditions, forecasted storm event, undermined sidewalk and concern for the roadway, and the prediction of continued El Nino pattern and heavy winter storms led the City to determine that the likelihood of further erosion from heavy flows was extremely high, and therefore the roadway and vehicular traffic adjacent to the channel were under imminent threat of severe damage from storm flooding. 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 to remove the immediate threat to infrastructure. The ACOE, with RWQCB concurrence, granted authorization under RGP 63.

Auburn Channel (MMP Map 77; Figure 3) in the emergency maintenance area is an earthen-bottom channel with mostly earthen sides, although portions of the banks also have rip-rap

and concrete. The maintenance area begins just north of Federal Boulevard, and continues 270 linear feet upstream to the north along Home Avenue. The average bottom width of the channel is approximately 23 feet along this section (MMP Map 77; Figure 3).

City engineers concluded that stabilizing the eroded bank with riprap, and removing accumulated sediment and vegetation along the western half of the channel in the downstream portion of the maintenance area would help restore the appropriate channel geometry and prevent further erosion, and allow conveyance of storm flows and minimize flood hazard risks during upcoming and future storm events.

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 Auburn Channel is presented here based on an evaluation of pre- and post-maintenance vegetation surveys, and BMPs implemented during maintenance.

The Auburn Channel is tributary to Chollas Creek and is part of the Pueblo Watershed within the San Diego Bay 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 February 25, 2016 by Dudek biologist Vipul Joshi. There were 0.03 acre of riparian scrub (disturbed southern willow scrub), and 0.12 acre of natural flood channel impacted as part of emergency maintenance activities.

The capacity of the Auburn Channel to uptake pollutants in the pre-maintenance condition is unknown. Generally, earthen-bottom facilities may be expected to have some potential

pollutant removal capability due to the presence of vegetation and some natural substrate. The potential of riparian scrub (disturbed southern willow scrub) to uptake pollutants is expected to be limited as compared to that of freshwater marsh or other wetlands vegetation. 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. Auburn 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 typically 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) A-6-NOC-11-086. For the Auburn Channel, mitigation is required at a ratio of 1:1 for temporary impacts, 2:1 for natural flood channel, and 3:1 for impacts to riparian habitat. Given that the emergency maintenance conducted 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 0.12 acre of natural flood channel, 0.03 acre of riparian scrub. The impacts to natural flood channel are considered to be restored in-place, at a 1:1 ratio, as the sediment/cobble substrate of the channel is substantially similar to pre-emergency conditions. This onsite restoration resulted in no-net-loss of functions and values and is considered adequate 1:1 mitigation, in accordance with SDP requirements. An additional 0.03 acre of mitigation would be required for temporary impacts to riparian scrub. 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.

As 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. All necessary BMPs to control erosion and runoff from staging and access areas were employed.

6. No revegetation was required as the slope of the channel is stable.

7. Rip rap was installed as an erosion control measure along a section of the southeastern bank of the channel that had become degraded and had been eroding into the channel during rain events.

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 88 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.

The City will pursue the fourth optionand 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.

Historical Assessment

A records search was conducted at the South Coastal Information Center for Auburn Creek Channel (Map 77) and a 1/2-mile radius around the channel. The records search identified 17 studies which have been performed within ½ mile of the channel, three of which addressed the channel directly, including one which was a study of the creek itself. Two (2) cultural resources have been identified within ½ mile of the channel, although none have been recorded in the project area. One of the resources (CA-SDI-10528/H) is a City of San Diego dump dating to the early 1900s. and is located immediately northeast of this channel segment. Records search results are included separately as Attachment 1 (note: a combined records search for Auburn Channel Maps 67, 68, 70, and 77 was performed due to proximity of the channels. Although the records search cover page states the Project Identification is "Auburn Creek 67 & 68 #9357," the data from Map 77 are included in the search).

Auburn Creek Channel Map 77 is primarily an earthen channel. All sediments within the channel that required removal were deposited in the channel as a result of erosion, and therefore have no potential contain intact cultural resources. In 2008 Affinis identified the area surrounding this channel segment and the sediments beneath the channel itself as having a high potential to contain cultural resources, due to the channel being located adjacent to a known significant historic archaeological site. Since the channel is mostly earthen and located within close proximity to a known archaeological site, there is a high possibility that intact archaeological deposits could be impacted in the banks of the channel or beneath the constructed channel bottom. Therefore, archaeological and Native American monitoring of channel maintenance activities was performed.

Archaeological and Native American monitors were present for ground disturbing activities for two days; March 4, 2016 and March 5, 2016. During channel maintenance activities the archaeological monitor observed scattered non-diagnostoc historic and modern items at 3.5 to 5 feet below the current surface level. The items were embedded in the surface of the eastern wall of the channel. Dudek's Principal Investigator and the monitor conducted a field investigation of the discovery in order to determine if an intact cultural deposit was present. The investigation consisted of three shovels probes. The investigation determined that the historic items have been washed downstream from their original location (liekly associated with CA-SDI-10528/H) during a past flood/rain event and are not intact. No impacts to

cultural resources occurred. All maintenance activities were limited to fill sediments deposited during previous rainstorms – no intact native sediments were impacted.

Noise Assessment

Consistent with the requirements of the MMP PEIR, because work was conducted after January 15th, raptor nesting surveys were conducted prior emergency maintenance on March 4, 2016. No nests were found within 500 feet of the maintenance area nor were any encountered during the maintenance period. The PEIR identifies sensitive avian species as the only sensitive noise receptors for channel maintenance activities. Since the survey for nesting raptors was negative, and the maintenance was conducted outside of the breeding season of most listed species that could potentially nest in the area (e.g. Least Bell's vireo),a technical study for noise impacts from maintenance was not conducted for the Auburn Creek Channel (Map 77).

Conclusion

Please find the attached documents submitted for the SCR of the Auburn Creek Channel (MMP Map 70) emergency channel maintenance project. If you have any questions or concerns regarding the emergency maintenance activities or associated documentation, please call me at (619) 527-3445.

Sincerely

Stephanie Bracci
Senior Planner

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Attachments:

1 – General Application Form (Form DS-3032)
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 – Individual Biological Assessment (Dudek, April 12, 2016)
6 – Records Search Summary
7 – Regulatory Permits

cc: Gene Matter, Assistant Deputy Director, Transportation & Storm Water Department

Christine Rothman, Development Project Manager III, Transportation & Storm Water Department
Jamie Kennedy, Associate Planner, Transportation & Storm Water Department
Scott Gressard, Environmental Analyst/Biologist – Dudek
Vipul Joshi, Senior Project Manager/Ecologist - Dudek