



THE CITY OF SAN DIEGO

M E M O R A N D U M

DATE: March 10, 2016

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

FROM: Stephanie Bracci, Transportation & Storm Water Department

SUBJECT: Auburn Creek Channel (MMP Maps 67 & 68) Emergency Channel Maintenance Substantial Conformance Review Submittal

REFERENCE: Emergency Permit PTS #459745; Job Order # 21003732

This memorandum and attached documents are being submitted for the 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 for the subject project. The project involved emergency repair and protection activities at the Auburn Creek channel (MMP Maps 67&68; Attachment E, Figures 3a&3b) within the City. This channel is an identified channel in the City MMP and was maintained under emergency permit authorization. Therefore, mitigation measures and other requirements of the MMP were followed to the extent possible.

Assessments by City staff and engineers were conducted on two channel sections during the week of November 16th, 2015. In the first channel section (MMP Map 67; Attachment E, Figure 3a) it was determined that sediment and non-native vegetation had accumulated upstream constricting capacity into a single box culvert (5 feet by 8 feet). Erosive impacts from past storms likely involving backwater effects were evident within the existing cobble, and non-native vegetation and erosion impacts from flooding were visible along the adjacent slope (Attachment A). The City's assessment in the second channel (MMP Maps 68; Attachment E, Figure 3b) determined that sediment and invasive species (*Arundo*) build up had further narrowed the channel, exacerbating a "bottle-necking" effect. This effect caused flows to back-up upstream further exaggerating the imminent flood risk to adjacent properties. These two channel sections abut an open lot dominated by exotic species (MMP Map 67; Attachment E, Figure 3a) as well as public roads, and private residences that have experienced and reported flooding during past rain events. In light of the condition of the concrete-and earthen-lined drainage channel sections observed during the November 2015 assessment, and with the prediction of El Niño storms and expected heavy rains during the 2015-2016 storm season, the City determined that the properties and City infrastructure adjacent to the Auburn Creek channel were under imminent threat of severe damage from storm flows. 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.

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 with the MMP, while allowing the work to be conducted in an expeditious manner to address the imminent threat to life and property. 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 included the removal of all accumulated vegetation and sediment within the concrete- and earthen-lined drainage channel sections that extend for a total of approximately 701 linear feet. The first section is located north of Wightman Street (MMP Map 67; Attachment E, Figure 3a) and is approximately 427 feet in length with an average bottom width of approximately 10 feet. The second section is located directly south of Wightman Street (MMP Map 68; Attachment E, Figure 3b) and is approximately 274 feet in length with an average bottom width of approximately 12 feet. On December 15, 2015, City crews began the emergency maintenance and the project was completed on January 12, 2016.

A third section of Auburn Creek channel was originally planned to be included in this emergency maintenance effort adjacent to the intersection of Ontario Avenue and Auburn Drive. However, it was later discovered that this section is located on private property where the City does not have an easement. No maintenance was conducted in this section, and it is not covered in this submittal.

In the first section located directly north of Wightman Street (MMP Map 67; Figure 3a), all materials were excavated from the channel segments by a Gradall (i.e., excavating-type equipment with an extended arm) and Trackhoe. The Gradall was staged outside and above the channel within the disturbed Access/Staging area. A Pole Saw and chainsaws were also used to remove a large exotic tree on the southwestern end of this section.

In the second section located directly south of Wightman Street (MMP Map 68; Figure 3b), a Gradall was used to lower a Trackhoe and Bobcat into the channel. The Trackhoe and Bobcat pushed vegetation and sediment to a location that it could be removed by the Gradall, which was staged outside and above the channel at the north end (Wightman Street). Some vegetation and sediment within and adjacent to the channel were also removed using hand tools and chainsaws.

Crews used existing cobble and sediment to re-shape and support the channel banks to prevent erosion and discourage sloughing of material into the channel. Adjacent access/staging areas were located in existing developed areas. Adequate BMPs were placed in those areas to prevent sedimentation and erosion from occurring (see pollution prevention measures listed below).

Work was conducted mostly during dry periods, but pumps were used as necessary to bypass water downstream and out of work areas. Crews set up sand bag berms to prevent any downstream flow from entering the work areas. The materials removed from the two sections were loaded into dump trucks and hauled offsite to an approved dumpsite (the Miramar Landfill). All work was monitored by a qualified biologist and all equipment and materials were removed following completion of the work.

Hydrologic and Hydraulic Assessment

No quantitative hydrologic or hydraulic studies (e.g., modeling) were completed for this channel. Instead, flooding as reported by adjacent private residences and observed by City crews was investigated and determined to be the result of sediment and vegetation that had accumulated within the Auburn Creek channel. 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) as part of an application for use of Regional General Permit (RGP) 63 to conduct emergency channel maintenance to remove the immediate threat to property. The ACOE, with RWQCB concurrence, granted authorization under RGP 63.

The City staff determined that immediate action was necessary to remove sediment and vegetation from the Auburn Creek channel to prevent imminent damage to public and private property and downstream resources. City staff noted several areas where previous flows had eroded the bank of the channel such that residential properties, public infrastructure and parking facilities were being undermined. Based on field observations, staff also determined that the accumulation of vegetation, sediment, and debris within this entire facility had created a significant likelihood that a major storm event would further undermine the adjacent structures and cause flooding on the adjacent properties.

Assessments by City staff and engineers in the first channel section (MMP Map 67), determined that sediment and non-native vegetation had accumulated upstream of Wightman Street, and had constricted capacity into a single box culvert (5'x8') under Wightman Street. Erosive impacts from past storms likely involving backwater effects were evident within the existing cobble and non-native vegetation, and erosion impacts from flooding were visible along the adjacent slope, which supports a residential parking lot to the west. City staff's assessment in the second channel section (MMP Map 68), which is located directly south of Wightman Street and fed from the single box culvert that carries water under the roadway, determined that sediment and invasive species (*Arundo*) build up had aggravated the narrow channel conditions and diminished capacity, further exacerbating a the flow constriction. This situation caused storm flows to back-up and increase the imminent flood risk to adjacent residences, and also contributed to the flooding threats discussed in the first section north of Wightman Street.

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

The Auburn Creek 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 the water quality functions they provide (prior to emergency maintenance) in the maintenance area was made on November 11, 2015 by Dudek biologist Scott Gressard. There were 0.05 acre of disturbed wetland (*Arundo*-dominated) vegetation, 0.07 acre of developed concrete-lined channel, and 0.09 acre of natural flood channel impacted as part of emergency maintenance activities.

The capacity of the Auburn Creek channel to uptake pollutants in the pre-maintenance condition is unknown. Generally, earthen- and concrete-lined facilities may be expected to have some potential pollutant removal capability due to the presence of vegetation and some natural substrate, however, this channel was primarily unvegetated and full of accumulated sediment. The potential of the small amount of disturbed wetland (*Arundo*-dominated) vegetation growing on the channel bank 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 Creek channel is subject to ephemeral flows 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 ratios for wetland impacts vary and generally are implemented in the form of wetland creation/establishment, wetland enhancement, or mitigation credit purchase within the same or adjacent watershed as the impacts but, in many 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. For this channel, mitigation is only required for impacts to natural flood channel. The required mitigation ratio is 1:1 for temporary impacts, 2:1 for permanent impacts. RWQCB staff verbally requested that areas of streambed that supported a cobble bottom prior to maintenance be returned to similar condition following maintenance. City crews, under supervision of the monitoring biologist and in compliance with the RWQCB requirement (and SDP requirement for temporary impacts), provided 1:1 in-kind mitigation for temporary impacts to natural flood channel (0.9 acre) by restoring the cobble bottom of the channel following maintenance. This onsite restoration resulted in no-net-loss of functions and values and is considered adequate 1:1 mitigation, in accordance with SDP requirements.

In addition to the specific 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 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 (e.g., fiber rolls) were employed. No temporary impacts occurred and therefore no restoration is required.
7. No revegetation is required. Maintenance was conducted within unvegetated stream channels which remain unvegetated after maintenance and areas of invasive species, which were cut to grade and will continue (for up to 2 years) to be re-treated to control re-sprouts.

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 did not remove any vegetation that was not invasive, non-native (e.g., Arundo-dominated) vegetation. The fourth option is not dependent on the amount of vegetation removed.

Therefore, water quality mitigation for channel clearing impacts would be achieved under the fourth option; the City will 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.

The above water quality improvement strategy under the Settlement Agreement will be implemented 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 performed for both sections and a ¼-mile radius around the channels in January 2016 by staff at the South Coastal Information Center (SCIC). The records search identified 13 previous studies that cover both channels, either in part or entirely. The records search did not identify any cultural resources in the channels, but did identify a few historic period resources near the project site. The historic period resources consist of sidewalk stamps and historic period refuse scatters. Evidence of the records search is included as Attachment G.

The emergency maintenance sections within the Auburn Creek Channel are earthen-lined in Map 67 and both earthen- and concrete-lined in Map 68. All sediments removed from within the channel during maintenance activities are the result of secondary deposition during previous rainstorms and therefore do not have the potential to contain intact cultural resources. Maintenance within the earthen channels was limited to excavation into the existing channel bottom. The banks of the earthen channel, which have the potential to contain intact cultural resources, were not impacted during maintenance activities. Staging of equipment outside the channel was confined to previously disturbed areas where no excavation or soil disturbance was required and therefore these activities did not have potential to affect cultural resources. Therefore, no cultural resource monitoring was necessary.

Noise Assessment

While an Individual Noise Assessment would typically be prepared for any channel maintenance activities, the MMP PEIR Mitigation Measure 4.1.3 states, “If a listed species is located within 500 feet of a proposed maintenance activity **and maintenance would occur during the associated breeding season**, an analysis of the noise generated by maintenance activities shall be completed by a qualified acoustician.” Since emergency maintenance work was conducted outside of the breeding season of any sensitive avian species, impacts from noise were not expected and no technical studies for noise impacts from maintenance were required. This memo is provided in lieu of an INA. No significant noise impacts are

associated with the channel maintenance activity due to the timing of the activities outside of the bird breeding season.

Please find the attached documents submitted for the SCR for the Auburn Creek Channel (MMP Maps 67 & 68) emergency channel maintenance project. If you have any questions or concerns regarding the emergency channel maintenance activities or associated documentation, please call me at (619) 527-3445

Sincerely,



Stephanie Bracci, Senior Planner, Transportation & Storm Water Department

SB/jk

Attachments:

- A – General Application Form (Form DS-3032) & Supplemental Discretionary Project Application (Form DS-3035)
- B – Public Notice Figure & Parcel List
- C – Storm Water Applicability Checklist (Form DS-560)
- D – Substantial Conformance Review Checklist
- E – Individual Biological Assessment (Dudek, February 26, 2016)
- F – Records Search Summary
- G – Regulatory Permits

cc: Gene Matter, Assistant Deputy Director, Transportation & Storm Water Department
Christine Rothman, Development Project Manager III, Transportation & Storm Water Department
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Scott Gressard, Environmental Analyst/Biologist – Dudek
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