

Los Cerritos Channel
Report of Waste Discharge (ROWD)
June 28, 2017

ATTACHMENT 2.
Adaptive Management Report



LOS CERRITOS CHANNEL
WATERSHED GROUP

Los Cerritos Channel

2017 Adaptive Management Report

Bellflower

Cerritos

Downey

Lakewood

Long Beach

Paramount

Signal Hill

Los Angeles
County Flood
Control District

We Serve to Protect our Coastal Waters



Prepared by:



RICHARD WATSON & ASSOCIATES, INC.
Stormwater Quality Planning

Introduction

The Los Cerritos Channel (LCC) is regulated by the Los Cerritos Channel Total Maximum Daily Loads for Metals (TMDLs) established by USEPA Region IX on 17 March 2010. The Los Cerritos Channel TMDL Implementation Plan was adopted by the Los Angeles Regional Water Board on 06 June 2013. The TMDLs require reductions of copper and zinc and maintenance of average existing conditions for lead.

Section VI.C.8.a.I of Order No. R4-2012-0175 requires that Permittees implement an adaptive management process every two years from the date of program approval, in order to adapt the WMP to become more effective based on several factors.

The adaptive management process for the Los Cerritos Channel Watershed is based on the experience of the municipalities and Caltrans working together to address the Los Cerritos Channel Metals TMDLs first proposed by USEPA in November 2008, and on the working relationship established among the Permittees since that time. In addition, the Los Angeles County Flood Control District is now an active member of the Watershed Group.

Data from the receiving water monitoring and watershed segmentation components of the Coordinated Integrated Monitoring Program (CIMP), as well as documentation of soil stabilization and sediment control and documentation of runoff reduction, provides the basis for implementation of the adaptive management process. Additional information comes from implementation of SB 346, development of zinc source control measures, implementation of low impact development ordinances and green streets policies, implementation of trash control measures, implementation of runoff reduction measures, documentation of outreach programs, assessment of street sweeping effectiveness, implementation of regional water capture projects, and planning of local and sub-watershed treatment control measures.

1. Assessment of Progress Toward Achieving WQBELs and RWLs

The Watershed Group has revisited strategies, control measures, and BMPs that it has used over the past five years and concluded that addressing WQBELs and RWLs within the Los Cerritos Channel receiving waters should continue to be based on the multi-faceted strategy initially focused on source control, runoff reduction, total suspended solids (TSS) reduction, and water capture. If pollutants are not generated or released, they will not be available for transport to the receiving waters. In addition, if soils can be stabilized, sediment controlled, and dry-weather runoff and initial flushes of stormwater runoff eliminated or greatly reduced, the major transportation mechanisms will be eliminated or greatly reduced, and many fewer pollutants will reach the receiving waters. As noted in the ROWD, implementation of the Watershed Group strategies and control measures has reduced loads of the metals for which

WQBELs have been established. In addition, the loading of TSS has also been reduced, which reduces other constituents that bind to fine sediments. Furthermore, the reductions in dry-weather flows in the Watershed has also contributed to improved water quality by reducing the transport of sediments and pollutants to the receiving waters. Backing up these measures is the capture of dry-weather runoff and the first flush of stormwater discharges. Two water capture projects are currently under construction and two additional projects are being designed. In addition, the LCC Watershed Management Program specifies other water capture projects that will be proposed for funding.

2. Assessment of Progress in Achieving Improvement in Water Quality in MS4 Discharges

The same measures that have led to progress in achieving WQBELs and RWLs have also led to progress in improving water quality in MS4 discharges. Water conservation practices implemented in response to the drought have reduced irrigation runoff, which has reduced the discharge of nutrients from landscaped areas as well as reducing the transport of litter and other pollutants from impervious surfaces such as driveways, parking lots, local roads, and highways. Further implementation of green streets, LID, and other measures such as source control will provide further progress in improving the quality of MS4 discharges.

3. Assessment of Progress Toward Achieving Interim Milestones

As noted above, the Los Cerritos Watershed Group has revisited strategies, control measures, and BMPs and determined that its multi-faceted strategy should initially focus on source control, runoff reduction, water capture, and total suspended solids (TSS) reduction. The jurisdictions in the Los Cerritos Channel are demonstrating progress toward achieving improved water quality in MS4 discharges and achieving receiving water limitations through implementation of the watershed control measures the LCC Watershed Group identified in its Watershed Management Program (WMP).

The LCC Watershed Group member agencies achieved additional progress toward interim milestones during the Reporting Year, as follows:

- Sub-basin 4 – progress toward design/build construction of a water capture project involving Permittees Lakewood, Long Beach, and Signal Hill. Expected completion date: March 2018.
- Sub-basin 8 – Completion of a preliminary design for a water capture project at Mayfair Park involving Permittees Bellflower and Lakewood. Expected completion date: November 2019.
- Sub-basin 9 – Initiation of construction for a water capture project at Bolivar Park involving Permittees Bellflower, Downey, Lakewood, Long Beach, and Paramount. Expected completion date: March 2018
- Sub-basin 9 – Completion of design for a green street project involving the City of Lakewood. Expected completion date: December 2018.

- Sub-basin 10 – initiation of design of a water capture project at Caruthers Park in Bellflower.

At this time, the Watershed Group proposes to maintain its water quality priorities. After the 2014 and 2016 303(d) listing cycles have been completed, the Group will make any necessary changes to its water quality priorities. More data is needed for the first order watershed segmentation monitoring sites and from the second order watershed segmentation monitoring program about to be implemented before other changes are completed.

TMDL Implementation

The Metals TMDL Implementation Plan includes interim milestone requirements for September 30, 2017, September 30, 2020, and September 30, 2023, with a final compliance date of September 30, 2026. As demonstrated in the ROWD, the Watershed Group has already achieved the September 30, 2017 interim milestone. The Watershed Group's current focus is on attaining a 70% dry-weather load reduction and a 35% wet-weather load reduction at Stearns Street (the compliance point for the Metals TMDLs) by September 30, 2020 to meet the next Metals TMDLs interim milestone. The Watershed Group is working diligently to support continued efforts to control the sources of copper and zinc in the watershed and to implement water capture and green streets projects.

Local water conservation measures have contributed substantially to dry-weather runoff reduction. This process will continue, as will conversion of landscaped areas to more drought-tolerant plant material. The development of green streets and green complete streets will contribute to runoff reduction in both dry weather and wet weather, as will construction of water capture facilities. The two regional water capture projects under construction and the two additional regional projects in design will capture all dry weather flows and first flush flows from approximately 45% of the watershed.

4. Assessment of New Information from Sources Other than the CIMP

As documented by CASQA in an April 2015 report entitled, Zinc Sources in California Urban Runoff, the two major sources of zinc are outdoor zinc sources –galvanized surfaces – and tire wear debris. The LCC Watershed Group's consultant is currently working with the California Stormwater Quality Association (CASQA) and the State Water Board on a petition to the State Department of Toxic Substances Control to reduce zinc in tire treads, the major sources of tire wear debris. This reduction will be a long process. In the meantime, the Watershed Group is implementing other control measures such as water capture and green streets projects, as noted above, as well as street sweeping, and other measures to control local sources of zinc.

Implementation of SB 346 to reduce copper in brake pads appears to be on track to greatly reduce the discharge of copper in the Watershed. According to an April 2016 report published by the California Storm Water Quality Association (CASQA) entitled, Estimated Urban Runoff

is 5.6% - a 22% reduction from 2011 reported data, and as much as 32% less than a 2006 estimate. According to a recent report from the State of Washington, which receives information not required to be reported to the State of California, the average copper content of brake pads was down to 2.2% by April 1, 2017.

5. Assessment of Regional Water Board Recommendations

No specific recommendations for changes to the Los Cerritos Channel WMP have been received from the Regional Water Board since the revised WMP was approved.

6. Assessment of Recommendations from Watershed Stakeholders and the Public

No specific recommendations for changes to the Los Cerritos Channel WMP have been received from Watershed stakeholders or the public since the revised WMP was approved.

7. Proposed Modifications to the Watershed Management Program

The Los Cerritos Channel Watershed Group was fortunate to be able to obtain funding for four water capture projects that changed the initial emphasis of the Program. Some projects were accelerated, some were delayed, and some were no longer necessary. The following pages from Section 6 of the Watershed Management Program show the changes requested in the Implementation Schedule of the WMP resulting from the changed emphasis on water capture projects resulting from the opportunity to fund these projects and Appendix E of the Trash Amendments adopted by the State Water Board. As noted in the ROWD, the Watershed Group is proposing modifications in the schedule for installing full capture devices in catch basins serving priority land uses defined in the Trash Amendments. Member jurisdictions have already begun installing full capture devices in catch basins serving high priority land uses, and will continue to do so. However, the Watershed Group needs to adjust the 10-year accounting schedule to allow member agencies to comply with the procedures specified in Appendix E. The proposed new schedule is based on the assumption that the Regional Water Board will issue an order pursuant to Water Code Section 13267 or 13383 later this year.

June 8, 2015

6.0 Implementation Schedules

Formal implementation of the Los Cerritos Channel WMP began upon approval of the final program plan pursuant to Table 9 of Order No. R4-2012-0175. The schedule provides for commencing monitoring on July 1, 2015 as starting monitoring part way through a complete monitoring year or missing the first storms of the year would not be productive. The implementation schedule is strongly influenced by TMDL final wet-weather compliance dates and target dates for Category 2 and Category 3 pollutants, the Watershed Group's Water Quality Improvement Strategy, and the need to establish a stable and sustainable stormwater funding source in Los Angeles County to pay for the expensive stormwater capture and stormwater treatment facilities anticipated to be necessary to meet water quality standards in a timely manner.

At this time, it is not possible to identify all projects and schedule their implementation. For instance, although the RAA identifies areas for green street construction and assumes a 30% conversion of road length in suitable areas, it will take time to identify and schedule construction of individual green streets projects. The watershed cities are currently working with the Gateway Council of Governments (Gateway COG) to identify future arterial and intersection projects in the COG's Strategic Transportation Plan with potential for installation of green street measures. Even though not all projects can be specified and scheduled at this time, the Permittees, consistent with the Water Quality Improvement Hierarchy shown in Figure 3-1 and the overall Water Quality Improvement Strategy discussed in Section 3, will construct the necessary mix of water capture facilities, green streets, LID projects, and treatment controls in the various sub-basins to supplement the true source control, runoff reduction, and TSS reduction measures to ensure compliance with permit requirements per applicable compliance schedules. The mix of measures will be periodically adjusted through the adaptive management process.

Furthermore, the LACFCD will work with the Watershed Group in its efforts to address source controls; assess, develop and pursue funding for structural BMPs; and promote the use of infiltration of stormwater. As regional project scopes are further refined, the LACFCD will contribute to the WMP projects on a case-by-case basis, agreed upon with the Watershed Group.

The overall implementation schedule for the Los Cerritos Channel Watershed Management Program is based, in part, on the implementation schedule in the Los Cerritos Channel Metals TMDLs and the Greater Harbor Toxics TMDLs. For other pollutants, the implementation schedules are based on the schedules for TMDLs in other watersheds. Final wet-weather compliance target dates for Category 1, 2, and 3 pollutants are shown in Table 6-1 as well as tables, 2-9, 2-10, 2-11, and 2-12 in Section 2. Interim milestone targets occurring between July 1, 2014 and December 28, 2022 are shown in Table 6-2.

Table 6-1: Final Compliance Dates for Category 1, 2, and 3 Pollutants

Date	Target
September 2025	Target compliance date for trash, Bis(2-ethylhexyl)phthalate, and MBAS
September 2026	Final compliance date for LCC Metals TMDLs
March 2032	Final compliance date for Harbor Toxics TMDL
September 2040	Target compliance date for bacteria

Table 6-2: Interim Milestone Targets Between December 28, 2012 and December 28, 2017*

Date	Target
September 30, 2016	10% of the Watershed meeting Basin Plan standard of 0.5 mg/L for MBAS
March 23, 2017	Greater Harbor Responsible Parties complete Phase I of Implementation Plan and Sediment Management Plan
September 30, 2017	For the LCC Metals TMDLs, 30% of the drainage area served by storm drain system effectively meeting dry-weather WLAs and 10% of drainage area served by storm drain system meeting wet-weather WLAs or equivalent reductions in total loads at Stearns Street monitoring site.
September 30, 2017	20% of the watershed meeting Basin Plan standard of 0.5 mg/l for MBAS

* Additional milestone information in Tables 6-4 through 6-11.

** Assuming adoption of proposed Trash Amendments in Spring 2015.

Part VI.C.5.c provides guidance for inclusion of implementation schedules into the WMP. Compliance schedules for TMDLs are to be incorporated into the program schedule. Compliance schedules and interim milestone dates are to be used to measure progress toward addressing the highest water quality priorities and achieving applicable water quality-based effluent limitations. Schedules must be adequate to measure progress on a watershed scale every two years as part of an adaptive management process. Schedules are to be developed for the strategies, control measures, and BMPs to be implemented by each Permittee within its jurisdiction and for those that will be implemented by multiple Permittees on a watershed scale. The current schedule focuses on regional projects to be implemented on a watershed scale and on municipal roles in planning and implementing these projects. Schedules for jurisdictional projects will be added to the schedules during the second adaptive management review as cities plan and program implementation of green streets, LID, and other local projects. Several of the measures in the Implementation Schedule include encouraging actions by other. Depending on the measure, this encouragement will be done through outreach efforts and/or implementation of inspection programs.

June 8, 2015

The initial schedule contained in this WMP covers a 26-year period and is structured into eight three-year phases and a two-year phase. These schedules assume a 2015 start date and are based on an anticipated 5-year permit renewal cycle. Table 3 is an implementation summary for the period 2015 through 2040. The table summarizes information for Phases 1-4 (2015-2026) and a schedule for planning Phases 5-9 (2027-2040). It shows the interim milestone and final compliance dates for the metals TMDLs as well as anticipated interim milestone and final compliance dates for the State Water Board's trash amendments. At this time, it contains only one compliance date for the Greater Harbor Toxics TMDL. The Watershed Group will review data from the Greater Harbor Regional Monitoring Coalition monitoring of East San Pedro Bay during the first two adaptive management reviews to develop a schedule, if needed, for measures to address Greater Harbor Toxics TMDL pollutants not already addressed.

June 8, 2015

Table 6-3
Summary WMP Implementation and Milestone Schedule¹

2015-2017 Phase 1 (See Tables 6-4, 6-5, and 6-12 for schedules, milestones, and sub-basin implementation measures)²

April 7, 2015 – Adoption of Trash Amendments

December 2, 2015 – Effective Date of Trash Amendment

September 30, 2016 – Interim MBAS Milestone

March 23, 2017 – Completion of Phase I of Implementation Plan and Sediment Management Plan for Greater Harbor Toxics TMDL

July 3, 2017 – Report of Waste Discharge (ROWD)

September 30, 2017 – Interim Metals TMDL Milestone

September 30, 2017 – Interim MBAS Milestone

2018-2020 Phase 2 (See Tables 6-6, 6-7, and 6-12 for schedules, milestones, and sub-basin implementation measures)^{1,2}

September 30, 2018 – Interim MBAS Milestone

September 30, 2019 – Interim MBAS Milestone

November 30, 2019 – Anticipated Interim Trash Amendment Milestone for Los Angeles Region

September 30, 2020 – Interim MBAS Milestone

September 30, 2020 – Interim Metals TMDL Milestone

November 30, 2020 – Anticipated Interim Trash Amendment Milestone for Los Angeles Region

2021-2023 Phase 3 (See Tables 6-8, 6-9, and 6-12 for schedules, milestones, and implementation measures)³

September 30, 2021 – Interim MBAS Milestone

November 30, 2021 – Anticipated Interim Trash Amendment Milestone for Los Angeles Region

¹ Schedule based on 5-year permit renewal schedule

² Phases 1 and 2 are detailed as action plans subject to availability of funds for design and construction of green streets and stormwater capture devices.

³ Phase 3 will be converted to an action plan as part of a 2017 Adaptive Management Report.

June 8, 2015

July 2022 – Anticipated ROWD Due Date

September 30, 2022 – Interim MBAS Milestone

November 30, 2022 – Anticipated Interim Trash Amendment Milestone for Los Angeles Region

September 30, 2023 – Interim Metals TMDLs Milestone

September 30, 2023 – Interim MBAS Milestone

November 30, 2023 – Anticipated Interim Trash Amendment Milestone for Los Angeles Region

2024-2026 Phase 4 (See Tables 6-10, 6-11, and 6-12 for schedules, milestones, and implementation measures)⁴

September 30, 2024 – Interim MBAS Milestone

November 30, 2024 – Anticipated Interim Trash Amendment Milestone for the Los Angeles Region

September 30, 2025 – Final MBAS Compliance Target Date

November 30, 2025 – Anticipated Interim Trash Amendment Milestone for the Los Angeles Region

July 2026 – Anticipated ROWD Due Date

September 30, 2026 – Final Metals TMDLs Compliance Date

November 30, 2026 – Anticipated Interim Trash Amendment Milestone for the Los Angeles Region

2027-2029 Phase 5 (To Be Planned During Phase 3)⁵

2030–2032 Phase 6 (To Be Planned During Phase 4)⁶

2033-2035 Phase 7 (To Be Planned During Phase 5)⁷

2036-2038 Phase 8 (To Be Planned in Phase 6)⁸

⁴ Phase 4 will be converted to an action plan as part of the expected 2021 Adaptive Management Report.

⁵ Phase 5 will be converted to an action plan as part of the expected 2025 Adaptive Management Report.

⁶ Phase 6 will be converted to an action plan as part of the expected 2029 Adaptive Management Report.

⁷ Phase 7 will be converted to an action plan as part of the expected 2031 Adaptive Management Report.

June 8, 2015

2039-2040 Phase 9 (To Be Planned in Phase 7)⁹

Tables 6-4 through 6-11 provide more information about activities during phases 1-4 (2015-2026). They demonstrate the progressive implementation of the WMP, beginning with planning and ordinance development and moving to design and construction, subject to the availability of funding. The schedule for phases 2-4 will be reviewed and refined during the first adaptive management review.

⁸ Phase 8 will be converted to an action plan as part of the expected 2032 ROWD.

⁹ Phase 9 will be converted to an action plan as part of the expected 2037 ROWD.

June 8, 2015

Table 6-4
WMP Implementation Schedule – Ongoing Measures
Phase 1 (2015-2017)

Minimum Control Measures

- Public Information and Participation Program
- Industrial/Commercial Facilities Control Program¹
- Development of Planning Program
- Development of Controls Program
- Public Agencies Activities Program
- Illicit Connection and Illicit Discharge Elimination Program
- Preparation of a targeted industrial inspection component for metals by City of Paramount

True Source Control and Operational Source Control²

(Emphasis on Category 1 pollutants)

- Implementation of SB 346
- Implementation of SB 757
- Support development and Implementation of Safer Consumer Products Regulations
- Monitoring of USEPA Proposed Rulemaking to further reduce or remove lead from aviation gasoline
- Monitoring of California Product Stewardship Council Proposals, especially for Extended Producer Responsibility and other true source control measures
- Outreach to industries potentially contributing zinc to Watershed by all municipalities to encourage control of non-industrial process source of zinc.

TSS Reduction (Soil Stabilization/Sediment Control)²

- Implementation of Model TSS Reduction Ordinance by City of Signal Hill
- Enhanced erosion and sediment control at construction sites
- Stabilization of exposed soil not associated with construction sites
- Enhanced street sweeping.

Runoff Reduction and Stormwater Capture²

- Jurisdictional planning for green streets
- Support State legislation to resolve liability issues raised by school administrators in order to facilitate construction of water capture facilities under school athletic fields and playgrounds
- Encourage Cities and water purveyors to work together to implement stormwater capture and use or infiltration facilities consistent with AB 2403
- Encourage the use of permeable pavements in parking lots

¹ Initial emphasis on facilities that are probable metals and trash sources.

² Refer to Table 6-12 for implementation by sub-basin.

June 8, 2015

- Encourage the use of cisterns and rain barrels to reduce the discharge of roof stormwater runoff

Trash Reduction and Control²

- Watershed Group coordination with California Product Stewardship Council to reduce trash through reduction of packing materials and implementation of take-back programs
- Research regarding grant opportunities by Watershed Group to pay for installation of full capture systems for high priority land use areas

Stormwater Financing

- Encourage California Contract Cities and League of California Cities, Los Angeles County Division to organize as recommended in the Stormwater Funding Options report to secure sustainable water quality funding in Los Angeles County.
- Improve public education and outreach by Watershed Cities to inform residents, businesses, and others about stormwater program requirements and funding issues.
- Encourage State legislature to adopt a “per tire” zinc control fee with monies made available to local government to construct stormwater capture and/or treatment control facilities to reduce the discharge of zinc to receiving waters
- Encourage inclusion of more money for stormwater quality management in future State water bonds and transportation bond measures
- Encourage Cities to support adoption of a regional stormwater fee

<u>Targets</u>	<u>Priority Sub-basin Targets³</u>	
	<u>Acreage⁴</u>	<u>% LCC Watershed⁴</u>
Sub-basin 4	2,270.6	12.80
Sub-basin 8	2,711.8	15.30
Sub-basin 9	3,709.3	20.90
Sub-basin 10	3,403.1	<u>19.20</u>
		68.20

³ See Figure 1-4 and Attachment B. Special attention given to control measures serving priority sub-basins during this phase.

⁴ Based on EPA TMDL acreages that include Caltrans and County acreages

Table 6-5
WMP Implementation Schedule – Measures with Interim Milestones
Phase 1 (2015-2017)

TSS Reduction (Soil Stabilization/Sediment Control)

- Adoption of model TSS reduction ordinances by City of Signal Hill (November 30, 2017)

Runoff Reduction and Stormwater Capture

- Development of prototype design of biofiltration and infiltration chamber for streets with wider parkways by City of Lakewood (September 30, 2015)
- Development of prototype design of biofiltration and infiltration changes for streets with narrow parkways by City of Paramount (December 31, 2015)
- Development of concept plan for stormwater project at Long Beach Airport by Cities of Long Beach and Signal Hill (December 31, 2015)
- Development of a process for allocating costs to operate and maintain regional stormwater capture projects (December 31, 2015)
- Development of concept plan for stormwater capture device at Mayfair Park by the City of Lakewood (June 30, 2016)

Trash Reduction and Control

- Initial inventory by Cities in Watershed of catch basins in high priority land use areas pursuant to Trash Amendments adopted by State Water Board (June 30, 2016)¹

Treatment Control

- Installation of two tree box filters by the City of Downey, funded partially through a Proposition 84 grant received by the Gateway Water Management Authority (June 30, 2017)
- Installation of two tree box filters by City of Signal Hill, partially funded by a Proposition 84 grant received by the Gateway Water Management Authority (June 30, 2017)

¹ Presuming adoption of trash amendments by State Water Board in spring of 2015.

June 8, 2015

<u>Targets</u>	<u><i>Priority Sub-basin Targets</i></u> ²	<u>% LCC Watershed</u> ³
Sub-basin 4	2,270.6	12.80
Sub-basin 8	2,711.8	15.30
Sub-basin 9	3,709.3	20.90
Sub-basin 10	3,403.1	<u>19.20</u>
		68.20

² See Figure 1-4 and Attachment B. Special attention given to control measures serving priority sub-basins during this phase.

³ Based on EPA TMDL acreages that include Caltrans and County acreages

June 8, 2015

Table 6-6
WMP Implementation Schedule – Ongoing Measures
Phase 2 (2018-2020)

Minimum Control Measures

- Public Information and Participation Program
- Industrial/Commercial Facilities Control Program¹
- Development Planning Program
- Development Controls Program
- Public Agencies Activities Program
- Illicit Connection and Illicit Discharge Elimination Program

True Source Control and Operational Source Control²

(Emphasis on Category 1 pollutants)

- Implementation of SB 346
- Implementation of SB 757
- Implementation of Safer Consumer Products Regulations to reduce zinc in tires
- Monitoring of USEPA Rulemaking to further reduce or remove lead from aviation gasoline
- Monitoring of California Product Stewardship Council Proposals, especially for Extended Producer Responsibility and other true source control measures
- Outreach to industries potentially contributing zinc to Watershed by all municipalities to encourage control of non-industrial process source of zinc.
- Outreach to restaurants and markets to encourage control of potential sources of bacteria
- Outreach to pet owners to clean up after their pets to reduce sources of bacteria

TSS Reduction (Soil Stabilization/Sediment Control)²

- Implementation of adopted TSS reduction ordinance(s) by Cities in Watershed
- Implementation of adopted parking lot sweeping ordinances by Cities in Watershed
- Development of agreements with utilities for TSS reduction
- Enhanced erosion and sediment control at construction sites
- Stabilization of exposed soil not associated with construction sites
- Enhanced street sweeping
- Enhanced parking lot sweeping

Runoff Reduction and Stormwater Capture²

- Jurisdictional planning for green streets
- Implementation of biofiltration and infiltration chambers for streets with wider parkways by Cities, subject to availability of funding
- Implementation of biofiltration and infiltration chambers for streets with narrow parkways by Cities, subject to availability of funding

¹ Initial emphasis on facilities that are probable metals and trash sources.

² Refer to Table 6-12 for implementation by sub-basin.

June 8, 2015

- Encourage Cities and water purveyors to work together to implement stormwater capture and use or infiltration facilities consistent with AB 2403
- Encourage the use of permeable pavements in parking lots
- Encourage the use of cisterns and rain barrels to reduce the discharge of roof stormwater runoff

Trash Reduction and Control²

- Watershed Group coordination with California Product Stewardship Council to reduce trash through reduction of packing materials and implementation of take-back programs
- Research regarding grant opportunities by Watershed Group to pay for full capture devices for catch basins in high priority land use areas

Stormwater Financing

- To Be Determined

<u>Targets</u>	<u>Priority Sub-basin Targets³</u>	
	<u>Acreage⁴</u>	<u>% LCC Watershed⁴</u>
Sub-basin 4	2,270.6	12.80
Sub-basin 7	1,359.7	7.68
Sub-basin 8	2,711.8	15.30
Sub-basin 9	3,709.3	20.90
Sub-basin 10	3,403.1	<u>19.20</u>
		75.88

³ See Figure 1-4 and Attachment B. Special attention given to control measures serving priority sub-basins during this phase.

⁴ Based on EPA TMDL acreages that include Caltrans and County acreages

June 8, 2015 (Page Amended July 21, 2017)

Table 6-7
WMP Implementation Schedule – Measures with Interim Milestones
Phase 2 (2018-2020)

TSS Reduction (Soil Stabilization/Sediment Control)

- Consideration of possible adoption of TSS reduction ordinances by other Cities within the Watershed (December 31, 2018)
- Consideration and possible adoption of parking lot sweeping ordinances by Cities within Watershed (December 31, 2018)

Runoff Reduction and Stormwater Capture

- Completion of stormwater project at the Long Beach Airport by Cities of Long Beach and Signal Hill, (March 30, 2018)
- Completion of stormwater capture project at Bolivar Park by the City of Lakewood (March 30, 2018)
- Development of concept plan for stormwater capture at Skylinks Golf Course (Wardlow Channel) by City of Long Beach (September 30, 2019)
- Development of plan for stormwater capture device at Caruthers Park by the City of Bellflower (December 31, 2018)
- Development of concept plan for stormwater capture at Heartwell Park (Palo Verde Channel) by City of Long Beach (June 30, 2019)
- Implementation of stormwater capture project at Mayfair Park by City of Lakewood (September 30, 2019)
- Completion of stormwater capture project at Caruthers Park by City of Bellflower (March 31, 2020)
- Development of complete concept plan for stormwater capture at Progress Park by City of Paramount (June 30, 2020)
- Completion of stormwater capture project at Skylinks Golf Course (Wardlow Channel) by City of Long Beach (September 30, 2020)
- Development of concept plan for stormwater capture at Heartwell Park (Clark Channel) by Long Beach (September 30, 2020)

Trash Reduction and Control

- Installation of full capture systems by Cities in 10% of catch basins serving high priority land use areas within the Watershed (November 30, 2019)
- Installation of full capture systems by Cities in 20% of catch basins serving high priority land use areas within the Watershed portions of each City, subject to the availability of funding (November 30, 2020)

June 8, 2015

<u>Targets</u>	<u><i>Priority Sub-basin Targets</i></u> ¹	<u>% LCC Watershed</u> ²
	<u>Acreage</u> ²	
Sub-basin 4	2,270.6	12.80
Sub-basin 6	1,663.7	9.39
Sub-basin 7	1,359.7	7.68
Sub-basin 8	2,711.8	15.30
Sub-basin 9	3,709.3	20.90
Sub-basin 10	3,403.1	<u>19.20</u>
		85.27

¹ See Figure 1-4 and Attachment B. Special attention given to control measures serving priority sub-basins during this phase.

² Based on EPA TMDL acreages that include Caltrans and County acreages

June 8, 2015

Table 6-8
WMP Implementation Schedule – Ongoing Measures
Phase 3 (2021-2023) Tentative Plan

Minimum Control Measures

- Public Information and Participation Program
- Industrial/Commercial Facilities Control Program¹
- Development Planning Program
- Development Controls Program
- Public Agencies Activities Program
- Illicit Connection and Illicit Discharge Elimination Program

True Source Control and Operational Source Control²

(Emphasis on Category 1 pollutants)

- Implementation of SB 346
- Implementation of SB 757
- Implementation of Safer Consumer Products Regulations to reduce zinc in tires
- Monitoring of USEPA Rulemaking to further reduce or remove lead from aviation gasoline
- Monitoring of California Product Stewardship Council Proposals, especially for Extended Producer Responsibility and other true source control measures
- Outreach to industries potentially contributing zinc to Watershed by all municipalities to encourage control of non-industrial process source of zinc.
- Outreach to restaurants and markets to encourage control of potential sources of bacteria
- Outreach to pet owners to clean up after their pets to reduce sources of bacteria

TSS Reduction (Soil Stabilization/Sediment Control)²

- Implementation of adopted TSS reduction ordinance(s) by Cities in Watershed
- Implementation of adopted parking lot sweeping ordinances by Cities in Watershed
- Implementation of agreements with utilities
- Enhanced erosion and sediment control at construction sites
- Stabilization of exposed soil not associated with construction sites
- Enhanced street sweeping
- Enhanced parking lot sweeping

Runoff Reduction and Stormwater Capture²

- Jurisdictional planning for green streets
- Implementation of biofiltration and infiltration chambers for streets with wider parkways by Cities, subject to availability of funding
- Implementation of biofiltration and infiltration chambers for streets with narrow parkways by Cities, subject to availability of funding

¹ Initial emphasis on facilities that are probable metals and trash sources.

² Refer to Table 6-12 for implementation by sub-basin.

June 8, 2015

- Encourage Cities and water purveyors to work together to implement stormwater capture and use or infiltration facilities consistent with AB 2403
- Encourage the use of permeable pavements in parking lots
- Encourage the use of cisterns and rain barrels to reduce the discharge of roof stormwater runoff

Trash Reduction and Control²

- Watershed Group coordination with California Product Stewardship Council to reduce trash through reduction of packing materials and implementation of take-back programs
- Research regarding grant opportunities by Watershed Group to pay for installation of full capture systems for catch basins in high priority land use areas

Stormwater Financing

- To Be Determined

<u>Targets</u>	<u>Priority Sub-basin Targets³</u>	
	<u>Acreage⁴</u>	<u>% LCC Watershed⁴</u>
Sub-basin 5	331.6	1.87
Sub-basin 6	1,663.7	9.39
Sub-basin 7	1,359.7	7.68
Sub-basin 9	3,709.3	20.90
Sub-basin 10	3,403.3	19.20
		59.04

³ See Figure 1-4 and Attachment B. Special attention given to control measures serving priority sub-basins during this phase.

⁴ Based on EPA TMDL acreages that include Caltrans and County acreages

June 8, 2015

Table 6-9
WMP Implementation Schedule –Measures with Interim Milestones
Phase 3 (2021-2023) Tentative Plan

Runoff Reduction and Stormwater Capture

- Implementation of stormwater project at Heartwell Park (Palo Verde Channel) by City of Long Beach, subject to availability of funding (September 30, 2021)
- Completion of stormwater capture project at Heartwell Park (Clark Channel) by City of Long Beach, subject to availability of funding (September 30, 2022)
- Development of concept plan for stormwater capture at Wardlow Park by City of Long Beach (September 30, 2022)

Trash Reduction and Control

- Installation of full capture systems by Cities in 30% of catch basins serving high priority land use areas within the Watershed portions of each City, subject to the availability of funding (September 30, 2021)
- Installation of full capture systems by Cities in 40% of catch basins serving high priority land use areas within the Watershed portions of each City, subject to the availability of funding (November 30, 2022)
- Installation of full capture systems by Cities in 50% of catch basins serving high priority land use areas within the Watershed portions of each City, subject to the availability of funding (November 30, 2023)

Stormwater Financing

- To Be Determined

<u>Targets</u>	<u>Priority Sub-basin Target¹</u>	<u>% LCC Watershed²</u>
	<u>Acreage²</u>	
Sub-basin 5	331.6	1.87
Sub-basin 6	1,663.7	9.39
Sub-basin 7	1,359.7	7.68
Sub-basin 9	3,709.3	20.90
Sub-basin 10	3,403.1	19.20
		59.04

¹ See Figure 1-4 and Attachment B. Special attention given to control measures serving priority sub-basins during this phase.

² Based on EPA TMDL acreages that include Caltrans and County acreages

June 8, 2015

Table 6-10
WMP Implementation Schedule – Ongoing Measures
Phase 4 (2024-2026) Tentative Plan

Minimum Control Measures

- Public Information and Participation Program
- Industrial/Commercial Facilities Control Program¹
- Development Planning Program
- Development Controls Program
- Public Agencies Activities Program
- Illicit Connection and Illicit Discharge Elimination Program

True Source Control and Operational Source Control²

(Emphasis on Category 1 pollutants)

- Implementation of SB 346
- Implementation of SB 757
- Implementation of Safer Consumer Products Regulations to reduce zinc in tires
- Implementation of USEPA Rulemaking to further reduce or remove lead from aviation gasoline
- Monitoring of California Product Stewardship Council Proposals, especially for Extended Producer Responsibility and other true source control measures
- Outreach to industries potentially contributing zinc to Watershed by all municipalities to encourage control of non-industrial process source of zinc.
- Outreach to restaurants and markets to encourage control of potential sources of bacteria
- Outreach to pet owners to clean up after their pets to reduce sources of bacteria

TSS Reduction (Soil Stabilization/Sediment Control)²

- Implementation of adopted TSS reduction ordinance(s) by Cities in Watershed
- Implementation of adopted parking lot sweeping ordinances by Cities in Watershed
- Implementation of agreements with utilities
- Enhanced erosion and sediment control at construction sites
- Stabilization of exposed soil not associated with construction sites
- Enhanced street sweeping
- Enhanced parking lot sweeping

Runoff Reduction and Stormwater Capture²

- Jurisdictional implementation for green streets
- Implementation of biofiltration and infiltration chambers for streets with wider parkways by Cities, subject to availability of funding
- Implementation of biofiltration and infiltration chambers for streets with narrow parkways by Cities, subject to availability of funding
- Encourage Cities and water purveyors to work together to implement stormwater capture and use or infiltration facilities consistent with AB 2403
- Encourage the use of permeable pavements in parking lots

¹ Initial emphasis on facilities that are probable metals and trash sources.

² Refer to Table 6-12 for implementation by sub-basin.

June 8, 2015

- Encourage the use of cisterns and rain barrels to reduce the discharge of roof stormwater runoff

Trash Reduction and Control²

- Watershed Group coordination with California Product Stewardship Council to reduce trash through reduction of packing materials and implementation of take-back programs
- Research regarding grant opportunities by Watershed Group to pay for installation of full capture systems for catch basins in high priority land use areas (ongoing)

Stormwater Financing

- To Be Determined

	<u>Priority Sub-basin Targets³</u>	
<u>Targets</u>	<u>Acreage⁴</u>	<u>% LCC Watershed⁴</u>
Sub-basin 1	719.6	4.06
Sub-basin 2	1,241.1	7.00
Sub-basin 3	305.0	1.72
Sub-basin 5	331.6	1.87
Sub-basin 6	1,663.7	<u>9.39</u>
		24.04

³ See Figure 1-4 and Attachment B. Special attention given to control measures serving priority sub-basins during this phase.

⁴ Based on EPA TMDL acreages that include Caltrans and County acreages

June 8, 2015

**Table 6-11
WMP Implementation Schedule – Measures with Interim Milestones
Phase 4 (2024-2026) Tentative Plan**

Runoff Reduction and Stormwater Capture

- Implementation of stormwater capture project at Progress Park by City of Paramount, subject to availability of funding (September 30, 2024)
- Development of concept plan for stormwater capture facility at Sims Park by City of Bellflower (June 30, 2024)
- Development of concept plan for stormwater capture facility at Pan American Park by City of Long Beach (June 30, 2024)
- Development of concept plan for stormwater capture facility at Long Beach Junior Golf Course by City of Long Beach (June 30, 2024)
- Implementation of stormwater capture project at Wardlow Park by City of Long Beach, subject to availability of funding (September 30, 2025)

Trash Reduction and Control

- Installation of full capture systems by Cities in 60% of catch basins serving high priority land use areas within the Watershed portion of each City, subject to the availability of funding (November 30, 2024)
- Installation of full capture systems by Cities in 70% of catch basins serving high priority land use areas within the Watershed portion of each City, subject to the availability of funding (November 30, 2025)
- Installation of full capture systems by Cities in 80% of catch basins serving high priority land use areas within the Watershed portion of each City, subject to the availability of funding (November 30, 2026)

Stormwater Financing

- To Be Determined

<u>Targets</u>	<i>Priority Sub-basin Targets¹</i>	
	<u>Acreage²</u>	<u>% LCC Watershed²</u>
Sub-basin 1	719.6	4.06
Sub-basin 2	1,241.1	7.00
Sub-basin 3	305.0	1.72
Sub-basin 5	331.6	1.87
Sub-basin 6	1,663.7	<u>9.39</u>
		24.04

¹ See Figure 1-4 and Attachment B. Special attention given to control measures serving priority sub-basins during this phase.

² Based on EPA TMDL acreages that include Caltrans and County acreages.

June 8, 2015

**Table 6-12
Sub-Basin Implementation Measures**

Target Sub-basin	Acreage	True Source Control BMPs	Runoff Reduction	Operational Source Ctrl BMPs	Sediment Control	Treatment Ctrl BMPs
Sub-basin 1 [Phase 4] (2024-2026) Responsible Jurisdiction: Long Beach	719.6 ac (4.06% of LCC watershed)	Copper reduction through implementation of SB 346 Lead reduction through implementation of SB 757 Lead reduction through implementation of EPA Rulemaking to further reduce or remove lead from aviation gasoline Zinc reduction through implementation of Safer Consumer Product Alternatives regulations	Reduction of landscape irrigation runoff through implementation of AB 1881 Seek grants for construction of capture and infiltration/use structural BMPs Promote installation of cisterns and rain barrels Installation of green street measures at key locations Seek grants for LID retrofit projects Promote use of porous pavement & distributed capture and infiltration structural BMPs	Outreach to priority industries identified as having high probability of generating copper, lead, or zinc, trucking companies, facilities with large parking lots, and automotive repair facilities to encourage implementation of cover and containment BMPs. Promote coating of exposed galvanized metal Implement requirements for coated galvanized metal for use when exposed	Enhanced street sweeping with vacuum and regenerative sweepers ¹ Enhanced erosion and sediment control at construction sites Stabilization of exposed soils not associated with construction sites Implementation of TSS Reduction Ordinances Implementation of Parking Lot Sweeping Ordinances	Distributed LID measures associated with development projects Installation of green street measures at key locations Installation of full capture systems in catch basins in high priority land use areas Others to be determined

¹ Potential Measure; the City of Long Beach is not currently using regenerative or vacuum sweepers.

June 8, 2015

Target Sub-basin	Acreage	True Source Control BMPs	Runoff Reduction	Operational Source Ctrl BMPs	Sediment Control	Treatment Ctrl BMPs
Sub-basin 2 [Phase 2] (2024-2026) Responsible Jurisdiction: Long Beach	1,241.1 ac (7% of LCC watershed)	<p>Copper reduction through implementation of SB 346</p> <p>Lead reduction through implementation of SB 757</p> <p>Lead reduction through implementation of EPA Rulemaking to further reduce or remove lead from aviation gasoline</p> <p>Zinc reduction through implementation of Safer Consumer Product Alternatives regulations</p>	<p>Reduction of landscape irrigation runoff through implementation of AB 1881</p> <p>Seek grants for construction of capture and infiltration/use structural BMPs</p> <p>Promote installation of cisterns and rain barrels</p> <p>Installation of green street measures at key locations</p> <p>Seek grants for LID retrofit projects</p> <p>Promote use of porous pavement & distributed capture and infiltration structural BMPs</p>	<p>Outreach to priority industries identified as having high probability of generating copper, lead, or zinc, trucking companies, facilities with large parking lots, and automotive repair facilities to encourage implementation of cover and containment BMPs</p> <p>Promote coating of exposed galvanized metal</p> <p>Implement requirements for coated galvanized metal for use when exposed</p>	<p>Enhanced street sweeping with vacuum and regenerative sweepers¹</p> <p>Enhanced erosion and sediment control at construction sites</p> <p>Stabilization of exposed soils not associated with construction sites</p> <p>Implementation of TSS Reduction Ordinances</p> <p>Implementation of Parking Lot Sweeping Ordinances</p>	<p>Distributed LID measures associated with development projects</p> <p>Installation of green street measures at key locations</p> <p>Installation of full capture systems in catch basins in high priority land use areas</p> <p>Others to be determined</p>

¹ Potential Measure; the City of Long Beach is not currently using regenerative or vacuum sweepers

June 8, 2015

Target Sub-basin	Acreage	True Source Control BMPs	Runoff Reduction	Operational Source Ctrl BMPs	Sediment Control	Treatment Ctrl BMPs
Sub-basin 3 [Phase 4] (2024-2026) Responsible Jurisdiction: Long Beach	305 ac (1.72% of LCC watershed)	<p>Copper reduction through implementation of SB 346</p> <p>Lead reduction through implementation of SB 757</p> <p>Lead reduction through implementation of EPA Rulemaking to further reduce or remove lead from aviation gasoline</p> <p>Zinc reduction through implementation of Safer Consumer Product Alternatives regulations</p>	<p>Reduction of landscape irrigation runoff through implementation of AB 1881</p> <p>Seek grants for construction of capture and infiltration/use structural BMPs</p> <p>Promote installation of cisterns and rain barrels</p> <p>Installation of green street measures at key locations</p> <p>Seek grants for LID retrofit projects</p> <p>Promote use of porous pavement & distributed capture and infiltration structural BMPs</p>	<p>Outreach to priority industries identified as having high probability of generating copper, lead, or zinc, trucking companies, facilities with large parking lots, and automotive repair facilities to encourage implementation of cover and containment BMPs</p> <p>Promote coating of exposed galvanized metal</p> <p>Implement requirements for coated galvanized metal for use when exposed</p>	<p>Enhanced street sweeping with vacuum and regenerative sweepers¹</p> <p>Enhanced erosion and sediment control at construction sites</p> <p>Stabilization of exposed soils not associated with construction sites</p> <p>Implementation of TSS Reduction Ordinances</p> <p>Implementation of Parking Lot Sweeping Ordinances</p>	<p>Distributed LID measures associated with development projects</p> <p>Installation of green street measures at key locations</p> <p>Installation of full capture systems in catch basins in high priority land use areas</p> <p>Others to be determined</p>

¹ Potential Measure; the City of Long Beach is not currently using regenerative or vacuum sweepers

June 8, 2015

Target Sub-basin	Acreage	True Source Control BMPs	Runoff Reduction	Operational Source Ctrl BMPs	Sediment Control	Treatment Ctrl BMPs
Sub-basin 4 [Phases 1 & 2] (2015-2020) Responsible Jurisdictions: Long Beach and Signal Hill	2,270.6 ac (12.8% of LCC watershed)	<p>Copper reduction through implementation of SB 346</p> <p>Lead reduction through implementation of SB 757</p> <p>Lead reduction through implementation of EPA Proposed Rulemaking to further reduce or remove lead from aviation gasoline</p> <p>Zinc reduction through implementation of Safer Consumer Product Alternatives regulations</p>	<p>Reduction of landscape irrigation runoff through implementation of AB 1881</p> <p>Seek grants for construction of capture and infiltration/use structural BMPs</p> <p>Promote installation of cisterns and rain barrels</p> <p>Installation of green street measures at key locations</p> <p>Seek grants for LID retrofit projects</p> <p>Promote use of porous pavement & distributed capture and infiltration structural BMPs</p> <p>Implementation of Stormwater Capture Project at Skylinks Golf Course (Phase 2)</p>	<p>Outreach to priority industries identified as having high probability of generating copper, lead, or zinc, trucking companies, facilities with large parking lots, and automotive repair facilities to encourage implementation of cover and containment BMPs</p> <p>Promote coating of exposed galvanized metal</p> <p>Implement requirements for coated galvanized metal for use when exposed</p>	<p>Enhanced street sweeping with vacuum and regenerative sweepers¹</p> <p>Enhanced erosion and sediment control at construction sites</p> <p>Stabilization of exposed soils not associated with construction sites</p> <p>Implementation of TSS Reduction Ordinances (Phase 2)</p> <p>Implementation of Parking Lot Sweeping Ordinances (Phase 2)</p>	<p>Distributed LID measures associated with development project</p> <p>Installation of green street measures at key locations</p> <p>Installation of full capture systems in catch basins in high priority land use areas</p> <p>Others to be determined</p>

¹ Potential Measure for part of sub-basin; the City of Long Beach is not currently using regenerative or vacuum sweepers

June 8, 2015

Target Sub-basin	Acreage	True Source Control BMPs	Runoff Reduction	Operational Source Ctrl BMPs	Sediment Control	Treatment Ctrl BMPs
Sub-basin 5 [Phases 3 & 4] (2021-2026) Responsible Jurisdiction: Long Beach	331.6 ac (1.87% of LCC watershed)	<p>Copper reduction through implementation of SB 346</p> <p>Lead reduction through implementation of SB 757</p> <p>Lead reduction through implementation of EPA Proposed Rulemaking to further reduce or remove lead from aviation gasoline</p> <p>Zinc reduction through implementation of Safer Consumer Product Alternatives regulations</p>	<p>Reduction of landscape irrigation runoff through implementation of AB 1881</p> <p>Seek grants for construction of capture and infiltration/use structural BMPs</p> <p>Promote installation of cisterns and rain barrels</p> <p>Installation of green street measures at key locations</p> <p>Seek grants for LID retrofit projects</p> <p>Promote use of porous pavement & distributed capture and infiltration structural BMPs</p>	<p>Outreach to priority industries identified as having high probability of generating copper, lead, or zinc, trucking companies, facilities with large parking lots, and automotive repair facilities to encourage implementation of cover and containment BMPs</p> <p>Promote coating of exposed galvanized metal</p> <p>Implement requirements for coated galvanized metal for use when exposed</p>	<p>Enhanced street sweeping with vacuum and regenerative sweepers¹</p> <p>Enhanced erosion and sediment control at construction sites</p> <p>Stabilization of exposed soils not associated with construction sites</p> <p>Implementation of TSS Reduction Ordinances</p> <p>Implementation of Parking Lot Sweeping Ordinances</p>	<p>Distributed LID measures associated with development project</p> <p>Installation of green street measures at key locations</p> <p>Installation of full capture systems in catch basins in high priority land use areas</p> <p>Others to be determined</p>

¹ Potential Measure; the City of Long Beach is not currently using regenerative or vacuum sweepers

June 8, 2015

Target Sub-basin	Acreage	True Source Control BMPs	Runoff Reduction	Operational Source Ctrl BMPs	Sediment Control	Treatment Ctrl BMPs
Sub-basin 6 [Phases 3 & 4] (2021-2026) Responsible Jurisdictions: Lakewood and Long Beach	1,663.7 ac (9.39% of LCC watershed)	<p>Copper reduction through implementation of SB 346</p> <p>Lead reduction through implementation of SB 757</p> <p>Monitor USEPA Proposed Rulemaking to further reduce or remove lead from aviation gasoline</p> <p>Prepare petition for control of zinc in tires through Safer Consumer Product Regulations</p>	<p>Reduction of landscape irrigation runoff through implementation of AB 1881</p> <p>Seek grants for construction of capture and infiltration/use structural BMPs</p> <p>Promote installation of cisterns and rain barrels</p> <p>Installation of green street measures at key locations</p> <p>Seek grants for LID retrofit projects</p> <p>Promote use of porous pavement & distributed capture and infiltration structural BMPs</p> <p>Implementation of Stormwater Capture Project at Skylinks Golf Course (Phase 3)</p>	<p>Outreach to priority industries identified as having high probability of generating copper, lead, or zinc, trucking companies, facilities with large parking lots, and automotive repair facilities to encourage implementation of cover and containment BMPs</p> <p>Promote coating of exposed galvanized metal</p> <p>Develop specifications and requirements for coated galvanized metal for use when exposed</p>	<p>Enhanced street sweeping with vacuum and regenerative sweepers¹</p> <p>Enhanced erosion and sediment control at construction sites</p> <p>Stabilization of exposed soils not associated with construction sites</p> <p>Implementation of TSS Reduction Ordinances</p> <p>Implementation of Parking Lot Sweeping Ordinances</p>	<p>Distributed LID measures associated with development projects</p> <p>Installation of green street measures at key locations</p> <p>Installation of full capture systems in catch basins in high priority land use areas</p> <p>Others to be determined</p>

¹ Potential Measure for part of sub-basin; the City of Long Beach is not currently using regenerative or vacuum sweepers

June 8, 2015

Target Sub-basin	Acreage	True Source Control BMPs	Runoff Reduction	Operational Source Ctrl BMPs	Sediment Control	Treatment Ctrl BMPs
Sub-basin 7 [Phases 2 & 3] (2018-2023) Responsible Jurisdictions: Lakewood and Long Beach	1,359.7 ac (7.68% of LCC watershed)	<p>Copper reduction through implementation of SB 346</p> <p>Lead reduction through implementation of SB 757</p> <p>Lead reduction through implementation of EPA Rulemaking to further reduce or remove lead from aviation gasoline</p> <p>Zinc reduction through implementation of Safer Consumer Product Alternatives regulations</p>	<p>Reduction of landscape irrigation runoff through implementation of AB 1881</p> <p>Seek grants for construction of capture and infiltration/use structural BMPs</p> <p>Promote installation of cisterns and rain barrels</p> <p>Installation of green street measures at key locations</p> <p>Seek grants for LID retrofit projects</p> <p>Promote use of porous pavement & distributed capture and infiltration structural BMPs</p> <p>Implementation of Stormwater Capture Project at Heartwell Park (Phase 3)</p> <p>Implementation of Stormwater Capture Project at Pan American Park (Delayed until Phase 4)</p>	<p>Outreach to priority industries identified as having high probability of generating copper, lead, or zinc, trucking companies, facilities with large parking lots, and automotive repair facilities to encourage implementation of cover and containment BMPs</p> <p>Promote coating of exposed galvanized metal</p> <p>Implement requirements for coated galvanized metal for use when exposed</p>	<p>Enhanced street sweeping with vacuum and regenerative sweepers¹</p> <p>Enhanced erosion and sediment control at construction sites</p> <p>Stabilization of exposed soils not associated with construction sites</p> <p>Implementation of TSS Reduction Ordinances</p> <p>Implementation of Parking Lot Sweeping Ordinances</p>	<p>Distributed LID measures associated with development project</p> <p>Installation of green street measures at key locations</p> <p>Installation of full capture systems in catch basins in high priority land use areas</p> <p>Others to be determined</p>

¹ Potential Measure for part of sub-basin; the City of Long Beach is not currently using regeneration or vacuum sweepers

June 8, 2015

Target Sub-basin	Acreage	True Source Control BMPs	Runoff Reduction	Operational Source Ctrl BMPs	Sediment Control	Treatment Ctrl BMPs
<p>Sub-basin 8 [Phases 1 & 2] (2015-2020)</p> <p>Responsible Jurisdictions: Bellflower and Lakewood</p>	2,711.8 ac (15.3% of LCC watershed)	<p>Copper reduction through implementation of SB 346</p> <p>Lead reduction through implementation of SB 757</p> <p>Monitor USEPA Proposed Rulemaking to further reduce or remove lead from aviation gasoline</p> <p>Prepare petition for control of zinc in tires through Safer Consumer Product Regulations</p>	<p>Reduction of landscape irrigation runoff through implementation of AB 1881</p> <p>Seek grants for construction of capture and infiltration/use structural BMPs</p> <p>Promote installation of cisterns and rain barrels</p> <p>Installation of green street measures at key locations</p> <p>Seek grants for LID retrofit projects</p> <p>Promote use of porous pavement & distributed capture and infiltration structural BMPs</p> <p>Implementation of Stormwater Capture Project at Mayfair Park (Phase 2)</p>	<p>Outreach to priority industries identified as having high probability of generating copper, lead, or zinc, trucking companies, facilities with large parking lots, and automotive repair facilities to encourage implementation of cover and containment BMPs</p> <p>Promote coating of exposed galvanized metal</p> <p>Develop specifications and requirements for coated galvanized metal for use when exposed</p>	<p>Enhanced street sweeping with vacuum and regenerative sweepers</p> <p>Enhanced erosion and sediment control at construction sites</p> <p>Stabilization of exposed soils not associated with construction sites</p> <p>Implementation of TSS Reduction Ordinances (Phase 2)</p> <p>Implementation of Parking Lot Sweeping Ordinances (Phase 2)</p>	<p>Distributed LID measures associated with development projects</p> <p>Installation of green street measures at key locations</p> <p>Installation of full capture systems in catch basins in high priority land use areas</p> <p>Others to be determined</p>

June 8, 2015

Target Sub-basin	Acreage	True Source Control BMPs	Runoff Reduction	Operational Source Ctrl BMPs	Sediment Control	Treatment Ctrl BMPs
Sub-basin 9 [Phases 2 & 3] (2018-2023) Responsible Jurisdictions: Bellflower, Downey, Long Beach, and Paramount	3,709.3 ac (20.9% of LCC watershed)	Copper reduction through implementation of SB 346 Lead reduction through implementation of SB 757 Lead reduction through implementation of EPA Proposed Rulemaking to further reduce or remove lead from aviation gasoline Zinc reduction through implementation of Safer Consumer Product Alternatives regulations	Reduction of landscape irrigation runoff through implementation of AB 1881 Seek grants for construction of capture and infiltration/use structural BMPs Promote installation of cisterns and rain barrels Installation of green street measures at key locations Seek grants for LID retrofit projects Promote use of porous pavement & distributed capture and infiltration structural BMPs Implementation of stormwater capture project at Progress Park (Delayed until Phase 4) ²	Outreach to priority industries identified as having high probability of generating copper, lead, or zinc, trucking companies, facilities with large parking lots, and automotive repair facilities to encourage implementation of cover and containment BMPs Promote coating of exposed galvanized metal Implement requirements for coated galvanized metal for use when exposed	Enhanced street sweeping with vacuum and regenerative sweepers ¹ Enhanced erosion and sediment control at construction sites Stabilization of exposed soils not associated with construction sites Implementation of TSS Reduction Ordinances Implementation of Parking Lot Sweeping Ordinances	Distributed LID measures associated with development project Installation of green street measures at key locations Installation of full capture systems in catch basins in high priority land use areas Others to be determined

¹ Potential Measure for part of sub-basin; the City of Long Beach is not currently using regenerative or vacuum sweepers

² Subject to availability of funding

June 8, 2015

Target Sub-basin	Acreage	True Source Control BMPs	Runoff Reduction	Operational Source Ctrl BMPs	Sediment Control	Treatment Ctrl BMPs
Sub-basin 10 [Phases 1 & 2] (2015-2020) Responsible Jurisdictions: Bellflower, Cerritos, Lakewood, and Long Beach	3,403.1 ac (19.2% of LCC watershed)	<p>Copper reduction through implementation of SB 346</p> <p>Lead reduction through implementation of SB 757</p> <p>Monitor USEPA Proposed Rulemaking to further reduce or remove lead from aviation gasoline</p> <p>Prepare petition for control of zinc in tires through Safer Consumer Product Regulations</p>	<p>Reduction of landscape irrigation runoff through implementation of AB 1881</p> <p>Seek grants for construction of capture and infiltration/use structural BMPs</p> <p>Promote installation of cisterns and rain barrels</p> <p>Installation of green street measures at key locations</p> <p>Seek grants for LID retrofit projects</p> <p>Promote use of porous pavement & distributed capture and infiltration structural BMPs</p> <p>Implementation of Stormwater Capture Project at Caruthers Park (Phase 2)²</p> <p>Implementation of Stormwater Capture Project at Heartwell Park (Delayed until Phase 3)²</p>	<p>Outreach to priority industries identified as having high probability of generating copper, lead, or zinc, trucking companies, facilities with large parking lots, and automotive repair facilities to encourage implementation of cover and containment BMPs</p> <p>Promote coating of exposed galvanized metal</p> <p>Develop specifications and requirements for coated galvanized metal for use when exposed</p>	<p>Enhanced street sweeping with vacuum and regenerative sweepers¹</p> <p>Enhanced erosion and sediment control at construction sites</p> <p>Stabilization of exposed soils not associated with construction sites</p> <p>Implementation of TSS Reduction Ordinances (Phase 2)</p> <p>Implementation of Parking Lot Sweeping Ordinances (Phase 2)</p>	<p>Distributed LID measures associated with development projects</p> <p>Installation of green street measures at key locations</p> <p>Installation of full capture systems in catch basins in high priority land use areas</p> <p>Others to be determined</p>

¹ Potential Measure for part of sub-basin; the City of Long Beach is not currently using regenerative or vacuum sweepers

² Subject to availability of funding