

ATTACHMENT F

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

**DRAFT
FACT SHEET / TECHNICAL REPORT**

FOR

**TENTATIVE
ORDER NO. R9-2013-0001
NPDES NO. CAS0109266**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
AND WASTE DISCHARGE REQUIREMENTS FOR
DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)
DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION**

MONTH DAY, 2013

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I. FACT SHEET FORMAT

This Fact Sheet briefly sets forth the principal facts and the significant factual, legal, methodological, and policy questions that the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) considered in preparing Order No. R9-2013-0001 (Order). In accordance with the Code of Federal Regulations (CFR) Title 40 Parts 124.8 and 124.56 (40 CFR 124.8 and 40 CFR 124.56), this Fact Sheet includes, but is not limited to, the following information:

1. Contact information
2. Public process and notification procedures
3. Background of municipal storm water permits
4. Regional MS4 Permit approach
5. Economic considerations
6. Applicable statutes, regulations, plans and policies
7. Discussion of the provisions in the Order

Tentative Order No. R9-2013-0001 was distributed for public review on October 31, 2012. The San Diego Water Board accepted written comments on the Tentative Order until January 11, 2013. A public hearing was subsequently held on Month Day, 2013 to receive oral comments from interested persons.

The San Diego Water Board files applicable to the issuance of Order No. R9-2013-0001 are incorporated into the administrative record in support of the findings and requirements of the Order.

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The Order and other related documents can be downloaded from the San Diego Water Board website at

http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/index.shtml

The documents referenced in this Fact Sheet and in Order No. R9-2013-0001 are available for public review at the San Diego Water Board office, located at the address listed above. Public records are available for inspection during regular business hours, from 8:00 am to 5:00 pm Monday through Friday. To schedule an appointment to inspect public records, contact the San Diego Water Board Records Management Officer at 858-467-2952.

COPERMITTEES

Orange County Copermittees

- County of Orange
 - City of Aliso Viejo
 - City of Dana Point
 - City of Laguna Beach
 - City of Laguna Hills
 - City of Laguna Niguel
 - City of Laguna Woods
- City of Lake Forest
- City of Mission Viejo
- City of Ranch Santa Margarita
- City of San Clemente
- City of San Juan Capistrano
- Orange County Flood Control District

Riverside County Copermittees

- County of Riverside
 - City of Murrieta
 - City of Temecula
 - City of Wildomar
- Riverside County Flood Control and Water Conservation District

San Diego County Copermittees

- County of San Diego
 - City of Carlsbad
 - City of Chula Vista
 - City of Coronado
 - City of Del Mar
 - City of El Cajon
 - City of Encinitas
 - City of Escondido
 - City of Imperial Beach
 - City of La Mesa
 - City of Lemon Grove
- City of National City
- City of Oceanside
- City of Poway
- City of San Diego
- City of San Marcos
- City of Santee
- City of Solana Beach
- City of Vista
- San Diego County Regional Airport Authority
- San Diego Unified Port District

III. PUBLIC PROCESS AND NOTIFICATION PROCEDURES

The San Diego Water Board followed the schedule listed below for the preparation of Order No. R9-2013-0001:

1. On February 8, 2011, the San Diego Water Board met with the San Diego County Copermittees to discuss the Report of Waste Discharge required pursuant to Order No. R9-2007-0001.
2. Between February and May 2011, the San Diego Water Board met with select San Diego County, Orange County, and Riverside County Copermittees, as well as representatives of the environmental community to discuss concepts and receive recommendations for elements to be incorporated in a Regional Municipal Separate Storm Sewer System Permit (Regional MS4 Permit).
3. On June 27, 2011 the San Diego Water Board received the Report of Waste Discharge from the San Diego County Copermittees for the renewal of their NPDES permit, Order No. R9-2007-0001.
4. On April 9, 2012, the San Diego Water Board released an administrative draft of Tentative Order No. R9-2013-0001 for preliminary informal comments and feedback.
5. On April 25, 2012, the San Diego Water Board held an informal public workshop to present the administrative draft of Tentative Order No. R9-2013-0001 and receive verbal comments.
6. Between June and August 2012, the San Diego Water Board held four (4) focused meetings with representatives of the principal stakeholders (the Copermittees, the environmental community, the development/business community, and USEPA) to discuss and receive preliminary comments and feedback about specific elements in the administrative draft of Tentative Order No. R9-2013-0001.
7. On September 5, 2012, the San Diego Water Board held an informal public workshop to present the modifications that were expected to be incorporated into the Tentative Order based on the preliminary comments and feedback received during the focused meetings held between June and August 2012.
8. Informal written comments on the administrative draft of Tentative Order No. R9-2013-0001 were accepted until September 14, 2012.
9. On October 12, 2012, the San Diego Water Board released a revised administrative draft of Tentative Order No. R9-2013-0001.

10. On October 24, 2012, the San Diego Water Board held a focused meeting with representatives of the principal stakeholders (the Copermitees, the environmental community, the development/business community, and USEPA) to discuss modifications incorporated into the administrative draft of Tentative Order No. R9-2013-0001.
11. On October 31, 2012, the San Diego Water Board released Tentative Order No. R9-2013-0001 for formal public review and comment.
12. On November 13, 2012, the San Diego Water Board held a formal public Board workshop to present the public draft of Tentative Order No. R9-2013-0001 and receive verbal comments.
13. Formal written comments on the public draft of Tentative Order No. R9-2013-0001 were accepted until January 11, 2013.
14. A public hearing of Tentative Order No. R9-2013-0001 was conducted on Month Day, 2013.

IV. BACKGROUND OF THE SAN DIEGO REGION MUNICIPAL STORM WATER PERMITS

In developed and developing areas, storm water runoff is commonly transported through municipal separate storm sewer systems (MS4s) and discharged into local receiving water bodies. As the storm water runs off and flows over the land or impervious surfaces (e.g., paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment, and other pollutants that can adversely affect receiving water quality if discharged untreated. The United States Environmental Protection Agency (USEPA) recognizes wet weather flows from urban areas as the number one source of estuarine pollution in coastal communities,¹ such as those within the San Diego Region.

The federal Clean Water Act (CWA) was amended in 1987 to address and regulate discharges of storm water associated with industrial activities and from municipal storm sewers. With the amendments, many municipalities throughout the United States were obligated for the first time to obtain National Pollutant Discharge Elimination System (NPDES) permits for discharges of storm water from their MS4s.

In response to the CWA 1987 amendment, as well as the pending federal NPDES regulations which would implement the amendment, the San Diego Water Board issued “early” MS4 permits. The San Diego Water Board adopted and issued Order Nos. 90-38, 90-42, and 90-46 to regulate storm water discharges from the MS4s in Orange County, San Diego County, and Riverside County, respectively, within the San Diego Region on July 16, 1990.

The “early” MS4 permits, or First Term Permits, were issued prior to the November 1990 promulgation of the final federal NPDES storm water regulations. By issuing these First Term Permits before the federal regulations took effect, the San Diego Water Board was able to provide the Copermitees additional flexibility in addressing and managing storm water discharges. The First Term Permits contained the essentials of the 1990 regulations, and required the Copermitees to develop and implement runoff management programs, but provided little specificity about what was required to be included in or actually achieved by those programs.

The flexibility provided in the First Term Permits was generally continued through the Second Term Permits. The combination of the lack of specificity in the First and Second Term Permits, a general lack of meaningful action by the Copermitees and a general lack of corresponding reaction (i.e. enforcement) by the San Diego Water Board during the first ten years of the storm water program, resulted in few substantive steps towards achieving improvements in the quality of receiving waters or storm water discharges from the MS4s.

¹ US EPA. 1999. 40 CFR Parts 9, 122, 123, and 124. National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. 64 FR 68727.

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From 2001, the regulatory approach incorporated into Third Term Permits was a significant departure from the regulatory approach of the First and Second Term Permits. The Third Term Permits issued by the San Diego Water Board included more detailed requirements that outlined the minimum level of implementation required for the Copermittees' programs to meet the maximum extent practicable (MEP) standard for storm water. The Third Term Permits included more detail to emphasize and enhance the jurisdictional runoff management programs developed by the Copermittees and introduced requirements for developing and implementing watershed-based programs.

The Third Term Permits also incorporated two precedent setting decisions by the State Water Board. In Order WQ 99-05, the State Water Board established receiving water limitation language to be included in all MS4 permits. The State Water Board's precedential language clarified that municipal storm water permits must include provisions requiring discharges to be controlled to attain water quality standards in receiving waters. Unlike previously adopted versions of the receiving water limitation language in the First and Second Term Permits, the language no longer stated that "*violations of water quality standards are not violations of the municipal storm water permit under certain conditions.*" In addition, the receiving water limitation language no longer indicated that the "*implementation of best management practices is the 'functional equivalent' of meeting water quality standards.*" State Water Board Order WQ 99-05 specifically requires language in MS4 permits for the Copermittees to comply with water quality standards based discharge prohibitions and receiving water limitations through timely implementation of control measures and other actions to reduce pollutants in discharges. (See State Water Board Order WQ 99-05 (*Environmental Health Coalition*)).

In Order WQ 2000-11, also a precedential decision, the State Water Board addressed design standards for structural post-construction best management practices (BMPs) for new development and significant redevelopment. The State Water Board found that the design standards, which require that runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. State Water Board Order WQ 2000-11 also found that the post-construction BMP provisions, or Standard Storm Water Mitigation Plan (SSMP) provisions, constitute MEP for addressing storm water pollutant discharges resulting from specific development categories.

The Third Term San Diego County and Orange County Permits (Order Nos. 2001-01 and R9-2002-0001, respectively) were appealed to the State Water Board. Minor modifications were made by the State Water Board, but the requirements were largely upheld. In State Water Board Order WQ 2001-15, the State Water Board upheld the Third Term San Diego County Permit requirements with certain modifications. The State Water Board removed the prohibition of storm water discharges *into* the MS4 that cause or contribute to exceedances of water quality objectives. The revision allows for treatment of pollutants in storm water runoff after the pollutants have entered the MS4. State Water Board Order WQ 2001-15 otherwise upheld all the other requirements of the permit.

In addition to the modification to the discharge prohibition in Order WQ 2001-15, the State Water Board refined Order WQ 99-05 by making clear that the Copermittees may use an iterative approach to achieving compliance with water quality standards that involves ongoing assessments and revisions. Thus, the language for the discharge prohibitions and receiving water limitations was revised to explicitly require the Copermittees to implement an iterative process of assessments and revisions to comply with the discharge prohibitions and receiving water limitations. The San Diego Water Board retained the authority to enforce receiving water limitations and discharge prohibitions even if the Copermittee is engaged in the iterative process.

The Third Term San Diego County Permit was subsequently challenged in the Superior Court of the State of California and the Court of Appeal, Fourth Appellate District. The Court of Appeals, Fourth Appellate District, found that the approach of the Third Term San Diego County Permit to regulating discharges into the MS4 was appropriate (*Building Industry Ass'n. v. State Water Resources Control Bd., et al.*, 124 Cal.App.4th 866 (2004)). The State of California Supreme Court denied review sought by the Building Industry Association in March 2005.

The Fourth Term Permits, or current MS4 permits, began with the adoption of Order No. R9-2007-0001 issued to the Copermittees of San Diego County in January 2007. Order Nos. R9-2009-0002 and R9-2010-0016 were subsequently issued to the Copermittees of Orange County and Riverside County. The Fourth Term Permits continued to include more detailed requirements to be implemented by each Copermittee's jurisdictional runoff management program. The Fourth Term Permits also include requirements to further emphasize a watershed management approach and for more coordination among jurisdictional runoff management programs. In addition, the Fourth Term Permits included more requirements for assessing the effectiveness of the runoff management programs being implemented by the Copermittees. The intent of the inclusion of additional requirements was to enhance and better define elements of the permit that were expected to be incorporated into the iterative process for managing runoff from each Copermittee's jurisdiction and within the watersheds of the San Diego Region.

The Fourth Term Permits include several new and emerging approaches for managing storm water runoff and discharges. Low impact development (LID) requirements are included for development and significant redevelopment to reduce pollutants in storm water runoff from sites through more natural processes such as infiltration and biofiltration closer to the source, rather than utilizing conventional mechanical end-of-pipe treatment systems. Hydrograph modification (hydromodification) management requirements also are included to mitigate the potential for increased erosion in receiving waters due to increased runoff rates and durations often caused by development and increased impervious surfaces. The Fourth Term Orange County and Riverside County Permits introduced requirements to identify areas of existing development where retrofitting with LID projects would be feasible and could be implemented to reduce storm water runoff and pollutants in storm water discharges.

The Fourth Term Orange County and Riverside County Permits included a clearer distinction between storm water and non-storm water discharges. The term “urban runoff” was completely removed, and a distinction between storm water (wet weather) runoff and non-storm water (dry weather) runoff was emphasized. This clarification was made to prevent any potential misunderstanding that regulation under the MS4 permits is limited only to urbanized areas, and to prevent non-storm water runoff from being managed in the same manner as storm water runoff. The term “urban runoff” is not defined in the Code of Federal Regulations (CFR) or Federal Register (FR) in the regulation of MS4 discharges. According to the CWA 402(p)(3)(B)(ii), MS4 permits must include a requirement to effectively prohibit non-storm water discharges into the MS4s.

Finally, for the Fourth Term Orange County and Riverside County Permits the San Diego Water Board found that non-storm water discharges to the MS4 from over application of irrigation water are sources of pollutants. The San Diego Water Board found that non-storm water discharges resulting from over-irrigation must be prohibited from entering the MS4 in accordance with the requirements of the CWA and pursuant to 40 CFR 122.26(d)(2)(iv)(B)(1).

The requirements of the Fourth Term Permits issued to the Copermittees in each county within the San Diego Region now have substantively the same core requirements such as discharge prohibitions, receiving water limitations, jurisdictional runoff management program components, and monitoring program requirements. There are, however, several inconsistencies that exist among the three Fourth Term Permits which complicate oversight and implementation of the permits by the San Diego Water Board.

The Fourth Term San Diego County Permit expired in January 2012. The Fourth Term Orange County and Riverside County Permits will expire in December 2014 and November 2015, respectively. Issuing the Fifth Term Permits within five years for three counties under three different permits would require the San Diego Water Board to expend significant time and resources for the issuance of the permits through three separate public proceedings, thereby greatly reducing the time and resources available to oversee implementation and compliance. Multiple permits also create confusion for determining compliance among regulated entities, especially for the land development community.

The San Diego Water Board has acknowledged that issuing a single MS4 permit for all the Copermittees in the San Diego Region can and is expected to result in more consistent implementation, improve communication among agencies within watersheds crossing multiple jurisdictions, and minimize resources spent with each permit renewal process. Within the findings of the Fourth Term Riverside County Permit issued in November 2010, the San Diego Water Board notified the public of its intent to develop and issue a single Regional MS4 Permit.

V. REGIONAL MS4 PERMIT APPROACH

The Fifth Term Permit, or Regional MS4 Permit, shifts the focus of the permit requirements from a minimum level of actions to be implemented by the Copermittees to identifying outcomes to be achieved by those actions. Order No. R9-2013-0001 represents an important paradigm shift in the approach for MS4 permits within the San Diego Region.

Historical Permitting Approach

The First and Second Term Permits were very broad and provided little specificity about what was required to be developed and implemented by the Copermittees. The Third Term Permits began to become more specific about the minimum level of implementation required by the Copermittees. The Fourth Term Permits, or current permits, subsequently increased in specificity. The MS4 permits have progressively become more detailed and focused on specifying the minimum level of actions expected to be implemented by the Copermittees. As detailed and specific as the MS4 permits have become, however, they include very little detail about what the desired outcomes of the required actions are expected to achieve. Compliance with the permit requirements has essentially been tracking numbers of actions and reporting, not tracking progress or actual improvements in the quality of receiving waters or discharges from the MS4s. The result has been an increase in actions being implemented by the Copermittees with little or no ability or expectations to determine whether or not improvements in water quality are being achieved.

The Fourth Term Permits result in significant resource expenditure by the Copermittees to report permit compliance information to the San Diego Water Board in the form of annual jurisdictional runoff management program, watershed program, and monitoring program reports. The San Diego Water Board must then expend much of its limited resources on reviewing more than 50 voluminous reports submitted annually by the Copermittees. The information currently reported by the Copermittees is of limited value when trying to measure progress toward achieving improvements in the quality of receiving waters or discharges from the MS4s. Oversight of the MS4 permits is further complicated by the inconsistencies among the requirements issued to the Orange County, San Diego County, and Riverside County Copermittees under three separate MS4 permits.

Under the Fourth Term Permits, the Copermittees must expend a significant portion of their limited resources collecting data of limited value, and putting together reports to submit that information to the San Diego Water Board. Likewise, the San Diego Water Board must expend most of its limited resources reviewing reports, and developing permits instead of working directly with the Copermittees to identify solutions to problems causing impacts to water quality. This is an unsustainable course that will continue to demand more resources from the Copermittees and the San Diego Water Board, and would continue to result in unknown water quality benefits.

New Permitting Approach

The goal of the Regional MS4 Permit is twofold: 1) bring a consistent set of MS4 permit requirements to all of the Copermittees within the San Diego Region; and, 2) provide a MS4 permit with requirements that will allow the Copermittees to focus their efforts and resources on achieving goals and desired outcomes toward the improvement of water quality rather than completing specific actions.

The overall approach included in the Regional MS4 Permit with respect to the jurisdictional runoff management programs will not differ significantly from the current permits. The general requirements for the jurisdictional runoff management program components and compliance with those requirements will remain and be applied consistently throughout the San Diego Region under the Regional MS4 Permit.

The most significant difference in the new permitting approach is the specific manner of implementation for those jurisdictional runoff management programs. Implementation will be based on decisions made by the Copermittees in accordance with what they have identified as their highest priority water quality conditions. In other words, the Copermittees will have significant control in how to implement the jurisdictional runoff management programs to best utilize their available resources in addressing a specific set of priorities effectively, instead of trying to address all the water quality priorities ineffectively.

The Copermittees are given the responsibility of identifying their highest priority water quality conditions that they intend to address. The Copermittees will develop goals that can be used to measure and demonstrate progress or improvements toward addressing those priorities. In addition to the goals, the Copermittees will provide a schedule for achieving the goals for those highest priorities. The measurement of progress toward achieving the goals for those highest priorities requires a better defined and more focused program of monitoring and assessment than under the Fourth Term Permits.

The monitoring and assessment program must be designed to inform the Copermittees of their progress, and the need for modifications in their jurisdictional runoff management programs and schedules to achieve their goals to improve water quality. The monitoring and assessment program requirements will have a more central role in the Regional MS4 Permit than in earlier permits. The monitoring and assessment requirements must also be designed to enable the Copermittees to focus and direct their efforts in implementing their jurisdictional runoff management programs toward their stated desired outcomes to improve the quality of receiving waters and/or discharges from the MS4s.

By providing a MS4 permit that allows the Copermittees to make more decisions about how to utilize and focus their resources, along with a better defined monitoring and assessment program to inform their water quality management decisions, the Copermittees will have the opportunity to:

- 1) *Plan strategically.* The Copermittees must have the ability to identify their available resources and develop and implement long term plans that can organize, collect, and use those resources in the most strategically advantageous and efficient manner possible. This ability to develop long term plans will allow the Copermittees to focus and utilize their resources in a more concerted way over the short term and long term to address specific water quality priorities through stated desired outcomes.
- 2) *Manage adaptively.* The Copermittees must be given the ability to modify their plans as additional information and data are collected from the monitoring and assessment programs. The Copermittees' plans may require modifications to the programs, priorities, goals, strategies, and/or schedules in order for the Copermittees to achieve a stated desired outcome.
- 3) *Identify synergies.* The Copermittees must be given more flexibility to identify efficiencies within and among their jurisdictional runoff management programs as the strategies are developed and implemented to increase the Copermittees' collective effectiveness. The Copermittees must also be able to identify and utilize resources available from other agencies and entities to further augment and enhance their jurisdictional runoff management programs and/or to collectively work with those other agencies and entities toward achieving a stated desired outcome.

The Regional MS4 Permit requirements will provide the Copermittees the flexibility and responsibility to decide what actions will be necessary to achieve an outcome that is tailored and designed by the Copermittees to improve specific prioritized water quality conditions. The San Diego Water Board expects the approach of the Regional MS4 Permit to give the Copermittees a greater sense of ownership for restoring the quality of receiving waters in the San Diego Region by becoming an integral part of the decision making process in identifying water quality conditions to be addressed, as well as determining the best use of their resources.

VI. ECONOMIC CONSIDERATIONS

Statutory Considerations

California Water Code (CWC) section 13241 requires the San Diego Water Board to consider certain factors, including economic considerations, in the adoption of water quality objectives. CWC section 13263 requires the San Diego Water Board to take into consideration the provisions of CWC section 13241 in adopting waste discharge requirements.

In *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, the California Supreme Court considered whether Regional Water Boards must comply with CWC section 13241 when issuing waste discharge requirements under CWC section 13263(a) by taking into account the costs a permittee will incur in complying with the permit requirements. The Court concluded that whether it is necessary to consider such cost information “*depends on whether those restrictions meet or exceed the requirements of the federal Clean Water Act.*” (*Id.* at p. 627.) The Court ruled that Regional Water Boards may not consider the factors in CWC section 13241, including economics, to justify imposing pollutant restrictions that are less stringent than applicable federal law requires. (*Id.* At pp. 618, 626-627 “[*Water Code section 13377 specifies that [] discharge permits issued by California’s regional boards must meet the federal standards set by federal law. In effect, section 13377 forbids a regional board’s consideration of any economic hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water Act...Because CWC section 13263 cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a [] discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards.*”]). However, when pollutant restrictions in an NPDES permit are more stringent than federal law requires, CWC section 13263 requires that the Regional Water Boards consider the factors described in CWC section 13241 as they apply to those specific restrictions.

As discussed in Section VII.F, Unfunded State Mandates, the San Diego Water Board finds that the requirements in this Order are not more stringent than the minimum federal requirements. Among other requirements, federal law requires MS4 permits to include requirements to effectively prohibit non-storm water discharges into the MS4s, in addition to requiring controls to reduce the discharge of pollutants in storm water to the MEP, and other provisions as USEPA or the State determines are appropriate for the control of pollutants in MS4 discharges.

The requirements in this Order may be more specific or detailed than those enumerated in federal regulations under 40 CFR 122.26 or in the USEPA guidance. However, the requirements have been designed to be consistent with and within the federal statutory mandates described in CWA section 402(p)(3)(B)(ii) and (iii) and the related federal regulations and guidance. Consistent with federal law, all of the

conditions in this Order could have been included in a permit adopted by USEPA in the absence of the in lieu authority of California to issue NPDES permits.

Moreover, the inclusion of numeric WQBELs in this Order does not cause this Order to be more stringent than federal law. Federal law authorizes both narrative and numeric effluent limitations to meet state water quality standards. The inclusion of WQBELs as discharge specifications in an NPDES permit in order to achieve compliance with water quality standards is not a more stringent requirement than the inclusion of BMP based permit limitations to achieve water quality standards (State Water Board Order No. WQ 2006-0012 (*Boeing*)). Therefore, consideration of the factors set forth in CWC section 13241 is not required for permit requirements to implement the effective prohibition on the discharge of non-storm water discharges into the MS4 or for controls to reduce the discharge of pollutants in storm water to the MEP, or other provisions that the San Diego Water Board has determine appropriate to control such pollutants, as those requirements are mandated by federal law.

Included in the provisions of the Order are monitoring and reporting requirements that are designed to demonstrate that the Copermittees are implementing programs to comply with the CWA municipal storm water requirements. CWA section 308(a) and 40 CFR 122.41(h), (j)-(l), 122.44(i) and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Federal regulations applicable to large and medium MS4s (40 CFR 122.26(d)(1)(iv)(D), 122.26(d)(1)(v)(B), 122.26(d)(2)(i)(F), 122.26(d)(2)(iii)(D), 122.26(d)(2)(iv)(B)(2) and 122.42(c)) also specify additional monitoring and reporting requirements. In addition to the federal requirements of the CWA, the San Diego Water Board also has the authority in CWC 13383 to establish monitoring, reporting, and recordkeeping requirements that implement federal and state laws and regulations through NPDES permits. .

The monitoring and assessment information that will be reported to the San Diego Water Board is necessary to determine if the Copermittees are making progress toward achieving compliance with the discharge prohibitions, receiving water limitations, and effluent limitations under Provision A of the Order. The monitoring and assessment information that will be reported is also expected to be key to the iterative approach and adaptive management process that is required to be implemented by the Copermittees if they cannot meet the discharge prohibitions and receiving water limitations under the present conditions, which is also part of the requirements under Provision A of the Order.

Notwithstanding the above, the San Diego Water Board has considered cost information in issuing this Order, as discussed below. The San Diego Water Board has also considered all of the evidence that has been presented to the San Diego Water Board regarding the CWC section 13241 factors in adopting this Order. The San Diego Water Board finds that the requirements in this Order are reasonably necessary to protect beneficial uses identified in the Basin Plan and the economic information related to costs of compliance and other CWC section 13241 factors are not sufficient to justify failing to protect those beneficial uses. Where appropriate, the

San Diego Water Board has provided or will consider providing the Copermittees with additional time to implement control measures to achieve final WQBELs and/or water quality standards.

Cost Information

Discussions of the financial and economic ramifications of municipal storm water management programs tend to focus on the significant costs incurred by municipalities in developing and implementing the programs. When considering the cost of implementing the programs, however, it is also important to consider the alternative costs that are incurred when programs are not fully implemented, as well as the economic benefits which result from effective program implementation.

The recent financial and economic conditions have amplified the concerns about the costs incurred by the municipalities in developing and implementing their programs. The reduction in resources resulting from the recent financial and economic conditions has been cited by many of the Copermittees as a justification for reducing the requirements that must be met by their programs. While the recent conditions are a cause for concern in the short term, these programs also have an opportunity to identify and implement improvements and efficiencies before the next period of growth and development, resulting in more effective and sustainable programs over the long term.

In addition, it is very difficult to ascertain the true cost of implementation of the Copermittees' management programs because of inconsistencies in reporting by the Copermittees. Reported costs of compliance for the same program element can vary widely from city to city, often by a very wide margin that is not easily explained.² Despite these problems, efforts have been made to identify management program costs, which can be helpful in understanding the costs of program implementation.

The San Diego Water Board recognizes that the Copermittees will incur costs in implementing this Order, potentially above and beyond the costs from the Copermittees' prior permits. The San Diego Water Board also recognizes that, due to California's current economic condition, many Copermittees currently have limited staff and resources to implement actions to address its MS4 discharges. Based on the economic considerations below, the San Diego Water Board has provided the Copermittees a significant amount of flexibility to choose how to implement the requirements of the Order.

The Order also allows the Copermittees to customize their plans, programs, and monitoring requirements. In the end, it is up to the Copermittees to determine the effective BMPs and measures necessary to comply with this Order. The Copermittees can choose to implement the least expensive measures that are effective in meeting the requirements of this Order. This Order also does not require the Copermittees to

² LARWQCB, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

fully implement all requirements within a single permit term. Where appropriate, the Board has provided the Copermitees with additional time outside of the permit term to implement control measures to achieve final WQBELs and/or water quality standards.

The San Diego Water Board has considered cost information associated with compliance with this Order. It is not possible to predict accurately the cost impact of the requirements that involve an unknown level of implementation or that depend on environmental variables that are as yet undefined. Only general conclusions can be drawn from this information.

Estimated Municipal Storm Water Program Implementation Costs

The USEPA, the State Water Board, and the California Regional Water Quality Control Boards (Regional Water Boards) have attempted to evaluate the costs of implementing municipal storm water programs. The assessments have demonstrated that the true costs are difficult to ascertain and reported costs vary widely. In addition, reported fiscal analyses tend to neglect the costs incurred to municipalities when storm water and non-storm water runoff is not effectively managed, which are incurred as a result of pollution, contamination, nuisance, and damage to ecosystems, property, and human health. Nonetheless, they provide a useful context for considering the costs of requirements within Order No. R9-2013-0001.

In 1999, the USEPA reported on multiple studies it conducted to determine the cost of management programs. A study of Phase II municipalities determined that the annual cost of the Phase II program was expected to be \$9.16 per household. The USEPA also studied 35 Phase I municipalities, finding costs to be \$9.08 per household annually, similar to those anticipated for Phase II municipalities.³

The State Water Board commissioned a study by the California State University, Sacramento to assess costs of the Phase I MS4 program. This study includes an assessment of costs incurred by Phase I MS4s throughout the state to implement their programs. Annual cost per household in the study ranged from \$18 to \$46, with the Fresno-Clovis Metropolitan Area representing the lower end of the range, and the City of Encinitas (in San Diego County) representing the upper end of the range.⁴

A study on Phase I MS4 program costs was also conducted by the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board), where program costs reported in the municipalities' annual reports were assessed. The Los Angeles Water Board estimated that average per household cost to implement the MS4 program in Los Angeles County was \$12.50.⁵

³ Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791-68792.

⁴ State Water Board, 2005. NPDES Stormwater Cost Survey. P. ii.

⁵ Los Angeles Water Board, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

It is important to note that reported program costs are not all attributable to solely complying with MS4 permits. Many program components, and their associated costs, existed before any MS4 permits were ever issued. For example, street sweeping and trash collection costs cannot be solely or even principally attributable to MS4 permit compliance, since these practices have long been expected from and implemented by municipalities.

Therefore, true program cost resulting from MS4 permit requirements is some fraction of reported costs. The California State University, Sacramento study found that only 38 percent of program costs are new costs fully attributable to MS4 permits. The remainder of the program costs was either pre-existing or resulted from enhancement of pre-existing programs.⁶ In 2000, the County of Orange found that even lower amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to implement the County of Orange Drainage Area Management Plan (DAMP), was less than 20 percent of the total budget. The remaining 80 percent was attributable to pre-existing programs.⁷ More current data from the County of Orange is not used in this discussion because the County of Orange no longer reports such information.

Estimated Value of Healthy Water Quality

Economic considerations of municipal storm water management programs cannot be limited only to program costs. Evaluation of programs must also consider information on the benefits derived from environmental protection and improvement.⁸ Attention is often focused on municipal storm water management program costs, but the programs must also be viewed in terms of their value to the public.

Placing a value on healthy receiving waters is very difficult. Often the value of receiving waters with good water quality manifests in other forms, such as tourism, recreational opportunities, and/or increased property values. When surface water bodies are degraded, thereby degrading the habitat within and adjacent to the water bodies, the public loses the value and benefits associated with being able to use the area in and around the water bodies. Surface waters that are able to support the beneficial uses designated in the Basin Plan can sustain plants and wildlife that can attract visitors and residents, providing aesthetic, recreational, as well as monetary value to the public. At this time, however, there have been no studies for the San Diego Region to quantify the added value that surface waters with healthy water quality can provide.

USEPA has estimated that household willingness to pay for improvements in fresh water quality for fishing and boating is approximately \$158-\$210.⁹ This estimate can be considered conservative, since it does not include important considerations such as

⁶ State Water Board, 2005. NPDES Stormwater Cost Survey. P. 58.

⁷ County of Orange, 2000. A NPDES Annual Progress Report. P. 60.

⁸ Ribaud M.O. and D. Heelerstein. 1992, *Estimating Water Quality Benefits: Theoretical and Methodological Issues*. U.S. Department of Agriculture. Technical Bulletin No. 1808.

⁹ Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68793.

marine waters benefits, wildlife benefits, or flood control benefits. Another study conducted by California State University, Sacramento reported that the annual household willingness to pay for statewide clean water is approximately \$180.¹⁰

A study conducted by the University of Southern California and University of California, Los Angeles assessed the costs and benefits of implementing various approaches for achieving compliance with the MS4 permits in the Los Angeles region. The study found that non-structural systems would cost \$2.8 billion but provide \$5.6 billion in benefit. If structural systems were determined to be needed, the study found that total costs would be \$5.7 to \$7.4 billion, while benefits could reach \$18 billion.¹¹ Costs are anticipated to be borne over many years, probably at least ten years.

As can be seen, the benefits of the municipal storm water management programs are expected to considerably exceed their costs. Such findings are corroborated by USEPA, which found that the benefits of implementation of its Phase II storm water rule would also outweigh the costs.¹²

¹⁰ State Water Board, 2005. NPDES Stormwater Cost Survey. P. iv.

¹¹ Los Angeles Water Board, 2004. Alternative Approaches to Stormwater Control.

¹² Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791.

VII. APPLICABLE STATUTES, REGULATIONS, PLANS AND POLICIES

A. Legal Authorities – Federal Clean Water Act and California Water Code

This Order is issued pursuant to section 402 of the CWA and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the CWC (commencing with section 13370). This Order serves as an NPDES permit for point source discharges to surface waters. This Order also serves as waste discharge requirements pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).

The objective of the CWA is “*to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.*” To carry out this objective, the CWA requires the implementation of permit programs to regulate the discharge of pollutants and dredged or fill material to the navigable waters of the U.S. and to regulate the use and disposal of sewage sludge. CWA section 402 provides the legal authority to issue a permit for the discharge of pollutants to waters of the U.S. under the NPDES. The CWA provides that NPDES permits may be issued by states which are authorized to implement the provisions of that act. California became authorized to implement the NPDES permit program on May 14, 1973.

The Porter-Cologne Water Quality Control Act (Division 7, commencing with CWC section 13000) established the State Water Resources Control Board (State Water Board) and nine Regional Water Quality Control Boards (Regional Water Boards) as the principal state agencies with primary responsibility for the coordination and control of water quality. CWC section 13200(f) established the San Diego Water Board, which has the primary responsibility for the coordination and control of water quality in the San Diego Region, which includes all the basins draining into the Pacific Ocean between the southern boundary of the Santa Ana Region and the California-Mexico boundary. The San Diego Water Board implements the CWA through Chapter 5.5 of the CWC, commencing with section 13370. CWC section 13377 provides the San Diego Water Board the legal authority to issue waste discharge requirements to ensure compliance with all applicable provisions of the CWA and acts amendatory thereof or supplementary, thereto, to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.

CWA section 402(p) requires the USEPA or authorized state to issue NPDES permits for storm water discharges from municipal separate storm sewer systems (MS4s) to waters of the U.S. CWA section 402(p)(3)(B)(ii) requires that NPDES permits for storm water discharges from MS4s “*effectively prohibit non-storm water discharges*” into the MS4s. CWA section 402(p)(3)(B)(iii) requires that NPDES permits for storm water discharges from MS4s to “*require controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable [MEP], including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control*

of such pollutants.”

The USEPA published implementing regulations (Code of Federal Regulations [CFR] Title 40, Part 122 [40 CFR 122]), which prescribe permit application requirements for storm water discharges from MS4s pursuant to CWA 402(p), on November 16, 1990. The USEPA published an Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems, which provided guidance on permit application requirements for regulated MS4s, on May 17, 1996. The federal regulations in 40 CFR 122 and guidance issued by USEPA serve as the foundation for the provisions of Order No. R9-2013-0001. The legal authorities provided by the above statutes and regulations are included as part of the discussions in Section VIII of this Fact Sheet.

B. Legal Authority for the Permit Issued on a Region-wide Basis

CWA section 402(p)(3)(B) provides the San Diego Water Board the legal authority to issue an NPDES permit for the San Diego Region as compared to separate MS4 permits based upon County- and partial County-wide boundaries as they exist within the San Diego Region. CWA section 402(p)(3)(B) states that “*Permits for discharges from municipal storm sewers- (i) may be issued on a system- or jurisdiction-wide basis*” The federal regulations in 40 CFR 122.26(a)(1)(v) also state that the San Diego Water Board “*may designate dischargers from municipal separate storm sewers on a system-wide or jurisdiction-wide basis. In making this determination, the [San Diego Water Board] may consider the following factors: (A) the location of the discharge with respect to waters of the United States; (B) the size of the discharge; (C) the quantity and nature of the pollutants discharged to waters of the United States; and (D) other relevant factors.*”

More specifically, the federal regulations provide that for large and medium MS4 systems, the San Diego Water Board may issue a regional permit. Specifically, the federal regulation in 40 CFR 122.26(a)(3) provide:

- "(ii) The Director may either issue one system-wide permit covering all discharges from municipal separate storm sewers within a large or medium municipal storm sewer system or issue distinct permits for appropriate categories of discharges within a large or municipal separate storm sewer system including, but not limited to: all discharges owned or operated by the same municipality; located within the same jurisdiction; all discharges within a system that discharge to the same watershed; discharges within a system that are similar in nature; or for individual discharges from municipal separate storm sewers within the system.*
- (iii) The operator of a discharge from a municipal separate storm sewer which is part of a large or medium municipal separate storm sewer system must either: (A) Participate in a permit application (to be a permittee or a co-permittee) with one or more other operator of discharges from the large or medium municipal storm sewer system which covers all, or a portion of all, discharges from the*

municipal separate storm sewer system; (B) Submit a distinct permit application which only covers discharges from the municipal separate storm sewers for which the operator is responsible; or (C) A regional authority may be responsible for submitting a permit application under the following guidelines....

- (iv) One permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems. The Director may issue one systemwide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.*
- (v) Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas which contribute storm water to the system."*

Based on these regulations, the San Diego Water Board may issue a region-wide MS4 permit. The regulations also clarify that the permit may include different conditions for separate discharges covered by the permit. This allows the San Diego Water Board to ensure that suitable water quality conditions and provisions are identified for each watershed.

The USEPA's responses to comments in the Final Rule for the above-mentioned regulations also make it clear that the permitting authority, in this case the San Diego Water Board, has the flexibility to establish system- or region-wide, permits. In the Final Rule published in the Federal Register and containing the responses to comments, USEPA notes that 40 CFR 122.26(a)(3)(iv) would allow an entire system in a geographical region under the purview of a State agency to be designated under a permit.¹³ USEPA also states that many commenters wanted to allow the permitting authority broad discretion to establish system-wide permits, and that EPA believes that paragraphs 40 CFR 122.26 (a)(1)(v) and (a)(3)(ii) allow for such broad discretion.¹⁴

This Order creates watershed requirements that apply to multiple counties. The regional nature of this Order will ensure consistency of regulation within watersheds and is expected to result in overall cost savings for the Copermitees. Managing storm water on a regional and watershed basis is expected to result in improved water quality, as the Order focuses on monitoring and management practices necessary to improve each watershed rather than political boundaries. A single permit also allows the San Diego Water Board staff to expend fewer resources developing successive multiple permits and allows more resources to be devoted to working cooperatively with all three current groups of Copermitees to ensure implementation of this Order results in improved water quality.

¹³ 55 Federal Register 47990-01, 48042

¹⁴ Ibid

C. Federal and California Endangered Species Acts

This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2115.5) or the Federal Endangered Species Act (16 United States Code [USC] sections 1531 to 1544). This Order requires compliance with requirements to protect the beneficial uses of waters of the U.S. The Copermittees are responsible for meeting all requirements of the applicable Endangered Species Act.

D. California Environmental Quality Act

The action to adopt an NPDES Permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code section 21100, et seq.) pursuant to CWC section 13389. (*County of Los Angeles v. Cal. Water Boards* (2006) 143 Cal.App.4th 985.)

E. State and Federal Regulations, Plans and Policies

The legal authority provided by the following regulations, plans, and policies are also included as part of the discussions in Section VIII of this Fact Sheet.

Water Quality Control Plan for the San Diego Basin

The CWA requires the San Diego Water Board to establish water quality standards for each water body in its region. Water quality standards include beneficial uses, water quality objectives and criteria that are established at levels sufficient to protect beneficial uses, and an antidegradation policy to prevent degrading of waters. On September 8, 1994, the San Diego Water Board adopted the *Water Quality Control Plan for the San Diego Basin* (Basin Plan). The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters in the San Diego Region. The San Diego Water Board has amended the Basin Plan on multiple occasions since 1994. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the surface water bodies that receive discharges from the MS4s within the San Diego Region generally include those listed below:

The Basin Plan identifies the following existing and potential beneficial uses for inland surface waters in the San Diego Region:

- Municipal and Domestic Supply (MUN)
- Agricultural Supply (AGR)
- Industrial Process Supply (PROC)
- Industrial Service Supply (IND)
- Ground Water Recharge (GWR)
- Contact Water Recreation (REC1)
- Non-contact Water Recreation (REC2)
- Warm Freshwater Habitat (WARM)
- Cold Freshwater Habitat (COLD)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)
- Freshwater Replenishment (FRSH)
- Hydropower Generation (POW)
- Preservation of Biological Habitats of Special Significance (BIOL)

The following additional existing and potential beneficial uses are identified for coastal waters of the San Diego Region:

- Navigation (NAV)
- Commercial and Sport Fishing (COMM)
- Estuarine Habitat (EST)
- Marine Habitat (MAR)
- Aquaculture (AQUA)
- Migration of Aquatic Organisms (MIGR)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Shellfish Harvesting (SHELL)

Pursuant to Water Code sections 13263 and 13377, the requirements of this Order implement the Basin Plan.

Water Quality Control Plan for Ocean Waters of California, California Ocean Plan

In 1972, the State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan). The State Water Board adopted the most recent amended Ocean Plan on September 15, 2009. The Office of Administrative Law approved it on March 10, 2010. On October 8, 2010, USEPA approved the 2009 Ocean Plan. The Ocean Plan is applicable, in its entirety, to ocean waters of the State. In order to protect beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Pursuant to Water Code sections 13263 and 13377, the requirements of this Order implement the Ocean Plan. The Ocean Plan identifies the beneficial uses of ocean waters of the State to be protected as summarized below:

- Industrial water supply
- Water contact and non-contact recreation, including aesthetic enjoyment;

- navigation
- Commercial and sport fishing
 - Mariculture
 - Preservation and enhancement of designated Areas of Special Biological Significance
 - Rare and endangered species
 - Marine habitat
 - Fish spawning and shellfish harvesting

On March 20, 2012, the State Water Board approved Resolution No. 2012-0012 approving an exception to the Ocean Plan prohibition against discharges to Areas of Special Biological Significance (ASBS) for certain nonpoint source discharges and NPDES permitted municipal storm water discharges. The State Water Board Resolution No. 2012-0012 requires monitoring and testing of marine aquatic life and water quality in several ASBS to protect California's coastline during storms when rain water overflows into coastal waters. Specific terms, prohibitions, and special conditions were adopted to provide special protections for marine aquatic life and natural water quality in ASBS. The City of San Diego's municipal storm water discharges to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach's municipal storm water discharges to the Heisler Park ASBS are subject terms and conditions of State Water Board Resolution No. 2012-0012. The Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012 applicable to these discharges are hereby incorporated in this Order as if fully set forth herein. Requirements of this Order implement the Ocean Plan.

Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality

On September 16, 2008, the State Water Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (Sediment Quality Control Plan). The Sediment Quality Control Plan became effective on August 25, 2009. The Sediment Quality Control Plan establishes 1) narrative sediment quality objectives for benthic community protection from exposure to contaminants in sediment and to protect human health, and 2) a program of implementation using a multiple lines of evidence approach to interpret the narrative sediment quality objectives. Requirements of this Order implement the Sediment Quality Control Plan.

Antidegradation Policy

Federal regulations (40 CFR 131.12) require that the state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining the Quality of the Waters of the State"). State Water Board Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law.

The San Diego Water Board's Basin Plan implements and incorporates by reference

both the State and federal antidegradation policies. State Water Board Resolution No. 68-16 and 40 CFR 131.12 require the San Diego Water Board to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the San Diego Water Boards' policies. State Water Board Resolution No. 68-16 requires that discharges of waste be regulated to meet best practicable treatment or control to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State be maintained.

The discharges permitted in this Order are consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. Many of the water bodies within the area covered by this Order are of high quality. The Order requires the Copermittees to meet best practicable treatment or control to meet water quality standards. As required by 40 CFR 122.44(a), the Copermittees must comply with the "maximum extent practicable" technology-based standard set forth in CWA section 402(p) for discharges of pollutants in storm water from the MS4s.

Many of the waters within the area covered by this Order are impaired and listed on the State's CWA Section 303(d) List and the San Diego Water Board has established TMDLs to address the impairments. This Order requires the Copermittees to comply with permit provisions to implement the WLAs set forth in the TMDLs in order to restore the beneficial uses of the impaired water bodies consistent with the assumptions and requirements of the TMDLs. This Order includes requirements to develop and implement storm water management programs, achieve WQBELs, and effectively prohibit non-storm water discharges into the MS4. The issuance of this Order does not authorize an increase in the amount of discharge of waste.

Anti-Backsliding Requirements

CWA sections 402(o) and 303(d)(4) and 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations or conditions may be relaxed. All effluent limitations and other conditions in this Order are at least as stringent as the effluent limitations in the previous permits issued to the San Diego County Copermittees, the Orange County Copermittees and the Riverside County Copermittees.

Clean Water Act Section 303(d) List

CWA section 303(d)(1) requires each State to identify specific water bodies within its boundaries where water quality standards are not being met or are not expected to be met after implementation of technology-based effluent limitations on point sources. Water bodies that do not meet water quality standards are considered impaired and are placed on the state's "303(d) List." Periodically, USEPA approves the State's 303(d) List.

Most recently, USEPA approved the State's 2010 303(d) List of impaired water bodies on October 11, 2011, which includes certain receiving waters in the San Diego Region. For each listed water body, the state or USEPA is required to establish a TMDL of each pollutant impairing the water quality standards in that water body. A TMDL is a tool for implementing water quality standards and is based on the relationship between pollution sources and in-stream water quality conditions. The TMDL establishes the allowable pollutant loadings for a water body and thereby provides the basis to establish water quality-based controls. These controls should provide the pollution reduction necessary for a water body to meet water quality standards.

A TMDL is the sum of the allowable pollutant loads of a single pollutant from all contributing point sources (the waste load allocations or WLAs) and non-point sources (load allocations of LAs) plus the contribution from background sources and a margin of safety (40 CFR 130.2(i)). MS4 discharges are considered point source discharges. For 303(d)-listed water bodies and pollutants in the San Diego Region, the San Diego Water Board or USEPA develops and adopts TMDLs that specify these requirements.

Since 2002, the San Diego Water Board has established six (6) TMDLs to remedy water quality impairments in various water bodies within the San Diego Region (see Attachment E to the Order). These TMDLs identify MS4 discharges as a source of pollutants to these water bodies, and, as required, establish WLAs for MS4 discharges to reduce the amount of pollutant discharged to receiving waters. CWA section 402(p)(3)(B)(iii) requires the San Diego Water Board to impose permit conditions, including: "management practices, control techniques and system, design and engineering methods, and *such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*" (Emphasis added.) CWA section 402(a)(1) also requires states to issue permits with conditions necessary to carry out the provisions of the CWA. Federal regulations also require that NPDES permits contain WQBELs consistent with the assumptions and requirements of all available WLAs (40 CFR 122.44(d)(1)(vii)(B)). CWC section 13377 also requires that NPDES permits include limitations necessary to implement water quality control plans. Therefore, this Order includes WQBELs and other provisions to implement the TMDL WLAs assigned to Copermitttees regulated by this Order.

Other Regulations, Plans and Policies

This Order implements all other applicable federal regulations and State regulations, plans and policies, including the California Toxics Rule at 40 CFR 131.38 (Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California Rule [California Toxics Rule or CTR]), and State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP).

F. Unfunded State Mandates

Article XIII B, Section 6(a) of the California Constitution provides that whenever “*any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service.*” The requirements of this Order do not constitute state mandates that are subject to a subvention of funds for several reasons, including, but not limited to, the following.

First, the requirements of this Order do not constitute a new program or a higher level of service as compared to the requirements contained in the previous Fourth Term Permits. The overarching requirement to impose controls to reduce the pollutants in discharges from MS4s is dictated by the CWA and is not new to this permit cycle (33 USC section 1342(p)(3)(B)). The inclusion of new and advanced measures as the MS4 programs evolve and mature over time is anticipated under the CWA (55 FR 47990, 48052 (Nov. 16, 1990)), and to the extent requirements in this Order are interpreted as new advanced measures, they do not constitute a new program or higher level of service.

Second, and more broadly, mandates imposed by federal law, rather than by a state agency, are exempt from the requirement that the local agency’s expenditures be reimbursed (Cal. Const., art. XIII B, section 9, subd. (b)). This Order implements federally mandated requirements under the CWA and its requirements are therefore not subject to subvention of funds. This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants in storm water to the MEP, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants (33 USC section 1342(p)(3)(B)). Federal cases have held these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (*Natural Resources Defense Council, Inc., v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.)

The authority exercised under this Order is not reserved state authority under the CWA’s savings clause (cf. *Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 627-628 [relying on 33 USC section 1370, which allows a state to develop requirements which are not “less stringent” than federal requirements]), but instead is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, *City of Rancho Cucamonga v. Regional Water Quality Control Board, Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389; *Building Industry Ass’n of San Diego Co. v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-883.)

The MEP standard is a flexible standard that balances a number of considerations, including technical feasibility, cost, public acceptance, regulatory compliance, and effectiveness. (*Building Ind. Ass’n., supra*, 124 Cal.App.4th at pp. 873-874, 889.) Such considerations change over time with advances in technology and with experience

gained in storm water management (55 FR 47990, 48052 (Nov. 16, 1990)). Accordingly, a determination of whether the conditions contained in this Order exceed the requirements of federal law cannot be based on a point by point comparison of the permit conditions and the sic minimum control measures that are required “at a minimum” to reduce pollutants to the maximum extent practicable and to protect water quality (40 CFR 122.34). Rather, the appropriate focus is whether the permit conditions, as a whole, exceed the MEP standard.

In recent months, the County of Los Angeles and County of Sacramento Superior Courts have granted writs setting aside decisions of the Commission on State Mandates that held certain requirements in Phase I permits constituted unfunded mandates. In both cases, the courts have found that the correct analysis in determining whether an MS4 permit constituted a state mandate was to evaluate whether the permit as a whole – and not a specific permit provision – exceeds the MEP standard. (*State of Cal. V. Comm. on State Mandates* (Super. Ct. Sacramento County, 2012, No. 34-2010-80000604), *State of California v. County of Los Angeles* (Super. Ct. Los Angeles County, 2011, No. BS130730.) Both cases are currently pending appeal.

The requirements of the Order, taken as a whole rather than individually, are necessary to reduce the discharge of pollutants to the MEP and to protect water quality. The San Diego Water Board finds that the requirements of the Order are practicable, do not exceed federal law, and thus do not constitute an unfunded mandate. These findings are the expert conclusions of the principal state agency charged with implementing the NPDES program in California (CWC sections 13001, 13370).

It should also be noted that the provisions in this Order to effectively prohibit non-storm water discharges are also mandated by the CWA (33 USC section 1342(p)(3)(B)(ii)). Likewise, the provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for water bodies that do not meet federal water quality standards (33 USC section 1313(d)). Once the USEPA or a state establishes or adopts a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions and requirements of any applicable waste load allocation in a TMDL (40 CFR 122.44(d)(1)(vii)(B)).

Third, the local agency Copermittees’ obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges. With a few inapplicable exceptions, the CWA regulates the discharge of pollutants from point sources (33 USC section 1342) and the Porter-Cologne Act regulates the discharge of waste (CWC section 13263), both without regard to the source of the pollutant or waste. As a result, the “costs incurred by local agencies” to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and non-governmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers’ compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The CWA and the Porter-Cologne Act largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Generally, the CWA requires point source dischargers, including dischargers of storm water associated with industrial or construction activity, to comply strictly with water quality standards (33 USC section 1311(b)(1)(C); *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1164-1165 [noting that industrial discharges must strictly comply with water quality standards]). As discussed in prior State Water Board decisions, certain provisions of this Order do not require strict compliance with water quality standards (State Water Board Order No. WQ 2001-0015, p. 7). Those provisions of this Order regulate the discharge of waste in municipal storm water under the CWA's MEP standard, not the BAT/BCT standard that applies to other types of discharges. These provisions, therefore, regulate the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Fourth, the Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA section 301(a) (33 USC section 1311(a)). To the extent that the local agency Copermittees have voluntarily availed themselves of the permit, the program is not a state mandate. (*Accord, County of San Diego v. State of California* (1997) 15 Cal.4th 68, 107-108.)

Fifth, the local agency Copermittees' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIII B, Section (6) of the California Constitution.

Finally, even if any of the permit provisions could be considered unfunded mandates, under Government Code section 17556, subdivision (d), a state mandate is not subject to reimbursement if the local agency has the authority to charge a fee. The local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order, subject to certain voting requirements contained in the California Constitution. (See Cal. Const., Art. XIII D, section 6, subd. (c); see also *Howard Jarvis Taxpayers Ass'n v. City of Salinas* (2002) 98 Cal.App.4th 1351, 1358-1359.) The Fact Sheet demonstrates that numerous activities contribute to the pollutant loading in the MS4. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Ass'n of Los Angeles County, Inc., v. City of Los Angeles* (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The authority and ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*Clovis Unified School Dist. V. Chiang* (2010) 188 Cal.App.4th 794, 812, citing *Connell v. Sup. Ct.* (1997) 59 Cal.App.4th 382, 401; *County of Fresno v. State of California* (1991) 53 Cal. 3d. 482, 487-488.)

VIII. PROVISIONS

The provisions (i.e. NPDES permit requirements) of the Order are discussed below.

A. Prohibitions and Limitations

Purpose: Provision A includes the prohibitions and limitations requirements that are the foundation of all the subsequent requirements included in the Order. Compliance with the prohibitions and limitations will restore and protect receiving waters from impacts that may be caused by discharges into and from the Copermittees' MS4s and ultimately achieve the objective of the CWA.

In meeting the requirements set forth in the Order, the Copermittees must be cognizant that the prohibitions and limitations exist and will be the standard by which the San Diego Water Board will be measuring the progress and success of their implementation of the NPDES permit requirements.

Discussion: The objective of the CWA is to “*restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.*” The CWA requires the implementation of NPDES permit programs to regulate discharges of pollutants and dredged or fill material to the navigable waters of the U.S. For discharges into and from MS4s, the CWA requires the NPDES permits to “*effectively prohibit non-stormwater discharges into the storm sewers*” and “*require controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable.*”

Provision A includes limitations, consistent with the requirements of the CWA for discharges from MS4s. Provision A expresses these limitations as discharge prohibitions, receiving water limitations, and effluent limitations. Compliance with the discharge prohibitions and receiving water limitations is also explicitly described, in conformance with precedential State Water Board Orders.

More specific and detailed discussions of the requirements of Provision A are provided below.

Provision A.1 (Discharge Prohibitions) prohibits the discharge of specific types of waste into and/or from the Copermittees' MS4s.

Provision A.1.a restates and reiterates Basin Plan Waste Discharge Prohibition 1, by prohibiting discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance in receiving waters of the

state. The terms pollution,¹⁵ contamination,¹⁶ and nuisance¹⁷ are defined under CWC 13050. Provision [A.1.c](#) incorporates all the waste discharge prohibitions of the Basin Plan into the requirements of the Order. The waste discharge prohibitions from the Basin Plan have been reproduced and provided in [Attachment A](#) to the Order.

Provision [A.1.b](#) requires non-storm water discharges into the MS4s to be effectively prohibited, consistent with the requirements of the CWA for MS4 permits to “*effectively prohibit non-stormwater discharges into the storm sewers.*” The prohibition does not apply to NPDES permitted discharges into the Copermittees’ MS4s. The prohibition also refers to the requirements of Provisions [E.2.a.\(1\)-\(5\)](#), which has specific requirements for the Copermittees to address certain types of non-storm water discharges if they enter the MS4.

The CWA employs the strategy of prohibiting the discharge of any pollutant from a point source into waters of the United States unless the discharger of the pollutant(s) obtains an NPDES permit pursuant to CWA Section 402. The 1987 amendment to the CWA includes provision 402(p) that specifically addresses NPDES permitting requirements for storm water discharges from MS4s. CWA section 402(p) prohibits the discharge of pollutants from specified MS4s to waters of the U.S. except as authorized by an NPDES permit and identifies two substantive standards for MS4 storm water permits. MS4 permits (1) “*shall include a requirement to effectively prohibit nonstormwater discharges into the storm sewers*” and (2) “*shall require controls to reduce the discharge of pollutants to, the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or State determines appropriate for the control of such pollutants.*” (CWA section 402(p)(3)(B)(ii-iii).)

In November 1990, the USEPA published regulations addressing storm water discharges from MS4s (55 FR 47990 and following (Nov. 16, 1990) (Phase I Final Rule)). The regulations establish minimum requirements for MS4 permits, and generally focus on the requirement that MS4s implement programs to reduce the amount of pollutants found in storm water discharges to the MEP. The CWA’s municipal storm water MEP standard does not require storm water discharges to strictly meet water quality standards, as is required for other NPDES permitted discharges. Compliance is achieved through an iterative approach of continuous implementation of improved BMPs. This distinction reflects Congress’s recognition that

¹⁵ CWC 13050(l): “(1) ‘Pollution’ means an alteration of the quality of waters of the state by waste to a degree which unreasonably affects either of the following: (A) The water for beneficial uses. (B) Facilities which serve beneficial uses. (2) ‘Pollution’ may include “contamination.

¹⁶ CWC 13050(k): “Contamination’ means an impairment of the quality of waters of the state by waste to a degree which creates a hazard to public health through poisoning or through the spread of disease. ‘Contamination’ includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.”

¹⁷ CWC 13050(m): “Nuisance’ means anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. (3) Occurs during, or as a result of, the treatment or disposal of wastes.”

variability in flow and intensity of storm events render difficult strict compliance with water quality standards by MS4 permittees. In describing the controls that permits must include to reduce pollutants in storm water discharges to the MEP, the statute (CWA section 402(p)(3)(B)(iii)) states that the controls shall include: "*management practices, control techniques and system, design and engineering methods, and such other provisions as the [permit writer] determines appropriate for the control of such pollutants.*"

In contrast, non-storm water discharges from the MS4 that are not authorized by separate NPDES permits, nor specifically included in a category of non-storm water discharges only required to be addressed if identified as a source of pollutants (see 40 CFR 122.26(d)(2)(iv)(B)), are subject to requirements under the NPDES program, including discharge prohibitions, technology based effluent limitations and water quality-based effluent limitations (40 CFR 122.44). The regulations also require the Copermitee's program to include an element to detect and remove illicit discharges and improper disposal into the storm sewer (40 CFR 122.26(d)(2)(iv)(B)).

While "non-storm water" is not defined in the CWA or federal regulations, the federal regulations (at 40 CFR 122.26(b)(2)) define "*illicit discharge*" as "*any discharge to a municipal separate storm sewer that is not composed entirely of storm water and that is not covered by an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer and discharges resulting from fire fighting activities).*" This definition is the most closely applicable definition of "non-storm water" contained in federal law. As stated in the Phase I Final Rule, USEPA added the illicit discharge program requirement to begin implementation of the 'effective prohibition' requirement to detect and control non-storm water discharges to their municipal system.

Thus, federal law mandates that permits issued to MS4s must require management practices that will result in reducing storm water pollutants to the MEP yet at the same time requires that non-storm water discharges be effectively prohibited from entering the MS4. "Effectively" prohibit does not mean that non-storm water discharges are authorized to be discharged into and from the Copermitees' MS4s. The Phase I Final Rule clarifies what "effectively prohibit" means (55 FR 47995):

"Section 402(p)(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to "effectively prohibit" non-storm water discharges from the municipal separate storm sewer...Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit (other than the permit for the discharge from the municipal separate storm sewer)."

Consistent with federal law, unless non-storm water discharges to the MS4 are authorized by a separate NPDES permit or are specifically included in a category of non-storm water discharges only required to be addressed if identified as a source of pollutants under federal regulations, non-storm water discharges are appropriately

subject to the effective prohibition requirement in the CWA and Regional Water Boards are not limited by the iterative MEP approach to storm water regulation in crafting appropriate regulations for non-storm water discharges.

The federal regulations (40 CFR 122.26(d)(vi)(B)(1)) require the Copermitttees to “*implement and enforce an ordinance, order or similar means*” to prevent non-storm water discharges to their MS4s. Thus, the Copermitttees are required to “*effectively*” prohibit non-storm water discharges to their MS4s through enforcing their “*ordinance, order or similar means*” and remove those discharges to their MS4s, or require those discharges to obtain coverage under a separate NPDES permit. More detail about the program that must be implemented to “*effectively*” prohibit non-storm water discharges to the Copermitttees’ MS4s is provided under the discussion for Provision [E.2](#).

Provision [A.1.d](#) was included to be consistent Resolution No. 2012-0012, adopted by the State Water Board on March 20, 2012. Provision [A.1.d](#) prohibits discharges from MS4s to Areas of Special Biological Significance (ASBS), except for storm water discharges from the City of San Diego’s MS4 to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach to the Heisler Park ASBS subject to the Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012. The pertinent Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012 are provided in [Attachment A](#) to the Order.

Provision A.2 (Receiving Water Limitations) specifies the condition of the receiving waters that must be achieved when there are discharges from the Copermitttees’ MS4s. Receiving water limitations are included in all NPDES permits issued pursuant to the CWA section 402. CWA section 402(p)(3)(B)(iii) authorizes the inclusion of “*such other provisions as the Administrator or the State determines appropriate for the control of [] pollutants.*” This requirement gives USEPA or the State permitting authority, in this case the San Diego Water Board, discretion to determine what permit conditions are necessary to control pollutants.

In its Phase I Final Rule (see 55 FR 47990, 47994 (Nov. 16, 1990)), USEPA elaborated on these requirements, stating that, “*permits for discharges from municipal separate storm sewer systems must require controls to reduce the discharge of pollutants to the maximum extent practicable, and where necessary water quality-based controls.*” USEPA reiterated in its Phase II Final Rule (64 FR 68722, 68737), that MS4 “*permit conditions must provide for attainment of applicable water quality standards (including designated uses), allocations of pollutant loads established by a TMDL, and timing requirements for implementation of a TMDL.*” CWC section 13377 also requires that NPDES permits include limitations necessary to implement water quality control plans. Both the State Water Board and the San Diego Water Board have previously concluded that discharges from the MS4 contain pollutants that have the reasonable potential to cause or contribute to excursions above water quality standards. As such, inclusion of receiving water limitations is appropriate to control MS4 discharges.

The inclusion of receiving water limitations is also consistent with the Ninth Circuit Court of Appeals' ruling in *Defenders of Wildlife v. Browner* (191 F.3d 1159, 1166 (1999)) that the permitting authority has discretion regarding the nature and timing of requirements that it includes as MS4 permit conditions to attain water quality standards. The Ninth Circuit Court of Appeals recently explained that, “[w]ater quality standards are used as a supplementary basis for effluent limitations [guidelines] so that numerous dischargers, despite their individual compliance with technology based effluent limitations, can be regulated to prevent water quality from falling below acceptable levels.” (*Natural Resources Defense Council v. County of Los Angeles* (9th Cir. 2011) 673 F.3d 880, 886 (review granted by the Supreme Court on other grounds).)

The receiving water limitations included in this Order consist of all applicable numeric or narrative water quality objectives or criteria, or limitations to implement the applicable water quality objectives or criteria, for receiving waters as contained in the Basin Plan or in water quality control plans or policies adopted by the State Water Board, including State Water Board Resolution No. 68-16, or in federal regulations, including but not limited to 40 CFR 131.12 and 131.38. The water quality objectives in the Basin Plan and other State Water Board plans and policies have been approved by USEPA and combined with designated beneficial uses constitute the water quality standards required under federal law.

Provision [A.2.a](#) requires that discharges from the Copermittees' MS4s must not cause or contribute to the violation of water quality standards in receiving waters. The water quality standards of the receiving waters must be protected from the impacts that may be caused by the Copermittees' MS4 discharges. Water quality standards applicable to the surface waters in the San Diego Region must be achieved through meeting the technology based standard of MEP through an iterative process of improved management actions. Provision [A.2.a](#) is also consistent with State Water Board Order WQ 99-05 precedent-setting language requiring discharges from MS4s to attain receiving water quality standards. The water quality control plans and policies with water quality standards applicable to the waters in the San Diego Region are included under Provision [A.2.a](#).

Provisions [A.2.b](#) was included to be consistent with the requirements of State Water Board Resolution No. 2012-0012, adopted on March 20, 2012.

Provision A.3 (Effluent Limitations) specifies the condition of the discharges from the Copermittees' MS4s that must be achieved if and when there are discharges.

Consistent with CWA section 301(b)(1)(A) and 40 CFR 122.44(a), Provision [A.3.a](#) includes the technology-based effluent limitations that must be included in the Order. The technology-based effluent limits, representing the minimum level of control that must be imposed in a permit under CWA section 402, requires that pollutants in discharges of storm water from the Copermittees' MS4s be reduced to the MEP. This provision applies specifically to storm water discharges. Non-storm water discharges

must be effectively prohibited, as required under Provision [A.1.b](#). Non-storm water (dry weather) discharges from the MS4 are not considered storm water (wet weather) discharges and therefore are not subject to the MEP standard.

The technology-based MEP standard is an ever-evolving, flexible, and advancing concept. Neither Congress nor USEPA has specifically defined the term “maximum extent practicable.” Congress established this flexible MEP standard so that the administrative bodies would have “*the tools to meet the fundamental goals of the Clean Water Act in the context of storm water pollution.*” (*Building Industry Ass’n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 884.) As knowledge about controlling storm water runoff and discharges continues to evolve, so does the knowledge which constitutes MEP. Reducing the discharge of pollutants in storm water from the MS4 to the MEP requires the Copermittees to assess each program component and revise activities, control measures, BMPs, and measurable goals, as necessary to meet MEP.

The San Diego Water Board or the State Water Board ultimately define MEP, and may include requirements that provide specific guidance on what is expected to demonstrate MEP. It is the responsibility of the Copermittees to propose actions that implement BMPs to reduce storm water pollution to the MEP. In other words, the Copermittees’ runoff management programs developed and implemented under the Order are the Copermittees’ proposals of achieving MEP. Their total collective and individual activities conducted pursuant to their runoff management programs become their proposal for achieving MEP as it applies both to their overall effort, as well as to specific activities. Provisions [B](#) through [E](#) of the Order provides a minimum framework to guide the Copermittees in achieving the MEP standard for discharges of pollutants in storm water.

Provision [A.3.b](#) incorporates any water quality based effluent limitations (WQBELs) applicable to the MS4s established for TMDLs adopted and approved for the San Diego Region and requires the Copermittees to comply with those WQBELs. This is consistent with 40 CFR 122.44(d)(1)(vii)(B), which requires that NPDES permits to incorporate WQBELs “*developed to protect a narrative water quality criterion, a numeric water quality criterion, or both...consistent with the assumptions and requirements of any available wasteload allocation for the discharge...*”

Pursuant to CWA section 303(d), for surface water bodies identified as impaired by one or more pollutants, the San Diego Water Board is required to establish TMDLs “*at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.*” The TMDLs identify sources of the pollutants causing the impairments and assign portions of the TMDL as WLAs to point sources, which include MS4s.

WLAs must be expressed in NPDES permits as WQBELs, which may include one or more numeric components such as numeric effluent limits, and/or receiving water

limitations, and/or BMP requirements. Because numeric targets for TMDLs typically include a component that will be protective of water quality standards, a TMDL will likely include one or more numeric receiving water limitations and/or effluent limitations as part of the assumptions or requirements of the TMDL. Any numeric receiving water limitations and/or effluent limitations developed as part of the assumptions or requirements of a TMDL must be incorporated and included as part of a WQBELs for the MS4s.

Because the development and approval of new TMDLs, or modification of existing TMDLs, may occur during the term of this Order, the specific provisions of those TMDLs, including effluent limitations applicable to MS4s are provided within Attachment E to the Order. Attachment E will be updated with new TMDLs and modifications to existing TMDLs in a timely manner as they occur.

Provision A.4 (Compliance with Discharge Prohibitions and Receiving Water Limitations) describes the process required to be implemented by the Copermittees if compliance with the discharge prohibitions of Provisions A.1.a and A.1.c and receiving water limitations of Provision A.2.a are not being achieved under current conditions.

In its Phase II Stormwater Regulations, Final Rule, USEPA states that MS4 “*permit conditions must provide for attainment of applicable water quality standards (including designated uses), allocations of pollutant loads established by a TMDL, and timing requirements for implementation of a TMDL.*”¹⁸ In a series of comment letters on MS4 permits issued by various Regional Water Boards, USEPA has also reiterated that MS4 discharges must meet water quality standards.¹⁹ In addition, the Ninth Circuit Court of Appeals explained in a recent ruling that, “[w]ater quality standards are used as a supplementary basis for effluent limitations [guidelines] so that numerous dischargers, despite their individual compliance with technology based effluent limitations, can be regulated to prevent water quality from falling below acceptable levels.”²⁰

Water quality standards for the San Diego Region are established in the Basin Plan. The water quality standards of the Basin Plan are incorporated into this Order as the discharge prohibitions under Provisions A.1.a and A.1.c and receiving water limitations under Provision A.2.a. The discharge prohibitions and receiving water limitations in this Order consist of all applicable numeric or narrative water quality objectives or criteria, or limitations or prohibitions to implement the applicable water quality objectives or criteria, for receiving waters as contained in the Basin Plan, water quality control plans or policies adopted by the State Water Board, including Resolution No.

¹⁸ Phase II Stormwater Regulations, Final Rule, 64 Fed. Reg. 68722, 68737.

¹⁹ Letter from Alexis Strauss, Acting Director, Water Division, USEPA Region IX, to Walt Pettit, Executive Director, State Water Board, re: SWRCB/OCC File A-1041 for Orange County, dated January 21, 1998.

²⁰ NRDC v. County of Los Angeles (9th Cir. 2011), 673 F.3d 880, 886. On July 13, 2012, the United States Supreme Court granted review of this case on other grounds. See also, *Building Industry Ass’n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 884-886, citing *Defenders of Wildlife v. Browning*, (9th Cir. 1999) 191 F.3d 1159.)

68-16, or federal regulations, including but not limited to, 40 CFR 131.12 and 131.38. The waste discharge prohibitions and water quality objectives in the Basin Plan have been approved by USEPA and combined with the designated beneficial uses constitute the water quality standards required under federal law.

Under federal law (CWA section 402(p)(3)(B)(iii)), an MS4 permit must include “controls to reduce the discharge of pollutants to the maximum extent practicable...and such other provision as...the State determines appropriate for control of such pollutants.” The State Water Board has previously determined that limitations necessary to meet water quality standards are appropriate for the control of pollutants discharged by MS4s and must be included in MS4 permits. (State Water Board Orders WQ 91-03, 98-01, 99-05, 2001-15; see also *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159.) This Order prohibits discharges that cause or contribute to violations of water quality standards.

The discharge prohibitions under Provisions [A.1.a](#) and [A.1.c](#) and receiving water limitations under Provision [A.2.a](#) are included in this Order to ensure that discharges from the MS4s do not cause or contribute to exceedances of water quality objectives necessary to protect the beneficial uses of the receiving waters.

Provision [A.4](#) is consistent with the precedent-setting language in State Water Board Order WQ 99-05 required to be included in municipal storm water permits. State Water Board Order WQ 2001-15 refined Order WQ 99-05 by requiring an iterative approach to compliance with water quality standards involving ongoing assessments and revisions, as referred to as the “iterative process.” The “iterative process” is a fundamental NPDES requirement for municipal storm water permits to achieve the objectives of the CWA.

The State Water Board and Regional Water Boards have stated that the provisions under Provisions [A.1.a](#), [A.1.c](#), [A.2.a](#), and [A.4](#) are independently applicable, meaning that compliance with one provision does not provide a “safe harbor” where there is non-compliance with another provision (i.e., compliance with the Provision [A.4](#) does not shield a Copermitee who may have violated Provision [A.1.a](#), [A.1.c](#), or [A.2.a](#) from an enforcement action). The intent of Provision [A.4](#) is to ensure that the Copermitees have the necessary storm water management programs and controls in place, and that they are modified by the Copermitees in a timely fashion when necessary, so that compliance with Provisions [A.1.a](#), [A.1.c](#), and/or [A.2.a](#) is achieved as soon as possible. USEPA expressed the importance of this independent applicability in a series of comment letters on MS4 permits proposed by various Regional Water Boards. At that time, USEPA expressly objected to certain MS4 permits that included language stating, “*permittees will not be in violation of this [receiving water limitation] provision ... [if certain steps are taken to evaluate and improve the effectiveness of the*

*jurisdictional runoff management programs],” concluding that this phrase would not comply with the CWA.*²¹

The Ninth Circuit held in *Natural Resources Defense Council v. County of Los Angeles* (2011) 673 F3d. 880, 886 (certiorari granted on other grounds) that engagement in the iterative process does not provide a safe harbor from liability for violations of permit terms prohibiting exceedances of water quality standards. The Ninth Circuit holding is consistent with the position of the State and Regional Water Boards that exceedances of water quality standards in an MS4 permit constitute violations of permit terms subject to enforcement by the Water Boards or through a citizen suit. While the Water Boards have generally directed dischargers to achieve compliance by improving control measures through the iterative process, the San Diego Water Board retains the discretion to take other appropriate enforcement and the iterative process does not shield dischargers from citizen suits under the CWA.

The requirements of Provision A.4, therefore, are required to be implemented until the water quality standards expressed under Provisions A.1.a, A.1.c, and A.2.a are achieved. The CWA requires MS4 permits to “*require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*” The requirements of this Order have been deemed or determined to be “appropriate” to achieve water quality standards in receiving waters.

Part of the “controls” required by the Order is the process described in Provision A.4. Provision A.4 includes the process that is ultimately expected to achieve compliance with the requirement that discharges from the MS4 do not cause or contribute to violations of water quality standards in the receiving waters. The implementation of Provision A.4 is required when the Copermittees or the San Diego Water Board have determined that discharges from the MS4 are causing or contributing to violations of water quality standards in the receiving waters.

The Copermittees must effectively prohibit non-storm water discharges into the MS4s, reduce the discharge of pollutants in storm water from the MS4s to the MEP, and ensure that their MS4 discharges do not cause or contribute to violations of water quality standards. If the Copermittees have effectively prohibited non-storm water discharges and reduced storm water pollutant discharges to the MEP, but their discharges are still causing or contributing to violations of water quality standards, Provision A.4 provides a clear “iterative process” for the Copermittees to follow.

Provision A.4 essentially requires the Copermittees to implement additional BMPs until MS4 discharges no longer cause or contribute to a violation of water quality standards.

²¹ Letter from Alexis Strauss, Acting Director, Water Division, USEPA Region IX, to Walt Pettit, Executive Director, State Water Board, re: SWRCB/OCC File A-1041 for Orange County, dated January 21, 1998.

In assessing compliance and potential enforcement actions, the San Diego Water Board looks at the Copermittees' efforts in total to meet the requirements of Provisions [A.1.a](#), [A.1.c](#), [A.2.a](#) and Provision [A.4](#). The Copermittees need to demonstrate that they are making improvements to their programs and making progress toward achieving the discharge prohibitions and receiving water limitations in Provisions [A.1.a](#), [A.1.c](#), and [A.2.a](#) by implementing the requirements of Provision [A.4](#). The San Diego Water Board would consider these efforts prior to strictly enforcing the requirements of Provisions [A.1.a](#), [A.1.c](#), and [A.2.a](#). Causes of exceedances of the receiving water limitations can often be more difficult to identify and attribute solely to the Copermittees' MS4s. The intent of the Order is to provide the Copermittees more clarity and flexibility in addressing these exceedances through the iterative approach and adaptive management process until the requirements under Provisions [A.1.a](#), [A.1.c](#), and [A.2.a](#) are fully achieved.

An exception to the iterative approach and adaptive management process would be in receiving waters subject to adopted and approved TMDLs. For TMDLs that are incorporated into the Order, there is a specific date for compliance to be achieved, after which the iterative approach and adaptive management process required under Provision [A.4](#) no longer provides the flexibility to achieve compliance. Where compliance dates for a TMDL have passed, compliance with the WQBELs incorporated into the Order to be consistent with the assumptions and requirements of a WLA established by a TMDL to protect water quality standards is required. Thus, after the interim or final compliance dates for a TMDL have passed, if the discharges from the Copermittees' MS4s are causing or contributing to a violation of WQBELs, exceedances of WQBELs must be strictly enforced by the San Diego Water Board.

B. Water Quality Improvement Plans

Purpose: Provision B includes requirements for the Copermittees to develop and implement Water Quality Improvement Plans to ultimately comply with the prohibitions and limitations under Provision A. The Water Quality Improvement Plans will provide the Copermittees a comprehensive program that can achieve the requirements of the CWA. Implementation of the Water Quality Improvement Plans will also improve the quality of the receiving waters in the San Diego Region.

The Water Quality Improvement Plan is the backbone of the Regional MS4 Permit requirements. Provision B provides the guidance, criteria, and minimum expectations and requirements for the elements of the Water Quality Improvement Plan to be developed and implemented by the Copermittees. The Water Quality Improvement Plans will be implemented in the Watershed Management Area by the Copermittees within their jurisdictions through their jurisdictional runoff management programs.

The Water Quality Improvement Plan also incorporates a program to monitor and assess the progress of the Copermittees' jurisdictional runoff management programs toward improving the quality of discharges from the MS4s, as well as tracking improvements to the quality of receiving waters. A process to adapt and improve the effectiveness of the Water Quality Improvement Plans has also been incorporated into the requirements of Provision B to be consistent with the "iterative approach" required to achieve compliance with discharge prohibitions of Provisions A.1.a and A.1.c and receiving water limitations of Provision A.2.a, pursuant to the requirements of Provision A.4.

The Water Quality Improvement Plans have also been structured to incorporate the requirements of any TMDLs that have been adopted for the San Diego Region. Incorporating the requirements of the TMDLs into the requirements of Provision B allows the Copermittees to develop a single plan, instead of separate plans, to coordinate their non-storm water and storm water runoff management programs. The Water Quality Improvement Plans allow the Copermittees to meet the requirements of this Order, as well as fulfill the requirements of the WLAs that have been assigned to discharges from the MS4s.

As an added benefit, if the Copermittees demonstrate that impaired water bodies within the Watershed Management Area listed on the 303(d) List will be addressed with their Water Quality Improvement Plans in a reasonable period of time, the San Diego Water Board may be able to remove the water bodies from the 303(d) List, which would greatly reduce the need for the San Diego Water Board to develop additional TMDLs that would have to be incorporated into the Order.

Discussion: The federal NPDES regulations require the Copermittees to develop a proposed management program (40 CFR 122.26(d)(2)(iv)). The proposed management program must include "a comprehensive planning process" and "where

necessary intergovernmental coordination” for the “*duration of the permit.*” The Water Quality Improvement Plan is the Copermittees’ “*comprehensive planning process*” document for the proposed management program that will be implemented within a Watershed Management Area. Implementation of the Water Quality Improvement Plan requires “*intergovernmental coordination*” among the Copermittees for at least the “*duration of the permit,*” and likely into and beyond the next iteration of the permit.

Developing Water Quality Improvement Plans based upon watersheds is consistent with federal regulations that support the development of permit conditions, as well as implementation of storm water management programs, at a watershed scale (40 CFR 122.26(a)(3)(ii), 122.26(a)(3)(v), and 122.26(d)(2)(iv)). In 2003, USEPA issued a Watershed-Based NPDES Permitting Policy Statement (USEPA, 2003) that defines watershed-based permitting as an approach that produces NPDES permits that are issued to point sources on a geographic or watershed basis. In this policy statement, USEPA explains that “[*t]he utility of this tool relies heavily on a detailed, integrated, and inclusive watershed planning process.*” USEPA identifies a number of important benefits of watershed permitting, including more environmentally effective results, the ability to emphasize measuring the effectiveness of targeted actions on improvements in water quality, reduced cost of improving the quality of the nation’s waters and more effective implementation of watershed plans, including TMDLs, among others.

An emphasis on watersheds is appropriate at this stage in the San Diego Region’s MS4 program to shift the focus to more targeted, water quality driven planning and implementation. Addressing discharges on a watershed scale focuses on water quality results by emphasizing the receiving waters in the watershed. The conditions of the receiving waters drive management actions, which in turn focus measures to address pollutant contributions from MS4 discharges.

The Water Quality Improvement Plan gives the Copermittees the responsibility of developing a comprehensive plan to coordinate the efforts of their jurisdictional runoff management programs for addressing the problems related to MS4 discharges causing impacts to water quality in the Watershed Management Area. The development of the plan provides the Copermittees the opportunity to provide significant input on how to implement their jurisdictional runoff management programs, and how to best utilize their available resources in addressing a focused set of priorities that they believe will result in measureable improvements to water quality within the Watershed Management Area.

The Copermittees are encouraged to separate the Watershed Management Area into subwatersheds, as appropriate. This allows the Copermittees to identify priorities applicable to a subset of the Copermittees or specific water bodies or areas within the Watershed Management Area.

Included in the requirements for the elements to be included in the Water Quality Improvement Plan are monitoring and assessment requirements that are necessary to implement, as well as ensure the Copermittees are in compliance with, the

requirements of the Order. In addition to the federal requirements of the CWA section 308(a) and 40 CFR 122.26(d), the San Diego Water Board has the authority to establish monitoring, reporting, and recordkeeping requirements for NPDES permits under CWC 13383.

More specific and detailed discussions of the requirements of Provision B are provided below.

Provision B.1 (Watershed Management Areas) requires the Copermittees to develop a Water Quality Improvement Plan for each of the Watershed Management Areas defined by the San Diego Water Board.

Pursuant to 40 CFR 122.26(d)(2)(iv), proposed management programs “*may impose controls on a...watershed basis...*” The Water Quality Improvement Plan is the Copermittees’ proposed management program. A Water Quality Improvement Plan must be developed for each Watershed Management Area identified in the Order.

The Watershed Management Areas are identified in Table B-1. Table B-1 establishes ten (10) Watershed Management Areas, and identifies the Copermittees that are responsible for developing and implementing the Water Quality Improvement Plan for each Watershed Management Area.

The Copermittees from each of the three counties within the San Diego Region are expected to be phased in as their respective NPDES municipal storm water permits expire. Because Order No. R9-2007-0001 expired in January 2012, the San Diego County Copermittees are covered under the Regional MS4 Permit on the effective date of the Order.

After San Diego Water Board receives and considers the Reports of Waste Discharge required to be submitted by the Orange County Copermittees and Riverside County Copermittees pursuant to the requirements of their current permits, and make any necessary changes to the Order, the Orange County Copermittees and Riverside County Copermittees will be covered under the Regional MS4 Permit after Order No. R9-2009-0002 expires in November 2014, and Order No. R9-2010-0016 expires in December 2015, respectively.

The Orange County Copermittees and Riverside County Copermittees also have the option to obtain coverage under the Regional MS4 Permit earlier than their respective permit expiration dates. The process to apply for early coverage is described Provision F.6.

Because the Santa Margarita River Watershed Management Area includes Copermittees from both San Diego County and Riverside County, a footnote to Table B-1 has been included to specify that the requirements of Provision B must be implemented by the County of San Diego until the Riverside County Copermittees have received a notice of coverage under the Regional MS4 Permit.

Provision B.2 (Priority Water Quality Conditions) requires the Copermittees in each Watershed Management Area to identify the highest priority water quality conditions which will be the focus of the Water Quality Improvement Plan implementation.

Provisions [B.2.a](#) and [B.2.b](#) provide the criteria that must be assessed when characterizing the receiving water quality and potential impacts from MS4 discharges of the receiving waters within the Watershed Management Area. The criteria are based primarily on the requirements in 40 CFR 122.26(d)(1)(iv)(C) and (C)(1)-(9). Characterizing the receiving water quality and identifying the potential impacts caused by MS4 discharges to receiving waters in the Watershed Management Area is necessary to identify the impacts to receiving waters associated with MS4 discharges that are of the most concern to the Copermittees.

Based on the information required to be considered under Provisions [B.2.a](#) and [B.2.b](#), Provision [B.2.c](#) requires to Copermittees to identify the highest priority water quality conditions related to discharges from the MS4s that will be the primary focus of the Water Quality Improvement Plan in the Watershed Management Area. Addressing and improving these highest priority water quality conditions will become the focus of each Copermittee's jurisdictional runoff management program as the Water Quality Improvement Plan is implemented in the Watershed Management Area. The highest priority water quality conditions are expected to include source of pollutants and/or stressors, and/or receiving water conditions, that the Copermittees consider the highest threats or most likely to have adverse impacts on the physical, chemical, and biological integrity of receiving waters. Addressing these threats and/or adverse impacts should restore the physical, chemical, and biological integrity of receiving waters, and result in the restoration and protection of the beneficial uses of the receiving waters in the Watershed Management Area.

Provision [B.2.d](#) requires the Copermittees to identify known and suspected sources of pollutants and/or stressors contributing to the highest priority water quality conditions. The requirements of Provision [B.2.d](#) are based primarily on the requirements in 40 CFR 122.26(d)(1)(iii)(B)(1)-(6). The Copermittees are required to evaluate several factors in the identification of those sources. The Copermittees must consider and evaluate the following: (1) the land uses that may contribute toward impacts to receiving waters, (2) the locations of the Copermittees' MS4s that can convey and discharge runoff and pollutants to receiving waters, (3) other sources that discharge into the Copermittees' MS4s and receiving waters, and (4) other information and data that can help the Copermittees to evaluate the relative importance of or contribution from those sources toward the highest priority water quality conditions. Identifying the known and suspected sources, and their relative contribution toward the highest priority water quality conditions, will help the Copermittees to focus, direct, and prioritize their resources and implementation efforts within their jurisdictions.

Provision [B.2.e](#) requires the Copermittees to identify interim and final numeric goals, and schedules to achieve those goals as part of the Water Quality Improvement Plans.

Provision [B.2.e](#) requires the Copermittees to identify two types of numeric goals to be achieved:

- (1) Final numeric goals in the receiving waters and/or MS4 discharges that will be able to restore and protect the water quality standards of the receiving waters for the highest priority water quality conditions identified by the Copermittees for Provision [B.2.c](#). These final numeric goals are the ultimate goals for the Water Quality Improvement Plan, and the achievement and maintenance of these final numeric goals will indicate that one or more beneficial uses have been successfully restored and/or protected.
- (2) Interim numeric goals that can be used by the Copermittees to demonstrate progress toward achieving the final numeric goals in the receiving waters and/or MS4 discharges for the highest priority water quality conditions in the Watershed Management Area. Achievement of the interim numeric goals will demonstrate to the San Diego Water Board that the Copermittees' implementation efforts are progressing toward achieving the final numeric goals.

Provision [B.2.e](#) does not specify what the interim and final numeric goals must be based on. The numeric goals must be designed to achieve compliance with water quality standards in the receiving waters. To that end, the interim goals must be based on measureable criteria or indicators capable of demonstrating progress toward achieving the numeric goals.”

The interim and final numeric goals can be based on the water quality objectives in the Basin Plan. The water quality objectives in the Basin Plan, however, consist of numeric and narrative water quality objectives. Numeric water quality objectives can be directly used as numeric goals. Narrative water quality objectives, on the other hand, will require some interpretation to identify numeric goals. The achievement of multiple numeric goals based on the water quality objectives, used in combination, may be necessary to demonstrate that beneficial uses have been restored and/or protected.

The Copermittees could also propose other numeric goals that are not necessarily water quality objectives from the Basin Plan. For example, the Copermittees could propose a numeric goal that consists of achieving some percent improvement of a measureable indicator, such as acreage of a specific habitat or increase in a specific plant or animal species population. Other examples may include pollutant load reductions, number of impaired waterbodies delisted from the List of Water Quality Impaired Segments, Index of Biological Integrity (IBI) scores, etc.

The Copermittees may choose to develop interim numeric goals based on the final numeric goals they develop, such as incremental steps toward ultimately achieving the final numeric goals. The Copermittees may also choose to develop interim numeric goals that are based on other measureable indicators that can indirectly indicate improvements and progress toward the final numeric goals.

There are no limits to the types of interim numeric goals that could be proposed by the Copermittees, other than the goals must be based on measureable criteria or indicators capable of demonstrating progress toward achieving the numeric goals. Likewise, there are no limits to the types of final numeric goals that could be proposed by the Copermittees, other than the goals must “*restore and protect the water quality standards of the receiving waters.*”

Finally, Provision [B.2.e](#) also requires the Copermittees to develop schedules for measuring progress and achieving the interim and final numeric goals. Several criteria are included for the development of the schedules, but the Copermittees are required to achieve the numeric goals as soon as possible, consistent with federal NPDES regulations (40 CFR 122.47(a)(1)).

The Copermittees are also required by to incorporate any compliance schedules that are included in any applicable TMDLs. Applicable TMDL compliance schedules are set forth in [Attachment E](#) to the Order. The information provided by the Copermittees under Provision [B.2.e](#) will be used by the Copermittees and the San Diego Water Board to gauge and track the progress of the Copermittees’ efforts in addressing the highest priority water quality conditions identified in the Water Quality Improvement Plan.

Provision B.3 (Water Quality Improvement Strategies) requires the Copermittees in each Watershed Management Area to identify the strategies which will be implemented by the Copermittees’ jurisdictional runoff management programs to address and improve the highest priority water quality conditions identified under Provision [B.2](#). The element of the Water Quality Improvement Plan required under Provision [B.3](#) is where the “*comprehensive planning*” and “*intergovernmental coordination*” [40 CFR 122.26(d)(2)(iv)] of the Copermittees’ actions for the proposed management programs within the Watershed Management Area is expected to be described.

Provision [B.3](#) requires the Copermittees to identify the water quality improvement strategies that will be implemented within the Watershed Management Area to 1) reduce of pollutants in storm water discharged from the MS4 to the MEP, 2) prevent or eliminate controllable non-storm water discharges from entering the MS4, 3) achieve of demonstrable improvements in the physical, chemical, and biological receiving water conditions, 4) restore and protect water quality standards in receiving waters by controlling discharges so that they do not cause or contribute to exceedances of receiving water limitations, and 5) achieve applicable WQBELs that implement TMDLs.

The Copermittees are expected to provide a description of all the actions and potential actions that they will implement over the course of a schedule that they develop. The implementation actions may include, but are not limited to, inspection and enforcement strategies, resource identification and development efforts, non-structural and structural controls, retrofitting projects, stream and habitat rehabilitation/restoration

projects, and agency and department coordination efforts. Water quality improvement strategies that will be implemented within the Watershed Management Area may need to be different within each Copermittees' jurisdiction. The descriptions in the Water Quality Improvement Plan are not expected to specify exactly what strategies each Copermittee will implement within its jurisdiction, but enough information to allow the San Diego Water Board to determine when and where the strategies may be or should be implemented. Specific information about how those strategies will be implemented will be provided in each Copermittee's jurisdictional runoff management program document.

The Copermittees must also develop and include schedules in the Water Quality Improvement Plan for implementing the water quality improvement strategies. The schedule for implementing the water quality improvement strategies will be used by the Copermittees and San Diego Water Board to measure and demonstrate the progress of the Copermittees' implementation efforts toward reducing pollutants in storm water discharged from the MS4 to the MEP, and eliminating non-storm water discharges from entering the MS4.

Provision B.4 (Water Quality Improvement Monitoring and Assessment) requires the Copermittees to develop an integrated monitoring and assessment program to track the progress of the Water Quality Improvement Plan toward meeting the implementation goals and schedules, and improving the water quality of the Watershed Management Area. Provision B.4 is the part of the Water Quality Improvement Plan where the Copermittees describe the monitoring data that will be collected, which is not only necessary to implement the "iterative approach" required by Provision A.4, but inform the adaptive management and "*comprehensive planning process*" that allows the Copermittees to make adjustments and modifications to the Water Quality Improvement Plans and the jurisdictional runoff management programs.

Provision B.4 requires the Copermittees, at a minimum, to include the requirements of Provision D as part of the water quality improvement monitoring and assessment program for the Water Quality Improvement Plan. The Copermittees, however, are not limited to the requirements of Provision D and may include additional monitoring and assessment methods to track progress toward improving water quality in the Watershed Management Area.

In addition to incorporating the requirements of Provision D, the water quality improvement monitoring and assessment program must incorporate any monitoring and assessment requirements specified for any applicable TMDLs included in Attachment E to the Order, and the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012 for Watershed Management Areas with ASBS.

The monitoring and assessments required to be incorporated into the Water Quality Improvement Plan are necessary to implement, as well as ensure the Copermittees are in compliance with, the requirements of the Order.

Provision B.5 (Iterative Approach and Adaptive Management Process) requires the Copermittees to implement the iterative approach pursuant to Provision [A.4](#) to adapt the Water Quality Improvement Plan, monitoring and assessment program, and jurisdictional runoff management programs to become more effective toward achieving compliance with Provisions [A.1.a](#), [A.1.c](#) and [A.2.a](#).

Provision [B.5](#) requires the Copermittees in each Watershed Management Area to re-evaluate the highest priority water quality conditions and numeric goals, the water quality improvement strategies, and the water quality improvement monitoring and assessment program and provide recommendations for modifying those elements to improve the effectiveness of the Water Quality Improvement Plan. The re-evaluation of the Water Quality Improvement Plan is part of the assessment requirements of Provision [D](#).

Provision B.6 (Water Quality Improvement Plan Submittal, Updates, and Implementation) requires to Copermittees to submit, update, and implement the Water Quality Improvement Plans.

The requirements for the process to develop and submit the Water Quality Improvement Plans is described in more detail under the discussion for Provision [F.1](#). The process will include several opportunities for the public to provide input during the development of the Water Quality Improvement Plans. The process for updating the Water Quality Improvement Plans is described in more detail under the discussion for Provision [F.3.c](#). Upon acceptance of the Water Quality Improvement Plan and updates, the Copermittees are required to immediately begin implementing the Water Quality Improvement Plan and subsequent updates.

The Water Quality Improvement Plan is expected to be a dynamic document that will evolve over time. The Water Quality Improvement Plan is also expected to be a long term plan that focuses the Copermittees' efforts and resources on a limited set of priority water quality conditions, with the ultimate goal of protecting all the beneficial uses of the receiving waters within the Watershed Management Area from impacts that may be caused or contributed to by MS4 discharges. As the Copermittees collect data, implement their jurisdictional runoff management programs, and review the results from their water quality improvement monitoring and assessment program, the Water Quality Improvement Plan is expected to be continually reviewed and updated until compliance with Provisions [A.1.a](#), [A.1.b](#), and [A.2.a](#) is achieved.

Implementation of the Water Quality Improvement Plans may also demonstrate that TMDLs are not required for impaired water bodies within the Watershed Management Area. Impaired water bodies are not required to be placed on the 303(d) List, thus do not require a TMDL, if technology-based effluent limitations required by the CWA, more stringent effluent limitations required by state, local, or federal authority, or other pollution control requirements (e.g., best management practices) required by local, state or federal authority are stringent enough to implement applicable water quality

standards within a reasonable period of time.²²

The San Diego Water Board submits an Integrated Report to USEPA to comply with the reporting requirements of CWA sections 303(d), 305(b) and 314, which lists the attainment status of water quality standards for water bodies in the San Diego Region. According to USEPA guidance for the Integrated Report,²³ water bodies are placed in one of five categories. Water bodies included in Category 5 in the Integrated Report indicate at least one beneficial use is not being supported or is threatened, and a TMDL is required. Water bodies included in Category 5 are placed on the 303(d) List.

Category 4 in the Integrated Report is for water bodies where available data and/or information indicate that at least one beneficial use is not being supported or is threatened, but a TMDL is not needed.²⁴ Impaired surface water bodies may be included in Category 4 if a TMDL has been adopted and approved (Category 4a); if other pollution control requirements required by a local, state or federal authority are stringent enough to implement applicable water quality standards within a reasonable period of time (Category 4b); or, if the failure to meet an applicable water quality standard is not caused by a pollutant, but caused by other types of pollution (Category 4c).

Impaired water bodies can be included in Category 4a if a TMDL has been adopted and approved. The TMDLs in Attachment E to the Order implement the requirements of the TMDLs adopted by the San Diego Water Board, and approved by the State Water Board and USEPA. The water bodies in [Attachment E](#) will be included in Category 4a in the Integrated Report and removed from the 303(d) List.

Impaired water bodies can be included in Category 4b if there are *acceptable* “pollution control requirements” required by a local, state or federal authority stringent enough to implement applicable water quality standards within a reasonable period of time (e.g., a compliance date is set). When evaluating whether a particular set of pollution controls are “requirements,” the USEPA considers a number of factors, including: (1) the authority (local, state, federal) under which the controls are required and will be implemented with respect to sources contributing to the water quality impairment (examples may include: self-executing state or local regulations, permits, and contracts and grant/funding agreements that require implementation of necessary controls), (2) existing commitments made by the sources and completion or soon to be completed implementation of the controls (including an analysis of the amount of actual implementation that has already occurred), (3) the certainty of dedicated funding for the implementation of the controls, and (4) other relevant factors as determined by USEPA depending on case-specific circumstances.²⁵

²² 40 CFR 130.7(b)(1)

²³ USEPA, 2005. *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act*

²⁴ Ibid

²⁵ Ibid

Impaired water bodies can be included in Category 4c if the failure to meet an applicable water quality standard is not caused by a pollutant, but caused by other types of pollution. Pollution, as defined by the CWA is “the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.”²⁶ In other cases, pollution does not result from a pollutant and a TMDL is not required. Examples of circumstances where an impaired segment may be placed in Category 4c include segments impaired solely due to lack of adequate flow, stream channelization, or hydromodification. In these situations, there may be water quality management actions that can address the cause(s) of the impairment, but a TMDL may not be required to implement the actions.

The Water Quality Improvement Plans will require the implementation of pollution controls and water quality management actions (i.e. water quality improvement strategies) which can result in the attainment of water quality standards in water bodies impaired by discharges from the Copermitees’ MS4s. The Water Quality Improvement Plans also include requirements that are expected to attain water quality standards in a reasonable period of time. The San Diego Water Board considers the Water Quality Improvement Plans to be a commitment by the Copermitees to develop, plan, budget for, and implement pollution controls that will attain water quality standards in receiving waters in a reasonable period of time, or as soon as possible. The results of the Copermitees’ efforts in implementing the Water Quality Improvement Plans can be used to re-evaluate the condition of the impaired water bodies during the next update to the 303(d) List.

After the Copermitees submit the Water Quality Improvement Plans and demonstrate that water quality standards are being attained or will be attained in a reasonable period of time, the San Diego Water Board may re-evaluate the water bodies on the 303(d) List. These water bodies on the 303(d) List may be re-evaluated and placed into Category 4b or Category 4c in the Integrated Report. The water bodies placed in Category 4b or Category 4c in the Integrated Report must show a record that the water bodies are attaining water quality standards or supporting the identified beneficial uses, or will attain water quality standards or support identified beneficial uses in a reasonable period of time, in order for the water bodies to be appropriately removed from the 303(d) List.

²⁶ CWA section 502(19)

C. Action Levels

Purpose: Provision C includes requirements for the Copermittees to identify and include numeric action levels in the Water Quality Improvement Plan to direct and focus the Copermittees' jurisdictional runoff management program implementation efforts for controlling MS4 discharges to receiving waters.

Discussion: Under Provision C, the numeric action levels required are for non-storm water discharges and storm water discharges. The non-storm water action levels (NALs) are applicable to non-storm water discharges from the Copermittees' MS4s, which can occur year-round. The storm water action levels (SALs) are applicable to storm water discharges from the Copermittees' MS4s, which occur during the rainy season defined as the period between October 1 and April 30.

The action levels required by Provision C are based on the action level requirements that were developed and incorporated into Order Nos. R9-2009-0002 and R9-2010-0016, the Orange County and Riverside County MS4 Permits, respectively. The Fact Sheets for these Orders provide detailed discussions about the development of the numeric NALs and SALs included in this Order.

Order Nos. R9-2009-0002 and R9-2010-0016 required the Copermittees to perform prescribed actions if the NALs or SALs are exceeded. The actions required under Order Nos. R9-2009-0002 and R9-2010-0016 generally included conducting additional monitoring and source investigations when a discharge from the MS4 is observed to exceed one or more NALs and/or SALs.

For this Order, however, the action levels of Provision C are to be used by the Copermittees to prioritize the actions to be implemented as part of the Water Quality Improvement Plan. Monitoring data collected by the Copermittees from MS4 outfalls will be compared with the NALs and SALs. Exceedances of the NALs and SALs will not require the Copermittees to immediately identify sources causing exceedances, but will provide some numeric indicator levels that can give the Copermittees a way to measure the relative severity of a pollutant contributing to receiving water quality impacts.

NALs and SALs must be included in the Water Quality Improvement Plans to be used by the Copermittees in directing and focusing their water quality improvement strategies. The Copermittees are expected to utilize the NALs and SALs to help focus their implementation efforts on addressing pollutants that have the most significant potential or observed impacts to receiving waters. The NALs and SALs will be used as part of the MS4 discharges assessments required under Provision D.4.b. The NALs and SALs may also be used by the Copermittees as the numeric goals to be achieved in MS4 discharges and/or receiving waters as the Water Quality Improvement Plans are implemented.

More specific and detailed discussions of the requirements of Provision C are provided below.

Provision C.1 (Non-storm Water Action Levels) requires the Copermittees to incorporate NALs into the Water Quality Improvement Plan for pollutants and/or constituents that are causing or contributing, or may be causing or contributing, to the highest priority water quality conditions identified in the Water Quality Improvement Plan related to non-storm water discharges from the MS4s. NALs generally must be consistent with the water quality objectives found within the Basin Plan.

The NALs have been included to ensure that the Copermittees are implementing and complying with several requirements of the MS4 permit. The federal CWA requires permits for municipal storm sewer systems to “*effectively prohibit non-storm water discharges into the storm sewers.*” The federal NPDES regulations, which were promulgated to implement the CWA requirements for discharges from municipal storm sewers, require a program to address illicit discharges, which are non-storm water discharges. Provision A.1.b prohibits “[n]on-storm water discharges into MS4s” unless the non-storm water discharge authorized by a separate NPDES permit, or is a category of non-storm water specified in Provisions E.2.a.(1)-(5) that does not need to be addressed through ordinance, order or similar means and is not a source of pollutants. The NALs will be used as part of the illicit discharge detection and elimination program required pursuant to Provision E.2, as well as part of the MS4 discharges assessments required pursuant to Provision D.4.b.

Provision A.1.a prohibits non-storm water discharges from the MS4 from “*causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the state.*” In addition, pursuant to Provision A.2.a, non-storm water discharges “*must not cause or contribute to the violation of water quality standards in any receiving waters.*”

Ideally, the Copermittees’ jurisdictional runoff management programs will eliminate all non-storm water discharges entering the MS4s within their jurisdictions. The complete elimination of non-storm water discharges to the Copermittees’ MS4s would be in compliance with the CWA requirements for non-storm water discharges, as well as the prohibitions and limitations of Provisions A.1.a and A.2.a.

The federal regulations, however, also refer to several non-storm water discharge categories that must be addressed as illicit discharges if they are found to be a source of pollutants. The federal regulations thus identify some non-storm water discharges that are not required to be addressed as illicit discharges if they are not a source of pollutants (e.g. non-storm water discharges specified in Provisions E.2.a.(1)-(5)). Thus, these regulations imply that some non-storm water discharges into and from the MS4 may occur even if non-storm water discharges are “effectively” prohibited by the Copermittees.

If the source of a non-storm water discharge is identified as a category of non-storm water specified in Provisions [E.2.a.\(1\)-\(5\)](#), the NALs can be used to determine the category of non-storm water discharges is a source of pollutants. For other non-storm water discharges not specified in Provisions [E.2.a.\(1\)-\(5\)](#), the CWA requires those discharges to be “*effectively*” prohibited by removing the discharge to the MS4 through enforcement of “*ordinance, order or similar means.*”

If there are non-storm water discharges, however, those discharges must comply, at a minimum, with the discharge prohibitions and receiving water limitations of Provision [A](#). Thus, the non-storm water discharges from the MS4 must be at levels that will not cause or contribute to a condition of pollution, contamination, or nuisance (Provision [A.1.a](#)), and must not cause or contribute to a violation of water quality standards in receiving waters (Provision [A.2.a](#)) to be consistent with the discharge prohibitions and receiving water limitations of Provisions [A.1.a](#) and [A.2.a](#).

Furthermore, the San Diego Region has predominantly intermittent and ephemeral rivers and streams which vary in flow volume and duration at spatial and temporal scales. For most of these river and stream systems, non-storm water discharges from the MS4 are likely to be the most significant or the only source contributing to surface flows present within the receiving water, especially during the dry season.

Therefore, because of the prohibitions and limitations of Provision [A.1.a](#) and [A.2.a](#), and the likelihood that non-storm water discharges from the MS4 are the most significant or only source contributing to surface flows present within the receiving water, NALs generally must be consistent with the water quality objectives found within the Basin Plan. Non-storm water discharges that are meeting the NALs would not be expected to cause or contribute to an exceedance of water quality objectives in receiving waters, which would be consistent with the discharge prohibitions and receiving water limitations of Provisions [A.1.a](#) and [A.2.a](#).

Exceedances of the NALs would then provide an indication of the relative severity of a pollutant in non-storm water discharges from the MS4 contributing to potential or observed receiving water quality impacts. The relative severity or significance of a pollutant in non-storm water discharges from the MS4 will provide the Copermittees a valuable source of information that can be used to identify priority water quality conditions within a Watershed Management Area and within each Copermittee’s jurisdiction.

Tables [C-1](#) through [C-4](#) under Provision [C.1.a](#) specify numeric NALs for several parameters or pollutant constituents for non-storm water discharges from the MS4 to several water body types. The NALs for MS4 discharges given under Provision [C.1.a](#) are based on the water quality objectives for inland surface waters in the Basin Plan, and the water quality objectives for ocean waters in the Ocean Plan. The NALs for most of the metals were calculated based on the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The NALs provided in Tables [C-1](#)

through C-4 must be included in the Water Quality Improvement Plans required to be developed pursuant to Provision B.

Provision C.1.b requires the Copermittees to identify NALs for pollutants and/or constituents, not specified in Provision C.1.a, which are causing or contributing, or may be causing or contributing, to the highest priority water quality conditions of the Watershed Management Area related to non-storm water discharges from the MS4s. The NALs must be based on the water quality objectives in the Basin Plan. The NALs identified under Provision C.1.b must be included in the Water Quality Improvement Plan.

The San Diego Water Board recognizes that some of the NALs required pursuant to Provisions C.1.a and C.1.b may be exceeded more frequently than not. Thus, Provision C.1.c has been included in the Order to provide the Copermittees the option to develop secondary NALs that are set at levels greater than the levels required pursuant to Provisions C.1.a and C.1.b to further refine the prioritization and assessment of water quality improvement strategies for addressing non-storm water discharges to and from the MS4s, as well as the detection and elimination of non-storm water and illicit discharges to and from the MS4.

Provision C.2 (Storm Water Action Levels) requires the Copermittees to incorporate SALs into the Water Quality Improvement Plan for pollutants and/or constituents causing or contributing, or may be causing or contributing, to the highest priority water quality conditions identified in the Water Quality Improvement Plan related to storm water discharges from the MS4s.

The SALs have been included to ensure that the Copermittees are implementing and complying with several requirements of the MS4 permit. Provision A.1.a prohibits storm water discharges from the MS4 from “*causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the state.*” In addition, pursuant to Provision A.2.a, storm water discharges “*must not cause or contribute to the violation of water quality standards in any receiving waters.*”

Provision A.3.a, however, implicitly acknowledges that compliance with Provisions A.1.a and A.2.a cannot be achieved immediately for discharges of storm water from the MS4 by applying the MEP standard. Thus, Provision A.4 requires the Copermittees to implement an iterative approach to demonstrate that MEP is being achieved. This approach is supported by USEPA.

The federal CWA requires permits for municipal storm sewer systems to “*require controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*” MEP is an ever-evolving, flexible, and advancing concept. As knowledge about controlling storm water runoff

and discharges evolves, so does the knowledge which constitutes MEP. Reducing the discharge of storm water pollutants from the MS4 to the MEP requires the Copermittees to assess their jurisdictional runoff management programs and revise activities, control measures, BMPs, and measurable goals, as necessary to meet MEP. The SALs provide the Copermittees measurable goals that may be used to demonstrate the achievement of MEP for reducing pollutants in storm water discharges from the MS4. The SALs will be used as part of the MS4 discharges assessments required under Provision [D.4.a](#).

In June of 2006, the State Water Board's Blue Ribbon Storm Water Panel released its report titled "*The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities.*" In the recommendations, the Blue Ribbon panel proposed storm water effluent limitations which are computed using statistical based population approaches. The SALs specified in Table [C-5](#) under Provision [C.2.a](#) were developed from a regional subset of nationwide Phase I MS4 data by using USEPA Rain Zone 6 (arid west) data.²⁷ Additionally, utilization of regional data is appropriate due to the addition of data into the nationwide Phase I MS4 monitoring dataset in February 2008. This additional data increased the number of USEPA Rain Zone 6 samples to more than 400, and included additional monitoring events within Southern California.

Utilizing data from USEPA Rain Zone 6 resulted in SALs which closely reflect the environmental conditions experienced in the San Diego Region. The localized subset of data includes sampling events from multiple Southern California locations including Orange, San Diego, Riverside, Los Angeles, and San Bernardino Counties. The dataset includes samples taken from highly built-out impervious areas and from storm events representative of Southern California conditions.

The SALs for cadmium, copper, lead and zinc require the measurement of hardness and to provide more specificity in the assessment of samples with SALs for total metal concentrations. While USEPA Rain Zone 6 data include a large sample size for concentrations of total metals, the impact the concentration will have on receiving waters will vary with receiving water hardness. Since it is the goal of the SALs, through the iterative process and MEP standard, to have MS4 storm water discharges meet all applicable water quality objectives, the hardness of the receiving water should be used when assessing the total metal concentration of a sample.

Thus, when there is an exceedance of a SAL for a metal, the Copermittee must determine if that exceedance is above the existing applicable water quality objectives based upon the hardness of the receiving water. The water quality objectives Copermittees must use to assess total metal SAL exceedances are the California Toxic Rule (CTR) and USEPA National Recommended Water Quality Criteria for Freshwater Aquatic Life 1 hour maximum concentrations. The 1 hour maximum

²⁷ Data used to develop SAL were obtained from <http://rpitt.eng.ua.edu/Research/ms4/mainms4.shtml>

concentration is to be used for comparison since it is expected to most replicate the impacts to waters of the State from the first flush following a precipitation event.

The statistically calculated SALs given in Table C-5 are at levels greater than the water quality objectives in the Basin Plan or Ocean Plan. Because the objective of the CWA is to “*to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters*”, meaning eventually pollutants in storm water discharges must be reduced to a level that cannot cause or contribute to an exceedance of water quality objectives in receiving waters, over time the SALs are expected to be reduced to a level that is based on the water quality objectives rather than statistical calculations. The San Diego Water Board will review the SALs as more data for discharges of storm water from the MS4s are collected, and revise them as conditions improve and the MEP standard advances. For the Water Quality Improvement Plans required under this Order, the SALs identified under Provision C.2.a must be included.

Provision C.2.b requires the Copermittees to identify SALs for pollutants and/or constituents, not specified in Provision C.2.a, which are causing or contributing, or may be causing or contributing, to the highest priority water quality conditions of the Watershed Management Area related to storm water discharges from the MS4s. The SALs identified under Provision C.2.b must be included in the Water Quality Improvement Plan.

The San Diego Water Board recognizes that some of the SALs required pursuant to Provisions C.2.a and C.2.b may be exceeded more frequently than not. Thus, Provision C.2.c has been included in the Order to provide the Copermittees the option to develop secondary SALs that are set at levels greater than the levels required pursuant to Provisions C.2.a and C.2.b to further refine the prioritization and assessment of water quality improvement strategies for reducing pollutants in storm water discharges from the MS4s.

D. Monitoring and Assessment Program Requirements

Purpose: Provision D includes minimum monitoring and assessment requirements that must be developed and implemented by the Copermittees as part of the Water Quality Improvement Plans. Implementation of the monitoring and assessment requirements of Provision D will allow the Copermittees to demonstrate that the requirements of the CWA to effectively prohibit non-storm water discharges to the MS4 and reduce pollutants in storm water discharges from the MS4 to the MEP are being achieved. Implementation of the monitoring and assessment requirements of Provision D will also allow the Copermittees and the San Diego Water Board to track improvements to the water quality in the San Diego Region. The monitoring and assessment program requirements are necessary to implement, as well as ensure the Copermittees are in compliance with, the requirements of the Order.

Discussion: The San Diego Water Board recognized that changes to the monitoring and assessment requirements of the Fourth Term Permit were necessary to improve the usefulness and usability of monitoring data collected by the Copermittees to support their jurisdictional storm water programs more efficiently and with increased effectiveness. The data collected are needed to better inform the Copermittees' understanding of the physical, chemical, and biological condition of the receiving waters and the quality of the MS4 discharges. The monitoring program needs to provide opportunities for the Copermittees to integrate regional monitoring efforts into municipal storm water monitoring requirements to provide a cost-effective approach to monitoring and avoid duplication of efforts.

The requirements in Provision D were largely recommended by the Copermittees as an outcome of the San Diego Water Boards Focused Meeting process. The monitoring and assessment program requirements now require collection of more specific information necessary for each Copermittee to adapt its jurisdictional runoff management program in such a way that focuses resources on a watershed's highest priority water quality conditions. The monitoring and assessment program will require the Copermittees to collect data that can be utilized to answer both watershed level management questions (e.g. Are the chemical, physical, and biological conditions of a receiving water protective, or likely protective of beneficial uses?), and specific jurisdictional runoff management program activity questions (e.g. Are the water quality improvement strategies of the jurisdictional program effectively eliminating non-storm water discharges to the MS4?).

The monitoring data collected and assessment information that will be reported to the San Diego Water Board are necessary to determine if the Copermittees are complying with the prohibitions and limitations of Provision A. The required monitoring and assessments that must be reported to the San Diego Water Board will be utilized for three purposes:

- (1) Inform the Copermittees, San Diego Water Board, and the public on the progress

of the Copermittees' efforts to effectively prohibit non-storm water discharges to the MS4 and reduce pollutants in storm water discharges from the MS4 to the MEP;

- (2) Inform the Copermittees, San Diego Water Board, and the public on the condition of water bodies receiving discharges from the Copermittees' MS4, and the progress of the Copermittees' water quality improvement implementation efforts toward improving the receiving water quality; and
- (3) Inform the Copermittees, the San Diego Water Board, and the public on the effectiveness of the Water Quality Improvement Plan toward achieving (1) and (2).

The monitoring and assessment information reported pursuant to Provision F is also expected to be key to the iterative approach and adaptive management process required under Provision A.4 and implemented through the Water Quality Improvement Plan required under Provision B. As required by Provision A.4, the iterative approach and adaptive management process is required if the Copermittees cannot meet the discharge prohibitions and receiving water limitations of Provisions A.1.a, A.1.c, and/or A.2.a under the present conditions.

Provision D provides the minimum monitoring and assessment requirements that must be included in each Water Quality Improvement Plan to be developed and implemented by the Copermittees. The Copermittees, however, are not limited to the requirements of Provision D and may include additional methods to track progress toward improving water quality in a Watershed Management Area.

More specific and detailed discussions of the requirements of Provision D are provided below.

Provision D.1 (Receiving Water Monitoring Requirements) specifies the minimum receiving water monitoring that the Copermittees must conduct within the Watershed Management Area and include as part of the Water Quality Improvement Plan.

Provision D.1 establishes minimum monitoring requirements that must be conducted by the Copermittees within each Watershed Management Area. Provision D.1 requires the Copermittees to collect and develop the data and information necessary to determine potential impacts to the beneficial uses in the receiving waters due to discharges from the MS4s. The monitoring required under Provision D.1 will also provide the data that will allow the Copermittees to gauge the effectiveness and progress of its Water Quality Improvement Plan implementation efforts toward improving the quality of receiving waters.

The receiving water monitoring requirements of Provision D.1 are focused primarily on monitoring the conditions and response of the receiving waters to the Copermittees' collective implementation efforts to reduce receiving water impacts that may be

caused by the discharges from the MS4s. The preference of the San Diego Water Board is for the Copermittees to spend their resources achieving tangible and observable improvements in receiving water conditions instead of collecting samples and analyzing data that has consistently indicated that receiving water conditions are degraded and require improvement. In general, the ability to measure potential improvements in receiving water conditions due to any actions implemented by the Copermittees as part of the Water Quality Improvement Plan may require several years before a response can be observed. Thus, the frequency of collecting receiving water monitoring data has been kept to a minimum.

During the transitional period between adoption of this Order and San Diego Water Board acceptance of a Water Quality Improvement Plan, the Copermittees must conduct receiving water monitoring in accordance with Provision [D.1.a](#). This approach to collecting receiving water data is different from what was required in the Fourth Term Permits, but one that truly embraces the concept of an integrated, cost-effective, streamlined receiving water monitoring approach.

Provision [D.1.a](#) requires Copermittees to continue performing the receiving water monitoring programs required in Order Nos. R-2007-0001, R9-2009-002, and R9-2010-0016; plus participation in: hydromodification management plan monitoring approved by the San Diego Water Board, monitoring plans as part of load reduction plans (either Bacteria Load Reduction Plans or Comprehensive Load Reduction Plans) for TMDLs in [Attachment E](#) of the Order, Storm Water Monitoring Coalition Regional Monitoring, Southern California Bight Regional Monitoring, Sediment Quality Monitoring, and ASBS Monitoring as applicable to a Watershed Management Area.

Provision [D.1.a](#) also provides an opportunity for the Copermittees to use third party data to meet receiving water monitoring requirements where feasible. Allowing the Copermittees to use the data currently collected through its participation in existing regional receiving water programs and that of third parties provides an efficiency of resources in obtaining the data necessary to inform the Copermittees and the San Diego Water Board about the physical, chemical, and biological conditions of the receiving waters, which can also help to focus the receiving water monitoring during the implementation of the Water Quality Improvement Plan. Once a Water Quality Improvement Plan is developed for a Watershed Management Area in compliance with Provision [B](#) of this Order, the transitional period is over and Copermittees are required to conduct receiving water monitoring according to the requirements of Provision [D.1.b-e](#).

Provision [D.1.b](#) requires each Copermittee to identify at least one long term receiving water monitoring station to be representative of receiving water quality within each Watershed Management Area. Long term receiving water monitoring stations can be located at any existing mass loading stations, temporary watershed assessment stations, bioassessment stations, and stream assessment stations previously established by the Copermittees. The requirements under Provision [D.1.b](#) are consistent with 40 CFR 122.26(d)(2)(iii)(D), which specifies that a “*monitoring program*”

for representative data collection for the term of the permit” may include “*instream locations.*” For each Watershed Management Area, at least one long term watershed monitoring station is required to be established and monitored. The Copermittees may choose to establish additional long term monitoring stations where necessary to support the implementation and adaptation of the Water Quality Improvement Plan.

Provision [D.1.b.](#) requires the Copermittees to locate the long term receiving water monitoring station at one of these existing receiving water monitoring stations to provide the Copermittees an opportunity to experience monitoring cost savings while continuing to collect the necessary data to assess the status and trends of receiving water quality conditions in 1) coastal water, 2) enclosed bays, harbors, estuaries, and lagoons, and 3) streams under both dry weather and wet weather conditions. Ideally these stations will continue to be monitored as part of the receiving water monitoring for each Watershed Management Area to maintain a consistent set of locations and a period of data that can be built upon with the monitoring required under this Order.

The receiving water monitoring requirements are separated into monitoring required during dry weather conditions pursuant to Provision [D.1.c.](#), and wet weather conditions pursuant to Provision [D.1.d.](#)

At each long term monitoring station the Copermittees must conduct at least three dry weather monitoring events as required pursuant to Provision [D.1.c](#) and at least three wet weather monitoring events as required pursuant to Provision [D.1.d](#) per permit term. Provision [D.1.c](#) and [D.1.d](#) require the Copermittees to monitor priority water quality conditions identified in the Water Quality Improvement Plan, constituents listed as causing impairment of receiving waters in the Watershed Management Area, applicable NALs, constituents listed in [Tables D-2](#) and [D-3](#), and constituents for implementation plans (e.g. Bacteria Load Reduction Plans and Comprehensive Load Reduction Plans). Receiving water monitoring efforts in this Order have been streamlined to redirect resources to monitoring efforts that better support pollutant reduction solutions with an increasing emphasis on MS4 outfall monitoring, source identification and source abatement activities.

In addition to the receiving water monitoring requirements under Provisions [D.1.b-d](#), Provision [D.1.e](#) requires the Copermittees participate in and/or conduct other types of receiving water monitoring. As recommended and requested by the Copermittees, Provision [D.1.e.\(1\)](#) requires the Copermittees to participate in existing regional monitoring, as applicable to each Watershed Management Area. Existing regional monitoring includes monitoring conducted by the Storm Water Monitoring Coalition and for the Southern California Bight. Participation in and use of monitoring data collected from these existing regional water quality monitoring programs provide the Copermittees a greater opportunity for efficiency in the use of their resources to manage their storm water programs and those controllable discharges under their authority.

The State Water Resources Control Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries of California – Part 1 Sediment Quality which became effective August 25, 2009 (Sediment Quality Monitoring Policy). Provision [D.1.e.\(2\)](#) requires any Copermittees with MS4 discharges to an enclosed bay or estuary to monitoring the sediments in the enclosed bay or estuary receiving water in accordance with the sediment quality monitoring procedures as prescribed in the Sediment Quality Monitoring Policy.

The State Water Board adopted Resolution No. 2012-0012 which approved exceptions to the California Ocean Plan for selected discharges into Areas of Special Biological Significance (ASBS), including special protections for beneficial uses. State Board Resolution No. 2012-0012 became effective on March 20, 2012, and Attachment B to the Resolution established limitations on point source storm water discharges to ASBS. Copermittees with MS4s that discharge to an ASBS must monitor its discharge to assure compliance with State Board Resolution No. 2012-0012 as required pursuant to Provision [D.1.e.\(3\)](#).

The San Diego Water Board is currently developing a regional monitoring strategy to assess the conditions of receiving waters in the San Diego Region. The monitoring requirements of Provision D.1 are expected to be incorporated or serve as a foundation of this regional monitoring strategy, but may require some modifications. When the San Diego Water Board develops an alternative regional monitoring strategy, the Copermittees will be required to participate in the development and implementation of the alternative regional monitoring program pursuant to Provision [D.1.f](#).

Provision D.2 (MS4 Outfall Discharge Monitoring Requirements) specifies the minimum MS4 outfall discharge monitoring requirements that the Copermittees must incorporate and implement as part of the Water Quality Improvement Plan.

The dry weather MS4 outfall discharge monitoring requirements are included under Provisions [D.2.a.\(2\)](#) and [D.2.b](#). The dry weather MS4 outfall discharge monitoring requirements are part of the “*program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer*” required by 40 CFR 122.26(d)(2)(iv)(B), which is expected to achieve compliance with the CWA section 402(p)(3)(B)(ii) statutory requirement for municipal storm water permits to require the Copermittees to “*effectively prohibit non-storm water discharges into the storm sewers.*” The dry weather MS4 outfall discharge monitoring data collection requirements are based on requirements under 40 CFR 122.26(d)(1)(iv)(D) and 122.26(d)(2)(iv)(B)(3).

The dry weather MS4 outfall discharge monitoring requirements are designed to provide wide spatial and temporal coverage of each jurisdiction to better understand the extent and magnitude of non-storm water discharges to receiving waters, and make a distinction between persistent and transient non-storm water flows. This

information is expected to allow each Copermittee to focus its resources on eliminating and controlling the highest priority threats to receiving water quality, as well as integrating other elements of the storm water programs (e.g. complaint call response) and third party data to efficiently and effectively assist in efforts to eliminate non-storm water discharges.

The dry weather MS4 outfall discharge monitoring requirements of Provision [D.2.a.\(2\)](#) and [D.2.b](#) are separated into monitoring required before and after the San Diego Water Board accepts the Copemittees' Water Quality Improvement Plan. Outfall monitoring conducted prior to acceptance of the Water Quality Improvement Plan is referred to in the Order as Transitional MS4 Outfall Discharge Monitoring. Provision [D.2.a.\(2\)](#) includes the transitional dry weather MS4 outfall discharge monitoring requirements.

The requirements under Provision [D.2.a.\(2\)](#) are based on the requirements under 40 CFR 122.26(d)(1)(iv)(D), (d)(1)(v)(B) and (d)(2)(iv)(B), which include the requirements for a monitoring program to identify, detect, and eliminate illicit connections and illegal discharges to the MS4s. The federal regulations (40 CFR 122.26(d)(1)(iv)(D)) require the monitoring program to include *“a field screening analysis for illicit connections and illegal dumping [that]...[a]t a minimum, include[s] a narrative description, for either each field screening point or major outfall, of visual observations made during dry weather periods.”* The federal regulations (40 CFR 122.26(d)(1)(v)(B)) require the monitoring program to include *“inspection procedures and methods for detecting and preventing illicit discharges, and describe areas where this program has been implemented.”* Furthermore, the monitoring program is required by federal regulations (40 CFR 122.26(d)(2)(iv)(B)) to include *“a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”*

Dry weather transitional MS4 outfall discharge monitoring requires each Copermittee to field screen (inspect) its major MS4 outfalls to classify the MS4 outfall locations as having persistent dry weather flows, transient dry weather flows, or no dry weather flows. To account for the variance in size of the 39 jurisdictions covered under this Order, the Copermittees recommended a tiered approach to the number of major MS4 outfalls that must be inspected. Provision [D.2.a.\(2\)\(a\)](#) provides a tiered approach to the number of major MS4 outfalls that must be visually inspected per jurisdiction as well as a minimum frequency each Copermittee must inspect each major MS4 outfall per year. This tiered approach is based on the total number of major MS4 outfalls within a Copermittees jurisdiction within each Watershed Management Area.

Based on the field screening, each Copermittee is required to make a determination whether any observed flowing, pooled, or ponded waters are transient or persistent flows. Based on this field screening information, other jurisdictional program information, and third party information, each Copermittee is required to prioritize the MS4 outfalls within its jurisdiction for follow up investigation and elimination of the non-storm water discharge, as part of its illicit discharge detection and elimination program

required pursuant to Provision [E.2](#). In accordance with the requirements of Provision [E.2](#), each Copermittee is required to immediately investigate obvious illicit discharges (e.g. outfall discharges with unusual color, unusual odor, or high flows).

This approach allows a Copermittee to use all of its resources, as well as leverage resources and information provided by third parties, to effectively eliminate non-storm water discharges from its MS4 outfalls. If the source of the non-storm water discharge cannot be immediately eliminated, the Copermittee uses the persistent flow or transient flow classification along with other programmatic implementation data to prioritize the MS4 outfalls for future investigation. In accordance with the adaptive management approach deployed throughout this Order, Provision [D.2.a.\(2\)\(c\)](#) requires each Copermittee to update its MS4 outfall discharge monitoring station inventory, compiled pursuant to Provision [D.2.a.\(1\)](#), with any new information on the classification of whether the MS4 outfall produces persistent flow, transient flow, or no dry weather flow. The requirement of Provision [D.2.a.\(2\)\(c\)](#) assures that each Copermittee is collecting data that can be used to demonstrate compliance with the CWA requirement that each Copermittee must implement a program to “*effectively prohibit non-storm water discharges into the [MS4]*” and with the requirements under 40 CFR 122.26(d)(1)(iv)(D), (d)(1)(v)(B) and (d)(2)(iv)(B).

Provision [D.2.b](#) describes the dry weather MS4 outfall discharge monitoring required to be incorporated and implemented as part of the Water Quality Improvement Plan. Dry weather MS4 outfall discharge monitoring must be performed by each Copermittee to identify non-storm water and illicit discharges within its jurisdiction pursuant to Provision [E.2.c](#), and to prioritize the dry weather MS4 discharges that will be investigated and eliminated pursuant to [E.3](#). The emphasis of the dry weather MS4 outfall discharge monitoring required pursuant to Provision [D.2.b](#) is consistent with the requirements under 40 CFR 122.26(d)(1)(iv)(D), (d)(1)(v)(B) and (d)(2)(iv)(B).

Provision [D.2.b.\(1\)](#) requires each Copermittee to continue field screening its major MS4 outfalls and identifying those with persistent flows and transient flows, as conducted during the transitional period (i.e. before the Water Quality Improvement Plan was developed). However, each Copermittee now has the flexibility to adjust the field screening monitoring frequencies and locations for the MS4 outfalls in its inventory, as needed, to identify and eliminate sources of non-storm water persistent flow discharges in accordance with the highest priority water quality conditions identified in the Water Quality Improvement Plan. In order to ensure a minimum number of outfalls are inspected, Provision [D.2.b.\(1\)](#) requires the number of visual inspections be equal to the number of visual inspections required in the tiered inspection program pursuant to Provision [D.2.a.\(2\)\(a\)](#).

Provision [D.2.b.\(2\)\(b\)](#) requires each Copermittee to monitor a minimum of 10 major MS4 outfalls with persistent flows identified as the highest priorities within a Copermittee’s jurisdiction, and within each Watershed Management Area. In other words, Copermittees located in more than one Watershed Management Area must identify at least 10 major MS4 outfalls with persistent flows per Watershed

Management Area. If a Copermittee is located in more than one Watershed Management Area, but there are less than 10 major MS4 outfalls with persistent flows within the area of its jurisdiction located in the Watershed Management Area, all the those major MS4 outfalls must be identified as the highest priority dry weather persistent flow MS4 outfalls.

Monitoring must occur at the highest priority outfall locations at least semi-annually until the non-storm water discharges have been eliminated for three consecutive dry weather monitoring events; identified to be authorized by a separate NPDES Permit; or reprioritized to a lower priority. Persistent flow MS4 outfall monitoring stations that have been removed must be replaced with the next highest prioritized MS4 major outfall in the Copermittee's jurisdiction within the Watershed Management Area, unless there are no remaining qualifying major MS4 outfalls within the Copermittees jurisdiction. The Copermittees must continually update their dry weather persistent flow MS4 outfall discharge monitoring locations with the next highest priority non-storm water flow that have yet to be eliminated until all persistent and transient flows are eliminated or its threat reduced.

Non-storm water persistent flow MS4 outfall discharge monitoring data collected during each semi-annual monitoring event, must be collected and analyzed according to the requirements of Provision [D.2.b.\(2\)\(b\)–\(e\)](#). These monitoring requirements are consistent with the requirements under 40 CFR 122.26(d)(1)(iv)(D), (d)(1)(v)(B) and (d)(2)(iv)(B).

The wet weather MS4 outfall discharge monitoring requirements are included under Provisions [D.2.a.\(3\)](#) and [D.2.c](#). The wet weather MS4 outfall discharge monitoring requirements are necessary for the Copermittees to implement a “*management program...to reduce the discharge of pollutants to the maximum extent practicable, using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate*” required by 40CFR 122.26(d)(2)(iv), which is expected to achieve compliance with the CWA section 402(p)(3)(B)(iii) statutory requirement for municipal storm water permits to require “*controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable.*” The wet weather MS4 outfall discharge monitoring data collection requirements are based on requirements under 40 CFR 122.26(d)(2)(iii), 122.26(d)(2)(iii)(A) and 122.26(d)(2)(iii)(A)(1)-(4), and 40 CFR 122.21(g)(7)(i)-(ii).

The wet weather MS4 outfall discharge monitoring requirements of Provision [D.2.a.\(3\)](#) and [D.2.c](#) are separated into monitoring required before and after the San Diego Water Board accepts the Copemittees' Water Quality Improvement Plan. Outfall monitoring conducted prior to acceptance of the Water Quality Improvement Plan is referred to in the Order as Transitional MS4 Outfall Discharge Monitoring. Provision [D.2.a.\(3\)](#) includes the transitional wet weather MS4 outfall discharge monitoring requirements.

Until the wet weather MS4 outfall discharge monitoring requirements of Provision [D.2.c](#) are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board, the Copermittees must comply with the requirements of transitional wet weather MS4 outfall monitoring requirements pursuant to Provision [D.2.a.\(3\)](#). Provision [D.2.a.\(3\)](#) requires each Copermittee to sample, at least five of the major MS4 outfalls inventoried pursuant to Provision [D.2.a.\(1\)](#) twice per wet season for the monitoring data required to be collected pursuant to Provision [D.2.a.\(3\)\(c\)-\(e\)](#).

At a minimum, the five sampling locations chosen must be representative of storm water discharges from residential, commercial, industrial, and typical mixed-use land uses present within a Watershed Management Area. The San Diego Water Board expects the Copermittees to extrapolate from these data to similar land uses throughout the Watershed Management Area to better inform the Water Quality Improvement Plan development process by prioritizing drainages for implementation efforts required pursuant to Provision [E](#).

Provision [D.2.c](#) describes the wet weather MS4 outfall discharge monitoring required to be included and implemented as part of the Water Quality Improvement Plan. Provision [D.2.c](#) provides the Copermittees the flexibility to adjust the wet weather MS4 outfall discharge monitoring locations and frequencies in the Watershed Management Area, as needed, to identify sources of pollutants in storm water discharges from MS4s in accordance with the highest priority water quality conditions identified in the Water Quality Improvement Plan.

Although Provision [D.2.c.\(1\)](#) allows the Copermittees to adaptively manage the wet weather MS4 outfall discharge monitoring locations and frequencies, the provision requires a minimum of at least five wet weather outfall stations to be monitored. Provision [D.2.c.\(2\)](#) further requires the Copermittees to modify the monitoring frequency at each wet weather MS4 outfall station at an appropriate frequency to identify sources of pollutants in storm water discharges.

The wet weather MS4 outfall discharge monitoring requirements of Provisions [D.2.c.\(3\)](#) and [D.2.c.\(4\)](#) are the same as the transitional wet weather MS4 outfall discharge monitoring. In contrast, the requirements of Provision [D.2.c.\(5\)](#) are focused on collecting analytical data specific to the highest priority water quality conditions in the Watershed Management Area identified in the Water Quality Improvement Plan. The wet weather MS4 outfall discharge monitoring data collection requirements are consistent with the requirements under 40 CFR 122.26(d)(2)(iii), 122.26(d)(2)(iii)(A) and 122.26(d)(2)(iii)(A)(1)-(4), and 40 CFR 122.21(g)(7)(i)-(ii).

Provision D.3 (Special Studies) requires the Copermittees to develop special studies that will be conducted for each Watershed Management Area and the entire San Diego Region. Data collected pursuant to Provision [D.3](#) is to be used by the Copermittees to improve the effectiveness of the strategies implemented by the jurisdictional runoff management programs toward achieving the numeric goals identified in the Water Quality Improvement Plans and ultimately achieve compliance

with the discharge prohibitions and receiving water limitations of Provisions [A.1.a](#), [A.1.c](#), and [A.2.a](#), which is consistent with the requirements of Provision [A.4](#).

Special studies are often necessary to fill data gaps or provide more refined information that allow the Copermittees to better manage the generation or elimination of pollutants and discharges to and from the MS4. In the Fourth Term Permits, the Copermittees have been required to implement special studies as directed by the San Diego Water Board. The special studies required by this Order provide the Copermittees more flexibility to identify and implement special studies that will be most useful to improving the effectiveness of their jurisdictional runoff management programs.

Provision [D.3.a.\(1\)](#) requires the Copermittees to develop and conduct at least three special studies per Watershed Management Area, to be determined by the Copermittees. One of the three special studies may be accomplished through participation in a Regional Special Study required under Provision [D.3.a.\(2\)](#). The requirements provide the Copermittees great latitude in identifying and developing the special studies. Watershed Management Area special studies are required, at a minimum, to: (a) relate in some way to the highest water quality priorities identified by the Copermittees in the Water Quality Improvement Plan, (b) be conducted within the Watershed Management Area, and (c) include some form of participation (e.g. contribution of funds, personnel services, project management) by all the responsible Copermittees within the Watershed Management Area.

Examples of Watershed Management Area special studies might include, but are not limited to: (1) focused pollutant source identification studies, (2) BMP effectiveness and/or comparison studies, (3) pilot tests for new or emerging pollutant control methods, (4) receiving water pollutant or stressor source identification and/or mitigation studies, or (5) pollutant fate and transport studies. The Watershed Management Area special studies are expected to provide data that can be utilized by the Copermittees to improve the Water Quality Improvement Plan or implementation of the Copermittees' jurisdictional runoff management programs to address the highest priority water quality conditions.

Provision [D.3.a.\(2\)](#) requires the Copermittees to develop special studies that will be conducted for the entire San Diego region. The regional special studies are expected to provide data that can be utilized by the Copermittees to improve the Water Quality Improvement Plan or implementation of the Copermittees' jurisdictional runoff management programs to identify or address regional water quality concerns and priorities.

An example of a regional special study would be to develop and establish allowable exceedance frequencies of the bacteria water quality objectives for several types of water bodies, during different wet and dry weather conditions the San Diego region. The special study would be related to bacteria, which is a priority for the San Diego region due to the adoption of "*Bacteria TMDL Project I – Beaches and Creeks in the*

San Diego Region.” The study results could be used to inform the Copermittees and the San Diego Water Board about the indicator bacteria water quality objective exceedance frequencies that occur in natural or reference watersheds.

Provision D.4 (Assessment Requirements) specifies the assessments that the Copermittees are required to perform, based on the monitoring data collected, and will be reported as part of the Annual Report for the Water Quality Improvement Plan implementation. Provision [D.4](#) requires the Copermittees assess the progress of the water quality improvement strategies in the Water Quality Improvement Plan toward achieving compliance with Provisions [A.1.a](#), [A.1.c](#), and [A.2.a](#).

Provision [D.4](#) specifies the assessments that Copermittees must perform for each Watershed Management Area to assess the effectiveness of each Copermittee’s jurisdictional runoff management program and the Water Quality Improvement Plan. The effectiveness of each Copermittee’s jurisdictional runoff management program and Water Quality Improvement Plan is measured through these types of assessments: (a) Receiving Waters Assessments (b) MS4 Outfall Discharges Assessments, (c) Special Studies Assessments, and (d) Integrated Assessment of Water Quality Improvement Plan.

Provision [D.4.a](#) requires the Copermittees to assess the status of receiving water conditions. The monitoring data collected pursuant to Provision [D.1](#) will be evaluated, among other information, to assess the condition of a Watershed Management Area’s streams, coastal waters, enclosed bays, harbors, estuaries, and lagoons. The focus of the receiving waters assessments is to measure progress toward the objective of the CWA to “*restore and maintain the chemical, physical, and biological integrity of the Nation’s waters*” as the Water Quality Improvement Plan and each Copermittee’s jurisdictional runoff management program are implemented within a Watershed Management Area. Provision [D.4.a](#) is consistent with 40 CFR 122.42(c)(7) which requires the Copermittees to annually report the “[i]dentification of water quality improvements or degradation.”

Provision [D.4.b](#) includes the MS4 outfall discharges assessment requirements. The focus of MS4 outfall discharges assessments is to determine if the Copermittees’ are implementing programs that comply with the requirements of the CWA for MS4 permits to “*effectively prohibit non-stormwater discharges into the storm sewers*” and “*require controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable.*” The monitoring data collected pursuant to Provisions [D.2](#) will be evaluated, among other information, to assess the effectiveness of the implementation of the Water Quality Improvement Plan and each Copermittee’s jurisdictional runoff management program. The MS4 outfall discharge assessments consist of Non-Storm Water Discharges Reduction Assessments and Storm Water Pollutant Discharges Reduction Assessments.

The Non-Storm Water Discharges Reduction Assessments are how each Copermittee will demonstrate that its jurisdictional runoff management program implementation

efforts are achieving the CWA requirement to “*effectively prohibit non-stormwater discharges into the storm sewers.*” Provision [D.4.b.\(1\)](#) requires each Copermittee to assess and report on its illicit discharge detection and elimination program required pursuant to Provision [E.2](#) to reduce and effectively prohibit non-storm water and illicit discharges into the MS4 within its jurisdiction. The Non-Storm Water Discharges Reduction Assessments include specific assessment requirements applicable to each Copermittee.

As each Copermittee collects and analyzes the data collected pursuant to dry weather MS4 outfall discharges monitoring requirements of Provisions [D.2.a.\(2\)](#) and [D.2.b](#), Provision [D.4.b.\(1\)](#) requires each Copermittee to assess the progress, assess the effectiveness of its current actions, and identify modifications necessary to increase the effectiveness of its actions toward reducing and eliminating non-storm water and illicit discharges to its MS4. The findings from these assessments are expected to be utilized by the Copermittee as part of its procedures to prioritize the non-storm water discharges that will be addressed by its Illicit Discharge Detection and Elimination program required pursuant to Provision [E.2](#).

The assessment requirements of Provision [D.4.a.\(1\)](#) are consistent with 40 CFR 122.26(d)(2)(iv)(B) and 122.26(d)(2)(iv)(B)(3) which require “*procedures...to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information [emphasis added], indicate a reasonable potential of contain illicit discharges or other sources of non-storm water*” as part of a “*program...to detect and remove...illicit discharges and improper disposal into the storm sewer.*” The assessment requirements of Provision [D.4.a.\(1\)](#) are also consistent with 40 CFR 122.42(c)(1) requires the Copermittees to annually report the “*status of implementing the components of the storm water management program that are established as permit conditions.*”

The Storm Water Pollutant Discharges Reduction Assessment is how the Copermittees in each Watershed Management Area will demonstrate that their jurisdictional runoff management program implementation efforts are achieving the CWA requirement to “*reduce the discharge of pollutants [in storm water] to the maximum extent practicable.*” Provision [D.4.b.\(2\)](#) requires the Copermittees in each Watershed Management Area to assess and report the progress of the Copermittees’ efforts to reduce pollutants in storm water discharges from the MS4s to the MEP. The Storm Water Pollutant Discharges Reduction Assessments include specific assessment requirements applicable to the Watershed Management Area and each Copermittee.

As the Copermittees collect and analyze the data collected pursuant to wet weather MS4 outfall discharges monitoring requirements of Provisions [D.2.a.\(3\)](#) and [D.2.c](#), Provision [D.4.b.\(2\)](#) requires the Copermittees to assess the progress of the Water Quality Improvement Plan strategies toward reducing pollutants in storm water from the MS4 to the MEP. The findings from these assessments are expected to be utilized by the Copermittees to identify any modifications to the wet weather MS4 outfall

discharge monitoring locations and frequencies necessary to identify sources of pollutants in storm water discharges from the MS4s, as well as focus, modify, and improve the water quality improvement strategies implemented by each Copermittee within its jurisdiction to reduce pollutants in storm water discharges to the MEP.

The assessment requirements of Provision [D.4.a.\(1\)](#) are consistent with 40 CFR 122.26(d)(2)(iii)(B) which requires “[e]stimates of the annual pollutant load of the cumulative discharges to waters of the United States from all identified municipal outfalls...during a storm event...accompanied by a description of the procedures for estimating constituent loads and concentrations, including any modeling, data analysis, and calculation methods.” The assessment requirements of Provision [D.4.a.\(2\)](#) are consistent with 40 CFR 122.26(d)(2)(v) which requires that each Copermittee assesses the “estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program.” The assessment requirements of Provision [D.4.a.\(2\)](#) are also consistent with 40 CFR 122.42(c)(1) which requires the Copermittees to annually report the “status of implementing the components of the storm water management program that are established as permit conditions.”

Provision [D.4.c](#) includes the special studies assessment requirements. Performing special studies are how the Copermittees will address data gaps identified during the development of and updates to the Water Quality Improvement Plan. The relevant findings from the special studies assessments are expected to be incorporated as part of the applicable receiving water assessments, MS4 outfall discharge assessments, and integrated water quality improvement assessments required in Provision [D.4.a](#), [D.4.b](#), and [D.4.d](#), respectively.

The assessment requirements in Provision [D.4.d](#) are part of the iterative approach and adaptive management process required by Provision [A.4](#). The Copermittees are required to integrate the data collected pursuant to Provisions [D.4.a-c](#), and information collected during the implementation of the jurisdictional runoff management programs required pursuant to Provision [D](#) to re-evaluate the Water Quality Improvement Plan.

The monitoring data collected pursuant to Provisions [D.1](#) and [D.2](#), and the results of the assessment required pursuant to Provisions [D.4.a-c](#), will be used to determine whether the Water Quality Improvement Plan and each Copermittee’s jurisdictional runoff management program are effective, or require modifications or improvements to become more effective to achieve the requirements of the CWA. The assessments required by Provision [D.4.d](#) are consistent with 40 CFR 122.42(c)(1) which requires that the Copermittees to report the “[t]he status of implementing the components of the storm water management program that are established as permit conditions.”

E. Jurisdictional Runoff Management Programs

Purpose: Provision E includes the requirements for the jurisdictional runoff management programs to be implemented by each of the Copermittees. Compliance with the requirements for the jurisdictional runoff management programs will allow the Copermittees to demonstrate that they are implementing programs to effectively prohibit non-storm water discharges to the MS4 and reduce pollutants in storm water discharges from the MS4 to the MEP. The jurisdictional runoff management program document prepared by each Copermittee will also provide the details for implementing the water quality improvement strategies identified in the Water Quality Improvement Plan specifically within its jurisdiction.

Discussion: Implementation of the jurisdictional runoff management program requirements under Provision E is how the Copermittees “*effectively prohibit non-stormwater discharges into the storm sewers*”, and outlines the “*controls to reduce the discharge of pollutants to the maximum extent practicable*” consistent with the federal regulations under 40 CFR 122.26. The jurisdictional runoff management program is part of the “*comprehensive planning process*” that is required pursuant to 40 CFR 122.26(d)(2)(iv). Where the Water Quality Improvement Plan is the “*comprehensive planning process*” on a Watershed Management Area scale, requiring “*intergovernmental coordination*”, the jurisdictional runoff management program document is the “*comprehensive planning process*” on a jurisdictional scale that should be coordinated with the other Copermittees in the Watershed Management Area to achieve the goals of the Water Quality Improvement Plan.

The jurisdictional runoff management program requirements are included to provide each Copermittee criteria that can be used to demonstrate that its storm water management program is implementing the “*comprehensive planning process*” within its jurisdiction to “*effectively prohibit non-stormwater discharges into the storm sewers*”, and to identify and implement the most effective “*controls to reduce the discharge of pollutants to the maximum extent practicable*” in accordance with the performance standards given in the CWA.

Provision E includes the requirements for each of the components that must be included in the Copermittee’s jurisdictional runoff management program document that will be implemented by the Copermittee within its jurisdiction. Implementation of the components of each Copermittee’s jurisdictional runoff management program must be consistent with the water quality improvement strategies identified in the Water Quality Improvement Plans.

More specific and detailed discussions of the requirements of Provision E are provided below.

Provision E.1 (Legal Authority Establishment and Enforcement) requires to each Copermitttee to establish and enforce sufficient legal authority to control discharges to the MS4 within its jurisdiction.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermitttee must have sufficient “*legal authority to control discharges to the municipal separate storm sewer system*” and be able to demonstrate that it can “*operate pursuant to legal authority established by statute, ordinance or series of contracts.*” Provision [E.1.a](#) describes the minimum legal authorities each Copermitttee must establish for itself within its jurisdiction to control discharges to its MS4. The requirements of Provision [E.1.a](#) are consistent with the requirements set forth in 40 CFR 122.26(d)(2)(i)(A)-(F).

The certification statement required from each Copermitttee by Provision [E.1.b](#) is included to provide the San Diego Water Board additional documentation that each Copermitttee has established the legal authorities consistent with Provision [E.1.a](#) and 40 CFR 122.26(d)(2)(i)(A)-(F), and the Copermitttee can “*operate pursuant to legal authority established by statute, ordinance or series of contracts.*”

Provision E.2 (Illicit Discharge Detection and Elimination) requires each to Copermitttee to implement an illicit discharge detection and elimination program to effectively prohibit non-storm water discharges to the MS4 by actively detecting and eliminating illicit discharges and disposal into its MS4.

Provision [E.2](#) establishes the minimum requirements that each Copermitttee must implement within its jurisdiction to prevent and eliminate illicit discharges, and effectively prohibit non-storm water discharges, from entering its MS4. The federal CWA requires permits for municipal storm sewer systems to “*effectively prohibit non-storm water discharges into the storm sewers.*” Under 40 CFR 122.26(d)(2)(iv)(B), each Copermitttee must implement a “*program...to detect and remove...illicit discharges and improper disposal into the storm sewer.*” The federal NPDES regulations, under 40 CFR 122.26(b)(2), define illicit discharges as “*any discharge to a municipal separate storm sewer that is not composed entirely of storm water.*” Thus, non-storm water discharges are not authorized to enter the MS4 and are considered to be illicit discharges, unless authorized by a separate NPDES permit.

The Phase I Final Rule clarifies that non-storm water discharges through an MS4 are not authorized under the CWA (55 FR 47995):

“Today’s rule defines the term “illicit discharge” to describe any discharge through a municipal separate storm sewer system that is not composed entirely of storm water and that is not covered by an NPDES permit. Such illicit discharges are not authorized under the Clean Water Act. Section 402(p)(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to “effectively prohibit” non-storm water discharges from the municipal separate storm sewer...Ultimately, such non-storm water discharges through a municipal separate

storm sewer must either be removed from the system or become subject to an NPDES permit.”

The federal NPDES requirements for the program to address illicit discharges must include “*inspections, to implement and enforce an ordinance, orders, or other similar means to prevent illicit discharges to the MS4.*” The federal NPDES regulations also reference several categories of “*non-storm water discharges or flows [which] shall be addressed where such discharges are identified...as sources of pollutants to waters of the United States.*” The Phase I Final Rule (55 FR 48037) further clarified the requirements of 40 CFR 122.26(d)(2)(iv)(B)(1) as follows:

“EPA is clarifying that section 402(p)(3)(B) of the CWA (which requires permits for municipal separate storm sewers to 'effectively' prohibit non-storm water discharges) does not require permits for municipalities to prohibit certain discharges or flows of nonstorm water to waters of the United States through municipal separate storm sewers in all cases.”

In previous iterations of the municipal storm water permits for the San Diego Region, these categories were simply listed and referred to as categories of non-storm water discharges “not prohibited” unless identified as a source of pollutants. The Copermittees have often referred to these categories as “exempt” discharges. In both cases, however, the language is inconsistent with the federal CWA and NPDES regulations. And, the clarification provided in the Phase I Final Rule does not specifically state that such discharges are “not prohibited” or “exempt” or in any way authorized. The federal NPDES regulations do, however, state that specific categories of non-storm water discharges must be “*addressed*” if identified as “*sources of pollutants to waters of the United States.*”

The language of Provision [E.2.a](#) has been revised to be fully consistent with the language of the CWA and the requirements of the federal regulations under 40 CFR 122.26(d)(2)(iv)(B)(1). Provision [E.2.a](#) requires each Copermittee to address all types of non-storm water discharges into its MS4 as illicit discharges, unless the discharge is authorized by a separate NPDES permit, or identified as a category of non-storm water discharges or flows that must be addressed pursuant to Provisions [E.2.a.\(1\)](#) through [E.2.a.\(5\)](#). Only non-NPDES-permitted non-storm water discharges identified as a category of non-storm water discharges under Provisions [E.2.a.\(1\)](#) through [E.2.a.\(5\)](#) and not identified as a source of pollutants do not have to be addressed as illicit discharges.

Several of the non-storm water categories listed in 40 CFR 122.26(d)(2)(iv)(B)(1) have not been included in Provisions [E.2.a.\(1\)](#) through [E.2.a.\(5\)](#), including: street wash water, landscape irrigation, irrigation water, and lawn watering. Because these are no longer included within the categories listed under Provisions [E.2.a.\(1\)](#) through [E.2.a.\(5\)](#), the Copermittees must prohibit these types of non-storm water discharges from entering the MS4. This is consistent with the clarification of 40 CFR 122.26(d)(2)(iv)(B)(1) in the Phase I Final Rule (55 FR 48037), which states:

“[T]he Director may include permit conditions that either require municipalities to prohibit or otherwise control any of these types of discharges where appropriate.”

Street wash water is a category of non-storm water discharges that was removed when the Third Term Permits were issued. Street wash water is a source of several pollutants (e.g., metals, oil and grease, petroleum hydrocarbons, chlorinated solvents, sediment) which are generated during the street washing process. The removal of this category requires the Copermittees to prohibit this type of non-storm water discharge from entering the MS4.

The landscape irrigation, irrigation water, and lawn watering categories, collectively referred to hereafter as “over-irrigation” discharges, were removed from the list of non-storm water discharge categories in the Fourth Term Orange County and Riverside County Permits. Non-storm water discharges resulting from over-irrigation have been found to be a source of several types of pollutants (e.g., nutrients, bacteria, pesticides, sediment) in receiving waters. The San Diego Water Board and the Copermittees have identified categories of non-storm water discharges associated with over-irrigation as a source of pollutants and conveyance of pollutants to the MS4 and waters of the United States in the following documents:

- **SmartTimer/EdgescapE Evaluation Program (SEEP) Grant Application**

The State Water Board allocated grant funding to the SEEP project grant application submitted in 2006, which targeted irrigation runoff by retrofitting areas of existing development and documenting the conservation and runoff improvements. The basis of this grant project is that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. In addition, the grant application indicated that this alteration of natural flows is impacting the beneficial uses of waters of the state and U.S. Results from the study indicate that that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 *is* a source and conveyance of pollutants. The results of this study can be applied broadly to any area where over-irrigation takes place. The grant application included the following statements:

“Irrigation runoff contributes flow & pollutant loads to creeks and beaches that are 303(d) listed for bacteria indicators.”

“Regional program managers agree that the reduction and/or elimination of irrigation-related urban flows and associated pollutant loads may be key to successful attainment of water quality and beneficial use goals as outlined in the San Diego Basin Plan and Bacteria TMDL over the long term.”

“Elevated dry-weather storm drain flows, composed primarily ... of landscape irrigation water wasted as runoff, carry pollutants that impair recreational use and aquatic habitats all along Southern California’s urbanized coastline. Storm

drain systems carry the wasted water, along with landscape derived pollutants such as bacteria, nutrients and pesticides, to local creeks and the ocean. Given the local Mediterranean climate, excessive perennial dry season stream flows are an unnatural hydrologic pattern, causing species shifts in local riparian communities and warm, unseasonal contaminated freshwater plumes in the near-shore marine environment.”

- **2006-2007 Orange County Watershed Action Plan Annual Reports**

The Watershed Action Plan Annual Reports for the 2006-2007 reporting period were submitted by the County of Orange, Orange County Flood Control District and Copermittees within the San Juan Creek, Laguna Coastal Streams, Aliso Creek, and Dana Point Coastal Streams Watersheds. San Juan Creek, Laguna Coastal Streams, Aliso Creek and Dana Point Coastal Streams are all currently 303(d) listed as impaired for indicator bacteria within their watersheds and/or in the Pacific Ocean at the discharge points of their watersheds. The Orange County Copermittees, within their Watershed Action Strategy Table for fecal indicator bacteria included the following:

“Support programs to reduce or eliminate the discharge of anthropogenic dry weather nuisance flow throughout the...watershed. Dry weather flow is the transport medium for bacteria and other 303(d) constituents of concern.”

Additionally, they state that *“conditions in the MS4 contribute to high seasonal bacteria propagation in-pipe during warm weather. Landscape irrigation is a major contributor to dry weather flow, both as surface runoff due to over-irrigation and overspray onto pavements; and as subsurface seepage that finds its way into the MS4.”*

- **Fiscal Year 2008 Carlsbad Watershed Urban Runoff Management Program Annual Report**

The Carlsbad Watershed Urban Runoff Management Program Annual Report for Fiscal Year 2008 was submitted by the Carlsbad Watershed Copermittees (Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista, and the County of San Diego). In the Annual Report, the Carlsbad Watershed Copermittees stated the following:

“The Carlsbad Watershed Management Area (WMA) collective watershed strategy identifies bacteria, sediment, and nutrients as high priority water quality pollutants in the Agua Hedionda (904.3 – bacteria and sediment), Buena Vista (904.2 – bacteria), and San Marcos Creek (904.5 – nutrients) Hydrologic Areas. Bacteria, sediment, and nutrients have been identified as potential discharges from over-irrigation.”

- **2007-2008 San Diego Bay Watershed Urban Runoff Management Program Annual Report**

The San Diego Bay Watershed Urban Runoff Management Program 2007-2008 Annual Report was submitted by the San Diego Bay Watershed Copermittees (Cities of Chula Vista, Coronado, Imperial Beach, La Mesa, Lemon Grove, National City, and San Diego, the County of San Diego, the Port of San Diego, and the San Diego County Airport Authority). In Appendix D of the Annual Report, titled "Likely Sources of Pollutants", the San Diego Bay Watershed Copermittees identified over-irrigation of lawns as a pollutant generating activity from business and/or residential land uses for bacteria, pesticides, and sediment.

- **Copermittee Public Education Materials**

The Orange County Public Works *Tips for Landscape & Gardening* public education brochure states: "*Fertilizers, pesticides and other chemicals that are left on yards or driveways can be blown or washed into storm drains that flow to the ocean. Overwatering lawns can also send materials into storm drains.*"

The Riverside County Flood Control and Water Conservation District *Landscape and Garden* public education brochure states: "*Soil, yard wastes, over-watering and garden chemicals become part of the urban runoff mix that winds it way through streets, gutters and storm drains before entering lakes, rivers, streams, etc. Urban runoff pollution contaminates water and harms aquatic life!*"

- **Los Penasquitos Lagoon Sedimentation/Siltation TMDL Technical Report**

The Los Penasquitos Lagoon Sedimentation/Siltation TMDL technical report was prepared for the City of San Diego and USEPA in October 2010. The technical report was included as a technical supporting document attached to the Sediment TMDL for Los Penasquitos Lagoon staff report prepared by the San Diego Water Board, dated June 13, 2012. Under the Source Assessment section, the technical report states the following:

"Dry weather loading is dominated by nuisance flows from urban land use activities such as car washing, sidewalk washing, and lawn over-irrigation, which pick up and transport sediment into receiving waters."

These documents confirm that non-storm water discharges associated with over-irrigation are a source of pollutants and should be addressed as illicit discharges to the MS4. Prohibiting non-storm water discharges associated with over-irrigation, however, is not a new requirement for the Copermittees because it is also consistent with and required by the Water Conservation in Landscaping Act (AB 1881, Laird).

The Water Conservation in Landscaping Act required the Department of Water Resources (DWR) to prepare a Model Water Efficient Landscape Ordinance for use by local agencies (e.g. the Copermittees). All local agencies were required to adopt a water efficient landscape ordinance by January 1, 2010. Local agencies could adopt the Water Efficient Landscape Ordinance developed by DWR, or an ordinance considered at least as effective as the Model Ordinance. The Water Efficient Landscape Ordinance includes a requirement that local agencies prohibit runoff from irrigation (§ 493.2):

“Local agencies shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff from leaving the target landscape [emphasis added] due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures. Penalties for violation of these prohibitions shall be established locally.”

Furthermore, non-storm water discharges from over-irrigation not only transport and discharge pollutants to receiving waters, but are also a likely source of the dry weather flows causing changes to habitat within and along the receiving water bodies. Examples of habitat changes from the dry weather flows include perennialization of ephemeral streams, and conversion of saltwater and brackish water marsh habitats to freshwater marsh habitats (e.g. Los Penasquitos Lagoon). Both of these examples have resulted in the promotion of invasive species in several areas of the San Diego Region.

The removal of the over-irrigation discharges categories does not require the Copermittees to strictly prohibit lawn and landscape irrigation, but does require the prohibition of excessive irrigation water that results in non-storm water discharges to the MS4. Non-storm water discharges to the MS4 from over-irrigation must be addressed as illicit discharges by the Copermittees pursuant to the requirements of Provision [E.2](#).

The remaining non-storm water categories listed in 40 CFR 122.26(d)(2)(iv)(B)(1) are listed under Provisions [E.2.a.\(1\)](#) through [E.2.a.\(5\)](#) and generally fall into four categories: (1) non-storm water discharges subject to existing San Diego Water Board waste discharge requirements and NPDES permits; (2) non-storm water discharges generally not expected to be a source of pollutants to receiving waters; (3) non-storm water discharges likely to contain pollutants requiring some form of control to address the pollutants prior to discharging to the MS4; and (4) non-storm water discharges or flows associated with firefighting.

Provisions [E.2.a.\(1\)](#) and [E.2.a.\(2\)](#) include several categories of non-storm water discharges listed in 40 CFR 122.26(d)(2)(iv)(B)(1) for which the San Diego Water Board already has developed general waste discharge requirements and NPDES permits to address the discharges. The Copermittees are only required to address these types of non-storm water discharges as illicit discharges if the Copermittees or the San Diego Water Board identifies these non-storm water discharges not having

coverage under the applicable NPDES permit or as a source of pollutants to receiving waters. Generally, if these types of non-storm water discharges have coverage under an NPDES permit and are identified as a source of pollutants to receiving waters, the Copermittees would be expected to identify the responsible dischargers and report their identities to the San Diego Water Board. The San Diego Water Board would then have the responsibility to enforce the NPDES permit and/or waste discharge requirements.

Provision [E.2.a.\(3\)](#) includes several categories of non-storm water discharges listed in 40 CFR 122.26(d)(2)(iv)(B)(1) which are generally not expected to be a source of pollutants to receiving waters, many of which originate from what are typically natural, uncontrollable sources. The Copermittees are only required to address these types of non-storm water discharges as illicit discharges if the Copermittees or the San Diego Water Board identifies these non-storm water discharges as a source of pollutants to receiving waters. Because many of these sources are generally uncontrollable, enforcing a prohibition may not be a possibility for the Copermittees. The Copermittees would be able to address these non-storm water discharges by preventing these non-storm water discharges from entering the MS4. This could potentially be achieved by sealing their MS4 structures so the discharges cannot enter the MS4.

Provision [E.2.a.\(4\)](#) includes several categories of non-storm water discharges listed in 40 CFR 122.26(d)(2)(iv)(B)(1) that are likely to contain pollutants requiring some form of control to address the pollutants prior to discharging to the MS4. At this time, an outright prohibition of these types of non-storm water discharges does not yet appear to be warranted. Thus, Provision [E.2.a.\(4\)](#) has includes several requirements for the Copermittees to control the pollutants from these types of non-storm water discharges. This is consistent with the clarification of the federal regulations in the Phase I Final Rule (55 FR 48037), which states the San Diego Water Board has the authority to require the Copermittees to “*control any of these types of discharges where appropriate.*”

Unlike non-storm water discharges from over-irrigation, these types of non-storm water discharges are not expected to occur in close proximity to each other or very frequently. Provided these types of non-storm water discharges are controlled as required in Provision [E.2.a.\(4\)](#), the Copermittees would only be required to address these types of non-storm water discharges as illicit discharges if the Copermittee or the San Diego Water Board identifies these non-storm water discharges as a source of pollutants to receiving waters.

Provision [E.2.a.\(5\)](#) includes specific requirements for fire fighting discharges and flows. The requirements for non-storm water discharges and flows associated with fire fighting have been separated into requirements for: a) non-emergency fire fighting discharges and flows, and b) emergency fire fighting discharges and flows.

The San Diego Water Board has found that discharges from building fire suppression system maintenance (e.g. fire sprinklers) contain waste and potentially a significant source of pollutants to receiving waters. As such, the San Diego Water Board is requiring these discharges be addressed as illicit discharges by the Copermitees. Thus, the discharges to the MS4 are to be prohibited via ordinance, order or similar means. For other non-emergency fire fighting discharges and flows (i.e., flows from controlled or practice blazes, fire fighting training, and maintenance activities not associated with building fire suppression systems), the Copermitees are required to develop and implement a program to address pollutants in these non-storm water discharges and flows. This is consistent with the clarification of the federal regulations in the Phase I Final Rule (55 FR 48037), which states the San Diego Water Board has the authority to require the Copermitees to “*control any of these types of discharges where appropriate.*”

For emergency fire fighting discharges and flows, the Phase I Final Rule (55 FR 48037) has clarified the requirements of 40 CFR 122.26(d)(2)(iv)(B)(1) pertaining to emergency fire fighting flows and discharges, which states:

“In the case of fire fighting it is not the intention of these rules to prohibit in any circumstances the protection of life and public or private property through the use of water or other fire retardants that flow into separate storm sewers.”

Thus, the requirements have been made to be consistent with the guidance provided by the Phase I Final Rule. The Order recommends that the Copermitees develop and encourage implementation of BMPs to reduce or eliminate the discharge of pollutants from emergency fire fighting flows to the MS4s and receiving waters.

The Copermitees are expected to review the dry weather MS4 outfall discharge monitoring data they collect to determine if and when there are non-storm water discharges to or from their MS4s that are a source of pollutants to receiving waters. If the Copermitees identify one of the types of non-storm water discharges listed in Provisions [E.2.a.\(1\)](#) through [E.2.a.\(4\)](#) as a source of pollutants to receiving waters based on the review and evaluation of monitoring data, Provision [E.2.a.\(6\)](#) requires the Copermitees to prohibit those categories of discharges from entering the MS4 through ordinance, order or similar means.

Provision [E.2.a.\(6\)](#) also clarifies that the San Diego Water Board may identify categories of non-storm water discharges or flows listed under Provisions [E.2.a.\(1\)](#) through [E.2.a.\(4\)](#) that must be prohibited. This is consistent with the clarification of 40 CFR 122.26(d)(2)(iv)(B)(1) in the Phase I Final Rule (55 FR 48037), which states the San Diego Water Board may “*require municipalities to prohibit or otherwise control any of these types of discharges where appropriate.*”

Finally, Provision [E.2.a.\(7\)](#) has been included in the requirements for non-storm water discharges to clarify that any non-storm water discharges to the Copermitee’s MS4, even those identified pursuant to Provisions [E.2.a.\(1\)](#) through [E.2.a.\(4\)](#), must be

reduced or eliminated. Provision [E.2.a.\(7\)](#) is consistent with the requirements of CWA section 402(p)(3)(B)(ii) and 40 CFR 122.26(d)(1)(v)(B), as clarified in the Phase I Final Rule (55 FR 47995) that “[u]ltimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit.”

Consistent with 40 CFR 122.26(d)(2)(iv)(B) and 122.26(d)(2)(iv)(B)(1), each Copermittee must implement a “program...to prevent illicit discharges to the municipal storm sewer system” and “detect...illicit discharges and improper disposal into the storm sewer.” Provision [E.2.b](#) requires each Copermittee to implement measures to prevent and detect illicit discharges and connections to its MS4 as part of its illicit discharge detection and elimination program.

As part of the program to prevent and detect illicit discharges to the MS4, 40 CFR 122.26(d)(2)(iv)(B)(2) requires “procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.” As part of the procedures, each Copermittee is required to maintain an updated map of its entire MS4 and the corresponding drainage areas within its jurisdiction. Having knowledge about where inlets, access points, connections with other MS4s, and outfalls are located is necessary for each Copermittees to track, identify, and eliminate illicit discharges and connections. Thus, Provision [E.2.b.\(1\)](#) of the Order specifies that the map must include the segments of the storm sewer system owned, operated, and maintained by the Copermittee, and include locations of all known inlets, connections with other MS4s, and outfalls to the Copermittee’s MS4. The remaining requirements of Provision [E.2.b](#) are consistent with the requirements of 40 CFR 122.26(d)(2)(iv)(B)(3)-(7) related to implementing measures to prevent and detect illicit discharges and connections to the MS4.

Provision [E.2.c](#) requires each Copermittee to conduct field screening and monitoring of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect non-storm water and illicit discharges and connections to the MS4. Field screening is a required element of the program to detect and eliminate illicit discharges and connections to the MS4, pursuant to 40 CFR 122.26(d)(2)(iv)(B)(2). The field screening requirement will be implemented through the dry weather MS4 outfall discharge monitoring required under Provisions [D.2.a.\(2\)](#) and [D.2.b.\(1\)](#).

Provision [E.2.d](#) specifies the measures each Copermittee must implement to eliminate illicit discharges and connections to its MS4. Elimination of illicit discharges and connections to the MS4 is consistent with the requirement of 40 CFR 122.26(d)(2)(iv)(B) “to detect and remove [emphasis added]...illicit discharges and improper disposal into the storm sewer” and will achieve the CWA requirement for MS4 permits to “effectively prohibit non-storm water discharges into the storm sewers.”

Generally, each Copermittee is responsible for prioritizing its efforts to eliminate non-storm water and illicit discharges or connections to its MS4 based on field screening and monitoring data, NALs, illicit discharge investigation records, and the known or

suspected sources. Sources of non-storm water and illicit discharges or connections must be eliminated by enforcing the legal authority established by each Copermitttee pursuant to Provision [E.1](#).

Finally, Provision [E.2.e](#) requires the Copermitttee to include the strategies and/or activities identified in the Water Quality Improvement Plan that the Copermitttee will implement as part of the illicit discharge detection and elimination program within its jurisdiction. The Water Quality Improvement Plan is expected to include several strategies and options that the Copermitttee can and should implement within its jurisdiction. The Copermitttee is expected to describe and provide the details of when, where, and how those strategies will be implemented within its jurisdiction.

The San Diego Water Board will utilize the information provided in the jurisdictional runoff management program document pursuant to Provision [E.2.e](#) to gauge and assess the Copermitttee's efforts in trying to address the highest priority water quality conditions identified in the Water Quality Improvement Plan within its jurisdiction.

Provision E.3 (Development Planning) requires each Copermitttee to use its land use and planning authority to implement a development planning program to control and reduce the discharge of pollutants in storm water from new development and significant redevelopment to the MEP. Proper implementation of the development planning program will also contribute toward effectively prohibiting non-storm water discharges from development projects to the MS4.

Pursuant to 40 CFR 122.26(d)(2)(iv), each Copermitttee is required to implement a *“management program...to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and other such provisions where applicable.”* As part of the management program, 40 CFR 122.26(d)(2)(iv)(A)(2) requires *“planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal storm sewers which receive discharges from areas of new development and significant redevelopment.”*

Development typically includes the construction of impervious surfaces such as sidewalks, driveways, roads, and rooftops. These impervious surfaces generate and concentrate pollutants (such as pesticides, petroleum hydrocarbons, heavy metals, and pathogens) that are otherwise not found in high concentrations in the natural environment. Pollutants that accumulate on impervious surfaces are not easily biodegraded or not subject to natural treatment processes. When it rains, these pollutants are transported in storm water runoff from these impervious surfaces into receiving waters, resulting in poor water quality and degradation of beneficial uses.

In addition to the generation of pollutants, development generally alters the natural conditions of the land by removing vegetative cover, reducing the perviousness of the surface, and reducing the capacity of storm water that can be intercepted, captured, stored, infiltrated, evaporated, and/or evapotranspired. The alteration of the natural

conditions and addition of impervious surfaces associated with development causes water quality problems. Hydrograph modification, or hydromodification, is the change in the natural watershed hydrologic processes and runoff characteristics caused by development or other land use changes that result in increased stream flows, altered sediment transport, and morphological changes to channels receiving the runoff.

This is consistent with what USEPA has noted, that “[m]ost stormwater runoff is the result of the man-made hydrologic modifications that normally accompany development. The addition of impervious surfaces, soil compaction, and tree and vegetation removal result in alterations to the movement of water through the environment. As interception, evapotranspiration, and infiltration are reduced and precipitation is converted to overland flow, these modifications affect not only the characteristics of the developed site but also the watershed in which the development is located. Stormwater has been identified as one of the leading sources of pollution for all waterbody types in the United States. Furthermore, the impacts of stormwater pollution are not static; they usually increase with more development and urbanization.”²⁸

Reducing the impact from the increased pollutant loads and flows generated by impervious surfaces added to a watershed is essential to protecting and restoring the integrity of the receiving waters. Provision E.3 includes the minimum “management practices, control techniques and system, design and engineering methods, and other such provisions where applicable” to be included in the “planning procedures...to reduce the discharge of pollutants...from areas of new development and significant redevelopment.” The requirements of Provision E.3 will 1) minimize the generation and discharge of pollutants in storm water from the MS4, and 2) minimize the potential of storm water discharges from causing altered flow regimes and excessive downstream erosion in receiving waters.

Provision E.3 is based on the requirements of the Fourth Term Permits for Orange County and Riverside County, and do not differ significantly from the Fourth Term Permit for San Diego County. Provision E.3 has been modified to allow the more holistic, long-term planning approach of the Water Quality Improvement Plan to be incorporated into each Copermittee’s development planning. The result will be greater pollutant removal from storm water runoff, and improvements and/or rehabilitation of the functionality and hydrologic regimes of a Watershed Management Area. Alternative compliance options have been included in Provision E.3, which will result in multiple beneficial outcomes within a jurisdiction, a subwatershed, a receiving water body, and/or a Watershed Management Area.

Incorporating a holistic and long-term planning approach into each Copermittee’s development planning program is essential to reducing the impact of development on receiving waters. Development projects that convert natural open space areas into

²⁸ USEPA, 2007. Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, December 2007.

urbanized areas result in the generation and discharge of pollutants associated with anthropogenic activities, and significant modifications to the hydrologic flow regimes. Both adversely affect the chemical, physical, and biological conditions of receiving waters. Redevelopment projects, on the other hand, are opportunities to reduce the generation of pollutants and restore more natural hydrologic flow regimes in areas of existing development, which can contribute toward restoring or rehabilitating the chemical, physical, and biological conditions of impacted and/or impaired receiving waters.

To improve the health and functionality of the receiving waters in a Watershed Management Area, planning and land use practices must change to reduce the various impacts due to hydromodification and pollutants associated with storm water runoff from developing and developed areas. Planning principles to preserve, enhance, and restore the functionality and hydrologic regimes were incorporated into the development planning provisions of all the Third and Fourth Term Permits within the San Diego Region. Provision E.3 of this Order focuses on mitigating the effects of development by continuing to include these principles, as well as promote the concept of utilizing storm water as a resource. By doing so, pollutants in storm water runoff generated within developing and developed areas will be treated more naturally, and storm water will be discharged to receiving waters at discharge rates that are not unnaturally erosive, thereby resulting in conditions that are more supportive of healthy and sustainable water bodies.

The requirements of Provision E.3.a are the minimum “*management practices, control techniques and system, design and engineering methods, and other such provisions where applicable*” to be included in the “*planning procedures...to reduce the discharge of pollutants...from areas of new development and significant redevelopment*” applicable to all development projects, regardless of size or purpose of development. These requirements are based on and consistent with the requirements for all development projects in the Fourth Term Permits for San Diego, Orange, and Riverside Counties (Order Nos. R9-2007-0001, R9-2009-0002, and R9-2010-0016, respectively). All development projects are required to implement source control BMPs that will minimize the generation of pollutants. Additionally, each development project must implement, where applicable and feasible, LID BMPs to mimic the natural hydrology of the site and retain and/or treat pollutants in storm water runoff prior to discharging to and from the MS4.

The LID Center defines LID as “*a comprehensive land planning and engineering design approach with a goal of maintaining and enhancing the pre-development hydrologic regime of urban and developing watersheds.*”²⁹ LID designs seek to control storm water at the source, using small-scale integrated site design and management practices to mimic the natural hydrology of a site, retain storm water runoff by

²⁹ www.lowimpactdevelopment.org

minimizing soil compaction and impervious surfaces, and disconnect storm water runoff from conveyances to the storm drain system.

LID BMPs may utilize interception, storage, evaporation, evapotranspiration, infiltration, and filtration processes to retain and/or treat pollutants in storm water before it is discharged from a site. Because of these numerous options, the San Diego Water Board expects that every development project will be able to implement some form of LID BMPs. Examples of LID BMPs include using permeable pavements, rain gardens, rain barrels, grassy swales, soil amendments, and native plants.

Provision [E.3.a](#) also includes requirements for all development projects to, where feasible, landscape with native and/or low water use plants to minimize the discharge of non-storm water discharges associated with excessive irrigation, as well as harvest (i.e., storage) and use precipitation to promote the concept of utilizing storm water as a resource.

While all development projects are subject to the requirements of Provision [E.3.a](#), Provision [E.3.b](#) identifies Priority Development Projects that exceed given size thresholds and/or fit under specific use categories. Priority Development Projects are required to incorporate specific performance criteria for structural BMPs incorporated into the project plan to reduce the generation of pollutants, and address potential impacts from hydromodification.

The Priority Development Project categories are based on the requirements of the Fourth Term Permits for Orange County and Riverside County (Order Nos. R9-2009-0002 and R9-2010-0016, respectively), and do not differ significantly from the Fourth Term Permit for San Diego County. Furthermore, the Priority Development Project categories are consistent with Santa Ana Water Board Order Nos. R8-2009-0030 and R8-2010-0033 (Orange County and Riverside County MS4 Permits, respectively), and Los Angeles Water Board Order No. R4-2010-0108 (Ventura County MS4 Permit).

Priority Development Projects generally include new development and significant redevelopment projects that can generate large amounts of pollutants, or have large areas of impervious surface that will contribute to adverse impacts in receiving waters. Placement of impervious surfaces within the environment not only generates and accumulates significant amounts of pollutants that will be transported in storm water runoff, but also drastically modifies the natural hydrologic processes within the watersheds.

Impervious surfaces do not allow natural infiltration and treatment of storm water runoff to take place. Instead, storm water runoff from impervious surfaces have typically been directed through pipes, curbs, gutters, and other hardscape into receiving waters, with little treatment at significantly increased volumes and accelerated flow rates over what would occur naturally. The increased pollutant loads, storm water volume, discharge rates and velocities, and discharge durations discharged from the MS4 adversely impacts the flora and fauna of receiving waters, and causes increased,

unnatural erosion and scouring within creek bed and banks. Placement of impervious surfaces also encapsulates “good” sediment (such as sand, gravel, rocks and cobbles) that would normally replenish creek beds and banks to help stabilize them.

This increased and unnatural erosion, which is caused by both altered storm water flow and altered sediment flow regimes, is largely responsible for degradation of creeks, streams, and associated habitats in the San Diego Region. In an ongoing study by the Stormwater Monitoring Coalition to assess the health of streams throughout Southern California, researchers found that three of the four highest risk stressors to creeks (percent sands and fines present, channel alteration, and riparian disturbance) were related to physical habitat.³⁰ Researchers studying flood frequencies in Riverside County have found that increases in watershed imperviousness of only 9-22 percent can result in increases in peak flow rates for the two-year storm event of up to 100 percent.³¹ Such changes in runoff have significant impacts on channel morphology.

In addition, a technical report issued by the Southern California Coastal Water Research Project (SCCWRP) stated that “[r]ecent studies indicate that California’s intermittent and ephemeral streams are more susceptible to the effects of hydromodification than streams from other parts of the United States. Physical degradation of stream channels in the central and eastern United States can initially be detected when watershed impervious cover approaches 10 percent, although biological effects (which may be more difficult to detect) may occur at lower levels. In contrast, initial response of streams in the semi-arid portions of California appears to occur between 3 and 5 percent impervious cover.”³² These studies highlight the extent to which impacts originating from impervious surfaces created by development are responsible for the degradation and hydromodification of creeks and streams.

Because the impact relatively small increases in impervious surfaces in a watershed can have on receiving waters, Provision [E.3.b.\(2\)\(g\)](#) has been updated to include large driveways. Although they generally do not carry heavy traffic, paved, impervious driveways that are 5,000 square feet or more create significant areas of impervious surface that contribute to altered flow regimes, and are also sometimes used for storage of motor vehicles that can generate significant amounts of pollutants.

The Copermittees have identified several types of projects that they assert would be cost prohibitive if they were categorized as Priority Development Projects, and would discourage development or redevelopment within their jurisdictions. Many of these types of projects may not pose a threat when considered individually. However, collectively and cumulatively, several of these projects would likely cause significant impacts to receiving waters if they were all located within a subwatershed, watershed,

³⁰ Assessing the Health of Southern California Streams, Stormwater Monitoring Coalition, Fact Sheet

³¹ Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection.

³² Stein, E. and Zaleski, S., 2005. Technical Report 475, Managing Runoff to Protect Natural Streams: The Latest Development on Investigation and Management of Hydromodification in California. December 30, 2005.

and/or Watershed Management Area. Thus, these types of development projects should be required to implement structural BMPs that Priority Development Projects are required to implement to be protective of water quality.

Provision [E.3.b.\(3\)](#), however, does provide exemptions for several of these types of development projects identified by the Copermittees from being defined as Priority Development Projects. Development projects that are not Priority Development Projects are not required to be included in the inventory of Priority Development Projects that must be maintained by each Copermittee pursuant to Provision [E.3.e.\(2\)](#). In addition, structural BMPs on development projects that are not Priority Development Projects are not required to be inspected pursuant to Provision [E.3.e.\(3\)](#). Inspections of development projects that are not Priority Development Projects, however, will be performed as part of the existing development inspections required pursuant to Provision [E.5.c](#).

The exemptions under Provision [E.3.b.\(3\)](#) are provided for development projects that meet certain conditions. The exemptions have been provided as an incentive for the Copermittees to encourage and promote the implementation of LID design concepts and green infrastructure and building principles. The conditions for allowing those exemptions have been included to provide an incentive for developers to implement LID design concepts and green infrastructure and building principles. Development projects that meet the conditions of Provision [E.3.b.\(3\)](#) are not expected to be cost prohibitive and also expected to be protective of water quality.

For development projects identified as Priority Development Projects, the requirements of Provision [E.3.c](#) are the minimum “*management practices, control techniques and system, design and engineering methods, and other such provisions where applicable*” to be included in the “*planning procedures...to reduce the discharge of pollutants...from areas of new development and significant redevelopment.*” Provisions [E.3.c.\(1\)-\(3\)](#) describe the performance criteria for the structural BMPs that must be implemented for each Priority Development Project defined by Provision [E.3.b](#).

Provisions [E.3.c.\(1\)-\(3\)](#) and emphasize preserving natural watershed hydrology by requiring retention of storm water and management of flows to maintain or mimic the natural hydrology of a site. The holistic and long-term planning approach of the Water Quality Improvement Plans is incorporated into Provisions [E.3.c.\(1\)-\(3\)](#) by encouraging the Copermittees to improve or rehabilitate watershed functionality and flow regimes with a combination of strategies.

Provision [E.3.c.\(1\)](#) describes the storm water pollutant control BMP requirements that must be implemented by all Priority Development Projects. The purpose of Provision [E.3.c.\(1\)](#) is to reduce pollutants in storm water runoff to the MEP from Priority Development Projects before it is discharged to the MS4. Of all the available treatment processes available, retention of storm water, and therefore capture of the pollutants in the storm water, will achieve 100 percent pollutant removal efficiency for

the volume of storm water retained. No other method of treatment can achieve 100 percent pollutant removal efficiency. Thus, retention of as much storm water onsite is the most effective way to reduce pollutants in storm water discharges to and from the MS4, and controls pollutants in storm water discharges from a site to the MEP.

Under Provision [E.3.c.\(1\)\(a\)\(i\)](#), retention of the 85th percentile storm event is the default design standard that Priority Development Projects must use to implement to mimic the pre-development retention volume (“design capture volume”). Since the 85th percentile storm event has previously been used as the numeric design standard for treatment control BMPs, the same size storm event has been applied as the numeric design standard for the storm water pollutant control BMP requirements. This is consistent with the Fourth Term Permits for Orange County and Riverside County (Order Nos. R9-2009-0002 and R9-2010-0016, respectively), as well as Santa Ana Water Board Order Nos. R8-2009-0030 and R8-2010-0033 (Orange County and Riverside County MS4 Permits, respectively), and Los Angeles Water Board Order No. R4-2010-0108 (Ventura County MS4 Permit).

The 85th percentile storm event is the event that has a precipitation total greater than or equal to 85 percent of all storm events over a given period of record in a specific area or location. For example, to determine what the 85th percentile storm event is in a specific location, all 24 hour storms that have recorded values over a 30 year period would be tabulated and a 85th percentile storm would be determined from this record (i.e., 15 percent of the storms would be greater than the number determined to be the 85th percentile storm). Most jurisdictions in the San Diego Region have already developed isopluvial maps that can provide this type of information. The 85th percentile storm might be determined to be a number such as 1.0 inch, and this would be multiplied by the total area of the project footprint to calculate the design capture volume. The Priority Development Project designer would then select a system of BMPs that would retain (i.e. intercept, infiltrate, store, evaporate, evapotranspire, or harvest and use) the design capture volume, based on the 85th percentile storm event, onsite.

Retention of all storm water and all pollutants in storm water onsite for the 85th percentile storm event, however, may not always mimic the natural pre-development retention volume. Retention of the volume generated by the 85th percentile storm event also may not be practical, nor desirable, as storm water flows are a necessary component of the natural hydrologic processes in a watershed.

The optimum amount of storm water retained onsite would mimic the pre-development retention volume of the project site. Mimicking the pre-development retention volume is an approach USEPA allows for federal development projects. USEPA issued guidance on implementing storm water runoff requirements for federal projects that requires the retention of the 95th percentile storm event as the default design standard

to mimic the pre-development hydrology of a project site.³³ The USEPA guidance also provided an option to develop a site-specific design standard. Similar to the USEPA guidance for federal facilities, Provision [E.3.c.\(1\)\(a\)\(ii\)](#) provides an option to develop a site specific design capture volume that would mimic the pre-development retention volume of the project site.

Retention BMPs will be designed to capture a specific volume, and may take some time for the intercepted or captured storm water to infiltrate, evaporate, evapotranspire, or be used. Retention of the design capture volume, however, will capture and retain a significant portion of the pollutants generated and accumulated on a Priority Development Project. In a recent study performed by SCCWRP in the Los Angeles Region, they found *“that the magnitude of constituent load associated with storm water runoff depends, at least in part, on the amount of time available for pollutant build-up on land surfaces. The extended dry period that typically occurs in arid climates such as southern California maximizes the time for constituents to build-up on land surfaces, resulting in proportionally higher concentrations and loads during initial storms of the season.”*³⁴ This implies that the “first flush” of a rainy season and the first storm events after long antecedent dry periods tend to have the highest pollutant loads. Capturing and retaining the pollutant loads of the “first flush” of a rainy season and the first storm events after long antecedent dry periods will reduce a significant portion of the pollutants in storm water discharged to and from the MS4.

The San Diego Water Board, however, acknowledges that in some situations retaining the design capture volume fully onsite may not be technically feasible, may be cost prohibitive, or may not provide any overall water quality benefits to the Watershed Management Area. Thus, Provision [E.3.c.\(1\)\(b\)](#) allows for the use of a combination of onsite retention BMPs, and alternative compliance options described in Provision [E.3.c.\(3\)](#). Provision [E.3.c.\(3\)](#) is discussed in more detail below.

If the design capture volume is not retained onsite because the Priority Development Project is allowed to implement alternative compliance options, the pollutants in the portion of the design capture volume not reliably retained onsite must still be reduced to the MEP. Thus, flow-thru conventional treatment control BMPs are required to be implemented on Priority Development Projects in addition to the retention BMPs and/or biofiltration BMPs. The requirements of Provision [E.3.c.\(1\)\(c\)](#) include the performance standards for flow-thru conventional treatment control BMPs, consistent with the Fourth Term Permits in the San Diego Region.

Where the purpose of the requirements under Provision [E.3.c.\(1\)](#) is to reduce pollutants in storm water runoff to the MEP, the purpose of the requirements under Provision [E.3.c.\(2\)](#) is to maintain or restore more natural hydrologic flow regimes to

³³ USEPA, 2009. Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act, EPA 841-B-09-001. December 2009.

³⁴ Stein, E.D., Tiefenthaler, L.L., and Schiff, K.C., 2007. Technical Report 510, Sources, Patterns and Mechanisms of Storm Water Pollutant Loading from Watershed and Land Uses of the Greater Los Angeles Area, California, USA. March 20, 2007.

prevent increased, unnatural erosion in downstream receiving waters to the MEP. Provision [E.3.c.\(2\)](#) describes hydromodification management BMP requirements that must be implemented by all Priority Development Projects.

The development planning requirements under the Fourth Term Permits required the Copermittees in San Diego County, Orange County, and Riverside County to develop Hydromodification Management Plans (HMPs). Because the Copermittees have already developed HMPs, there is no longer a requirement to develop these plans. The Copermittees in each county, however, must update to their respective HMPs, as needed, to incorporate the hydromodification management BMP requirements of Provision [E.3.c.\(2\)](#).

The performance criteria for the implementation of hydromodification management BMPs on Priority Development Projects are consistent with the requirements in the Fourth Term Permits for Orange and Riverside Counties (Order Nos. R9-2009-0002 and R9-2010-0016, respectively). Modifications to the Orange County and Riverside County HMPs will likely be minor, or may not be necessary. The HMP for San Diego County, however, will likely require some modifications to incorporate the requirements of Provision [E.3.c.\(2\)](#) and become consistent with the Orange County and Riverside County HMPs. The San Diego Water Board does not, however, expect that it will be necessary for the San Diego County Copermittees to develop a new approach or significantly re-write the San Diego County HMP.

Provision [E.3.c.\(2\)\(a\)](#) requires that post-project flow rates and durations mimic the *pre-development* condition, and not the *pre-project* condition of the Fourth Term San Diego County Permit. This includes assuming artificially hardened channels receiving storm water discharges from a Priority Development Project have the characteristics of a natural stream segment similar to that found in the watershed. Provision [E.3.c.\(2\)\(a\)](#) will primarily apply to redevelopment projects and artificially hardened channels, whose pre-project conditions have already significantly altered the natural hydrologic regime. This will allow more natural hydrologic flow regimes to eventually be restored in the developed areas of the Watershed Management Areas, which can in turn allow hydromodified streams and creeks to eventually be restored or rehabilitated.

Provision [E.3.c.\(2\)\(b\)](#) requires hydromodification management BMPs to compensate for sediment loss in cases where the development would cause loss of sediment supply as a result of the project. Maintaining the pre-development flows and durations from a Priority Development Project will significantly reduce the potential for increased erosion caused by development. Loss of natural sediment because pervious areas covered by the impervious surfaces on the Priority Development Project, however, can still cause increased, unnatural erosion in receiving waters. Runoff that is discharged from a Priority Development Project that lacks sediment becomes “sediment hungry” and can result in increased erosion upstream and downstream from the point of discharge.

The San Diego Water Board recognizes that in some situations implementing the hydromodification management BMP requirements fully onsite may not be technically feasible, may be cost prohibitive, or may not provide any overall water quality benefits to the Watershed Management Area. Thus, Provision [E.3.c.\(2\)\(c\)](#) allows for the use of a combination of onsite hydromodification management BMPs and alternative compliance options described in Provision [E.3.c.\(3\)](#). The San Diego County Copermittees may incorporate the alternative compliance options into their HMP. Provision [E.3.c.\(3\)](#) is discussed in more detail below.

Finally, Provision [E.3.c.\(2\)\(d\)](#) allows Priority Development Projects to be exempt from the hydromodification management BMP requirements under Provisions [E.3.c.\(3\)\(a\)-\(b\)](#) if a limited set of conditions are met.

Provision [E.3.c.\(3\)](#) describes the alternative compliance options that each Copermittee may allow Priority Development Projects within its jurisdiction to utilize to meet the structural BMP performance criteria of Provisions [E.3.c.\(1\)](#) and [E.3.c.\(2\)](#). Such allowances are not required and are at the discretion of each Copermittee. Provision [E.3.c.\(3\)](#) was included because the San Diego Water Board recognizes that various site specific conditions can make complying with the structural BMP performance criteria requirements fully onsite difficult or impractical, and implementing the alternative compliance options can potentially realize or achieve greater water quality benefits for the Watershed Management Area.

Provision [E.3.c.\(3\)\(a\)](#) includes the conditions that must be met for a Copermittee to allow a Priority Development Project to utilize the alternative compliance options to comply with the structural BMP performance criteria of Provisions [E.3.c.\(1\)](#) and [E.3.c.\(2\)](#). Priority Development Projects that cannot comply with the requirements of Provision [E.3.c.\(3\)\(a\)](#) must be required by the Copermittee to comply with the requirements of Provisions [E.3.c.\(1\)](#) and [E.3.c.\(2\)](#) fully onsite.

Provisions [E.3.c.\(3\)\(b\)-\(d\)](#) describe the alternative compliance options that the Copermittee may develop and/or allow to be implemented by Priority Development Projects. The descriptions include the conditions that must be met for the alternative compliance option to be allowed to be utilized by a Priority Development Project. For the alternative compliance project options under Provision [E.3.c.\(3\)\(b\)](#), the descriptions also specify if the alternative compliance options may only be implemented to comply with the storm water pollutant control BMP requirements of Provision [E.3.c.\(1\)](#), hydromodification management BMP requirements of Provision [E.3.c.\(2\)](#), or both.

Provisions [E.3.c.\(4\)](#) and [E.3.c.\(5\)](#) were included under the BMP requirements applicable to all development projects in the Fourth Term Permits for San Diego, Orange, and Riverside Counties (Order Nos. R9-2007-0001, R9-2009-0002, and R9-2010-0016, respectively). In this Order, the long-term BMP maintenance and infiltration and groundwater protection requirements were move under the structural

BMP performance requirements of Provision [E.3.c](#) and only apply to structural BMPs implemented by Priority Development Projects.

Provision [E.3.d](#) requires the Copermittees to update their BMP Design Manual as needed to incorporate the requirements of Provision [E.3](#). The BMP Design Manual is formerly known as the Standard Storm Water Mitigation Plan, or SSMP, and was renamed so that the title has a more accurate description of the document content. The contents of the BMP Design Manual are largely unchanged from the previous Standard Storm Water Mitigation Plans required under the Fourth Term Permits. The BMP Design Manual fulfills the 40 CFR 122.26(d)(2)(iv)(A)(2) requirement that the Copermittee's development planning program includes "*a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal storm sewers which receive discharges from areas of new development and significant redevelopment.*"

As part of the "*planning procedures*", 40 CFR 122.26(d)(2)(iv)(A)(2) requires the procedures to "*address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed.*" The requirements applicable to the implementation and oversight of structural BMPs at Priority Development Projects are provided under Provision [E.3.e](#).

Proper installation of the structural BMPs approved for a Priority Development Project is necessary to ensure that pollutants in storm water discharges will be reduced to the MEP after the project is completed. In addition to the proper installation of structural BMPs, the maintenance of structural BMPs on Priority Development Projects is necessary to ensure that pollutants in storm water discharges will continue to be reduced to the MEP. Provision [E.3.e.\(1\)](#) includes the minimum requirements that each Copermittee must implement to ensure structural BMPs are properly installed and will be properly maintained.

The requirements under Provision [E.3.e.\(2\)-\(3\)](#) are necessary to demonstrate each Copermittee is implementing a program that complies with Provisions [E.3.b-c](#) and [E.3.e.\(1\)](#), and ensure structural BMPs at Priority Development Project will continue to be able to reduce pollutants in storm water discharges to the MEP.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient "*legal authority to control discharges to the municipal separate storm sewer system.*" Where enforcement is necessary for any development projects to compel compliance with the requirements of Provision [E.3](#) and ensure the pollutants in storm water discharges from the MS4 are reduced and continue to be reduced to the MEP, Provision [E.3.f](#) requires each Copermittee to enforce its legal authority established pursuant to Provision [E.1](#), and in accordance with its Enforcement Response Plan required to be developed pursuant to Provision [E.6](#).

Finally, Provision [E.3.g](#) requires the Copermittee to include the strategies and/or activities identified in the Water Quality Improvement Plan that the Copermittee will

implement as part of the development planning program within its jurisdiction. The Water Quality Improvement Plan is expected to include several strategies and options that the Copermittee can and should implement within its jurisdiction. The Copermittee is expected to describe and provide the details of when, where, and how those strategies will be implemented within its jurisdiction.

Provision [E.3.g](#) specifically requires the Copermittee to identify areas within its jurisdiction where Priority Development Projects may be allowed or should be encouraged to implement or contribute toward the implementation of alternative compliance retrofitting and/or stream, channel, or habitat rehabilitation projects. This requirement has been included to promote and encourage cooperation between the Copermittees and the development community to implement projects that can reduce pollutants in storm water runoff from areas of existing development, and stabilize or rehabilitate channels, stream and/or habitats that have been hydromodified because of existing development.

Furthermore, Provision [E.3.g](#) encourages the Copermittee to collaborate and cooperate with other Copermittees and/or entities in the Watershed Management Area to identify regional alternative compliance projects that Priority Development Projects may be allowed or should be encouraged to implement or participate in implementing. This requirement has been included to promote and encourage more collaboration and coordination, as well as long term planning, among Copermittees and other entities in the Watershed Management Area.

The San Diego Water Board will utilize the information provided in the jurisdictional runoff management program document pursuant to Provision [E.3.g](#) to gauge and assess the Copermittee's efforts in trying to address the highest priority water quality conditions identified in the Water Quality Improvement Plan within its jurisdiction.

Provision E.4 (Construction Management) requires each Copermittee to implement a construction management program to control and reduce the discharge of pollutants in storm water from construction sites to the MEP. Proper implementation of the construction management program will also contribute toward effectively prohibiting non-storm water discharges from construction sites to the MS4.

Pursuant to 40 CFR 122.26(d)(2)(iv), each Copermittee is required to implement a *“management program...to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and other such provisions where applicable.”* As part of the management program, 40 CFR 122.26(d)(2)(iv)(D) requires *“a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system.”*

Construction sites can be significant sources of sediment, trash, and other pollutants to receiving waters. Although sediment is naturally occurring in the natural

environment, the discharge of sediment under unnatural conditions is problematic to receiving waters. Fine sediment in creeks causes high turbidity that interferes with the functionality of native flora and fauna in local creeks. For example, turbidity interferes with both photosynthesis of water-philic plants, as well as successful foraging and reproduction of benthic macroinvertebrates. Sediment can also make it difficult for fish to breathe because it clogs fish gills. Other pollutants such as heavy metals or pesticides can adhere to sediment and are transported to receiving waters during storm events, where they dissolve in the water column and become bioavailable to aquatic organisms. Sediment is recognized as a major stressor to surface waters and is responsible for the impairment of several lagoons and creeks in the San Diego Region.

Provision [E.4](#) includes requirements that each Copermittee must implement to minimize the discharge of sediment and other pollutants from construction sites to the MS4 within its jurisdiction. The requirements under Provision [E.4](#) are consistent with the Fourth Term Permits for San Diego, Orange, and Riverside Counties. Therefore, Copermittees are expected to implement the requirements seamlessly, with minimal changes to their existing construction management programs. The Copermittees, however, are given more flexibility to run their programs as needed to maximize efficiency, and also to be consistent with the Water Quality Improvement Plan for the Watershed Management Area.

As part of the construction management program, 40 CFR 122.26(d)(2)(iv)(D)(1) requires “*procedures for site planning which incorporate consideration of potential water quality impacts.*” Provision [E.4.a](#) describes the minimum elements each Copermittee is required to include as part of the construction site planning and project approval process. The construction site planning and approval process is based primarily on ensuring each project had an adequate site-specific pollution control, construction BMP, and/or erosion and sediment control plan that will be implemented to minimize the discharge of pollutants in storm water to the MEP, and minimize impacts to receiving waters.

The requirements under Provision [E.4.b](#) provide the data and information necessary to identify “*priorities for inspecting sites and enforcing control measures*” required pursuant to 40 CFR 122.26(d)(2)(iv)(D)(3). Under Provision [E.4.b](#), each Copermittee must identify construction sites that are considered a high threat to downstream surface waters. Designation of “high threat to water quality” construction sites will necessitate the Copermittees to develop criteria to identify such sites. Provision [E.4.b.\(2\)](#) describes a list of factors that must be considered when the Copermittee considers threat to water quality. For example, a Copermittee must identify sites as “high threat to water quality” if it is located within a hydrologic subarea where sediment is known or suspected to contribute to the highest priority water quality conditions, according to the Water Quality Improvement Plan. This ensures that construction management program implementation is compatible with the Copermittee’s identified highest priority water quality conditions.

Pursuant to 40 CFR 122.26(d)(2)(iv)(D)(2) each Copermittee is required describe “*requirements for nonstructural and structural best management practices*” at construction sites. Provision E.4.c includes the types of construction site BMPs that the Copermittees must implement, or require the implementation of, at each construction site to reduce pollutants in storm water discharges to the MEP.

Each Copermittee is expected to require the implementation of appropriate BMPs given specific site conditions, the season and likelihood of rain events, and construction phase (i.e. grading vs. vertical construction). This means that throughout the life of the project construction, the appropriate BMPs will vary, especially if the construction of the project spans multiple wet seasons. As opposed to describing specific minimum BMPs that must be implemented, the Order describes major BMP categories that should be considered for each site.

Each Copermittee is expected to use its 20 years of storm water experience and knowledge to require implementation of appropriate BMPs from the various categories at each construction site within its jurisdiction. For example, the San Diego Water Board expects that each site will be required to implement erosion control and sediment control at each construction site. The San Diego Water Board also expects each Copermittee to require implementation of active/passive sediment treatment systems at sites where other BMPs have been tried and are known to be inadequate, and discharges of sediment are causing or contributing to water quality impairment downstream. Each Copermittee is granted flexibility in specifying the minimum level of BMP requirements at each site, but the San Diego Water Board expects each site to be capable of controlling pollutants in storm water discharges to the MEP and preventing illicit discharges.

The requirements under Provision E.4.d are necessary to demonstrate that each Copermittee is implementing a program that complies with Provisions E.4.a and E.4.c and ensure BMPs at construction sites will reduce pollutants in storm water discharges to the MEP.

Provision E.4.d does not include minimum required inspection frequencies for construction sites. Each Copermittee must use its experience and knowledge to specify an appropriate inspection frequency for both high priority and lower priority sites in their jurisdictional runoff management program documents, and in accordance with the Water Quality Improvement Plan. Appropriate inspection frequencies may vary by Copermittee, but the San Diego Water Board expects that the stated frequency will be adequate for each Copermittee to properly oversee the construction sites within its jurisdiction, confirm BMPs are implemented to reduce pollutants in storm water discharges from constructions sites to the MEP, and make needed changes to its program on an ongoing basis as necessary.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient “*legal authority to control discharges to the municipal separate storm sewer system.*” Where enforcement is necessary for any development projects

to compel compliance with the requirements of Provision E.4 and ensure the pollutants in storm water discharges from the MS4 are reduced and continue to be reduced to the MEP, Provision E.4.e requires each Copermittee to enforce its legal authority established pursuant to Provision E.1, and in accordance with its Enforcement Response Plan required to be developed pursuant to Provision E.6.

Finally, Provision E.4.f requires the Copermittee to include the strategies and/or activities identified in the Water Quality Improvement Plan that the Copermittee will implement as part of the construction management program within its jurisdiction. The Water Quality Improvement Plan is expected to include several strategies and options that the Copermittee can and should implement within its jurisdiction. The Copermittee is expected to describe and provide the details of when, where, and how those strategies will be implemented within its jurisdiction.

The San Diego Water Board will utilize the information provided in the jurisdictional runoff management program document pursuant to Provision E.4.f to gauge and assess the Copermittee's efforts in trying to address the highest priority water quality conditions identified in the Water Quality Improvement Plan within its jurisdiction.

Provision E.5 (Existing Development Management) requires each Copermittee to implement an existing development management program to control and reduce the discharge of pollutants in storm water from areas of existing development to the MEP. Proper implementation of the existing development management program will also contribute toward effectively prohibiting non-storm water discharges from areas of existing development to the MS4.

Pursuant to 40 CFR 122.26(d)(2)(iv), each Copermittee is required to implement a "*management program...to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and other such provisions where applicable.*" Within 40 CFR 122.26(d)(2)(iv)(A) and (C), the management program is required to reduce impacts on receiving waters and reduce pollutants in storm water discharges to the MEP from commercial and residential areas, industrial facilities, and municipal facilities.

Commercial and residential areas, industrial facilities, and municipal facilities must be addressed by each Copermittee with the existing development management program required under Provision E.5. All other areas within each Copermittee's jurisdiction should be either undeveloped open space, or areas that are being developed or under construction. Areas being developed or under construction will be addressed by the Copermittee under the requirements of Provision E.3 (Development Planning) or Provision E.4 (Construction Management).

Areas of existing development typically include impervious surfaces such as sidewalks, driveways, roads, and rooftops, which generate and concentrate pollutants (such as pesticides, petroleum hydrocarbons, heavy metals, and pathogens) that are otherwise not found in high concentrations in the natural environment. Pollutants that

accumulate on impervious surfaces are not easily biodegraded or not subject to natural treatment processes. When it rains, these pollutants are transported in storm water runoff from these impervious surfaces into receiving waters, resulting in poor water quality and degradation of beneficial uses.

In addition to the generation of pollutants, areas of existing development have generally altered the natural conditions of the land and removed vegetative cover, reduced the perviousness of the surface, and reduced the capacity of storm water that can be intercepted, captured, stored, infiltrated, evaporated, and/or evapotranspired. The alteration of the natural conditions and the impervious surfaces associated with areas of existing development causes water quality problems due to the alteration of natural flow regimes within the watersheds, resulting in hydromodification of channels, streams and habitats that exist within or adjacent to areas of existing development.

Thus, storm water discharges from areas of existing development are responsible for poor water quality, degraded habitats, and hydromodified channels throughout the developed portions of the watersheds in the San Diego Region. To improve the health and functionality of the receiving waters in a Watershed Management Area, land use practices and the amount of impervious surfaces in areas of existing development must change to reduce the various impacts caused by hydromodification and pollutants from storm water runoff generated in developed areas. Each Copermittee must be aggressive in tackling pollutant sources and runoff from areas of existing development to be able to reduce pollutants in storm water discharges from the MS4 to the MEP.

There is some overlap in the requirements under Provision E.5 with the requirements under Provisions E.2 (Illicit Discharge Detection and Elimination), E.3 (Development Planning), and E.4 (Construction Management). Illicit discharges frequently originate from areas of existing development. New development projects, when completed will become some type of residential, commercial, industrial or municipal existing development. Redevelopment projects are, by definition, redeveloping areas of existing development. And, redevelopment projects become construction sites located in areas of existing development. Much of the data and information collected, inspections performed, and enforcement actions taken for the requirements under Provisions E.2 to E.4 may also be utilized by the existing development management program. The requirements under Provision E.5, however, are focused primarily on reducing pollutants generated in areas of existing development that can be transported in storm water runoff and discharged to and from the MS4.

The requirements under Provision E.5 build upon existing program elements being implemented by the Copermittees. Provision E.5 is generally consistent with the existing development requirements of the Fourth Term Permits for Orange and Riverside Counties (Order Nos. R9-2009-0002 and R9-2010-0016, respectively), but modified to provide more flexibility to implement the programs so resources can be better focused toward addressing the highest priority water quality conditions identified in the Water Quality Improvement Plans.

For a Copermittee to properly manage areas of existing development, having knowledge of what development exists within its jurisdiction is essential. The requirements under Provision [E.5.a](#) for each Copermittee to maintain a watershed-based inventory of all the existing development within its jurisdiction are necessary for each Copermittee to implement the requirements of Provision [E.5.b-e](#).

As opposed to just maintaining separate inventories based on the type of site, each Copermittee must maintain a watershed-based inventory that includes all types of existing development within its jurisdiction. By utilizing a watershed-based inventory, the Copermittees within a Watershed Management Area can combine their inventories and review the inventories by watershed in addition to by jurisdiction. Pollutant sources and strategies for abatement can then be evaluated on a watershed level, as opposed to evaluating sources and strategies strictly by type of site.

Provision [E.5.a](#) includes the information that must be included in the inventory. Provision [E.5.a.\(1\)](#) specifies what facilities or areas must be included in the inventory. A commercial type of existing development may be identified in the inventory as a facility (e.g. individual building, individual business) or an area (e.g. shopping center, commercial zone). An industrial type of existing development must be identified in the inventory by facility (e.g. individual industrial entity). A municipal type of existing development must be identified in the inventory by facility, with a list of specific municipal facilities that must be included in the inventory. A residential type of existing development must be identified by areas to be designated by the Copermittee. For each of the facilities and areas identified in the Copermittee's inventory developed pursuant to Provision [E.5.a.\(1\)](#), Provision [E.5.a.\(2\)](#) specifies the information that must be included in the description for the facility or area.

Provision [E.5.a.\(3\)](#) requires each Copermittee to maintain an updated map showing the location of inventoried existing development, watershed boundaries, and water bodies. This requirement was included because this information is expected to help the Copermittees in a Watershed Management Area identify and prioritize sources of pollutants and/or stressors in areas of existing development that contribute toward the highest priority water quality conditions identified in the Water Quality Improvement Plans.

Knowledge of the sources of existing development likely contributing to the highest priority water quality conditions is expected to be a key element in the Copermittees' development of the water quality improvement strategies that will be included in the Water Quality Improvement Plans. The strategies described in the Water Quality Improvement Plans will direct the existing development management programs implemented by each Copermittee.

Pursuant to 40 CFR 122.26(d)(2)(iv)(A) each Copermittee is required describe "*structural and source control measures to reduce pollutants*" in storm water runoff discharged from areas of existing development. Provision [E.5.b](#) includes the BMP

implementation and maintenance requirements that the each Copermittee must require at areas of existing development to reduce pollutants in storm water discharges to the MEP. The San Diego Water Board, however, recognizes that BMP implementation and maintenance for residential areas will require much more education and encouragement through less authoritative measures than for commercial, industrial and municipal facilities and areas. Thus, the BMP implementation and maintenance requirements have been separated between requirements under Provision [E.5.b.\(1\)](#) for commercial, industrial and municipal facilities and areas, and Provision [E.5.b.\(2\)](#) for residential areas.

Most of the requirements in Provision [E.5.b](#) are consistent with the related requirements in the Fourth Term Permits. The level of specificity, however, has been changed to allow each Copermittee the flexibility to implement its program to achieve maximum efficiency, and to perform functions that will address the highest priority water quality conditions identified in the Water Quality Improvement Plans.

Each Copermittee is expected to require the implementation of appropriate BMPs to address the expected pollutants from each facility or area. The Third and Fourth Term Permits described specific minimum BMPs that must be implemented at various sites. This Order, however, requires each Copermittee to designate minimum BMPs themselves and require implementation. Consistent with the Fourth Term Permits, each Copermittee is required to maintain, or require the maintenance of, all BMPs as needed.

The BMP implementation and maintenance requirements include a schedule of operation and maintenance activities for the MS4 and related structures (such as catch basins, storm drain inlets, and detention basins), as well as public streets and roads. Public streets and roads specifically include public unpaved roads. The San Diego Water Board identified, through investigations and complaints, sediment discharges from unpaved roads as a significant source of water quality problems in the San Diego Region. Enforcement and inspection activities conducted by the San Diego Water Board since the Third Term Permits were issued have found a lack of source control for many unpaved roads within the jurisdiction of the Copermittees.

Unpaved roads are a source of sediment that can be discharged in runoff to receiving waters, especially during storm events. Erosion of unpaved roadways occurs when soil particles are loosened and carried away from the roadway base, ditch, or road bank by water, wind, traffic, or other transport means. Exposed soils, high runoff velocities and volumes, sandy or silty soil types, and poor compaction increase the potential for erosion.

Road construction, culvert installation, and other maintenance activities can disturb the soil and drainage patterns to streams in undeveloped areas, causing excess runoff and thereby erosion and the release of sediment. Poorly designed unpaved roads can act as preferential drainage pathways that carry runoff and sediment into natural streams, impacting water quality. In addition, other public works activities along

unpaved roads have the potential to significantly affect sediment discharge and transport within streams and other waterways, which can degrade the beneficial uses of those waterways.

USEPA also recognizes that discharges from unpaved roads pose a significant potential threat to water quality. USEPA guidance³⁵ emphasizes the threat of unpaved roads to water quality:

“Dirt and gravel roads are a major potential source of these pollutants [sediment] and pollutants that bind to sediment such as oils, nutrients, pesticides, herbicides, and other toxic substances. Many roads have unstable surfaces and bases. Roads act like dams, concentrating flows that accelerate erosion of road materials and roadsides. Both unstable surfaces and accelerated erosion then lead to sediment and dust.”

There are several guidance documents, developed by the USEPA,³⁶ the US Forest Service,³⁷ the University of California,³⁸ and others, that include design and construction specifications and BMPs that are readily available for implementation by public entities. Implementing design and other source control BMPs for unpaved roads in the region is necessary to reduce and minimize the impacts of sediment discharged during storm events from unpaved roads to the MS4s and receiving waters.

Provision E.5.c describes existing development site inspection frequency, content, and tracking that each Copermittee must incorporate into their existing development management programs. The requirements under Provision E.5.c are necessary to demonstrate each Copermittee is implementing a program that complies with Provision E.5.b and ensure BMPs implemented in areas of existing development will reduce pollutants in storm water discharges to the MEP. Provision E.5.c has been modified to include a minimum of once every 5 years for all inventoried facilities and areas of existing development, utilizing one or more methods of inspection.

In addition to onsite inspections, the methods of inspection have been expanded to include drive-by inspections. Inspections may be performed by the Copermittee’s municipal and contract staff, or by volunteer monitoring or patrol programs. Volunteer monitoring or patrol programs are not expected to enforce the Copermittee’s ordinances, or to inspect areas or facilities where members of the public are not allowed access. Volunteer monitoring or patrol programs must be trained by the Copermittee, and are only expected to collect visual observations. By utilizing drive-by inspections and volunteer monitoring or patrol programs, the Copermittees will be able

³⁵ USEPA, 2006. Environmentally Sensitive Maintenance for Dirt and Gravel Roads. Gesford and Anderson, USEPA-PA-2005.

³⁶ Ibid

³⁷ US Forest Service, 1996. Forest Service Specifications for Construction of Roads & Bridges. EM-7720-100. Revised August 1996.

³⁸ University of California Division of Agriculture and Natural Resources, 2007. Rural Roads: A Construction and Maintenance Guide of California Landowners. Publication 8262.

to maximize and efficiently use their resources to identify and address sources of pollutants in areas of existing development.

The municipal and contract staff of each Copermittee must annually perform onsite inspections of an equivalent of at least 20 percent of the commercial, industrial, and municipal facilities and areas in its inventoried existing development pursuant to Provision [E.5.c.\(1\)\(a\)\(iv\)](#). An “equivalent” of at least 20 percent means if any commercial, industrial, or municipal facilities or areas require multiple onsite inspections during any given year, those additional inspection may count toward the total annual inspection requirement. Linear municipal facilities (i.e., MS4, streets, roads and highways) in the Copermittee’s existing development inventory are not subject to the inspection frequency requirement of Provision [E.5.c.\(1\)\(a\)\(iv\)](#).

The inspection content specified in Provision [E.5.c.\(2\)\(a\)](#) includes the information required to be collected during an inspection by any method. The inspection content specified in Provision [E.5.c.\(2\)\(a\)](#) includes additional information that must be collected when a Copermittee’s municipal or contract staff perform an onsite inspection. Provision [E.5.c.\(3\)](#) specifies the information that each Copermittee must maintain in its existing development inspection records.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient “*legal authority to control discharges to the municipal separate storm sewer system.*” Where enforcement is necessary to compel compliance with the requirements of Provision [E.5](#) and ensure the pollutants in storm water discharges from the MS4 are reduced and continue to be reduced to the MEP, Provision [E.5.d](#) requires each Copermittee to enforce its legal authority established pursuant to Provision [E.1](#), and in accordance with its Enforcement Response Plan required to be developed pursuant to Provision [E.6](#).

Finally, Provision [E.5.e](#) requires the Copermittee to include the strategies and/or activities identified in the Water Quality Improvement Plan that the Copermittee will implement as part of the existing development management program within its jurisdiction. The Water Quality Improvement Plan is expected to include several strategies and options that the Copermittee can and should implement within its jurisdiction. The Copermittee is expected to describe and provide the details of when, where, and how those strategies will be implemented within its jurisdiction.

Provisions [E.5.e.\(2\)-\(3\)](#) specifically require the Copermittee to identify areas of existing development as candidates for retrofitting, and streams, channels, and/or habitats as candidates for rehabilitation. Provisions [E.5.e.\(2\)-\(3\)](#) are based on the retrofitting requirements of the Fourth Term Permits for Orange and Riverside Counties, but modified to also include identifying projects to rehabilitate channels within areas of existing development. The requirements have also been modified to be more focused on utilizing these types of projects for addressing the highest priority water quality conditions identified in the Water Quality Improvement Plans.

Interest and opportunity to retrofit areas of existing development and rehabilitate channels located in areas of existing development has been observed in several programs the San Diego Water Board oversees (e.g., CWA Section 401 Water Quality Certification program, supplemental environmental projects, and grant programs). Each jurisdiction has miles and miles of streets that could be retrofitted to become green streets. Reshaping landscaped areas from convex to concave configurations can detain storm water instead of directing runoff as quickly as possible to the MS4. Retrofit projects could also include simply replacing impervious surfaces with permeable surfaces.

Retrofitting projects do not necessarily have to be expensive. Retrofitting projects could be as simple as redirecting downspouts from roofs to pervious or landscaped areas instead of to hardscaped areas discharging directly to the MS4, providing rain barrels to harvest storm water from downspouts for use at a later time, or planting more trees in areas with little vegetation to provide canopy that can intercept storm water. The San Diego Water Board encourages the Copermittees to identify simple, low-cost retrofitting opportunities that can be easily implemented, in addition to other more expensive retrofitting and channel rehabilitation projects.

Rehabilitation of channels, streams, and/or habitat will require more significant planning and resources to implement. There are, however, also abundant opportunities to rehabilitate channels, streams and/or habitats in or adjacent to areas of existing development. Each Watershed Management Area likely has several creeks and stream reaches that have been undergrounded, artificially hardened, or hydromodified that could be rehabilitated to be more sustainably configured, which would slow down storm water flows and potentially have more assimilative capacity for pollutants while still being supportive of designated beneficial uses.

The San Diego Water Board recognizes that it may be infeasible to implement retrofitting or channel rehabilitation projects within certain areas of a Copermittee's jurisdictions. For such areas, the Copermittee must instead identify, develop, and implement regional retrofitting and channel rehabilitation projects (i.e. projects that can retain and/or treat storm water from one or more areas of existing development) adjacent to and/or downstream of the areas of existing development.

Provisions [E.5.e.\(2\)-\(3\)](#) do not require the implementation of retrofitting and rehabilitation projects, but do require the Copermittee to develop a strategy to facilitate the implementation of these types of projects in areas of existing development. The strategy is expected to include allowing and encouraging Priority Development Projects to implement these types of projects to comply with the structural BMP performance criteria requirements of Provisions [E.3.c.\(1\)](#) and [E.3.c.\(2\)](#).

The San Diego Water Board will utilize the information provided in the jurisdictional runoff management program document pursuant to Provision [E.5.e](#) to gauge and assess the Copermittee's efforts in trying to address the highest priority water quality conditions identified in the Water Quality Improvement Plan within its jurisdiction.

Provision E.6 (Enforcement Response Plans) requires each Copermittee to develop an Enforcement Response Plan as part of its jurisdictional runoff management program document. Proper implementation of the Enforcement Response Plans is necessary to effectively prohibit non-storm water discharges to the MS4, and reduce the discharge of pollutants in storm water from the MS4 to the MEP.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient “*legal authority to control discharges to the municipal separate storm sewer system*” and be able to demonstrate that it can “*operate pursuant to legal authority established by statute, ordinance or series of contracts*” to control the discharge of non-storm water and pollutants in storm water to and from its MS4. Pursuant to 40 CFR 122.26(d)(2)(i)(E) each Copermittee is specifically required to have the legal authority to “[*r*]equire compliance with conditions in ordinances, permits, contracts or orders.”

The requirements under Provision [E.6](#) are necessary to demonstrate that each Copermittee can enforce its legal authority to “*effectively prohibit non-stormwater discharges*” and “*reduce the discharge of pollutants to the maximum extent practicable*” as well as “[*r*]equire compliance with conditions in ordinances, permits, contracts or order.”

The Enforcement Response Plan required under Provision [E.6](#) will serve as a reference for the Copermittee and the San Diego Water Board to determine if consistent enforcement actions are being implemented to achieve timely and effective compliance from all public and private entities that are not in compliance with the Copermittee’s ordinances, permits, or other requirements. The Enforcement Response Plan must contain clear direction for the Copermittee to take immediate enforcement action, when appropriate and necessary, in their illicit discharge detection and elimination, development planning, construction management, and existing development management programs.

If the entities subject to the Copermittee’s legal authority do not implement appropriate corrective actions in a timely manner, or if violations repeat, the Copermittee must take progressively stricter responses to enforce its legal authority and achieve compliance with its ordinances, permits, or other requirements to “*effectively prohibit non-stormwater discharges*” and “*reduce the discharge of pollutants to the maximum extent practicable*.”

Provision E.7 (Public Education and Participation) requires each Copermittee to implement a public education and participation program. Proper implementation of the public education and participation program as part of its jurisdictional runoff management program will contribute toward effectively prohibiting non-storm water discharges to the MS4, and toward the reduction of pollutants in storm water from the MS4 to the MEP.

Provision E.7 establishes the minimum requirements that each Copermittee must implement to engage members of the public as part of its jurisdictional runoff management program. In the Fourth Term Permits, the public education program requirements and the public participation requirements were included as separate jurisdictional runoff management program components. In this Order, the public education requirements have been consolidated with the public participation requirements, as both sets of requirements are related to the engagement of the public by each Copermittee. Engagement of the public is critical for the success of each Copermittee's jurisdictional runoff management program.

The Copermittees have been implementing public education programs for the last 20 years, which are now well established. The specificity of expected public education program elements of the Fourth Term Permits has been removed. For the most part, the public education program requirements in Provision E.7.a have been reduced to a set of requirements that are specifically included in the federal regulations under 40 CFR 122.26(d)(2)(iv)(A)(6), 122.26(d)(2)(B)(6) and 122.26(d)(2)(D)(4), which should already be incorporated into each Copermittee's existing public education program. Each Copermittee is expected to utilize the information and data collected from the monitoring and assessments conducted within the Watershed Management Area, and from its inventories and inspections to best direct its public education program resources toward addressing the highest priority water quality conditions identified within the Water Quality Improvement Plan.

According to 40 CFR 122.26(d)(2)(iv), public participation is required to be included as part of the "*comprehensive planning process*", which includes the development and implementation of the Water Quality Improvement Plan and jurisdictional runoff management programs. The requirements under Provision E.7.b specify the opportunities that the public must be provided to be involved in the "*comprehensive planning process*", as required by to 40 CFR 122.26(d)(2)(iv).

Provision E.8 (Fiscal Analysis) requires each Copermittee to secure the resources and provide an analysis of the resources that will be necessary to implement the requirements of the Order. Adequate fiscal resources are necessary for a jurisdictional runoff management program to effectively prohibit non-storm water discharges to the MS4, and reduce pollutants in storm water from the MS4 to the MEP.

According to 40 CFR 122.26(d)(2)(vi), each Copermittee is responsible for providing "*a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities*" required by this Order, including "*a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.*" The fiscal analysis requirements of Provision E.8 are consistent with 40 CFR 122.26(d)(2)(vi).

The San Diego Water Board has chosen not to require a description of fiscal benefits realized from implementation of the jurisdictional runoff management programs. This

is a recommendation from the National Association of Flood and Stormwater Management Agencies.³⁹ For instance, the fiscal analysis requirements do not address city-wide fiscal benefits of protection (e.g., public health, tourism, property values, economic activity, beneficial uses, etc.), even though many costs currently reported to the San Diego Water Board are for related activities. This type of assessment may help Copermittees improve the allocation of resources and it may help the Copermittees secure adequate funding for the program. Qualitative assessments, however, could be overly subjective and most Copermittees likely lack the ability to provide accurate quantitative assessments. The San Diego Water Board encourages the Copermittees to consider means for conducting assessments of fiscal benefits derived from the programs. Such assessments could be conducted on a regional scale similar to studies of program costs conducted by the State Water Board.⁴⁰

³⁹ National Association of Flood and Stormwater Management Agencies. 2006. *Guidance for Municipal Stormwater Funding*. Prepared under a grant provided by the USEPA.

⁴⁰ State Water Board, 2005. NPDES Stormwater Cost Survey.

F. Reporting

Purpose: Provision F includes the requirements for the documents and reports that the Copermittees must prepare and provide to the San Diego Water Board. The documents prepared by the Copermittees and provided to the San Diego Water Board and made available to the public will provide the documentation that the Copermittees are complying with the requirements of the Order.

Discussion: Provision F requires the Copermittees to prepare several documents and reports that must be provided to the San Diego Water Board and made available to the public. The reporting requirements have been significantly reduced compared to the Fourth Term Permit reporting requirements. The reduction in reporting requirements was recommended by the San Diego County Copermittees in the Report of Water Discharge submitted in June 2011.

More specific and detailed discussions of the requirements of Provision F are provided below.

Provision F.1 (Water Quality Improvement Plans) requires the Copermittees in each Watershed Management Area to develop and submit a Water Quality Improvement Plan in accordance with the requirements of Provision B.

Of all the requirements of Provision F, the Water Quality Improvement Plans will likely be the documents requiring the most significant effort to develop. The content of the Water Quality Improvement Plans, however, is expected to include content that should already have been developed for the Watershed Plans and several elements that are included in the Monitoring and Reporting Programs required under the Fourth Term Permits.

Because the Water Quality Improvement Plan is part of the “*comprehensive planning process*” requiring public participation, Provision F.1 includes requirements to give multiple opportunities to the public to provide input on the content of the plans. The Water Quality Improvement Plans are required to be submitted by the Copermittees within 18 months after adoption of this Order.

Provision F.2 (Updates) requires the Copermittees to update specific documents that the Copermittees will utilize to implement the requirements of this Order.

Each Copermittee is required to continue implementing a jurisdictional runoff management program, as required under Provision E. Implementation of each Copermittee’s jurisdictional runoff management program is directed by its jurisdictional runoff management program document. Provision F.2.a requires each Copermittee to update its jurisdictional runoff management program document to be consistent with the requirements of Provision E within 18 months after the adoption of this Order.

Likewise, each Copermittee must continue to require new development and redevelopment projects to implement BMPs to control pollutants in storm water runoff. The control of pollutants in storm water runoff from development and redevelopment projects within each Copermittee's jurisdiction is guided and directed by its BMP Design Manual, formerly known as a Standard Storm Water Mitigation Plan (SSMP). Provision [F.2.b](#) requires each Copermittee to update its BMP Design Manual to be consistent with the requirements of Provision [E.3](#) within 18 months after the adoption of this Order.

In general, the requirements of the Order should not necessitate a complete rewrite of each Copermittee's jurisdictional runoff management program document or BMP Design Manual, as was required by the Third Term Permits. The jurisdictional runoff management program and BMP Design Manual requirements of this Order are not significantly different than the requirements of the Fourth Term Permits. Thus, only sections of the Order which are new or have been significantly changed should warrant revisions to specific sections of the Copermittee's jurisdictional runoff management program document and BMP Design Manual.

Finally, the Water Quality Improvement Plans are expected to require updates as the iterative approach and adaptive management process included in the Water Quality Improvement Plan, as required under Provision [B.5](#), is implemented by the Copermittees. Provision [F.2.c](#) requires the Copermittees to submit the updates to the Water Quality Improvement Plan as part of the Annual Reports required under Provision [F.3.b](#).

Provision [F.3](#) (Progress Reporting) requires the Copermittees to report on the progress of implementing the Water Quality Improvement Plans.

The requirements of Provision [F.3](#) are to report the progress toward improving water quality that the Copermittees are achieving with the implementation of the Water Quality Improvement Plans and each Copermittee's jurisdictional runoff management program. The Progress Report Presentations required under Provision [F.3.a](#) are included to provide the Copermittees an opportunity to communicate directly with the San Diego Water Board and the public. The Progress Report Presentations will also provide the members of the San Diego Water Board and members of the public an opportunity to become more acquainted with the Copermittees and their projects and programs to address non-storm water and storm water discharges into and from their MS4s.

The Annual Report requirements of Provision [F.3.b](#) are a consolidation of several reporting requirements from the Fourth Term Permits, including the Jurisdictional Runoff Management Program Annual Reports, the Watershed Annual Reports, and the Monitoring and Reporting Program Annual Reports. Furthermore, the Annual Report requirements are consistent with the requirements under 40 CFR 122.42(c).

Pursuant to 40 CFR 122.42(c), “[t]he operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director...must submit an annual report”, which must include the following:

- (1) *The status of implementing the components of the storm water management program that are established as permit conditions [40 CFR 122.42(c)(1)];*
- (2) *Proposed changes to the storm water management programs that are established as permit conditions [40 CFR 122.42(c)(2)];*
- (3) *Revisions, if necessary, to the assessment of controls and fiscal analysis [40 CFR 122.42(c)(3)];*
- (4) *A summary of data, including monitoring data, that is accumulated throughout the reporting year [40 CFR 122.42(c)(4)];*
- (5) *Annual expenditures and budget for year following each annual report [40 CFR 122.42(c)(5)];*
- (6) *A summary describing the number and nature of enforcement actions, inspections, and public education programs [40 CFR 122.42(c)(6)];*
- (7) *Identification of water quality improvements or degradation [40 CFR 122.42(c)(7)].*

Under the Fourth Term Permits, each Copermittee is responsible for submitting a Jurisdictional Runoff Management Program Annual Report; the Copermittees in each designated watershed are responsible for submitting a Watershed Annual Report; and the Copermittees from each county are responsible for submitting a Monitoring and Reporting Program Annual Report.

There are 39 Copermittees in the San Diego Region, each required to prepare and submit a Jurisdictional Runoff Management Program Annual Report. There are 9 designated watersheds in San Diego County, 6 designated watersheds in Orange County, and 1 designated watershed in Riverside County for a total of 16 designated watersheds, each requiring a Watershed Annual Report. There are 3 sets of Copermittees in 3 counties in the San Diego Region, requiring Copermittees from each county to prepare and submit a Monitoring and Reporting Program Annual Report. Thus each Copermittee is currently required to prepare, or participate in the preparation of at least 3 annual reports. In addition, the San Diego County Copermittees are required to prepare and submit a Regional Urban Runoff Management Plan Annual Report.

In total, there are 59 annual reports that are prepared by the Copermittees and submitted to the San Diego Water Board for the Fourth Term Permits. The preparation of these annual reports requires significant time and resources from each Copermittee, which could otherwise be expended on actions that could improve water

quality within its jurisdiction. In turn, significant time and resources are required from the San Diego Water Board staff to review these reports, which could otherwise be expended on working directly with the Copermittees to improve their implementation efforts toward restoring and protecting water quality.

Provision [F.3.b](#) only requires one Annual Report for each of the 10 Watershed Management Areas designated under Provision [B.1](#), which is a significant reduction in the number of annual reports required to be prepared and submitted by the Copermittees. The Annual Report will document the Copermittees' efforts to implement the Water Quality Improvement Plan. Each Annual Report will be focused primarily on reporting the analysis of the monitoring data collected pursuant to Provisions [D.1-D.3](#) during the reporting period, and the assessments that are required pursuant to Provision [D.4](#) based on the data. The monitoring data analyses and the assessments that are provided in the Annual Report will be the core of the report. The reporting of the jurisdictional runoff management program implementation efforts have been reduced to a single 2-page form, and will no longer be the primary focus of the reporting requirements as in the Third and Fourth Term Permits.

The Jurisdictional Runoff Management Program Annual Report Form (see [Attachment D](#) to the Order) will certify that each Copermittee has implemented its jurisdictional runoff management program in accordance with the requirements of Provision [E](#). Instead of reviewing a voluminous report from each Copermittee, as was required under the Third and Fourth Term Permits, the San Diego Water Board will conduct audits of each Copermittee's jurisdictional runoff management program to investigate and confirm the information provided by each Copermittee on its Jurisdictional Runoff Management Program Annual Report Form. The audits will allow the San Diego Water Board to become more familiar with the each Copermittee's jurisdictional runoff management program, and each Copermittee will become more informed about the expectations of the San Diego Water Board.

The reduction in the number and content of the Annual Reports should result in significant time, cost and resource savings for the Copermittees, as well as the San Diego Water Board. Those savings should offset a significant portion of any additional costs that may be incurred to develop the Water Quality Improvement Plans and to implement the monitoring and assessment program requirements of Provision [D](#).

The reporting period for the Annual Reports consists of two periods. Because the jurisdictional runoff management programs are typically budgeted and implemented during a fiscal year, the information provided on the Jurisdictional Runoff Management Program Annual Report Forms will cover the period from July 1 to June 30 of the following year.

The Annual Reports, however, are focused primarily on the monitoring data and the assessments based on the monitoring data. The monitoring data is collected during the monitoring year, which begins October 1 and ends September 30 of the following year. The monitoring year begins after the beginning of the fiscal year and ends after

the end of the fiscal year. Therefore, to accommodate and capture the information collected during the fiscal year and the monitoring year, the Annual Report reporting period incorporates both periods.

Finally, Provision [F.3.c](#) requires the Copermittees to develop and submit a Regional Monitoring and Assessment Report. The Regional Monitoring and Assessment Report is similar to the Long Term Effectiveness Assessment required under the Fourth Term San Diego County Permit. The Regional Monitoring and Assessment Report is expected to utilize the entire body of data and information collected by the Copermittees during the term of this Order to assess improvements to water quality on a regional scale.

Provision F.4 (Regional Clearinghouse) requires the Copermittees to develop, update, and maintain an internet-based Regional Clearinghouse that can be used to store, disseminate, and share the Copermittees' documents, monitoring data, special studies, and any other data or information.

Most of the documents and data that are generated by the Copermittees can be provided in electronic format, and made available to the San Diego Water Board and the public on the internet. The San Diego Water Board has been gradually transitioning its document submittal requirements to electronic submittals. Provision [F.4](#) has been included to further these efforts.

Provision [F.4](#) has also been included to improve the exchange and availability of information among the Copermittees, as well as between the Copermittees and the San Diego Water Board. Provision [F.4](#) will also make the information generated during the implementation of the Order more accessible to the public.

Provision F.5 (Report of Waste Discharge) requires the Copermittees to submit a Report of Waste Discharge to reapply for renewal of the Order prior to its expiration, in accordance with 40 CFR 122.21(d)(2) and CWC section 13376.

Because the Orange County and Riverside County Copermittees will not be subject to the requirements of this Order until they are notified of coverage, Provision [F.5.a](#) describes the process of submitting their Reports of Waste Discharge pursuant to the requirements of their current permits to obtain coverage under this Order.

For the Copermittees subject to the requirements of this Order, Provision [F.5.b](#) requires the Copermittees to submit a Report of Waste Discharge 180 days in advance of the expiration of this Order. Provision [F.5.b](#) also describes the minimum information to be included in the Report of Waste Discharge, based on USEPA guidance "Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems", dated May 17, 1996.

Provision F.6 (Application for Early Coverage) describes the process that would allow the Orange County and/or Riverside County Copermittees to obtain coverage under this Order earlier than the expiration of their current Orders.

If the Orange County and/or Riverside County Copermittees choose to obtain coverage under this Order earlier than the expiration of their current Orders, the preparation and submittal of a Report of Waste Discharge, as required by the Fourth Term Permits, will not be necessary. The existing Order for the respective county will be rescinded upon the effective coverage date under this Order, except for enforcement purposes.

G. Principal Watershed Copermittee Responsibilities

Purpose: Provision **G** includes the requirements for the Principal Watershed Copermittee designated by the Copermittees in each Watershed Management Area.

Discussion: Unlike previous NPDES requirements, there will no longer be a single Principal Copermittee. Provision **G.1** requires the Copermittees to designate a Principal Watershed Copermittee for each Watershed Management Area. There are ten (10) Watershed Management Areas in the San Diego Region, as defined in **Table B-1** under Provision **B.1** of the Order. An individual Copermittee should not be the Principal Watershed Copermittee for more than two (2) Watershed Management Areas. There could be up to 10 Principal Water Copermittees designated for the Watershed Management Areas in the San Diego Region.

Provision **G.2** describes the minimum responsibilities of each Principal Watershed Copermittee. The primary responsibility of the Principal Watershed Copermittees is to serve as the liaison between the Copermittees in the Watershed Management Area and the San Diego Water Board on general permit issues. Ideally, the Principal Watershed Copermittee can represent the interests of all the Copermittees within a Watershed Management Area during discussions or meetings to facilitate communication with the San Diego Water Board. The Principal Watershed Copermittees are also responsible for facilitating and coordinating the implementation efforts of the Copermittees and submittals of required documents and reports.

The Principal Watershed Copermittee is responsible for facilitating the efforts of the Copermittees within the Watershed Management Area to develop the Water Quality Improvement Plan required under Provision **B**, and submit it for approval in accordance with Provision **F.1**. The Principal Watershed Copermittee is also responsible for coordinating the submittal of the document updates, Progress Report Presentations, and Annual Reports required from the Copermittees within each Watershed Management Area under Provisions **F.2**, **F.3.a**, and **F.3.b**. The Principal Watershed Copermittees are responsible for coordinating with each other to develop and submit the Regional Clearinghouse, Regional Monitoring and Assessment Report, and the Report of Waste Discharge required under Provisions **F.3.c**, **F.4**, and **F.5**.

The designated Principal Watershed Copermittee for each Watershed Management Area does not necessarily have to serve as the Principal Watershed Copermittee for the entire term of the Order. If the Copermittees in a Watershed Management Area choose to designate a new Principal Watershed Copermittee, the change may be submitted as part of the Annual Report required under Provision **F.3.b**, with an update to the Water Quality Improvement Plan in accordance with Provision **F.2.c**.

H. Modification of Programs

Purpose: Provision H provides the conditions under which modifications to Order No. R9-2013-0001 may occur.

Discussion: Provision H allows for modifications to Order No. R9-2013-0001. Minor modifications may be made by the San Diego Water Board Executive Officer without a public notice or public hearing. Minor modifications are defined under 40 CFR 122.63. Minor modifications under 40 CFR 122.63 potentially applicable to this Order are the following:

- Correcting typographical errors;
- Requiring more frequent monitoring or reporting by the Copermittees;
- Changing an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement.

Modifications that are not one of the above minor modifications will require re-opening the Order, subject to the requirements of 40 CFR 122.62 and 124.5(c)(1)-(3), but only for the specific provisions subject to the modification. Modifications of the Order that are not minor require a draft Order with the proposed modifications made available for public review, a public notice and comment period, and a public hearing. Comments on the provisions not subject to the proposed modifications are not required to be considered in the San Diego Water Board's responses to comments or during the public hearing.

Provision H.4 was included specifically to allow for the Order to be re-opened to make modifications to the requirements of Provision A should new language addressing compliance with water quality standards in the receiving waters be developed and issued by the State Water Board.

I. Standard Permit Provisions and General Provisions

Purpose: Provision I incorporates the standard permit provisions required to be included in all NPDES permits, as well as several other general provisions.

Discussion: Provision I refers to Attachment B to the Order. Attachment B expressly incorporates the conditions applicable to all NPDES permits as provided under 40 CFR 122.41(a)-(n), as well as the applicable conditions for MS4s and storm water discharges provided under 40 CFR 122.42(c) and 40 CFR 122.42(d), respectively. Attachment B also includes several general provisions that are typically included in or applicable to waste discharge requirements issued by the San Diego Water Board.

IX. ATTACHMENTS

The attachments to the Order are discussed below. The discussions describe the content of the attachments.

Attachment A – Discharge Prohibitions and Special Protections

Section 1 of [Attachment A](#) includes the Waste Discharge Prohibitions from the Basin Plan. They have been provided verbatim in their entirety.

Section 2 of [Attachment A](#) includes the “*Special Protections for Areas of Special Biological Significance, Governing Point Source Discharges of Storm Water and Nonpoint Source Waste Discharges*” applicable to permitted point source discharges of storm water, adopted under State Water Board Resolution No. 2012-0012. The terms, prohibitions, and special conditions (collectively referred to as special conditions) are established as limitations on point source storm water discharges. These special conditions provide Special Protections for marine aquatic life and natural water quality in ASBS, as required for State Water Quality Protection Areas pursuant to California Public Resources Code sections 36700(f) and 36710(f). These Special Protections were adopted by the State Water Board as part of the Ocean Plan General Exception.

Attachment B – Standard Permit Provisions and General Provisions

Conditions applicable to all NPDES permits, as required under 40 CFR 122.41, and conditions applicable to MS4s and storm water discharges, as required under 40 CFR 122.42(c) and 122.42(d), respectively are provided in [Attachment B](#) to the Order. They have been provided expressly in their entirety.

In addition to the standard provisions required to be incorporated into the Order and NPDES permit pursuant to 40 CFR 122.41 and 40 CFR 122.42, several other general provisions apply to this Order. These general provisions are typically included in or applicable to waste discharge requirements issued by the San Diego Water Board. Many of the general provisions were developed by the State Water Board. Where a general provision is derived from statute or regulation, a citation of the statute or regulation section is provided. General provisions that do not provide a citation are included under the authority provided CWC 13377.

Attachment C – Acronyms, Abbreviations and Definitions

The acronyms and abbreviations that are used in the Order are provided in [Attachment C](#). [Attachment C](#) also includes definitions that may provide an explanation or description of the meaning or intent of specific terms or phrases included in the Order.

Attachment D – Jurisdictional Runoff Management Program Annual Report Form

An example of the Jurisdictional Runoff Management Program Annual Report Form required to be submitted by each Copermittee as part of the Annual Reports required under Provision [F.3.b.\(1\)\(e\)](#) is provided as [Attachment D](#) to the Order. An electronic version of the form will be available from the San Diego Water Board after the adoption of the Order.

The Jurisdictional Runoff Management Program Annual Report Form includes the minimum information necessary to demonstrate that the Copermittee is implementing and in compliance with the requirements of Provision [E](#), and includes much of the information required to be reported pursuant to 40 CFR 122.42(c).

The information that must be provided on the Jurisdictional Runoff Management Program Annual Report Form is limited to the fiscal year, which begins July 1 and ends June 30 of the following year. The information expected to be provided by the Copermittees in each section of the Jurisdictional Runoff Management Program Annual Report Form is discussed below.

I. COPERMITTEE INFORMATION

The name of the Copermittee (e.g. name of city, county, or special district) and the contact information for the storm water program manager are provided under this section.

II. LEGAL AUTHORITY

The Copermittee must confirm whether or not the legal authorities under Provision [E.1.a](#) have been established for itself within its jurisdiction.

The Copermittee must also confirm whether or not a Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative has certified that the Copermittee obtained and maintains adequate legal authority, as required under Provision [E.1.b](#). The certification statement required by Provision [E.1.b](#) is only required to be submitted with the first Annual Report required under Provision [F.3.b](#).

III. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM DOCUMENT UPDATE

The Copermittee must inform the San Diego Water Board whether or not an update to its jurisdictional runoff management program document was required or recommended by the San Diego Water Board during the reporting period. An update to the jurisdictional runoff management program is required under Provision [F.2.a](#). The San Diego Water Board may recommend modifications to the jurisdictional runoff management program as part of the iterative approach and adaptive management process required under Provision [B.5](#), which may result in an update that is necessary for the Copermittee's jurisdictional runoff management document.

If an update was required or recommended, the Copermittee must confirm whether or not the update was completed and made available on the Regional Clearinghouse within the reporting period. If no update was required or recommended, an answer is not required. If the answer is NO, meaning the required or recommended update was not completed and/or made available on the Regional Clearinghouse, the Copermittee must attach a schedule for the completion of the update and/or posting of the updated document on the Regional Clearinghouse.

IV. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The Copermittee must confirm whether or not a program was implemented during the fiscal year to actively detect and eliminate illicit discharges and connections in accordance with the requirements under Provision [E.2](#).

In addition to confirming that a program to detect and eliminate illicit discharges was implemented during the reporting period, the Copermittee is also required to report on several items related to the program. The information that must be reported is limited to the fiscal year for the Annual Report.

All non-storm water discharges are considered illicit discharges unless the source is identified as one of the categories on non-storm water discharges under Provisions [E.2.a.\(1\)-\(5\)](#). If a non-storm water discharge is identified as one of the categories on non-storm water discharges under Provisions [E.2.a.\(1\)-\(5\)](#), the discharge is a non-storm water discharge, but not an illicit discharge. If a non-storm water discharge is identified but in not one of the categories on non-storm water discharges under Provisions [E.2.a.\(1\)-\(5\)](#), the discharge is both a non-storm water discharge and an illicit discharge.

V. DEVELOPMENT PLANNING PROGRAM

The Copermittee must confirm whether or not a development planning program was implemented during the fiscal year in accordance with the requirements under Provision [E.3](#).

The Copermittee must also inform the San Diego Water Board whether or not an update to its BMP Design Manual was required or recommended by the San Diego Water Board during the fiscal year. An update to the BMP Design Manual is required under Provision [F.2.b](#). The San Diego Water Board may recommend modifications to the BMP Design Manual, which may result in an update that is necessary for Copermittee's the BMP Design Manual.

If an update was required or recommended, the Copermittee must confirm whether or not the update was completed and made available on the Regional Clearinghouse within the reporting period. If no update was required or recommended, an answer is not required. If the answer is NO, meaning the required or recommended update was not completed and/or made available on the Regional Clearinghouse, the Copermittee must attach a schedule for the completion of the update and/or posting of the updated document on the Regional Clearinghouse.

The Copermittee is also required to report on several items related to the program. For the development and redevelopment projects that are reviewed under the program, the Copermittee must report the total number projects submitted for review during the fiscal year. Of those projects, the Copermittee must report the number that are Priority Development Projects, as defined under Provision [E.3.b.\(1\)](#). The Copermittee must also report the number of Priority Development Projects that were approved and/or granted occupancy during the fiscal year, regardless of when the project was originally submitted for review. Any projects that were approved during the fiscal year and granted any exemptions from the BMP Design Manual requirements and/or allowed to implement alternative compliance options in accordance with Provision [E.3.c.\(3\)](#) must be reported.

Finally, the Copermittee must also report on several items related to its oversight of permanent BMPs on Priority Development Projects within its jurisdiction, as required under Provision [E.3.e](#). The information that must be reported is limited to the fiscal year for the Annual Report.

VI. CONSTRUCTION MANAGEMENT PROGRAM

The Copermittee must confirm whether or not a construction management program was implemented during the fiscal year in accordance with the requirements under Provision [E.4](#).

The Copermittee is also required to report on several items related to its oversight construction projects within its jurisdiction. The information that must be reported is limited to the fiscal year for the Annual Report.

VII. EXISTING DEVELOPMENT MANAGEMENT PROGRAM

The Copermittee must confirm whether or not an existing development management program was implemented during the fiscal year in accordance with the requirements under Provision [E.5](#).

The Copermittee is also required to report on several items related to its oversight in areas of existing development within its jurisdiction. The information that must be reported is limited to the fiscal year for the Annual Report. The information must also be separated into four categories of existing development: municipal, commercial, industrial, and residential.

VIII. PUBLIC EDUCATION AND PARTICIPATION

The Copermittee must confirm whether or not a public education program component was implemented during the fiscal year in accordance with the requirements under Provision [E.7.a](#).

The Copermittee must also confirm whether or not a public participation program component was implemented during the fiscal year in accordance with the requirements under Provision [E.7.b](#).

IX. FISCAL ANALYSIS

The Copermittee must confirm a summary of its fiscal analysis, conducted in accordance with the requirements under Provision [E.8](#), has been attached to the form.

X. CERTIFICATION

A Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative must sign and certify the Jurisdictional Runoff Management Program Annual Report Form. The appropriate box must be checked to indicate the whether the a Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative is signing the form.

Attachment E – Specific Provisions for Total Maximum Daily Loads Applicable to Order No. R9-2013-0001

Attachment E provides specific provisions for implementing the Total Maximum Daily Loads (TMDLs) adopted by the San Diego Water Board and approved by USEPA in which the Copermittees are identified as responsible for meeting an assigned wasteload allocation (WLA). Federal regulations require that NPDES requirements incorporate water quality based effluent limitations (WQBELs) that must be consistent with the requirements and assumptions of any available WLAs,⁴¹ which may be expressed as numeric effluent limitations, when feasible, and/or as a best management practice (BMP) program of expanded or better-tailored BMPs.⁴² Where the TMDL includes WLAs that provide numeric pollutant load or pollutant parameter objectives, the WLA has been, where feasible, translated into numeric WQBELs.⁴³

For each TMDL in **Attachment E**, five sections are included:

- 1) **Applicability**: This section provides the resolution under which the TMDL Basin Plan amendment was adopted and approved, with the applicable adoption and approval dates. This section also gives the effective date of the TMDL and where the TMDL is applicable (i.e. Watershed Management Area and water body). The Copermittees that are responsible for implementing the specific provisions are also given in this section.
- 2) **Water Quality Based Effluent Limitations**: For each TMDL, the WQBELs are expressed in terms of receiving water limitations, effluent limitations, and/or best management practices (BMPs). The WQBELs for the TMDLs are incorporated by reference into Provision **A** of the Order. The WQBELs when the compliance dates have passed. Applicable BMPs within the WQBELs must be incorporated into the Water Quality Improvement Plans.
- 3) **Compliance Schedule**: The final date for compliance with the WLA assigned to the Copermittees is provided in this section. If there are interim compliance requirements, they are included in this section as well. The WQBELs become enforceable when the final compliance date has passed. If there are interim WQBELs with interim compliance dates, the interim WQBELs become enforceable when the corresponding interim compliance dates have passed.
- 4) **Specific Monitoring and Assessment Requirements**: If there are specific monitoring and assessment requirements that cannot be met with the monitoring and assessment program requirements under Provision **D** of the Order, the additional requirements are included in this section.
- 5) **Compliance Determination**: There may be several options to demonstrate compliance with the WQBELs. If there is more than one option to demonstrate compliance with the WQBELs, the options are provided in this section.

⁴¹ 40 CFR 122.44(d)(1)(vii)(B)

⁴² 40 CFR 122.44(k)(2) and 40 CFR 122.44(k)(3)

⁴³ November 12, 2010 Memorandum from the USEPA, Revisions to the November 22, 2002 Memorandum "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLA"

The requirements of the TMDLs are based on the assumptions and requirements of any available WLAs for adopted and approved TMDLs that have been incorporated into the Basin Plan. Modifications to the requirements for the TMDLs in [Attachment E](#) cannot be made unless the TMDLs are modified in the Basin Plan.

A modification to any aspect of a TMDL in the Basin Plan requires a Basin Plan amendment. A Basin Plan amendment to modify a TMDL will require the San Diego Water Board to adopt a resolution to amend the Basin Plan, which includes a separate public process. When the San Diego Water Board adopts a Basin Plan amendment, it subsequently requires approval from the State Water Board, the Office of Administrative Law, and the USEPA before it becomes effective.

If and when the TMDLs are modified in the Basin Plan, the San Diego Water Board will revise the requirements of the TMDL in accordance with the Basin Plan amendment. When a Basin Plan amendment to modify a TMDL becomes effective, the San Diego Water Board will modify the requirements of the TMDL pursuant to the requirements of Provision H of the Order as soon as possible.