

Fact Sheet – Revised July 2005

**SANTA CLARA VALLEY URBAN RUNOFF POLLUTION PREVENTION PROGRAM
REVISED TENTATIVE ORDER
AMENDMENT OF NPDES PERMIT No. CAS029718**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
1515 CLAY STREET, 14TH FLOOR
OAKLAND, CA 94612

PUBLIC NOTICE:

Written Comments

Interested persons are invited to submit written comments concerning this draft permit amendment. Comments must be submitted to the Water Board no later than 5:00 p.m. on June 27, 2005. Send comments to the attention of Sue Ma and Janet O’Hara.

Public Hearing

The draft permit amendment will be considered for adoption by the Board at a public hearing during the Board’s regular monthly meeting at: Elihu Harris State Office Building, 1515 Clay Street, Oakland, CA; 1st floor Auditorium.

This meeting will be held on: July 20, 2005, starting at 9:00 am.

Additional Information

For additional information about this matter, interested persons should contact Regional Board staff member:

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I. Reason for Amendment of NPDES Permit NO. CAS029718

This Order amends the Permit by approving the proposed alternative definition for smaller development and redevelopment projects (Group 2) that create 10,000 square feet or more and less than 1 acre of new impervious surface. The alternative definition divides these smaller projects into Groups 2A and 2B to allow implementation to be completed in phases by the Dischargers. Group 2A is comprised of a subset of land uses, including parking lots, and certain commercial uses with major unroofed activities. Group 2B includes all land uses. This Order also amends the Permit to approve key provisions of the *Hydromodification Management Plan (HMP) Final Report*¹.

II. Background Information on the Permit

The Santa Clara Valley Water District, County of Santa Clara, City of Campbell, City of Cupertino, City of Los Altos, Town of Los Altos Hills, Town of Los Gatos, City of Milpitas,

¹ *Hydromodification Management Plan Report, Final Draft*, Santa Clara Valley Urban Runoff Pollution prevention Program, April 21, 2005.

City of Monte Sereno, City of Mountain View, City of Palo Alto, City of San Jose, City of Santa Clara, City of Saratoga, and City of Sunnyvale (hereinafter the Dischargers) have joined together to form the Santa Clara Valley Urban Runoff Pollution Prevention Program (hereinafter the Program). On February 21, 2001, the California Regional Water Quality Control Board San Francisco Bay Region (hereinafter the Board) re-issued waste discharge requirements (Order No. 01-024) under the National Pollutant Discharge Elimination System (NPDES) to the Program to discharge stormwater runoff from storm drains and watercourses within the Dischargers' jurisdictions by complying with Order No. 01-024 and implementing the Program's associated Storm Water Management Plan (hereinafter the Management Plan).

On October 17, 2001, the Board adopted Order No. 01-119, which amended Order No. 01-024 by adding requirements to Provision C.3. to enhance the Performance Standard for the Program's new development and significant redevelopment program component. Order No. 01-024 as amended by Order No. 01-119 is the existing Permit for the Program. The Permit specifically requires a level of implementation of best management practices (BMPs), including source control, site design, and structural stormwater treatment measures in new development and significant redevelopment, that removes pollutants from the discharge to the maximum extent practicable (MEP).

III. Background Information on Hydromodification and Permit Provision C.3.f.

New development and redevelopment can impact water quality and beneficial uses of waters by altering a watershed's patterns of runoff and particularly by increasing the rates, durations, and frequencies of peak flows. These alterations to runoff patterns result from the addition of impervious surfaces such as rooftops, roads, parking lots, and sidewalks, and the construction of an efficient storm drain system, replacing previously undeveloped land in a watershed. The land use changes associated with urbanization increase the total volume of runoff and increase the speed with which runoff is conveyed to downstream watercourses and receiving waters.

Increases in flows from impervious surfaces associated with urbanization can have the following effects, which are referred to hydromodification impacts:²

² Selected references reviewed for this section include:

"The Importance of Imperviousness," in *Watershed Protection Techniques* 1(3). p.100-111.

Booth, Derek B., June 1990. "Stream Channel Incision Following Drainage-Basin Urbanization," Paper No. 89098, *Water Resources Bulletin* 26(3), p.407-417.

Brown, Kenneth B., "Housing Density and Urban Land Use as Indicators of Stream Quality," in *Watershed Protection Techniques* 2(4). p.735-739.

Hollis, G.E., 1975. "The Effect of Urbanization on Floods of Different Recurrence Interval," *Water Resources Research* (1975). p. 431-435.

Klein, Richard D., August 1979. "Urbanization and Stream Quality Impairment," Paper No. 78091, *Water Resources Bulletin* 15(4), p.948-963.

U.S. Environmental Protection Agency, 1999. Preliminary Data Summary of Urban Storm Water Best Management Practices. EPA-821-R-99-012. p.4-24 to 4-26.

Washington State Department of Ecology, August 2000. Stormwater Management Manual for Western Washington (Final Draft), Publication 99-11. Volumes 1 and III.

- Increases in the number of bankfull events and increased peak flow rates in downstream watercourses;
- Sedimentation and increased sediment transport in downstream watercourses;
- More frequent flooding;
- Stream bed scouring and habitat degradation;
- Stream channel widening and shoreline erosion, including threats to infrastructure (e.g., bridges, utility line crossings, and adjacent roads) and existing structures (e.g., homes, businesses, fences, etc.);
- Decreased stream baseflow;
- Aesthetic degradation; and,
- Changes in stream morphology.

Provision C.3.f. requires appropriate control of both changes in peak runoff discharge rates and durations, in order to minimize the negative impacts described above. Efforts to mitigate these impacts in other areas, including Ontario and British Columbia, Canada, Washington State, Pennsylvania, and Maryland, initially focused on reducing the increases only in peak flows. However, this approach was often ineffective, and sometimes exacerbated the problems it attempted to solve, by reducing the peak flow but increasing the duration of erosive flows.³ To appropriately address hydromodification impacts, it is necessary to address changes to both peak flows and the duration of erosive flows. Thus, Provision C.3.f. requires, under certain circumstances, limits on urban runoff flows from new and redevelopment projects.

Further, Provision C.3.f. recognizes that the exact runoff control requirements necessary to address those impacts may vary by creek location, condition, and other factors, and therefore requires the development of a Hydromodification Management Plan (HMP) to better address appropriate management of these changes. Implementation of the HMP would manage increases in peak runoff flow and increased runoff volume for certain new and redevelopment projects where such increased flow and/or volume can cause increased erosion of creek beds and banks, silt pollutant generation, or other impacts to beneficial uses. Provision C.3.f. requires the Dischargers to prepare the HMP for Board approval.

IV. Revised Fact Sheet

This Revised Fact Sheet includes the information in the original Fact Sheet circulated on May 6, 2005, and also describes significant changes made to the Tentative Order since that date. The Tentative Order has been revised in response to the following public input:

- Meeting: Executive Officer, Board staff, and representative Dischargers, at EOA, Inc., conference room, Oakland, 6/7/05
- Teleconference on HMP requirements only: Board and Discharger line staff, 6/10/05

³ MacRae, C.R., ~1996. "Experience from morphological research on Canadian Streams: Is control of the two-year frequency runoff event the best basis for stream channel protection?" in **Effects of Watershed Development and Aquatic Management on Aquatic Ecosystems**, Larry A. Roesner, ed. New York: ASCE. pp. 144-162.

- Email: Summary of Proposed Changes to Tentative Order to Address Water Board Staff Concerns, from Adam Olivieri, representative to Program, to Executive Officer, received 6/14/05
- Email: Santa Clara Tentative Order comments, from Adam Olivieri, representative to Program, to Executive Officer, 6/21/05
- Written comments on Tentative Order from Baykeeper, 6/27/05
- Written comments on Tentative Order from Morrison Foerster, legal counsel for the Program, 6/27/05
- Written comments on Tentative Order from Ruth & Going, civil engineers involved in land development in the South Bay Area, 6/27/05
- Written comments on Tentative Order from the City of San Jose, 6/27/05

The Revised Tentative Order will be considered by the Board at its meeting of July 20, 2005.

V. Discharge Description and Location

The Dischargers each have jurisdiction over and/or maintenance responsibility for their respective municipal separate storm drain systems and/or watercourses in the Santa Clara Valley basin. Discharge consists of the surface runoff generated from various land uses in all the hydrologic sub-basins in the basin which discharge into storm drains and watercourses, which in turn flow into South San Francisco Bay. The quality and quantity of these discharges varies considerably and is affected by hydrologic, geologic, land use, season, and sequence and duration of storm events.

Pollutants of concern in these discharges are certain heavy metals, excessive sediment production from erosion due to anthropogenic activities, petroleum hydrocarbons from sources such as used motor oil, microbial pathogens of domestic sewage origin from illicit discharges, certain pesticides associated with the risk of acute aquatic toxicity, excessive nutrient loads which may cause or contribute to the depletion of dissolved oxygen and/or toxic concentrations and dissolved ammonia, and other pollutants which may cause aquatic toxicity in the receiving waters. Pollutants wash off of the roofs, road pavement, parking lots, and other paved portions of development particularly. However, all land use categories studied have been shown to contribute some pollutants.⁴ As shown by the body of literature

⁴ Heaney, J.B., Pitt, R, and Field, R. **Innovative Urban Wet-Weather Flow Management Systems**, 1999. USEPA Doc. No. EPA/600/R-99/029. Chapter 4 summarizes research on pollutant loadings based on broad category of land use (e.g., industrial, commercial, residential) and specific type of land uses (e.g., roadways, parking lots, roofs, loading docks, etc.).

Tiefenthaler, L.L., Schiff, K.C., and Bay, S.M. "Characteristics of parking lot runoff produced by simulated rainfall," July 2001. Westminster: Southern California Coastal Water Research Project, discusses results measuring toxicity of parking lot runoff based on parking lot use, maintenance (street sweeping), and duration and intensity of rainfall.

Oltmann, R.N., and Shulters, M.V., **Rainfall and Runoff Quantity and Quality Characteristics of Four Urban Land-Use Catchments in Fresno, California, October 1981 To April 1983**, 1987. USGS Open-File Report 84-710. Discusses results of sampling for a variety of urban runoff and dry weather urban pollutants in Fresno generally and with respect to land use type.

on urban runoff, including the cited references, pollutants in urban stormwater runoff from all land uses, including already-built projects, contribute to impacts to water quality and beneficial uses of waters of the State.

VI. Amendment of Group 2 Projects Definition in Provision C.3.c.

The Permit defined large new and redevelopment projects (those projects creating 1 acre or more of new impervious surface) as Group 1 Projects and smaller projects (those creating less than 1 acre but 5000 square feet or more of new impervious surface) as Group 2 Projects. In September 2003, as allowed by the Permit, the Dischargers proposed an alternative Group 2 Project definition to provide consistency between the Permit and the permits for other Bay Area Phase I municipal stormwater permit holders⁵ (hereinafter referred to as the “other Bay Area Permittees”). The Dischargers proposed excluding specific projects from the Group 1 and 2 Project categories, increasing the Group 2 Project size to 10,000 square feet, allowing projects with water quality benefits (such as stream restoration) under an alternative compliance program, and providing exemptions for certain redevelopment projects. The Dischargers also requested additional time for the implementing stormwater treatment requirements for Group 2 Projects by extending the date from October 15, 2004, to April 15, 2005.

The Board approved the Program’s proposal at its October 15, 2003, meeting and directed the Executive Officer to sign and send a Letter of Approval to the Dischargers.

***Revised Tentative Order:** The Tentative Order has been revised to include the changes to the Group 1 Project definition that were approved by the Board in October 2003, by adding these changes in Provision C.3.c.i. This revision was requested by the Dischargers on June 7, 2005, to document within the Permit the previous Board action to conform the Group 1 Project definition to the one used in other Bay Area stormwater program permits.*

In March 2005, the Dischargers again proposed an alternative Group 2 Project definition as a means of requesting more time for implementing stormwater treatment requirements for all Group 2 Projects. The Dischargers’ proposal divided Group 2 Projects into Group 2A and 2B Projects. Stormwater treatment requirements would apply to Group 2A projects starting July 1, 2005. No date was specified for requiring stormwater treatment for Group 2B projects. The March 2005 proposal defined Group 2A Projects as:

“[N]ew and redevelopment projects of 10,000 square feet or more of impervious surface in the following land use categories:

1. Gas stations or equipment fueling facilities or expansion of such uses;

Ebbert et al., **Water Quality in the Puget Sound Basin, Washington and British Columbia, 1996-98**, USGS Circular 1216, and Ayers et al., **Water Quality in the Long Island-New Jersey Coastal Drainages, New Jersey and New York, 1996-98**, USGS Circular 1201, summarize major findings about water quality based on broad land use categories. and,

The **National Urban Runoff Program** (NURP) Study (USEPA 1983).

⁵ The other Bay Area Permittees include the Alameda Countywide Clean Water Program, Contra Costa Clean Water Program, Fairfield-Suisun Sewer District, and the San Mateo Stormwater Pollution Prevention Program.

2. Auto wrecking yards or expansion of such uses;
3. Loading dock areas (greater than 10,000 square feet) or expansion of such uses;
4. Other “Land Uses of Concern” which generate amounts of heavy pollutants equivalent to the above uses, including expansion of such uses. These will be projects with the following uses if the reviewing local agency finds that pollution potential for such uses cannot be satisfactorily mitigated through requirements for source control BMPs:
 - a. Vehicle or equipment maintenance areas, including washing and repair
 - b. Outdoor handling or storage of wastes or hazardous materials
 - c. Outdoor manufacturing areas
 - d. Outdoor food handling or processing
 - e. Outdoor animal care; or
 - f. Outdoor horticultural activities.”

Board staff provided comments on the Dischargers’ proposal on April 18, 2005, and requested additional data demonstrating that the proposed Group 2 Project definition would be substantially as effective as the Permit’s definition. In response, the larger Dischargers (i.e., San Jose, Milpitas, Palo Alto, Santa Clara, and Sunnyvale) provided data on Group 2 projects approved in fiscal years 2002-2004. The data show there were 68 Group 2 Projects in these cities in fiscal years 2002-2004, and 28 of them (41%) were in San Jose. Based on these data, Board staff determined that using the Dischargers’ proposed definition of Group 2A Projects would result in only three of the 68 projects (4.5%) being subject to Provision C.3.d. requirements, a much too low percentage.

Through a series of telephone conference calls with the City of San Jose, representing the Dischargers, Board staff negotiated an expanded definition of Group 2A which would include surface parking lots. Using data provided by San Jose, Board staff concluded that including parking lots greater than 10,000 square feet in the Group 2A definition would capture roughly 52% of the total new impervious surface area from projects greater than 10,000 square feet and less than 1 acre. This expansion of the Group 2A definition, along with the requirement for Group 2B Projects (all other projects creating 10,000 square feet or more but less than 1 acre of new impervious surface) to be subject to stormwater treatment requirements by August 15, 2006, would allow the regulation of Group 2 Projects to be completed in phases. Board staff and the Dischargers also agreed that a final implementation date for all Group 2 Projects (Group 2A and 2B) of August 15, 2006, would be consistent with the permits of the other Bay Area Permittees.

The Tentative Order (circulated May 6, 2005) amended Subsection C.3.c.ii. of Order No. 01-119 to define two subgroups of Group 2 Projects, namely 2A and 2B, that are required to implement stormwater BMPs under Provision C.3.d. Group 2A Projects are defined in all ways the same as the Group 1 Projects, except that the size threshold of impervious area for new and Significant Redevelopment projects is reduced from one acre (43,560 ft²) to 10,000 square feet and the project is one of the following land use categories:

- Gas stations;
- Auto wrecking yards;

- Vehicle or equipment maintenance areas, including washing and repair;
- Outdoor handling or storage of waste or hazardous materials;
- Outdoor manufacturing area(s);
- Outdoor food handling or processing;
- Outdoor animal care;
- Outdoor horticultural activities;
- Loading docks;
- Surface parking lots; and
- Various other industrial and commercial uses where potential pollutant loading cannot be satisfactorily mitigated through other post-construction source control and site design practices.

***Revised Tentative Order:** In response to the Dischargers' comments of June 7, 2005, the Revised Tentative Order would define Group 2A Projects to better represent what was agreed upon in negotiations between Board staff and the Program. Specifically, some of the land use categories listed in the Tentative Order have now been combined within one land use category, as shown below:*

- *Gas stations;*
- *Auto wrecking yards;*
- *Loading docks and surface parking lots containing more than 10,000 square feet or more of impervious surface area; and*
- *Vehicle or equipment maintenance areas (including washing and repair), outdoor handling or storage of waste or hazardous materials, outdoor manufacturing area(s), outdoor food handling or processing, outdoor animal care, outdoor horticultural activities, and various other industrial and commercial uses where potential pollutant loading cannot be satisfactorily mitigated through other post-construction source control and site design practices.*

Group 2B Projects would be defined in all ways the same as Group 2A Projects, except that Group 2B Projects are not any of the land use categories defined above. Also, projects consisting of one single family home not part of a larger common plan of development are excluded from the Group 2B Project definition. Dischargers are required to implement Provision C.3.d. with respect to Group 2B projects by August 15, 2006. After August 15, 2006, all projects creating 10,000 square feet or more of new impervious surface will be classified as Group 1 Projects and the classifications of Group 2, 2A, and 2B will no longer be necessary. Therefore, the Tentative Order would extend the final implementation for all Group 2 Projects from April 15, 2005, to August 15, 2006.

The Tentative Order (circulated May 6, 2005) set the implementation deadline for 2A projects to be the anticipated date of adoption of the Amendment (June 15, 2005). It also required a report by February 20, 2006, on the progress towards ensuring that implementation of Provision C.3.d. for Group 2B projects will occur by August 15, 2006.

Revised Tentative Order: In response to the Dischargers' comments of June 7, 2005, the implementation deadline for provision C.3.d. for Group 2A projects would be extended from June 15, 2005, to no later than three months from the date of adoption of the Amendment. The Dischargers requested this change to allow enough time to adopt implementing ordinances, policies and/or guidance with regard to Group 2A projects.

The Revised Tentative Order would remove the requirement for the Dischargers to submit a progress report by February 20, 2006. This would make Group 2 Project requirements more consistent throughout the Bay Area. The progress report is currently not required of other Bay Area Permittees.

VII. Amendment of Hydromodification Management Requirements, Provision C.3.f.

Provision C.3.f. required the Dischargers to prepare and submit for Board approval, by October 15, 2003, an HMP to manage increases in peak runoff flow and volume for certain new and redevelopment projects. However, the Dischargers were provided an additional three months until January 15, 2004 to complete the HMP Report in order to provide the Dischargers and other Bay Area Permittees the same net amount of time to complete an HMP Report. Subsequently, the Dischargers submitted components of their HMP and were allowed additional time, approximately 15 more months, to resolve technical and administrative implementation issues and complete their HMP Report. In April 2005, the Dischargers submitted a final HMP Report⁶. The Dischargers' seven-chapter HMP Report contains background information, a management objective, performance standards, and guidance.

The Revised Tentative Order would approve only key provisions of the Dischargers' HMP Report, not the entire report, for two reasons. First, it is necessary to clarify specifically what implementation language the Program and the Board can agree is being approved in the Revised Tentative Order. Second, Board staff does not accept all of the technical or implementation aspects of the HMP Report, and have reached an agreement with the Program that the key provisions can and should be implemented while all parties continue working on specific technical and implementation issues. Where these issues are applicable across the Bay Area, the issues will be addressed at a regional level. The following gives some examples of the technical and implementation aspects in the HMP Report that are not acceptable:

1. Page 5-7, Exemption Based on Project Characteristics –“The amount of impervious surface is not the only indicator of pre-project runoff. For example, a project may be able to show that even though the impervious surface area has increased, actual runoff will be less because permeability of the remaining area will be enhanced by the project and there is less *directly connected impervious surface*.” The term “directly connected impervious surface” is introduced here and mentioned several times in other chapters. This term is less stringent than the “impervious surface” term the Board uses in its

⁶ *Hydromodification Management Plan Report, Final Report*, Santa Clara Valley Urban Runoff Pollution Prevention Program, April 21, 2005. Available at www.scvurppp.org.

orders to define the Group 1 projects for applicability of HMP requirements.

Therefore, a project could be exempt when the Board did not intend to make it so.

2. Page 5-11, Exemption for Infill Projects in Highly Developed Watersheds – The HMP as submitted proposes that, “The definition of an infill project is as follows: a. All projects in subwatersheds with 65% or more of impervious surface; or b. Projects less than 50 acres (total size) in subwatersheds with less than 65% of impervious surface.” The latter definition is arbitrary and without adequate cost-benefit justification. As a compromise, in the Revised Tentative Order, projects that meet definition b. are exempt in this phase of HMP implementation. However, it is not anticipated that this infill project definition will be acceptable in future phases of implementation or on a regional level.
3. Page 2-13, Undeveloped Land – The HMP as submitted provides an exemption for “undeveloped land” that indicates that the working definition is “land without improvements (i.e., curb and gutter, sidewalks, structures, etc.) Parking lots, parks, designated open space, cemeteries, golf courses, etc. that have been developed according to the designated zoning for the parcel are not considered undeveloped land.” The latter sentence is problematic because it has the effect of exempting areas that are currently largely unpaved by characterizing them as highly developed.
4. Page 7-7, 2% cost cap definition – 2% of total project cost is proposed by the Program as the primary measure for the practicability of implementing on-site flow control measures. However, it is not clearly defined in the HMP Report what costs will be included and excluded. The Revised Tentative Order defines in footnote 6 on page A-2 that the costs of flow control measures shall not include land costs, soil disposal fees, hauling, contaminated soil testing, mitigation, disposal, or other normal site enhancement costs such as landscaping or grading that are required for other development purposes. This footnoted definition is consistent with the case studies in Chapter 6 of the HMP Report. (p. 6-14, 6-17)

Meanwhile, the other Bay Area Permittees submitted their own HMP Reports on or about May 15, 2005, as required by their Permits. Board staff will review all of these HMP Reports; comment on the technical merits of each report; participate in collaborative meetings to encourage consistency in HMP requirements across the Bay Area; require any necessary revisions to HMP Reports; and issue public notices of intent to approve the HMPs. Following those steps, the Board may consider approving the other Bay Area Permittees’ HMPs in a public hearing(s). The Board may consider making revisions of the Dischargers’ HMP provisions if needed to make the Dischargers’ HMP consistent with the HMPs of the other Bay Area Permittees. The Board may do this through approval of a region-wide permit, through a blanket permit amendment for all Bay Area Permittees, or through reissuance or amendment of the Dischargers’ permit accomplished in a consistent fashion with the other Bay Area Permittees. Thus, the Revised Tentative Order may contain a phased approach to implementing HMP requirements in the Santa Clara Valley.

Revised Tentative Order – Implementation Dates and Format:

- *The Tentative Order of May 6, 2005, replaced Provision C.3.f. of Order 01-119 with certain HMP requirements. The Revised Tentative Order would amend C.3.f. by adding the HMP requirements in Attachment A, as requested by the Dischargers.*
- *The Tentative Order of May 6, 2005, required implementation within four weeks of adoption of the Order. The Revised Tentative Order would require implementation of HMP requirements within three months of adoption of the Order, as requested by the Dischargers.*
- *The Tentative Order of May 6, 2005, stated the Executive Officer would make revision of the HMP as needed to make the HMP consistent with other Bay Area HMPs. The Revised Tentative Order moved the concept that the Dischargers' HMP may need to be modified to Finding 9, because this concept is informative but not an enforceable provision.*
- *The text of the Tentative Order of May 6, 2005, contained HMP requirements. The Revised Tentative Order would place the enforceable HMP requirements (key provisions of the HMP Report) in Attachment A, as requested by the Dischargers.*

HMP Management Standard: The HMP Report and its supporting technical documents⁷ present a method for analyzing the erosion potential (Ep) of increased flows and durations of flows from new/redevelopment to indicate their impact on stream stability. Ep is expressed as the ratio of post-project to pre-project “work done” on the stream by the increased flows and durations of flows. Using the Ep index as a point of reference, the HMP Report presents the management objective: “*Stormwater discharges from non-exempt, Group 1 development projects shall not cause an increase in the erosion potential of the receiving stream over the pre-project (existing) condition, i.e., an Ep of up to 1.0 will be maintained for stream segments downstream of the project discharge point.*” This objective serves as the basis for the Management Standard in the Order.

Revised Tentative Order – Management Standard: *As agreed upon by the Dischargers and Board staff, the Revised Tentative Order clarifies that the HMP requirements will apply to only those projects that create or replace one acre or more of impervious surface. Thus, when the Permit’s requirements to treat the pollutants in stormwater runoff from projects that create or replace 10,000 sq. ft. or more of impervious surface come into effect, the HMP requirements will remain applicable to only the larger, one-acre sized projects.*

HMP Performance Criterion 2: One technical element of the HMP involves determining how erosive the flows discharged by various storm events will be. Throughout the process of developing the HMP, Board staff understood that the Dischargers’ HMP submittals demonstrated that matching pre- and post-project discharge rates and durations over the *entire* period of record (e.g., up to the 50-year peak flow) results in an Erosion Potential (Ep) of 1.0 (i.e., no increased erosion), whereas matching a lesser portion of the record could result in a higher Ep, and that the actual size and cost of example hydromodification control

⁷ Hydromodification Management Plan Report, Revised Public Review Draft, prepared by SCVURPPP, November 2004. Includes Volume 2, Appendices A-I.

units did not increase significantly when they are designed to match the entire period of record. However, the Dischargers understood their HMP submittals demonstrated that matching up to the ten-year peak flow controlled most of the erosive flows, and thus is sufficient. Board staff and the Dischargers will continue to evaluate the potential benefits to waterways and incremental costs of controlling a range of flows up to the 50-year peak flow, as opposed to controlling up to the ten-year peak flow, as proposed by the Dischargers. Any future revisions of the Dischargers' HMP provisions may reflect improved understanding of this issue.

Revised Tentative Order – Range of Storms: *The May 6 Tentative Order required matching the pre- and post-development discharge rates and durations over the entire period of record. The Revised Tentative Order would require the design of flow duration controls to match pre-project discharge rates and durations from 10% of the pre-project 2-year peak flow up to the pre-project 10-year flow, as requested by the Dischargers.*

HMP Performance Criteria 3 and 4: Because the HMP Report is a lengthy document containing technical information, performance criteria, and guidelines, a summary of the document was needed to clarify the actual requirements. The May 6 Tentative Order attempted to streamline the performance criteria in the Dischargers' HMP. One point of clarification was how project proponents could demonstrate that HMP requirements are impracticable, and what these projects should do in lieu of meeting the flow/duration matching criterion. However, the Dischargers commented that the Tentative Order incorrectly captured the nature of the requirements, and offered alternative streamlined performance criteria.

Revised Tentative Order – Impracticability Criteria:

- *The Revised Tentative Order would change the wording of the May 6 Tentative Order so that costs are not the initial focus, as requested by the Dischargers.*
- *The Revised Tentative Order would remove the requirement to incorporate site design and stormwater treatment measures that reduce runoff volume and time of concentration for projects that demonstrate meeting the flow/duration criterion is impracticable, as requested by the Dischargers.*
- *The Revised Tentative Order would remove the requirement that the project proponent must provide the reasons for impracticability, relevant site data, and reasonable cost estimates, as requested by the Dischargers. Instead, Dischargers will be expected to report similar information in their Annual Reports.*
- *As requested by the Dischargers, the Revised Tentative Order would change the wording of the May 6 Tentative Order so that projects less than 20 acres in size, and projects where on-site measures are not practicable, “may” match the pre- and post-project runoff volume and time of concentration based on the 2- and 10-year storms, rather than requiring this outright.*

HMP Operation and Maintenance Requirements: The Revised Tentative Order would change the format of the May 6 Tentative Order so that the Operation and Maintenance requirements are placed in a separate section, as requested by the Dischargers.

Areas of Applicability: Provision C.3.f.ii. allows that, in certain situations, hydromodification impacts from new/redevelopment projects would be minimal. Such situations may include discharges into creeks that are concrete-lined or significantly hardened downstream to their outfall in San Francisco Bay, underground storm drains discharging to the Bay, and construction of infill projects in highly developed watersheds, where the potential for single-project and/or cumulative impacts is minimal. Provision C.3.f.ii. requires Dischargers to include guidelines for identification of such situations in the HMP, noting that plans to restore a creek reach may re-introduce the applicability of HMP controls, and would need to be addressed in the HMP.

Revised Tentative Order – Applicability of HMP Requirements:

- *As agreed upon by the Dischargers and Board staff, the Revised Tentative Order would clarify that the HMP requirements will apply to only those projects that create or replace one acre or more of impervious surface. Thus, when the Permit's requirements to treat the pollutants in stormwater runoff from projects that create or replace 10,000 sq. ft. or more of impervious surface come into effect, the HMP requirements will remain applicable to only the larger, one-acre sized projects.*
- *The Revised Tentative Order would remove the requirement for projects that do not increase the impervious surface over pre-project conditions to demonstrate that the volume of runoff from the site will not increase (due to grading changes, site compaction, and/or directly connected impervious surfaces), at the request of the Dischargers.*
- *The Dischargers' HMP Report exempts projects smaller than 50 acres located in areas with < 65-70% impervious surface and 90% or more built-out from HMP requirements. The provisions of the May 6 Tentative Order stated that this is an interim exemption, until the other Bay Area Permittees' HMPs are approved. The Revised Tentative Order would place information about potential future changes in the HMP in Finding 9, at the request of the Dischargers.*
- *The Revised Tentative Order states that certain projects shall be encouraged, rather than required, to implement the HMP, at the request of the Dischargers.*

VIII. Board's Authority to Amend Permit

Order No. 01-119 expressly allows and requires: approving an alternate Group 2 definition and an HMP. Modifying the permit to reflect the new Group 2 definition and new HMP requirements is necessary and authorized because they are major revisions to the Management Plan, through which provision C.3 is implemented. Provision C.11. of the existing permit makes clear that amendments, revisions and modifications to the Management Plan and existing permit would be necessary from time to time, and that changes requiring major revision of the Management Plan shall be brought before the Board as permit amendments.

IX. Waste Discharge Requirement Appeals

Any person may petition the State Water Resources Control Board to review the decision of the Board regarding the Waste Discharge Requirements. A petition must be made within 30 days of the Board public hearing.