CITY OF OAKLAND

# CITY OF OAKLAND
# STORMWATER SUPPLEMENTAL FORM

*This form must be submitted with all Planning and Zoning applications for projects defined as Regulated Projects by Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). Regulated Projects are:*

- *Projects that create or replace 10,000 square feet or more of new or existing impervious surface area; and*
- *Since December 1, 2011, the following projects that create or replace 5,000 square feet or more of new or impervious surface area:*
  - *Auto servicing, auto repair, and gas stations;*
  - *Restaurants (full service, limited service, and fast-food); and*
  - *Uncovered parking lots (including stand-alone parking lots, parking lots serving an activity, and uncovered portions of parking structures unless drainage from the uncovered portion of the parking structure is connected to the sanitary sewer system).*

*Regulated Projects do not include individual single-family dwellings (that are not part of a larger multi-unit development) or routine maintenance activities. For more information about the C.3 stormwater requirements, please refer to the City of Oakland's Overview of Provision C.3 and the website of the Alameda Countywide Clean Water Program: http://www.cleanwaterprogram.org/*

## GENERAL INFORMATION

**1. Project Name** (if applicable): ______________________

**2. Project Address** (including cross street): ______________________

**3. Assessor's Parcel Number(s):** ______________________

**4. Applicant's Name:** ______________________

**5. Applicant's Address:** ______________________

**6. Applicant's Phone:** ______________ **Email:** ______________

**7. Project Type (**check all that apply**):** ☐ Residential ☐ Commercial ☐ Industrial ☐ Mixed Use ☐ Streets/Roads[1]

**8. Project Description (**Also note any past or future phases of project**):** ______________________

______________________

______________________

______________________

______________________

______________________

**9. Slope on Site:** ______________ **%**

**10: Project Watershed:**[2] ______________

**11. Total Site Area (acres):** ______________

**12: Total Land Area Disturbed**[3] **(acres)** ______________

**Special Projects Worksheet Completed by:**

______________________

**Signature** **Date**

______________________

**Print or Type Name**

*To Be Completed By City Staff:*

Date Application Submitted: ______________________

Case Number(s): ______________________

➢ Note to Staff: Please route a copy of this form to the stormwater coordinator in the Planning and Zoning Division.

1 Roadway projects that replace existing impervious surface are subject to C.3 requirements only if one or more lanes of travel are added.

2 Project Watershed information is available via the following link. http://acfloodcontrol.org/resources/explore-watersheds

3 Includes clearing, grading, excavating and stockpiling.

## SUPPLEMENTAL PROJECT INFORMATION

**1. Type of Development** (check one): ❑ Development on previously undeveloped land
❑ Development on previously developed land

**2. Site Calculations**:

| **Type of Impervious Surface** | **Pre-Project Impervious Surface (sq.ft.)** | **Existing Impervious Surface to be Replaced[7] (sq.ft.)** | **New Impervious Surface to be Created[7] (sq.ft.)** | **Post-project pervious surface (sq.ft.)** |
|---|---|---|---|---|
| Roof area(s) – excluding any portion of the roof that is vegetated ("green roof") | | | | N/A |
| Impervious[5] sidewalks, patios, paths, driveways | | | | |
| Impervious[5] uncovered parking[6] | | | | |
| Streets (public) | | | | |
| Streets (private) | | | | |
| Totals: | | | | |
| Area of Existing Impervious Surface to remain in place | | N/A | | |
| Total New Impervious Surface *(sum of totals for columns b and c)*: | | | | |

*Impervious Surface = Any surface that cannot be effectively (easily) penetrated by water. Permeable paving (such as permeable concrete and interlocking pavers) underlain with permeable soil or permeable storage material, and green roofs with a minimum of three inches of planting media, are not considered impervious surfaces.*

| | Yes | No |
|---|---|---|
| **3.** Does the total amount of Replaced impervious surface equal 50 percent or more of the Pre-Project Impervious Surface? If YES, stormwater treatment requirements apply to the whole site; if NO, these requirements apply only to the impervious surface created and/or replaced. | ❑ | ❑ |
| **4.** Is the project installing a total of 3,000 sq. ft. or more (excluding private-use patios in single family homes, townhomes, or condominiums) of new pervious pavement systems? (Pervious pavement systems include pervious concrete, pervious asphalt, pervious pavers and grid pavers etc. and are described in the C3 Technical Guidance at www.cleanwaterprogram.org) If YES, stormwater treatment system inspection requirements (C.3.h) apply[4]; If NO, inspection requirements only apply if there are other treatment systems installed on the project. | ❑ | ❑ |
| **5.** Is the site a "Hillside Site" that disturbs 5,000 sq. ft. or more, but less than 1.0 acre (43,560 sq.ft.) of land? "Hillside Sites" in the City of Oakland are sites with a footprint slope of greater than 20%.[5] | ❑ | ❑ |

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[4] Planning staff to notify Inspection staff that O&M inspections are required.
[5] Planning staff to notify Inspection staff that storm water inspections are required during the wet weather season (October 1 through April 30) and other times as appropriate.

## APPLICABILITY OF C.3 REQUIREMENTS TO PROJECT

*This section of the form will determine which requirements of Provision C.3 apply to the project.*

### SITE DESIGN MEASURES

*Site design measures are site planning techniques that conserve natural spaces and/or limit the amount of impervious surface in development projects in order to minimize the amount of stormwater runoff.*

**10. Site Design Measures.** The following site design measures are required for all C.3 Regulated Projects as applicable; Projects that create and/or replace 2,500 - 10,000 sq. ft. of impervious surface, and stand-alone single family homes that create/replace 2,500 sq. ft. or more of impervious surface, must include one of Site Design Measures a through g.i through g.vi (check “Applicable” if the measure is applicable to the project; check “Not Applicable” if the measure is not applicable):

| | Applicable | Not Applicable |
|---|---|---|
| a. Minimize land disturbance and impervious surfaces (especially parking lots). | ❑ | ❑ |
| b. Maximize permeability by clustering development and preserving open space. | ❑ | ❑ |
| c. Use micro-detention, including distributed landscape based detention | ❑ | ❑ |
| d. Protect sensitive areas, including wetland and riparian areas, and minimize changes to natural topography. | ❑ | ❑ |
| e. Use self-treating or self-retaining areas[6] | ❑ | ❑ |
| f. Plant or preserve receptor trees.[7] | ❑ | ❑ |
| g. Minimize stormwater runoff by implementing one or more of the following site design measures (check “Applicable” for at least one measure below): | | |
| i. Direct roof runoff into cisterns or rain barrels and reuse for irrigation or other non-potable use. | ❑ | ❑ |
| ii. Direct roof runoff onto vegetated areas. | ❑ | ❑ |
| iii. Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas. | ❑ | ❑ |
| iv. Direct runoff from driveways and/or uncovered parking lots onto vegetated areas. | ❑ | ❑ |
| v. Construct sidewalks, walkways, and/or patios with permeable surfaces.[8] | ❑ | ❑ |
| vi. Construct driveways, bike lanes, and/or uncovered parking lots with permeable surfaces.[9] | ❑ | ❑ |

[6] Use the specifications in the C3 Technical Guidance (Version 4.1) (Sections 4.1 and 4.2)
[7] Use the specifications in the C3 Technical Guidance (Version 4.1) (Section 4.5 )
[8] Use the specifications in the C3 Technical Guidance (Version 4.1) or for small projects see the BASMAA Pervious Paving Factsheet. www.cleanwaterprogram.org and click on “Resources.”
[9] See Footnote 5.

## SOURCE CONTROL MEASURES

*Source control measures are structural and operational measures that aim to prevent stormwater runoff pollution by reducing contact between runoff and the source of pollution.*

**11. Source Control Measures.** The following source control measures are required for all projects as applicable (check "Applicable" if the measure is applicable to the project; check "Not Applicable" if the measure is not applicable):

| | Applicable | Not Applicable |
|---|---|---|
| a. Install stenciling at storm drain inlets, such as "No Dumping – Drains to Bay." | ❑ | ❑ |
| b. Plumb interior floor drains to sanitary sewer | ❑ | ❑ |
| c. Plumb interior parking garage floor drains to sanitary sewer. | ❑ | ❑ |
| d. Cover and enclose trash/recycling storage areas and design these areas to prevent storm water run-on and run-off into the trash area. Connect any drains to sanitary sewer. | | |
| e. Cover outdoor equipment and material storage area or design to avoid pollutant contact with stormwater runoff. Locate area only on paved and contained areas. | ❑ | ❑ |
| f. Cover and/or grade to minimize run-on to and runoff from the loading area. Position downspouts to direct stormwater away from the loading area. Drain water from loading docks to the sanitary sewer. Install door skirts between the trailers and the building. | ❑ | ❑ |
| g. Provide sink or other area for restaurant and food service equipment cleaning, which is: connected to a grease interceptor prior to sanitary sewer discharge and large enough for the equipment to be cleaned. Clean indoors or outdoors in a roofed area designed to prevent stormwater run-on and run-off, and signed to require washing in this area. | ❑ | ❑ |
| h. Perform outdoor process activities including machine shops, auto repair, industries with pretreatment facilities either indoors or in roofed outdoor area, designed to prevent stormwater run-on and runoff, and to drain to the sanitary sewer. | ❑ | ❑ |
| i. Commercial car wash facilities shall discharge to the sanitary sewer. Roofed, pave and berm vehicle equipment wash area to prevent stormwater run-on and runoff and sign as wash area. | ❑ | ❑ |
| j. Designate vehicle repair/maintenance area indoors, or an outdoors area designed to prevent stormwater run-on and runoff and provide secondary containment. Do not install drains in the secondary containment areas. No floor drains unless pretreated prior to discharge to the sanitary sewer. Connect parts cleaning areas to sanitary sewer. | ❑ | ❑ |
| k. Discharge swimming pool water to on-site vegetated areas or to the sanitary sewer. | ❑ | ❑ |
| l. Discharge fire sprinkler test water to on-site vegetated areas or to the sanitary sewer if discharge to on-site vegetated areas is not feasible. | ❑ | ❑ |
| m. Incorporate sustainable landscaping practices, retain existing vegetation, use efficient irrigation systems to minimize runoff, promote surface infiltration, minimize the use of pesticides and fertilizers, and other practices of Bay Friendly Landscaping.[10] | ❑ | ❑ |
| n. Discharge architectural copper rinse water to sanitary sewer, or collect and dispose offsite. | ❑ | ❑ |
| o. Drain air conditioning unit water to landscaping or discharge to the sanitary sewer. Drain roofs to unpaved area where practicable. Drain boiler drain lines, roof top equipment, all wash water to sanitary sewer. | ❑ | ❑ |
| p. Fuel dispensing areas shall have impermeable surface that is graded to prevent ponding and separated from the rest of the site by a grade break. Canopies shall extend at least 10' in each direction from pumps and drain away from fueling area. | ❑ | ❑ |

[10] More information about Bay Friendly Landscaping is available on the StopWaste.Org website: http://www.stopwaste.org/home/index.asp?page=8

## SPECIAL PROJECTS

*Provision C.3 requires development projects to incorporate stormwater treatment measures into the project in order to remove pollutants from stormwater runoff. Since December 1, 2011, only Low Impact Development (LID) treatment measures are allowed. LID treatment measures are rainwater harvesting, infiltration, evapotranspiration, and biotreatment. Non-LID treatment measures include high flowrate tree well filters and mechanical vault-type media filters. Non-LID treatment measures are only allowed for Special Projects as defined by Provision C.3. This section of the form will determine if the project qualifies as a Special Project and non-LID treatment measures are allowed.*

**12. Density** (check one): ❑ Residential Project – Dwelling Units (DU) per Acre: ______________________________
❑ Nonresidential Project – Floor Area Ratio (FAR): ______________________________
❑ Mixed-Use Project: Indicate either DU or FAR above.

**Special Project Category "A"**

**13. Does the project have ALL the following characteristics?**

| | Yes | No |
|---|---|---|
| a. Located in a CBD, D-BV1, D-BV-2, D-LM-2, CN-1, CN-2, CN-3, RU-5, or S-15 zone; or<br>Located in a Retail, Dining, and Entertainment district in Jack London Square on the City's General Plan map; or<br>Located in a City-designated historic district (either an Area of Primary Importance or an Area of Secondary Importance); or<br>Located on a site listed on the City's Local Register of Historical Resources (as defined by the Oakland Planning Code)? | ❑ | ❑ |
| b. Create and/or replaces 0.5 acres or less of impervious surface? | ❑ | ❑ |
| c. Include no surface parking, except for incidental parking for emergency vehicle access, ADA access, and passenger or freight loading zones? | ❑ | ❑ |
| d. Have at least 85% lot coverage by permanent structures? | ❑ | ❑ |

- If you checked "yes" for all of the above questions, the project qualifies as a Category "A" Special Project.
- If you checked "no" for any of the above questions, the project is not a Category "A" Special Project.

**Special Project Category "B"**

**14. Does the project have ALL the following characteristics?**

| | Yes | No |
|---|---|---|
| a. Located in a CBD, D-BV-1, D-BV-2, D-LM-2, CN-1, CN-2, CN-3, RU-5, or S-15 zone; or<br>Located in a Retail, Dining, and Entertainment district in Jack London Square on the City's General Plan map; or<br>Located in a City-designated historic district (either an Area of Primary Importance or an Area of Secondary Importance); or<br>Located on a site listed on the City's Local Register of Historical Resources (as defined by the Oakland Planning Code)? | ❑ | ❑ |
| b. Create and/or replace more than 0.5 acres of impervious surface but no more than 2.0 acres of impervious surface? | ❑ | ❑ |
| c. Include no surface parking, except for incidental parking for emergency vehicle access, ADA access, and passenger or freight loading zones? | ❑ | ❑ |
| d. Have at least 85% lot coverage by permanent structures? | ❑ | ❑ |
| e. Have a minimum Gross Density (GD)[11] of 50 dwelling units per acre (for residential projects) or a floor area ratio (FAR)[12] of 2.0 (for commercial projects)? Either criterion may be used for mixed-use projects[13]. | ❑ | ❑ |

- If you checked "yes" for all of the above questions, the project qualifies as a Category "B" Special Project.
- If you checked "no" for any of the above questions, the project is not a Category "B" Special Project.

**Special Project Category "C"**

**15. Does the project have ALL the following characteristics?**

| | Yes | No |
|---|---|---|
| a. At least 50% of the project area is located within ½ mile of an existing or planned transit hub;[14] or 100% of the project is located within a planned Priority Development Area (PDA)?[15] | ❑ | ❑ |
| b. Characterized as a non-auto-related project?[16] | ❑ | ❑ |
| c. Have a minimum Gross Density of 25 dwelling units per acre (for residential projects) or a floor area ratio (FAR) of 2.0 (for nonresidential projects)? Either criterion may be used for mixed-use projects. | ❑ | ❑ |

- If you checked "yes" for all of the above questions, the project qualifies as a Category "C" Special Project.
- If you checked "no" for any of the above questions, the project is not a Category "C" Special Project.

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11 Gross Density (GD) is the total number of residential units divided by the acreage of the entire site area, including land occupied by public right-of-ways, recreational, civic, commercial, and other non-residential uses.

8 Floor Area Ratio (FAR) is the ratio of the total floor area on all floors of all buildings at a project site (except structures, floors, or floor areas dedicated to parking) to the total project site area.

13 Mixed-use project is the development or redevelopment of property to be used for two or more different uses, all intended to be harmonious and complementary.

14 A transit hub is a rail station, ferry terminal, or bus transfer station served by three or more bus routes. (A bus stop with no supporting services does not qualify.)

15 A planned PDA is an infill development area formally designated by the Association of Bay Area Governments (ABAG). A map of the planned PDAs in Oakland is attached to this form (see Attachment A).

16 Category "C" Special Projects excludes auto-related uses including stand-alone surface parking lots, car dealerships, auto and truck rental facilities with on-site surface vehicle storage, fast-food restaurants, activities with drive-through facilities, gas stations, car wash facilities, auto servicing, auto repair, and other auto-related uses.

**16. Calculate the amount of stormwater runoff that can be treated with non-LID treatment measures by using the worksheet below.** If the project does not quality as a Special Project, skip this step and go to no. 17 and check "no."

*Check the Special Project Category(ies) the project qualifies for based on the information from pages 3-4 and circle the Treatment Reduction Credit amount that corresponds to the project's characteristics.*

| | **Treatment Reduction Credit** |
|---|---|
| ❑ **Category "A" Special Project** | |
| All Category "A" Special Projects | 100% |
| ❑ **Category "B" Special Project** | |
| ≥ 50 dwellings per acre (residential); or ≥ 2.0 floor area ratio (FAR) (nonresidential) | 50% |
| ≥ 75 dwellings per acre (residential); or ≥ 3.0 floor area ratio (FAR) (nonresidential) | 75% |
| ≥ 100 dwellings per acre (residential); or ≥ 4.0 floor area ratio (FAR) (nonresidential) | 100% |
| ❑ **Category "C" Special Project**[17] | |
| a. Location | |
| Within ¼ mile of existing transit hub | 50% |
| Between ¼ mile and ½ mile of existing transit hub | 25% |
| Within Planned PDA | 25% |
| b. Density | |
| ≥ 30 units per acre (residential); or ≥ 2.0 floor area ratio (FAR) (nonresidential/mixed-use) | 10% |
| ≥ 60 units per acre (residential); or ≥ 4.0 floor area ratio (FAR) (nonresidential/mixed-use) | 20% |
| ≥ 100 units per acre (residential); or ≥ 6.0 floor area ratio (FAR) (nonresidential/mixed-use) | 30% |
| c. Parking | |
| Surface parking occupies ≤ 10% of total post-project impervious surface | 10% |
| No surface parking (except for incidental parking for emergency vehicle access, ADA access, and passenger or freight loading zones) | 20% |
| *Total Category "C" (sum of location, density, and parking treatment reduction credits):* | ____________ |

**17. Does the project qualify as a Special Project** (check one)?

❑ No

❑ Yes:

a. Special Project Category (A, B, or C): [18] ______________

b. LID Treatment Reduction Credit: ______________ %

c. Maximum Impervious Surface Area Allowed to be Treated with Non-LID Treatment Measures (multiply the amount in [b] by the Total Post-Project Impervious Surface Area [see no. 9 on page 1]): [19] ______________ sq. ft.

[17] Category "C" Special Projects are only allowed to claim one location credit, one density credit, and one parking credit even if the project qualifies for more than one.

[18] If the project qualifies for more than one category of Special Projects, the project applicant may choose which category applies to the project.

[19] The remaining stormwater runoff requiring treatment must be treated with LID treatment measures. The project applicant may choose to treat stormwater runoff with LID treatment measures even if non-LID treatment measures are allowed.

## HYDROMODIFICATION MANAGEMENT

*Changes to the timing and volume of stormwater runoff from a site are known as "hydrograph modification" or "hydromodification." Provision C.3 requires certain development projects to incorporate measures to manage hydromodification. This section of the form will determine if hydromodification management measures are required for the project.*

**24. Does the project have the following characteristics?**

| | Yes | No |
|---|---|---|
| a. Create and/or replace one acre or more of impervious surface? | ❑ | ❑ |
| b. The total post-project amount of impervious surface would exceed the amount of existing/pre-project impervious surface? | ❑ | ❑ |
| c. Located in a susceptible area on the Hydromodification Susceptibility Map?[20] | ❑ | ❑ |

- If you checked "no" for any of the questions above, hydromodification management measures are not required. Go to no. 25 and check "no."
- If you checked "yes" for all of the questions above, hydromodification management measures are required. Go to no. 25 and check "yes."

**25. Are Hydromodification Management Measures Required** (check one)?

❑ No

❑ Yes. Hydromodification management measures must be designed to meet the following standard:

***Hydromodification Management Standard***

Hydromodification management measures shall be designed such that post-project stormwater discharge rates and durations match pre-project discharge rates and durations from 10% of the pre-project two-year peak flow up to the pre-project 10-year peak flow.

To assist in the design of hydromodification management measures, the Alameda Countywide Clean Water Program, in collaboration with other clean water agencies, has developed a computer software program called the Bay Area Hydrology Model (BAHM). The BAHM is available at www.bayareahyrologymodel.com. Please refer to the "C.3 Stormwater Technical Guidance" manual available on the Alameda Countywide Clean Water Program's website http://www.cleanwaterprogram.org/ for more information about the BAHM and hydromodification management measures.

Hydraulic calculations for hydromodification management measures are not required to be submitted with applications for Planning and Zoning permits/approvals. However, adequate area for hydromodification management measures must be provided in the project drawings submitted with applications for Planning and Zoning permits/approvals.

[20] The Hydromodification Susceptibility Map is a tool created by the Alameda Countywide Clean Water Program to locate areas susceptible to hydromodification. The Hydromodification Susceptibility Map is attached to this form (see Attachment B) and is located on the Alameda Countywide Clean Water Program's website: http://www.cleanwaterprogram.org.

## PROPOSED STORMWATER MANAGEMENT MEASURES

*Use this section to identify the stormwater measures that will be incorporated into the project to comply with Provision C.3.*

**26. Proposed Site Design Measures.** List the required measures from page 2 along with any other proposed site design measures:

______________________________

______________________________

______________________________

**27. Proposed Source Control Measures.** List the required measures from pages 2 and 3 along with any other proposed source control measures:

______________________________

______________________________

______________________________

**28. Proposed Non-LID Treatment Measures.** Non-LID treatment measures are only allowed for Special Projects (see pages 3 to 5) AND if it is infeasible to incorporate 100% LID treatment. Are non-LID treatment measures proposed (check one)?

❑ No

❑ Yes (describe):

______________________________

______________________________

a. If both non-LID and LID treatment proposed, percentage of drainage area treated with non-LID treatment: ______

b. Non-LID treatment measures must meet minimum design criteria published by a government agency or be certified by a government agency. Identify the government agency and the applicable criteria/certification:

______________________________

c. If non-LID treatment measures are proposed, provide a discussion explaining why it is infeasible to incorporate 100% LID treatment in the project (attach additional sheets if necessary) as described in Attachment C.[21] Technical Guidance document attached. Select a treatment measure certified for "Basic" General Use Level Designation (GULD) by the Washington State Department of Ecology's Technical Assessment Protocol – Ecology (TAPE). Guidance is provided in Section Appendix J of the C.3 Technical Guidance (download at www.cleanwaterprogram.com – excerpt attached).[22]

______________________________

______________________________

______________________________

[21] Both technical and economic factors may be considered in the discussion of the feasibility of 100% LID treatment.
[22] TAPE certification is used in order to satisfy Special Project's reporting requirements in the MRP.

**30. Proposed Biotreatment Measures.** Biotreatment measures may be used to treat stormwater runoff requiring LID treatment. Are biotreatment measures proposed (check one)?

❑ No

❑ Yes (describe):

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

**31. Numeric Sizing for Stormwater Treatment Measures.** Stormwater treatment measures—both non-LID treatment measures and LID treatment measures (including rainwater harvesting and biotreatment)—must be designed to capture a specified amount of stormwater runoff using one of the design criteria in Provision C.3. Indicate the method to be used to size the proposed stormwater treatment measures (check one):[23]

a. <u>Volume Hydraulic Design Basis</u> – Treatment measures whose primary mode of action depends on *volume capacity*:

❑ i. The maximized stormwater capture volume for the area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients set forth in Urban Runoff Quality Management, WEF Manual of Practice No. 23 / ASCE Manual of Practice No 87 (1998), pages 175-178 (e.g., approximately the $85^{th}$ percentile 24-hour storm runoff event);

❑ ii. The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology set forth in Section 5 of the California Stormwater Quality Association's Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data;

b. <u>Flow Hydraulic Design Basis</u> – Treatment measures whose primary mode of action depends on *flow capacity*:

❑ i. 10 percent of the 50-year peak flowrate;

❑ ii. The flow of runoff produced by a rain event equal to at least two times the $85^{th}$ percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths;

❑ iii. The flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity; or

c. ❑ <u>Combination Flow and Volume Design Basis</u> – Treatment measures using a combination of flow and volume capacity sized to treat at least 80 percent of the total runoff over the life of the project, using local rainfall data.

**32. Proposed Hydromodification Management Measures.** Hydromodification management measures are required for certain projects (see page 9). Are hydromodification management measures proposed (check one)?

❑ No

❑ Yes (describe):

[23] Hydraulic calculations for proposed stormwater treatment measures are not required to be submitted with applications for Planning and Zoning permits/approvals. However, Provision C.3 requires that the *preliminary* proposed hydraulic sizing method be identified with the Planning and Zoning application.

## SUBMITTAL REQUIREMENTS

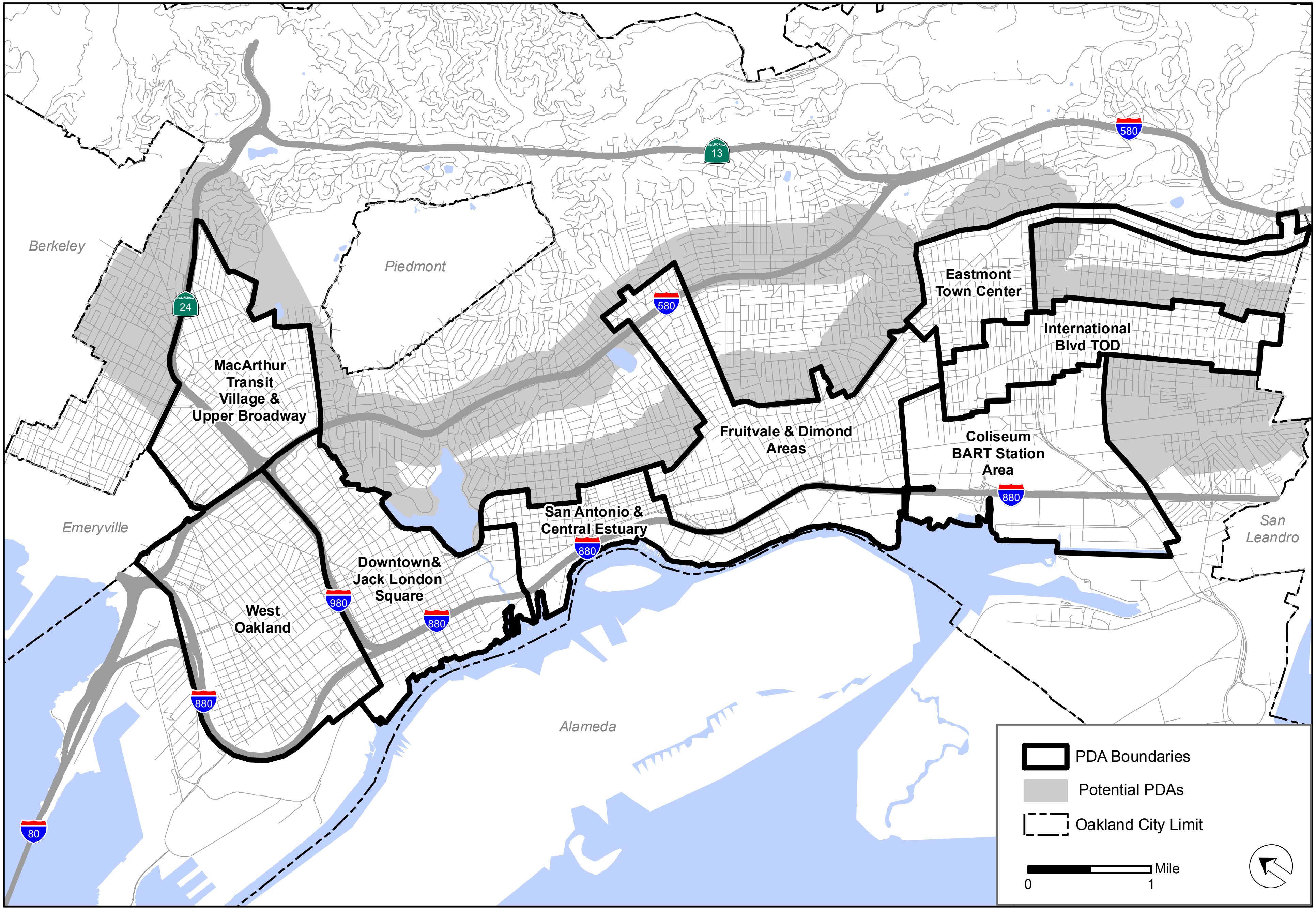
*This section of the form identifies the stormwater-related information required to be submitted with the project application.*

**33. Submittal Requirements.** The following materials/information must be submitted with the application for Planning and Zoning permit(s)/approval:

- ❑ **a. Stormwater Supplemental Form** – A completed copy of this form.
- ❑ **b. Preliminary Post-Construction Stormwater Management Plan** – A project drawing containing the following information (shown and labeled):
  - ❑ Location and size of new and replaced impervious surface;
  - ❑ Directional surface flow of stormwater runoff;
  - ❑ Location of proposed on-site storm drain lines;
  - ❑ Preliminary type and location of proposed site design measures;
  - ❑ Preliminary type and location of proposed source control measures;
  - ❑ Preliminary type and location of proposed stormwater treatment measures; and
  - ❑ Preliminary type and location of proposed hydromodification management measures (if applicable).

# ATTACHMENT A

## MAP OF OAKLAND PLANNED PRIORITY DEVELOPMENT AREAS (PDAS)




CITY OF OAKLAND

# Priority Development Areas (PDAs)

Department of Planning and Building
December 2015

# ATTACHMENT B

## HYDROMODIFICATION SUSCEPTIBILITY MAP

**Map Instructions**

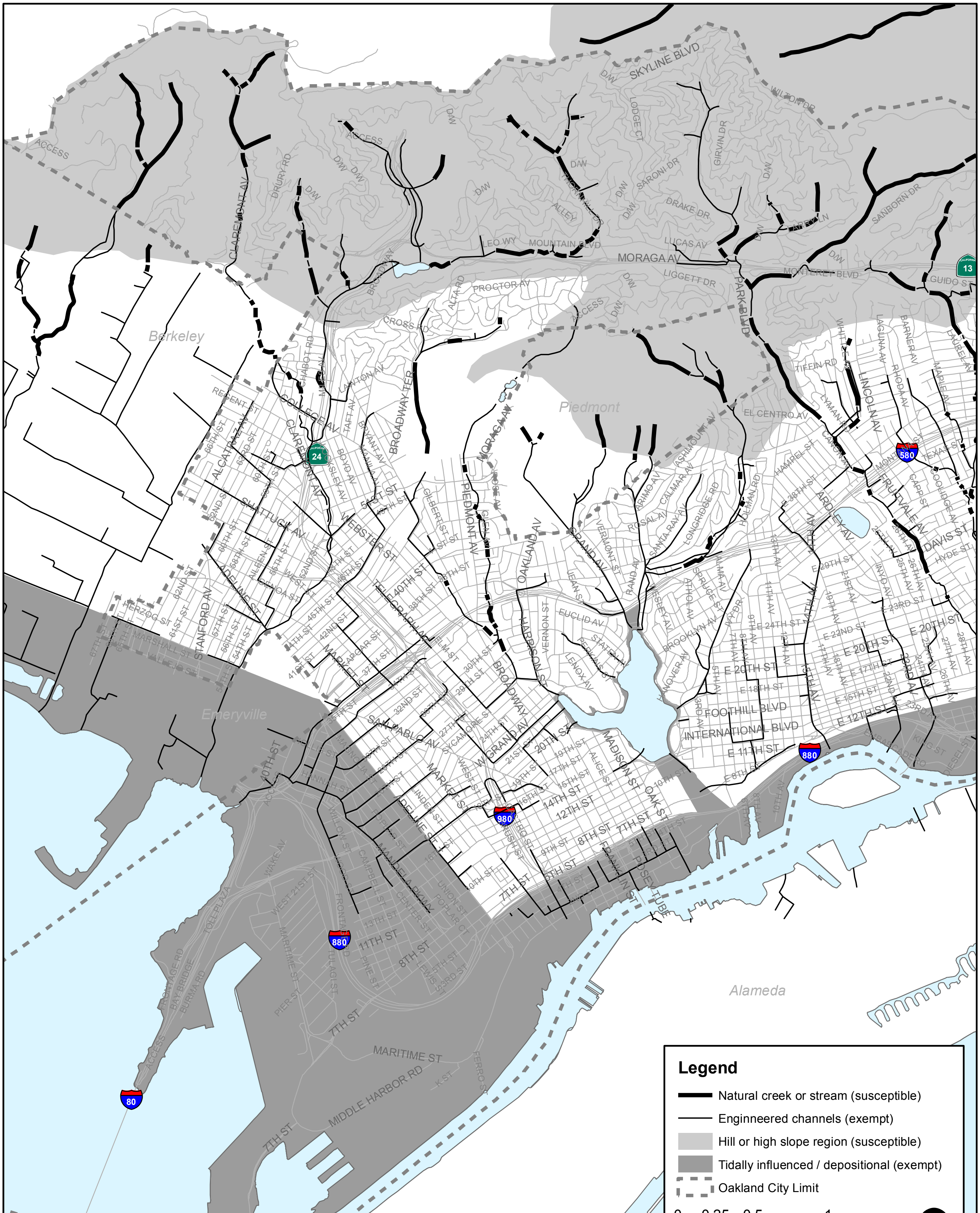
Use the map on the following pages to determine if the project is located in a susceptible area. The map is divided into three areas:

***High Susceptibility Area (Light Grey)*** – This area generally consists of steep slopes. Applicable projects in this area are required to incorporate hydromodification management measures.

***Potential Susceptibility Area (White)*** – This area is located between the hills and the tidal zone of San Francisco Bay. This area may be susceptible to hydromodification depending upon the nature of the drainage system. Applicable projects in this area are required to incorporate hydromodification management measures *unless* project stormwater runoff will flow through fully hardened, engineered channels from the project site to the tidal zone. If stormwater runoff from the project site will flow through a natural creek or stream (shown as a thick black line on the map), hydromodification management measures are required.

***Tidal Influence / Depositional Area (Dark Grey)*** – This area is located in the tidal zone of San Francisco Bay. Creeks in this area are generally tidally influenced or primarily depositional. Projects in this area are exempt from hydromodification management measures.

# ATTACHMENT C




Map by: City of Oakland, Department of Planning, Building, and Neighborhood Preservation
Source: Alameda Countywide Clean Water Program
March 2012

CITY OF OAKLAND

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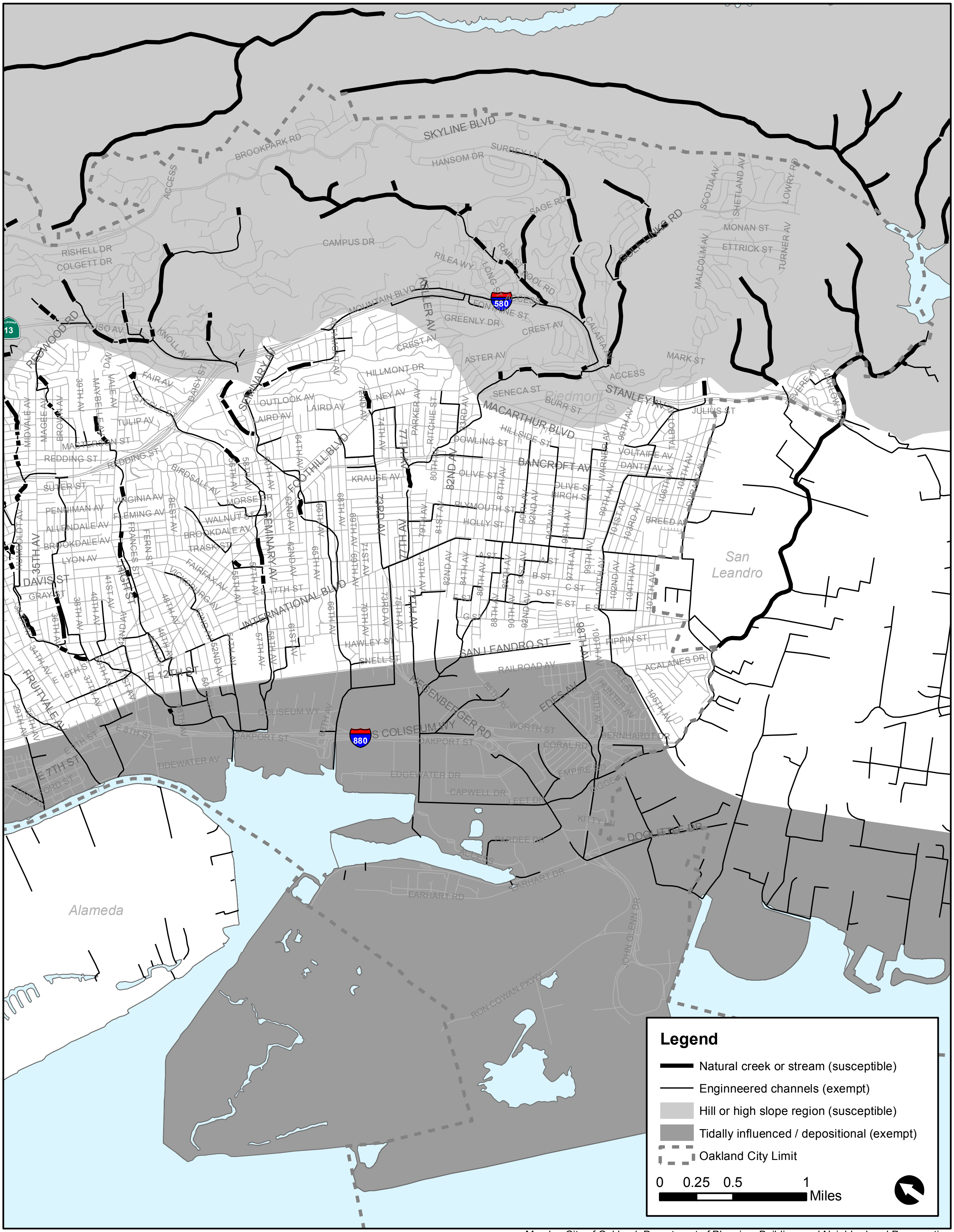
## Hydromodification Susceptibility Map - West




Map by: City of Oakland, Department of Planning, Building, and Neighborhood Preservation
Source: Alameda Countywide Clean Water Program
March 2012

# CITY OF OAKLAND
## Hydromodification Susceptibility Map - East

# LOW IMPACT DEVELOPMENT INFEASIBILITY

**EXCERPTS FROM APPENDIX J OF THE C.3 TECHNICAL GUIDANCE**

## J.6 LID Infeasibility Requirement for Special Projects

In order to be considered a Special Project, in addition to documenting that all applicable criteria for one of the above-described Special Project categories have been met, the applicant must provide a narrative discussion of the feasibility or infeasibility of using 100 percent LID treatment onsite, offsite, or at a Regional Project. The narrative discussion is required to address the following:

1. The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite;
2. The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures offsite or paying in-lieu fees to treat 100% of the Provision C.3.d runoff with LID treatment measures at an offsite or Regional Project; and
3. The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with some combination of LID treatment measures onsite, offsite, and/or paying in-lieu fees towards at an offsite or Regional Project.

The discussion is required to contain enough technical and/or economic detail to document the basis of any infeasibility that is determined.

### J.6.1 On-site LID Treatment

The narrative discussion should describe how the routing of stormwater runoff has been optimized to route as much runoff as possible to LID treatment measures. A discussion should also be provided for each area of the site for which runoff must be treated with non-LID treatment measures, and should include the following:

1. Uses of impervious surfaces that preclude the use of LID treatment; and
2. Technical constraints that preclude the use of any landscaped areas for LID treatment, such as:
   a. Inadequate size to accommodate bio-treatment facilities that meet the sizing requirements for the drainage area;
   b. Slopes too steep to terrace;
   c. Proximity to an unstable bank or slope;
   d. Environmental constraints (e.g., landscaped area is within riparian corridor);
   e. High groundwater or shallow bedrock;
   f. Conflict with subsurface utilities;
   g. Cap over polluted soil or groundwater;
   h. Lack of head or routing path to move collected runoff to the landscaped area or from the landscaped area to the disposal point;
   i. Other conflicts or required uses that preclude use for stormwater treatment (explain).

### J.6.2 Off-site LID Treatment.

The applicant must demonstrate to the municipality performing the project review that it is infeasible to provide LID treatment of an equivalent amount of runoff offsite either by paying in-lieu fees to a regional project or on other property owned by the project proponent in the same watershed (in other words, that alternative compliance, as described in Chapter 9, is infeasible).

Check with the local municipality to determine if there are any regional projects available for alternative compliance purposes (at the time of completion of this Appendix, there were none in Alameda County). These considerations should be documented in the narrative discussion of the feasibility and infeasibility of providing 100% LID treatment.

### J.6.3 Combination of On-site and Off-site LID Treatment

The applicant must also demonstrate to the municipality performing the project review that it is infeasible to provide LID treatment of 100% of the amount of runoff specified in Provision C.3.d with some combination of LID measures on-site, offsite, and or paying in-lieu fees to a regional project.

After determining the extent to which stormwater runoff can be optimized to route as much runoff as possible to LID treatment measures, if that amount is less than 100%, and if there are no options to provide LID treatment off-site on a property owned by the project proponent in the same watershed, check with the municipality to determine if there are any regional projects available for alternative compliance purposes for the remainder of the C.3.d amount of runoff. These considerations should be documented in the narrative discussion of the feasibility and infeasibility of providing 100% LID treatment.

### .J.7 Select Non-LID Treatment Measures Certified by a Government Agency

MRP Provision C.3.e.vi.(3)(i) requires municipalities to report to the Regional Water Board, for each non-LID treatment measure that the municipality approves, "whether the treatment system either meets minimum design criteria published by a government agency or received certification issued by a government agency, and reference the applicable criteria or certification."

For Special Projects that are allowed to use non-LID treatment measures, applicants are advised to use treatment measures that have been certified by the Washington State Department of Ecology's Technical Assessment Protocol – Ecology (TAPE), under General Use Level Designation (GULD) for Basic Treatment.24 You can identify proprietary media filters and high flow rate tree well filters currently holding this certification at the following link: http://www.ecy.wa.gov/programs/wq/stormwater/newtech/technologies.html.

The municipality may require that any non-LID treatment measures used in a Special Project be TAPE-certified, or the municipality may allow the use of non-LID treatment measures certified by another governmental program.

If the TAPE system is used, treatment measures must be sized based on the hydraulic sizing criteria specified in MRP Provision C.3.d and the design operating rate for which the product received TAPE GULD certification for Basic Treatment. If a different certification program is used, specify the design operating rate for which the product received the relevant certification.

[24] "General Use" is distinguished from a pilot or conditional use designation. "Basic Treatment" is distinguished from treatment effectiveness for phosphorus removal. Basic treatment is intended to achieve 80 percent removal of total suspended solids (TSS) for influent concentrations from 100 mg/L to 200 mg/L TSS and achieve 20 mg/L TSS for less heavily loaded influents.