



Department of Public Works • 809 Center Street • Room 201 • Santa Cruz, CA 95060

Initial Meeting and Storm Water Checklist

List of Required Storm Water Application Materials

I. Initial Meeting

It is strongly recommended that the Project team requests a meeting with City storm water staff and the City's third party QSD storm water reviewer prior to submitting a Design Permit application. The Project team shall include the Civil Engineer who will design the Project for compliance with storm water requirements.

The purpose of the meeting is to 1) go over the storm water requirements; 2) help ensure that initial design plans include sufficient space for storm water control measures; and 3) go over what should be included in the submittals. This in turn should reduce the review times and number of resubmittals.

II. Storm Water Checklist

1. City Storm Water Development Requirements

Please see the information below regarding the applicable development requirements. Both documents are available at: www.cityofsantacruz.com/LID.

- *SFD/Duplex <15,000 SF Impervious Area* - Project plans shall demonstrate compliance with Chapter 6A of the City's Best Management Practices Manual Storm Water BMPs for Single-Family Homes on Small Lots.
- or**
- *Projects creating or replacing over 2,500 SF of Net Impervious Area (unless per above)* - Project plans shall demonstrate compliance with Chapter 6B of the City's Best Management Practices Manual-Storm Water BMPs for Private and Public Development Projects.

Please note that the City Storm Water Development Requirements in Chapter 6A and 6B are based on the Central Coast Regional Water Quality Control Board (RWQCB) Post-Construction Requirements per Resolution R3-2013-0032. Please see: https://www.waterboards.ca.gov/centralcoast/water_issues/programs/stormwater/docs/lid/lid_hydromod_charette_index.html

2. Storm Water and LID Assessment Checklist

All projects shall complete and submit the applicable Storm Water and LID Assessment Checklist (Appendix A).

For the applicable Appendix A checklist, please refer to:

- Chapter 6A of the City's Best Management Practices Manual Storm Water BMPs for Single-Family Homes on Small Lots
- OR*
- Chapter 6B of the City's Best Management Practices Manual Storm Water BMPs for Private and Public Development Projects

Both documents are available at: www.cityofsantacruz.com/LID.

3. Preliminary Storm Water Control Plan (SWCP) Sheet

This requirement applies to projects that include 5,000 square feet or more of net impervious surface area.

The preliminary SWCP sheet and associated “Details” sheet shall demonstrate that the proposed drainage design and storm water BMPs are feasible and will properly function to meet the City Storm Water Development Requirements (Chapter 6B) and RWQCB PCRs. The SWCP sheet and associated “Details” sheet must be prepared by a licensed civil engineer.

The preliminary SWCP sheet shall include:

- Locations of existing or proposed storm drain inlets on or adjacent to the property
- Show any storm water flows or “run-on” from adjacent parcels and indicate how this will be addressed.
- Distance from each disconnected downspout, e.g. flowing to landscaping or similar, to adjacent property line(s)
- Provide slopes, grades/elevations and flow direction for proposed storm water conveyance systems, LID and structural BMPs, associated piping, inlets and outlets to demonstrate that the proposed project design will be in compliance with the RWQCB PCRs and City Chapter 6B requirements.
- Provide a detail for each storm water BMP and a preliminary cross-section for a bio-swale or bio-retention facility. Detail and cross-section shall include dimensions and show over-flow piping, inlets, outlets, and “free-board” based on preliminary design.
- For projects proposing infiltration or bio-retention BMPs, demonstrate there is sufficient depth/space between the bottom of the proposed BMP (e.g. bio-retention basin) and the top of groundwater or seasonal high water table. Typically the minimum space requirement is 3 feet however it may vary/increase depending upon site. Provide depths.

4. Preliminary Storm Water Control Plan (SWCP) Report

This requirement applies to projects that include 5,000 square feet or more of net impervious surface area. The SWCP must be prepared by a licensed civil engineer.

The preliminary SWCP report shall demonstrate that the proposed project will meet the requirements of the City Storm Water Development Requirements (Chapter 6B) and RWQCB PCRs. The preliminary SWCP report shall be in an 8 ½ x 11 inch report format and follow the outline in Chapter 6B, Appendix B. In addition, the preliminary SWCP report shall include:

- List and description of LID methods and BMPs proposed to meet each of the applicable RWQCB PCR tiers.
- Calculations for the proposed LID methods and BMPs verifying that BMP sizing is correct and in compliance with the RWQCB PCRs.
- Drawdown time of each proposed BMP if applicable.
- Depth to groundwater (or note if none encountered at specified depth).
- Information on how any storm water flows or “run-on” from adjacent parcels will be addressed. Please include flow estimate.

5. Preliminary Operations and Maintenance Plan (O&M Plan)

This requirement applies to:

- *Projects between 2,500-5,000 SF of net impervious surface area if a structural storm water BMP is proposed.*
- *Projects equal to or greater than 5,000 SF of net impervious surface area.*

The preliminary O&M Plan shall include: 1) draft site plan showing drainage structures and storm water control measures; 2) draft O&M procedures, timing, and frequency for maintenance of LID features and drainage systems; 3) draft maintenance cost estimates; and 4) BMPs for any Special Site Conditions (see pages 30-31), e.g. trash enclosure, parking, etc.

6. Civil Sheets

This requirement applies to projects that include 5,000 square feet or more of net impervious surface area, although smaller projects may also provide civil sheets.

a. Design plans shall include supporting civil sheets prepared by a licensed civil engineer. Each sheet shall have the following unless not applicable for that specific sheet: Title block, North arrow, Scale, Legend, Abbreviations list and Key, Standard Notes, property lines, adjacent street and alleyways, and Detail references.

b. The following information shall be included on at least one of the following sheets: Utility, Drainage and SWCP:

- Limits of project disturbance.
- Location of natural features, e.g. waterbodies and conservation areas, and setbacks.
- Location of existing and proposed sewer, water and storm drain lines, manholes, inlets, outlets, etc.
- Location of existing and proposed utility, sewer, water and storm drain easements.
- Existing and proposed topography, drainage patterns and flow paths (onto and off site). Include sufficient spot grading and slopes to demonstrate that the storm water design is

feasible and will meet the applicable RWQCB PCR standards. Show that existing drainage patterns will be maintained.

- Location of existing and proposed impervious areas including buildings, driveways, patios, parking areas, and trash enclosure.
- Locations of downspouts and discharge points.
- Roof plan on civil sheets consistent with roof plan on architectural sheets if known.
- Building Finish Floor Elevations if known.
- Location of existing and proposed storm water conveyance systems including piping, inlets and outlets, French drains, and areas of overland release.
- Location of all BMPs proposed to meet the RWQCB PCRs and the City Storm Water Development requirements including (as applicable): permeable pavers or pavement, swales, bio-retention facilities, structural BMPs for water quality treatment, flow control devices, detention BMPs, and other Low Impact Design features, etc. Include grades, dimensions, and direction of flow.
- If the project will include a bio-retention facility, show applicable slopes, spot elevations, and dimensions of the bio-retention facility.

7. Storm Water Additional Information

This requirement applies to Commercial or Multi-Family projects equal to or greater than 2,500 square feet of new and replaced impervious surface area as applicable.

- If proposing to discharge or infiltrate storm water on a slope equal to or greater than 10%, please provide a statement or Geotechnical letter confirming slope stability and approval of preliminary design plan.
- If the project will use infiltration or retention to comply with RWQCB PCRs Tiers 2-4, please submit information regarding soil permeability. The information shall indicate that the proposed BMPs are feasible and will be effective at meeting the requirements. This information may be: a soils report; infiltration, percolation or permeability test results; a hydrologic or geotechnical report; or other summary or documentation.

Abbreviations:

-ADU: Accessory Dwelling Unit

-Appendix A: Storm Water and LID Assessment Checklist from the City's Development Best Management Practices brochures. There is an Appendix A per Chapter 6A and an Appendix A per Chapter 6B depending upon the type of project. For example, please use Appendix A from Chapter 6A for small residential projects. Chapter 6B is for commercial, industrial or multi-family (3 or more units) projects or a single family residential project >15,000 SF.

-BMPs: Best Management Practices

-City Storm Water Development Requirements: Chapter 6A of the City's Best Management Practices Manual Storm Water BMPs for Single-Family Homes on Small Lots (Chapter 6A) or Chapter 6B of the City's Best Management Practices Manual Storm Water BMPs for Private and Public Development Projects (Chapter 6B). Both documents are available at: www.cityofsantacruz.com/LID.

-Net impervious surface area: Net equals new and replaced impervious area minus any reduced impervious area credit

-PCRs or PCR Standards: Post-Construction Requirements per the RWQCB, Resolution R3-2013-0032, effective March 2014

-PCR Tiers: As applicable, the RWQCB PCR Tiers include: Tier 1 (Site Design & Runoff Reduction); Tier 2 (Water Quality Treatment); Tier 3 (Runoff Retention); Tier 4 (Peak Management).

-RWQCB: Regional Water Quality Control Board (Central Coast)

-SF-Square Feet

-SFD-Single Family Dwelling

-SWCP sheet: Storm Water Control Plan sheet

-SWCP report: Storm Water Control Plan report (8 ½ x 11 inch format)