

1 ORDINANCE NO. 2468

2 ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CHICO AMENDING  
3 CHAPTER 15.50 OF THE CHICO MUNICIPAL CODE REGARDING STORM WATER  
4 MANAGEMENT AND DISCHARGE CONTROLS

5 **WHEREAS**, the Federal Clean Water Act provides for the regulation and reduction of  
6 pollutants discharged into the waters of the United States by extending National Pollutant  
7 Discharge Elimination System (“NPDES”) requirements to storm water and urban runoff  
8 discharged into municipal storm drain systems;

9 **WHEREAS**, the City of Chico is a permittee under the “Waste Discharge  
10 Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer  
11 Systems” (Order No. 2013-0001-DWQ, NPDES General Permit No. CAS000004) issued by  
12 the State Water Resources Control Board, and as a permittee, the City is required to adopt  
13 ordinances and implement procedures with respect to discharges into the municipal separate  
14 storm sewer system (“MS4”);

15 **WHEREAS**, Chapter 15.50 of the City of Chico Municipal Code is being revised in  
16 order to comply with the current MS4 Permit;

17 **WHEREAS**, the City has the authority under the California Water Code to adopt and  
18 enforce ordinances imposing conditions, restrictions and limitations with respect to any activity  
19 that might degrade waters of the State; and

20 **WHEREAS**, the City is committed to a storm water management program that protects  
21 water quality and water supply by employing watershed-based approaches that balance  
22 environmental and economic conditions.

23 BE IT ORDAINED by the Council of the City of Chico as follows:

24 **Section 1.** That Section 15.50.020 – Definitions, of the Chico Municipal Code is hereby  
amended, as follows:

1 **15.50.020 Definitions.**

2 The following words and phrases, when used in this chapter, shall have the following  
3 meanings. Words and phrases used in this chapter and not otherwise defined shall be  
4 interpreted as defined in the regulations of the United States Environmental Protection Agency  
5 to implement the provisions of the federal Clean Water Act and as defined by the California  
6 Water Resources Control Board to implement the Porter-Cologne Water Quality Control Act.

7 A. “Best management practices” or “BMPs” means physical, structural and/or  
8 managerial practice that when used singly or in combination, prevent or reduce  
9 pollution of storm water.

10 B. “Construction site” means any project, including projects requiring coverage under  
11 the General Construction Permit, that involves soil disturbing activities including, but  
12 not limited to, clearing, grading, paving, disturbances to ground such as stockpiling,  
13 and excavation.

14 C. “Development or Project” means any construction—activity or alteration of the  
15 landscape, its terrain, contour or vegetation, including the erection or alteration of  
16 single or multiple structures, and any grading.

17 D. “Director” means the director of public works – engineering or his or her designee  
18 who is authorized to enforce compliance with this chapter.

19 E. “Direct Discharge” means a discharge that is routed directly to waters of the United  
20 States by means of a pipe, channel, or ditch including through the storm sewer  
21 system, or through surface runoff.

22 F. “Discharge” means any release, spill, leak, pumping, flow, escape or leaching,  
23 including subsurface migration to groundwater, dumping or disposal of any gas,  
24 liquid, semi-solid or solid substance, whether accidental or intentional.

- 1 G. "Discharge of a Pollutant" means the addition of any pollutant or combination of  
2 pollutants to waters of the United States from any point source. The term includes  
3 additions of pollutants to waters of the United States from: surface runoff which is  
4 collected or channeled by man; discharges through pipes, sewers, or other  
5 conveyances owned by a State, municipality, or other person which do not lead to a  
6 treatment works; and discharges through pipes, sewers, or other conveyances, leading  
7 into privately owned treatment works.
- 8 H. "Illicit discharge" means any discharge to the storm drain system that is prohibited  
9 under local, state, or federal statutes, ordinances, codes or regulations that is not  
10 composed entirely of storm water except discharges pursuant to a NPDES permit or  
11 discharges excepted under Section 15.50.050 of this chapter.
- 12 I. "Incidental runoff" is unintended amounts (volume) of runoff, such as unintended,  
13 minimal over-spray from sprinklers that escapes the area of intended use. Water  
14 leaving an intended use area is not considered incidental if it is part of the facility  
15 design, if it is due to excessive application, if it is due to intentional overflow or  
16 application, or if it is due to negligence.
- 17 J. "Linear Underground/Overhead Projects (LUPs)" means any conveyance, pipe, or  
18 pipeline for the transportation of any gaseous, liquid (including water and wastewater  
19 for domestic municipal services), liquescent, or slurry substance; and cable line or  
20 wire for the transmission of electrical energy; and cable line or wire for  
21 communications (e.g. telephone, telegraph, radio, or televisions messages); and  
22 associated ancillary facilities. Construction activities associated with LUPs include,  
23 but are not limited to, (a) those activities necessary for the installation of underground  
24 and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles,

1 cables, wires, connectors, switching, regulating and transforming equipment, and  
2 associated ancillary facilities); and include, but are not limited to, (b) underground  
3 utility mark-out, potholing, concrete and asphalt cutting and removal, trenching,  
4 excavation, boring and drilling, access road and pole/tower pad and cable/wire pull  
5 station, substation construction, substructure installation, construction of tower  
6 footings and/or foundations, pole and tower installations, pipeline installations,  
7 welding, concrete and/or pavement repair or replacement, and stockpile/borrow  
8 locations.

9 K. “Low Impact Development” means a sustainable practice that benefits water supply  
10 and contributes to water quality protection. Unlike traditional storm water  
11 management, which collects and conveys storm water runoff through storm drains,  
12 pipes, or other conveyances to a centralized storm water facility, Low Impact  
13 Development (LID) takes a different approach by using site design and storm water  
14 management to maintain the site’s pre-development runoff rates and volumes. The  
15 goal of LID is to mimic a site’s predevelopment hydrology by using design  
16 techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source  
17 of rainfall.

18 L. “Municipal Separate Storm Sewer System (MS4)” means a conveyance or system of  
19 conveyances (including roads with drainage systems, municipal streets, catch basins,  
20 curbs, gutters, ditches, man-made channels, or storm drains): (i) owned or operated  
21 by the City of Chico; (ii) designed or used for collecting or conveying storm water;  
22 and (iii) which is not part of a Publicly Owned Treatment Works as defined at 40  
23 Code of Federal Regulations 122.2.

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- 1 L. "National Pollutant Discharge Elimination System (NPDES) permit" or "NPDES  
2 permit" means a discharge permit issued by the State Water Resources Control  
3 Board, the Regional Water Quality Control Board or the United States Environmental  
4 Protection Agency.
- 5 M. "Non-storm water discharge" means any discharge to the storm drain system that is  
6 not entirely composed of storm water.
- 7 N. "Pollutant" means any contaminant that can degrade the quality of the receiving  
8 waters by altering pH, total suspended or settleable solids, biochemical oxygen  
9 demand, chemical oxygen demand, nutrients or temperature.
- 10 O. "Redevelopment" means land-disturbing activity that results in the creation, addition  
11 or replacement of exterior impervious surface area on a site which some past  
12 development has occurred. Redevelopment does not include trenching, excavation  
13 and resurfacing associated with LUPs; pavement grinding and resurfacing of existing  
14 roadways; construction of new sidewalks, pedestrian ramps, or bike lanes on existing  
15 roadways; or routine replacement of damaged pavement such as pothole repair or  
16 replacement of short, non-contiguous sections of roadway.
- 17 P. "Storm drain system" means a conveyance or system of conveyances owned,  
18 operated or controlled by the City designed or used to convey storm water to waters  
19 of the United States. The conveyance system may include, but is not limited to, any  
20 roads with drainage systems, streets, catch basins, natural and artificial channels,  
21 aqueducts, stream beds, gullies, curbs, gutters, ditches, open fields, parking lots,  
22 impervious surfaces used for parking, and storm drains.
- 23 Q. "Storm water" means water that originates from atmospheric moisture (rainfall, hail,  
24 snow or snowmelt) that falls onto land, water or other surfaces and any surface flow,

1 runoff or drainage associated with such atmospheric events.

2 R. "Storm water pollution prevention plan" or "SWPPP" means a plan required by the  
3 State Water Resources Control Board, the Regional Water Quality Control Board or  
4 the United States Environmental Protection Agency which sets forth the site map,  
5 identifies the activities that have the potential to pollute storm water which may enter  
6 the City's storm drain system, describes the proposed BMPs to be implemented by  
7 the discharger, and contains a description of any other requirements that the State  
8 Water Resources Control Board, the Regional Water Quality Control Board or the  
9 United States Environmental Protection Agency requires the discharger to list in the  
10 SWPPP.

11 **Section 2.** That Section 15.50.025 – Legal authority is hereby added to the Chico  
12 Municipal Code to read as follows:

13 **15.50.025 Legal authority.**

14 The City has the legal authority to:

- 15 A. Effectively prohibit non-storm water discharges through the Municipal Separate Storm  
16 Sewer System (MS4). Exceptions to this prohibition are listed under Section  
17 15.50.050.
- 18 B. Detect and eliminate illicit discharges and illegal connections to the MS4. Illicit  
19 connections include pipes, drains, open channels, or other conveyances that have the  
20 potential to allow an illicit discharge to enter the MS4. Illicit discharges include all  
21 non-storm water discharges not otherwise authorized in Section 15.50.050, including,  
22 but not limited to, discharges from privately owned septic systems; discharges of runoff  
23 from material storage areas; discharges from spills; and discharges from organized car  
24 washes, mobile cleaning and pressure wash operations.

- 1 C. Respond to the discharge of spills, and prohibit dumping or disposal of materials other  
2 than storm water into the MS4.
- 3 D. Require parties responsible for runoff in excess of incidental runoff to:
- 4 1. Detect leaks and correct the leaks within 72 hours of learning of the leak;
  - 5 2. Properly design and aim sprinkler heads;
  - 6 3. Not irrigate during precipitation events; and
  - 7 4. Manage pond containing recycled water such that no discharge occurs unless the  
8 discharge is a result of a 25-year, 24-hour storm event or greater, and the  
9 appropriate Regional Water Board is notified by email no later than 24 hours after  
10 the discharge. The notification is to include identifying information, including the  
11 Permittee's name and permit identification number.
- 12 E. Require operators of construction sites, new or redeveloped land, and industrial and  
13 commercial facilities to minimize the discharge of pollutants to the MS4 through the  
14 installation, implementation, or maintenance of Best Management Practices (BMPs)  
15 consistent with the California Storm Water Quality Association (CASQA) Best  
16 Management Practice Handbooks or equivalent.
- 17 F. Require information deemed necessary to assess compliance with the City of Chico  
18 Municipal Code.
- 19 G. Review designs and proposals for new development and redevelopment to determine  
20 whether adequate BMPs will be installed, implemented, and maintained during  
21 construction and after final stabilization (post construction).
- 22 H. Require any discharger, engaged in activities or operations, or owning facilities or  
23 property which will or may result in pollutants entering storm water, the storm drain  
24 system, or waters of the U.S. to perform all necessary maintenance activities to the



1 storm water control system as prescribed by the Operation & Maintenance (“O&M”)  
2 Plan & Certificate of Responsibility Form applicable. If the system is not functioning as  
3 designed and permitted, the discharger, engaged in activities or operations, or owning  
4 facilities or property must perform the required maintenance immediately to restore the  
5 system.

6 I. Enter private property for the purpose of inspecting, at reasonable times, any facilities,  
7 equipment practices, or operations for active or potential storm water discharges, or  
8 non-compliance with Chapter 15.

9 J. Require that dischargers promptly cease and desist discharging and/or cleanup and  
10 abate a discharge, including the ability to:

11 1. Effectively require the discharger to abate and clean up their discharge, spill, or  
12 pollutant release within 72 hours of notification; high risk spill should be cleaned up  
13 as soon as possible.

14 2. Require abatement within 30 days of notification, for uncontrolled sources of  
15 pollutants that could pose an environmental threat.

16 3. Perform the clean-up and abatement work and bill the responsible party, if  
17 necessary;

18 4. Provide the option to order the cessation of activities until such problems are  
19 adequately addressed if a situation persists where pollutant-causing sources or  
20 activities are not abated;

21 5. Require a new timeframe and notify the Central Valley Regional Water Board when  
22 all parties agree that clean-up activities cannot be completed within the original  
23 timeframe and notify the Central Valley Regional Water Board in writing within  
24 five business days of the determination that the timeframe requires revision.



1 K. Levy citations or administrative fines against responsible parties either immediately at  
2 the site or within a few days.

3 L. Require recovery and remediating costs from responsible parties.

4 M. Impose more substantial civil or criminal sanctions and escalate corrective response for  
5 persistent non-compliance, repeat or escalating violations, or incidents of major  
6 environmental harm.

7 N. Require compliance with Section 15.50.075 Construction site storm water runoff  
8 control.

9 O. Require compliance with Section 15.50.080 Post construction storm water  
10 management.

11 P. The City has the legal authority to inspect public and private construction projects and  
12 conduct enforcement as necessary.

13 **Section 3.** That Section 15.50.050 - Exceptions to discharge prohibition, of the Chico  
14 Municipal Code is hereby amended, as follows:

15 **15.50.050 Exceptions to discharge prohibition.**

16 The following discharges are exempt from the prohibitions set forth in Section  
17 15.50.040 above:

18 A. Any discharge regulated under a NPDES permit issued to the discharger provided that  
19 the discharger is in compliance with all requirements of the permit and all other  
20 applicable laws and regulations.

21 B. Discharges from the following non-storm water activities unless identified by either the  
22 City or the Regional Water Quality Control Board as a significant source of pollutants  
23 to waters of the United States:

24 1. Water line flushing;

- 1           2. Diverted stream flows;
- 2           3. Rising ground waters;
- 3           4. Uncontaminated ground water infiltration [as defined at 40 C.F.R. § 35.2005(20)] to
- 4           separate storm sewers;
- 5           5. Uncontaminated pumped ground water;
- 6           6. Discharges from potable water sources;
- 7           7. Foundation drains;
- 8           8. Air conditioning condensation;
- 9           9. Springs;
- 10          10. Water from crawl space pumps;
- 11          11. Footing drains;
- 12          12. Individual residential car washing;
- 13          13. Flows from riparian habitats and wetlands;
- 14          14. Dechlorinated swimming pool discharges;
- 15          15. Discharges or flows from fire fighting activities;
- 16          16. City municipal storm drain maintenance line clearing activities; and
- 17          17. Incidental runoff from landscaped areas (in accordance with below):
  - 18           a. Discharges in excess of an amount deemed to be incidental runoff shall be
  - 19           controlled.
  - 20           b. Non-storm water runoff discharge that is not incidental is prohibited, unless
  - 21           otherwise listed above in 1-17.
  - 22           c. Incidental runoff may be regulated by waste discharge requirements or, where
  - 23           necessary, waste discharge requirements that serve as a NPDES permit,
  - 24           including MS4 permits.

1           **Section 4.** That Section 15.50.075 – Construction site storm water runoff control is  
2 hereby added to the Chico Municipal Code to read as follows:

3 **15.50.075 Construction site storm water runoff control.**

4       A. Applicability - All projects that disturb soil are subject to the Construction Site Storm  
5 Water Runoff Control requirements. Projects that disturb one acre or more of soil or  
6 disturb less than one acre but are part of a larger common plan or development or sale  
7 are subject to the State Water Board’s Construction General Permit in addition to the  
8 Construction Site Storm Water Runoff Control requirements.

9       B. Construction Plan Review and Approval Procedures.

10       1. Prior to issuing a grading or building permit, the City of Chico shall require each  
11 operator of a construction activity within the City of Chico’s jurisdiction to prepare  
12 and submit for review and approval an erosion and sediment control plan (ESCP)  
13 per the City’s approved ESCP form. The ESCP shall contain appropriate site-  
14 specific construction site BMPs that meet the minimum requirements to control  
15 storm water pollution due to construction activities. The City of Chico holds the  
16 right to require additional specific BMPs before approving the ESCP.

17       a. The Storm Water Pollution Prevention Plan (SWPPP) developed pursuant to the  
18 Construction General Permit may substitute for the ESCP for projects where a  
19 SWPPP is developed. The City of Chico holds the right to require additional  
20 BMPs before approving the SWPPP.

21       2. The ESCP shall include the rationale used for selecting BMPs including, if  
22 necessary, supporting soil loss calculations. The ESCPs shall contain, as needed,  
23 erosion and sediment controls, soil stabilization, dewatering, source controls, and  
24

1 pollution prevention measures per the CASQA Best Management Practices  
2 Handbooks or as approved by the City of Chico.

3 3. The ESCP shall list all applicable permits directly associated with any grading  
4 activity, including State Water Boards' Construction General Permit, State Water  
5 Boards' 401 Water Quality Certification, U.S. Army Corps of Engineers 404  
6 Permit, and the California Department of Fish and Wildlife 1600 Streambed  
7 Alteration Agreement. The responsible party shall submit evidence to the City of  
8 Chico that all permits directly associated with the grading activity have been  
9 obtained prior to commencing the soil disturbing activities authorized by the  
10 grading permit.

11 4. Construction sites are subject to Section 15.50.040 Prohibited activities.

12 C. Construction Site Inspection and Enforcement-

13 1. The City has the legal authority to inspect public and private construction projects  
14 and conduct enforcement as necessary.

15 **Section 5.** That Section 15.50.080 – Development planning and design standards, of the  
16 Chico Municipal Code is hereby rescinded and replaced in its entirety as follows:

17 **15.50.080 Post construction storm water management.**

18 A. Site Design Measures.

19 1. All projects that create and/or replace (including projects with no net increase in  
20 impervious footprint) between 2,500 square feet and 5,000 square feet of  
21 impervious surface, including detached single family homes that create and/or  
22 replace 2,500 square feet or more of impervious surface and are not part of a larger  
23 plan of development are required to implement one or more of the following site  
24 design measures to reduce project site runoff:

- 1 a. Stream setbacks and buffers – a vegetated area including trees, shrubs, and
- 2 herbaceous vegetation, that exists or is established to protect a stream system;
- 3 b. Soil quality improvement and maintenance – improvement and maintenance soil
- 4 through soil amendments and creation of microbial community;
- 5 c. Tree planting and preservation – planting and preservation of healthy,
- 6 established trees that include both evergreens and deciduous;
- 7 d. Porous pavement – pavement that allows runoff to pass through it, thereby
- 8 reducing the runoff from a site and surrounding areas and filtering pollutants;
- 9 e. Green roofs – a vegetated, open-channel management practice designed
- 10 specifically to treat and attenuate storm water runoff; and/or
- 11 f. Rain barrels and cisterns – system that collects and stores storm water runoff
- 12 from a roof or other impervious surface.
- 13 2. This section is not applicable to linear underground/overhead projects.
- 14 3. Project proponents shall use the State Water Board SMARTS Post-Construction
- 15 Calculator to quantify and submit to the City of Chico the runoff reduction resulting
- 16 from implementation of site design measures.
- 17 4. The plans for the site design measures required in this section shall be stamped by:
- 18 a. A California Civil Professional Engineer for rooftop and impervious area
- 19 disconnections, porous pavement, rain cisterns, bioretention and rain gardens,
- 20 infiltration trenches, retention or detention basins, or green roofs; and
- 21 b. A California Landscape Architect for soil quality improvements, vegetated
- 22 swales, or bioretention and rain gardens.
- 23 B. Regulated Projects - Projects that create and/or replace 5,000 square feet or more of
- 24 impervious surface.

- 1 1. All projects that create and/or replace 5,000 square feet or more of impervious  
2 surface are required to implement measures for site design, source control, runoff  
3 reduction, storm water treatment and baseline hydromodification management.  
4 These projects are considered Regulated Projects.
- 5 a. Regulated Projects do not include detached single family home projects that are  
6 not part of a larger plan of development; interior remodels; routine maintenance  
7 or repairs such as exterior wall surface replacement or pavement resurfacing  
8 within the existing footprint; and LUPs.
- 9 i. LUPs that have a discrete location of 5,000 square feet or more of newly  
10 constructed contiguous impervious surface are considered a Regulated  
11 Project for that specific discrete location.
- 12 2. Regulated Projects include development projects. Development includes new and  
13 redevelopment projects on public or private land that fall under the permitting  
14 authority of the City of Chico. Redevelopment is any land-disturbing activity that  
15 results in the creation, addition, or replacement of exterior impervious surface area  
16 on a site on which some past development has occurred. Redevelopment does not  
17 include trenching, excavation and resurfacing associated with LUPs; pavement  
18 grinding and resurfacing of existing roadways; construction of new sidewalks,  
19 pedestrian ramps, or bike lanes on existing roadways; or routing replacement of  
20 damaged pavement such as a pothole repair or replacement of short, non-contiguous  
21 sections of roadway. The following describe specific Regulated Project  
22 requirements:
- 23 a. Redevelopment Projects –

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- 1 i. Where a redevelopment project results in an increase of more than 50  
2 percent of the impervious surface of a previously existing development,  
3 runoff from the entire project, consisting of all existing, new, and/or  
4 replaced impervious surfaces, must be included to the extent feasible.
- 5 ii. Where a redevelopment project results in an increase of less than 50 percent  
6 of the impervious surface of a previously existing development, only runoff  
7 from the new and/or replaced impervious surface of the project must be  
8 included.
- 9 b. Road Projects and LUPs – Any of the following types of road projects and  
10 LUPs that create 5,000 square feet or more of newly constructed contiguous  
11 impervious surface and that are public road projects and/or fall under the  
12 permitting authority of the City of Chico shall comply with Section  
13 15.50.080(D) Low impact Development Design Standards, except that treatment  
14 of runoff of the 85<sup>th</sup> percentile that cannot be infiltrated onsite shall follow  
15 U.S.Environmental Protection Agency’s guidance regarding green infrastructure  
16 to the extent feasible.
- 17 i. Construction of new streets or roads, including sidewalks and bicycle lanes  
18 built as part of the new streets or roads.
- 19 ii. Widening of existing streets or roads with additional traffic lanes.
- 20 a. Where the addition of traffic lanes result in an alteration of more than 50  
21 percent of the impervious surface of an existing street or road, runoff  
22 from the entire project, consisting of all existing, new, and/or replaced  
23 impervious surfaces, must be included in the treatment system design.

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1                   b. Where the addition of traffic lanes result in an alteration of less than 50  
2                   percent (but 5,000 square feet or more) of the impervious surface of an  
3                   existing street or road, only the runoff from new and/or replaced  
4                   impervious surface of the project must be included in the treatment  
5                   system design.

6                   iii. Construction of linear underground/overhead projects (LUPs).

7                   iv. Specific exclusions are:

8                   a. Sidewalks built as part of new streets or roads and built to direct storm  
9                   water runoff to adjacent vegetated areas.

10                  b. Bicycle lanes that are built as part of new streets or roads that direct  
11                  storm water runoff to adjacent vegetated areas.

12                  c. Impervious trails built to direct storm water runoff to adjacent vegetated  
13                  areas, or other non-erodible permeable areas, preferably away from  
14                  creeks or towards the outboard side of levees.

15                  d. Sidewalks, bicycle lanes, or trails constructed with permeable surfaces.

16                  e. Trenching, excavation and resurfacing associated with LUPs; pavement  
17                  grinding and resurfacing of existing roadways and parking lots;  
18                  construction of new sidewalks, pedestrian ramps, or bike lanes on  
19                  existing roadways; or routine replacement of damaged pavement such as  
20                  pothole repair or replacement of short, non-contiguous sections of  
21                  roadway.

22                  C. Source Control Measures:

23                  1. Regulated Projects with pollutant-generating activities and sources are required to  
24                  implement standard permanent and/or operation source control measures. The

1 measures for the following pollutant generating activities and sources shall be  
2 designed consistent with recommendations from the CASQA Storm Water BMP  
3 Handbook for New Development and Redevelopment or equivalent manual:

- 4 a. Accidental spills or leaks
- 5 b. Interior floor drains
- 6 c. Parking/storage areas and maintenance
- 7 d. Indoor and structural pest control
- 8 e. Landscape/outdoor pesticide use
- 9 f. Pools, spas, ponds, decorative fountains, and other water features
- 10 g. Restaurants, grocery stores, and other food service operations
- 11 h. Refuse areas
- 12 i. Industrial processes
- 13 j. Outdoor storage of equipment or materials
- 14 k. Vehicle and equipment cleaning
- 15 l. Vehicle and equipment repair and maintenance
- 16 m. Fuel dispensing areas
- 17 n. Loading docks
- 18 o. Fire sprinkler test water
- 19 p. Drain or wash water from boiler drain lines, condensate drain lines, rooftop  
20 equipment, drainage sumps, and other sources
- 21 q. Unauthorized non-storm water discharges
- 22 r. Building and grounds maintenance

23 D. Low Impact Development (LID) Design Standards - All Regulated Projects are  
24 required to implement LID standards as listed below.

1 1. Site Assessment – Regulated Projects are required to assess and evaluate how site  
2 conditions, such as soils, vegetation, and flow paths, will influence the placement of  
3 buildings and paved surfaces. The evaluation will be used to meet the goals of  
4 capturing and treating runoff and assuring these goals are incorporated into the  
5 project design. The following methods are required to be completed to optimize the  
6 site layout of the project site:

- 7 a. Define the development envelope and protected areas, identifying areas that are  
8 most suitable for development and areas to be left undisturbed.
- 9 b. Concentrate development on portions of the site with less permeable soils and  
10 preserve areas that can promote infiltration.
- 11 c. Limit overall impervious coverage of the site with paving and roofs.
- 12 d. Set back development from creeks, wetlands, and riparian habitats.
- 13 e. Preserve significant trees.
- 14 f. Conform the site layout along natural landforms.
- 15 g. Avoid excessive grading and disturbance of vegetation and soils.
- 16 h. Replicate the site’s natural drainage patterns.
- 17 i. Detain and retain runoff throughout the site.

18 2. Drainage Management Areas – Each Regulated Project is required to provide a map  
19 or diagram dividing the developed portions of the project site into discrete Drainage  
20 Management Areas (DMAs), and to manage runoff from each DMA using Site  
21 Design Measures, Source Controls and/or Storm Water Treatment and Baseline  
22 Hydromodification Measures.

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1 3. Numeric Sizing Criteria for Storm Water Retention and Treatment – Facilities  
2 designed to evapotranspire, infiltrate, harvest/use, and biotreat storm water are  
3 required to meet at least one of the following hydraulic sizing design criteria:

4 a. Volumetric Criteria:

5 i. The maximized capture storm water volume for the tributary area, on the  
6 basis of historical rainfall records, determined using the formula and volume  
7 capture coefficients in Urban Runoff Quality Management, WEF Manual of  
8 Practice No. 23/ASCE manual of Practice No. 87 (1998) pages 175-178  
9 (that is, approximately the 85<sup>th</sup> percentile 24-hour storm runoff event); or

10 ii. The volume of annual runoff required to achieve 80 percent or more capture,  
11 determined in accordance with the methodology in Section 5 of the  
12 CASQA's Storm Water Best Management Practice Handbook, New  
13 Development and Redevelopment (2003), using local rainfall data.

14 b. Flow-based Criteria:

15 i. The flow of runoff produced from a rain event equal to at least 0.2 inches  
16 per hour intensity; or

17 ii. The flow of runoff produced from a rain event equal to at least 2 times the  
18 85<sup>th</sup> percentile hourly rainfall intensity as determined from local rainfall  
19 records.

20 4. Site Design Measures as defined in Section 15.50.080(A) above, site layout, and  
21 design measures shall be implemented on the objective of achieving infiltration,  
22 evapotranspiration and/or harvesting/reuse of the 85<sup>th</sup> percentile 24-hour storm  
23 runoff event. Site design measures shall be used to reduce the amount of runoff, to  
24 the extent technically feasible, for which retention and runoff is required. Any

1 remaining runoff from impervious DMAs may then be directed to one or more  
2 bioretention facilities as specified in Section 15.50.080(D)(6) below.

- 3 5. Source Controls – All Regulated Projects shall implement Source Controls as  
4 defined in Section 15.50.080(C) above.
- 5 6. Storm Water Treatment Measures and Baseline Hydromodification Management  
6 Measures – After implementation of Site Design Measures on Regulated Projects,  
7 the remaining runoff from impervious DMAs must be directed to one or more  
8 facilities designed to infiltrated, evapotranspire, and/or bioretain the amount of  
9 runoff specified in Section 15.50.080(D)(3) Numeric Sizing Criteria for Storm  
10 Water Retention and Treatment. The facilities must be demonstrated to be at least  
11 as effective as a bioretention system with the following design parameters:
- 12 a. Maximum surface loading rate of 5 inches per hour, based on the flow rates  
13 calculated. A sizing factor of 4% of tributary impervious area may be used.
  - 14 b. Minimum surface reservoir volume equal to surface area times a depth of 6  
15 inches.
  - 16 c. Minimum planting medium depth of 18 inches. The planting medium must  
17 sustain a minimum infiltration rate of 5 inches per hour throughout the life of  
18 the project and must maximize runoff retention and pollutant removal. A  
19 mixture of sand (60%-70%) meeting the specifications of American Society for  
20 Testing and Materials (ASTM) C33 and compost (30%-40%) may be used.
  - 21 d. Subsurface drainage/storage (gravel) layer with an area equal to the surface area  
22 and having a minimum depth of 12 inches.
  - 23 e. Underdrain with discharge elevation at top of gravel layer.

24 ///

- 1 f. No compaction of soils beneath the facility, or ripping/loosening of soils if  
2 compacted.
- 3 g. No liners or other barriers interfering with infiltration.
- 4 h. Appropriate plant palette for the specified soil mix and maximum available  
5 water use.
- 6 7. Alternative Designs – Facilities, or a combination of facilities, of a different design  
7 than in Section 15.50.080D(6) may be permitted if all of the following measures of  
8 equivalent effectiveness are demonstrated:
- 9 a. Equal or greater amount of runoff infiltrated or evapotranspired;
- 10 b. Equal or lower pollutant concentrations in runoff that is discharged after  
11 biotreatment;
- 12 c. Equal or greater protection against shock loadings and spills;
- 13 d. Equal or greater accessibility and ease of inspection and maintenance.
- 14 8. Allowed Variations for Special Site Conditions – The bioretention system design  
15 parameters Section 15.50.080(D)(6) may be adjusted for the following special site  
16 conditions:
- 17 a. Facilities located within 10 feet of structures or other potential geotechnical  
18 hazards established by the geotechnical expert for the project may incorporate  
19 an impervious cutoff wall between the bioretention facility and the structure or  
20 other geotechnical hazard.
- 21 b. Facilities with documented high concentrations of pollutants in underlying soil  
22 or groundwater, facilities located where infiltration could contribute to a  
23 geotechnical hazard, and facilities located on elevated plazas or other structures  
24 may incorporate an impervious liner and may located the underdrain discharge

1 at the bottom of the subsurface drainage/storage layer (this configuration is  
2 commonly known as a “flow-through planter”).

3 c. Facilities located in areas of high groundwater, highly infiltrative soils or where  
4 connection of underdrain to a surface drain or to a subsurface storm drain are  
5 infeasible, may omit the underdrain.

6 d. Facilities serving high-risk areas such as fueling stations, truck stops, auto  
7 repairs, and heavy industrial sites may be required to provide additional  
8 treatment to address pollutants of concern unless these high-risk areas are  
9 isolated from storm water runoff or bioretention areas with little chance of spill  
10 migration.

11 9. Exceptions to Requirements of Bioretention Facilities –

12 Contingent on a demonstration that use of bioretention or a facility of equivalent  
13 effectiveness is infeasible, other types of biotreatment or media filters (such as tree-  
14 box-type biofilters or in-vault media filters) may be used for the following  
15 categories of Regulated Projects:

16 a. Projects creating or replacing an acre or less of impervious area, and located in a  
17 designated pedestrian-oriented commercial district, and having at least 85% of  
18 the entire project site covered by permanent structures;

19 b. Facilities receiving runoff solely from existing (pre-project) impervious areas;  
20 and

21 c. Historic sites, structures or landscapes that cannot alter their original  
22 configuration in order to maintain their historic integrity.

23 E. Hydromodification Management – Hydromodification management projects are  
24 Regulated Projects that create and/or replace one acre or more of impervious surface.



1 A project that does not increase impervious surface area over the pre-project condition  
2 is not a hydromodification management project. Post-project runoff for  
3 hydromodification management projects shall not exceed estimated pre-project flow  
4 rate for the 2-year, 24-hour storm.

5 F. Operations and Maintenance of Post-Construction Storm Water Management Measures

6 – All Regulated Projects shall at a minimum, require from all project proponents and  
7 their successors in control of the Project or successors in fee title:

8 1. The property owner or responsible party shall sign a Statement of Responsibility  
9 accepting responsibility for the on-going operation, inspection, and maintenance of  
10 the treatment control measures until the property and/or responsibility is legally  
11 transferred to another entity. The Statement of Responsibility shall be on a form  
12 approved by the City.

13 a. The transfer of property to a new owner shall contain conditions requiring the  
14 recipient to assume responsibility for maintenance of any treatment control  
15 measures to be included in the sales or lease agreement for that property and  
16 will be the owner's responsibility. The new owner or responsible party will be  
17 obligated to maintain the operations and maintenance of the treatment control  
18 measures.

19 2. The City will send the responsible party an Operation and Maintenance self-  
20 certification form. The responsible party will certify that the Operations and  
21 Maintenance program is being implemented and that the Treatment Control  
22 measures are in an effective operational condition. The responsible party will have  
23 sixty (60) days to complete and return the annual Operation and Maintenance self-  
24 certification form.

1 a. If the Operation and Maintenance self-certification form is not received within  
2 the sixty (60) day period, the City of Chico will perform the inspection and  
3 assessment. The responsible party will be billed for the inspection and  
4 assessment as applicable.

5 G. All projects subject to this Section shall submit a completed Post Construction Storm  
6 Water Worksheet to the City of Chico.

7 **Section 6.** That Chapter 18R.08.050 – Storm drainage, of the Chico Municipal Code, is  
8 hereby amended, as follows:

9 K. Post-Construction Structural or Treatment Control Best Management Practices. Post-  
10 construction treatment control Best Management Practices (BMPs) shall incorporate, at  
11 a minimum, either a volumetric or flow based treatment control design standard, or  
12 both, as identified below to mitigate (infiltrate, filter or treat) storm water runoff:

13 1. Volumetric Treatment Control BMPs:

14 a. The maximized capture storm water volume for the tributary area, on the basis  
15 of historical rainfall records, determined using the formula and volume capture  
16 coefficients in Urban Runoff Quality Management, WEF Manual of Practice  
17 No. 23/ASCE Manual of Practice No. 87 (1998) pages 175-178 (approximately  
18 the 85<sup>th</sup> percentile 24-hour storm runoff event); or

19 b. The volume of annual runoff to achieve 80 percent or more capture, determined  
20 in accordance with the methodology in Section 5 of the CASQA Storm Water  
21 Best Management Practice Handbook, New Development and Redevelopment  
22 (2003), using local rainfall data; or

23 2. Flow Based Treatment Control BMPs:

24 ///

- 1 a. The flow of runoff produced from a rain event equal to at least two times the  
2 85th percentile hourly rainfall intensity as determined from local rainfall  
3 records; or  
4 b. The flow of runoff produced from a rain event equal to at least 0.2 inches per  
5 hour intensity.

6 This ordinance was adopted by the City Council of the City of Chico at its meeting held  
7 on November 17, 2015, by the following vote:

8 AYES: Coolidge, Fillmer, Ritter, Schwab, Stone, Morgan, Sorensen

9 NOES: None

10 ABSENT: None

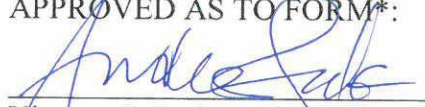
11 ABSTAIN: None

12 DISQUALIFIED: None

13 ATTEST:

14   
15 Deborah R. Presson, City Clerk

APPROVED AS TO FORM\*:

14   
15 Vincent C. Ewing, City Attorney

16 \*Pursuant to the Charter of the  
17 City of Chico §906(E)  
18  
19  
20  
21  
22  
23  
24