



COMMERCIAL Building Permit CHECKLIST

**We will rebuild Paradise better and more resilient than before ...
Below is what you'll need to submit for your building permits**

PLAN SUBMITTAL REQUIREMENTS

- 1 copy** of completed Building Permit Application.
- 2 signed sets of complete drawings**, drawn to the current California Building Codes – see the enclosed detailed checklist of drawing and plan requirements. All plans must be legible and a minimum of 24"x36".
- 2 sets of structural calculations** or design per conventional construction provisions.
- 2 sets of energy calculations** (Title 24).
- 2 sets of trusses calculations** (if using).
- 1 survey** completed by a land surveyor or civil engineer licensed in land surveying.
- 2 sets signed CALGreen** support documentation.
- Completed Erosion & Sediment Control Plan (<1 acre) or SWPPP (≥1 acre).
- Completed Post-Construction Standards Plan (if applicable).
- Copy of completed Construction & Demo Recycling Waste Management Plan.
- Fire Hydrant Flow Test**
- 2 sets of commercial fire sprinkler plans (if required).**
- 2 sets of Landscape & irrigation plans with water use calculations (may be deferred)**
- 2 sets of photovoltaic/solar system plans**
- Submittal of the appropriate construction permit application, with 2 additional plot plans and 1 floor plan, to the Onsite Sanitation Division.
- 1 copy of approved Architectural Design Review letter (for new construction).
- Complete digital plan set on flash drive**

GENERAL REQUIREMENTS

- All drawings shall be drawn to a common scale. Plan views (floor and elevation) must be drawn to a minimum architectural scale of 1/4"=1'. Site plans drawn to an engineer's scale; 1"=20' is preferred.
- All commercial new construction plans shall be prepared, signed, and stamped by an architect or engineer licensed by the State of California.
- A separate accessibility plan reviewed and approved by a State of California Certified Access Specialist.
- Materials and Construction methods for exterior wildfire exposure, Wildland Urban Interface (WUI) apply.
- The septic system shall be designed, or the capacity of the existing system certified, by a registered Civil Engineer or Registered Environmental Health Specialist experienced in the design of Wastewater Treatment Systems.
- Landscape area to be shown on building site plan.

Understand and have complied with all plan submittal requirements.

Signature of Applicant

Minimum Plan Standards

→ General Information

- NO DEFERRED SUBMITTALS WILL BE ACCEPTED**
- Code Compliance Statement listing applicable codes
- Project name, address and clear scope of work
- Owner information: Name, Address, and Phone Number
- Designer Information: Name, Address, Phone Number, and Email
- Cover sheet must identify previously existing square footages of structures being replaced
- Clear indication that the project will be fire sprinklered with the necessary plans
- Sheet index of drawings
- Vicinity Map of project location

→ Building Data

- Occupancy group(s) per Building Division (For Residential, generally R3 or U)
- Type of construction (Commonly VB)
- Floor area per story and total floor area
- Building height

→ CALGreen Checklist Forms

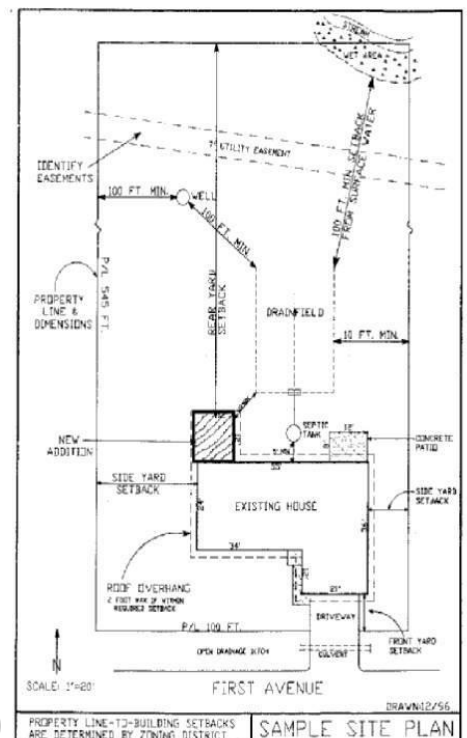
- CALGreen Checklist to be incorporated into the set of plans or attached to plans

→ Energy Compliance Form

- CF-1R and MF-1R to be incorporated into the set of plans

→ Site/Plot Plan

- North arrow
- Gradient (slope) lines
- Property lines with lot dimensions
- Front, rear and side setback distances to buildings
- Septic tank, leach field, and replacement area
- Streams and drainage areas
- The proposed building's exterior dimensions
- All public and private easements
- Underground gas, electric, and water lines
- Proposed and existing gas and electric meter locations
- Driveway location
- Name of adjacent road(s) and indicate the road centerline(s)



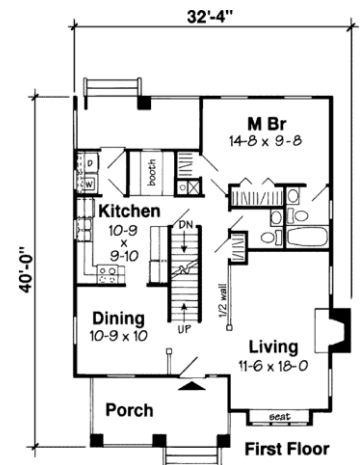
Minimum Plan Standards

→ Grading Plan and Drainage Details

- Existing drainage patterns, proposed drainage patterns, and drainage devices (as applicable)
- Existing and new contours, including elevation data and benchmarks
- Soil excavation calculations of export and import (in cubic yards)
- Proposed retaining walls and related structural calculations
- Erosion and Sediment Control Plan for all projects with less than an acre of disturbed soil (worksheet available from Engineering Division)
- Storm Water Pollution Prevention Plan approved by the State Water Resources Control Board with an issued WDID for projects with over an acre of disturbed soil
- Post-Construction Standards Plan – Small Projects *2,500-5,000 SF impervious area OR any size single-family residential home (worksheet available from Engineering Division)
- Post-Construction Standards Plan – Regulated Projects *Greater than 5,000 SF impervious area (worksheet available from Engineering Division) – **Special Note:** Redevelopment Regulated Projects with impervious area increasing greater than 50% of the original development must account for all original impervious areas in final site design. More information available from Engineering Division.

→ Floor Plans

- Separate plan for each floor level
- Descriptions and dimensions of all rooms
- Locations and descriptions of all Braced Wall Panels
- Locations and sizes of doors and windows
- Description of window types (and doors if glazed)
- Locations and sizes of skylights (indicate if openable)
- Required landing at exterior doors
- Location and size of attic access opening(s)
- Location of all plumbing fixtures
- Location of all appliances including forced air unit, water heater, range, & refrigerators
- Location, type, and model of approved listed fireplace appliances
- Locations of electrical service panel, subpanels, receptacles, lights, switches, fans and smoke detectors (may need to be shown on a separate electrical plan if the floor plan is too crowded to maintain clarity)
- Location and size of posts supporting roof or ceiling beams
- Locations of section views



Minimum Plan Standards

→ Roof Plans

- List roofing material (Class A required)
- Calculations detailing the attic ventilation requirements (Wildland Urban Interface required)
- Reference extent of, and label all framing members, shear or braced walls, wall ties, etc
- Direction and slope of roof, valleys, hips, skylights, etc.
- Overhangs, eaves, gables, and rakes dimensioned
- Header size for all openings in bearing walls (may be on floor plan instead)
- Location, size, grade and span of each roof or ceiling beam (or on floor plan)
- Sizes, ϕ to ϕ spacing and spans of rafters and attachment detail
- Sizes, ϕ to ϕ spacing and spans of ceiling joists and attachment detail
- Locations and sizes of purlins
- Location of each purlin support, showing where it is supported by a beam or bearing wall
- Show PV equipment if applicable

→ Foundation Plan

- All continuous footings with length of each segment in floor plan view
- Cross-section detail(s) with markers showing where they apply
- Foundations for interior bearing walls
- Locations of all pier footings (centers dimensioned in both directions)
- Size and depth of all pier footings
- Location and description of the embedded portion of all holdowns and anchor bolts
- Post anchor specifications for exterior posts

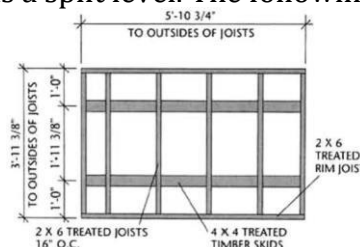
For slab floors the following is also required:

- Footings or 12" footing with two (2) #4 rebar top and bottom under interior Braced Wall Panels with note of how sills will be attached
- Underfloor venting details

→ Floor Framing Plan

The first story is normally included in the foundation plan. If the building has more than one wood-framed floor level, a separate floor framing plan must be provided for each level unless no floor is above the other at any point, such as a split level. The following must be included:

- Size and ϕ to ϕ spacing of girders
- Size and ϕ to ϕ spacing of joists
- Dimensions showing spans of girders and joists
- Size and span of any floor beams



Minimum Plan Standards

→ Floor Framing Plan (cont.)

- Underfloor posts at all point load footings
- Additional joists or blocking under interior Braced Wall Panels
- Location and size of underfloor access opening
- Calculations detailing the underfloor ventilation requirements (Wildland Urban Interface required)

→ Elevation Views

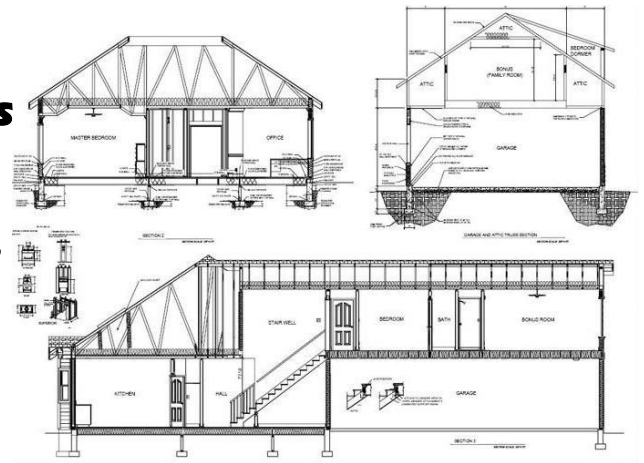
- Drawn to a $\frac{1}{4}'' = 1'$ scale, but may be drawn to $\frac{1}{8}'' = 1'$ scale if clarity is maintained
- Include elevations for each side of the building
- Approximate grade including actual slopes at the site
- Type of siding and roofing
- Windows, doors, and skylights
- Porches and decks
- Roof overhangs
- Chimney extensions

→ Section Views

- Specify all materials not called out on one of the plan views such as subflooring, roof sheathing, wall framing, insulation, etc. as well as vertical dimensions not shown on other drawings

→ Potential Additional Requirements

- Encroachment permit if repairs to the existing sidewalk or driveway are necessary
- Provide plumbing drawings for graywater systems, if applicable
- Permit for accessory structures proposed on the plot plan
- Permit for ground mount photovoltaic systems
- Permit for retaining walls, pools, or spas
- A soils compaction letter and plan review letter from a Soils Engineer **may be required**
- Elevation certificate, prepared by a Civil Engineer, Surveyor, or Architect, for properties located within a Special Permit Zone





Town of Paradise

Building Resiliency Center
6295 Skyway, Paradise, CA 95969
(530) 872-6291 ext 411

Building Permit Application

Application Date: _____ Assessor's Parcel Number: _____ BP Number: _____
Project Address: _____ City: _____ Zip: _____

APPLICANT Name: _____ Phone: _____ Cell: _____

Address: _____ City: _____ State: _____ Zip: _____

Email: _____ Main Contact: Applicant Owner/Tenant Contractor Arch/ Eng.

OWNER Representative (Owner's written approval required) **PROFESSIONAL** Architect Engineer Designer

Name: _____

Address: _____

City: _____ State: _____

Zip: _____ Phone: _____

Email: _____

Company Name: _____

Name: _____ CA Reg. # _____

Address: _____

City: _____ State: _____

Zip: _____ Phone: _____

CONTRACTOR Name: _____ Phone: _____ License#: _____

Company Name: _____ Email: _____

Address: _____ City: _____ State: _____ Zip: _____

PROJECT INFO Type: Residential Commercial/ Industrial Remodel/ Addition Demolition Other Grading

Permit For: Building Electrical Plumbing Mechanical Re-roof PV/ Solar Water Heater
 Patio Cover/ Deck Swimming Pool/Spa Addendum MH/ Commercial Coach T.I. Co-location Other _____

Description of Work: _____

Proposed Use: _____ Existing Use: _____

Construction Valuation Cost: _____ Occupancy Group(s): _____

Zoning District: _____ Type of Construction: _____ Square Footage: _____

PERMITTEE DECLARATION

I hereby declare under penalty of perjury that the foregoing statements and the attached plan(s) are true, accurate, complete, and correct to the best of my knowledge and belief.

Applicant Signature: _____ Date: _____

IMPORTANT NOTICE TO OWNER-BUILDERS

Dear Property Owner:

An application for a building permit has been submitted in your name listing yourself as the builder of the property improvements specified in the Town of Paradise, Butte County, California at:

Property Address: _____

Assessor Parcel No. (APN): _____ - _____ - _____ (Owner must be shown on Assessor records)

We are providing you with an Owner-Builder Acknowledge and Information Verification Form to make you aware of your responsibilities and possible risk you may incur by having this permit issued in your name as the Owner-Builder. **We will not issue a building permit until you have read, initialed your understanding of each provision, signed, and returned this form to us at our official address indicated.** An agent of the owner cannot execute this notice unless you, the property owner, obtain the prior approval of the permitting authority.

OWNER'S ACKNOWLEDGMENT AND VERIFICATION ON INFORMATION

DIRECTIONS: Read and initial each statement below to signify you understand or verify this information.

_____ 1. I understand a frequent practice of unlicensed persons is to have the property owner obtain an "Owner-Builder" building permit that erroneously implies that the property owner is providing his/her own labor and material personally. I, as Owner-Builder, may be held liable and subject to serious financial risk for any injuries sustained by an unlicensed person and his/her employees while working on my property. My homeowner's insurance may not provide coverage for those injuries. I am willfully acting as an Owner-Builder and am aware of the limits of my insurance coverage for injuries to workers on my property.

_____ 2. I understand building permits are not required to be signed by property owners unless they are *responsible* for the construction and are not hiring a licensed Contractor to assume this responsibility.

_____ 3. I understand as an "Owner-Builder" I am the responsible party of record on the permit. I understand that I may protect myself from potential financial risk by hiring a licensed Contractor and having the permit filed in his/her name instead of my own.

_____ 4. I understand Contractors are required by law to be licensed and bonded in California and to list their license numbers on permits and contracts.

_____ 5. I understand if I employ or otherwise engage any persons, other than California licensed Contractors, and the total value of my construction is at least five hundred dollars (\$500), including labor and materials, I may be considered an "employer" under state and federal law.

_____6. I understand if I am considered an “employer” under state and federal law, I must register with the state and federal government, withhold payroll taxes, provide workers’ compensation disability insurance, and contribute to unemployment compensation for each “employee”. I also understand my failure to abide by these laws may subject me to serious financial risk.

_____7. I understand under California Contractors’ State License Law, an Owner-Builder who builds single-family residential structures cannot legally build them with the intent to offer them for sale, unless *all* work is performed by licensed subcontractors and the number of structures does not exceed four within any calendar year, or all of the work is performed under contract with a licensed general building Contractor.

_____8. I understand as an Owner-Builder if I sell the property for which this permit is issued, I may be held liable for any financial or personal injuries sustained by any subsequent owner(s) that result from any latent construction defects in the workmanship or materials.

_____9. I understand I may obtain more information regarding my obligations as an “employer” from the Internal Revenue Service, the United States Small Business Administration, the California Department of Benefit Payments, and the California Division of Industrial Accidents. I also understand I may contact the California Contractors’ State License Board (CSLB) at 1-800-321-2752 or www.cslb.ca.gov for more information about licensed contractors.

_____10. I am aware of and consent to an Owner-Builder building permit applied for in my name, and understand that I am the party legally and financially responsible for proposed construction activity at the following address: _____, Assessor Parcel No: _____

_____11. I agree that, as the party legally and financially responsible for this proposed construction, activity, I will abide by all applicable laws and requirements that govern Owner-Builder as well as employers.

_____12. I agree to notify the issuer of this form immediately of any additions, deletions, or changes to any of the information I have provided on this form. Licensed contractors are regulated by laws designed to protect the public. If you contract with someone who does not have a license, the Contractors’ State License Board may be unable to assist you with any financial loss you may sustain as a result of a complaint. Your only remedy against unlicensed Contractors may be in civil court. It is also important for you to understand that if an unlicensed Contractor or employee of that individual or firm is injured while working on your property, you may be held liable for damages. If you obtain a permit as Owner-Builder and wish to hire Contractors, you will be responsible for verifying whether or not those Contractors are properly licensed and the status of their workers’ compensation insurance coverage.

Before a building permit can be issued, this form must be completed and signed by the property owner and return to the agency responsible for issuing the permit. Note: A copy of the property owner’s driver’s license, form notarization, or other verification acceptable to the agency is required to be presented when the permit is issued to verify the property owner’s signature.

Signature of Property Owner: _____ Date: _____

Note: The following Authorization Form is required to be completed by the property owner only when designating an agent of the property owner to apply for a construction permit for the Owner-Builder.

AUTHORIZATION OF AGENT TO ACT ON PROPERTY OWNER'S BEHALF

Excluding the Notice to Property Owner, the execution of which I understand is my personal responsibility, I hereby authorize the following person(s) to act as my agent(s) to apply for, sign, and file the documents necessary to obtain an Owner-Builder Permit for my project.

Scope of Construction Project/Description of Work: _____

Project Location/Address: _____

Name of Authorized Agent: _____ Phone: _____

Address of Authorized Agent: _____

I declare under penalty of perjury that I am the property owner for the address listed above and I personally filled out the above information and certify its accuracy. *Note: A copy of the owner's driver's license, form notarization, or other verification acceptable to the agency is required to be presented when the permit is issued to verify the property owner's signature.*

Signature of Property Owner: _____ Date: _____

*Acceptable Verification of Property Owner Signature for the Town of Paradise:

In person:

Present original State issued Driver's License or State issued Identification Card

Agent for Owner:

Copy of a valid State issued Driver's License or State issued Identification Card

Present notarization of signatures for both 1.) Owner's Acknowledgment and Verification of Information and 2.) Authorization of Agent to Act on Property Owner's Behalf

Staff Signature

Date

TOWN OF PARADISE

Erosion and Sediment Control Plan (ESCP) Worksheet for Small Construction Projects

(Less than 1 acre disturbed)



Project Name: _____

What is this document for?

The Town's Phase II MS4 NPDES General Permit issued by the State Water Board to the Town, requires the Town to develop and maintain a program to assure that sediment and other pollutants from construction activities do not flow into the Town's storm water drainage system and, subsequently, impact local receiving waters. The Town's Permit requires the Town to require the owner of any construction project having soil disturbance to submit an Erosion and Sediment Control Plan (ESCP). The ESCP must identify potential sources of erosion and sedimentation associated with the project and identify the control measures (best management practices or BMPs) used to prevent erosion and control sedimentation within the project. This document is a worksheet to assist owners of small projects to determine appropriate control measures for their project.

Who is required to complete this document?

All construction projects that have soil disturbance and pass through plan check or the Town's permitting process must develop an ESCP. Projects having more than 1 acre of soil disturbance or those projects that are part of a larger common plan may be required to comply with the State Water Board's Construction General Permit (CGP), which requires the development of a Storm Water Pollution Prevention Plan (SWPPP). For these larger projects, the CGP-required SWPPP may be submitted in lieu of the ESCP. For all other projects (small projects) having less than 1 acre of soil disturbance or those that qualify for a waiver or exemption from the CGP, they must submit an ESCP using this worksheet.

What is required in this document?

This worksheet requires basic project and contact information, as well as, basic site information including location, status, approximate start and end dates and the area of soil disturbance.

The Best Management Practices (BMPs) that will be used during construction are also required to be identified.

A basic site map showing the project boundaries, adjacent streets, storm drain inlets, placement of BMPs, and where construction work will be occurring is required to be included.

BMPs, as defined on the EPA's website, is *a term used to describe a type of water pollution control. Storm water BMPs are techniques, measures or structural controls used to manage the quantity and improve the quality of storm water runoff. The goal is to reduce or eliminate the contaminants collected by storm water as it moves into streams and rivers.*

For more details on BMPs please visit the California Storm Water Quality Association's website at:

[www.casqa.org/resources/bmp handbooks](http://www.casqa.org/resources/bmp%20handbooks)

or Caltrans's website at:

www.dot.ca.gov/hq/construc/stormwater/manuals.htm

1 Project Information

Project Name:	
Project Address:	
Project Size: (Indicate sq. ft. or acres)	
Anticipated Construction Start Date:	
Anticipated Construction End Date:	
Approximate Soil Disturbance: (Indicate sq. ft or acres)	
Number of Storm Drain Inlets within 50 ft. of the soil disturbance.	

2 Owner Information

Name:	
Address:	
Phone Number:	
Email:	

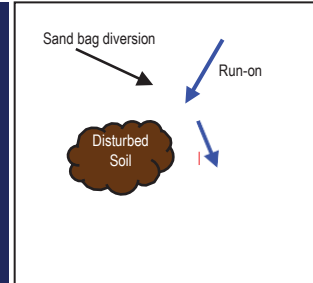
3 Contractor Information

Name:	
Company Name:	
Address:	
Phone Number:	
Email:	

4 Best Management Practices

4.1 Run-On Control BMPs

When surface flow of storm water runoff is allowed to pass through disturbed soils at an active construction project it can mobilize sediment and carry it into the municipality's storm drainage system and into the local receiving waters. This results in deposition of sediment in the municipal drainage system which causes more frequent maintenance and can cause flooding. The sediment is also harmful to the local waterways.



Does storm water have the potential to run-on to the construction site?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, will storm water surface flow be diverted around any disturbed soil areas? Show how it will be diverted on the site map.	<input type="checkbox"/> Yes <input type="checkbox"/> No

4.2 Erosion Control BMPs

The definition of erosion is the detachment of soil particles. These particles can become detached by rain, wind, or construction activity. Although construction, by nature, disturbs soil. It is vital to place a temporary or permanent covering over disturbed soil as soon as possible. Projects are not allowed to leave areas of exposed soil that do not have a cover. On the table below and on the site map show how you will prevent erosion at your project.

CASQA Fact Sheet	BMP Name	BMP Selected? (Yes/No)	Describe the BMP to be implemented. If not used, state the reason why.
EC-1	Scheduling (work will be conducted during the dry season)		
EC-2	Preservation of Existing Vegetation (existing vegetated areas will not be disturbed)		
EC-4	Area to be vegetated with landscaping, turf, or hydroseeding		
EC-7	Temporary Erosion Control using an erosion control blanket or geotextile		
EC-6 & EC-8	Area covered with a temporary or permanent mulch including straw, wood, compost, hydromulch, or equivalent		
EC-16	Non-Vegetated Stabilization (covered with aggregate, paving, permanent structures / surfaces)		
WE-1	Wind Erosion Control (kept moist to prevent wind erosion)		

4.3 Temporary Sediment Control BMPs

Sediment control is accomplished by two ways. First, giving sediment every opportunity to settle out of storm water runoff while still on the project. Second, remove sediment from surfaces that has been carried or tracked off site before it enters the municipal drains. Each project must have effective perimeter sediment control. Drain inlets within 50 feet of the project must be protected. Any visible track out or sedimentation onto municipal property must be removed as soon as possible. On the table below and on the site map show how you will control sediment at your project.

CASQA Fact Sheet	BMP Name	BMP Selected? (Yes/No)	Describe the BMP to be implemented. If not used, state the reason why.
SE-1	Temporary Silt Fence		
SE-2 or SE-3	Sediment basin or trap (all or some of the storm water drains to a retention pond or basin where sediment can settle out)		
SE-5	Temporary Fiber Rolls / Straw Wattles		
SE-6 or SE - 8	Temporary Gravel Bag Berm or Sand Bag Barrier		
SE-7	Street Sweeping (inspect roads and sidewalks daily and sweep as necessary)		
MS4 Standard	Curb cutback (maintain a minimum of 4 inches of elevation difference between the disturbed soil and the top of the existing curb, sidewalk, or paved surface)		
SE-10	Temporary Drain Inlet Protection (mandatory for any DI's within 50 feet of the project)		
SE-13	Compost Socks / Biofilter Bags		
MS4 Standard	Stabilized Construction Exit – Constructed with aggregate at the project owner's specification, but it must be effective in controlling trackout.		
TC-2	Stabilized Construction Roadways		
WM-03	Stockpile Management (stockpiles that have not been actively used in the last 14 days must be covered with an erosion control blanket or plastic sheeting and contained with a fiber roll or gravel bag berm)		

4.4 Non-Storm Water Pollution Control BMPs

The Town ordinances prohibit the discharge to its municipal drainage system of any wash water, unpermitted construction site dewatering, saw cutting or grinding slurries, unpermitted hydrotest water, chlorinated swimming pool or fountain water, concrete or paint wash out, or spills of hazardous materials or other substances. On the table below, list any of the activities that may apply to your project; and on the site map show the location of these activities.

CASQA Fact Sheet	BMP Name	Activity Planned? (Yes/No)	Describe the BMP to be implemented. If not used, state the reason why.
NS-3	Paving, Sealing, Saw-cutting, Coring, and Grinding Operations		
NS-7	Potable Water / Irrigation Testing and Discharge to the Municipal Drainage System		
NS-8	Vehicle and Equipment Cleaning Performed on Site		
NS-9 & WM-04	Vehicle and Equipment Fueling Performed on Site		
NS-10	Vehicle and Equipment Maintenance Performed on Site		
NS-12/13 & WM-08	Concrete, Stucco, Plaster, Tile, or Masonry Work		
WM-09	Temporary Sanitary Waste Facilities (port-a-potties)		
WM-01	Storage of Hazardous Materials on the Project Site (paints, solvents, acids, fuel, lubricants, etc.)		

Town of Paradise
Building Resiliency Center
6295 Skyway
Paradise, CA 95969
Tel (530) 872-6291 ext 411
www.townofparadise.com/stormwater



POST- CONSTRUCTION STANDARDS PLAN

A GUIDANCE DOCUMENT ON STORM WATER
POST-CONSTRUCTION DESIGN MEASURES FOR
DEVELOPERS AND PLAN CHECKERS

APPLICABILITY

2 Applicability

In regards to the Post-Construction Standards Plan, all projects fall into one of three possible categories: small, regulated, or not applicable. If a project does not qualify under either of the two following sections, the Post Construction Standards Plan does not apply to it.

2.1 SMALL PROJECTS 2,500 TO 5,000 FT²

Small projects are defined as those that create and/or replace between 2,500 ft² and 5,000 ft² of impervious surface. This includes projects that have no net increase in the impervious footprint. Single family homes that create and / or replace 2,500 ft² or more of impervious surface and are not part of a larger plan of development are considered to be applicable small projects. Small projects would include, but not limited to, the following:

- New construction that creates between 2,500 ft² and 5,000 ft² of impervious surface;
- A demolition of a small project site and the redevelopment of that site if more than 2,500 ft² of impervious surface is replaced or created;
- The replacement of 2,500 ft² or more of a parking lot;
- The construction of a new parking lot that is less than 5,000 ft²; and
- A roadway or sidewalk project that is creating or replacing between 2,500 ft² and 5,000 ft² of impervious surface.

Linear utility projects (LUPs) are not subject to the small project Site Design Measure requirements.

2.2 REGULATED PROJECTS >5,000 FT²

For the purposes of this Post-Construction Standards Plan, a “Regulated Project” is one that will create and / or replace 5,000 ft² or more of impervious surface. Regulated Projects include new and redevelopment projects on public or private land that fall under the planning and permitting authority of the municipality. Redevelopment is defined as any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface areas on a site



Figure 2 - A single family home that creates and / or replaces 2,500 ft² or more is a small project.

Impervious Surface - A surface covering or pavement of a developed parcel of land that prevents the land's natural ability to absorb and infiltrate rainfall/storm water. Impervious surfaces include, but are not limited to; roof tops, walkways, patios, driveways, parking lots, storage areas, impervious concrete and asphalt, and any other continuous watertight pavement or covering. Landscaped soil and pervious pavement, including pavers with pervious openings and seams, underlain with pervious soil or pervious storage material, such as a gravel layer sufficient to hold the specified volume of rainfall runoff are not impervious surfaces.

Source: Phase II MS4 Permit Glossary

APPLICABILITY

on which some past development has occurred. Redevelopment projects do not include pavement grinding and resurfacing of existing roadways; construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways; or routine replacement of damaged pavement for short, non-contiguous sections of roadway.

Regulated Projects do not include the following:

- Detached single family homes that are not a part of a larger plan of development (they are considered to be a “small project” even if they exceed 5,000 ft² of impervious surface);
- Projects that are exclusively interior remodels;
- Routine maintenance or repair such as exterior wall surface replacement, pavement grinding and resurfacing within the existing footprint, and roofing replacement or repair;
- Projects consisting solely of sidewalks or bicycle lanes built as part of new streets or roads and built to direct storm water runoff to adjacent vegetated areas;
- Projects consisting solely of impervious trails built to direct storm water to adjacent non-erodible permeable areas;
- Projects consisting solely of sidewalks, bicycle lanes, or trails constructed with permeable surfaces;
- Replacement of damaged pavement or the replacement of short, non-contiguous sections of roadways; and
- Trenching, excavation, and resurfacing associated with Linear Utility Projects (LUPs) unless it has a discrete location that has 5,000 ft² or more of newly constructed contiguous impervious surface such as a pump station or maintenance facility. In such cases, only the discrete location is subject to this Post-Construction Standards Plan.

Please note that some of the above-listed projects may still be considered “small projects” even if they are exempted from being a Regulated Project.

2.2.1 The 50% Rule

If a redevelopment project results in an increase of ***more than*** 50 percent of the impervious surface of a previously existing development, runoff from the entire project, consisting of all existing, new, and / or replaced impervious surfaces, must be included in the selection and sizing of site design measures, LID design standards, and hydromodification management measures to the extent feasible. However, if the redevelopment project results in an increase of ***less than*** 50 percent of the impervious surface, only runoff from the new and /or replaced impervious surface must be included in the selection and sizing of site design measures, LID design standards, and hydromodification management measures.



Figure 3 - Capital improvement projects such as roadways must include post-construction design measures and be appropriately sized.

APPLICABILITY

For street and road widening projects that include additional traffic lanes, where the addition of traffic lanes results in an alteration of ***more than*** 50 percent of the impervious surface, runoff from the entire project must be included in the selection and sizing of site design measures, LID design standards, and hydromodification management measures. However, if the addition of traffic lanes results in an alteration of ***less than*** 50 percent of the impervious surface, only the runoff from the new and / or replaced impervious surface is required to be included in the selection and sizing of site design measures, LID design standards, and hydromodification management measures.

2.2.2 Effective Date of Applicability

This Post-Construction Standards Plan becomes effective on July 14, 2015. Until that date, projects are still subject to the 1998 Interim Drainage Design Guidelines. There are no other storm water design requirements because the Town of Paradise was not required by the previous permit to implement such standards. On July 14, 2015, this Post-Construction Standards Plan will apply to all applicable public and private new and redevelopment “Small” and “Regulated Projects”. Any discretionary projects that have been deemed complete prior to July 14, 2015 and have unexpired vesting tentative maps will only need to comply with the municipality’s post-construction requirements that were in effect at the time of the map approval. Capital improvement projects or municipal-owned projects, for which their governing body or designee approved the initiation of the project design prior to July 14, 2015 will need only to comply with the post-construction requirements that were in place at that time.

Approved Tentative Maps and Signed Improvement Plans are completed once a discretionary project has a tentative map application that is deemed complete by the Town of Paradise. Approval of development applications is a discretionary action taken by the Town of Paradise once a discretionary project has a development application deemed complete. If the discretionary project has a tentative map application or development application that was deemed complete prior to July 14, 2015, it is not subject to the Post Construction Standards of the Small MS4 Permit.

REQUIREMENTS FOR REGULATED PROJECTS

5 Requirements for Regulated Projects

The following is a 6-step process required by the Town of Paradise for Regulated Projects as defined in [Section 2.2](#).

5.1 SPECIFY DRAINAGE MANAGEMENT AREAS

Regulated Projects are required to provide a map or diagram that divides the development into discrete Drainage Management Areas (DMAs). These are areas of the project where the nature of the development is distinct from the other portions of the development and, therefore, require a unique approach to mitigating storm water runoff. A separate DMA would also be necessary for portions of the project where post-construction design measures are dedicated to that portion and operate independently from the other DMAs. Some projects will have multiple DMAs while other projects may have only one single DMA.

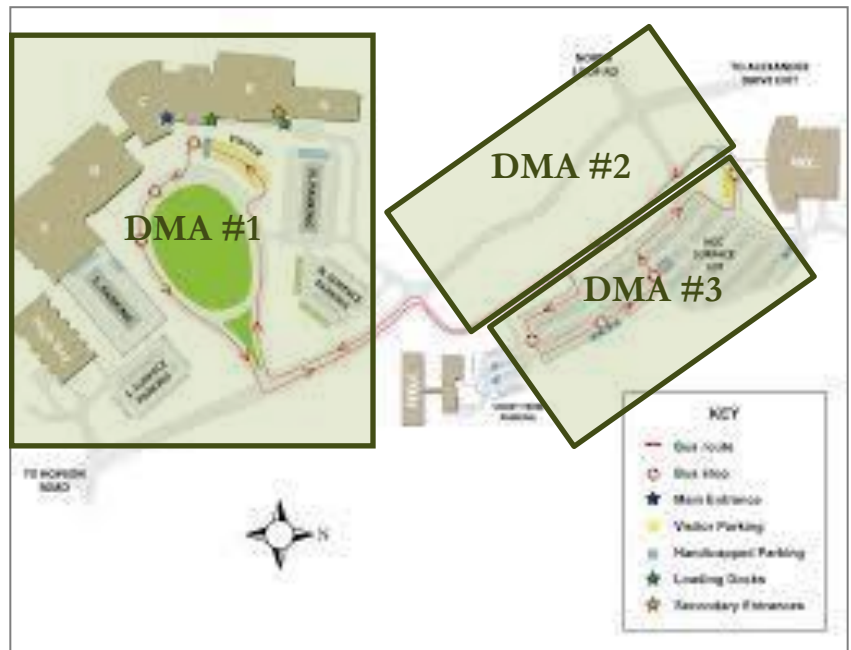


Figure 6 - Regulated Projects must submit a map with the boundaries of the various DMAs depicted.

5.2 IDENTIFY APPLICABLE SOURCE CONTROLS

The project proponent is required to identify potential sources of pollutants and to include into the design appropriate Best Management Practices / Source Controls. If a proposed Regulated Project has any of the potential pollutant-generating activities or sources identified in [Table 1](#), it must be designed and operated consistent with the recommendations provided in the CASQA Storm Water BMP Handbooks. A link is provided in [Table 1](#) to each BMP specification. The CASQA Handbooks can be accessed in their entirety at www.CASQA.org. There is an annual subscription to access the Commercial / Industrial Handbook and the Construction Handbook. At the date of this edition of the Post-Construction Standards Plan, CASQA was still offering free access to their BMP Handbooks for Municipal Operations and New Development and Redevelopment.

REQUIREMENTS FOR REGULATED PROJECTS

TABLE 1 – LIST OF SOURCE CONTROLS

Activity / Pollutant Source	CASQA BMP Handbook Link	Activity or Design-based Control Measure
Accidental spills or leaks	SC-11	Activity
Interior floor drains	SC-10	Activity and Design (connection of interior floor drains to the storm drainage system is prohibited)
Parking / storage areas and maintenance	SC-43	Activity
Indoor and structural pest control	SC-35	Activity
Landscape / outdoor pesticide use	SD-10 BG-40	Activity
Pools, spas, ponds, decorative fountains, and other water features	BG-63 SC-72	Activity and Design
Restaurants, grocery stores, and other food service operations	BG-30	Activity
Refuse areas	SC-34 SD-32	Activity and Design
Industrial processes	SD-35 SD-36	Design
Outdoor storage of equipment or materials	SC-32 SD-34	Activity and Design
Vehicle and equipment cleaning	SC-21 SD-33 BG-65	Activity and Design
Vehicle and equipment repair and maintenance	SC-22 BG-21	Activity
Fuel dispensing areas	SC-20 SD-30 BG-22	Activity and Design
Loading docks	SC-30 SD-31	Activity and Design
Fire sprinkler test water	SC-41	Activity
Drain or wash water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources	SC-10 SC-41	Activity
Unauthorized non-storm water discharges	SC-10	Activity
Building and grounds maintenance	SC-41	Activity

REQUIREMENTS FOR REGULATED PROJECTS

5.3 INCORPORATE LOW IMPACT DEVELOPMENT DESIGN STANDARDS

The project proponent must demonstrate how each DMA has been designed to accomplish the LID Standards listed in [Table 2](#).

TABLE 2 – LID STANDARDS

1. **Define the development envelope and protected areas, identifying areas that are most suitable for development and areas to be left undisturbed.**
2. **Concentrate development on portions of the site with less permeable soils and preserve areas that can promote infiltration.**
3. **Limit overall impervious coverage of the site with paving and roofs.**
4. **Set back development from creeks, wetlands, and riparian habitats.**
5. **Preserve significant trees.**
6. **Conform the site layout along natural landforms.**
7. **Avoid excessive grading and disturbance of vegetation and soils.**
8. **Replicate the site's natural drainage patterns.**
9. **Detain and retain runoff throughout the site.**

In completing Post-Construction Project Worksheet (included in [Appendix 8](#)), the project proponent will be required to demonstrate for each DMA how it is accomplishing the nine LID Standards listed in [Table 2](#). This demonstration can be done through narrative description, calculations, supporting information, and / or site plans and diagrams. The municipal plan checker will review the project proponent's response to each of the nine LID Standards and may challenge unsubstantiated statements, request additional information, or request that more be done to meet the objective of one or more of these LID Standards.

5.4 SELECT AND SIZE SITE DESIGN AND TREATMENT CONTROL MEASURES

As with small projects, Regulated Projects must also select one or more Site Design Measures (also called "facilities" in the Phase II MS4 Permit) that infiltrate, evapo-transpire, harvest and reuse, or biotreat storm water runoff. Regulated Projects are required to reduce the amount of runoff by sizing each "facility" (Site Design or Treatment Control Measure) to one of two hydraulic design criteria specified in the Phase II MS4 Permit. This section of the plan discusses how project proponents select, size, and configure Site Design and Treatment Control Measures.

5.4.1 List of Site Design Measures and Associated Sizing Criteria

Many of the Site Design Measures are described in [Section 4.1](#) of this Post-Construction Standards Plan. [Table 3](#) lists these Site Design Measures along with other possible Treatment Control Measures that infiltrate, evapo-transpire, harvest and reuse, or biotreat storm water runoff. The project proponent will need to select one or more of these control measures for each DMA. For each measure listed in [Table 3](#), the appropriate hydraulic sizing criteria and specification reference is also provided.

REQUIREMENTS FOR REGULATED PROJECTS

TABLE 3 – SITE DESIGN AND TREATMENT CONTROL MEASURES

Site Design or Treatment Control Measure	Description	CASQA Specification	Sizing Criteria
Stream setbacks and vegetated buffers (Site Design Measure)	Preservation of a green strip or vegetated buffer between the development and the discharge point through which storm water runoff passes.	<u>TC-10</u>	Flow
Soil quality improvement (Site Design Measure)	Commonly used in conjunction with landscaping, bioretention, or storm water gardens. Also known as “engineered soils”, through which storm water can infiltrate. This provides additional on-site storage and reduces peak flow rates.	<u>TC-40</u>	Volume
Tree planting and preservation (Site Design Measure)	Incorporated into the site’s landscaping. Trees reduce the energy of falling rain and help to reduce peak flow rates.	<u>SD-10</u>	SMARTS Calculator
Porous pavement (Site Design Measure)	Porous asphalt, concrete, or pavers; cobbles or rock covered surfaces; typically with at least 18” of drainage rock below the porous surface covering to store and infiltrate storm water.	<u>SD-20</u>	Volume
Green roofs (Site Design Measure)	Plants and growing media permanently installed on a rooftop to allow a certain amount of storm water infiltration and storage.	<u>TC-40</u>	Volume
Vegetated swales (Site Design Measure)	Storm water conveyance swales that are vegetated to stabilize the swale and prevent erosion. Vegetated swales improve water quality by providing filtration and bio-uptake of pollutants and by promoting sedimentation of suspended particles. Often, vegetative swales are used in conjunction with “soil quality improvement” to provide greater infiltration and / or with retention or detention basins.	<u>TC-30</u>	Flow
Rain harvesting and reuse (Site Design Measure)	Large scale or small scale capture, collection and re-use of storm water runoff. Includes rain barrels used at downspouts and large cisterns and collection systems.	<u>TC-12</u>	Volume
Bioretention and rain gardens (Treatment Control Measure)	Depressed landscaped areas to which storm water runoff flows. These rain gardens are designed with engineered soils so that they facilitate infiltration and storage of storm water.	<u>TC-32</u>	Volume
Infiltration trench, Flow-through Planter, or Tree Wells (Treatment Control Measure)	Similar in concept to a French drain or a leach field, in which storm water runoff is able to drain to a trench or pit that has been filled with rock. It provides underground storage of the water until it can infiltrate into the soils.	<u>TC-10</u>	Volume and Flow
Retention and detention basins (Treatment Control Measure)	Aboveground storage of storm water runoff in a basin that allows it to infiltrate into soils and / or be stored and released at a slower flow rate. Impounded water must be infiltrated or discharged within 72 hours to avoid vector breeding problems.	<u>TC-11</u> <u>TC-12</u> <u>TC-22</u> <u>TC-40</u>	Volume

A single control measure or a combination of two or more of the control measures specified in [Table 3](#) can be used to meet the hydraulic sizing criteria for each DMA. An example of a control measure combination would be a site using engineered soils below a vegetated swale and using a rain harvesting /

REQUIREMENTS FOR REGULATED PROJECTS

collection system for roof drains that are in the same DMA. Information for on-line publicly available design references and guidance to many of the above-listed control measures are provided in [Appendix 7](#).

5.4.2 Volumetric Criteria

The Phase II MS4 Permit requires the municipality to condition applicable new development and redevelopment projects to require “facilities” designed to evapo-transpire, infiltrate, harvest/use, and biotreat storm water **and that are designated on Table 3 as a volume-based control measure** to meet at least one of the following volumetric hydraulic sizing design criteria:

- The maximized capture storm water volume for the tributary area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients in the *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998)* pages 175-178 (that is, approximately the 85th percentile 24-hour storm runoff event); **or**
- The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology in Section 5 of *CASQA’s Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003)*, using local rainfall data.

As a part of this Post-Construction Standards Plan, the Town of Paradise is providing the project proponent with a Microsoft Excel™ worksheet that calculates the volumetric criteria. (Refer to [Appendix 6](#) for information on how to download and use the worksheet). In this worksheet, capture volumes can be calculated using both of the above-referenced volumetric criteria methods. Both methods are described in Section 5 of the *2003 Edition of the CASQA Stormwater Best Management Practice Handbook for New Development and Redevelopment*. Section 5 of the handbook can be accessed and downloaded at the following web link:

www.casqa.org/sites/default/files/BMPHandbooks/BMP_NewDevRedev_Section_5.pdf

The project proponent can select either method to size the Site Design and Treatment Control Measures that require volumetric sizing as specified in [Table 3](#). **To satisfy the plan check requirements one or more of these control measures must be used for each DMA and sized for the total runoff area of the DMA.**

The State Water Board’s Post-Construction Calculator (refer to [Appendix 5](#)) provides a discharge credit for trees by allowing an area of 218 ft² for each evergreen tree and 109 ft² for each deciduous tree. If trees are included within the DMA boundary, the project proponent may take the total area within the DMA (number of trees multiplied by the allowed area credit) multiplied by the “P” value (converted from inches to feet) as shown on Volumetric Sizing Tool in [Appendix 6](#). This will provide a volume reduction in cubic feet which may be used in meeting the overall volumetric criteria for the DMA and has been built into the Volumetric Sizing Tool.

5.4.3 Flow-Based Criteria

The Phase II MS4 Permit requires the municipality to condition applicable new development and redevelopment projects to require “facilities” designed to evapo-transpire, infiltrate, harvest/use, and

REQUIREMENTS FOR REGULATED PROJECTS

bioretain storm water ***and that are designated on Table 3 as a flow-based control measure*** to meet at least one of the following flow-based hydraulic sizing design criteria:

- The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; ***or***
- The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records. Local rainfall records are provided in Appendix D of the *CASQA Stormwater Best Management Practice Handbook for New Development and Redevelopment* for Fresno, Sacramento, and Redding, California.³ Table 4 below provides the 85th percentile hourly rainfall intensities for these Central Valley locations as reported in the CASAQ BMP Handbook.

TABLE 4 - RAINFALL INTENSITIES AND FLOW-BASED DESIGN VALUES

Central Valley Weather Station	85 th Percentile Rainfall Intensity (inches/hour)	Flow-Based Design Value (2 x 85 th Percentile Intensity in inches/hour)
Fresno – Yosemite International Airport (3257)	0.090	0.180
Sacramento – 5 ESE (7633)	0.093	0.186
Redding – Municipal Airport (7304)	0.130	0.260

The project proponent can select either method to size the Site Design and Treatment Control Measures that require flow-based sizing as specified in Table 3. ***To satisfy the plan check requirements one or more of these control measures must be used for each DMA and sized for the total runoff area of the DMA.***

5.4.4 Allowed Variations and Exceptions

Site Design and Treatment Control Measures that infiltrate or bioretain storm water into the subsurface may be altered in their design as specified on Table 5.

³ www.casqa.org/sites/default/files/BMPHandbooks/BMP_NewDevRedev_Appendix_D.pdf

REQUIREMENTS FOR REGULATED PROJECTS

TABLE 5 – ALLOWED DESIGN VARIATIONS

Condition	Allowed Variation
Facilities located within 10 feet of structures or other potential geotechnical hazards established by the geotechnical expert for the project	May incorporate an impervious cutoff wall between the bioretention / infiltration facility and the structure or other geotechnical hazard
Facilities with documented high concentrations of pollutants in underlying soil or groundwater; facilities located where infiltration could contribute to a geotechnical hazard; and facilities located on elevated plazas or other structures	May incorporate an impervious liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a “flow-through planter”)
Facilities located in areas of high groundwater, highly infiltrative soils or where connection of underdrain to a surface drain or to a subsurface storm drain are infeasible	May omit the underdrain
Facilities serving high-risk areas such as fueling stations, truck stops, auto repairs, and heavy industrial sites	Are required to provide additional treatment to address pollutants of concern prior to the flow reaching the infiltration facility

If the project proponent demonstrates that the use of bioretention or infiltration control measures are infeasible at the site, other types of treatment such as tree-box biofilters, compost filters, or in-vault media filters may be utilized for the following types of projects:

1. Projects creating or replacing an acre or less of impervious area, and located in a designated pedestrian-oriented commercial district (i.e., smart growth projects), and having at least 85% of the entire project site covered by permanent structures;
2. Facilities receiving runoff solely from existing (pre-project) impervious areas; and
3. Historic sites, structures or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

If any of these alternate non-infiltrating treatment control measures are utilized, they must meet the following performance criteria:

- Sized to treat the volumetric criteria specified in [Section 5.4.2](#) or the flow-based criteria in [Section 5.4.3](#) as appropriate to the type of treatment control measure selected.
- Selected to effectively remove pollutants of concern associated with the new development.

The project proponent is required to support the demonstration of infeasibility of using bioretention or infiltration control measures at the project site and the selection of the alternate non-infiltration treatment control measure(s) through the opinion of a qualified expert such as a California licensed Professional Civil Engineer, a California licensed Professional Geologist, a California licensed Geotechnical Engineer,

REQUIREMENTS FOR REGULATED PROJECTS

and/or an EnviroCert International, Inc. Certified Professional in Storm Water Quality (CPSWQ). If an alternate non-infiltrating treatment control measure(s) is proposed by the project proponent, a technical report, stamped and signed by any of the above-referenced experts, demonstrating infeasibility of bioretention or infiltration and the selection and sizing of the alternate treatment control measure must be submitted with the Post-Construction Project Worksheet ([Appendix 8](#)).

5.5 INCORPORATE HYDROMODIFICATION MANAGEMENT MEASURES

Storm water runoff that is not addressed with Site Design Measures must be treated with Treatment Control Measures (both of which are identified on [Table 3](#)) designed to infiltrate, evapo-transpire, and/or bioretain runoff. In other words, if the DMA is utilizing trees and a storm water capture, collection, and reuse system, **only the net runoff**, after factoring in the credit for the trees and for the amount captured / recycled, is subject to being included in the treatment control requirements. Treatment “facilities” must comply with the following design parameters:

1. Sized to treat the volumetric criteria specified in [Section 5.4.2](#) or the flow-based criteria in [Section 5.4.3](#) as appropriate to the type of treatment control measure selected;
2. Maximum surface loading rate of the infiltration facility of 5 inches per hour, based on the runoff rates calculated for the DMA;
3. Minimum surface reservoir volume equal to surface area of the infiltration facility times a depth of 6 inches;
4. Minimum planting medium depth of 18 inches. The planting medium must sustain a minimum infiltration rate of 5 inches per hour throughout the life of the project and must maximize runoff retention and pollutant removal. A mixture of sand (60%-70%) meeting the specifications of American Society for Testing and Materials (ASTM) C33 and compost (30%- 40%) may be used.
5. Subsurface drainage/storage layer (typically gravel) with an area equal to the surface area and having a minimum depth of 12 inches;
6. Underdrain with discharge elevation at top of the gravel layer;
7. No compaction of soils beneath the treatment control “facility”; or if the soils had previously been compacted, they must be ripped and loosened;
8. No liners or other barriers interfering with infiltration; and
9. Appropriate plant palette for the specified soil mix and maximum available water use.

Alternatives to the above-listed nine design parameters for treatment “facilities” is allowed if **all** of the following equivalent effectiveness features are demonstrated:

- Equal or greater amount of runoff infiltrated or evapo-transpired;
- Equal or lower pollutant concentrations in runoff that is discharged after biotreatment / infiltration;
- Equal or greater protection against shock loadings and spills; and

REQUIREMENTS FOR REGULATED PROJECTS

- Equal or greater accessibility and ease of inspection and maintenance.

Regulated projects that create and/or replace one acre or more of impervious surface must have incorporated Site Design and Treatment Control Measures (from [Table 3](#)) that prevent the post-project runoff from exceeding the pre-project flow rate for a 2-year, 24-hour storm event. This does not include projects that do not increase impervious surface area over the pre-project conditions. The 2-year, 24-hour values for a few selected Butte County locations are shown in [Table 6](#). The 2-year, 24-hour storm event volumes for all of Northern California are included on an isopluvial map included on the last tab of the Volumetric Post-Construction BMP Sizing Tool (which can be downloaded following the instructions in [Appendix 6](#)).

TABLE 6 – 2-YEAR, 24-HOUR STORM TOTALS FOR SELECTED LOCATIONS

Location	2-Year 24-Hour Design Value
Town of Paradise	5.0 inches
Magalia	5.8 inches
City of Chico	2.8 inches
City of Oroville	2.8 inches

5.6 PREPARE THE SUBMITTAL

The sixth and final step for Regulated Projects is to compile the information required to be submitted to the plan checker. This includes the following items:

- A completed Post-Construction Worksheet is required (obtained from [Appendix 8](#)).
- A separate site plan for each DMA must be submitted. If there are multiple DMAs, a key map showing the location of the DMAs in relationship to one another and the entire site is required to be submitted. Each DMA site plan is required to show the following information:
 - ✓ DMA name and boundary;
 - ✓ The selected Site Design and Treatment Control Measures (identified in [Table 3](#));
 - ✓ The total drainage area in square feet of the DMA;
 - ✓ The pre-development peak flow rate at the point(s) of discharge;
 - ✓ The predicted post-development peak flow rate at the point(s) of discharge;
 - ✓ Areas of existing impervious surfaces (pre-development);
 - ✓ Proposed areas of impervious surfaces (post-development);
 - ✓ Setbacks from creeks, wetlands, and riparian habitats;
 - ✓ Existing topography and drainage patterns (pre-development);
 - ✓ Proposed topography and drainage patterns (post-development);

REQUIREMENTS FOR REGULATED PROJECTS

- ✓ Soil types, soil type boundaries within the DMA, and their Hydrologic Soil Group Classification rating (A, B, C, or D); and
- ✓ Trees, vegetation, and sensitive environmental areas to be protected and preserved.

Each plan must be stamped by a qualified licensed professional. The plans must be stamped by a California Civil Professional Engineer if any of the following control measures were selected: rooftop and impervious area disconnection, porous pavement, rain cisterns, bioretention or rain gardens, infiltration trench, or retention or detention basins. The plans must be stamped by a California Structural Professional Engineer if a green roof was selected or if there is a significant structural aspect to the rain cisterns and collection system. The plans must be stamped by a California licensed Landscape Architect if any of the following Site Design Measures were selected: stream setbacks and buffers, soil quality improvement, vegetated swales, bioretention and rain gardens.

The selected Site Design and Treatment Control Measure(s) must be clearly called out on the submitted plans.

- Design drawings for the proposed Treatment Control Measures showing a plan view, elevation view, and subsurface cross-sections must be submitted. Sufficient detail and specifications should be included in these drawings to provide for adequate plan check review and for the construction of the treatment “facility”. The drawings must be stamped by a California Civil Professional Engineer if any of the following control measures were selected: rooftop and impervious area disconnection, porous pavement, rain cisterns, bioretention or rain gardens, infiltration trench, or retention or detention basins. The drawings must be stamped by a California Structural Professional Engineer if a green roof was selected or if there is a significant structural aspect to the rain cisterns and collection system. The drawings must be stamped by a California licensed Landscape Architect if any of the following Site Design Measures were selected: stream setbacks and buffers, soil quality improvement, vegetated swales, bioretention and rain gardens.
- A print out of the results page from the MS Excel™ Volumetric BMP Sizing Tool for each DMA and control measure that requires the volumetric sizing criteria is required to be submitted. (Refer to [Appendix 6](#) for information on how to download the tool.)
- Calculations stamped by the appropriate licensed individual (as described above) for each DMA and control measure that requires flow-based sizing criteria must be included with the submittal.
- An Operation and Maintenance Plan and signed Statement of Responsibility for the proposed treatment control measures must accompany the submittal (refer to [Section 6](#)).

Soil types and Hydrologic Soil Groups (HSGs) can be identified using the USDA’s online Web Soil Survey. The online tool uses aerial maps to select the area of interest. To access this online reference, go to:

<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

TABLE 7 – HYDROLOGIC SOIL GROUPS

Group A	Low runoff potential, high infiltration rates
Group B	Moderately low runoff potential, good infiltration rates
Group C	Moderately high runoff potential, low infiltration rates
Group D	High runoff potential, poor infiltration

For more information on the HSG classifications, go to:

<http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba>

OPERATION AND MAINTENANCE OF POST-CONSTRUCTION MEASURES

6 Operation and Maintenance of Post-Construction Measures

Owners of the projects where post-construction treatment control measures (as identified on [Table 3](#)) were installed are required to maintain the control measures so that they operate effectively and as designed. To that effect, the project proponent during the plan check process must submit an Operation & Maintenance (O&M) Plan and a Statement of Responsibility.

6.1 LONG TERM PLAN FOR CONDUCTING REGULAR MAINTENANCE OF CONTROL MEASURES

The owner of the project where any post-construction treatment control measures were installed is required to prepare a written plan for conducting regular inspections and maintenance of the installed treatment facilities. The proposed O&M activities should be commensurate with the maintenance measures identified in the CASQA BMP specifications. (Refer to the hyperlinked references in [Table 3](#).) The O&M Plan is required to identify the following information:

- Property name and address;
- Name of the DMA(s) and Treatment Control Measure(s);
- Property owner's contact information including name, mailing address, telephone number, and email address;
- Contact information for any contracted or delegated inspectors and maintenance personnel;
- Minimum inspection frequency by the property owner or their designee;
- Conditions that require maintenance or repair of the Treatment Control Measure; and
- Preventative maintenance tasks, their frequency, and who will perform them.

The project proponent is required to use the form provided in [Appendix 9](#) for the O&M Plan submittal.

6.2 STATEMENT OF RESPONSIBILITY

On the O&M Plan form (included in Appendix 9) is a Statement of Responsibility that must be accepted and signed by the property owner or the owner's duly authorized representative. The completed and signed form must be submitted during the plan check process. The statement indicates the current property owner's acceptance of responsibility for the on-going operation, inspection, and maintenance of the treatment control measures until the property and / or responsibility is legally transferred to another entity (such as the new property owner or a maintenance district). It is the responsibility of the current owner to notify the new owner or responsible party of their on-going O&M obligations. The storm water municipal code for the Town of Paradise provides the municipality with the legal authority to require any property owner to properly maintain installed storm water treatment control measures.

OPERATION AND MAINTENANCE OF POST-CONSTRUCTION MEASURES

6.3 SELF-CERTIFICATION ANNUAL REPORTS

Each year the Town of Paradise will mail to owners of installed Treatment Control Measures an O&M self-certification form. This form is required to be completed annually by the owner of the property to certify that the O&M program (described in [Section 6.1](#)) is being implemented and that the Treatment Control Measure(s) is in an effective operational condition. The property owner will have up to 60 days to complete and return the annual O&M self-certification form. If reports are not received within the 60-day period, the Town of Paradise will perform the inspection and assessment; and the property owner will be invoiced for it as described in the municipal code.

POST-CONSTRUCTION WORKSHEET FOR THE TOWN OF PARADISE

PROJECT SUMMARY SHEET

Project Owner Information:

Project Owner Name:					
Name of Contact Person:					
Mailing Street Address:					
City:		State:		Zip:	
Telephone:			Email:		

Project Information:

Project Name:					
Name of Contact Person:					
Project Address:					
City:		State:		Zip:	
Anticipated construction start date:			Ending date:		
Project size (ft ²):			Subject to the Construction General Permit? (Yes / No)		

Information of the Post-Construction Standards Plan Preparer:

Name of Organization:					
Name of Contact Person:					
Mailing Street Address:					
City:		State:		Zip:	
Telephone:			Email:		

Project Applicability:

Type of Project: (Check one)	<input type="checkbox"/>	Small Project (2,500 to 5,000 ft ² or detached single family home)	
	<input type="checkbox"/>	Regulated Project (5,000 ft ²)	
	<input type="checkbox"/>	Not applicable to the Post-Construction Standards Plan <i>(provide reason in the space below)</i>	
Is this a redevelopment project? (Yes / No)		Will the project result in an increase of more than 50% of the impervious surface? (Yes / No)	
Has the project or the vesting map received approval from the municipality? (Yes, No, or N/A)		Date of project or vesting map approval:	
Describe the nature and scope of the construction project:			
Number of Drainage Management Areas (DMAs):			

POST-CONSTRUCTION WORKSHEET FOR THE TOWN OF PARADISE

REGULATED PROJECT DMA SUBMITTAL SHEET

Drainage Management Area (DMA) & Project Information:

A **separate** Regulated Project DMA Submittal Sheet is required to be completed and submitted for each DMA. Refer to Section 5.1 of the Post-Construction Standards Plan for more information about DMAs.

Project Name:	
Project Owner Name:	
Project Address:	
Name of the DMA:	
DMA area (ft ²)	

Selection of Applicable Source Controls:

Indicate which of the following activities or pollutant sources are included in **this DMA** of the new development or redevelopment. For more information about required Source Control refer to Section 5.2.

Site Design Measures	(Yes / No)
Accidental spills or leaks	
Interior floor drains	
Parking / storage areas and maintenance	
Indoor and structural pest control	
Landscape / outdoor pesticide use	
Pools, spas, ponds, decorative fountains, and other water features	
Restaurants, grocery stores, and other food service operations	
Refuse areas	
Industrial processes	
Outdoor storage of equipment or materials	
Vehicle and equipment cleaning	
Vehicle and equipment repair and maintenance	
Fuel dispensing areas	
Loading docks	
Fire sprinkler test water	
Drain or wash water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources	
Unauthorized non-storm water discharges	
Building and grounds maintenance	

Hydrologic Soil Group and Soil Type Information:

Enter information concerning the soil types **within this DMA**. For more information, refer to Table 7 of the Post-Construction Standards Plan.

Soil Type Name	HSG Group (A, B, C, or D)

Low Impact Development (LID) Design Requirements:

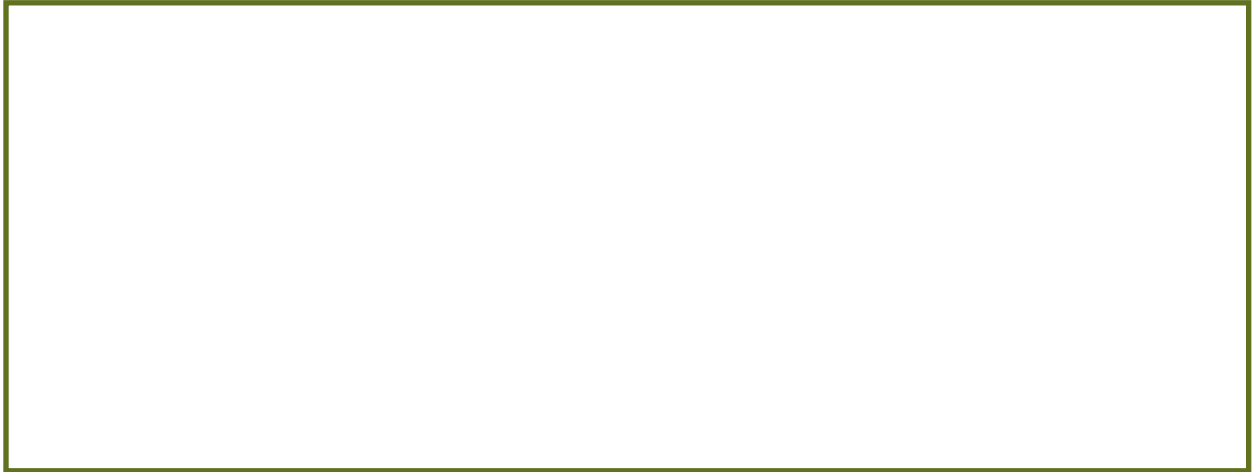
Please describe how the project is meeting each of the following LID design requirements. Provide your response in the text box following each requirement or provide responses on a separate sheet.

- 1. Define the areas of the project that are to be left undisturbed or protected from soil disturbance. Identify sensitive environmental receptors such as water bodies, stream buffers, existing trees, riparian areas, and habitat areas.

- 2. How is the project concentrating development on portions of the site with less permeable soils and preserving areas that can promote infiltration?

- 3. How is the project limiting the overall impervious coverage of the site consisting of paving and roofs?

4. If applicable, how much setback is there of the development from creeks, wetlands, and riparian habitats?

A large, empty rectangular box with a thin black border, intended for the user to provide an answer to question 4.

5. List and describe the trees that will be preserved.

A large, empty rectangular box with a thin black border, intended for the user to list and describe trees to be preserved.

6. Describe how the new development or redevelopment site layout will conform along natural landforms.

A large, empty rectangular box with a thin black border, intended for the user to describe how the site layout will conform to natural landforms.

7. Describe how the project is avoiding excessive grading and disturbance of vegetation and soils.



8. Describe how the new development or redevelopment is replicating the site's natural drainage patterns.



9. Describe how the project will detain and retain runoff through the new development and redevelopment site.



Pre- and Post-Development Project Hydrology Information:

Provide the following hydrology information for **this DMA**.

Pre-development Conditions:

Percent Impervious	
Average runoff coefficient for this DMA	
Peak flow rate (ft ³ /sec) for this DMA using the 2-year 24-hour design value discussed in Section 5.5 .	

Post-development Conditions:

Percent Impervious	
Average runoff coefficient for this DMA	
Peak flow rate (ft ³ /sec) for this DMA using the 2-year 24-hour design value discussed in Section 5.5 .	

Selection of Site Design and Treatment Control Measures:

Indicate which Site Design and Treatment Control Measures will be used for **this DMA**. For more information, refer to [Table 3](#). Provide calculations and design drawings for the selected measures per the submittal requirements describe in [Section 5.6](#).

Site Design or Treatment Control Measure	Sizing Criteria	Selected? (Yes / No)	Enter the Calculated Design Capture Volume or Flow Rate for the Selected Measure
Stream setbacks and vegetated buffers <i>(Site Design Measure)</i>	Flow		
Soil quality improvement <i>(Site Design Measure)</i>	Volume		
Tree planting and preservation <i>(Site Design Measure)</i>	SMARTS Calculator		
Porous pavement <i>(Site Design Measure)</i>	Volume		
Green roofs <i>(Site Design Measure)</i>	Volume		
Vegetated swales <i>(Site Design Measure)</i>	Flow		
Rain harvesting and reuse <i>(Site Design Measure)</i>	Volume		
Bioretention and rain gardens <i>(Treatment Control Measure)</i>	Volume		
Infiltration trench, Flow-through Planter, or Tree Wells <i>(Treatment Control Measure)</i>	Volume and Flow		
Retention and detention basins <i>(Treatment Control Measure)</i>	Volume		

Variations and Exceptions:

*Identify any applicable variations or exceptions for **this DMA**.*

Condition	Allowed Variation	Applicable to this DMA? If so, explain.
Facilities located within 10 feet of structures or other potential geotechnical hazards established by the geotechnical expert for the project	May incorporate an impervious cutoff wall between the bioretention / infiltration facility and the structure or other geotechnical hazard	
Facilities with documented high concentrations of pollutants in underlying soil or groundwater, facilities located where infiltration could contribute to a geotechnical hazard, and facilities located on elevated plazas or other structures	May incorporate an impervious liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a “flow-through planter”)	
Facilities located in areas of high groundwater, highly infiltrative soils or where connection of underdrain to a surface drain or to a subsurface storm drain are infeasible	May omit the underdrain	
Facilities serving high-risk areas such as fueling stations, truck stops, auto repairs, and heavy industrial sites	Are required to provide additional treatment to address pollutants of concern prior to the flow reaching the infiltration facility	

*If infiltration is not feasible for **this DMA**, please provide an explanation of the infeasibility and a description of the alternate non-infiltrating treatment control measure(s) that will be used in accordance with the development requirements in Section 5.4.4.*

Regulated Project Submittal Requirements:

The following must be submitted for Regulated Projects to the plan checker:

- The completed Post-Construction Worksheet including page 1 and, for each DMA, pages 3 – 10.
- A separate site plan for each DMA must be submitted. If there are multiple DMAs, a key map showing the location of the DMAs in relationship to one another and the entire site is required to be submitted. Each DMA site plan is required to show the following information:
 - ✓ DMA name and boundary;
 - ✓ The selected Site Design and Treatment Control Measures (identified in [Table 3](#));
 - ✓ The total drainage area in square feet of the DMA;
 - ✓ The pre-development peak flow rate at the point(s) of discharge;
 - ✓ The predicted post-development peak flow rate at the point(s) of discharge;
 - ✓ Areas of existing impervious surfaces (pre-development);
 - ✓ Proposed areas of impervious surfaces (post-development);
 - ✓ Setbacks from creeks, wetlands, and riparian habitats;
 - ✓ Existing topography and drainage patterns (pre-development);
 - ✓ Proposed topography and drainage patterns (post-development);
 - ✓ Soil types, soil type boundaries within the DMA, and their Hydrologic Soil Group Classification rating (A, B, C, or D); and
 - ✓ Trees, vegetation, and sensitive environmental areas to be protected and preserved.

Each plan must be stamped by a qualified licensed professional. The plans must be stamped by a California Civil Professional Engineer if any of the following control measures were selected: rooftop and impervious area disconnection, porous pavement, rain cisterns, bioretention or rain gardens, infiltration trench, or retention or detention basins. The plans must be stamped by a California Structural Professional Engineer if a green roof was selected or if there is a significant structural aspect to the rain cisterns and collection system. The plans must be stamped by a California licensed Landscape Architect if any of the following Site Design Measures were selected: stream setbacks and buffers, soil quality improvement, vegetated swales, bioretention and rain gardens. The selected Site Design and Treatment Control Measure(s) must be clearly called out on the submitted plans.

- Design drawings for the proposed Treatment Control Measures showing a plan view, elevation view, and subsurface cross-sections must be submitted. Sufficient detail and specifications should be included in these drawings to provide for adequate plan check review and for the construction of the treatment “facility”. Each design drawing must be stamped by a qualified licensed professional. The drawings must be stamped by a California Civil Professional Engineer if any of the following control measures were selected: rooftop and impervious area disconnection, porous pavement, rain cisterns, bioretention or rain gardens, infiltration trench, or retention or detention basins. The drawings must be stamped by a California Structural Professional Engineer if a green roof was selected or if there is a significant structural aspect to the rain cisterns and collection system. The drawings must be stamped by a California licensed Landscape Architect if any of the following Site Design Measures were selected: stream setbacks and buffers, soil quality improvement, vegetated swales, bioretention and rain gardens.

- A print out of the results page from the MS Excel™ Volumetric BMP Sizing Tool for each DMA and control measure that requires the volumetric sizing criteria is required to be submitted. (Refer to [Appendix 6](#) for information on how to download the tool.)
- Calculations stamped by the appropriate licensed individual (as described above) for each DMA and control measure that requires flow-based sizing criteria must be included with the submittal.
- An Operation and Maintenance Plan and signed Statement of Responsibility for the proposed treatment control measures must accompany the submittal (refer to [Section 6](#) and [Appendix 9](#)).



TOWN OF PARADISE CONSTRUCTION AND DEMOLITION DEBRIS RECYCLING WASTE MANAGEMENT PLAN (WMP)

Project No: _____ Staff Initials: _____ Date: _____ Approved: Waived: Not Approved:

California Green Building Code requires a minimum of 65% diversion of job-site waste materials from the landfill.

Please answer the following:

1.

Property Owner Name/Ph.#	
Job-site Address:	
Name of Project Manager:	
Address:	
Phone Number:	
Cellular Phone Number:	
Fax Number:	

- Identify the type of materials to be recycled, salvaged or disposed from the job-site in **Section I** of the waste assessment table on the back of this page.
- Identify how materials will be handled, who will haul materials or what facility materials will be going to in **Section I** of the waste assessment table on the back of this page.
- Section II** is to be filled out with supporting documentation upon completion of project.
- Briefly state how materials will be sorted for recycling and/or salvage on the job site.

- Will this project require the use of sub-contractors? Yes No
If yes, briefly state how you plan to inform and ensure participation by the sub-contractors of your job-site recycling and waste management responsibility.

WASTE ASSESSMENT

- I. BEFORE START OF PROJECT: Identify the materials that you estimate will be recycled, salvaged or landfilled. Identify the handling procedure, hauler and/or destination of each material type.
- II. UPON COMPLETION OF PROJECT: Indicate the material **types and quantities** recycled, salvaged or disposed from this job-site. Official weight tags must be submitted with this completed report identifying 1) job site address, 2) weight of load(s), 3) material type(s) and 4) if materials were recycled, salvaged or disposed.

Material Type	Section I Identify materials (✓)			Handling procedure, hauler or final destination of materials	Section II Quantity of each material (by weight)			Paradise use only Acceptable weight tag (staff initials)
	Recycle	Salvage	Landfill		Recycled	Salvaged	Landfilled	
Asphalt & Concrete								
Brick, Tile								
Building materials-doors, windows, fixtures, cabinets								
Cardboard								
Dirt/Clean Fill								
Drywall								
Carpet padding/ Foam								
Plate/window Glass								
Scrap Metals (steel, aluminum, brass, copper, etc.)								
Unpainted Wood & Pallets								
Yard Trimmings (brush, trees, stumps, etc.)								
Other:								
Garbage								
TOTALS								
% RECYCLED								%

If no materials are targeted for recycling or salvage, please state why.

Contractor's Signature / Date

Property Owner's Signature/Date

Construction & Demolition (C & D) Recycling and Salvage Information

General Waste Services:

- Northern Recycling & Waste Services 530-876-3340**
- Recology Butte Colusa Counties
530-538-5868 / 530-342-2222
- Waste Management
530-893-3340

Material Recovery Facilities:

- Recology Butte Colusa Counties
2720 S. 5th Ave, Oroville
530-538-5868

Inert Recycling Facilities:

- Neal Road Recycling & Waste Facility
1023 Neal Rd, Paradise
530-345-4917
- Knife River Construction
Co. 1764 Skyway, Chico
530-891-6555
- Granite Construction Co.
4714 Pacific Heights Rd, Oroville
530-538-7616

Fixture & Building Materials:

- Re-Store (Habitat for Humanity)
220 Meyers Chico
530-895-1271

Scrap Metal:

- Aldred Scrap & Steel Mill Recyclers
786 Oro-Chico Hwy, Durham
530-342-4930
- Chico Scrap Metal
766 Oro-Chico Hwy,
Durham 530-345-6241
- Norcal Recyclers
1855 Kusel Rd,
Oroville 530-532-0262

Yard & Wood Wastes:

- Neal Road Recycling & Waste Facility
1023 Neal Rd, Paradise
530-345-4917
- Recology Butte Colusa Counties
2720 S. 5th Ave, Oroville
530-538-5868

Cardboard

- Work Training Center
2300 Fair St, Chico
530-343-8641
- Chico Scrap Metal
766 Oro-Chico Hwy,
Durham 530-345-6241
- Norcal Recyclers
1855 Kusel Rd,
Oroville 530-532-0262

Northern Recycling and Waste Services for the Town of Paradise:

920 American Way Paradise
530-876-3340

Provides trash, debris, and Construction Waste Services for the Town of Paradise residences

This partial list is for information purposes only and not an endorsement of any product or services.





TOWN OF PARADISE
ONSITE WASTEWATER MANAGEMENT ZONE APPLICATION
 PHONE: (530) 872-6291 ~ FAX (530) 872-6201



OWNER'S NAME _____

ASSESSORS PARCEL: _____

OWNER ADDRESS: _____

CITY, STATE, ZIP _____

APPLICANT'S NAME: _____

APPLICANT'S PHONE NO: _____

APPLICANT'S ADDRESS: _____

APPLICANT'S EMAIL: _____

CONSTRUCTION SITE ADDRESS: _____ DESIGN

ENGINEER: _____

APPLICATION TYPE:

- | | | |
|---|---|--|
| <input type="checkbox"/> New Construction | <input type="checkbox"/> Graywater | <input type="checkbox"/> Extension Request |
| <input type="checkbox"/> Repair/Construction | <input type="checkbox"/> Septic Tank | <input type="checkbox"/> Absorption Field |
| <input type="checkbox"/> Upgrade/Alteration | <input type="checkbox"/> Abandonment | <input type="checkbox"/> Land Use Review |
| <input type="checkbox"/> Minor Repair (tees, risers, lids, floats, building sewer and etc.) _____ | <input type="checkbox"/> Permit Renewal | <input type="checkbox"/> Building Clearance |
| | | <input type="checkbox"/> Land Division w/application |

System Proposal:

Tank Size: _____ gal Absorption Field: _____ ft. Rock Under Pipe: _____ in
 Circle one: Concrete or Fiberglass or plastic Pump Type _____ Pump Size _____

Comments: _____

TYPE OF STRUCTURE SERVED BY PROPOSED SYSTEM:

- | | |
|--|------------------------------------|
| <input type="checkbox"/> Single Family Residence; No of Bedrooms: _____ | Water Supply: |
| <input type="checkbox"/> Mobile Home Park; No of units served by System: _____ | <input type="checkbox"/> Community |
| <input type="checkbox"/> Commercial; Type of Occupancy: _____ | <input type="checkbox"/> Well |

PLOT PLAN REQUIREMENTS: Indicate all of the following:

- Plot plan must be drawn to a 1" = 20' Scale. Provide all dimensions to setbacks.
- Property lines, required setbacks, easements, all existing and proposed structures, and location of septic system (existing and proposed). Provide North Arrow.
- Location of large trees, rock outcrops, escarpments and cutbanks.
- Location of any well, spring, drainage way, creek or pond located within 200 feet of the proposed septic system on proposed or adjacent parcels.
- Slope orientation and degree of slope.
- All utilities, i.e. water mains and service lines, gas lines, electric service lines, etc.
- Proposed septic system and, if required, septic system repair area(s).
- Trench section detail, type and location of distribution boxes and section detail of such proposed distribution, i.e. equal serial, step down.
- Floor plan of proposed structure and all appurtenant structures (commercial, new construction and building clearance).

SIGNATURE OF APPLICANT

DATE



Town of Paradise

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LAND SURVEYOR'S CERTIFICATION GUIDELINES FOR BUILDING PERMIT

Surveys for property line locations are required to protect the property rights of the owner of a property where work is being done as well as the owners of adjacent properties by ensuring that setback requirements are being enforced.

Title 17 of the Paradise Municipal Code sets the minimum property line setbacks to structures, which are verified during the first building inspection, for each of the zoning districts within the Town of Paradise. The Professional Land Surveyors' Act (California Business & Professions Code §§ 8700- 8805) specifies that a professional land surveyor, or California civil engineer authorized to practice land surveying (registered prior to 1982), is the only person licensed and authorized to determine and physically locate your property lines.

The following are the minimum submittal requirements for the Land Surveyor's Certification for Building Permit:

1. A completed Land Surveyor's Certification for Building Permit form to be stamped and signed by a Licensed Land Surveyor or Civil Engineer authorized to practice land surveying in the State of California.
2. An Exhibit plat prepared on an 8 ½ x 11" sheet showing the following:
 - a. The current configuration of the property as described in the current vesting deed, including all bearing and distances along the property lines.
 - b. Date.
 - c. North arrow.
 - d. Scale.
 - e. Assessor's Parcel Number.
 - f. Right(s) of Way and width of right(s) of way for all public and private roadways adjacent to property.
 - g. Location and description of found and set property corners.
 - h. Surveyor's signature and official stamp.



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LAND SURVEYOR'S CERTIFICATION FOR BUILDING PERMIT

Permit Number: _____

Site Address: _____

Site APN: _____

Record Map Reference (if any): Book Page _____

Lot/Parcel Number as shown on said Map: _____

Surveyor's Statement

I hereby state that a field survey was performed by me on the real property described above, or under my direction, in conformance with the requirements of the Professional Land Surveyors' Act, Business and Professions Code §§ 8700 – 8805.

I also hereby state:

- That the monuments, as shown on the above referenced Record Map, have been found, verified as to their location and exposed for inspection as of the date of this statement, and are shown on the attached Exhibit.

And/or

- That missing property corner monuments have been set, or reset, as shown on the attached Exhibit and the appropriate Corner Record or Record of Survey will be filed with the County of Butte.

- That the monuments as described on the above referenced deed have been found, verified as to their location and exposed for inspection as of the date of this statement; are shown on the attached Exhibit; and a Record of Survey will be filed with the County of Butte.

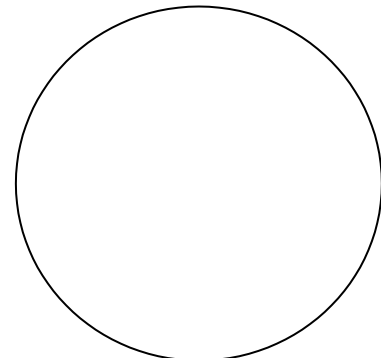
This certification and the attached exhibit are for the sole purpose of the property corner identification of this parcel only and are not intended for public distribution or any use other than building permit clearance for the real property described above.

By: _____

Date: _____

(print name and license number)

Company Name: _____



Attachment

(seal)



Town of Paradise

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Town of Paradise & MWELO Landscape Application Checklist

(Plans may be deferred and submitted prior to 4 way or framing inspection)

- Completed **Landscape Application and Fee (\$318.20)**
- Applicant Signature/ **Owner's Signature** or letter of authorization
- Water Budget/ Water Use Calculations:** example calculators can be found at:
<https://data.cnra.ca.gov/dataset/water-budget-calculators>
- Tree Removal Plan** - Designate trees to be removed, size, location on the lot, and species of trees.
- Landscape Design Plan** (2 hard copies or 1 electronic copy)
 - Plans to be designed by the property owner, or a registered landscape architect.
 - Detail common and botanical name, size, number, and location of **existing and proposed** plant types, and include:
 - Property lines, setbacks, and street names
 - Existing and proposed structures, fences & retaining walls.
 - North arrow
- Irrigation Plan & Schedule** – Detailing irrigation system location, equipment, and watering schedule. (controllers, hoses, backflow, rain/snow sensors etc.)
- Landscape Lighting Plan** – Show size, type, and location if proposed.
- Hydrozones Plan** – Detailed zones of high, medium, and low water use plants
- Soil Management Report**, preparation details (fertilizers, tilling etc.) and any other applicable planting and installation details.
- Grading Plan** (if applicable) – required if 50+ cubic yards of soil disturbed.

THE APPLICATION SHALL BE CONSIDERED INCOMPLETE UNTIL ALL OF THE ABOVE REQUIRED INFORMATION IS SUBMITTED TO THE COMMUNITY DEVELOPMENT DEPARTMENT.



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Introduction:

The purpose of a landscape plan is to provide for the placement and installation of water-efficient, fire-resistant landscaping for specified development projects within the town and to maintain the rural, wooded atmosphere of the community. Landscape plans apply to all development projects proposed to be established within the town requiring formal review and approval by the planning commission or the planning director and new or expanded commercial, professional, multifamily, public, quasi-public, industrial and mobile home park developments which may not require formal review and approval by the planning commission or the planning director.

Design Criteria:

Landscaping:

1. Plants having similar water use shall be grouped together in distinct hydrozones.
2. A top dressing of at least two inches in vertical depth shall be applied to and maintained in all planting areas except turf and areas immediately surrounding plant species that are intolerant to mulch. Areas to which a top dressing will be applied should be properly edged and scarified to retain top dressing.
3. For drought tolerant or native plantings only, temporary irrigation systems may be utilized and removed once plantings have become well-established (eighteen to twenty-four months after planting).
4. Turf areas shall be limited to thirty-five percent of the total landscaped area. This provision shall not apply to athletic fields and other recreational playing fields, community gardens, cemeteries and other land uses deemed to be similar by the planning director. The planning director may authorize a not-to-exceed turf area of one thousand square feet per unit as landscape materials within multiple residential land use developments.
5. All planting islands within parking areas shall be planted with drought-tolerant plant species.
6. Native plant species shall be protected and preserved to the maximum extent feasible.
7. Landscaped areas shall be designed and maintained in a manner that prevents the accumulation of dry grass, dead trees, cut limbs or branches that when dry constitute a fire hazard.
8. No vegetation or combustible materials shall exist within or overhang within five feet of any building or structure.



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Irrigation:

1. All irrigation systems, with the exception of temporary irrigation systems, shall be controlled automatically with cycling capacity and shall be designed to avoid irrigation of unplanted surfaces.
2. All planting areas where drought-tolerant plants are used or where any one dimension is five feet or less shall utilize drip/trickle/bubble or micro sprinklers.
3. Irrigation systems serving landscaped areas exceeding four hundred square feet in size (total size of all irrigated areas as shown on the landscape plan submitted for approval) shall utilize a rain-sensing device to avoid overwatering during periods of wet weather.
4. Recirculating water shall be used for decorative water features.
5. All irrigation systems shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways or structures.
6. Whenever possible, landscape irrigation shall be scheduled to avoid irrigating during times of high wind or temperature (contact the local water purveyor for suggested or mandated watering periods).

Estimated Processing Time:

A landscape plan shall be formally reviewed by Town staff within ten days of receipt of the required processing fee and a landscape plan application deemed complete for processing by the town. Town staff, using the standards identified in this chapter, shall make a final determination regarding the landscape plan not later than twenty days from the date the landscape plan is deemed complete for processing.



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WATER EFFICIENT LANDSCAPE APPLICATION

TO BE COMPLETED BY OWNER OR APPLICANT

PROPERTY OWNER		APPLICANT/PRIMARY CONTACT	
Name		Name	
Address		Address	
City, State/Zip		City, State/Zip	
Phone		Phone	
Email		Email	
Owner's signature _____		Applicant's signature _____	
APN No:		Total turf area:	square feet
		Total landscaped area:	square feet
Site Address:		Total water feature area:	square feet
		Water supply type:	
		Pressure at meter:	

Project description (attach supplemental statement if necessary):

↓ FOR OFFICE USE ONLY ↓ ↓ FOR OFFICE USE ONLY ↓ ↓ FOR OFFICE USE ONLY ↓

X-Ref. Files:	TYPE OF FEE	FEE	Zoning District:
	Processing Fee	\$318.20	General Plan:
	TOTAL	\$	Received by:
	Receipt	#	Date Filed:
			Permit No.:

Certification Statement:

I/We certify that the landscape plans for the above-listed project comply with the Landscape Design Standards and requirements for the State Model Water Efficient Landscape Ordinance.

PRINT NAME – PROPERTY OWNER

SIGNATURE & DATE

***PRINT NAME
LANDSCAPE ARCHITECT****

***SIGNATURE & DATE
LANDSCAPE ARCHITECT****

***PRINT NAME
QUALIFIED IRRIGATION DESIGNER*****

***SIGNATURE & DATE
QUALIFIED IRRIGATION DESIGNER*****

*The landscape design plan, at a minimum, shall bear the signature of a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agriculture Code.).

**The irrigation design plan, at a minimum, shall contain the signature of a licensed landscape architect, certified irrigation designer, licensed landscape contractor, or any other person authorized to design an irrigation system. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agriculture Code.



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Appendix B –Water Efficient Landscape Worksheet.

WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package.

Reference Evapotranspiration (ETo) _____

Hydrozone # /Planting Description ^a	Plant Factor (PF)	Irrigation Method ^b	Irrigation Efficiency (IE) ^c	ETAF (PF/IE)	Landscape Area (sq. ft.)	ETAF x Area	Estimated Total Water Use (ETWU) ^e
Regular Landscape Areas							
Totals					(A)	(B)	
Special Landscape Areas							
				1			
				1			
				1			
Totals					(C)	(D)	
ETWU Total							
Maximum Allowed Water Allowance (MAWA) ^e							

^aHydrozone #/Planting Description
 E.g
 1.) front lawn
 2.) low water use plantings
 3.) medium water use planting

^bIrrigation Method Efficiency
 overhead spray
 or drip

^cIrrigation
 0.75 for spray head
 0.81 for drip

^dETWU (Annual Gallons Required) =
 Eto x 0.62 x ETAF x Area
 where 0.62 is a conversion factor that converts acre- inches per acre per year to gallons per square foot per ye

MAWA (Annual Gallons Allowed) = (Eto) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]
 where 0.62 is a conversion factor that converts acre- inches per acre per year to gallons per square foot per year, LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is .55 for residential areas and 0.45 for non- residential areas.

ETAF Calculations

Regular Landscape Areas

Total ETAF x Area	(B)
Total Area	(A)
Average ETAF	B ÷ A

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential

All Landscape Areas

Total ETAF x Area	(B+D)
Total Area	(A+C)
Sitewide ETAF	(B+D) ÷ (A+C)