



**PLANNING COMMISSION STAFF REPORT**

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MEETING DATE: March 4, 2008  
TO: Town of Truckee Planning Commission  
FROM: Duane Hall, Town Planner  
Jessica Thompson, Assistant Engineer  
RE: 2008 Development Code Update – Storm Water Runoff and Quality

Approved by: \_\_\_\_\_  
John McLaughlin, Community Development Director

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**RECOMMENDATION:** That the Commission provide comments to staff on possible amendments to the Development Code regarding storm water runoff and quality.

**DISCUSSION:** The Town Council and Planning Commission identified storm water runoff and quality as a major topic for early discussion as part of the Development Code Update process. This was done with the realization that the Lahontan Regional Water Quality Control Board designated the Town as an operator of small Municipal Separate Storm Sewer System and the Town would be required to adopt and implement a storm water management plan in accordance with the Clean Water Act and EPA and RWQCB regulations. Town staff anticipates that the Development Code will be an important tool in implementing the storm water management plan, and the Council and Commission wanted to discuss possible amendments to the Development Code to implement actions contained in the Truckee Storm Water Management Plan.

This discussion paper is divided into two parts: general topics as discussed in Attachment A, and specific amendments to the Development Code as discussed in Attachment B. Each part includes recommendations from staff on how we should proceed with those items. Staff requests that the Commission comment on these topics and amendments, specifically responding to staff’s recommendations, and also provide comments on any other matter relating to grading, drainage, and erosion control. Staff will draw on your comments and responses to draft amendments to the Development Code and other portions of the Town Municipal Code and return these draft amendments to the Commission for further review and discussion.

**PUBLIC COMMUNICATIONS:** Notice of this Planning Commission agenda item was sent *via e-mail* to all persons included in the Development Code Update e-mail notification list and to those organizations and persons previously notified on the Storm Water Management Plan.

**ATTACHMENTS:**

1. General Topics
2. Grading, Drainage, and Erosion Control Standards – Recommended Amendments
3. Town of Truckee Storm Water Management Plan

## Attachment 1

### Storm Water Runoff and Quality General Topics

#### 1. **Comprehensive Grading / Storm Water Ordinance**

Unlike many other jurisdictions in California, the Town of Truckee does not have a comprehensive grading ordinance incorporating grading, drainage, and erosion control regulations in one document. Grading, drainage, and erosion control in Truckee are addressed in the California Building Code, the Development Code, and the Public Improvement and Engineering Standards. By dividing grading, drainage, and erosion control regulations amongst several Town ordinances and policies, there are occasions for regulations to overlap and sometimes conflict and for regulations to be incomplete. Divided regulations create difficulties for applicants to comply with regulations and incorporate these regulations into their construction plans. Also, it is more difficult, time consuming, and costly for staff to verify compliance since there are three different Town divisions responsible for plan check review and inspections.

**Staff Recommendation:** Staff will further evaluate the benefits and detriments of our current regulatory system and a comprehensive grading, drainage, and erosion control ordinance to determine the best approach in implementing the Storm Water Management Plan. Regardless of which approach is used, the Planning Commission will continue to be involved in the review of grading, drainage, and erosion control regulations as they pertain to future development.

Because these new regulations involve a citizen's advisory committee and may result in amendments to other parts of the Town Municipal Code or Town policies, Development Code amendments for storm water runoff and quality may be processed on a separate but parallel track to the Development Code Update.

#### 2. **Low Impact Development Guidelines**

Low Impact Development (LID) is an innovative stormwater management approach to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source. There was substantial discussion during the General Plan Update process to incorporate LID techniques in development project design. Conservation and Open Space Policy 11.6 states:

“Utilize Low Impact Development ... as guidelines for water quality and erosion control measures required by the Town.”

Also, the Storm Water Management Plan discusses the need for special guidelines for projects located in sensitive environmental areas including projects in proximity to Donner Lake, Truckee River, and other major streams and single family residences on steep slopes.

**Staff Recommendation:** Based on direction from the General Plan and the Storm Water Management Plan, staff will propose grading, drainage, and erosion control guidelines as part of the Development Code or a comprehensive grading ordinance. These will work similar to existing sections of the Development Code where there are both regulations and guidelines: parking regulations and guidelines, sign regulations and guidelines, and landscaping regulations and guidelines. Guidelines will be prepared to address special situations such as large developments with greater than 100,000 sf of floor space, large parking lots, development on steep slopes, and automobile service stations and repair shops.

## Attachment 2

### Development Code Grading, Drainage, and Erosion Control Standards

#### Recommended Amendments

#### **18.30.050 - Drainage and Storm Water Runoff**

All applications for Zoning Clearance, Development Permit, Minor Use Permit, or Use Permit, except single-family dwellings, secondary residential units, and duplexes, shall include drainage and erosion control plans and be designed and constructed to provide facilities for the proper conveyance, treatment, and disposal of storm water in compliance with this Section.

**A. Drainage and erosion control plan requirements.** Drainage and erosion control plans shall be submitted to the Department for review for compliance with the requirements of this Section. The plan may be incorporated within the project site plan.

1. A preliminary drainage and erosion control plan shall be submitted as part of an application for a land use permit, for new development, and the significant expansion or redevelopment of an existing use as determined by the Director.
2. Following approval of the land use permit, a final drainage and erosion control plan shall be submitted as part of the application for a Building Permit. Final plans shall be approved by the Director before the start of on-site construction or soil disturbance and before the issuance of a Building Permit. Projects requiring Commission approval due to their size or use shall require plans prepared by a licensed engineer.
3. Preliminary and final plans shall contain all information specified in the instructions for preparing drainage and erosion control plans provided by the Department.
4. After initial application review in compliance with Section 18.70.060 (Initial Application Review), the Director shall review each preliminary and final plan to verify its compliance with the provisions of this Section. The Director may approve the submittal in compliance with this Chapter, or may deny or require changes to a submittal that is not in compliance.

**B. Runoff treatment.** Surface runoff treatment measures consistent with the Regional Water Quality Control Board's Truckee River Hydrologic Unit Project Guidelines for Erosion Control and the "State of California Stormwater Best Management Practices Handbooks", prepared by the California Stormwater Quality Association (CASOA) ~~American Public~~

***Establish separate plan requirements and grading, drainage, and erosion control regulations for single family dwellings on existing lots consistent with "Town of Truckee Minimum Standards for Year-Round Erosion Prevention on One and Two Family Dwelling Construction Projects".***

***Require all erosion control plans, including single family residence plans, to be prepared by a qualified person.***

~~Works Association Storm Water Task Force~~, shall be incorporated into the project. The following measures shall also be incorporated into the project:

**1. Stormwater runoff:**

- a. Runoff from impervious surfaces shall be collected, treated, and contained on-site utilizing infiltration disposal facilities (e.g., infiltration basins and trenches) designed, installed, and maintained for, at a minimum, a twenty-year, one-hour storm event based on the Public Improvements and Engineering Standards. The Director may require a design to accommodate a larger storm event when topographic and/or drainage conditions of the surrounding area or watershed warrant more stringent drainage improvements;
- b. Runoff shall be directed into any on-site retention/treatment basin using a slot drain, culvert, depressed swale, rock-lined trench, and/or other approved drainage facilities. Surface and subsurface water shall not drain over sidewalks or adjoining parcels;
- c. Runoff from structures not directed into a retention/treatment basin shall utilize graveled dripline infiltration trenches under all eaves and decks designed, installed, and maintained for up to and including a twenty-year, one-hour event. Infiltration trenches shall include a minimum gravel depth of eight inches and a minimum width of two feet, unless a trench of different dimensions is approved by the Director based upon an engineered drainage analysis; and
- d. Runoff from snow storage areas shall be collected, treated, and contained on-site in accordance with the requirements of Subsection B.

***Add guidelines encouraging consistency with LID (Low Impact Development) practices and retaining and treating water closer to source.***

**2. On-site drainage facilities:**

- a. Facilities shall be designed to direct stormwater runoff which exceeds the required capacity of the facility into a public storm drainage system contained within the nearest public right-of-way; and
- b. Facilities shall not be used for snow storage. Snow shall not be placed within any required on-site drainage facility which conflicts with the intended function of the facility.

***Modify standard to allow snow storage in facilities if the facility is designed for such use.***

**3. Wetlands:**

- a. Runoff into wetland areas shall not be increased above or decreased below pre-project levels unless the review authority finds that the increase or decrease of runoff will not adversely affect the health, function, and values of the wetland; and

***Add standard to require flow path into wetlands to remain consistent (i.e., sheet flow as opposed to concentrated flow).***

- b. Runoff into wetland areas shall be treated in accordance with Subsection B prior to release into the wetland.

**C. Erosion control.** Erosion control measures consistent with the Regional Water Quality Control Board’s Truckee River Hydrologic Unit Project Guidelines for Erosion Control and the "State of California Stormwater Best Management Practices Handbooks", prepared by the California Stormwater Quality Association (CASQA) ~~American Public Works Association Storm Water Task Force~~, shall be incorporated into the project. The following measures shall also be incorporated into the project:

- 1. Temporary measures.** Temporary erosion control measures as required by the Director shall be installed and continuously maintained for the duration of construction and shall include:
  - a. All non-construction areas shall be clearly marked and protected during construction by fencing or other identification approved by the Director;
  - b. The protection of loose piles of clay, debris, sand, silt, soil, or other earthen material during periods of precipitation or runoff with tarps or similar material covers, nonwoven filter fabric fence, hay bales, temporary gravel, and/or earthen or sand bag dikes; and
  - c. All soil disturbance activities shall cease if adverse weather conditions exist, unless operating under an exception granted by the Director. Adequate temporary erosion control measures shall be immediately installed during adverse weather conditions.
- 2. Permanent measures.** Permanent erosion control measures as required by the Director shall be installed and continuously maintained for the life of the project and shall include:
  - a. All surplus or waste earthen materials shall be removed from the site and deposited in an approved location within 10 days from completion of construction;
  - b. Earthen materials shall not be placed in surface water drainage courses, permanent or temporary, or in a location to allow the discharge of earthen materials to any surface water drainage course; and
  - c. All disturbed areas shall be permanently stabilized or vegetated. Vegetated areas shall be continuously maintained to ensure adequate growth and root development. Vegetation shall consist of seeding, planting, mulching, and initial fertilizing and watering as needed.
- 3. Timing of operations.** Ground disturbance including vegetation removal that disturbs the soil shall be prohibited between October 15

***Add measure requiring temporary erosion control measures to remain in place until all disturbed areas are permanently stabilized and/or vegetated.***

of any year and May 1 of the following year. Exceptions may be granted by the Director based upon the following:

- a. Predicted dry weather conditions;
- b. The construction activity is associated with existing disturbed conditions only and is not intended to allow for the commencement of new construction activity or new disturbance;
- c. Specific dates and scope of work involved in the construction activity; and
- d. The site shall be winterized and specific Best Management Practices implemented to control erosion and protect water quality within 48 hours of the Director's order to cease ground disturbance.

**4. Stabilization.** Before October 15 in any year, permanent or temporary stabilization of all disturbed or eroding areas shall be installed consistent with the requirements of this Section.

**D. Limitation on runoff.** The net rate release of runoff from a site onto adjoining parcels and rights-of-way after construction shall not be greater than pre-construction levels of the runoff release from the site based on a 20-year, one-hour storm event. The Town Engineer may require a design to accommodate a larger storm event when topographic and/or drainage conditions of the surrounding area or watershed warrant more stringent drainage improvements.

**E. Maintenance.** All required drainage and erosion control improvements shall be maintained for the life of the approved project, including routine maintenance, repair, and replacement of the improvements. The property owner shall retain all maintenance records verifying compliance with this section. Maintenance shall include:

- 1. Unclogging of basins, pipes, swales, and trenches by debris, ice, and sediment;
- 2. Repair of damaged basins, pipes, swales, and trenches;
- 3. Replacement of unhealthy, damaged, or non-productive vegetation; and
- 4. Restabilization of erosion on slopes.

**F. Minor Use Permit required.** Projects satisfying any of the following conditions will require the approval of a Minor Use Permit in compliance with Chapter 18.76:

- 1. Projects within the 100-year floodplain of waters under the jurisdiction of the State Regional Water Quality Control Board or projects required by the Regional Water Quality Control Board to obtain a waste discharge permit due to the potential for the discharge

***Modify standard to indicate that erosion control measures are required year-round and erosion control / stabilization measures to be inspected for winterization and function prior to October 15 in any year.***

***Add standards establishing special enforcement provisions for maintenance of improvements including signed agreement similar to encroachment permit.***

or threatened discharge of solid or liquid materials to surface waters, potential wetlands areas, or other sensitive lands. Docks, piers, ramps, and similar structures within the 100-year floodplain of Donner Lake shall not require the approval of a Minor Use Permit if constructed in compliance with Section 18.38.050(D);

2. Projects located on sites containing contaminated soils as identified by the Nevada County Health Department or the State Regional Water Quality Control Board; and
3. Projects resulting in the disturbance of land or located within 200 feet of any wetland area unless the Director finds that the topographic conditions of the surrounding area will clearly preclude any disturbance of wetland areas and will ensure that any runoff from the project will not result in any water quality impacts to a wetland area. A wetlands delineation report shall be required for all projects requiring a minor use permit under this condition. The disturbance ~~disturbance~~ of wetland areas shall comply with Section 18.46.040 (Wetlands).

**18.30.080 - Grading and Vegetation Removal**

**A. Preservation of the natural vegetation.** To prevent premature grading of the existing terrain and to ensure preservation of the natural vegetation within the Town, grading and/or removal of natural vegetation shall not occur before the issuance of a land use permit (e.g., Zoning Clearance, Use Permit, etc.) authorizing development on the subject parcel, except for the following:

1. Grading and/or the removal of vegetation for a single-family residence on an existing subdivision lot;
2. Timber removal done in accordance with a timber harvesting plan approved by the California Department of Forestry and Fire Safety;
3. Removal of vegetation done within an open space area by a subdivision homeowner’s association or similar organization or a public agency in order to maintain the health of the forest and/or enhance fire safety; and
4. Removal of vegetation to comply with the fuel clearance regulations of the Truckee Fire Protection District.

**B. Building and Grading Permits.** A Grading Permit shall not be issued until the associated Building Permits are issued, unless grading is secured with an appropriate performance guarantee in compliance with Section 18.84.040 (Performance Guarantees).

**C. Commission requirements.** As part of the approval of a Development Permit or Use Permit involving grading, the Commission shall make one of the following findings:

***Add language stating that grading for a single family residence may require a grading permit for disturbance over 20 cubic yards or 500 sf of surface area.***

***Add language stating that timber and/or vegetation removal which disturbs soil may require a grading permit.***

***Add language stating that grading for a single family residence on an existing subdivision lot is exempt from this requirement subject to compliance with “Town of Truckee Minimum Standards for Year-Round Erosion Prevention on One and Two Family Dwelling Construction Projects”.***

1. Performance guarantees in compliance with Section 18.84.040 (Performance Guarantees) shall be required prior to issuance of any grading or building permits for the project to guarantee restoration of the site if the project is not completed;
2. There is sufficient evidence demonstrating there is adequate financing for the project to guarantee that the project will be completed; or
3. Performance guarantees are not necessary, given the particular circumstances of the application.

### **18.30.130 - Snow Storage**

All development and proposed land uses that are planned with off-street parking and circulation areas, except single-family dwellings, secondary residential units, and duplexes, shall be designed and constructed to provide snow storage areas in compliance with the minimum standards of this Section.

**A. Application content requirements.** All land use permit applications subject to this Section shall include identification of required snow storage areas on the required site plan.

**B. Minimum storage area required.** Each unenclosed parking area, including circulation drives and aisles, shall provide a snow storage area(s) as follows.

1. In areas with a snow load less than 200 pounds per square foot, the required snow storage area shall equal at least 50 percent of the total parking and driveway area.
2. In areas with a snow load of 200 pounds per square foot or greater, the required snow storage area shall equal to at least 75 percent of the total parking and driveway area.
3. The review authority may reduce or waive the required snow storage area(s) if the review authority finds one of the following:
  - (a) The size and configuration of snow storage area(s) allow ramping or other removal and storage methods which reduce the amount of area necessary to store snow in comparison to normal snow removal and storage operations;
  - (b) A long-term snow hauling plan is adopted as part of the land use permit and the snow hauling plan demonstrates the property owner and/or snow removal contractor has sufficient rights to an off-site storage area(s) to store excess snow from the property with an acceptable method to transport the snow from the property to the off-site storage area(s); or

***Add language requiring temporary snow storage areas in conjunction with snow hauling plans.***

- (c) An acceptable methods to remove and store snow from the property has been adopted as part of the land use permit and such method(s) clearly demonstrate that the amount of snow storage area(s) required by this section is not necessary.

**C. Location.** Snow storage areas:

1. Shall be located near the sides or rear of parking areas, away from the primary street frontage;
2. Shall be located to maximize solar exposure to the greatest extent feasible. Areas shaded by structures or vegetation shall be avoided;
3. Shall be located so that snow moving equipment is not required to enter the public streets to move snow to the storage area;
4. Shall be located in areas that are substantially free and clear of obstructions (e.g. propane tanks, trees, large boulders, trash enclosures, utility pedestals);
5. May be located within parking areas but such areas may not be counted towards meeting parking requirements for the use; and
6. May be located within required landscaping areas but the areas shall be planted with landscaping tolerant of snow storage or be native vegetation.

**D. Minimum dimensions.** The minimum dimension of a snow storage area shall be 10 feet in any direction.

**E. Drainage.** Snow storage areas shall be designed to provide adequate drainage to prevent ponding and the formation of ice, especially within pedestrian areas and driveways. Drainage from snow storage areas shall be directed towards on-site drainage retention/treatment facilities.

***Modify standard to allow snow storage in retention / treatment facilities if the facility is designed for such use.***