ORDINANCE NO. 193

AN ORDINANCE ADDING CHAPTER 141 "EROSION CONTROL" TO TITLE XIV OF THE DUNES CITY CODE AND REPEALING SECTION 154.05 OF THE DUNES CITY CODE

WHEREAS, the City Council of Dunes City is considering the adoption of various regulations to promote water quality in Dunes City; and

WHEREAS, it is most appropriate to place new regulations promoting water quality in Title XIV of the Code of Dunes City, a title intended for this purpose; and

WHEREAS, the City Council of Dunes City is concerned about the degradation to the lakes of Dunes City from the erosion of sediment from land disturbance; and

WHEREAS, proposed Chapter 141 is intended to replace Section 154.05 of the Dunes City Code.

NOW THEREFORE, Dunes City ordains as follows:

Section 1. Section 154.05 of the Dunes City Code is hereby repealed, effective on the day this Ordinance becomes effective.

Section 2. Chapter 141, entitled "Erosion and Sediment Control," is added to Title XIV of the Code of Dunes City and shall read as follows:

§141.001 PURPOSE

The purpose of this Chapter is to establish standards and practices to restrict sediments resulting from land disturbance from intruding into any public water bodies or onto any right-of-ways or crossing ownership property lines. The objective is to control erosion at its source in order to maintain and improve water quality and reduce downstream impacts.

§141.002 APPLICABILITY

In all cases of land disturbance including, the landowner or City, whichever is the responsible party is responsible for preventing erosion and sediment transport and is subject to requirements and penalties listed in this Chapter. This ordinance pertains to planned land disturbance or to accidental transport of sediments across property lines.

Requirements of this section shall apply to activity on both privately and city held properties.

§141.003 DEFINITIONS

Best Management Practices (BMPs):
A technique or series of techniques, which is the best known practice available to be effective in protecting water quality and lake / stream habitat.

Development: Any manmade change that results in land disturbance. Development does not include the following: Stream enhancement or restoration projects approved by the city; b)

Farming practices as defined in ORS 30.930 and farm use as defined in ORS 215.203, except that buildings associated with farm practices and farm uses are subject to the requirements of this Chapter, and c) Construction on lots in subdivisions meeting the criteria of ORS 92.040(2)

Emergency: "A situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard

Erosion: The process by which wind or water can impact the land surface and remove sediment. The rate of erosion depends on a variety of factors such as type of soil, climate, presence or absence of vegetative cover, the topography and surrounding land management practices. Erosion occurs naturally as a result of weather or runoff but can be intensified by clearing, grading or excavation of the land surface. Erosion usually refers to processes of surface erosion and not to mass soil movement (landsliding).

Excavation: The mechanical removal of earth material

Grading: The act of excavating and moving soil. Grading also refers to the mechanical smoothing of a road bed to maintain a free-draining smooth traveling surface.

Land disturbance: Any activity that results in a change in the existing soil cover (both vegetative and non–vegetative and both temporary or permanent) and / or the existing soil topography. Land disturbing activities include, but are not limited to, demolition, construction, paving, clearing, and grubbing.

Mitigate: To avoid or minimize real or potential negative environmental impacts or effects through the application of additional controls or actions.

Off-site: Any area lying upstream of the site that drains onto the site and any area lying downstream of the site to which the site drains.

On-site: The entire property that includes the proposed development.

Private roadway or street: Any street, road or right-of-way that is not a public street, as defined in this standard.

Public roadway or street: A street or road dedicated or deeded for public use. For the purpose of these standards, public street may include "alley", "lane", "court", "avenue", "boulevard", "cul-de-sac", and similar designations, and any county roads or state highways.

Qualified Professional: For purposes of this ordinance this means an Oregon registered professional engineer, an Oregon registered landscape architect, or a professional in erosion and sediment control certified by the Soil and Water Conservation Society.

Responsible party: The property owner and/or the person who creates the land disturbance or, if such person works for a contractor, either as an employee, subcontractor, or independent contractor, the contractor and/or other employer; and any licensee, permittee, or agent, manager, or person in charge.

Riparian area: The area adjacent to a river, lake or stream, consisting of the area of transition from an aquatic ecosystem to a terrestrial ecosystem.

Sediment: Organic or inorganic material that is carried or suspended in water that settles out to form deposits in the storm drain system or receiving waters or increases turbidity.

Sediment Transport: The horizontal conveyance of sediment suspended in moving water. Suspension and deposition result from the combined effects of sediment grain size, turbulence and channel configuration.

Shoreland Area (Zone): For purposes of construction near the shorelines of Woahink Lake, Little Woahink Lake, Siltcoos Lake, and Siltcoos River, the shoreland area is the section of land within fifty (50) feet measured horizontally inland from the ordinary high water (OHW) line of Woahink and Siltcoos Lakes and Siltcoos River and bounded by tax lot sidelines.

Significant amount of sediment: One cubic foot or more of sediment.

Slope: The vertical inclination of a line joining two points expressed as a percentage (%), equal to unit rise divided by unit horizontal distance between the points multiplied by 100.

Stormwater: The surface water runoff that results from all natural forms of precipitation.

Wetland: An area inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and which, under normal circumstances, does support a prevalence of vegetation typically adapted for life in saturated soil conditions.

§141.004 REQUIREMENT FOR AN EROSION CONTROL PLAN & STANDARDS.

(A) Landowner Responsibility. In all cases of land disturbance as defined in 141.004, the landowner is responsible for submitting a plan for Erosion & Sediment Control (hereafter referred to as the ESC Plan) to the City for approval. The specific erosion control measures and BMP practices to be used shall be selected from the Oregon Department of Environmental Quality (DEQ) Erosion and Sediment Control Manual[1] (April, 2005). These practices shall be the primary guide for establishing and reviewing erosion control plan and its application.

(B) Standards. All ESC plans shall address the following standards:

(1) Specific measures are given to prevent erosion and sediment transport.
(2) The plan is designed to limit land disturbance of natural topography and soils.
(3) The site design plan will seek to preserve native vegetation, healthy trees and ground cover.
(4) Activities will be scheduled to avoid land disturbance during periods of heavy rain.
(5) Measures are specified to stabilize disturbed soils if land disturbance activities cease for any extended period.
(6) Measures are specified for delineation and protection of wetlands, riparian or shore land zones on the parcel.
(7) Control measures are included for site access points to prevent tracking of sediments off site by any equipment.

§141.005 SEDIMENT AND EROSION CONTROL PLANS

(A) ESC Plan Not Required. For all land disturbances less than 3,000 square feet no Erosion and Sediment Control Plan is required unless land disturbance occurs within 100 feet of a lakeshore. For all land disturbances greater than 3,000 square feet or in any situations when sediment transport has occurred across property lines, an ESC Plan is required.

Vegetable gardens, and orchards are excluded from the ESC plan provisions of this ordinance unless there is greater than 3000 sq ft of land disturbance and greater than 15% slopes or if any portion of the land disturbance occurs within 100 horizontal feet of the high water level of any lakes of Dunes City..

(B) Levels of Erosion Control Plans. There are three levels of Erosion Control Plans:

(1) Simple ESC Plan. A Simple ESC Plan does not require any professional engineering but an outline is submitted covering the items listed in Section 141.004(B) and with a general plan with drawings of the site. A Simple ESC Plan shall be used for planned land disturbance of greater than 3000 square feet (sf) but less than 10,000 sf and with slopes of less than 15% or for planned land disturbance of greater that 1000 square feet if any portion of the land disturbance occurs within 100 horizontal feet of the high water level of any lakes of Dunes City.

Note: A higher level plan may be required within the 100' setback depending on size and slope of the disturbed area. See 2(a) and 3(b).

(2) Standard ESC Plan. A Standard ESC Plan does not require professional engineering but does require scale drawings of the full site and detailed plans for erosion control. A Standard ESC Plan is required for:

(a) Any land disturbance greater than 3000 sf and less than 10,000 sf and where the slopes are greater than 15% and less than 30% or if any portion of the land disturbance occurs within 100 horizontal feet of the high water level of any lakes of Dunes City. Here the applicant is to obtain a review of the plans by a qualified professional prior to submission.

(b) A planned land disturbance of greater than 10,000 sf but less than 43,560 sf and with slopes less than 15%. No review by a qualified professional is required prior to submission.

(3) Engineered ESC Plan. An Engineered ESC Plan shall be prepared and stamped by an Oregon Registered Professional Engineer, an Oregon Registered Landscape Architect, or a Certified Professional in Erosion and Sediment Control (Soil and Water Conservation Society) and must be accompanied by a full set of drawings. In all cases where slopes are referred to, the slopes are any areas on the property where land disturbance is planned. An Engineered ESC Plan is required for:

(a) A planned land disturbance of greater than 3000 sf and with slopes greater than 30%.

(b) A planned land disturbance of greater than 10,000 sf and with slopes greater than 15% or if any portion of the land disturbance occurs within 100 horizontal feet of the high water level of any lakes of Dunes City.

(c) All planned land disturbance of greater than 43,560 sf.

(C) Expedited ESC Plan. An Expedited ESC Plan may be required when previous methods of sediment and erosion control have not been effective and sediment transport occurs moving material across property lines. See Section 141.008(C) regarding Correction of Ineffective Measures and Expedited Plans.

§141.006 INSPECTOR REQUIRED

Roads and driveways that require an ESC plan will be inspected by the City Engineer. Site plans will be inspected by the building official, or another City contracted engineering agency.

§141.007 ESC PLAN SUBMISSION REQUIREMENTS

A standard and engineered erosion plan should address all items in Section 141.004(B) as well as the following specific items:

(A) Description of project
(B) Scaled drawing of lot, showing planned area of ground disturbance, riparian areas and waterway.
(C) Scheduling of activities to minimize land disturbance during wet weather.
(D) Covering or otherwise protecting bare soil during wet weather.
(E) Perimeter erosion control methods indicated as needed.
(F) Site entrance and exit sediment control.
(G) Designation of the on-site representative.
(H) Sign & submit the Summary ESC form available from City.

§141.008 PLAN IMPLEMENTATION REQUIREMENTS

(A) Plan Approval. Plan approval is required by inspectors defined in 141.006 prior to land disturbance.

(B) Implementation. The owner and/or responsible party shall implement the measures and construct facilities contained in the approved ESC in a timely manner and consistent with the following:

(1) Erosion control measures shall be installed prior to or concurrent with any land disturbance or road–work. Upon completion of the installation or a phase of the installation the on-site representative shall call for City inspection to certify that erosion control measures are installed in accordance with the Erosion Control Plan

(2) In all cases, the owner and/or responsible party shall be responsible for maintenance of erosion control measures to ensure that they are functioning properly without interruption.

(3) The removal of significant amounts of sediment that are carried off the site are the responsibility of the owner and/or responsible party. Sediment shall be removed daily from road surfaces. The owner and/or responsible party shall also be responsible for cleaning and repairing streets, catch basins, and adjacent properties where sediments transport affects such properties. In no case shall sediments be washed into storm drains, ditches, drainage ways, streams, wetlands or lakes.

(C) Correction of Ineffective Measures and Expedited Plans.

(1) If the implementation of the approved plan, based on an inspection of the site by the Inspector, does not fulfill the requirements of the approved Erosion Control Plan the Inspector shall require immediate compliance, with remedial action to be completed within 72 hours.

(2) In the event that visible amounts of sediment have been inadvertently deposited on adjacent property, on roadways, in a wetland, stream, or lake, the owner or his designee shall take remedial actions within 72 hours to correct the breech and is to notify the City within the same time period.

(3) If the City finds that significant amounts of sediment have been deposited on adjacent property, on roadways, in a wetland, stream, or lake, the property owner has 48 hours to correct the problem in consultation with the City or be in violation.

(4) In the event that the above remedies are ineffective a modified and expedited Erosion Control Plan shall be provided within five working days after written notification by the City. This plan shall be done in consultation with the Erosion Control Inspector. This expedited plan shall address measures for the immediate erosion concern as well as prevention of future episodes. The owner and/or responsible party shall implement the expedited plan within five (5) working days of approval.

(D) Emergency Measures.

If the owner or Inspector judge that the health or safety of residents or the community is under immediate threat by circumstances that have developed on the site, corrective action including excavation or grading can commence without prior notice to the city. In this case notice shall be provided to the city at the earliest possible opportunity

(E) Additional Standards. The following additional standards shall apply:

(1) Pollutants such as fuels, lubricants, raw sewage, and other harmful materials shall not be discharged onto the ground, shall be protected from the weather, and shall be properly stored and disposed of. Where the construction process results in or reveals soils contaminated with hazardous materials or machine fluids, the owner and/or responsible party shall remove all spill-contaminated soil from the site to an approved location. Spill kits are required on–site when construction machinery is present.

(F) Duration of Maintenance.

Temporary erosion control facilities constructed to control erosion shall be removed once the site is permanently stabilized. The ESC plan measures are to be maintained during all periods of construction whether currently active or delayed. When the construction activity is completed or ceases, temporary facilities constructed to control erosion shall be removed once the site is permanently stabilized. Subsequent to the above circumstance, the individual property owner is then responsible for the continued observance and maintenance of the ESC on their property as applicable and described in this Chapter.

In the case of a PUD, responsibility for on–going observance and maintenance of the ESC plan measures will lie with the homeowners association or responsible party that are owners of property in the PUD. Copies of the ESC plan shall be kept in the Dunes City Offices and made available for review.

§141.009 ENFORCEMENT

(A) Violation is a Civil Infraction. Failure to carry out the conditions and standards of erosion and sediment control set forth in this Chapter shall be unlawful and a civil infraction subject to the enforcement provisions of Chapter 36 of the Dunes City Code.

(B) Additional Penalties. In addition to fines imposed under Chapter 36 of the Dunes City Code the Inspector or Planning Official may enforce the following additional mitigating measures:

(1) Issue a stop work order or suspend any development or building permit on the subject property, or deny occupancy of the subject property until erosion control measures have been installed properly and maintained in accordance with this ordinance.

(2) In the event costs are incurred by Dunes City to mitigate problems of erosion or sediment transport caused by the inadequacy of an Erosion Control Plan or it's application, all costs and penalties must be paid in full by the owner before work is resumed, permits reinstated, or occupancy permitted. In the event the costs incurred by Dunes City are not reimbursed to the city within seven days of notice of violation, development or building permits can be revoked by the City and a lien may be issued on the property.

(C) The owner of the property from which the erosion and/or sediment transport occurs, together with any person or parties, who cause such erosion, shall be responsible for mitigating the impacts of the erosion and for preventing future erosion. A property owner shall not be held responsible for the products of erosion or sediment transport that originate on other properties.

Section 3. If any section, subsection, sentence, clause, phrase, or portion of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, that portion shall be deemed a separate, distinct, and independent provision and that holding shall not affect the validity of the remaining portions of this Ordinance.

While not a part of this ordinance, the findings attached as Exhibit "A" and incorporated herein by this reference are adopted in support of this decision.

ADOPTED BY THE DUNES CITY COUNCIL THIS 19TH DAY OF AUGUST, 2007.

Ayes: 4 Nays: 1 Abstain: _____ Absent: _____

Sheldon Meyer, Mayor

Joanne Hickey, City Recorder

Erosion and Sediment Control Plan Guide

	>1000-3000 Sq. Ft.	3000-10,000 Sq. Ft.	10,000 Sq. Ft. - 1 Acre	> 1 Acre
<15% Grade	No Plan Required	Simple Plan	Standard Plan	Engineered Plan
15 - 30% Grade	No Plan Required	Standard Plan	Engineered Plan	Engineered Plan
>30% Grade	No Plan Required	Engineered Plan	Engineered Plan	Engineered Plan
Within 100' of the Lake	Simple Plan Required	Standard Plan	Engineered Plan	Engineered Plan

Exhibit A

Findings Of Fact

Background

1. Dunes City encompasses lands bordering three lakes as well as several streams. Little Woahink Lake, a small lake, drains into Woahink Lake, which drains into Siltcoos Lake. They are reported in Lane County's Coastal Water Supply Study as being important sources of water, including ground water recharge, for the entire area south of the Siuslaw River.[1]

2. The surface and groundwaters of Dunes City are at risk for contamination as designated by Oregon Department of Environmental Quality. Source water assessment studies have specified that lands within 1,000 feet from streams and lakes as sensitive areas needing protection because of high soil erosion potentials, high runoff potentials, and high permeability soils.[2]

3. In the Source Water Assessment for Dunes City, Siltcoos Lake is listed at high risk for turbidity because of "siltation and algae blooms that are both currently causing problems with water filtration."[3]

4. Changes to Siltcoos and Woahink Lakes have been noted in various studies, including a 1999 study by the U.S. Forest Service, Siuslaw National Forest which states: "If nutrient levels continue to increase relatively unchecked by State or County officials, problems such as those in Tenmile Lake south of this watershed will begin to take place. In Tenmile Lake, toxic algal blooms (Microcystis) have made water unsafe for drinking or recreation during certain times of year with uncertainty of its long-term effects on public safety and the viability of local tourism."[4] Also, Tenmile Lake is the subject of Oregon Health Division health hazard advisories.[5]

5. Input of excess nutrients is almost always associated with human activity. Nutrients are in Dunes City soils and are released or added through human activity, including soil disturbance associated with new developments. Nutrients enter surface waters and ground waters and ultimately flow to wetlands or lakes. They enter these critical areas either in solution in water or attached to sediments. Sediments moving downward to wetlands or lakes can smother life-forms that beneficially uptake these nutrients and can transport the nutrients directly into lake waters.

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[1] *Lane County Coastal Domestic Water Supply Study*, August 1979, Pages 28, 34, 41–42, & 55

[2] *Dunes City Drinking Water Source Assessment and Potential Planning Strategies,* December 2002, Page 3; *Source Water Assessment Report, Summary Brochure, Alderwood development Company, PWS #4100304,* September 11, 2001, Pages 1 & 2; *Summary Brochure, South Coast Water District, PWS 4100302,* August 2001, Pages 1 & 2

[3] Lane Council of Governments (December 2002), "Source Water Assessment for Dunes City," pg 25.

[4] Siuslaw National Forest, Coastal Lakes Watershed Analysis," January 1999, pp. 48–9.

[5] Oregon DEQ Fact Sheet: Tenmile Lakes Septic Systems. http://www.deq.state.or.us/wq/wqfact/tenmilelakes.pdf

Water Quality Concerns – Woahink Lake

6. A 2001 Portland State University Study notes: "Erosion in the watershed contributes sediment to the arms of the lakes. Continued high sediment loading to Woahink Lake will eventually lead to changes in the lake trophic state and degradation of water quality."[6] The study further notes that there are "Critical Problems to Address" and that in Woahink Lake, this includes "nutrient loading to the lake to prevent further increases in productivity and the potential for hypolimnetic dissolved oxygen depletion that could lead to irreversible degradation of the lake."[7]

7. Little Woahink Lake drains through an important inventoried significant wetland directly into Woahink Lake. It has been documented that the construction of a road located adjacent to Little Woahink Lake in the fall of 2005 and early 2006 produced pronounced erosion, pools of muddy water at culvert locations, and sedimentation flows down the roadside, into the lake and adjoining wetland. The sedimentation from this construction, was so severe that residents downstream in Woahink Lake had water filters literally clogged with sediment as a result. Any worsening of Woahink Lake waters will impact Siltcoos Lake waters since Siltcoos receives all the flows from Woahink Lake.

Water Quality Concerns –Siltcoos Lake

8. The waters of Siltcoos Lake are impaired and at risk. Siltcoos fails certain water quality standards and has been listed as an impaired water body under Section 303(d) of the Clean Water Act. It is listed under Record ID 2773 in DEQ's Water Quality Limited Database and DEQ's TMDL Documents as impaired for "aquatic weeds or algae."[8]

9. The 303(d) listing of Siltcoos Lake will involve various state agencies and other jurisdictions in establishing a water-quality implementation plan to reduce nonpoint nutrient pollution. These plans will consider the cumulative impact from all nutrient sources including pollution sources from the City.[9] Further, Siltcoos Lake was found to have the highest concentrations of chlorophyll-a, total nitrogen, total phosphorus, and the lowest clarity among the 5 coastal lakes studied in 1996 by Dr. Richard Petersen, Portland State University.[10]

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[6] Mark Sytsma and Carrie Haag, "Oregon Lake Watch Final Report 2000," Portland State University (2001), pg 10.
[7] *Ibid.*, at pg 22.
[8] *Coastal Lakes Watershed Analysis*, Siuslaw National Forest Service (January 1999), Pages 51 & 57.
[9] See DEQ TMDL Fact Sheet 2003.
[10] Richard Petersen, "Trophic Conditions in 5 Oregon Lakes," Portland State University – Oregon Department of Environmental Quality,1997.

10. The Council notes that state-wide Goal #6, requires that, "All waste and process discharges from future development when combined with discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards."[11]

Soil Erosion and Sediment Control

11. "When left uncontrolled, large amounts of soil and other small particles collectively called sediment can move off of construction sites along with other attached pollutants. By volume, sediment is the greatest pollutant entering our surface waters, and causes multiple problems. Sediment buries plant and animal habitat critical to healthy streams, lakes, and wetlands. . . Sediment that remains suspended in the water column reduces water clarity, inhibits aquatic plant growth, lowers the esthetic and recreational values of water resources, and makes it difficult for some fish to find food. Suspended sediment increases the solar heating of water, scours aquatic life in streams, and clogs the gills of fish and aquatic insects. Warm water holds less oxygen than cooler water (oxygen is vital to aquatic animals) and increased water temperatures are stressful to coldwater fish such as trout. Particulate-bound nutrients, such as phosphorus delivered to surface waters by eroded soils, often causes algal blooms and alterations in the food chains, which further reduces the quality of these water resources."[12]

12. "Natural vegetation is remarkably effective at filtering contaminants before they reach water bodies or seep into the ground water. It can also slow the speed of runoff to prevent erosion. Vegetative measures capitalize on these abilities to promote filtering or infiltration of wastewater. They are often used to mitigate the damage caused by runoff. Examples include constructed wetlands, vegetated buffer strips along shorelines, or grassed swales or depressions that collect runoff, encourage infiltration, or reduce erosion.

Some of these practices may be imposed by local ordinances or health regulations. Regulations can be an effective way to control certain activities in source water protection areas. Construction and operating standards may be imposed to reduce threats to water supplies from some activities. Without appropriate erosion and sedimentation control (ESC) measures, construction activities can contribute large amounts of sediment to storm water runoff.

Ordinances can require plan reviews of construction activities to ensure that erosion is minimized, or require ESC measures during construction. Inspections and repairs will maintain the working order of ESC measures."[13]

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[11] OAR 660-015-0000(6).

[12] *U.S. Geological Survey Fact Sheet FS-109-00,* August 2006

[13] *Source Water Protection, Best Management Practices and Other Measures for Protecting Drinking Water Supplies, U.S. Environmental Protection Agency,* August 2002

Conclusions

1. Dunes City's primary ordinance 154.05 lacks prohibitions against soil erosion as well as meaningful and clear standards or mechanisms to prevent, limit or control surface erosion. There are no provisions for effective site review or erosion plans. The ordinance does not prevent erosion, it merely declares erosion "detrimental" in certain instances. In all instances where erosion remains on the lands of the project owner it is not even "detrimental."
2. Residential development in Dunes City under existing regulations and absent a more specific erosion control ordinance will harm water quality, cause substantial harm to Dunes City, and represent a great risk of uncertainty to property owners in the future.
