

# Indian Hills General Improvement District REVEGETATION AND STABILIZATION ORDINANCE

## INTRODUCTION

The purpose of this ordinance is to regulate development of disturbed lands to be transferred to the Indian Hills General Improvement District (the District) in a manner that such lands are stable, revegetated with adapted perennial plant species, and sustainable before title is transferred to the District. Disturbed lands under consideration for conveyance to the District as open space must be determined to be satisfactorily revegetated, stabilized, and sustainable by a Certified Professional in Erosion and Sediment Control.

## DEFINITIONS

***Adapted Perennial Species:*** Native or introduced plant species, excluding noxious species, that normally live three or more years, and are physiologically capable of sustaining growth and reproduction under locally specific soil and climatic conditions without artificial compensation.

***Certified Professional in Erosion and Sediment Control (CPESC):*** An engineer or plant specialist who holds an active certification as a Certified Professional in Erosion and Sediment Control by the Soil and Water Conservation Society.

***Contractor:*** A Contractor, licensed in the State of Nevada for the particular trade or type of work being performed, in the employ of and constructing public improvements for a developer.

***Developer:*** A subdivider or other private party who undertakes the development of private land.

***Design Engineer:*** The Licensed Engineer retained by the Developer to prepare the plans and specifications and to provide general supervision of the construction of the required improvements during the construction period.

***District Engineer:*** The Licensed Professional Engineer or Engineering firm employed by the Indian Hills General Improvement District to provide the District with engineering services.

***Dominated:*** A collective term for those species that contribute a minimum of 65 percent of the cumulative species composition based upon measurement of basal crown cover of herbaceous plants, and canopy crown cover of shrubs.

***Gully:*** Intermittent water channel that is larger than six inches in depth or width, and is too large as to be eliminated or obliterated by normal tillage methods.

***Handbook of Best Management Practices:*** The 1994 edition of the Handbook of Best Management Practices as adopted by the Nevada State Environmental Commission on

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November 9, 1994, or as it may be subsequently revised by the State Environmental Commission.

**Noxious Species:** A plant that is undesirable because it conflicts, restricts, or otherwise causes problems for site stabilization, or has been declared noxious by laws.

**Rill:** Small but conspicuous soil channel, or rivulet, that is formed by running water and is less than six inches in depth or width. Rills are small enough to be eliminated or obliterated by normal tillage methods.

**Sustainable:** The condition or ability of a previously disturbed site to maintain established perennial vegetation and soil stability under natural conditions, and unaided by supplemental or artificial irrigation.

**Revegetation Confirmation Period:** A period of time, during which a revegetated area is not irrigated and is monitored for sustainability, to consist of a minimum of one full growing period, commencing on March 1 and ending no sooner than October 1 of a single year.

## GENERAL SUMMARY

This ordinance applies only to those properties located [any property] within the boundaries of the Indian Hills General Improvement District (District), which properties are disturbed as a result of private development activities and which properties are proposed to be subsequently conveyed to the District for ownership, maintenance, and/or control, must be determined to be adequately revegetated, stable, and sustainable before such conveyance will be approved. The District must be advised at the time of submittal of project improvement plans that it is the Developer's intent to convey such property to the District, must provide to the District acceptable plans and specifications for grading, stabilization and revegetation of property proposed to be conveyed prior to commencement of work, and must provide certification to the District upon completion of work as to the stable condition of such property.

At such time as revegetation and stabilization improvements are completed in conformance with the accepted project plans and specifications, the Developer shall provide timely notification to the District of the Developer's request for conveyance. Such notification shall include certification by a licensed engineer qualified to do so, that all cut and fill slope improvements have been constructed in conformance with the approved project plans and in accordance with the applicable requirements of the current Douglas County adopted Building Code and the Douglas County Standard Specifications for Public Works Construction.

Upon the District's receipt of such notification of the request for acceptance, a revegetation confirmation period shall commence on revegetated areas and stabilized slopes. During that period no artificial irrigation is to occur. At the end of that period, the Developer shall provide a report by a CPESC of the status of stabilization, revegetation,

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and sustainability of the areas to be conveyed. Unacceptable conditions at any area not certified to be stable and sustainable at that time must be corrected by the Developer. The District, at its option, may at that time either refuse to accept conveyance of the area, or accept conveyance upon receipt of a reclamation bond for the cost of stabilizing the uncertified area.

## **PLANS AND SPECIFICATIONS**

Plans and specifications for proposed revegetation and slope stabilization improvements shall be prepared in conformance with the requirements of the Handbook of Best Management Practices.

Complete plans, drawn on 24 inch by 36 inch sheets of mylar shall be prepared for any proposed areas where slope creation or modification and/or removal of vegetation will occur. Plans shall be drawn to a scale suitable to adequately provide the necessary details, dimensions, and specifications. Those details included within the Douglas County Standard Details for Public Works Construction may be incorporated into the plans by reference. For review purposes two sets of blueprints of the drawings shall be submitted to the District's Engineer. Following acceptance of the plans by the District's engineer, and upon completion of the project, the original drawings or a set of reproducible copies of the originals, certified as being "as-built", shall be provided to the District. Revegetation and stabilization plans shall be required for all areas proposed to be conveyed where vegetation will be disturbed or removed during construction.

## **CERTIFICATION BY ENGINEER**

All project grading work, when completed, shall be certified by the Design Engineer as to its construction in accordance with accepted plans and specifications, and in accordance with Douglas County's most currently adopted Building Code and the Douglas County Standards for Public Works Construction. Said certification shall be affixed to "as-built" plans which shall be submitted to the District upon completion of all work, prior to acceptance of said work by the District, and prior to commencement of the revegetation confirmation period.

## **PERMITS**

It shall be necessary for the contractor performing any work within the District to obtain the necessary permits from all affected agencies, including, but not necessarily limited to: Douglas County; Nevada Bureau of Health Protection Services, Nevada Division of Environmental Protection, and the Nevada State Engineer's Office.

## **FEES**

The developer shall pay all costs incurred by the District in reviewing plans and providing inspection of the improvements. The District may, from time to time, adopt fees on a "per

lot" or other basis to compensate for providing these services. The developer will pay all costs associated with obtaining the services of a CPESC.

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## NOTICES

Prior to the beginning of the revegetation confirmation period, the developer shall provide written notice to the District requesting that the site be considered for conveyance to the District. The developer shall give the Indian Hills General Improvement District a minimum of 48 hours notice prior to inspection by the developer's CPESC.

## PROCEDURE FOR SITE ASSESSMENT, CERTIFICATION AND CONVEYANCE

**Step One:** Prior to project approval and construction, development plans including revegetation, erosion control, and stabilization plans shall be submitted to the District Engineer for review and recommendations. The District Engineer may forward the plans to a CPESC for review and comment. At the time of project completion, the Developer will submit "as-built" plans to the District, as previously described under "Certification by Engineer".

**Step Two:** The Developer will initiate the process of conveyance of revegetated and stabilized property by providing written notice to the District that the developer desires to transfer a specifically described area to the District. The Developer will at that time have all means of artificial irrigation removed from the site, and must have all mechanical means of slope stabilization and sediment control in place. The Developer will also submit an initial report, developed and signed by a CPESC, that certifies slope stabilization and revegetation measures were installed in accordance with approved construction plans and/or approved "as built". The District shall at its option:

- a) Agree to accept conveyance of such area(s) once certified to be stable, revegetated and sustainable. Such acceptance may include any additional conditions deemed necessary or appropriate by the District.
- b) Decline to accept conveyance of the subject areas(s).

The District shall provide to the Developer written notice of its decision on the offer of conveyance. If the District agrees to proceed to accept the subject area once certified to be stable, the Developer shall proceed to Step Three.

**Step Three:** The site will be acceptable for conveyance only after the site can be documented to have been without irrigation for a continuous revegetation confirmation period. At completion of that period, the site must be determined by a CPESC to be stable and sustainable.

A standard inspection form, provided as a part of this ordinance, shall be used by the CPESC to document the following conditions exist upon completion of the revegetation confirmation period:

- a) There is no evidence of unacceptable levels of wind or water erosion.

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- b) There is no evidence of plant root exposure by erosion (pedestalling).
- c) There is no evidence or indication that increased rilling has occurred during the revegetation confirmation period.
- d) There are no active, unprotected gullies present.
- e) The plant community is dominated by at least 3 adapted perennial species.

In addition, the CPESC shall prepare a brief site report which describes the site, erosion control and stabilization measures used, and the plant community present. Additionally there shall be confirmation of the sustainability of the site for long term (10-year) stability and a description of factors that could make the site susceptible to erosion or slope failure.

If a site, or any portion(s) of the site, do not meet these criteria, the CPESC shall make recommendations for remedies to observed problems. After the remedies are implemented by the Developer, the CPESC shall provide written confirmation that the repairs were properly made, that the site has the potential to be stable, and shall provide to the District a certified estimate of the cost of such remedies, (said estimate to include the cost of subsequent CPESC certification). The Developer shall then provide to the District a reclamation bond, in a form acceptable to the District, in an amount equal to 120% of the certified estimate of repairs prepared by the CPESC. The District shall be required to accept ownership only upon receipt of the CPESC confirmation, and receipt of the required reclamation bond, and prior agreement of the District to accept the open space.

**Step Four:** Upon the completion of Step Three, the District will accept conveyance of the site from the Developer.

**Step Five:** In the event of remedial improvements under Step Three, at the conclusion of a full revegetation confirmation period following the completion of remedies, a CPESC selected by the District shall prepare an inspection report on those areas previously requiring repair. The cost of such inspection report shall be the responsibility of the Developer. If the repaired areas are determined by the CPESC to be stable and sustainable, the District will return to the Developer the reclamation bond, after payment by the Developer of all CPESC services. If the areas to be repaired, or any portion thereof, are found not to be acceptable, the CPESC shall make recommendations for remedies for any observed problems. The District shall then proceed to have such repair completed, with the cost of such repairs to be deducted from the reclamation bond. Upon completion of those repairs, and certification by a CPESC that such repairs have been properly made, the District shall return to the Developer any portion of the reclamation bond not used for final repairs and for CPESC services.

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**STANDARD INSPECTION FORM**

Site: \_\_\_\_\_ Date Inspected: \_\_\_\_\_

Certified Professional Erosion and Sediment Control Specialist: \_\_\_\_\_

Certification Number: \_\_\_\_\_ (Print)

Developer: \_\_\_\_\_

**Answer the following questions:**

**YES**

**NO**

Has the site been irrigated within the last continuous period between March 1 and October 31  
Comments:



Does the site have evidence of recent unacceptable levels of wind or water erosion?  
Comments:



Are plant roots exposed? Is there plant pedestalling?  
Comments:



Is there evidence that there has been increased rilling within the site?  
Comments:



Are there any active, unprotected gullies on the site?  
Comments:



Is the site dominated by less than three adapted perennial species?  
Comments:



*Note: An entry of "Yes" under any one of the above questions represents a failure to comply with IHGID requirements for a stable, revegetated and sustainable site.*

Based on the above described inspection results, I hereby certify that the site which is the subject of this inspection is vegetatively stable, that there is no evidence of artificial irrigation or mechanical stabilizing activities during the preceding revegetation confirmation period, and that it can be considered to be naturally sustainable for a 10-year period from the date of my inspection.

Name \_\_\_\_\_  
(Signature)

Number \_\_\_\_\_

Stamp \_\_\_\_\_