



CARSON AREA METROPOLITAN PLANNING ORGANIZATION

## CLEAR CREEK STORMWATER MANAGEMENT PLAN

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## **Introduction**

The Clear Creek Stormwater Management Plan (CCSWMP) was developed to meet the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (NVS04000). This Plan is specifically for the portion of Douglas County, which is identified as being part of the Carson Area Metropolitan Planning Organization (CAMPO) and discharges to Clear Creek. The CCSWMP has been written to meet the Maximum Extent Practicable principal for preventing stormwater pollution into Clear Creek. This plan is considered a work in progress, as there are several parts of the plan that will be updated over time in accordance with the schedule in the Notice of Intent (NOI) (Attachment A).

## **Public Education and Outreach on Stormwater Impacts**

Douglas County proposes to develop a web site to distribute educational materials to the public. The County will evaluate existing northern Nevada governmental entities to utilize existing programs and information that already exist.

Educational materials are available from a variety of sources regarding stormwater pollution impacts and Best Management Practices (BMP's) to prevent stormwater pollution. Existing educational materials will be evaluated and information appropriate to Douglas County will be posted on the web site. Best Management Practices at a minimum will include silt fence and vegetative buffer strips at all down slope boundaries. Temporary and permanent erosion controls will be discussed in the educational materials. The materials will discuss the BMP's available to the public and the business community to reduce pollution in stormwater.

The County will inform individual households and commercial or retail businesses about stormwater pollution prevention through the web site. This public outreach will include information as to how individuals, households and businesses can reduce stormwater pollution and how to become involved in stormwater pollution prevention.

The target audience for the CAMPO area covered by the CCSWMP is generally commercial and retail businesses in the North Valley area. The web site is expected to reach the target audience. The target pollutant sources in the public outreach program are erosion from construction activities, parking lots and illegal dumping into storm drains. The target pollutants for the CCSWMP are the constituents, which are typical of discharges from parking lots. Those constituents are total suspended solids, total petroleum hydrocarbons (TPH) and turbidity.

The Douglas County Community Development Department is ultimately responsible for the stormwater public education program. Success in the public outreach control measure will be measured by implementation of the web site.

## **Public Involvement/Participation**

At a minimum, State and local public notice requirements will be complied with when implementing a public meeting. Any reports to the County Board of Commissioners will be placed on the respective agenda, which is public noticed.

The County plans to involve the public in the process by presenting the Clear Creek Stormwater Management Plan at a County Commissioners public meeting. The public may provide comments and input on the plan at that time. The target audience for the County Commissioners is the entire County population both individuals and businesses.

The Douglas County Community Development Department is responsible for implementing the public involvement and participation program. Success will be measured by the presentation of the CCSWMP to the public at a Commissioners meeting. The schedule for this presentation is the September 2003 Board of Commissioners meeting.

## **Illicit Discharge Detection and Elimination**

The County will develop a map of stormwater systems in the Douglas County portion of the CAMPO watershed area that discharges to Clear Creek. The map will show the location of the outfalls and the name and location of the receiving water that receives discharges from the stormwater systems. This map will be used in the County's program to detect and eliminate illicit discharges.

Title 8 Section 14.030 Unlawful dumping of garbage, rubbish and waste matter, of the Douglas County Code in summary makes it unlawful to discharge any deleterious or offensive matter into any water or stream. Chapter 1.08 General Penalty of the Douglas County code makes it unlawful to violate any provision of the Code. These regulations prohibit non-stormwater discharges into Clear Creek and provide an enforcement system to fine or otherwise punish offenders (Attachment B).

The County will develop a Policy to detect illegal discharges that will be adopted by the Board of County Commissioners. County staff will be advised about the Policy and impacts of non-stormwater discharges. Certain staff will be trained to detect and address these discharges in accordance with the new policy. The web site will contain information about the hazards associated with illegal discharges and improper disposal of waste to educate the general public.

The decision process for developing the illicit discharge detection policy will involve the Commissioners and the public in that the adoption of the policy will be placed on the agenda and heard in a public meeting. The policy will include requirements to locate priority areas, tracing illicit discharges, removing the source and program evaluation and assessment.

The map of storm sewers in the CAMPO will be developed using as-builts of all the projects currently in the Clear Creek watershed in Douglas County. The storm system map will be updated with as-builts of all new projects in the CAMPO, annually.

Once the Policy is adopted, the plan to detect illicit discharges is to inspect the existing outfall under County management. The outfall is from a sand/oil/water separator, which will be inspected during a non-storm event, annually during the annual sediment removal activity.

The second existing outfall is the NDOT culvert on US 395. A discharge from a privately maintained stormwater system discharges to the NDOT culvert, which in turn discharges to a dirt channel which eventually reaches Clear Creek. The privately owned and maintained detention pond and storm drainage facilities including flow restrictors and oil pollution control devices will be covered the proposed policy will include language requiring the owner to maintain the storm drain system and report any illicit discharges to the County. If an illicit discharge is encountered, the ordinance will address the requirement to sample the discharge.

Information on the proposed policy will be posted on the web site after adoption. Portions of Title 1 and 8 listed above may also be posted on the web site. In this way, the public will be informed of the stormwater program. The Douglas County Community Development Department is ultimately responsible for the overall management and implementation of the stormwater illicit discharge detection and elimination program. Success will be determined when the policy is adopted and information posted on the web site.

## **Construction Site Storm Water Runoff Control**

Douglas County Design Criteria and Improvement Standards Manual, Division 7, Erosion Control Design Criteria requires all construction requiring a Site Improvement Permit (SIP) to include erosion control as appropriate (portions included as Attachment C). The Design Manual requires construction sites to utilize erosion control techniques in the Nevada "Best Management Practice Manual". County engineering staff reviews all SIP's. This review includes the erosion control measures. SIP's are public information and can be reviewed at the County offices in Minden. A modification will be evaluated for Building Permit and SIP applications requiring that the applicant certify that they have submitted an NOI the State of Nevada to be included on the General Permit for Stormwater Associated with Construction Activity, or Small Construction Activity (NVR100000) if the project will disturb one acre or greater.

The County currently has an SIP tracking system and will utilize it to track erosion control measures. County staff inspects all construction projects to ensure that erosion control measures are installed per the approved SIP. If the County inspector determines that the erosion control BMP's have not been installed per the SIP a Red Tag-Stop Work order can be issued to the contractor. Work is not allowed to resume until the issues are resolved. A Notice of Completion is issued at the end of the project. All improvements are required to be maintained by the private property owner or for public improvements by the County or other public agency. The County has a similar process for Building Permits including a tracking system, inspections and a Certificate of Occupancy at the end of the project.

The Douglas County Community Development Department is responsible for the overall management and implementation of the construction site stormwater control program. The County Commissioners adopted the Design Manual in 1998.

## **Post-Construction Stormwater Management in New Development and Redevelopment**

New development and redevelopment projects are required to go through a County Development Review process. The Development Review process includes mitigation measures for stormwater runoff from development pursuant to the Design Manual Division 6 (Attachment D). Conditions of approval for projects include landscaping, stormwater mitigation measures, and erosion control measures and long-term maintenance of stormwater, drainage and erosion control improvements throughout the life of the project. Title 20.100.060 Drainage Facilities (Attachment E) requires that any development include drainage facilities “capable of conveying...stormwater runoff ...without resulting in erosion, sedimentation or flooding of the receiving water. A Building permit (BP) or Site Improvement permit (SIP) is required prior to starting construction. During permit application review erosion control measures are reviewed and the use of the State of Nevada “Best Management Practices” is reviewed. The SIP inspectors or BP inspectors ensure that the BMP’s are in place.

The Douglas County Master Plan was adopted in 1996 by the County Commissioners and the Planning Commission and includes a Conservation Element-Flooding and Drainage (portions included as Attachment F). One of the goals in this element is “To protect surface water quality in the County from the effects of growth and urbanization.” Within this goal are the requirements for development to reduce urban run-off pollutants, comply with NDPEs, maintain oil/water separators and silt traps, and provide yearly cleaning to publicly maintained underground drainage systems.

Upon completion of a project, the conditions of approval require that landscaping and other storm drainage facilities be maintained by the property owner.

## **Pollution Prevention/Good Housekeeping for Municipal Operations**

The operation and maintenance program in place for the CAMPO portion of the Clear Creek Area of Douglas County is to pump the sand/oil/water separator on Vista Grande annually. This good housekeeping/pollution prevention program was determined to be adequate based on manufacturers recommendations. The contractor who pumps the sludge from the sand/oil/water separator is required to dispose of the material in an approved disposal site. Detention ponds on private property are required to be maintained by the property owner or their heirs.

The Clear Creek area is a new area for development and the projects have been developed in accordance with the Design Manual, therefore, all of the stormwater runoff has some type of BMP prior to discharge into Clear Creek. The majority of the pavement area is treated in detention ponds. Portions of the pavement runoff go directly to the sand/oil/water separator

on Vista Grande. The side slopes in that area are covered with an erosion control mat and are required to be maintained by the property owner. Information on stormwater system maintenance and pollution prevention may be posted on the web site.

The measurable goal for this element of the plan is to continue to follow the existing erosion control measures and permitting program existing in the Douglas County Design Manual, Master Plan and Title 20. The Douglas County Community Development Department is ultimately responsible for this element. The Clear Creek Stormwater Management Plan will be updated annually with work products completed in accordance with the schedule in the NOI.

The measurable goal for this element is to perform required maintenance activities on County facilities annually. The Douglas County Community Development Department is responsible for this element.

## **Monitoring**

There is no approved TMDL for the Carson River so the monitoring program will be structured around constituents that are expected from parking lot runoff including total suspended solids, turbidity and Total Petroleum Hydrocarbons. The samples will be taken annually from the discharge of the sand/oil/water separator during a storm event. The samples will be representative of the discharge, analyzed by procedures set forth in 40 CFR Part 136 and submitted with the annual report on a Discharge Monitoring Report.

# **Attachment A**

## **Notice of Intent**

# **Attachment B**

## **Douglas County Code Title 1 and 8**

# **Attachment C**

## **Excerpts from Division 7**

### **Douglas Criteria and Improvement Standards**

# **Attachment D**

## **Division 6 Storm Drainage**

### **Douglas County Design Criteria and Improvement Standards**

# **Attachment E**

## **Title 20.100.060 Drainage Facilities**

# **Attachment F**

## **Portions of the Douglas County Master Plan Conservation Element**

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## **TABLE OF CONTENTS**

<b>Introduction.....</b>	<b>1</b>
<b>Public Education and Outreach on Stormwater Impacts....</b>	<b>1</b>
<b>Public Involvement / Participation.....</b>	<b>2</b>
<b>Illicit Discharge Detection and Elimination.....</b>	<b>2</b>
<b>Construction Site Storm Water Runoff Control.....</b>	<b>3</b>
<b>Post-Construction Stormwater Management in New Development and Redevelopment.....</b>	<b>4</b>
<b>Pollution Prevention / Good Housekeeping for Municipal Operations.....</b>	<b>4</b>
<b>Monitoring.....</b>	<b>5</b>
<b>Attachment A – Notice of Intent</b>	
<b>Attachment B – Douglas County Code Title 1 and 8</b>	
<b>Attachment C – Excerpts from Division 7, Douglas County Design Criteria and Improvement Standards</b>	
<b>Attachment D – Division 6 Storm Drainage, Douglas County Design Criteria and Improvement Standards</b>	
<b>Attachment E – Title 20.100.060 Drainage Facilities</b>	
<b>Attachment F – Portions of the Douglas County Master Plan Conservation Element</b>	