Notes for Water Watchers

Kansas Department of Health and Environment

November, 1994 (Revised October, 1997)

CONSTRUCTION SITE POLLUTION CONTROL

Loss of soil due to erosion is estimated to be 25.4 billion tons a year world wide. Improperly implemented activities which disturb land such as agricultural production, construction activities, or land clearing creates potential for sediment to be transported off the site, often affecting nearby water resources. When this off-site transport is accelerated or excessive, a serious pollution problem results. Degradation to the ecosystem results in increased public tax dollars which must be used for **a) street cleaning and b) stormwater sewer maintenance, c) water treatment costs, d) flood repair and control, e) dredging or sediment removal from reservoirs.** Excessive stream sediment also effects stream direction and flow, and may increase stream bank instability.

Adverse impacts include:

1) Reductions in:
a) oxygen,
b) sunlight
c) growth
d) ability to secure food
e) satisfactory habitat
f) suitable spawning beds

2) Increases in:
a) temperature,
b) need for mechanical, biological and chemical pest control
c) chances for displacement of desirable or native species with undesirable or non-native species.

Additional pollution associated with construction sites concerns include chemical applications (nutrients and hazardous substances), hazardous and solid wastes, and fuel storage.

All construction activities need to be conducted in a manner that avoids or minimizes discharge to Kansas water resources. The following measures can be used to develop a construction site pollution control plan.

I. EROSION AND SEDIMENT CONTROL MEASURES

PLANNING PHASE

* Disturb only what is needed for each phase of the project
* Designate and use an equipment staging area
* Write a pollution control plan for the project

TREATMENT AND APPLICATION

Rip-rap	Geo-textiles	Maintain and protect natural and buffer areas
Cover soil stock piles	Temporary seeding	Fiber Matting (with\without seed)
Hydro seeding	Dust control	Establish permanent vegetation (seeding and sodding)
Soil compaction	Surface roughening	Chemical Stabilization

ASSEMBLY REQUIRED

Stone outlet	Gabions	Hay bale barriers	Stone check dams
Baffles/energy dissipators	Grid pavers	Level spreaders	Silt screen

STRUCTURES

Earth dikes	Retaining walls	Diversions	Terraces
Catchments	Sediment traps	Sediment control basin	Sub-surface drains
Gravel and stone filter berm	Pollution containment wetlands		Temporary swales

* Pollution control measures previously described work best when in combinations and when they are monitored and maintained to ensure their effectiveness.

II. CHEMICAL CONTROL/MANAGEMENT MEASURES

1. Limit application and amount (use only where problem exists), avoid migration of toxic substances (apply properly, and follow product label directions).

2. Ensure the proper storage and disposal of toxic substances.

3. Apply nutrients at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface waters.

III. SOLID WASTE MANAGEMENT MEASURES

1. Temporarily locate a container (on-site) to hold solid waste containers and their remaining contents for permanent proper disposal (landfill or hazardous waste collection site).

2. When needed, dispose of solid waste in accordance with city, county and state regulations.

IV. FUEL STORAGE

1. Apply recommended pollution control measures

    a) Locate storage area away from streams or lakes; avoid burying tanks
    b) Paint the unit bright colors to reduce chances for collision
    c) Develop a spill response plan (to whom and how to report a fuel spill)
    e) Construct a temporary berm or install an artificial containment device
    f) Contact your KDHE District Office for more information.

(Partial information above extracted from U.S. Environmental Protection Agency, Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, 1993.)

POLLUTION CONTROL PLAN REQUIREMENT AND TECHNICAL ASSISTANCE

1. Construction activities 5 acres or greater need to secure a permit from KDHE BUREAU OF WATER-INDUSTRIAL PROGRAMS- (785) 296-5557.

2. Construction activities less than 5 acres do not need a permit, yet must avoid causing water pollution problems. Contact the local County Conservation District to inquire about a local plan which provides local guidance or contact the KDHE Nonpoint Source Pollution Section at (785) 296-4195.

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