Additional Construction Site Pollution Controls

- 1. Construction personnel, including subcontractors who may use or handle hazardous or toxic materials, shall be made aware of the following general guidelines regarding disposal and handling of hazardous and construction wastes:
 - Prevent spills
 - Use products up Follow label directions for disposal
 - Remove lids from empty bottles and cans when disposing in trash
 - Recycle wastes whenever possible
 - Don't pour into waterways, storm drains or onto the ground
 - Don't pour down the sink, floor drain or septic tanks

 - Don't bury chemicals or containers
 - Don't burn chemicals or containers Don't mix chemicals together
- 2. Containers shall be provided for the proper collection of all waste material including construction debris, trash, petroleum products and any hazardous materials used on-site. Containers shall be covered and not leaking. All waste material shall be disposed of at facilities approved for that material. Construction Demolition and Debris (CD&D) waste must be disposed of at an Ohio EPA approved CD&D landfill.
- 3. No construction related waste materials are to be buried on-site. By exception, clean fill (bricks, hardened concrete, soil) may be utilized in a way which does not encroach upon natural wetlands, streams or floodplains or result in the contamination of waters of the state.
- 4. Handling Construction Chemicals. Mixing, pumping, transferring or other handling of construction chemicals such as fertilizer, lime, asphalt, concrete drying compounds, and all other potentially hazardous materials shall be performed in an area away from any watercourse, ditch or storm drain.
- 5. Equipment Fueling and Maintenance, oil changing, etc., shall be performed away from watercourses, ditches or storm drains, in an area designated for that purpose. The designated area shall be equipped for recycling oil and catching spills. Secondary containment shall be provided for all fuel oil storage tanks. These areas must be inspected every seven days and within 24 hrs. of a 0.5 inch or greater rain event to ensure there are no exposed materials which would contaminate storm water. Site operators must be aware that Spill Prevention Control and Countermeasures (SPCC) requirements may apply. An SPCC plan is required for sites with one single above ground tank of 660 gallons or more, accumulative above ground storage of 1330 gallons or more, or 42,000 gallons of underground storage. Contaminated soils must be disposed of in accordance with Item 8.
- 6. Concrete Wash Water shall not be allowed to flow to streams, ditches, storm drains, or any other water conveyance. A sump or pit with no potential for discharge shall be constructed if needed to contain concrete wash water. Field tile or other subsurface drainage structures within 10 ft. of the sump shall be cut and plugged. For small projects, truck chutes may be rinsed away from any water conveyances.
- 7. Spill Reporting Requirements: Spills on pavement shall be absorbed with sawdust or kitty litter and disposed of with the trash at a licensed sanitary landfill. Hazardous or industrial wastes such as most solvents, gasoline, oil-based paints, and cement curing compounds require special handling. Spills shall be reported to Ohio EPA (1-800-282-9378). Spills of 25 gallons or more of petroleum products shall be reported to Ohio EPA, the local fire department, and the Local Emergency Planning Committee within 30 min. of the discovery of the release. All spills which contact waters of the state must be reported to Ohio EPA.
- 8. Contaminated Soils. If substances such as oil, diesel fuel, hydraulic fluid, antifreeze, etc. are spilled, leaked, or released onto the soil, the soil should be dug up and disposed of at licensed sanitary landfill or other approved petroleum contaminated soil remediation facility. (not a construction/demolition debris landfill). Note that storm water run off associated with contaminated soils are not be authorized under Ohio EPA's General Storm Water Permit associated with Construction Activities.
- 9. Open Burning. No materials containing rubber, grease, asphalt, or petroleum products, such as tires, autoparts, plastics or plastic coated wire may be burned (OAC 3745-19). Open burning is not allowed in restricted areas, which are defined as: 1) within corporation limits; 2) within 1000 feet outside a municipal corporation having a population of 1000 to 10,000; and 3) a one mile zone outside of a corporation of 10 000 or more. Outside of restricted areas, no open burning is allowed within a 1000 feet of an inhabited building on another property. Open burning is permissible in a restricted area for: heating tar, welding, smudge pots and similar occupational needs, and heating for warmth or outdoor barbeques. Outside of restricted areas, open burning is permissible for landscape or land-clearing wastes (plant material, with prior written permission from Ohio EPA), and agricultural wastes, excluding buildings.
- 10. Dust Control or dust suppressants shall be used to prevent nuisance conditions, in accordance with the manufacturer's specifications and in a manner, which prevent a discharge to waters of the state. Sufficient distance must be provided between applications and nearby bridges, catch basins, and other waterways. Application (excluding water) may not occur when rain is imminent as noted in the short term forecast. Used oil may not be applied for dust control.
- 11. Other Air Permitting Requirements: Certain activities associated with construction will require air permits including but not limited to: mobile concrete batch plants, mobile asphalt plants, concrete crushers, large generators, etc. These activities will require specific Ohio EPA Air Permits for installation and operation. Operators must seek authorization from the corresponding district of Ohio EPA. For demolition of all commercial sites, a Notification for Restoration and Demolition must be submitted to Ohio EPA to determine if asbestos corrective actions are required.
- 12. Process Waste Water/Leachate Management. Ohio EPA's Construction General Permit only allows the discharge of storm water and does not include other waste streams/discharges such as vehicle and/or equipment washing, on-site septic leachate concrete wash outs, which are considered process wastewaters. All process wastewaters must be collected and properly disposed at an approved disposal facility. In the event, leachate or septage is discharged; it must be isolated for collection and proper disposal and corrective actions taken to eliminate the source of waste water.
- 13.A Permit To Install (PTI) is required prior to the construction of all centralized sanitary systems, including sewer extensions, and sewerage systems (except those serving one, two, and three family dwellings) and potable water lines. Plans must be submitted and approved by Ohio EPA. Issuance of an Ohio EPA Construction General Storm Water Permit does not authorize the installation of any sewerage system where Ohio EPA has not approved a PTI.

Specifications

Dust Control

- 1. Vegetative Cover and/mulch Apply temporary or permanent seeding and mulch to areas that will remain idle for over 21 days. Saving existing trees and large shrubs will also reduce soil and air movement across disturbed areas. See Temporary Seeding; Permanent Seeding; Mulching Practices; and Tree and Natural Area Protection practices.
- 2. Watering Spray site with water until the surface is wet before and during grading and repeat as needed, especially on haul roads and other heavy traffic routes. Watering shall be done at a rate that prevents dust but does not cause soil erosion. Wetting agents shall be utilized according to manufacturers instructions.
- 3. Spray-On Adhesives Apply adhesive according to the following table or manufacturers' instructions.

Adhesive	esives for Dust C Water Dilution (Adhesive: Water)	Nozzle Type	Application Rate Gal./Ac
Latex Emulsion	12.5:1	Fine	235
Resin in Water Acrylic Emulsion (No-traffic)	4:1	Fine	300
Acrylic Emulsion (No-traffic)	7:1	Coarse	450
Acrylic Emulsion (Traffic)	3.5:1	Coarse	350

4. Stone – Graded roadways and other suitable areas will be stabilized using crushed stone or coarse gravel as soon as practicable after reaching an interim or final grade. Crushed stone or coarse gravel can be used as a permanent cover to provide control of soil emissions.

- 5. Barriers Existing windbreak vegetation shall be marked and preserved. Snow fencing or other suitable barrier may be placed perpendicular to prevailing air currents at intervals of about 15 times the barrier height to control air currents and blowing soil.
- 6. Calcium Chloride This chemical may be applied by mechanical spreader as loose, dry granules or flakes at a rate that keeps the surface moist but not so high as to cause water pollution or plant damage. Application rates should be strictly in accordance with suppliers' specified
- 7. Operation and Maintenance When Temporary Dust Control measures are used; repetitive treatment should be applied as needed to accomplish
- Street Cleaning Paved areas that have accumulated sediment from construction should be cleaned daily, or as needed, utilizing a street sweeper or bucket -type endloader or scraper.

Specifications

Mulching

- applied to disturbed areas within 7 days of grading if the area is to remain dormant (undisturbed) for more than 21 days or on areas and portions of the site which can be brought to final grade.
- Mulch shall consist of one of the following:
- Straw Straw shall be unrotted small grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The straw mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 sq.ft. sections and place two 45-lb. bales of straw in each section.
- 2,000 lb./ac. or 46 lb./1,000 sq. ft.
- Other Acceptable mulches include mulch mattings and rolled erosion control products applied according to manufacturer's recommendations or wood mulch/chips applied at 10-20 tons/ac.
- 1. Mulch and other appropriate vegetative practices shall be 3. Mulch Anchoring Mulch shall be anchored immediately to minimize loss by wind or runoff. The following are acceptable methods for anchoring mulch.
 - Mechanical Use a disk, crimper, or similar type tool set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but be left generally longer than 6 inches.
 - Mulch Nettings Use according to the manufacturer's recommendations, following all placement and anchoring requirements. Use in areas of water concentration and steep slopes to hold mulch in place.
 - Synthetic Binders For straw mulch, synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer. All applications of Sythetic Binders must be conducted in such a manner where there is no contact with waters of the state.
 - Wood Cellulose Fiber Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 lb./acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal. of wood cellulose fiber.

Specifications

De-Watering

- 1. A de-watering plan shall be developed prior to the commencement of any pumping activities.
- 2. The de-watering plan shall include all pumps and related equipment necessary for the dewatering activities and designate areas for placement of practices. Outlets for practices shall be protected from scour either by riprap protection, fabric liner, or other acceptable method of outlet protection.
- Water that is not discharged into a settling/treatment basin but directly into waters of the state shall be monitored hourly. Discharged water shall be within +/- 5° F of the receiving waters.
- in depth. The basin shall be constructed for sediment storage as outlined in Chapter 6, SEDIMENT BASIN OR SEDIMENT TRAP. The inlet and outlet for the basin shall be located at the furthest points of the storage. A floating outlet shall be used to ensure that settled solids do not re-suspend during the discharge process. The settling basin shall be cleaned out when the storage has been reduced by 50% of its original capacity.
- 5. All necessary National, State and Local permits shall be secured prior to discharging into waters of the state

Specifications

Specifications

Grade Treatment

Topsoiling

Salvaging and Stockpiling

- 1. Determine the depth and suitability of topsoil at the site. (For help, contact your local SWCD office to obtain a county soil survey report).
- 2. Prior to stripping topsoil, install appropriate downslope erosion and sedimentation controls such as sediment traps and
- 3. Remove the soil material no deeper than what the county soil survey describes as "surface soil" (ie. A or Ap horizon).
- 4. Construct stockpiles in accessible locations that do not interfere with natural drainage. Install appropriate sediment controls to trap sediment such as silt fence immediately adjacent to the stockpile or sediment traps or basins downstream of the stockpile. Stockpile side slopes shall not exceed a ratio of 2:1.
- 5. If topsoil is stored for more than 21days, it should be temporary seeded, or covered with a tarp

1. Stair-step grading may be carried out on any material soft

enough to be ripped with a bulldozer. The ratio of the hori-

than 1:1 and the horizontal portion of the "step" shall slope

toward the vertical wall. Individual vertical cuts shall not be

more than 24 inches on soft soil materials and not more

2. Grooving may be made with any appropriate implement

not cause undue compaction. Suggested implements

include discs, tillers, spring harrows, and the teeth on a

front-end loader bucket. Such grooves shall not be less

than 3 inches deep nor further than 15 inches apart.

Fill slopes steeper than 3:1 shall be grooved or allowed to

remain rough as they are constructed utilizing method

1. Grooving may be made with any appropriate implement

harrows, and the teeth on a front-end loader bucket.

As lifts of the fill are constructed, soil and rock materials

no time shall slopes be bladed or scraped to produce a

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MANUAL SECURIOR SECUR

which can be safely operated on the slope and which will

not cause undue compaction such as discs, tillers, spring

Grooves left shall not be less than 3 inches deep nor further

may be allowed to fall naturally onto the slope surface. At

which can be safely operated on the slope and which will

zontal distance to the vertical cut distance shall be flatter

Cut Slopes-Greater than 3:1 Slopes

than 36 inches in rocky materials.

Fill Slopes-Greater than 3:1 Slopes

(1) or (2) below.

than 15 inches apart.

smooth, hard surface.

Spreading the Topsoil

- Prior to applying topsoil, the topsoil should be pulverized. 2. To ensure bonding, grade the subsoil and roughen the top 3-4 in. by disking.
- 3. Do not apply when site is wet, muddy, or frozen, because it makes spreading difficult, causes compaction problems, and inhibits bonding with subsoil.
- 4. Apply topsoil evenly to a depth of at least 4 inches and compact slightly to improve contact with subsoil.

Cuts, Fills, and Graded Areas Which Will Be Mowed

be on the contour (perpendicular to

Roughening With Tracked Machinery

tial for compaction.

the slope).

1. Mowed slopes should not be steeper than 3:1 and shall

avoid excessive roughness. These areas may be roughened

with shallow grooves such as those, which remain after

tilling, discing, harrowing, raking, or use of a cultipacker-

seeder. The final pass of any such tillage implement shall

2. Grooves formed by implements shall be not less than 1 inch

chain harrow or similar implement to facilitate mowing.

Avoid tracking clayey soils if possible, due to their potential

Operate tracked machinery up and down the slope to leave

horizontal depressions in the soil. As few passes of the

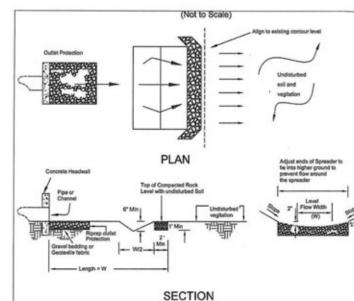
machinery should be made as possible to minimize com-

for compaction. Conversely sandy soils will have low poten-

deep and not further than 12 inches apart. Fill slopes that

are left rough during construction may be smoothed with a

5. After speading, grade and stabilize with seeding or appropri-



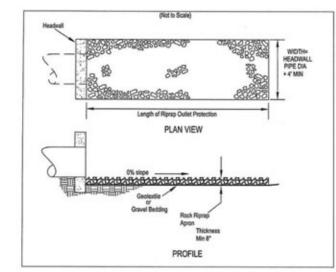
Rigid Lip Level Spreader

Level spreaders must be constructed on undisturbed soil, NOT on fill. 3. The level spreader must outlet to erosion-resistant areas 4. Rock shall be 000T Type D where 50% of the material by

6. Fertilizing, seeding, and mulching shall conform to the rec-

. Construct level spreader on a level grade to ensure uni-

Rock Outlet Protection



roots, sod, loose rock, or other material. 3. Geofextile shall be securely anchored according to manufacturers' recommendations. 4. Geotextile shall be laid with the long dimension parallel to 8. Construction shall be sequenced so that outlet protection the direction of flow and shall be laid loosely but without wrinkles and creases. Where joints are necessary, strips the upstream strip overlapping the downstream strip

Subgrade for the filter or bedding and riprap shall be

plan. The subgrade shall be cleared of all trees, stumps,

6. Riprap may be placed by equipment but shall be placed in Riprap shall conform to the grading limits as shown on the
 Riprap shall be placed by a method that does not cause riprap near its final location within the channel. open channel above it becomes operational. shall be placed to provide a 12-in. minimum overlap, with 9. All disturbed areas will be vegetated as soon as practical.

SWPP NOTES & DETAILS

BEFORE YOU DIG CALL TOLL FREE: 800-362-2764 OHIO UTILITIES PROTECTION SERVICE

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