

PROPOSED BUILDING DEMOLITION SWPPP FOR HASTINGS BRIDGE PROJECT
 PREPARED BY DWAYNE STENLUND, CPESC #2052
 MINNESOTA DEPARTMENT OF TRANSPORTATION
 AUGUST 9, 2009

THIS PROJECT WILL REMOVE BY DEMOLITION OF BUILDING FOR PREPARATION OF NEW HASTINGS TH61 BRIDGE, LOCATED IN DAKOTA COUNTY, FIPS 2703727530

THE EXPECTED AREA DISTURBANCE WILL BE LESS THAN 1 ACRE, BUT IS PART OF COMMON AREA DEVELOPMENT THAT CREATES STAGING AND ULTIMATE BRIDGE PIERS AND SUPPORT STRUCTURES. IT IS EXPECTED THAT THERE WILL BE NO CHANGE IN ULTIMATE IMPERVIOUS SURFACE, BUT THERE WILL BE SIGNIFICANT SHORT TERM SOIL AND DEMOLITION DEBRIS MATERIAL EXPOSURE.

THE ULTIMATE RECEIVING WATER IS THE MISSISSIPPI RIVER BY DIRECT DISCHARGE, DITCHES, CURB AND GUTTER INLETS, ROOF DRAINAGE AND CULVERTS.

THE FOLLOWING IMPAIRED WATERS ARE WITHIN 1 MILE OF THIS PROJECT:
 MISSISSIPPI RIVER FOR PCB, PFOS, AND T, WITH TMDL FOR HG
 REBECCA LAKE WITH TMDL FOR HG

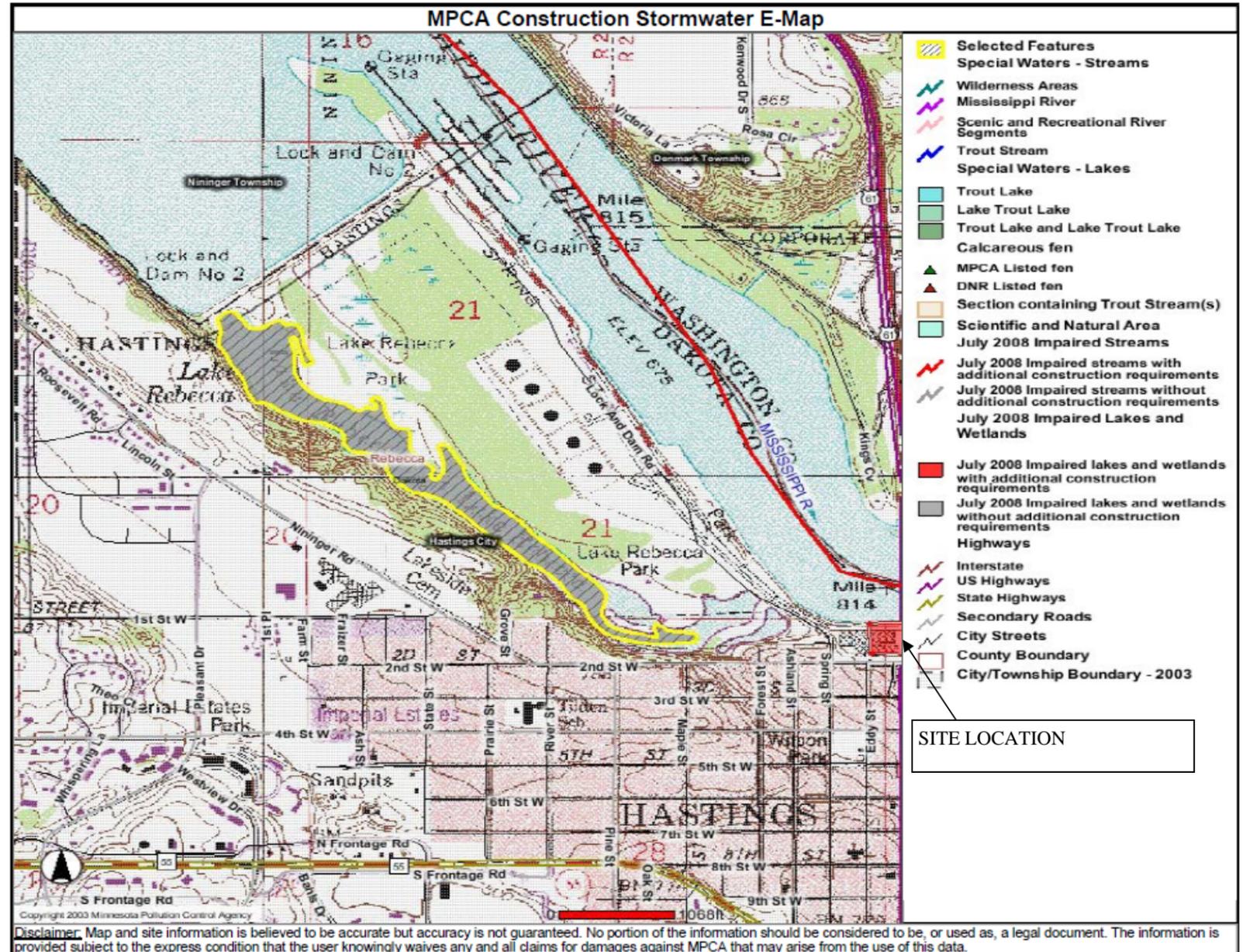
THIS PROJECT WILL ADDRESS THROUGH THE DEMOLITION REMOVAL PROCESS STRICT CONTROLS FOR PCB AND HG, AND IF PRESENT, WILL BE MITIGATED PRIOR TO BUILDING DEMOLITION.

SOILS LIKELY CONSIST OF SANDY AND SILT LOAMS.

THE POTENTIAL POLLUTANTS GENERATED FROM THIS WORK INCLUDE THE FOLLOWING:
 CONCRETE AND WOOD DUSTS, MASONRY AND MORTAR DUSTS, SHEETROCK, FUELS, AND SEDIMENTS

PROJECT ENGINEER & SWPPP CONTACTS

MN/DOT PROJECT ENGINEER		
CONTRACTOR EC SUPERVISOR		
PRELIMINARY SWPPP DESIGN	DWAYNE STENLUND CPESC #2052	
MN/DOT EROSION CONTROL TECHNICAL SUPPORT	DWAYNE STENLUND	612-810-9409
HISTORIC AREA COORDINATOR		
STATE DUTY OFFICER		800-422-0798
DNR TRANSPORTATION HYDROLOGIST	PETER LEETE	651-366-3634
MPCA		
USACE		



BMP INSTALLATION, MAINTENANCE AND OPERATIONS

ESTIMATED QUANTITIES (TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL) LUMP SUM

1. THE ENTIRE PROJECT SHALL USE THE SITE PLAN PROCESS AS PER 1717. ADDITIONAL SITE PLANS SHALL BE SUBMITTED WHEN REQUESTED BY THE PROJECT ENGINEER OR AS INDICATED IN THE PLAN. IT IS RECOMMENDED THAT 1717 SITE PLANS BE DEVELOPED BY THE CONTRACTOR PRIOR TO ANY WORK ADJACENT TO THE MISSISSIPPI RIVER. IT IS EXPECTED THAT THE CONTRACTOR USE BEST MANAGEMENT PRACTICES TO PREVENT THE DISCHARGE OF FUGITIVE DUSTS BY USE OF WATER MISTS OR PLASTIC SHROUDS AND VACUUMS.
2. PAVED ROADS AND CONVEYANCE OUTFALLS MUST BE PROTECTED FROM CEMENTITIOUS MATERIALS, SEDIMENTS, AND CHEMICALS BY AVOIDANCE, USE OF PLASTIC SHEETING, COMPOST FILTER LOGS OR OTHER PROJECT ENGINEER APPROVED METHODS. THE CONTACTOR SHALL PREVENT DISCHARGE TO SURFACE AND GROUND WATERS BY VACCUM OR SWEEP COLLECTION OF ALL COMENTITIOUS MATERIALS, OR OTHER PROJECT ENGINEER APPROVED METHOD.
3. ANY RUTS OR DAMAGED AND EXPOSED SOIL AREAS THAT COULD CREATE SEDIMENT DISCHARGE TO THE MISSISSIPPI RIVER AND CONVEYANCE SYSTEMS MUST BE STABILIZED WITHIN 24 HOURS WITH SHAPING, SEEDING AND CERTIFIED WEED FREE STRAW MULCH MATERIALS. EFFORT MUST BE MADE TO PREVENT REOCCURANCE OF SOIL DISTURBANCE BY PROTECTIVE SOIL COVERS, INCLUDING GEOTEXTILES.
4. PICKUP (ENCLOSED SKIDSTEER BROOM) SWEEPING OF ALL PAVED SURFACES WILL BE REQUIRED, AS NECESSARY TO KEEP SEDIMENTS, MUD, DIRT, ROCK, OR OTHER MATERIALS FROM LEAVING THE PAVED SURFACE DUE TO RAIN OR VEHICLE TRACKING.
5. CULVERT ENDS WILL BE PROTECTED FROM SEDIMENT DISCHARGE USING COMPOST FILTER LOGS, WOOD-FIBER LOGS, OR WOOD CHIP LOGS, AS NEEDED.
6. SLOPE GRADES MUST BE PROTECTED. ANY SOIL DISTURBED AREAS SHALL BE KEPT IN A PERPETUALLY STABILIZED CONDITION BY USE OF STRAW OR WOOD MULCHES.
7. SOFT SOIL CROSSING WILL REQUIRE DRIVABLE MATS CAPABLE OF MINIMIZING SOIL DISTURBANCE FOR THE CONTRACTORS' EQUIPMENT. THIS MAY BE ACCOMPLISHED BY USE OF PLYWOOD, MUD MATS, OR STRUCTURAL PLASTIC BASE UNITS.
8. THE CONTRACTOR SHALL DEVELOP A REFUELING MANAGEMENT PROGRAM. ALL REFUELING OF EQUIPMENT SHALL BE DONE IN A MANNER THAT DOES NOT LEAVE ANY RESIDUE IN THE SOIL OR ROAD SURFACE. NO REFUELING MAY TAKE PLACE WITHIN 50 LF OF ANY STORM INLET. IF A SPILL WERE TO OCCUR, IT MUST BE REMOVED IMMEDIATELY AND THE CONTAMINATED SOIL PROPERLY DISPOSED ACCORDING TO MPCA REQUIREMENTS. AN OIL AND UNIVERSAL SPILL KIT SHALL BE AVAILABLE ON SITE WHENEVER MOTORIZED EQUIPMENT IS PRESENT.
9. ALL PERIMETER CONTROL BMPS SHALL BE KEPT IN A FUNCTIONAL CONDITION, REGARDLESS OF NUMBER OF MOVEMENTS TO ACCOMMODATE THE CONTRACTORS OPERATIONS. PERIMETER CONTROL SHALL BE IN THE FORM OF 3987 FILTER LOGS, TYPE COMPOST LOG.
10. ALL CHEMICAL SPILLS SHALL BE IMMEDIATELY PICKED UP, INCLUDING PORTABLE URINALS. ALL SPILLED MATERIALS SHALL BE PROPERLY DISPOSED. THERE SHALL BE NO EQUIPMENT WASHING ON SITE UNLESS IN A PREAPPROVED PLAN BY THE PROJECT ENGINEER, AND IN A DESIGNATED SITE WITH TOTAL POLLUTION MANAGEMENT PROGRAM THAT PREVENTS AIR, LAND AND WATER POLLUTION.
11. ALL TRASH AND CONSTRUCTION DEBRIS SHALL BE PICKED UP AT THE END OF EACH DAY AND TEMPORARILY PLACED IN DUMPSTERS OR OTHER SUITABLE CONTAINERS, AND REMOVED AS NECESSARY TO REMAIN FUNCTIONAL.
12. ALL CONCRETE OR STONE SAW CUTTING SHALL BE PREVENTED FROM ENTERING STORM WATER CONVEYANCE SYSTEMS BY USE OF 3897 FILTER LOG, TYPE COMPOST LOG, AND REPLACE AS OFTEN AS NECESSARY TO REMAIN FUNCTIONAL TO FILTER REMOVE FINE CEMENTITIOUS DISCHARGE.
13. FINAL EXPOSED SOIL COVER SHALL BE AS MNDOT SEED MIX 250 AND CATEGORY 3 BLANKET, OR EQUIVALENT.
14. THE CONTRACTOR SHALL DEVELOP A QUALITY ASSURANCE PROGRAM AS PER 1717. THE CONTRACTOR SHALL PERFORM DAILY INSPECTIONS AND CORRECT ANY EROSION AND SEDIMENT CONTROL DEFICIENCIES, INCLUDING THOSE DISCOVERED AFTER EVERY 0.5 INCH RAIN EVENT. THE INSPECTION REPORT SHALL BE IN WRITING ALONG WITH PHOTOGRAPHS, AND SUBMITTED TO THE PROJECT ENGINEER EVERY WEEK DURING SOIL DISTURBANCE OPERATIONS. ONCE THE SITE HAS BEEN STABILIZED, THE INSPECTIONS SHALL BE DONE EVERY 30 DAYS, OR UNTIL 70 PERCENT PERENNIAL VEGETATIVE COVER HAS BEEN ESTABLISHED OVER THE WHOLE SITE. THE CONTRACTOR IS REMINDED TO TERMINATE THE PERMIT COVERAGE WITHIN 30 DAYS OF MEETING THE NPDES REQUIREMENTS, AS APPLICABLE.

MN/DOT SPECIFICATION	BMP	PROPOSED USE	ESTIMATED QUANTITY
3897 FILTER LOG	TYPE COMPOST	GUTTER FILTERS	100 LF (IN 4 FT UNITS)
3897 FILTER LOG	TYPE ROCK LOG	GUTTER INLET CHECK FOR WASH AND CUT SLURRY CONTAINMENT, CURB HEAD PERIMETER	100 LF
3897 FILTER LOG	TYPE COMPOST	PERIMETER CONTROL	2000 LF
		WATER MISTING	DUST CONTROL
		SPILL KITS	CONTINGENCY PLAN FOR SPILL RECOVERY 3 UNITS
3891 STORM DRAIN INLET PROTECTION	TYPE F FILTER BAG INSERT INLET SACK	SLURRY MANAGEMENT FROM WASHING, GRINDING AND MORTAR APPLICATION	3 EA
		PLASTIC OR GEOTEXTILE SHEETING	TEMPORARY SOIL COVERS 1000 SQ FT
2575.3M	TURF ESTABLISHMENT SALT TOLERANT SOD	RESTORATION OF TURF AREAS	0.25AC
2573.3A1 1717.2C	EROSION CONTROL SUPERVISOR	ENVIRONMENTAL QUALITY CONTROL PROGRAM	1 EA
2573.3A5	STREET SWEEPER, PICKUP TYPE ONLY	KEEPING ROAD SURFACES FREE OF SEDIMENTS AND DUSTS	12 HRS
3881 FERTILIZER	TYPE 3 SLOW RELEASE	QUICK COVER RATIO 22-5-10	10 LBS
3876 SEED	SEED MIXTURE 250	DISTURBED SOIL RESTORATION	25 LBS
3884 HYDRAULIC SOIL STABILIZER	TYPE 6 HYDROMULCH BLEND	TEMPORARY SOIL STABILIZATION, DUST CONTROL	1000 LBS
3882 MULCH MATERIAL	TYPE 5 SLASH MULCH	SOFT SOIL CROSSINGS, LIQUID MORTAR ADSORBANT, SEDIMENT CONTROL	1 T
3882 MULCH MATERIAL	TYPE 3 CERTIFIED WEED FREE STRAW	FINAL EXPOSED SOIL	0.25 T



Direction of surface flow

Image U.S. Geological Survey
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Imagery Date: Apr 2004

44°44'41.81" N 92°51'07.98" W elev 705 ft

Eye alt 2167 ft

EXAMPLE BEST MANAGEMENT PRACTICES, AND EXPECTED LOCATIONS.



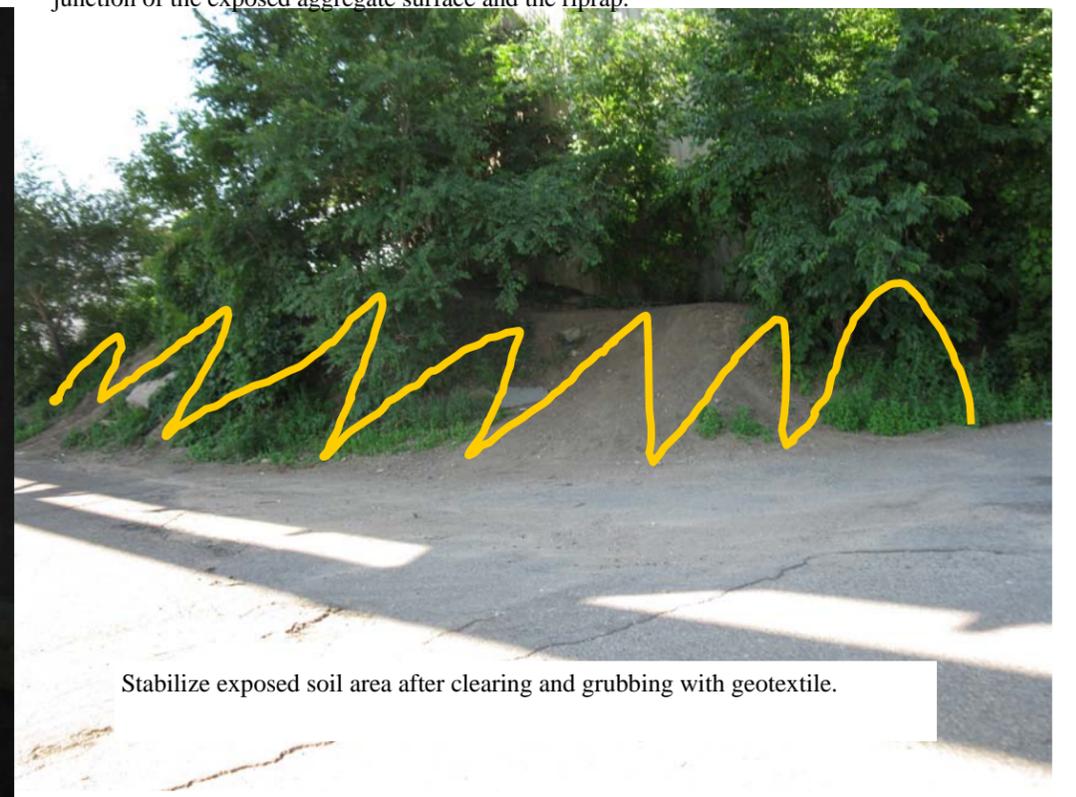
3897 filter log, type compost conveyance checks.



3897 filter log, type compost perimeter control. First line installed in a 'J-hook' pattern to create sediment traps, unless road surface is perfectly level. Second perimeter line is at the junction of the exposed aggregate surface and the riprap.



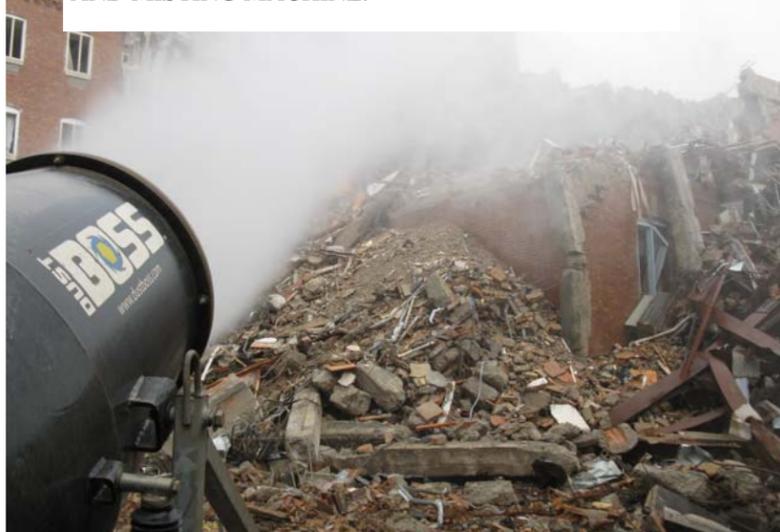
All road surfaces shall be kept in a clean condition, sweep as many times per day to limit blowing and tracking dusts. Areas by piers include storm drain inlets that must be protected from sediment and debris discharge.



Stabilize exposed soil area after clearing and grubbing with geotextile.



DUST SUPPRESSION WATER APPLICATION, HAND AND MISTING MACHINE.



GEOTEXTILE AND PLASTIC COVERS FOR EXPOSED SOILS, AND LIQUID CAPTURE



WHEEL WASHOFF SYSTEM PRIOR TO EXIT FROM DEMOLITION SITE



3897 COMPOST FILTER LOGS, PERIMETER CONTROL



RAPID STABILIZATION METHOD 3



Toxic/hazardous soil cover, with compost log perimeter filter



Heavy metal trap log (orange geotextile tube) for soluble divalent cation trapping.



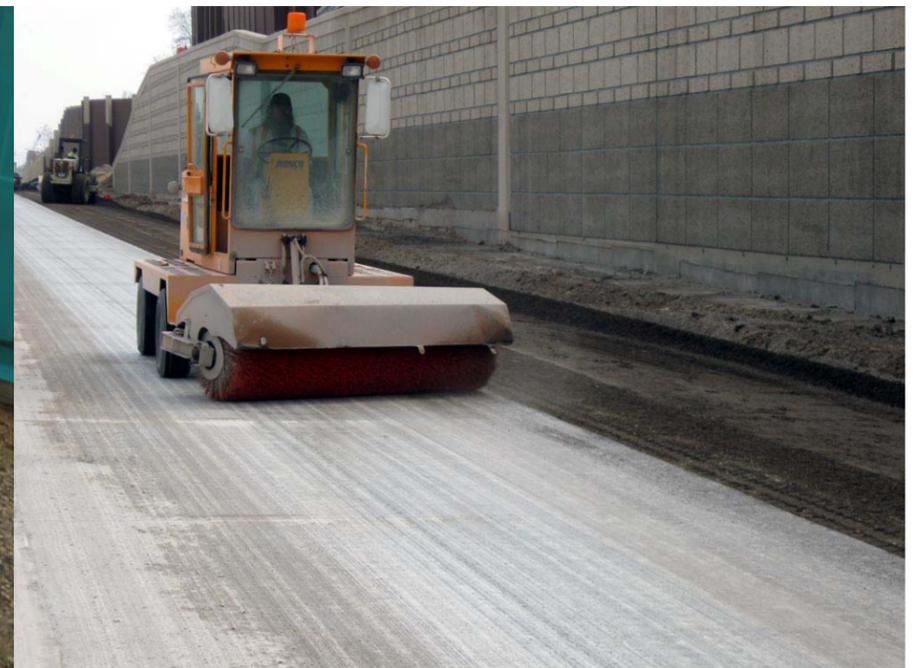
Secondary containment of concrete, mortar and cure agents using plastic and geotextile liners with berms made from wood, sand, soil, compost or rock.



Example inlet protection installed inside structure below grate with curb box rock log. This version has safety overflow spillways incorporated into the side walls of the filter bag.



Spill kit system.



Open air brooming is not acceptable without strong dust control pre-sweeping watering. All cementitious and demolition debris material must not be allowed to come in contact with discharge areas.