GENERAL NOTES

1. PRIOR TO START OF PROJECT WORK, VERIFY ALL SITE CONDITIONS AND SUBMIT A PROJECT WORK PLAN TO THE OWNER'S REPRESENTATIVE FOR REVIEW, COMMENT, APPROVAL, AND NOTICE TO PROCEED.
2. NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING OF ANY IDENTIFIED DISCREPANCIES WITHIN THE CONSTRUCTION DOCUMENTS PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL VERIFY ALL SIT CONDITIONS PRIOR TO STARTING WORK. IN ALL CASES WHERE A CONFLICT MAY OCCUR, THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED AND WILL INTERPRET THE INTENT OF THE CONTRACT DOCUMENTS
3. PRIOR TO THE COMMENCEMENT OF WORK, VERIFY LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THE WORK AND TAKE RESPONSIBILITY FOR DAMAGES TO SUCH UTILITIES CAUSED AS A RESULT OF CONSTRUCTION.
4. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PROTECT THE PUBLIC AND ADJACENT PROPERTIES FROM DAMAGE THROUGHOUT CONSTRUCTION, INCLUDING DAMAGES TO UTILITIES, WALKS, WALLS, DRIVES, CURVES, ETC.
5. ALL PLANT SUBSTITUTIONS MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE THEY ARRIVE ON SITE. PLANTS THAT HAVE NOT BEEN APPROVED SHALL BE REPLACED IMMEDIATELY PER CONTRACT DOCUMENTS.
6. ALL PLANT MATERIAL ARRIVING ON SITE MUST BE LABELED AND INSPECTED BY THE CONTRACTOR AND OWNER'S REPRESENTATIVE BEFORE PLANTING. PLANTS THAT DO NOT HAVE LABELS WILL BE REJECTED.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IRRIGATE ALL INSTALLED PLANTINGS, AS SPECIFIED BY THE OWNER'S REPRESENTATIVE, DURING THEIR FIRST YEAR OF ESTABLISHMENT.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT NO INVASIVE WEED SEEDS ARE INTRODUCED TO THE PROJECT SITE THROUGH SEED MIXES OR EQUIPMENT.

SITE PREPARATION NOTES

1. SITE OWNER SHALL WORK WITH A LANDSCAPE ARCHITECT OR NATIVE SEEDING SPECIALIST TO DETERMINE THE APPROPRIATE METHOD FOR VEGETATION REMOVAL.
2. VEGETATION REMOVAL METHOD WILL DEPEND ON THE EXISTING CONDITIONS. IT IS ESSENTIAL THAT WEEDS ARE THOROUGHLY CONTROLLED BEFORE SEEDING TO ENSURE PROJECT SUCCESS.
   - 2.1. FOR CROPLAND CONVERSION, NO VEGETATION REMOVAL IS REQUIRED IF SEEDING IS DONE IN THE WINTER FOLLOWING HARVEST.
   - 2.2. FOR ANNUAL-DOMINATED FIELD CONVERSION, VEGETATION REMOVAL MAY BE ACCOMPLISHED THROUGH COMBINATIONS OF BURNING/MOWING/AND HERBICIDE TREATMENT.
   - 2.3. FOR INVASIVE-DOMINATED FIELD CONVERSION, TWO FULL GROWING SEASONS OF REMOVAL IS RECOMMENDED USING A COMBINATIONS OF BURNING/MOWING/AND HERBICIDE TREATMENT.
   - 2.4. FOR WOOD-INVADED FIELD CONVERSION, MECHANICAL REMOVAL OF TREES MAY BE REQUIRED USING BRUSH HOGS, SLASHERS, BRUSH CUTTERS, AND/OR CHAIN SAWS. REMAINING BIOMASS MAY BE REMOVED THROUGH CONTROLLED BURNS.
   - 2.5. FOR TURF LAWN CONVERSION, SEVERAL METHODS MAY BE UTILIZED INCLUDING SOLARIZATION, SMOTHERING, HERBICIDE APPLICATION, OR MECHANICAL REMOVAL OF THE LAWN USING A SOD CUTTER. IN URBAN SETTINGS, IT MAY BE REQUIRED TO DECOMPACT THE UPPER SOIL LAYER PRIOR TO NATIVE SEEDING.
3. SITE OWNER SHALL TEST SOIL PRIOR TO PLANT SELECTION. AT A MINIMUM, SOIL SHOULD BE TESTED FOR MOISTURE CONTENT, PH, AND ORGANIC MATTER CONTENT AND AMEND WITH HIGH QUALITY COMPOST IF ORGANIC MATTER IS BELOW 3%-5%. ANALYSIS FEES ARE THE RESPONSIBILITY OF THE SITE OWNER.
4. THE CONTRACTOR IS RESPONSIBLE FOR VEGETATION REMOVAL, DISPOSAL, AND ALL ADDITIONAL SITE PREPARATION REQUIREMENTS. ALL WASTE MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH THE PLANS.

SOIL HEALTH PRACTICES

1. RECOMMEND FOLLOWING SUBGRADE AND DECOMPACTION MEASURES IN ACCORDANCE WITH MNDOT SPECIFICATION 2574 THROUGHOUT CONSTRUCTION.
2. PRIOR TO CONSTRUCTION
   - 2.1. DEVELOP A SOIL MANAGEMENT PLAN
3. DURING CONSTRUCTION
   - 3.1. TO PREVENT SOIL COMPACTION, PROTECT AREAS THAT ARE NOT TO BE DISTURBED AND IMPACT AREAS ONLY WHERE NECESSARY.
   - 3.2. SELECT MINIMALLY COMPACTING EQUIPMENT FOR CONSTRUCTION WORK AND PLANTING.
   - 3.3. AVOID DEGRADING SOIL STRUCTURE BY OVERWORKING OR SMEARING SOILS DURING CONSTRUCTION. AVOID DISTURBING MOIST OR WET SOILS.
   - 3.4. REMOVE AND PROTECT TOPSOIL USING BEST STOCKPILING PRACTICES
4. POST CONSTRUCTION
   - 4.1. UTILIZE SOIL RIPPING OR SUBSOILING TO DECOMPACT SUBSOIL COMPACTED DURING CONSTRUCTION.
   - 4.2. REAPPLY THE TOPSOIL AND AMEND WITH COMPOST AS NEEDED, AND TILL COMPOST TO THE TOP FEW INCHES OF TOPSOIL.
   - 4.3. PLANT VEGETATION TO PREVENT SOIL MIGRATION AND STABILIZE THE SUBSOIL.

PLANTING TIMELINE AND APPLICATION NOTES

1. PLANTING SHOULD GENERALLY BE COMPLETED IN THE SPRING OR FALL, DEPENDING ON THE TYPE OF SEED (GRASSES VS FORBS). INTERSEEDING THE FOLLOWING YEAR MAY BE REQUIRED IF INSUFFICIENT GROWTH IS OBSERVED.
   - 1.1. SPRING PLANTING APPLIES TO GRASSES AND IS GENERALLY DONE BETWEEN MAY AND JUNE WHEN SOIL TEMPERATURES ARE ABOVE 60 DEGREES F.
   - 1.2. FALL DORMANT PLANTING APPLIES TO FORBS, SEDGES, AND RUSHES AND IS GENERALLY DONE BETWEEN OCTOBER AND NOVEMBER WHEN SOIL TEMPERATURES FALL BELOW 50 DEGREES F.
2. A LANDSCAPE ARCHITECT OR NATIVE SEEDING SPECIALIST MUST BE CONSULTED TO DETERMINE THE APPROPRIATE SEED MIX FOR THE SITE.
3. SEED MIX SHALL BE INSTALLED USING EQUIPMENT SPECIFIED BY THE LANDSCAPE ARCHITECT OR NATIVE SEEDING SPECIALIST WHICH MAY INCLUDE BROADCAST SEEDERS, BRILLION TYPE SEEDERS, OR SEED DRILLS DEPENDING ON SITE CONDITIONS. SMALL FORB, SEDGE, AND RUSH SEEDS MUST BE SEEDED NEAR THE SOIL SURFACE.
4. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING SEEDING RATES FOLLOW REQUIREMENTS SPECIFIED BY THE SEED MIX. ANY DEVIATION MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE.

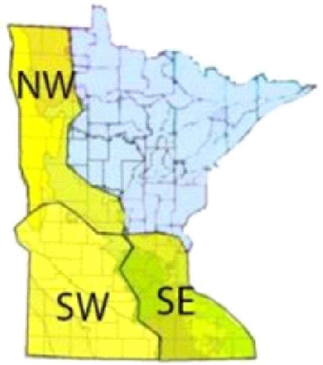
CARE OF WATER DURING CONSTRUCTION (CONTINUED)

1. MONITORING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED REGULARLY BY THE RESPONSIBLE PARTY AS DETERMINED BETWEEN THE CONTRACTOR AND OWNER.
2. SHORT-TERM MONITORING AND MAINTENANCE SHALL OCCUR DURING YEAR 1 AND YEAR 2 FOLLOWING CONSTRUCTION.
   - 2.1. YEAR 1 SHALL INVOLVE ROUTINE MOWING OF WEEDS TO A HEIGHT OF 4" – 6". MOWING SHALL OCCUR AT A FREQUENCY SUCH THAT WEEDS DO NOT FLOWER.
   - 2.2. YEAR 2 SHALL INVOLVE THE SAME ROUTINE MOWING OF WEEDS AS YEAR 1, BUT LESS FREQUENTLY.
   - 2.3. YEAR 3 AND BEYOND SHALL INVOLVE ROTATIONAL CONTROLLED BURNS. PRIOR TO CONTROLLED BURNS, SITE OWNER MUST OBTAIN ALL REQUIRED LOCAL AND STATE PERMITS. PERMIT FEES ARE THE RESPONSIBILITY OF THE SITE OWNER.

NOT FOR CONSTRUCTION PURPOSES

Maps for Distribution of Mixes

Grassland Mixes



Woodland Mixes

PURPOSE	PLANTING REGION	CONDITIONS	SEED MIX	SITE CONDITION
NATIVE GRASSLAND	Northwest	Dry Prairie	35-422	Mesic soils, Full sun 70%
		Mesic Prairie	35-442	
	Southwest	Dry Prairie	35-522	
		Mesic Prairie	35-542	
	Southeast	Dry Prairie	35-622	
		Mesic Prairie	35-642	
WOODLAND	Northwest	Woodland Edge	36-312	Dry to Mesic soils, Partial sun 50%
	Northeast	Woodland Edge	36-412	
	Central	Woodland Edge	36-712	
	South & West	Woodland Edge	36-212	
POLLINATOR	Northwest	Pollinator Plot NW	38-441	Mesic soils, Full sun 70%
	Northeast	Pollinator Plot NE	38-341	
	Southwest	Pollinator Plot SW	38-541	
	Southeast	Pollinator Plot SE	38-641	
		Pollinator Plot Urban SE	38-631	
	South & West	High Diversity Solar Array Mesic Soil S&W	39-241	
		Beneficial Insects S&W	38-542	
		Mid Diversity Solar Array Dry Soil S&W	39-221	

A full list of BWSR seed mixes and installation fact sheets can be found at https://bwsr.state.mn.us/seed-mixes

Seed Type	Spring/Early Summer (see date below)	Mid-Summer Jun 30 - Aug 1	Early Fall Aug 1 - Sep 10	Mid-Fall Sep 10 - Oct 15	Late Fall (Dormant Seeding) Nov 1 - Frozen Soil (see note about soil temp.)	Frost Seeding Feb 15 - April 7
Cool-season Prairie Grasses	Apr 1 - Jun 15	**		*		
Warm-season Prairie Grasses	May 15 - Jun 30		*	*		
Prairie Sedges and Forbs	May 15 - Jun 30		*	*		
Wetland Grasses	Apr 1 - Jun 30	**		*		
Wetland Sedges and Forbs	Apr 1 - Jun 30	**		*		
State Native Construction Mix	Apr 1 - Jun 15		*	*		
Oats Temp. Cover	Apr 1 - Jun 15			*	*	*
Winter Wheat Temp. Cover	**	*			*	*

High Success
Medium Success
Not Recommended Without Watering or Favorable Weather Conditions
* Low Success
** Not Recommended

Source: BWSR Native Vegetation Establishment ad Enhancement Guidelines - Section 3

NO.	REVISION DESCRIPTION	DATE	BY

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

Print Name:_____

Sign Name:_____ License No._____

Date _____

Date | Designed By | Drawn By

Minnesota Pollution Control Agency
520 Lafayette Rd.
St. Paul, MN 55155

MPCA

MINNESOTA STORMWATER MANUAL

NATIVE PLANTING GENERAL NOTES & GUIDELINES

Sheet No. of Sheets