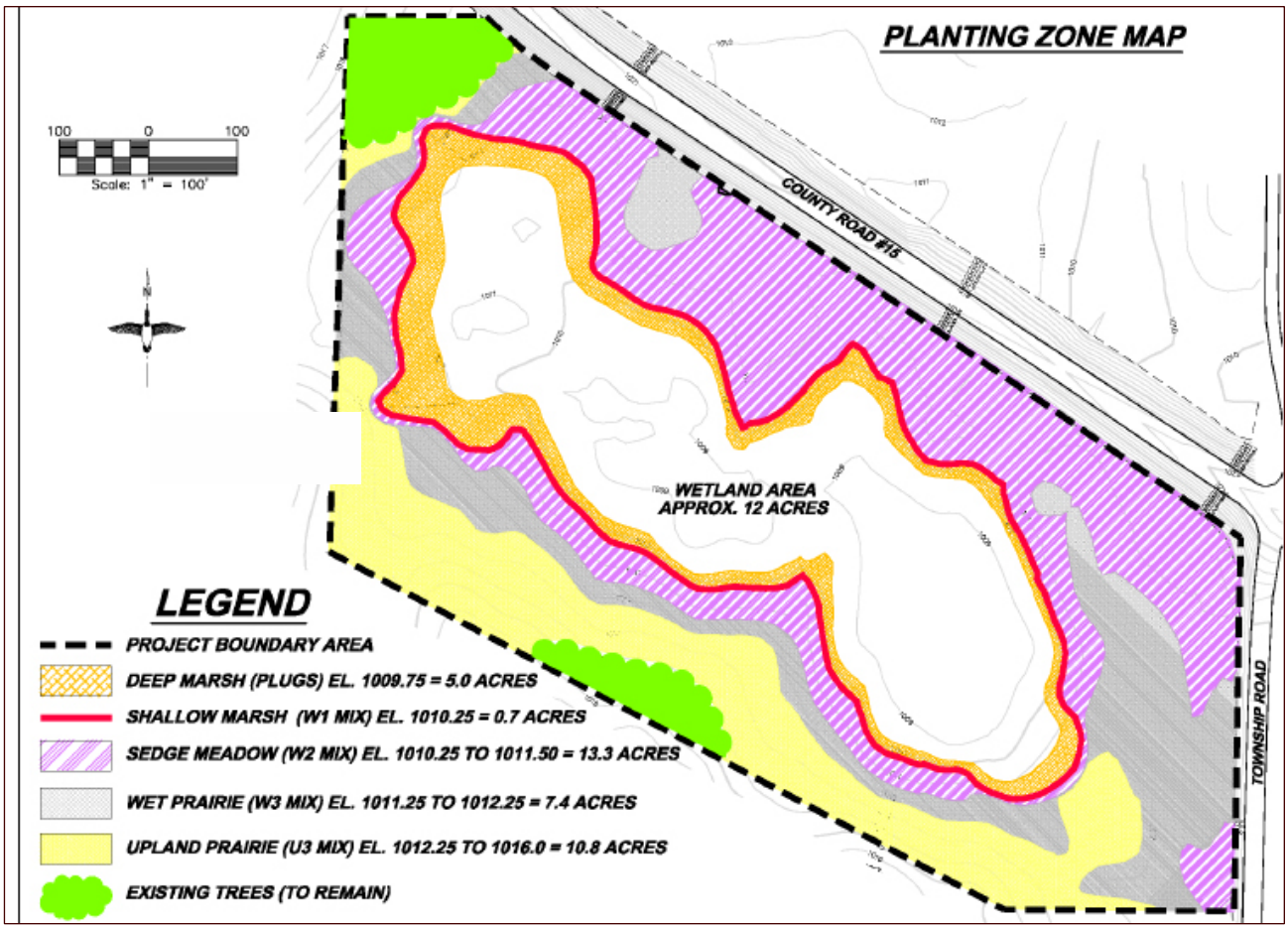
APPENDIX

5J Vegetation Plan Examples

Project Example 1.

Project Name
Date:

Seeding/Planting Zone Map



Sample Planting Zone Map

A. **Project Overview:**
This project is located in southcentral Minnesota and involves the restoration of a prairie pothole basin. The site is currently in agriculture and drained by agricultural drainage tile. Plant communities to be restored to match historic plant communities include deep marsh, shallow marsh, sedge meadow and wet prairie. Restoration will be conducted through seeding and planting of emergent vegetation.

B. **Project Administration**
Contactor must have at least three years of experience planting restorations of similar size to this project

Contract must submit their qualifications at least three weeks prior to bid closing.

Contractors bidding on this project must have appropriate herbicide applicators licenses and access to equipment described within the vegetation plan.

C. **Site Preparation**
The entire site will be planted to sweet corn in 2008 and harvested in late August. After harvest, the site will be chisel disked, and harrowed to accommodate construction activities and the native seed planting. Oats will be seeded over the entire area following seedbed preparation activities. This work will be completed by September 1, 2008.

Construction activity will take place during September and October 2008. When construction is complete, the work area will be tilled and harrowed and seeded to oats at a rate of 50 lbs. per acre. Permanent upland will be drill seeded in the uplands as a dormant planting between October 15th and freeze-up. Wetland mixes will be seeded in May or June of the following year.

The site will be inspected in late September 2008 to check for invasive or exotic plant species needing control. If problem species are identified, they will be mapped and sprayed with the appropriate herbicide up to September 31, 2008. If spraying is needed and not accomplished by the end of September 2008, the control will be done in May 2009 using the map and control plan.

Only Rodeo shall be used when within 50 feet of open water. Rodeo is specifically formulated for use in aquatic environments. The use of alternative herbicides or methods of eliminating existing vegetation must be approved by the project designer. All personnel applying chemicals shall have a Commercial Herbicide Applicator License. Allow at least seven days after herbicide application before disturbing the vegetation with other procedures.

Schedule of site preparation and planting activities.

- August 20, 2008 - Harvest sweet corn
- September 1, 2008 - Disk and harrow the entire site followed by seeding oats
- September 6, 2008 - Begin Construction
- September 20, 2008 - Inspect the site for invasive or exotic plant species
- September 31, 2008 - Apply control measures to eradicate the undesirable species.
- September/October, 2008 – Seed oats in areas disturbed by construction
- October 15th, 2008 - Drill permanent upland mix
- Mid-May, 2009 - Disk wetland seeding areas 2" deep to extent possible
- Mid-May, 2009 - Broadcast seed W2 and W3 Mixes
- Late May, 2009.- Raise water level to elevation 1009.5
- Early June, 2009 - Seed W1 Mix (after water levels have stabilized)
- July, 2009 - Raise water level to design elevation1010.25
- June, 2010 - Install wetland plugs/tuber

D. **Planting**
An oats cover crop will be planted over the entire site after harvesting of sweet corn. Additional oats will be seeded after the completion of construction. The permanent upland mix will be drill seeded after October 15th in the fall. Before drill seeding, walking on the soil should cause it to compact no more than 1-inch. Permanent wetland mixes will be broadcast seeded in Mid-May (W2 and W3) and Early June (W1) of the following year following a light disking of the wetland zones to the extent possible due to wet soils. Prior to seeding, the seed zones must be located and clearly staked or flagged to ensure the seed installer properly plants the appropriate amount and types of seed in zones designated on the planting Zone map. Seed mixtures shall be sown in all portions of the site as shown on the Planting Zone map. Areas broadcast seeded shall be rolled or cultipacked immediately following seeding. Oat cover crops in the upland and wetland portions of the project shall act as mulch for the new permanent seedings.

Hand plant the prescribed quantities of plugs within the area specified on the plan in June 2010. Plug/tuber installation shall occur after all seeding has been completed. Plugs shall be randomly planted throughout the area to provide a non-uniform appearance throughout the site.
Planting holes shall be made with dibble bars, spades or other suitable tools for the installation of live plants.

The following methods and equipment will be used for establishing native plants in each planting zone:

Zone 1a Deep Marsh – (Transplants/Tuber: (Arrowhead/ Water Plantain) The installation of plugs is scheduled to take place in June 2010 and site conditions should benefit from using the proposed water level control structure. The plant products will be manually installed using a tile spade to dig in the 3-inch plant plugs. The plant materials must be installed under saturated soil conditions and ideally installed under planned pool elevation.

Zone 1b Deep Marsh – (Transplants/Tuber: Sago Pond Weed / Coontail/Floating Leaf Pondweed) Installation of mix W1 will take place in early June 2009 if water levels have stabilized. This seeding zone will be hand broadcast in a 6-foot wide band straddling the proposed pool line. Care will be taken to ensure the seed is distributed evenly over this 6-foot wide band.

Zone 2 Shallow Marsh – (W1 /Plugs including: Lake Sedge, Slough Sedge, River Bull Rush, Sweet Flag, Giant Bur Reed, Soft Stem Bull Rush) Plugs should be staggered along the pool elevation boundary in the upper third of the six foot wide shallow marsh zone.

Zone 3 Sedge Meadow – Installation of mix W2 will take place (before hydrology is restored) in early Mid-May 2009. This seeding zone will be broadcasted using a mechanical seeder designed for broadcasting native seed mixes containing seed of varying sizes and weights (ie.; a cyclone type broadcaster). and will cover a variety of areas including narrow strips along the north and west side of the basin and wide irregular areas along the east and south sides of the basin.

Zone 4 Wet Prairie – Installation of W3 will take place in Mid-May 2009. This seeding zone will be broadcast seeded using a mechanical seeder designed for broadcasting native seed mixes of varying sizes and weights (ie.; a cyclone type broadcaster). This seed mix will be used to vegetate the transitional area between the wet meadow (W2) and the upland (U3) and therefore should overlap 5 feet uphill onto zone 5 planned to be upland tall grass prairie.

Zone 5 Upland – Installation of U3 will take place in September or October of 2008. This seeding zone will be drilled with a Truax type seeder. The seed drill must accurately meter the types of seed to be planted and keep all seed uniformly mixed during the drilling. The drill should contain a minimum of two seed boxes, a fine seed box and a box for large/fluffy seeds, and it should be equipped with disc furrow openers and packer assembly to compact the soil directly over the drill rows. Maximum row spacing should be 8 inches. The interseeder drill must be outfitted with trash rippers that will slice through the vegetative mat and make a furrow into the underlying soil approximately 1 inch wide by 0.2-1 inch deep. The furrows should be directly in line with the drill seed disc openers. Fine seed should be drop-seeded onto the ground from the fine seed box, and large/fluffy seed should be placed to obtain a final planting depth of ¼ to ½ inch.

This U3 seed mix is best suited for the drier areas and care must be taken to ensure this upland seed does not get misplaced into a lower planting zone slated for wetland species.

Seeding Summary Table

Planting Zone	Area Planted (Acres)	Seed/Plant Mix	Seeding/Planting Method	Seeding Rate (PLS seeds/lb.)
1	10.52	Plugs	Hand install	
2	6.05	W1	Hand seed	8
3	9.82	W2	Broadcast	8
4	9.89	W3	Broadcast	10
5	13.82	U3	Broadcast	15
Total	50.10			

E. **Seed Mixes and Plant Materials**
Seed will be purchased from a state seed vendor for this project following state seed vendor specifications. All seed shall be cleaned to the bare caryopsis, or as close to the bare caryopsis as possible, without damaging seed viability. Canada wild rye is an exception because it loses viability rapidly when it is de-awned. All seed shall be supplied as pure-live-seed (PLS). All bag labels shall be in accordance with specifications. All seed and seed mixes shall conform to state seed requirements for noxious weed content. Labels shall also include the following information for each species in the mixture; the percent of mixture for each species, PLS lbs. And bulk lbs (contained in the bag), date of seed test, lot number, common name, scientific name, variety, origin, percent purity, percent inert matter, percent weed seed, percent germination, percent viability (from tz test) and % PLS for each species.

To the extent possible, seed should be acquired that is of genotypes that originate within 150 miles of the project location. When available, seed that is Source Identified (Yellow Tag) through the Minnesota Crop Improvement Association (MCIA) should be used over non-Source identified seed. When MCIA Yellow Tag seed is not available wild ecotype native seed can be used provided that the collector, county and or provide of origin are known. When seed is not available within the desired distance requirement every effort should be made to acquire Minnesota genotypes that are as close to the project as possible. If Minnesota genotype seed is not available, seed originating from southern Canada, western North Dakota, western South Dakota, northern Iowa and western Wisconsin will be acceptable, provided the project vendor has consulted with and received the approval of the project designer. Failure to abide by these requirements can be a reason to cancel the contract or with-hold payment.

To the extent possible, seed should be acquired that is of genotypes that originate within 150 miles of the project location. When available, seed that is Source Identified (Yellow Tag) through the Minnesota Crop Improvement Association (MCIA) should be used over non-Source identified seed. When MCIA Yellow Tag seed is not available wild ecotype native seed can be used provided that the collector, county and or provide of origin are known. When seed is not available within the desired distance requirement every effort should be made to acquire Minnesota genotypes that are as close to the project as possible. If Minnesota genotype seed is not available, seed originating from southern Canada, western North Dakota, western South Dakota, northern Iowa and western Wisconsin will be acceptable, provided the project vendor has consulted with and received the approval of the project designer. Failure to abide by these requirements can be a reason to cancel the contract or with-hold payment.
Substitutions are discouraged. However, in cases where they are necessary due to supply shortages or excessive expense, substitutions may be made with written approval by BWSR staff. All substitutions shall serve the same function or similar niches as the species being substituted.

All seed tags must be retained to document actual seed used in the planting.

In total, the site is planned to include five plant communities, four that are wetland and one that is upland. The seeding zones are listed below with the recommended seed mix identified:

- Zone 1 = Plugs - Deep Marsh
- Zone 2 = W1- Native emergent wetland fridge
- Zone 3 = W2- Native Sedge/Wet Meadow
- Zone 4 = W3- Mesic Prairie – Native Wet Prairie
- Zone 5 = U3- SW MN Mesic Tall – Grass Prairie

Mixture W1 (BWSR Native Emergent/Wetland Fringe-Mitigation Projects)						
	Common Name	Botanical Name	Indicator Status	Seeds/oz	Seeds/ft2	% of Mix
GRASSES	Slough grass, American	Beckmannia syzigachne	OBL	50,000	67.6	46.0
	Blue-joint grass	Calamagrostis canadensis	OBL	280,000	8.2	1.0
	Manna grass, rattlesnake	Glyceria canadensis	OBL	74,000	4.3	2.0
	Manna grass, reed	Glyceria grandis	OBL	80,000	4.7	2.0
	Cut-grass, rice	Leersia oryzoides	OBL	34,000	2.0	2.0
GRAMINOIDS	Sedge, bottlebrush	Carex comosa	OBL	30,000	1.8	2.0
	Sedge, porcupine	Carex hystericina	OBL	30,000	3.5	4.0
	Sedge, lake	Carex lacustris	OBL	32,000	0.5	0.5
	Sedge, tussock	Carex stricta	OBL	53,000	0.8	0.5
	Sedge, fox	Carex vulpinoidea	OBL	100,000	14.7	5.0
	Spike-rush, creeping	Eleocharis acicularis	OBL	70,000	2.1	1.0
	Spike-rush, great	Eleocharis palustris	OBL	51,000	1.5	1.0
	Rush, common	Juncus effusus	OBL	1,000,000	29.4	1.0
	Bulrush, hard-stem	Scirpus acutus	OBL	20,000	1.2	2.0
	Bulrush, river	Scripus fluvitialis	OBL	4,300	0.3	2.0
	Bulrush, soft-stem	Scirpus validus	OBL	31,000	1.8	2.0
	Bur-reed, giant	Sparganium eurycarpum	OBL	500	0.1	10.0
FORBS	Sweet flag	Acorus calamus	OBL	6,600	0.4	2.0
	Plantain, large flowered-water	Alisma triviale	OBL	66,000	7.8	4.0
	Milkweed, marsh	Asclepias incarnata	OBL	4,800	0.6	4.0
	Joe-pye weed	Eupatorium maculatum	OBL	95,000	5.6	2.0
	Arrowhead, broad-leaved	Sagittaria latifolia	OBL	61,000	7.2	4.0
					Total:	100.0
Recommended Rate: 8.0 (PLS lbs/acre)						

Mixture W2 (BWSR Native Sedge/Wet Meadow-Mitigation Projects)						
	Common Name	Botanical Name	Indicator Status	Seeds/oz.	Seeds/ ft2	% of Mix
GRASSES	Slough grass, American	Beckmannia syzigachne	OBL	50,000	36.7	25.0
	Brome, fringed	Bromus ciliate	FACW	10,000	1.5	5.0
	Blue-joint grass	Calamagrostis Canadensis	OBL	280,000	8.2	1.0
	Wild-rye, Virginia	Elymus virginicus	FACW-	4,200	3.1	25.0
	Manna grass, reed	Glyceria grandis	OBL	80,000	2.4	1.0
	Manna grass, fowl	Glyceria striata	OBL	160,000	4.7	1.0
	Bluegrass, fowl	Poa palustris	FACW+	118,000	86.7	25.0
GRAMINOIDS	Sedge, bottlebrush	Carex comosa	OBL	30,000	0.9	1.0
	Sedge, tussock	Carex stricta	OBL	53,000	0.8	0.5
	Sedge, fox	Carex vulpinoidea	OBL	100,000	5.9	2.0
	Rush, slender	Juncus tenuis	FAC	1,000,000	8.8	0.3
	Bulrush, green	Scirpus atrovirens	OBL	460,000	13.5	1.0
	Wool grass	Scirpus cyperinus	OBL	1,700,000	5.0	0.1
	Bulrush, river	Scirpus fluviatilis	OBL	4,300	0.1	0.4
	Bulrush, soft-stem	Scirpus validus	OBL	31,000	1.5	1.6
FORBS	Anemone, Canada	Anemone canadensis	FACW	8,000	0.1	0.6
	Milkweed, marsh	Asclepias incarnata	OBL	4,800	0.1	1.0
	Aster, swamp	Aster puniceus	OBL	80,000	0.5	0.2
	Aster, flat-topped	Aster umbellatus	FACW	67,000	0.8	0.4
	Joe-pye weed	Eupatorium maculatum	OBL	95,000	0.6	0.2
	Boneset	Eupatorium perfoliatum	FACW+	160,000	0.9	0.2
	Goldenrod, grass-leaved	Euthamia graminifolia	FACW-	350,000	1.0	0.1
	Sneezeweed	Helenium autumnale	FACW+	130,000	0.8	0.2
	Sunflower, serrated	Helianthus grosseserratus	FACW-	15,000	0.2	0.4
	Iris, blue-flag	Iris versicolor	OBL	1,300	0.18	4.6
	Blazingstar, meadow	Liatris ligulistylis	FACU+	10,000	0.2	0.6
	Lobelia, great-blue	Lobelia siphilitica	FACW+	500,000	2.9	0.2
	Monkey flower	Mimulus ringens	OBL	2,300,000	6.8	0.1
	Mint, mountain	Pycnanthemum virginianum	FACW+	220,000	1.3	0.2
	Goldenrod, giant	Solidago gigantea	FACW	80,000	0.5	0.2
	Vervain, blue	Verbena hastate	FACW+	93,000	1.1	0.4
	Ironweed	Veronia fasciculata	FACW	24,000	0.3	0.4
	Culver's root	Veronicastrum virginicum	FAC	800,000	2.4	0.1
					Total:	100.0
Recommended Rate: 8.0 (PLS lbs/acre)						

Mixture W3 (BWSR Native Wet Prairie-Mitigation Projects)						
	Common Name	Botanical Name	Indicator Status	Seeds/oz.	Seeds/ft2	% of Mix
GRASSES	Bluestem, big	Andropogon gerardi	FAC-	10,000	2.2	6.0
	Slough grass, American	Beckmannia syzigachne	OBL	50,000	44.1	24.0
	Brome, fringed	Bromus ciliata	FACW	10,000	1.8	5.0
	Blue-joint grass	Calamagrostis canadensis	OBL	280,000	10.3	1.0
	Wild-rye, Virginia	Elymus virginicus	FACW-	4,200	3.1	20.0
	Manna grass, reed	Glyceria grandis	OBL	80,000	2.9	1.0
	Manna grass, fowl	Glyceria striata	OBL	160,000	5.9	1.0
	Switchgrass	Panicum virgatum	FAC+	14,000	1.0	2.0
	Bluegrass, fowl	Poa palustris	FACW+	118,000	78.0	18.0
	Indian grass	Sorghastrum nutans	FACU+	12,000	2.6	6.0
	Cord grass, prairie	Spartina pectinata	FACW+	6,600	1.2	5.0
GRAMINOIDS	Sedge, tussock	Carex stricta	OBL	53,000	0.6	0.3
	Sedge, fox	Carex vulpinoidea	OBL	100,000	3.7	1.0
	Bulrush, green	Scirpus atrovirens	OBL	460,000	10.1	0.6
	Wool grass	Scirpus cyperinus	OBL	1,700,000	6.2	0.1
	Bulrush, soft-stem	Scirpus validus	OBL	31,000	1.1	1.0
FORBS	Anemone, Canada	Anemone canadensis	FACW	8,000	0.12	0.4
	Milkweed, marsh	Asclepias incarnata	OBL	4,800	0.2	1.0
	Aster, swamp	Aster puniceus	OBL	80,000	0.6	0.2
	Aster, flat-topped	Aster umbellatus	FACW	67,000	0.7	0.3
	Tic-trefoil, showy	Desmodium canadense	FAC-	5,500	0.1	0.4
	Joe-pye weed	Eupatorium maculatum	OBL	95,000	1.4	0.4
	Boneset	Eupatorium perfoliatum	FACW+	160,000	1.2	0.2
	Goldenrod, grass-leaved	Euthamia graminifolia	FACW-	350,000	2.6	0.2
	Sneezeweed	Helenium autumnale	FACW+	130,000	1.91	0.4
	Sunflower, serrated	Helianthus grossesserratus	FACW-	15,000	0.3	0.6
	Iris, blue-flag	Iris versicolor	OBL	1,300	0.08	1.6
	Blazingstar, meadow	Liatris ligulistylis	FACU+	10,000	0.1	0.4
	Blazingstar, tall	Liatris pycnostachya	FAC-	11,000	0.2	0.4
	Lobelia, great blue	Lobelia siphilitica	FACW+	500,000	1.8	0.1
	Monkey flower	Mimulus ringens	OBL	2,300,000	8.4	0.1
	Mint, mountain	Pycnanthemum virginianum	FACW+	220,000	1.6	0.2
	Vervain, blue	Verbena hastata	FACW+	93,000	1.4	0.4
	Ironweed	Veronia fasciculata	FACW	24,000	0.2	0.2
	Culver's root	Veronicastrum virgnicum	FAC	800,000	2.9	0.1
	Alexander's, golden	Zizia aurea	FAC+	11,000	0.2	0.4
					Total:	100.0
Recommended Rate: 10.0 (PLS lbs/acre)						

Mixture U3 (BWSR Native SW MN Mesic Tall-grass Prairie-Mitigation Projects)					
	Common Name	Botanical Name	Seeds/oz.	Seeds/ft2	% of Mix
GRASSES & COVER CROPS*	Bluestem, big	Andropogon gerardi	10,000	3.3	6.0
	Oats or winter wheat*	Avena sativa or Triticum aestivum	800	1.4	32.0
	Grama, sideoats	Bouteloua curtipendula	6,000	2.0	6.0
	Wild-rye, Canadian	Elymus canadensis	5,200	1.7	6.0
	Wheat-grass, slender	Elymus trachycaulus	6,900	2.3	6.0
	Wheat-grass, western	Elytrigia smithii	6,000	1.3	4.0
	Rye-grass, annual*	Lolium italicum	20,000	8.8	8.0
	Switch grass	Panicum virgatum	14,000	0.8	1.0
	Bluestem, little	Schizachyrium scoparium	15,000	8.3	10.0
	Indian grass	Sorghastrum nutans	12,000	6.6	10.0
	Dropseed, tall	Sporobolus asper	30,000	1.7	1.0
	Needle grass, green	Stipa viridula	7,500	1.7	4.0
FORBS	Milkweed, butterfly	Asclepias tuberosa	4,000	0.1	0.4
	Aster, smooth-blue	Aster laevis	55,000	0.6	0.2
	Milkvetch, Canada	Astragalus canadensis	17,000	0.4	0.4
	Partridge pea	Chamaecrista fasiculata	2,700	0.1	0.4
	Prairie clover, white	Dalea candidum	19,000	0.2	0.2
	Prairie clover, purple	Dalea purpureum	18,000	0.4	0.4
	Tick-trefoil. showy	Desmodium canadense	5,500	0.1	0.4
	Coneflower, narrow-leaved	Echinacea angustifolia	7,000	0.2	0.4
	Sunflower, early	Heliopsis helianthoides	6,300	0.1	0.4
	Blazingstar, rough	Liatris aspera	16,000	0.2	0.2
	Blazingstar, tall	Liatris pycnostachya	11,000	0.1	0.2
	Bergamot, wild	Monarda fistulosa	70,000	0.8	0.2
	Penstemon, showy	Penstemon grandiflorum	14,000	0.2	0.2
	Coneflower, columnar	Ratibida columnifera	42,000	0.5	0.2
	Coneflower, grey-headed	Ratibida pinnata	30,000	0.7	0.4
	Black-eyed Susan	Rudbeckia hirta	92,000	2.0	0.4
	Goldenrod, stiff	Solidago rigida	41,000	0.5	0.2
	Vervain, blue	Verbena hastata	93,000	1.0	0.2
	Vervain, hoary	Verbena stricta	28,000	0.3	0.2
	Alexanders, golden	Zizia aurea	11,000	0.2	0.4
				Total:	100.0

Recommended Rate: 15.0 (PLS lbs/acre)
*Note: Oats are used in spring & summer and winter wheat in the fall.

Planting Zone Summary Table					
Planting Zone	Area Planted (Acres)	Seed/Plant Mix	Seeding/Planting Method	Seed/Plant Rate (PLS seed/Acre)	Total Seed/Plants Required
1a- Deep Marsh	2.00	Transplants/Tubers	Hand install	200	400
1b – Deep Marsh	2.00	Transplants/Tubers	Hand install	200	400
2 – Shallow Marsh	6.05	W1/Plugs	Hand seed	8 lbs/200	49 lbs/1,200 Plugs (15'x15')
3 - Sedge Meadow	9.82	W2	Broadcast	8 lbs	78 lbs
4 – Mesic Prairie	9.89	W3	Broadcast	10 lbs	100 lbs
5 - Upland	13.82	U3	Seed Drill	15 lbs	210 lbs
Total	50.10				

F. **Vegetation Maintenance:**
The entire site will receive aftercare starting in 2009. All planting zones will be monitored twice each year for invasive and exotic plants. If found, invasive and exotic species will be controlled with an approved herbicide. Mowing shall commence just prior to weed species, such as foxtail and thistle forming flowering heads (approximately 12 to 14 inches high in normal growing conditions). Mowing height shall range from 5 inches to 8 inches based on the condition of the planting. Wet areas should be mowed along with uplands when possible; however, the equipment used shall not cause ruts or compact the wet soil. Mowing shall be conducted two to three times the first growing season and two times during the second season. Spot treatment of perennial weeds shall occur once the first season and two or three times as needed during subsequent seasons. As plants reach a height of 6-inches, water levels should be raised a few inches to aid the establishment of sedge meadow and prairie species.

Planting zones 3, 4 and 5 will be subject to the following maintenance schedule:

Maintenance Schedule
- July, 2009 - Mow to 5-8 inch height
- August, 2009 - Mow to 5-8 inch height
- September 2009 - Mow to 5-8-inch height, spot treatment of perennial weeds
- June , 2010 - Monitor, Mow to 5-8-inch height – spot treat as needed with herbicide
- August 20, 2010 - Monitor, Mow to 5-8-inch height – spot treat as needed with herbicide
- September, 2010 - Monitor, Inspect and control invasive and exotic plant species.
- June, July August 2011 - Monitor, spot treat as needed with herbicide, replant any areas of poor establishment
- June, July August 2012 - Monitor, spot treat as needed with herbicide, replant any areas of poor establishment
- June, July August 2013 - Monitor, spot treat as needed with herbicide, replant any areas of poor establishment

G. **Project Implementation Schedule:**
- August 2008 - Harvest sweet corn
- Early September, 2008 - Disk and harrow the entire site followed by seeding oats
- Early September 2008 - Begin Construction
- Mid-September 2008 - Inspect the site for invasive or exotic plant species
- Mid-September 2008 - Apply control measures to eradicate undesirable species.
- Mid-September/October, 2008 – Seed oats in areas disturbed by construction
- October 2008 - Drill permanent upland mix
- Mid-May, 2009 - Disk wetland seeding areas 2" deep to extent possible
- Mid-May, 2009 - Seed W2 and W3 Mixes
- Late May, 2009 - Raise water level to 1009.5
- Early June, 2009 - Seed W1 Mix
- July, 2009 - Raise water level to design elevation 1010.25

- June, 2010 - Install wetland plugs/tuber
- August, 2009 - Mow to 6-8 inch height
- September 20, 2009 - Mow to 5-8-inch height
- June 1, 2010 – Monitor, Mow to 5-8-inch height - spot treat as needed with herbicide
- August 20, 2010 - Monitor, Mow to 5-8-inch height - spot treat as needed with herbicide
- September, 2010 - Monitor, Inspect and control invasive and exotic plant species.
- June, July August 2011 - Monitor, spot treat as needed with herbicide, replant any areas of poor establishment at direction of project manager
- June, July August 2012 - Monitor, spot treat as needed with herbicide, replant any areas of poor establishment at direction of project manager
- June, July August 2013 - Monitor, spot treat as needed with herbicide, replant any areas of poor establishment at direction of project manager