

Appendix A-1
Ditch Seeding - Species Composition
Last Updated June 2019

Zone 1 – Swale Bottom	Common Name	Max Height (ft.)	Root Depth (in.)	Form	Pollinator Value	Stratification/ Pre- treatment (highlighted species that can be sown in the near term without stratification)	Seeds/lb	Seeds/lb of mix	Typical Seeding Rate (% of mix)	% of Mix (only includes species that can be sown without cold stratification)
<i>Acorus americanus</i>	sweet flag	6	10	rhizomatous		3 month	70,000	-	1-5%	0%
<i>Asclepias incarnata</i>	swamp milkweed	5	18	rhizomatous	very high	3 month	70,000	-	1-5%	0%
<i>Bidens cernua</i>	nodding bur marigold	3	8	single crown re-seeding annual	medium	0/GA	130,000	130	1-2%	10%
<i>Carex crinita</i>	fringed sedge	4	18	bunch- type sedge		2-3 month	650,000	-	1-10%	0%
<i>Carex vulpinoidea</i>	fox sedge	3	16	bunch- type sedge		0	1,297,000	5,188	1-40%	40%
<i>Iris versicolor</i>	blue flag iris	2		rhizomatous	low	3 month	18,000	-	1-5%	0%
<i>Juncus effusus</i>	soft rush	4	24	bunch-type rush		0	45,359,000	90,718	1-5%	20%
<i>Leersia oryzoides</i>	rice cutgrass	3	14	rhizomatous warm season		1-2 month	610,000	-	1-20%	0%
<i>Liatris spicata</i>	blazing star	1-5	14	rhizomatous corms	high	2-3 month	100,000	-	1-5%	0%
<i>Ludwigia alternifolia</i>	seedbox	1-2				0/GA	20,800,000	20,800	0.5-2%	10%
<i>Mimulus ringens</i>	monkey flower	2-4		rhizomatous, re-seeds	medium	0	22,900,000	11,450	0.3-1%	5%
<i>Rhexia mariana</i>	MD meadow beauty	2.5			medium	1-2 month		-	0.5-1%	0%
<i>Scirpus atrovirens</i>	green bulrush							-		0%
<i>Scirpus pungens</i>	common three-square	4	14	rhizomatous		1-2 month	260,000	-	1-10%	0%
<i>Verbena hastata</i>	blue vervain	2-5		single stem	high	0	1,488,000	2,232	1-4%	15%
<i>Zizia aurea</i>	golden Alexander	3			medium	3 month	172,000	-	1-3%	0%

Zone 2 – Ditch Slope						Stratification/ Pre- treatment (highlighted species that can be sown in the near term without stratification)	Seeds/lb	Seeds/lb of mix	Typical Seeding Rate (% of mix)	% of Mix (only includes species that can be sown without cold stratification)
<i>Agrostis stolonifera</i>	creeping bentgrass	1-2	12	stoloniferous		0	6,129,000	12,258	5-25%	20%
<i>Asclepias syriaca</i>	common milkweed	5		spreading roots	very high	3 month	70,000	-	1-3%	0%
<i>Asclepias tuberosa</i>	butterfly milkweed	1-3	16	multi-stem tubers	very high	0-3 month	70,000	35	1-3%	5%
<i>Aster laevis</i>	smooth aster	1-4	10	branched stem	very high	3 month	1,014,000	-	1-3%	0%
<i>Aster novae-angliae</i>	New England aster	2-6		branched stem	very high	3 month	1,100,000	-	1-3%	0%
<i>Baptisia australis</i>	false indigo	5		legume	medium	scarify, inoculate	22,000	7	0.5-2%	3%
<i>Chamaecrista fasciculata</i>	partridge pea	3	14	bunch-type legume, re-seeding annual	high	scarify, inoculate	65,000	65	1-10%	10%
<i>Chasmanthium latifolium</i>	sea oats	4	10	rhizomatous bunchgrass		0	90,000	135	1-40%	15%
<i>Echinacea purpurea</i>	purple coneflower	5	24		high	3 month	116,000	-	1-5%	0%
<i>Elymus virginicus</i>	VA wild rye	3-6	12	cool season bunchgrass		0	73,000	73	1-25%	10%
<i>Eragrostis spectabilis</i>	purple lovegrass	1-3	4	short-rhizomed bunchgrass		0	1,000,000	500	1-5%	5%
<i>Eupatorium coelestinum</i>	mistflower	1-3	14	rhizomatous	very high	2-3 month	1,500,000	-	0.5-2%	0%
<i>Helianthus angustifolius</i>	swamp sunflower	1.5-5	6	rhizomatous multi-stemmed	high	2-3 month	504,000	-	1-5%	0%
<i>Monarda fistulosa</i>	wild bergamot	5	4	rhizomatous	high	0/GA	1,272,500	636	0.3-2%	5%

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<i>Panicum rigidulum</i>	redtop panicgrass	4	6 bunchgrass		3 month	797,000	-	1-50%	0%
<i>Penstemon digitalis</i>	foxglove beardtongue	4	8 rhizomatous	high	3 month	400,000	-	1-5%	0%
<i>Pycnanthemum tenuifolium</i>	narrowleaf mountain mint	2.5	spreading roots	very high	0/GA	6,048,000	1,210	0.1-0.5%	2%
<i>Rudbeckia hirta</i>	black eyed Susan	1-3	10 re-seeds	medium	0/GA	1,576,000	1,576	1-5%	10%
<i>Schizachyrium scoparium</i>	little bluestem	2-3	10-96 bunchgrass		0	200,000	200	10-67%	10%
<i>Solidago rugosa</i>	rough goldenrod	1-3.5	12 rhizomatous	very high	0/GA	1,000,000	500	0.5-1%	5%
<i>Tradescantia virginiana</i>	VA spiderwort	3	4	high	3 month	175,000	-	1-3%	0%

Supplemental Aquatic Seeding					Stratification/ Pre-treatment (highlighted species that can be sown in the near term without stratification)	Seeds/lb	Seeds/lb of mix	Typical Seeding Rate (% of mix)	% of Mix (only includes species that can be sown without cold stratification)
<i>*Alisma subcordatum</i>	water plantain	2	20 single crown	low	3 month	825,000	-	0.5-1%	0%
<i>Peltandra virginica</i>	arrow arum				0	600	3		50%
<i>*Pontederia cordata</i>	pickerelweed	3	10 bunch-type aquatic		0	5,000	25		50%
<i>*Sagittaria latifolia</i>	duck potato	3	18 tuber		3 month	67,000	-	1-10%	0%
<i>Saururus cernuus</i>	lizard tail						-		0%

Brackish Water					Stratification/ Pre-treatment (highlighted species that can be sown in the near term without stratification)	Seeds/lb	Seeds/lb of mix	Typical Seeding Rate (% of mix)	% of Mix (only includes species that can be sown without cold stratification)
<i>Hibiscus moscheutos</i>	marsh hibiscus						-		
<i>Kosteletzkya virginica</i>	seashore mallow						-		
<i>Scirpus pungens</i>	common three-square	4	14 rhizomatous		1-2 month	260,000	-	1-10%	0
<i>Solidago sempervirens</i>	seaside goldenrod						-		