PFO AREA VEGETATION SCHEDULE

PLANTING SCHEDULE / PLANTING QUANTITIES (BASED ON ONE-GALLON SIZE)[4]

CONTAINER PLANTING ZONE		SPECIES GROUP[1,2]	SPECIES[2]	INDICATOR STATUS	PLANT SPACING[3]	CONTAINER SIZE, RATE, AND QUANTITY[4]: PLANTS PER ACRE	# OF PLANTS	AREA (SF): / AREA (AC): / LENGTH (LF):	C	F	I	L	M	P	T	W	Z	AA	FF
								AREA (SF):	712	251	346	1,712	1,027	2,784	282	1,853	2,385	3,374	133
								AREA (AC):	0.016	0.006	0.008	0.039	0.024	0.064	0.006	0.043	0.055	0.077	0.003
								LENGTH (LF):	120	46	61	328	210	-	-	-	-	-	-
PFO FOREST	TREE LAYER	1	QUERCUS BICOLOR (SWAMP WHITE OAK)	FACW+	SEE NOTE #3	200 ONE-GALLON -- or -- 400 TUBELINGS -- or -- MIX AT 1:2 RATIO (SEE NOTE #4)	49 (BASED ON ONE-GALLON)		-	-	-	-	-	13	1	9	11	15	-
			QUERCUS PALUSTRIS (PIN OAK)	FACW															
			QUERCUS PHELLOS (WILLOW OAK)	FAC+															
		2	ACER NEGUNDO (BOX ELDER)	FAC+	SEE NOTE #3	350 ONE-GALLON -- or -- 700 TUBELINGS -- or -- MIX AT 1:2 RATIO (SEE NOTE #4)	85 (BASED ON ONE-GALLON)		-	-	-	-	-	22	2	15	19	27	-
			ACER RUBRUM (RED MAPLE)	FAC															
			BETULA NIGRA (RIVER BIRCH)	FACW															
			CARPINUS CAROLINIANA (IRONWOOD OR MUSCLEWOOD)	FAC															
			LIQUIDAMBAR STYRACIFULA (SWEET GUM)	FAC															
			NYSSA SYLVATICA (BLACK GUM)	FACW+															
			PLATANUS OCCIDENTALIS (AMERICAN SYCAMORE)	FACW-															
		3	SALIX NIGRA (BLACK WILLOW)	FACW+	SEE NOTE #3	200 TUBELINGS -- or -- LIVESTAKES (SEE NOTE #5)	49 (TUBELINGS OR LIVESTAKES ONLY -- SEE NOTE #5)		-	-	-	-	-	13	1	9	11	15	-
	SHRUB LAYER	4	AMELANCHIER CANADENSIS (CANADIAN SERVICEBERRY)	FAC	SEE NOTE #3	150 ONE-GALLON -- or -- 300 TUBELINGS -- or -- MIX AT 1:2 RATIO (SEE NOTE #4)	37 (BASED ON ONE-GALLON)		-	-	-	-	-	10	1	6	8	12	-
			ALNUS SERRULATA (BROOKSIDE ALDER)	OBL															
			CEPHALANTHUS OCCIDENTALIS (BUTTONBUSH)	OBL															
			ILEX VERTICILLATA (COMMON WINTERBERRY)	FACW+															
			LINDERA BENZOIN (NORTHERN SPICEBUSH)	FACW-															
			VIBURNUM DENTATUM (SOUTHERN ARROWWOOD)	FAC															
RIPARIAN FOREST QUANTITY SUBTOTALS						**900**	**220**		**-**	**-**	**-**	**-**	**-**	**58**	**5**	**39**	**49**	**69**	**-**
STREAM BANK	TREE AND SHRUB LAYER	5	CORNUS AMOMUM (SILKY DOGWOOD)	FACW	SEE NOTE #3 (AVERAGES 3' O.C. FOR ONE-GALLON)	N/A	254 (BASED ON ONE-GALLON)		40	15	20	109	70	-	-	-	-	-	-
			ILEX VERTICILLATA (COMMON WINTERBERRY)	FACW+															
			SAMBUCUS CANADENSIS (ELDERBERRY)	FACW-															
			VIBURNUM DENTATUM (SOUTHERN ARROWWOOD)	FAC															
STREAM BANK QUANTITY SUBTOTALS						**---**	**254**		**40**	**15**	**20**	**109**	**70**	**-**	**-**	**-**	**-**	**-**	**-**
STREAM EDGE	TREE AND SHRUB LAYER	6	ALNUS SERRULATA (BROOKSIDE ALDER)	OBL	1' O.C. (SEE NOTES #5, #6)	N/A	765 (TUBELINGS OR LIVESTAKES ONLY -- SEE NOTE #5)		120	46	61	328	210	-	-	-	-	-	-
			CORNUS AMOMUM (SILKY DOGWOOD)	FACW															
			SALIX NIGRA (BLACK WILLOW)	FACW+															
			VIBURNUM DENTATUM (SOUTHERN ARROWWOOD)	FAC															
STREAM EDGE QUANTITY SUBTOTALS						**---**	**765**		**120**	**46**	**61**	**328**	**210**	**-**	**-**	**-**	**-**	**-**	**-**

SEEDING SCHEDULE / SEEDING QUANTITIES

SEED PLANTING ZONE	SPECIES GROUP[1,2]	SPECIES[2]	INDICATOR STATUS	SEEDING RATE[7] (LBS/AC)	AREA PER PLANT (AC)	QUANTITY (LBS)	AREA (SF): / AREA (AC):	C	F	I	L	M	P	T	W	Z	AA	FF
							AREA (SF):	712	251	346	1,712	1,027	2,784	282	1,853	2,385	3,374	133
							AREA (AC):	0.016	0.006	0.008	0.039	0.024	0.064	0.006	0.043	0.055	0.077	0.003
PFO SEED MIX	7	LOLIUM MULTIFLORUM (ANNUAL RYEGRASS)	NI	45.00	0.34	15.37		0.72	0.27	0.36	1.76	1.08	2.88	0.27	1.94	2.48	3.47	0.14
		SETARIA ITALICA (FOXTAIL MILLET) (OR ECHINOCHLOA CRUSGALLI VAR. FRUMENTACEA)	UPL	45.00	0.34	15.37		0.72	0.27	0.36	1.76	1.08	2.88	0.27	1.94	2.48	3.47	0.14
	8	CAREX SCOPARIA (BLUNT BROOM SEDGE)	FACW	0.30	0.34	0.09		0.00	0.00	0.00	0.01	0.01	0.02	0.00	0.01	0.02	0.02	0.00
		CAREX SQUARROSA (SQUARROSE SEDGE)	FACW	0.30	0.34	0.09		0.00	0.00	0.00	0.01	0.01	0.02	0.00	0.01	0.02	0.02	0.00
		CAREX VULPINOIDEA (FOX SEDGE)	OBL	0.30	0.34	0.09		0.00	0.00	0.00	0.01	0.01	0.02	0.00	0.01	0.02	0.02	0.00
		CYPERUS ESCULENTUS (CHUFA)	FACW	0.30	0.34	0.09		0.00	0.00	0.00	0.01	0.01	0.02	0.00	0.01	0.02	0.02	0.00
		JUNCUS EFFUSUS (SOFT RUSH)	FACW+	0.30	0.34	0.09		0.00	0.00	0.00	0.01	0.01	0.02	0.00	0.01	0.02	0.02	0.00
		JUNCUS TENUIS (PATH RUSH)	FAC-	0.30	0.34	0.09		0.00	0.00	0.00	0.01	0.01	0.02	0.00	0.01	0.02	0.02	0.00
	9	ELYMUS RIPARIUS (RIVERBANK WILD RYE)	FACW	10.00	0.34	3.41		0.16	0.06	0.08	0.39	0.24	0.64	0.06	0.43	0.55	0.77	0.03
		ELYMUS VIRGINICUS (VIRGINIA WILD RYE)	FACW-	10.00	0.34	3.41		0.16	0.06	0.08	0.39	0.24	0.64	0.06	0.43	0.55	0.77	0.03
		PANICUM CLANDESTINUM (DEER TONGUE GRASS)	FAC+	10.00	0.34	3.41		0.16	0.06	0.08	0.39	0.24	0.64	0.06	0.43	0.55	0.77	0.03
		PANICUM DICHOTOMIFLORUM (SMOOTH PANIC GRASS)	FACW-	10.00	0.34	3.41		0.16	0.06	0.08	0.39	0.24	0.64	0.06	0.43	0.55	0.77	0.03
	10	ALISMA SUBCORDATA (WATER PLANTAIN)	OBL	0.10	0.34	0.03		0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00
		ASTER NOVAE-ANGLIAE (NEW ENGLAND ASTER)	FACW-	0.10	0.34	0.03		0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00
		ASTER PUNICEUS OR SYMPHOTRICHUM PILOSUM (PURPLE-STEMM	OBL	0.10	0.34	0.03		0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00
		ASTER PRENANTHOIDES (ZIG ZAG ASTER)	FAC	0.10	0.34	0.03		0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00
		LILIUM SUPERBUM (TURKSCAP LILY)	FACW+	0.10	0.34	0.03		0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00
		SCIRPUS CYPERINUS (WOOLGRASS)	FACW+	0.10	0.34	0.03		0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00
	11	EUPATORIUM FISTULOSUS (JOE PYE WEED)	FACW	0.10	0.34	0.03		0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00
		EUPATORIUM PERFOLIATUM (BONESET)	FACW+	0.10	0.34	0.03		0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00
		EUTHAMIA GRAMINIFOLIA (GRASS LEAVED GOLDENROD)	FAC	0.10	0.34	0.03		0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00
		LUDWEGIA ALTERNIFOLIA (BUSHY SEEDBOX)	FACW+	0.10	0.34	0.03		0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00
		VERNONIA NOVEBORACENSIS (NEW YORK IRONWEED)	FACW+	0.10	0.34	0.03		0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00
		ZIZIA AUREA (GOLDEN ALEXANDERS)	FAC	0.10	0.34	0.03		0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00
	12	ASCLEPIAS INCARNATA (SWAMP MILKWEED)	OBL	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		BIDENS FRONDOSA (BEGGAR TICKS)	FACW	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		HELENIUM AUTUMNALE (COMMON SNEEZEWEED)	FACW+	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		HELIANTHUS ANGUSTIFOLIUS (NARROW-LEAF SUNFLOWER)	FACW	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		ONOCLEA SENSIBILIS (SENSITIVE FERN)	FACW	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		PENSTEMON DIGITALIS (PENSTEMON)	FAC	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		VERBENA HASTATA (BLUE VERVAIN)	FACW+	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		VERBESINA ALTERNIFOLIA (WINGSTEM)	FAC	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
	13	LEERSIA ORYZOIDES (RICE CUT GRASS)	OBL	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		POLYGONUM PENSYLVANICUM (PA SMARTWEED)	FACW	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		SENNA HEBECARPA (WILD SENNA)	FAC	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		SOLIDAGO RUGOSA (WRINKLED GOLDENROD)	FAC	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
	14	AMELANCHIER CANADENSIS (CANADIAN SERVICEBERRY)	FAC	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		HAMAMELIS VIRGINIANA (WITCH HAZEL)	FAC-	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		ILEX VERTICILLATA (WINTERBERRY)	FACW+	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		LINDERA BENZOIN (NORTHERN SPICEBUSH)	FACW-	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		PHYSOCARPUS OPULIFOLIUS (COMMON NINEBARK)	FACW-	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		SPIREA TOMENTOSA (STEEPLEBUSH)	FACW	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		VIBURNUM DENTATUM (SOUTHERN ARROW WOOD)	FAC	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
	15	ACER RUBRUM (RED MAPLE)	FAC	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		CARPINUS CAROLINIANA (IRONWOOD OR MUSCLEWOOD)	FAC	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		NYSSA SYLVATICA (BLACK GUM)	FAC	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
		PLATANUS OCCIDENTALIS (AMERICAN SYCAMORE)	FAC	0.20	0.34	0.06		0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.00
SEEDING TOTALS				**137.60**		**46.66**		**2.08**	**0.78**	**1.04**	**5.37**	**3.18**	**8.79**	**0.78**	**5.89**	**7.63**	**10.72**	**0.40**

PLANTING AND SEEDING NOTES:

1. IT IS EXPECTED AND PREFERRED THAT ALL SPECIES IN EACH OF THE SPECIES GROUPS ARE PLANTED. THE TOLERANCES LISTED IN THIS NOTE ARE INTENDED TO INCORPORATE FLEXIBILITY ACCORDING TO SPECIES AVAILABILITY. AT A MINIMUM, CONTRACTOR TO PROVIDE AT LEAST:
   A) 2 OF THE 3 SPECIES IN GROUP 1,
   B) 5 OF THE 7 SPECIES IN GROUP 2,
   C) ALL OF GROUP 3,
   D) 5 OF THE 6 SPECIES IN GROUP 4,
   E) 3 OF THE 4 SPECIES IN GROUP 5,
   F) 3 OF THE 4 SPECIES IN GROUP 6 (WITH SALIX NIGRA A REQUIRED SPECIES),
   G) ALL OF GROUP 7,
   H) 4 OF THE 6 SPECIES IN GROUP 8,
   I) 3 OF THE 4 SPECIES IN GROUP 9,
   J) 5 OF THE 6 SPECIES IN GROUP 10,
   K) 5 OF THE 6 IN GROUP 11,
   L) 6 OF THE 8 IN GROUP 12
   M) 3 OF THE 4 IN GROUP 13,
   N) 5 OF THE 7 IN GROUP 14, AND
   O) 3 OF THE 4 IN GROUP 15.

2. SUBSTITUTIONS FOR SELECTED SPECIES BASED UPON AVAILABILITY SHALL BE REQUESTED IN WRITING TO ENGINEER DOCUMENTING THE LACK OF AVAILABILITY IF THE FLEXIBILITY INHERENT IN THE ABOVE SCHEDULE IS STILL NOT SUFFICIENT. ENGINEER IS UNDER NO OBLIGATION TO APPROVE SUBSTITUTIONS.

3. THE PLANTED TREES AND SHRUBS SHALL BE RANDOMLY SPACED AND SPECIES MIXED THROUGHOUT THE PLANTING AREAS.

4. CONTAINER RATES AND QUANTITIES SHOWN FOR ONE GALLON SIZE. FOR PURPOSES OF SUBSTITUTION, TWO TUBELINGS ARE THE EQUIVALENT OF 1 ONE-GALLON CONTAINER PLANT IN THIS SCHEDULE. CONTRACTOR MAY PROVIDE A MIX OF CONTAINER AND TUBELING SIZES FOR EACH SPECIES REQUIREMENT, PROVIDED THE RATIO OF TUBELINGS TO CONTAINERS IS NOT LESS THAN 2:1. EXCEPTION -- GROUPS 3 AND 6 (SALIX NIGRA AND THE STREAM EDGE) SHALL BE PLANTED IN ACCORDANCE WITH NOTE #5.

5. GROUPS 3 AND 6 (SALIX NIGRA AND THE STREAM EDGE) SHALL BE PLANTED WITH TUBELINGS, OR AS LIVESTAKES (SALIX NIGRA ONLY, AND ONLY BETWEEN FEBRUARY 1 AND MARCH 31). NO ONE GALLONS ARE REQUIRED TO BE USED FOR ANY OF THESE GROUPS' SPECIES.

6. STREAM BANK AND STREAM EDGE ZONES SHALL BE PLANTED SUCH THAT THE COMBINED MIX OF SPECIES IS SPACED APPROX. 3' O.C. AND 1' O.C, RESPECTIVELY. THESE ZONES SHALL NOT BE PLANTED SUCH THAT EACH INDIVIDUAL SPECIES IN THESE ZONES IS PLANTED AT THESE RATES, RESULTING IN TIGHTER SPACING.

7. ALL SEEDING RATES ARE EXPRESSED IN POUNDS OF PURE LIVE SEED (PLS).

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Northern Virginia Stream Restoration Bank
The Glade - Reach 5
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PFO Area Vegetation Schedule

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COMMONWEALTH OF VIRGINIA
FRANK R. GRAZIANO
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PROFESSIONAL ENGINEER

REVISIONS

No.	Date	Description	Rev. By	App. By

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