

ORD Waters of the US Delineation



Photo 465. Tributary 3, Willow Creek, General site, View to the north



Photo 466. Willow Creek - Section 1, Near North sister entrance. View to the north



Photo 467. Willow Creek - Section 1, General site, View to the north



Photo 468. Willow Creek - Section 1, General site, discharge near Middle sister

ORD Waters of the US Delineation



Photo 469. Willow Creek - Section 1, General site, north box culverts. View to the north



Photo 470. Willow Creek - Section 2, General site, View to the south



Photo 471. Willow Creek - Section 2, General site, south discharge



Photo 472. Willow Creek - Section 2, General site, View to the north

ORD Waters of the US Delineation



Photo 473. Willow Creek - Section 2, General site, north box culvert. View to the north



Photo 474. Willow Creek - Section 2, General site, View to the south



Photo 475. Willow Creek - Section 3, General site, View to the north



Photo 476. Willow Creek - Section 3, Willow Creek wracking

ORD Waters of the US Delineation



Photo 477. Willow Creek - Section 3, General site, View to the north



Photo 478. Willow Creek - Section 3, General site, box culvert. View to the north



Photo 479. Willow Creek - Section 3, General site, View to the east



Photo 480. Willow Creek - Section 4, General site, View to the north

ORD Waters of the US Delineation



Photo 481. Willow Creek - Section 4, General site, gabion wall. View to the west



Photo 482. Willow Creek - Section 5, General site, View to the east



Photo 483. Willow Creek - Section 5, General site, View to the west



Photo 484. Willow Creek - Section 6, General site, View to the west

ORD Waters of the US Delineation



Photo 485. Willow Creek - Section 6, General site, west end gabion wall. View to the west



Photo 486. Willow Creek - Section 6, General site, riffles. View to the south



Photo 487. Willow Creek - Section 6, General site, culvert entrance. View to the south



Photo 488. Willow Creek - Section 6, General site, View to the east

ORD Waters of the US Delineation



Photo 489. Willow Creek - Section 6, General site, View to the east



Photo 490. Willow Creek - Section 7, General site, View to the east



Photo 491. Willow Creek - Section 7, General site, View to the west



Photo 492. Willow Creek - Section 8, General site, View to the east

ORD Waters of the US Delineation



Photo 493. Willow Creek - Section 9, General site, View to the east



Photo 494. Willow Creek - Section 9, General site, View to the west



Photo 495. Willow Creek - Section 9, General site, outfall. View to the west



Photo 496. Willow Creek - Section 9, General site, wracking. View to the south

ORD Waters of the US Delineation



Photo 497. SW19-56, General site



Photo 498. SW19-58, General site



Photo 499. SW19-59, General site



Photo 500. Ditch 13 - Section 1. General site, View to the north

ORD Waters of the US Delineation



Photo 501. Ditch 13 - Section 1. General site, View to the south

Appendix L. Floristic Quality Assessment Sheet and Summary

Wetland No	Mean Coefficient of Conservatism (mean C all species)	Floristic Quality Assessment Index (FQAI) (all species)
NW19-01	0.75	1.50
NW19-02	2.17	5.31
NW19-03	0.90	2.85
NW19-04	1.57	4.16
NW19-05	0.00	0.00
NW19-06	1.83	4.49
NW19-07	1.29	3.40
NW19-08	1.00	1.73
NW19-09	0.60	1.34
NW19-10	1.50	3.67
NW19-11	0.00	0.00
NW19-12	2.33	5.72
NE19-13	0.89	2.67
NE19-14	1.10	3.48
NE19-15	1.50	4.74
NE19-16	0.75	1.50
NE19-17	1.00	2.83
NW19-18	2.33	5.72
NE19-19	1.09	3.62
NE19-20	0.50	1.58
NE19-21	1.50	3.00
NE19-22	3.13	8.84
NE19-23	1.00	2.65
SE19-24	0.00	0.00
SE19-25	1.25	2.50
SE19-026	0.00	0.00
SE19-027	1.20	2.68
SW19-028	2.33	5.72
SW19-029	1.43	3.78
SW19-030	2.20	4.92
SW19-031	1.43	3.78
SW19-032	0.67	1.15
SW19-033	1.50	3.67
SW19-034	2.00	3.46
SW19-035	0.75	1.50
SW19-036	3.25	6.50
SW19-037	1.50	3.00
SW19-038	1.67	4.08
NW39 (See Remaining Wetlands)		
SW19-040	1.80	4.02
SE19-041	0.90	2.85
SW19-042	3.20	7.16
SE19-043	0.00	0.00
SW19-044	0.00	0.00

Wetland No	Mean Coefficient of Conservatism (mean C all species)	Floristic Quality Assessment Index (FQAI) (all species)
SW19-045	1.17	2.86
SE19-046	1.57	4.16
SE19-047	0.00	0.00
SE19-048	1.00	3.16
SE19-049	0.75	2.12
SE19-050	1.25	3.54
SE19-051	1.00	2.00
SE19-052	1.11	3.33
SE19-053	2.22	6.67
SE19-054	1.17	2.86
SW19-055/SW120	0.29	0.76
SW19-056	0.60	1.34
SW19-057	0.00	0.00
SE19-058	0.00	0.00
SW19-059	0.43	1.13
SE19-060	0.00	0.00
NE19-061	0.00	0.00
NE19-062	1.14	3.02
SE19-063	0.80	1.79
SE19-064	0.60	1.34
SE19-065	1.75	3.50
SE19-066	0.60	1.34
SE19-067	0.50	1.41
SE19-068	1.89	5.67
NE19-069	0.00	0.00
SW19-070	2.30	7.27
SW19-071	1.38	3.89
SW19-072	1.00	2.00
SW19-073	0.00	0.00
SW19-074	2.27	7.54
NW19-075	1.70	5.38
NW19-076	2.57	6.80
NW19-077	1.17	2.86
NW19-078	1.17	2.86
NW19-079	1.20	2.68
NE19-080	0.00	0.00
NW19-081	2.67	6.53
NW19-082	0.00	0.00
NW19-083	2.20	4.92
NW19-084	0.00	0.00
SE19-085	0.00	0.00
SE19-086	0.00	0.00
NE19-087	0.00	0.00

Wetland No	Mean Coefficient of Conservatism (mean C all species)	Floristic Quality Assessment Index (FQAI) (all species)
NE19-088	0.50	1.22
NE19-089	0.00	0.00
NW19-090	0.00	0.00
NW19-091	0.00	0.00
NW19-092	0.00	0.00
SW19-093	2.14	5.67
SW19-094	0.50	1.00
SE19-095	0.00	0.00
NW19-096	0.71	1.89
SE19-097	0.00	0.00
SE19-098	1.30	4.11
SE19-099	0.75	1.50
SE19-100	0.50	1.22
SW19-101	0.00	0.00
SW19-102	0.00	0.00
NW19-103	0.00	0.00
NE19-104	1.79	6.68
NE19-105	0.73	2.41
NE19-106	1.67	5.77
NE19-107	0.00	0.00
NE19-108	0.00	0.00
NE19-109	1.50	4.24
NE19-110	1.92	6.64
NE19-111	2.63	7.42
NE19-112	1.60	3.58
NE19-113	1.00	2.83
SE19-114	0.43	1.13
SE19-115	1.17	2.86
NE19-116	0.00	0.00
NE19-117	1.67	4.08
NE19-118	2.00	5.29
SE19-119	0.00	0.00
SE19-120	0.00	0.00
SE19-121	0.86	2.27
SE19-122	0.75	1.50
SE19-123	0.77	2.77
SE19-124	0.43	1.13
SE19-125	0.00	0.00
NE19-126	0.57	1.51
SE19-127	0.50	1.22
NE19-128	0.60	1.34
SE19-129	0.67	1.63
SE19-130	1.22	3.67

Wetland No	Mean Coefficient of Conservatism (mean C all species)	Floristic Quality Assessment Index (FQAI) (all species)
SE19-131	0.25	0.71
SE19-132	0.50	1.22
SE19-133	0.75	1.50
SE19-134	0.75	1.50
SE19-135	0.50	1.22
SE19-136	0.50	1.22
SE19-137	0.67	2.31
SE19-138	0.13	0.35
SE19-139	1.17	4.04
NE19-140	0.88	2.47
SW19-141	1.17	4.04
SW19-142	0.00	0.00
SE19-143	0.00	0.00
SE19-144	0.80	1.79
SE19-145	1.14	3.02
SW19-146	1.00	2.24

Remaining Wetland No	Mean Coefficient of Conservatism (mean C all species)	Floristic Quality Assessment Index (FQAI) (all species)
SE01	0.50	1.00
NW39/NW01	1.31	5.25
NE41	3.00	9.00
SE62	1.00	2.00
SE64	0.44	1.33
NE65	1.00	3.16

NW19-01

Inventory Calculator											Conservation-Based Metrics	
Species Acronym	Species Name (NWPL/Mehlenbeck)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity		
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (native species)	3.00
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	Mean C (all species)	0.75
SCHPRA	Schedonorus pratensis	FESTUCA ELATIOR	Meadow False Rye Grass	0	FACU	FACU	1	Grass	Perennial	Adventive	Mean C (native trees)	n/a
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	3.00
											FQAI (native species)	3.00
											FQAI (all species)	1.00
											Adjusted FQAI	16.00
											% C value 0	75%
											% C value 1-3	25%
											% C value 4-6	0%
											% C value 7-10	0%
											Additional Metrics	
											Species Richness (all)	4
											Species Richness (native)	1
											% Non-native	75%
											Wet Indicator (all)	-1.25
											Wet Indicator (native)	-2.00
											% hydrophyte (Midwest)	75%
											% native perennial	0%
											% native annual	25%
											% annual	25%
											% perennial	75%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-02

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbreck)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
ALISUB	Alisma subcordatum	Alisma subcordatum	American Water-Plantain	3	OBL	OBL	-2	Forb	Perennial	Native	Mean C (native species) 4.33 Mean C (all species) 2.17 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 4.33 FQAI (native species) 7.51 FQAI (all species) 6.31 Adjusted FQAI 30.64 % C value 0 90% % C value 1-3 33% % C value 4-6 0% % C value 7-10 17%	
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native		
JUNHOO	Juncus nodosus	Juncus nodosus	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native		
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive		
PRUVULV	Prunella vulgaris ssp. vulgaris	PRUNELLA VULGARIS	Common Selfheal	0	FAC	FAC	0	Forb	Perennial	Adventive		
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive		
Additional Metrics												
Species Richness (all)											6	
Species Richness (native)											3	
% Non-native											50%	
Wet Indicator (all)											-1.50	
Wet Indicator (native)											-1.67	
% hydrophyte (Midwest)											100%	
% native perennial											50%	
% native annual											0%	
% annual											0%	
% perennial											100%	

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-003

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CXSTIP	Carex stipata	Carex stipata	Stalk-Grass Sedge	4	OBL	OBL	-2	Sedge	Perennial	Native	Mean C (native species) 1.50 Mean C (all species) 0.90 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 1.50 FOAI (native species) 3.67 FOAI (all species) 2.85 Adjusted FOAI 11.62 % C value 0 70% % C value 1-3 20% % C value 4-6 10% % C value 7-10 0%
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
HORJUB	Hordeum jubatum	HORDEUM JUGATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
JUNTEN	Juncus tenuis	Juncus tenuis	Lesser Poverty Rush	0	FAC	FAC	0	Forb	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
PERPEN	Persicaria pennsylvanica	Polygonum pennsylvanicum	Piskweed	0	FACW	FACW	-1	Forb	Annual	Native	
PLALAN	Plantago lanceolata	PLANTAGO LANCEOLATA	English Plantain	0	FACU	FACU	1	Forb	Perennial	Adversive	
RUMCRI	Rumex crispus	RUMEX CRISPUS	Cutty Dock	0	FAC	FAC	0	Forb	Perennial	Adversive	
TRIPEP	Trifolium repens	TRIFOLIUM REPENS	White Clover	0	FACU	FACU	1	Forb	Perennial	Adversive	
Additional Metrics											
Species Richness (all)										10	
Species Richness (native)										6	
% Non-native										40%	
Wet Indicator (all)										-0.60	
Wet Indicator (native)										-1.00	
% hydrophyte (Midwest)										80%	
% native perennial										40%	
% native annual										20%	
% annual										20%	
% perennial										80%	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-04

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
CXSTIP	Carex stipata	Carex stipata	Stalk-Grass Sedge	4	OBL	OBL	-2	Sedge	Perennial	Native		
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native		
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive		
PHAAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive		
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive		
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native		
SALNIG	Salix nigra	Salix nigra	Black Willow	5	OBL	OBL	-2	Tree	Perennial	Native		
										Mean C (native species)		2.75
										Mean C (all species)		1.57
										Mean C (native trees)	2.50	
										Mean C (native shrubs)	n/a	
										Mean C (native herbaceous)	3.00	
										FOAI (native species)	5.50	
										FOAI (all species)	4.15	
										Adjusted FOAI	20.79	
										% C value 0	67%	
										% C Value 1-3	14%	
										% C value 4-6	25%	
										% C value 7-10	0%	
Additional Metrics												
Species Richness (all)										7		
Species Richness (native)										4		
% Non-native										43%		
Wet Indicator (all)										-1.25		
Wet Indicator (native)										-1.25		
% hydrophyte (Midwest)										100%		
% native perennial										57%		
% native annual										0%		
% annual										0%		
% perennial										100%		

USACE Chicago Region FOA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-05

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mehlenbeck)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	Mean C (native species) 0.00
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (all species) 0.00
											Mean C (native trees) n/a
											Mean C (native shrubs) n/a
											Mean C (native herbaceous) n/a
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 2
											Species Richness (native) 0
											% Non-native 100%
											Wet Indicator (all) -1.50
											Wet Indicator (native) 0.00
											% hydrophyte (Midwest) 100%
											% native perennial 0%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

Inventory Calculator

Species Acronym	Species Name (NWPL/Mohlenbreck)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics		
ECHCRU	Echinochloa crus-galli	Echinochloa crusgali	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native			
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native			
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native			
JUNWO	Juncus nodosus	Juncus nodosus	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native			
PERSIPEN	Persicaria pensylvanica	Polygonum.pensylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native			
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive			
												Mean C (native species)	2.20
												Mean C (all species)	1.63
												Mean C (native trees)	n/a
												Mean C (native shrubs)	n/a
												Mean C (native herbaceous)	2.20
												FOAI (native species)	4.92
												FOAI (all species)	4.49
												Adjusted FOAI	20.08
												% C value 0	67%
												% C value 1-3	17%
												% C value 4-6	0%
												% C value 7-10	17%
											Additional Metrics		
											Species Richness (all)	6	
											Species Richness (native)	5	
											% Non-native	17%	
											Wet Indicator (all)	-1.33	
											Wet Indicator (native)	-1.20	
											% hydrophyte (Midwest)	100%	
											% native perennial	33%	
											% native annual	50%	
											% annual	50%	
											% perennial	50%	

NW19-07

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbreck)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ALISUB	<i>Aisma subcordatum</i>	<i>Aisma subcordatum</i>	American Water-Plantain	3	OBL	OBL	-2	Forb	Perennial	Native	
ELEOBT	<i>Eleocharis obtusa</i>	<i>Eleocharis ovata</i>	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
LYTSAL	<i>Lythrum salicaria</i>	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	
PHAARU	<i>Phalaris arundinacea</i>	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive	
PHRAUSU	<i>Phragmites australis</i> ssp. <i>australis</i>	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	
SCHTAB	<i>Schoenoplectus tabernaemontani</i>	<i>Scirpus validus creber</i>	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	
TYPANG	<i>Typha angustifolia</i>	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-08

Inventory Calculator											Conservation-Based Metrics	
Species Acronym	Species Name (NWPL/Mehlenbeck)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity		
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FAC/N	FAC	-1	Grass	Annual	Native	Mean C (native species)	1.00
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (all species)	1.00
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	Mean C (native trees)	n/a
											Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	1.00
											FQAI (native species)	1.73
											FQAI (all species)	1.73
											Adjusted FQAI	10.00
											% C value 0	67%
											% C value 1-3	33%
											% C value 4-6	0%
											% C value 7-10	0%
											Additional Metrics	
											Species Richness (all)	3
											Species Richness (native)	3
											% Non-native	0%
											Wet Indicator (all)	-1.00
											Wet Indicator (native)	-1.00
											% hydrophyte (Midwest)	100%
											% native perennial	33%
											% native annual	67%
											% annual	67%
											% perennial	33%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-09

Inventory Calculator											Conservatism-Based Metrics
Species Acronym	Species Name (NWPL/Mehlenbeck)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OB1	OB1	-2	Sedge	Annual	Native	Mean C (native species) 1.50
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	Mean C (all species) 0.50
PHAAJU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (native trees) n/a
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adventive	Mean C (native shrubs) n/a
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OB1	OB1	-2	Forb	Perennial	Adventive	Mean C (native herbaceous) 1.50
											FOAI (native species) 2.12
											FOAI (all species) 1.24
											Adjusted FOAI 9.48
											% C value 0 80%
											% C value 1-3 20%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
										Species Richness (all)	
										Species Richness (native)	
										% Non-native	
										Wet Indicator (all)	
										Wet Indicator (native)	
										% hydrophyte (Midwest)	
										% native perennial	100%
										% native annual	20%
										% annual	20%
										% perennial	80%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-10

Inventory Calculator											
Species Acronym	Species Name (NWP/Mohlenbeck)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
PHARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (native species) 3.00 Mean C (all species) 1.50 Mean C (native trees) n/a Mean C (native shrubs) 2.00 Mean C (native herbaceous) 3.00 FOAI (native species) 5.20 FOAI (all species) 3.67 Adjusted FOAI 21.21 % C value 0 50% % C value 1-3 33% % C value 4-6 17% % C value 7-10 0%
PHRAUS	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	
SALINT	Salix interior	Salix interior	Sandbar Willow	2	FACW	FACW	-1	Shrub	Perennial	Native	
SCHTAB	Schoenoplectus tabernaemontani	Scirpus validus creber	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	
TYPANG	Typha angustifolia	TYPHA ANGSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	
VERHAS	Verbena hastata	Verbena hastata	Simpser's-Joy	4	FACW	FACW	-1	Forb	Perennial	Native	
											Additional Metrics
											Species Richness (all) 6
											Species Richness (native) 3
											% Non-native 50%
											Wet Indicator (all) -1.33
											Wet Indicator (native) -1.33
											% hydrophyte (Midwest) 100%
											% native perennial 50%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-11

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbreck)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adverse		
											Mean C (native species)	0.00
											Mean C (all species)	0.00
											Mean C (native trees)	n/a
											Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	n/a
											FQAI (native species)	0.00
											FQAI (all species)	0.00
											Adjusted FQAI	0.00
											% C value 0	100%
											% C Value 1-3	0%
											% C value 4-6	0%
											% C value 7-10	0%
											Additional Metrics	
											Species Richness (all)	1
											Species Richness (native)	0
											% Non-native	100%
											Wet Indicator (all)	-1.00
											Wet Indicator (native)	0.00
											% hydrophyte (Midwest)	100%
											% native perennial	0%
											% native annual	0%
											% annual	0%
											% perennial	100%

NW19-12

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
APOCAN	Apocynum cannabinum	Apocynum sibiricum	Indian-Hemp	2	FAC	FAC	0	Forb	Perennial	Native	Conservatism-Based Metrics Mean C (native species) 2.00 Mean C (all species) 2.33 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 3.25 FOAI (native species) 6.25 FOAI (all species) 6.72 Adjusted FOAI 26.56 % C value 0 17% % C Value 1-3 60% % C value 4-6 33% % C value 7-10 0%
CXSTIP	Carex stipata	Carex stipata	Stalk-Grass Sedge	4	OBL	OBL	-2	Sedge	Perennial	Native	
ELEGBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Flush	3	OBL	OBL	-2	Sedge	Annual	Native	
LYCAME	Lycopus americanus	Lycopus americanus	Cut-Leaf Water-Horehound	4	OBL	OBL	-2	Forb	Perennial	Native	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
VITRIP	Vitis riparia	Vitis riparia var. sylvestris	River-Bank Grape	1	FACW	FAC	-1	Vine	Perennial	Native	
											Additional Metrics
											Species Richness (all) 6
											Species Richness (native) 5
											% Non-native 17%
											Wet Indicator (all) -1.33
											Wet Indicator (native) -1.40
											% hydrophyte (Midwest) 100%
											% native perennial 67%
											% native annual 17%
											% annual 17%
											% perennial 83%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-13

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native		
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native		
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive		
PERPEN	Panicum pensylvanicum	Polygonum pensylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native		
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive		
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adversive		
SCHTAB	Schoenoplectus tabernaemontani	Scirpus validus oreber	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native		
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive		
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive		
											Mean C (native species)	2.90
											Mean C (all species)	0.99
											Mean C (native trees)	n/a
											Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	2.00
											FQAI (native species)	4.00
											FQAI (all species)	2.67
											Adjusted FQAI	13.33
											% C value 0	67%
											% C Value 1-3	33%
											% C value 4-6	0%
											% C value 7-10	0%
											Additional Metrics	
											Species Richness (all)	9
											Species Richness (native)	4
											% Non-native	66%
											Wet Indicator (all)	-1.33
											Wet Indicator (native)	-1.50
											% hydrophyte (Midwest)	100%
											% native perennial	22%
											% native annual	22%
											% annual	22%
											% perennial	78%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-014

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
HORJUB	<i>Hordeum jubatum</i>	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	Mean C (native species) 2.75 Mean C (all species) 1.10 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.75 FOAI (native species) 6.60 FOAI (all species) 3.40 Adjusted FOAI 17.36 % C value 0 00% % C value 1-3 10% % C value 4-6 0% % C value 7-10 10%
JUNNOO	<i>Junus nodosus</i>	Junus nodosus	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native	
LYTSAL	<i>Lythrum salicaria</i>	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
PERLAP	<i>Panicum lapathifolia</i>	panicum lapathifolium, PNI VERNUM CRABGRASS	Dock-Leaf Smartweed	0	FACW	FACW	-1	Forb	Annual	Native	
PHRAUSU	<i>Phragmites australis ssp. australis</i>	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
RUMCRI	<i>Rumex crispus</i>	RUMEX CRISPUS	Cutty Dock	0	FAC	FAC	0	Forb	Perennial	Adversive	
SCHITAB	<i>Schoenoplectus tabernaemontani</i>	Scopus validus creber	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	
SISALT	<i>Sisymbrium altissimum</i>	SISYMBRIUM ALTISSIMUM	Tall Hedge-Mustard	0	FACU	FACU	1	Forb	Annual	Adversive	
SONARV	<i>Sonchus arvensis</i>	SONCHUS ARVENSIS	Field Sow-Thistle	0	FACU	FACU	1	Forb	Perennial	Adversive	
TYPANG	<i>Typha angustifolia</i>	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
											Additional Metrics
											Species Richness (all) 10
											Species Richness (native) 4
											% Non-native 60%
											Wet Indicator (all) -0.80
											Wet Indicator (native) -1.25
											% hydrophyte (Midwest) 80%
											% native perennial 30%
											% native annual 10%
											% annual 20%
											% perennial 80%

USACE Chicago Region FGA Calculator 12.12.17

NE19-15

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
ECHGRU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native		
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native		
JUNNOO	Juncus nodosus	Juncus nodosus	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native		
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive		
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive		
RUMCRI	Rumex crispus	RUMEX CRISPUS	Cutty Dock	0	FAC	FAC	0	Forb	Perennial	Adversive		
SCIRLU	Schoenoplectus fluviatilis	Schoenoplectus fluviatilis, Schoenoplectus fluviatilis	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native		
SCHTAB	Schoenoplectus tabernaemontani	Schoenoplectus tabernaemontani	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native		
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive		
SYMSUB	Symphoricarpos subulatum	ASTER SUBULATUS	Seaside American-Aster	0	OBL	FACW	-2	Forb	Annual	Adversive		
											Mean C (native species)	3.00
											Mean C (all species)	1.50
											Mean C (native trees)	n/a
											Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	3.00
											FOAI (native species)	6.71
											FOAI (all species)	4.74
											Adjusted FOAI	21.21
											% C value 0	70%
											% C value 1-3	10%
											% C value 4-6	10%
											% C value 7-10	10%
Additional Metrics												
Species Richness (all)											10	
Species Richness (native)											5	
% Non-native											50%	
Wet Indicator (all)											-1.30	
Wet Indicator (native)											-1.40	
% hydrophyte (Midwest)											100%	
% native perennial											40%	
% native annual											10%	
% annual											20%	
% perennial											80%	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-16

Inventory Calculator										
Species Acronym	Species Name (NWPL/Mohlenbreck)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native
PERMAC	Persicaria maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adventive
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive
										Conservatism-Based Metrics Mean C (native species) 1.50 Mean C (all species) 0.75 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 1.50 FGAI (native species) 2.12 FGAI (all species) 1.50 Adjusted FGAJ 10.61 % C value 0 75% % C value 1-3 25% % C value 4-6 0% % C value 7-10 0%
										Additional Metrics Species Richness (all) 4 Species Richness (native) 2 % Non-native 50% Wet Indicator (all) -1.25 Wet Indicator (native) -1.50 % hydrophyte (Midwest) 100% % native perennial 0% % native annual 55% % annual 75% % perennial 25%

NE19-17

Inventory Calculator											
Species Acronym	Species Name (NWP/Mohlenbeck)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
AGRSO	Agrostis stolonifera	Agrostis alba palustris	Spreading Bent	2	FACW	FACW	-1	Grass	Perennial	Native	Mean C (native species) 2.00 Mean C (all species) 1.00 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.00 FOAI (native species) 4.00 FOAI (all species) 2.83 Adjusted FOAI 14.14 % C value 0 63% % C value 1-3 36% % C value 4-6 0% % C value 7-10 0%
AJSUB	Alisma subcordatum	Alisma subcordatum	American Water-Plantain	3	OBL	OBL	-2	Forb	Perennial	Native	
ELEOB	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	
PHRAUS	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	
											Additional Metrics
											Species Richness (all) 8
											Species Richness (native) 4
											% Non-native 50%
											Wet Indicator (all) -1.38
											Wet Indicator (native) -1.25
											% hydrophyte (Midwest) 100%
											% native perennial 36%
											% native annual 13%
											% annual 13%
											% perennial 86%

USACE Chicago Region FOA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-18

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ECHGRU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
JUNNDO	Juncus nodosus	Juncus nodosus	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native	
POAPRA	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0	FAC	FACU	0	Grass	Perennial	Adversive	
SCHPRA	Schedonorus pratensis	FESTUCA ELATIOR	Meadow False Rye Grass	0	FACU	FACU	1	Grass	Perennial	Adversive	
SCHTAB	Schoenoplectus tabernaemontani	Scirpus validus onibar.	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	

USACE Chicago Region FOA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-019

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
AGRSO	Agrostis stolonifera	Agrostis alba palustris	Spreading Bent	2	FACW	FACW	-1	Grass	Perennial	Native	Mean C (native species) 2.00 Mean C (all species) 1.09 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.00 FQAI (native species) 4.90 FQAI (all species) 3.62 Adjusted FQAI 14.77 % C value 0 64% % C Value 1-3 27% % C Value 4-6 9% % C Value 7-10 0%
ATRPAT	Atriplex patula	ATRIplex PATULA	Halberd-Leaf Orache	0	FACW	FACW	-1	Forb	Annual	Adversive	
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blant Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adversive	
SCIRLU	Scheuchzeria palustris	Scheuchzeria palustris	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native	
SCHTAB	Scheuchzeria palustris	Scheuchzeria palustris	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
											Additional Metrics
											Species Richness (all) 11
											Species Richness (native) 6
											% Non-native 46%
											Wet Indicator (all) -1.18
											Wet Indicator (native) -1.33
											% hydrophyte (Midwest) 100%
											% native perennial 36%
											% native annual 18%
											% annual 27%
											% perennial 73%

USACE Chicago Region FQA Calculator 12.12.17

NE19-20

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbreck)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
DIPLAC	Dipsacus laetifolius	DIPSACUS LACINIATUS	Cut-Leaf Tassel	0	UPL	FACU	2	Forb	Biennial	Adventive	Mean C (native species)1.00 Mean C (all species)0.50 Mean C (native trees)0.00 Mean C (native shrubs)0.00 Mean C (native herbaceous)2.00 FQAI (native species)2.24 FQAI (all species)1.58 Adjusted FQAI7.07 % C value 080% % C value 1-310% % C value 4-610% % C value 7-100%
FRAVIR	Fragaria virginiana	Fragaria virginiana	Virginia Strawberry	0	FACU	FACU	1	Forb	Perennial	Native	
JUNVIR	Juniperus virginiana	Juniperus virginiana crebra	Eastern Red Cedar	0	FACU	FACU	1	Tree	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	
POPDIL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native	
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckhorn	0	FAC	FAC	0	Shrub	Perennial	Adventive	
SOLGIG	Solidago gigantea	Solidago gigantea	Late Goldenrod	4	FACW	FACW	-1	Forb	Perennial	Native	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive	
VITRIP	Vitis riparia	Vitis riparia var. sylvestris	River-Bank Grape	1	FACW	FAC	-1	Vine	Perennial	Native	
Additional Metrics											
Species Richness (all)10											
Species Richness (native)5											
% Non-native50%											
Wet Indicator (all)-0.20											
Wet Indicator (native)0.00											
% hydrophyte (Midwest)70%											
% native perennial50%											
% native annual0%											
% annual0%											
% perennial90%											

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

Inventory Calculator

Species Acronym	Species Name (NWPL/Mohlenbreck)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
AGRSO	Agrostis stolonifera	Agrostis alba palustris	Spreading Bent	2	FACW	FACW	-1	Grass	Perennial	Native		
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native		
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive		
SCIFLU	Scheuchzeria palustris	Scheuchzeria palustris Rivularia	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native		
											Mean C (native species)	2.00
											Mean C (all species)	1.50
											Mean C (native trees)	n/a
											Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	2.00
											FOAI (native species)	3.46
											FOAI (all species)	3.00
											Adjusted FOAI	17.32
											% C value 0	50%
											% C value 1-3	25%
											% C value 4-6	25%
											% C value 7-10	0%
											Additional Metrics	
											Species Richness (all)	4
											Species Richness (native)	3
											% Non-native	25%
											Wet Indicator (all)	-1.00
											Wet Indicator (native)	-1.00
											% hydrophyte (Midwest)	100%
											% native perennial	75%
											% native annual	0%
											% annual	0%
											% perennial	100%

NE19-22

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
ALISUB	Alisma subcordatum	Alisma subcordatum	American Water-Plantain	3	OBL	OBL	-2	Forb	Perennial	Native		
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native		
JUNNOD	Juncus nodosus	Juncus nodosus	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native		
LEMMIO	Lemna minor	Lemna minor	Common Duckweed	5	OBL	OBL	-2	Forb	Annual	Native		
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive		
PERPEN	Persicaria pensylvanica	Polygonum pensylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native		
SAGLAT	Sagittaria latifolia	Sagittaria latifolia	Duck-Potato	3	OBL	OBL	-2	Forb	Perennial	Native		
SCHTAB	Scheuchzeria palustris	Scheuchzeria palustris	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native		
											Mean C (native species)	3.57
											Mean C (all species)	3.13
											Mean C (native trees)	n/a
											Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	3.57
											FOAI (native species)	9.45
											FOAI (all species)	8.84
											Adjusted FOAI	33.41
											% C value 0	25%
											% C Value 1-3	60%
											% C value 4-6	13%
											% C value 7-10	13%
											Additional Metrics	
											Species Richness (all)	8
											Species Richness (native)	7
											% Non-native	13%
											Wet Indicator (all)	-1.88
											Wet Indicator (native)	-1.86
											% hydrophyte (Midwest)	100%
											% native perennial	50%
											% native annual	38%
											% annual	36%
											% perennial	63%

USACE Chicago Region FOA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-24

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
PHRAUSU	<i>Phragmites australis</i> ssp. <i>australis</i>	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	Mean C (native species) 0.00
SOLSEM	<i>Solidago sempervirens</i>	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	Mean C (all species) 0.00
											Mean C (native trees) n/a
											Mean C (native shrubs) n/a
											Mean C (native herbaceous) n/a
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
											Additional Metrics
											Species Richness (all) 2
											Species Richness (native) 0
											% Non-native 100%
											Wet Indicator (all) -1.00
											Wet Indicator (native) 0.00
											% hydrophyte (Midwest) 100%
											% native perennial 0%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-025

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
AGRSTO	Agrostis stolonifera	Agrostis alba palustris	Spreading Bent	2	FACW	FACW	-1	Grass	Perennial	Native	Mean C (native species)	1.25
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (all species)	1.25
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (native trees)	n/a
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	1.25
											FOAI (native species)	2.50
											FOAI (all species)	2.50
											Adjusted FOAI	12.50
											% C value 0	60%
											% C Value 1-3	60%
											% C value 4-6	0%
											% C value 7-10	0%
Additional Metrics												
											Species Richness (all)	4
											Species Richness (native)	4
											% Non-native	0%
											Wet Indicator (all)	-1.25
											Wet Indicator (native)	-1.25
											% hydrophyte (Midwest)	100%
											% native perennial	50%
											% native annual	50%
											% annual	60%
											% perennial	50%

USACE Chicago Region FGA Calculator 12.12.17

SE19-026

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlesbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 0.00
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 0.00
JUNTEN	Juncus tenuis	Juncus tenuis	Lesser Poverty Rush	0	FAC	FAC	0	Forb	Perennial	Native	Mean C (native trees) n/a
TRIREP	Trifolium repens	TRIFOLIUM REPENS	White Clover	0	FACU	FACU	1	Forb	Perennial	Adventive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 0.00
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 3
											% Non-native 25%
											Wet Indicator (all) -0.25
											Wet Indicator (native) -0.67
											% hydrophyte (Midwest) 75%
											% native perennial 50%
											% native annual 25%
											% annual 25%
											% perennial 75%

SE19-027

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
AGRSTO	Agrostis stolonifera	Agrostis alba palustris	Spreading Bent	2	FACW	FACW	-1	Grass	Perennial	Native	Mean C (native species) 2.00 Mean C (all species) 1.20 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.00 FQAI (native species) 3.46 FQAI (all species) 2.60 Adjusted FQAI 16.49 % C value 0 60% % C Value 1-3 20% % C value 4-6 20% % C value 7-10 0%
HORIUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	
SCIRLU	Schoenoplectus fluviatilis	SCIRPUS FLUVIATILIS, SCHOENOPLECTUS FLUVIATILIS	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native	
Additional Metrics											
Species Richness (all)										5	
Species Richness (native)										3	
% Non-native										40%	
Wet Indicator (all)										-1.20	
Wet Indicator (native)										-1.00	
% hydrophyte (Midwest)										100%	
% native perennial										60%	
% native annual										0%	
% annual										0%	
% perennial										100%	

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-028

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics Mean C (native species)3.50 Mean C (all species)2.33 Mean C (native trees)n/a Mean C (native shrubs)n/a Mean C (native herbaceous)3.50 FQAI (native species)7.00 FQAI (all species)5.72 Adjusted FQAI26.68 % C value 050% % C value 1-333% % C value 4-60% % C value 7-1017% Additional Metrics Species Richness (all)6 Species Richness (native)4 % Non-native33% Wet Indicator (all)-1.83 Wet Indicator (native)-1.75 % hydrophyte (Midwest)100% % native perennial50% % native annual17% % annual17% % perennial83%
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
JUNWOO	Juncus nodosus	Juncus nodosus	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	
SCHTAS	Schoenoplectus tabernaemontani	Scirpus validus creber	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-029

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ALISUB	Alisma subcordatum	Alisma subcordatum	American Water-Plantain	3	OB1	OB1	-2	Forb	Perennial	Native	
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Slant Spike-Rush	3	OB1	OB1	-2	Sedge	Annual	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OB1	OB1	-2	Forb	Perennial	Adversive	
SCIRLU	Scheuchzeria palustris	Scheuchzeria palustris, scorzonerosus flustralis	River Club-Rush	4	OB1	OB1	-2	Sedge	Perennial	Native	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OB1	OB1	-2	Forb	Perennial	Adversive	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-030

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ECHGRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Conservatism-Based Metrics Mean C (native species) 2.75 Mean C (all species) 2.20 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.75 FOAI (native species) 6.60 FOAI (all species) 4.92 Adjusted FOAI 24.60 % C value 0 60% % C Value 1-3 20% % C value 4-6 0% % C value 7-10 20%
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
JUNNDO	Juncus nodosus	Juncus nodosus	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native	
PERPEN	Persicaria pensylvanica	Polygonum pensylvanicum	Pickweed	0	FACW	FACW	-1	Forb	Annual	Native	
TYPANG	Typha angustifolia	TYPHA.ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
											Additional Metrics Species Richness (all) 5 Species Richness (native) 4 % Non-native 20% Wet Indicator (all) -1.60 Wet Indicator (native) -1.60 % hydrophyte (Midwest) 100% % native perennial 20% % native annual 60% % annual 60% % perennial 40%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-031

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
PERPEN	Persicaria pensylvanica	Polygonum pensylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	
SCIRLU	Schoenoplectus fluviatilis	Soropus fluviatilis, Soroposchoenus fluviatilis	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native	
SCHTAB	Schoenoplectus tabernaemontani	Sorpus validus oreber	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	

SW19-032

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
AGRSTO	Agrostis stolonifera	Agrostis alba palustris	Spreading Bent	2	FACW	FACW	-1	Grass	Perennial	Native	Mean C (native species)	1.00
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species)	0.67
TYPANG	Typha angustifolia	TYPHA.ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	CGL	CGL	-2	Forb	Perennial	Adventive	Mean C (native trees)	n/a
											Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	1.00
											FQAI (native species)	1.41
											FQAI (all species)	1.15
											Adjusted FQAI	0.16
											% C value 0	67%
											% C value 1-3	33%
											% C value 4-6	0%
											% C value 7-10	0%
Additional Metrics												
Species Richness (all)											3	
Species Richness (native)											2	
% Non-native											33%	
Wet Indicator (all)											-1.33	
Wet Indicator (native)											-1.00	
% hydrophyte (Midwest)											100%	
% native perennial											33%	
% native annual											33%	
% annual											33%	
% perennial											67%	

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

Inventory Calculator

Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
AGRSTO	Agrostis stolonifera	Agrostis alba palustris	Spreading Bent	2	FACW	FACW	-1	Grass	Perennial	Native	Mean C (native species)	1.00
ECHGRU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species)	1.60
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (native trees)	n/a
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	Mean C (native shrubs)	n/a
SCIFLU	Schoenoplectus fluviatilis	schoenoplectus fluviatilis	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native	Mean C (native herbaceous)	1.00
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	FQAI (native species)	4.02
											FQAI (all species)	3.67
											Adjusted FQAI	16.43
											% C value 0	60%
											% C value 1-3	35%
											% C value 4-6	17%
											% C value 7-10	0%
Additional Metrics												
											Species Richness (all)	6
											Species Richness (native)	5
											% Non-native	17%
											Wet Indicator (all)	-1.33
											Wet Indicator (native)	-1.20
											% hydrophyte (Midwest)	100%
											% native perennial	50%
											% native annual	35%
											% annual	35%
											% perennial	67%

SW19-034

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	GBL	GBL	-2	Sedge	Annual	Native	Mean C (native species) 3.00
SCHTAB	Schoenoplectus tabernaemontani	Scirpus validus ontari	Soft-Stem Club-Rush	3	GBL	GBL	-2	Sedge	Perennial	Native	Mean C (all species) 2.00
TYPANG	Typha angustifolia	TYPHA.ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	GBL	GBL	-2	Forb	Perennial	Adventive	Mean C (native trees) n/a
											Mean C (native shrubs) n/a
											Mean C (native herbaceous) 3.00
											FOAI (native species) 4.24
											FOAI (all species) 3.46
											Adjusted FOAI 24.49
											% C value 0 33%
											% C Value 1-3 67%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 3
											Species Richness (native) 2
											% Non-native 33%
											Wet Indicator (all) -2.00
											Wet Indicator (native) -2.00
											% hydrophyte (Midwest) 100%
											% native perennial 33%
											% native annual 33%
											% annual 33%
											% perennial 67%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-035

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
RUMCRI	<i>Rumex crispus</i>	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adventive	Mean C (native species) 3.00
SCHTAB	<i>Schoenoplectus tabernaemontani</i>	Sorpus validus ontari	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	Mean C (all species) 0.75
SOLSDM	<i>Solidago sempervirens</i>	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive	Mean C (native trees) n/a
TYPANG	<i>Typha angustifolia</i>	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 3.00
											FQAI (native species) 3.00
											FQAI (all species) 1.60
											Adjusted FQAI 16.00
											% C value 0 75%
											% C Value 1-3 25%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 1
											% Non-native 75%
											Wet Indicator (all) -1.25
											Wet Indicator (native) -2.00
											% hydrophyte (Midwest) 100%
											% native perennial 25%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-036

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
AGRSTO	<i>Agrostis stolonifera</i>	<i>Agrostis alba palustris</i>	Spreading Bent	2	FACW	FACW	-1	Grass	Perennial	Native	Mean C (native species) 3.25
ECHDRU	<i>Echinochloa crus-galli</i>	<i>Echinochloa crus-galli</i>	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 3.25
ELEOBT	<i>Eleocharis obtusa</i>	<i>Eleocharis ovata</i>	Blunt Spike-flush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (native trees) n/a
JUNNOO	<i>Juncus nodosus</i>	<i>Juncus nodosus</i>	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 3.25
											FQAI (native species) 6.50
											FQAI (all species) 6.50
											Adjusted FQAI 32.50
											% C value 0 25%
											% C Value 1-3 60%
											% C value 4-6 0%
											% C value 7-10 25%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 4
											% Non-native 0%
											Wet Indicator (all) -1.50
											Wet Indicator (native) -1.50
											% hydrophyte (Midwest) 100%
											% native perennial 50%
											% native annual 50%
											% annual 50%
											% perennial 50%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-037

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ELEOBT	<i>Eleocharis obtusa</i>	<i>Eleocharis ovata</i>	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (native species) 3.00
PHRAUSU	<i>Phragmites australis</i> ssp. <i>australis</i>	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	Mean C (all species) 1.50
SCHITAB	<i>Schoenoplectus tabernaemontani</i>	<i>Scirpus validus</i> ontar.	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	Mean C (native trees) n/a
TYPANG	<i>Typha angustifolia</i>	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 3.00
											FQAI (native species) 4.24
											FQAI (all species) 3.00
											Adjusted FQAI 21.21
											% C value 0 60%
											% C Value 1-3 60%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 2
											% Non-native 50%
											Wet Indicator (all) -1.75
											Wet Indicator (native) -2.00
											% hydrophyte (Midwest) 100%
											% native perennial 25%
											% native annual 25%
											% annual 25%
											% perennial 75%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-038

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
JUNTEN	Juncus tenuis	Juncus tenuis	Lesser Poverty Rush	0	FAC	FAC	0	Forb	Perennial	Native	
PHPAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	
SCHTAB	Schoenoplectus tabernaemontani	Scirpus validus oreber	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	
SCIATV	Scirpus atrovirens	Scirpus atrovirens	Dark-Green Bulrush	4	OBL	OBL	-2	Sedge	Perennial	Native	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	

SW19-040

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ALISUB	Alisma subcordatum	Alisma subcordatum	American Water-Plantain	3	OBL	OBL	-2	Forb	Perennial	Native	Mean C (native species) 2.25 Mean C (all species) 1.00 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.25 FQAI (native species) 4.50 FQAI (all species) 4.02 Adjusted FQAI 20.12 % C value 0 40% % C Value 1-3 60% % C value 4-6 0% % C value 7-10 0%
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
HORLUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
SCHTAB	Schoenoplectus tabernaemontani	Scirpus validus oreber	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
Additional Metrics											
Species Richness (all) 5											
Species Richness (native) 4											
% Non-native 20%											
Wet Indicator (all) -1.60											
Wet Indicator (native) -1.50											
% hydrophyte (Midwest) 100%											
% native perennial 60%											
% native annual 20%											
% annual 20%											
% perennial 80%											

SE19-041

Inventory Calculator												
Species Acronym	Species Name (NWPL Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
APOCAN	Apocynum cannabinum	Apocynum sibiricum	Indian-Hemp	2	FAC	FAC	0	Forb	Perennial	Native	Mean C (native species) 1.29 Mean C (all species) 0.99 Mean C (native trees) 0.0 Mean C (native shrubs) 0.0 Mean C (native herbaceous) 1.29 FOAI (native species) 3.40 FOAI (all species) 2.05 Adjusted FOAI 10.76 % C value 0 70% % C Value 1-3 20% % C value 4-6 10% % C value 7-10 0%	
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native		
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native		
ELBOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native		
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive		
FERLAP	Persicaria lapathifolia	Polygonum lapathifolium, pers. viviparum or elaeagnifolium	Dock-Leaf Smartweed	0	FACW	FACW	-1	Forb	Annual	Native		
PERPEN	Persicaria pennsylvanica	Polygonum pennsylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native		
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive		
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive		
VERHAS	Verbena hastata	Verbena hastata	Simpser's-Joy	4	FACW	FACW	-1	Forb	Perennial	Native		
											Additional Metrics	
											Species Richness (all)	10
											Species Richness (native)	7
											% Non-native	30%
											Wet Indicator (all)	-1.20
											Wet Indicator (native)	-1.00
											% hydrophyte (Midwest)	100%
											% native perennial	30%
											% native annual	40%
											% annual	40%
											% perennial	60%

SW19-042

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CENPUL	Centaurium pulchellum	CENTAURIUM PULCHELLUM	Branched Centaury	0	FACU	FAC	1	Forb	Annual	Adversive	Mean C (native species) 6.33
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (all species) 3.20
JUNEFF	Juncus effusus ssp. solutus	Juncus effusus	Lamp Rush	5	OBL	OBL	-2	Forb	Perennial	Native	Mean C (native trees) n/a
JUNNOD	Juncus nodosus	Juncus nodosus	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native	Mean C (native shrubs) n/a
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	Mean C (native herbaceous) 6.33
											FQAI (native species) 9.24
											FQAI (all species) 7.16
											Adjusted FQAI 41.31
											% C value 0 40%
											% C Value 1-3 20%
											% C value 4-6 20%
											% C value 7-10 20%
Additional Metrics											
											Species Richness (all) 5
											Species Richness (native) 3
											% Non-native 40%
											Wet Indicator (all) -1.40
											Wet Indicator (native) -2.00
											% hydrophyte (Midwest) 80%
											% native perennial 40%
											% native annual 20%
											% annual 40%
											% perennial 60%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-043

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species)	0.00
HORLUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	Mean C (all species)	0.00
JUNTEN	Juncus tenuis	Juncus tenuis	Lesser Poverty Rush	0	FAC	FAC	0	Forb	Perennial	Native	Mean C (native trees)	n/a
PERPEN	Persicaria pensylvanica	Polygonum pensylvanicum	Pickweed	0	FACW	FACW	-1	Forb	Annual	Native	Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	0.00
											FOAI (native species)	0.00
											FOAI (all species)	0.00
											Adjusted FOAI	0.00
											% C value 0	100%
											% C Value 1-3	0%
											% C value 4-6	0%
											% C value 7-10	0%
											Additional Metrics	
											Species Richness (all)	4
											Species Richness (native)	4
											% Non-native	0%
											Wet Indicator (all)	-0.50
											Wet Indicator (native)	-0.50
											% hydrophyte (Midwest)	100%
											% native perennial	75%
											% native annual	25%
											% annual	25%
											% perennial	75%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-044

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
HORJUB	<i>Hordeum jubatum</i>	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	Mean C (native species) 0.00
PHRAUSU	<i>Phragmites australis ssp. australis</i>	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	Mean C (all species) 0.00
SOLSDM	<i>Solidago sempervirens</i>	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	Mean C (native trees) n/a
TYPANG	<i>Typha angustifolia</i>	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 0.00
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 1
											% Non-native 75%
											Wet Indicator (all) -1.00
											Wet Indicator (native) 0.00
											% hydrophyte (Midwest) 100%
											% native perennial 25%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

Inventory Calculator

Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics		
ELEOBT	Glechans obtusa	Glechans ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native			
HOFLUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native			
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive			
RHPAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive			
SCIFLU	Schoenoplectus fluviatilis	schorpus fluviatis, schoenosorus fluviatis	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native			
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive			
												Mean C (native species)	2.93
												Mean C (all species)	1.17
												Mean C (native trees)	n/a
												Mean C (native shrubs)	n/a
												Mean C (native herbaceous)	2.33
												FQAI (native species)	4.04
												FQAI (all species)	2.86
												Adjusted FQA	16.60
												% C value 0	67%
												% C Value 1-3	17%
												% C value 4-6	17%
												% C value 7-10	0%
Additional Metrics													
Species Richness (all)											6		
Species Richness (native)											3		
% Non-native											50%		
Wet Indicator (all)											-1.50		
Wet Indicator (native)											-1.33		
% hydrophyte (Midwest)											100%		
% native perennial											33%		
% native annual											17%		
% annual											17%		
% perennial											83%		

SE19-046

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
ASCINC	Asclepias incarnata	Asclepias incarnata	Swamp Milkweed	3	OBL	OBL	-2	Forb	Perennial	Native		
CYPSQU	Cyperus squarrosus	Cyperus inflexus	Awned Flat Sedge	0	OBL	OBL	-2	Sedge	Annual	Native		
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native		
ELEPAL	Eleocharis palustris	Eleocharis acicularis; Eleocharis palustris	Common Spike-Rush	1	OBL	OBL	-2	Sedge	Perennial	Native		
SCHPUN	Schoenoplectus purpureus	Scirpus purpureus	Three-Square	4	OBL	OBL	-2	Sedge	Perennial	Native		
SCHTAB	Schoenoplectus tabernaemontani	Scirpus validus orebar	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native		
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive		
Mean C (native species)												1.03
Mean C (all species)												1.57
Mean C (native trees)											n/a	
Mean C (native shrubs)											n/a	
Mean C (native herbaceous)											1.03	
FQAI (native species)											4.49	
FQAI (all species)											4.16	
Adjusted FQAI											16.97	
% C value 0											43%	
% C Value 1-3											43%	
% C value 4-6											14%	
% C value 7-10											0%	
Additional Metrics												
Species Richness (all)											7	
Species Richness (native)											6	
% Non-native											14%	
Wet Indicator (all)											-1.71	
Wet Indicator (native)											-1.83	
% hydrophyte (Midwest)											100%	
% native perennial											57%	
% native annual											29%	
% annual											29%	
% perennial											71%	

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-047

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
HORJUB SOLSEM	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	Mean C (native species) 0.00
	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	Mean C (all species) 0.00
											Mean C (native trees) n/a
											Mean C (native shrubs) n/a
											Mean C (native herbaceous) 0.00
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
											Species Richness (all) 2
											Species Richness (native) 1
											% Non-native 50%
											Wet Indicator (all) -0.50
											Wet Indicator (native) 0.00
											% hydrophyte (Midwest) 100%
											% native perennial 50%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-048

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ATRPAT	Atriplex patula	ATRIplex PATULA	Halberd-Leaf Orache	0	FACW	FACW	-1	Forb	Annual	Adversive	Mean C (native species) 2.00 Mean C (all species) 1.00 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.00 FOAI (native species) 4.47 FOAI (all species) 3.16 Adjusted FOAI 14.14 % C value 0 70% % C value 1-3 20% % C value 4-6 10% % C value 7-10 0%
ECHORU	Echinodhiza crus-galli	Echinodhiza crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEGBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
PHARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive	
SCHRLU	Schoenoplectus fluviatilis	schoenus fluviatilis; trochodermus fluviatilis	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native	
SCHTAB	Schoenoplectus tabernaemontani	Sorpus validus creber	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
SUAVAL	Suaeda calceoliformis	SUAEDA DEPRESSA	Parakeeweed	0	FACW	FACW	-1	Forb	Annual	Adversive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
											Additional Metrics
											Species Richness (all) 10
											Species Richness (native) 5
											% Non-native 60%
											Wet Indicator (all) -1.30
											Wet Indicator (native) -1.40
											% hydrophyte (Midwest) 100%
											% native perennial 30%
											% native annual 20%
											% annual 40%
											% perennial 60%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-049

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ATRPAT	Atriplex patula	ATRIPLEX PATULA	Halberd-Leaf Orache	0	FACW	FACW	-1	Forb	Annual	Adversive	Mean C (native species) 1.50
ECHORU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 0.75
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (native trees) n/a
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	Mean C (native shrubs) n/a
PHARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive	Mean C (native herbaceous) 1.50
SCHTAB	Schoenoplectus tabernaemontani	Sorpus validus orebar	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	FQAI (native species) 3.00
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	FQAI (all species) 2.12
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	Adjusted FQAI 10.61
											% C value 0 75%
											% C Value 1-3 25%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 8
											Species Richness (native) 4
											% Non-native 50%
											Wet Indicator (all) -1.25
											Wet Indicator (native) -1.25
											% hydrophyte (Midwest) 100%
											% native perennial 25%
											% native annual 25%
											% annual 36%
											% perennial 69%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-050

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ATRPAT	<i>Atriplex patula</i>	ATRIplex PATULA	Halberd-Leaf Orache	0	FACW	FACW	-1	Forb	Annual	Adversive	Mean C (native species) 2.00 Mean C (all species) 1.25 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.00 FOAI (native species) 4.47 FOAI (all species) 3.54 Adjusted FOAI 15.01 % C value 0 63% % C Value 1-3 26% % C value 4-6 13% % C value 7-10 0%
ECHORU	<i>Echinodhloa crus-galli</i>	Echinodhloa crugalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEGBT	<i>Eleocharis obtusa</i>	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
HORJUB	<i>Hordeum jubatum</i>	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
PHRAUSU	<i>Phragmites australis ssp. australis</i>	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
SCHFLU	<i>Schoenoplectus fluviatilis</i>	Schoenus fluviatilis, Schoenoplectus fluviatilis	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native	
SCHTAB	<i>Schoenoplectus tabernaemontani</i>	Schoenus validus creber	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	
SOLSEM	<i>Solidago sempervirens</i>	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
											Additional Metrics
											Species Richness (all) 8
											Species Richness (native) 5
											% Non-native 38%
											Wet Indicator (all) -1.25
											Wet Indicator (native) -1.40
											% hydrophyte (Midwest) 100%
											% native perennial 38%
											% native annual 25%
											% annual 36%
											% perennial 63%

USACE Chicago Region FOA Calculator 12.12.17

ORD Waters of the US Delineation

Inventory Calculator

Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
HOFUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native		
PHPAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive		
SCIRLU	Scheuchzeria palustris	SCHEUCHZERIA PALUSTRIS	River Club-Rush	4	GBL	GBL	-2	Sedge	Perennial	Native		
SUACAL	Suaeda calceoliformis	SUAEDA DEPRESSA	Paintweed	0	FACW	FACW	-1	Forb	Annual	Adversive		
Mean C (native species)												2.00
Mean C (all species)												1.00
Mean C (native trees)												n/a
Mean C (native shrubs)												n/a
Mean C (native herbaceous)												2.00
FOAI (native species)											2.83	
FOAI (all species)											2.00	
Adjusted FOAI											14.14	
% C value 0											75%	
% C value 1-3											0%	
% C value 4-6											25%	
% C value 7-10											0%	
Additional Metrics												
Species Richness (all)											4	
Species Richness (native)											2	
% Non-native											50%	
Wet Indicator (all)											-1.00	
Wet Indicator (native)											-1.00	
% hydrophyte (Midwest)											100%	
% native perennial											50%	
% native annual											0%	
% annual											25%	
% perennial											75%	

SE19-052

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ATRPAT	Atriplex patula	ATRIPLEX PATULA	Halberd-Leaf Orache	0	FACW	FACW	-1	Forb	Annual	Adversive	Mean C (native species) 2.90 Mean C (all species) 1.11 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.00 FOAI (native species) 4.47 FOAI (all species) 3.30 Adjusted FOAI 14.91 % C value 0 67% % C Value 1-3 22% % C value 4-6 11% % C value 7-10 0%
ECHORU	Echinodhiza crus-galli	Echinodhiza crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEGBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
SCIRLU	Schroenoplectus fluviatilis	Schroenoplectus fluviatilis, Scirpus fluviatilis	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native	
SCHTAB	Schroenoplectus tabernaemontani	Scirpus validus creber	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
											Additional Metrics Species Richness (all) 9 Species Richness (native) 5 % Non-native 44% Wet Indicator (all) -1.33 Wet Indicator (native) -1.40 % hydrophyte (Midwest) 100% % native perennial 33% % native annual 22% % annual 33% % perennial 67%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-053

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ADIRTO	Agrostis chloroloma	Agrostis alba palustris	Spreading Bent	2	FACW	FACW	-1	Grass	Perennial	Native	Mean C (native species) 2.06 Mean C (all species) 2.22 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.06 FOAI (native species) 7.56 FOAI (all species) 6.67 Adjusted FOAI 25.20 % C value 0 44% % C Value 1-3 33% % C value 4-6 11% % C value 7-10 11%
ALISUB	Alisma subcordatum	Alisma subcordatum	American Water-Plantain	3	OBL	OBL	-2	Forb	Perennial	Native	
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	
JUNNOO	Juncus nodosus	Juncus nodosus	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
PERPEN	Persicaria pennsylvanica	Polygonum pennsylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native	
SAGLAT	Sagittaria latifolia	Sagittaria latifolia	Duck-Potato	3	OBL	OBL	-2	Forb	Perennial	Native	
SCHRUN	Schoenoplectus purpureus	Scirpus purpureus	Three-Square	4	OBL	OBL	-2	Sedge	Perennial	Native	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
											Additional Metrics Species Richness (all) 9 Species Richness (native) 7 % Non-native 22% Wet Indicator (all) -1.56 Wet Indicator (native) -1.57 % hydrophyte (Midwest) 100% % native perennial 67% % native annual 11% % annual 11% % perennial 89%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-054

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
ECHGRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (native species)	1.75
PERPEN	Persicaria pensylvanica	Polygonum pensylvanicum	Pickweed	0	FACW	FACW	-1	Forb	Annual	Native	Mean C (all species)	1.17
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adventive	Mean C (native trees)	n/a
SCHFLU	Schoenoplectus fluviatilis	Sorpus fluviatilis, triosonocarpus fluviatilis	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native	Mean C (native shrubs)	n/a
SCHTAB	Schoenoplectus tabernaemontani	Sorpus validus oniber	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	Mean C (native herbaceous)	1.75
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	FOAI (native species)	3.50
											FOAI (all species)	2.86
											Adjusted FOAI	14.29
											% C value 0	67%
											% C Value 1-3	17%
											% C value 4-6	17%
											% C value 7-10	0%
											Additional Metrics	
											Species Richness (all)	6
											Species Richness (native)	4
											% Non-native	33%
											Wet Indicator (all)	-1.33
											Wet Indicator (native)	-1.50
											% hydrophyte (Midwest)	100%
											% native perennial	33%
											% native annual	33%
											% annual	33%
											% perennial	67%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-055

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-Flowering Thoroughwort	0	FAC	FAC	0	Forb	Perennial	Native	Mean C (native species) 1.00 Mean C (all species) 0.29 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 1.00 FOAI (native species) 1.41 FOAI (all species) 0.76 Adjusted FOAI 6.36 % C value 0 06% % C Value 1-3 14% % C value 4-6 0% % C value 7-10 0%
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	
Additional Metrics											
Species Richness (all) 7											
Species Richness (native) 2											
% Non-native 71%											
Wet Indicator (all) -1.14											
Wet Indicator (native) -0.50											
% hydrophyte (Midwest) 100%											
% native perennial 29%											
% native annual 0%											
% annual 0%											
% perennial 100%											

USACE Chicago Region FOA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-056

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 0.75
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 0.60
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (native trees) n/a
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	Mean C (native shrubs) n/a
PERPEN	Paspalum pensylvanicum	Polygonum pensylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native	Mean C (native herbaceous) 0.75
											FQAI (native species) 1.50
											FQAI (all species) 1.34
											Adjusted FQAI 6.71
											% C value 0 80%
											% C Value 1-3 20%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 5
											Species Richness (native) 4
											% Non-native 20%
											Wet Indicator (all) -1.40
											Wet Indicator (native) -1.25
											% hydrophyte (Midwest) 100%
											% native perennial 20%
											% native annual 60%
											% annual 60%
											% perennial 40%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-057

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
AMBART	Ambrosia artemisiifolia	Ambrosia artemisiifolia elatior	Annual Ragweed	0	FACU	FACU	1	Forb	Annual	Native	Mean C (native species)	0.00
ECHORU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species)	0.00
JUNTEN	Juncus tenuis	Juncus tenuis	Lesser Poverty Rush	0	FAC	FAC	0	Forb	Perennial	Native	Mean C (native trees)	n/a
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	Mean C (native shrubs)	n/a
PERPEN	Paspalum pensylvanicum	Polygonum pensylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native	Mean C (native herbaceous)	0.00
SCHARU	Schedonorus arundinaceus	ΔΒΙ ΚΛΙΜΑΚΙΤΙΣ	Tall False Rye Grass	0	FACU	FACU	1	Grass	Perennial	Adventive	FQAI (native species)	0.00
SETPUM	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	FAC	0	Grass	Annual	Adventive	FQAI (all species)	0.00
											Adjusted FQAI	0.00
											% C value 0	100%
											% C value 1-3	0%
											% C value 4-6	0%
											% C value 7-10	0%
Additional Metrics												
											Species Richness (all)	7
											Species Richness (native)	4
											% Non-native	43%
											Wet Indicator (all)	-0.28
											Wet Indicator (native)	-0.25
											% hydrophyte (Midwest)	71%
											% native perennial	14%
											% native annual	43%
											% annual	57%
											% perennial	43%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-058

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 0.00
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 0.00
SETPUM	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	FAC	0	Grass	Annual	Adventive	Mean C (native trees) n/a
											Mean C (native shrubs) n/a
											Mean C (native herbaceous) 0.00
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 3
											Species Richness (native) 2
											% Non-native 33%
											Wet Indicator (all) -0.67
											Wet Indicator (native) -1.00
											% hydrophyte (Midwest) 100%
											% native perennial 33%
											% native annual 33%
											% annual 67%
											% perennial 33%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-059

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 0.75 Mean C (all species) 0.43 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 0.75 FOAI (native species) 1.50 FOAI (all species) 1.13 Adjusted FOAI 6.67 % C value 0 06% % C Value 1-3 14% % C value 4-6 0% % C value 7-10 0%
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEGBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OBL	OBL	-2	Sedge	Annual	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	
PERPEN	Paspalum pensylvanicum	Polygonum pensylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native	
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adventive	
SETPUM	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	FAC	0	Grass	Annual	Adventive	
Additional Metrics											
Species Richness (all)										7	
Species Richness (native)										4	
% Non-native										43%	
Wet Indicator (all)										-1.00	
Wet Indicator (native)										-1.25	
% hydrophyte (Midwest)										100%	
% native perennial										14%	
% native annual										43%	
% annual										57%	
% perennial										43%	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-060

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ATRPAT	<i>Atriplex patula</i>	ATRIplex PATULA	Halberd-Leaf Orache	0	FACW	FACW	-1	Forb	Annual	Adventive	Mean C (native species) 0.00
PHRAUSU	<i>Phragmites australis</i> ssp. <i>australis</i>	PHRAgmITEs AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (all species) 0.00
SOLSDM	<i>Solidago sempervirens</i>	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive	Mean C (native trees) n/a
SUAICAL	<i>Suaeda calceoliformis</i>	SUAEDA DEPRESSA	Parula-weed	0	FACW	FACW	-1	Forb	Annual	Adventive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) n/a
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 0
											% Non-native 100%
											Wet Indicator (all) -1.00
											Wet Indicator (native) 0.00
											% hydrophyte (Midwest) 100%
											% native perennial 0%
											% native annual 0%
											% annual 50%
											% perennial 50%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-061

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	Mean C (native species) 0.00
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	Mean C (all species) 0.00
PHARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive	Mean C (native trees) n/a
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	Mean C (native shrubs) n/a
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	Mean C (native herbaceous) 0.00
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 5
											Species Richness (native) 1
											% Non-native 80%
											Wet Indicator (all) -1.00
											Wet Indicator (native) 0.00
											% hydrophyte (Midwest) 100%
											% native perennial 20%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-062

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
DIPLAC	Dipsacus laevis	DIPSACUS LACINATUS	Cut-leaf Tassel	0	UPL	FACU	2	Forb	Biennial	Adversive	Mean C (native species) 2.67 Mean C (all species) 1.14 Mean C (native trees) 4.00 Mean C (native shrubs) 0.00 Mean C (native herbaceous) 2.00 FOAI (native species) 4.62 FOAI (all species) 3.02 Adjusted FOAI 17.46 % C value 0 71% % C value 1-3 0% % C value 4-6 26% % C value 7-10 0%
EUPSEB	Eupatorium serotinum	Eupatorium serotinum	Late-flowering	0	FAC	FAC	0	Forb	Perennial	Native	
EUTGRA	Euthamia graminifolia	Euthamia graminifolia	Flat-Top Goldenrod	4	FACW	FAC	-1	Forb	Perennial	Native	
FRAPEN	Fraxinus pennsylvanica	FRAXINUS PENNSYLVANICA	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adversive	
SOLCAR	Solanum carolinense	SOLANUM CAROLINENSE	Carolina Horse-Nettle	0	FACU	FACU	1	Forb	Perennial	Adversive	
											Additional Metrics
											Species Richness (all) 7
											Species Richness (native) 3
											% Non-native 57%
											Wet Indicator (all) -0.14
											Wet Indicator (native) -0.67
											% hydrophyte (Midwest) 71%
											% native perennial 49%
											% native annual 0%
											% annual 0%
											% perennial 86%

USACE Chicago Region FOA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-063

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ECHDRU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
QLYSTR	Glycine striata	Glycine striata var. striata	Fowl Manna Grass	4	OBL	OBL	-2	Grass	Perennial	Native	
HORLUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
PERPEN	Panicum pensylvanicum	Polygonum pensylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native	
TRIREP	Trifolium repens	TRIFOLIUM REPENS	White Clover	0	FACU	FACU	1	Forb	Perennial	Adversive	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-064

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 0.60 Mean C (all species) 0.60 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 0.60 FOAI (native species) 1.34 FOAI (all species) 1.34 Adjusted FOAI 6.00 % C value 0 00% % C Value 1-3 20% % C value 4-6 0% % C value 7-10 0%
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OBL	OBL	-2	Sedge	Annual	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
PERPEN	Panicum pensylvanicum	Polygonum pensylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native	
Additional Metrics											
Species Richness (all)										5	
Species Richness (native)										5	
% Non-native										0%	
Wet Indicator (all)										-1.00	
Wet Indicator (native)										-1.00	
% hydrophyte (Midwest)										100%	
% native perennial										40%	
% native annual										60%	
% annual										60%	
% perennial										40%	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-065

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 1.75
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 1.75
ELEGBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OGL	OGL	-2	Sedge	Annual	Native	Mean C (native trees) n/a
GLYSTR	Glycyca strata	Glycyca strata var. stricta	Foot Manna Grass	4	OGL	OGL	-2	Grass	Perennial	Native	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 1.75
											FQAI (native species) 3.50
											FQAI (all species) 3.50
											Adjusted FQAI 17.50
											% C value 0 60%
											% C Value 1-3 25%
											% C value 4-6 25%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 4
											% Non-native 0%
											Wet Indicator (all) -1.50
											Wet Indicator (native) -1.50
											% hydrophyte (Midwest) 100%
											% native perennial 50%
											% native annual 50%
											% annual 50%
											% perennial 50%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

Inventory Calculator

Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET indicator (numeric)	Habit	Duration	Nativity
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native
ECHCRU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OGL	OGL	-2	Sedge	Annual	Native
PERPEN	Panicum pensylvanica	Polygonum pennsylvanicum	Piskweed	0	FACW	FACW	-1	Forb	Annual	Native
PHAJRU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Invasive
Conservatism-Based Metrics										
								Mean C (native species)	0.75	
								Mean C (all species)	0.60	
								Mean C (native trees)	n/a	
								Mean C (native shrubs)	n/a	
								Mean C (native herbaceous)	0.75	
								FQAI (native species)	1.80	
								FQAI (all species)	1.34	
								Adjusted FQAI	6.71	
								% C value 0	80%	
								% C Value 1-3	20%	
								% C value 4-6	0%	
								% C value 7-10	0%	
Additional Metrics										
								Species Richness (all)	5	
								Species Richness (native)	4	
								% Non-native	20%	
								Wet Indicator (all)	-1.20	
								Wet Indicator (native)	-1.25	
								% hydrophyte (Midwest)	100%	
								% native perennial	20%	
								% native annual	60%	
								% annual	60%	
								% perennial	40%	

SE19-067

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ATRPAT	Atriplex patula	ATRIplex PATULA	Halberd-Leaf Orache	0	FACW	FACW	-1	Forb	Annual	Adversive	Mean C (native species) 1.00 Mean C (all species) 0.50 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 1.00 FOAI (native species) 2.00 FOAI (all species) 1.41 Adjusted FOAI 7.97 % C value 0 00% % C Value 1-3 0% % C value 4-6 13% % C value 7-10 0%
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
PERPEN	Panicum pensylvanicum	Polygonum pensylvanicum	Pickweed	0	FACW	FACW	-1	Forb	Annual	Native	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
SCIRLU	Schoenoplectus fluviatilis	Schoenoplectus fluviatilis, Scirpus fluviatilis	River Club-Rush	4	GBL	GBL	-2	Sedge	Perennial	Native	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
SUAICAL	Suaeda calceoliformis	SUAEDA DEPRESSA	Paintweed	0	FACW	FACW	-1	Forb	Annual	Adversive	
											Additional Metrics
											Species Richness (all) 8
											Species Richness (native) 4
											% Non-native 50%
											Wet Indicator (all) -1.00
											Wet Indicator (native) -1.00
											% hydrophyte (Midwest) 100%
											% native perennial 25%
											% native annual 25%
											% annual 50%
											% perennial 50%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-068

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CXSTIP	Carex stipata	Carex stipata	Stalk-Grass Sedge	4	OB	OB	-2	Sedge	Perennial	Native	
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	
CYPSQU	Cyperus squarrosus	Cyperus inflexus	Awned Flat Sedge	0	OB	OB	-2	Sedge	Annual	Native	
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEPAL	Eleocharis palustris	Eleocharis acicularis; Eleocharis palustris	Common Spike-Rush	1	OB	OB	-2	Sedge	Perennial	Native	
GLYSTR	Glycyca strata	Glycyca strata var. stricta	Fowl Manna Grass	4	OB	OB	-2	Grass	Perennial	Native	
JUNNDO	Juncus nodosus	Juncus nodosus	Knotted Rush	8	OB	OB	-2	Forb	Perennial	Native	
PERPEN	Persicaria pensylvanica	Polygonum pensylvanicum	Platweed	0	FACW	FACW	-1	Forb	Annual	Native	
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-069

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 0.00
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 0.00
PHPAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (native trees) n/a
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 0.00
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 2
											% Non-native 50%
											Wet Indicator (all) -1.25
											Wet Indicator (native) -1.00
											% hydrophyte (Midwest) 100%
											% native perennial 25%
											% native annual 25%
											% annual 25%
											% perennial 75%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-070

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 2.00 Mean C (all species) 2.50 Mean C (native trees) n/a Mean C (native shrubs) n/a
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ECHMUR	Echinochloa mucronata	Echinochloa mucronata	Rough Barnyard Grass	4	OBL	OBL	-2	Grass	Annual	Native	
JUNNOO	Juncus nodosus	Juncus nodosus	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	Mean C (native herbaceous) 2.00 FQAI (native species) 6.13 FQAI (all species) 7.27 Adjusted FQAI 26.71 % C value 0 60% % C Value 1-3 10% % C value 4-6 30% % C value 7-10 10%
PERLAP	Pennisetum lapathifolium	Pennisetum lapathifolium; POLYCHLOM SPADICEM	Dock-Leaf Smartweed	0	FACW	FACW	-1	Forb	Annual	Native	
SCIRLU	Scheuchzeria palustris	Scheuchzeria palustris; SCIRPUS	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native	
SCHRUN	Scheuchzeria palustris	Scheuchzeria palustris	Three-Square	4	OBL	OBL	-2	Sedge	Perennial	Native	
SCHTAB	Scheuchzeria palustris	Scheuchzeria palustris	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	Additional Metrics Species Richness (all) 10 Species Richness (native) 8 % Non-native 20% Wet Indicator (all) -1.70 Wet Indicator (native) -1.63 % hydrophyte (Midwest) 100% % native perennial 50% % native annual 30% % annual 30% % perennial 70%
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-071

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (native species)2.75 Mean C (all species)1.50 Mean C (native trees)n/a Mean C (native shrubs)n/a Mean C (native herbaceous)2.75 FQAI (native species)6.50 FQAI (all species)3.09 Adjusted FQAI10.45 % C value 063% % C Value 1-313% % C value 4-625% % C value 7-100%
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
PERPEN	Persicaria pensylvanica	Polygonum pensylvanicum	Pinkweed	0	FACW	FACW	-1	Forb	Annual	Native	
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
SCIRLU	Schoenoplectus fluviatilis	Scirpus rupestris, Schoenoplectus fluviatilis	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native	
SCIATV	Scirpus atrovirens	Scirpus atrovirens	Dark-Green Bulrush	4	OBL	OBL	-2	Sedge	Perennial	Native	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
Additional Metrics											
Species Richness (all)8											
Species Richness (native)4											
% Non-native50%											
Wet Indicator (all)-1.63											
Wet Indicator (native)-1.75											
% hydrophyte (Midwest)100%											
% native perennial25%											
% native annual25%											
% annual25%											
% perennial75%											

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-072

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 1.33
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 1.00
SCHPUN	Schoenoplectus pungens	Sorpus pungens	Three-Square	4	OGL	OGL	-2	Sedge	Perennial	Native	Mean C (native trees) n/a
TRIFRA	Trifolium pratense	TRIFOLIUM PRATENSE	Red Clover	0	FACU	FACU	1	Forb	Perennial	Adventive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 1.33
											FQAI (native species) 2.31
											FQAI (all species) 2.00
											Adjusted FQAI 11.65
											% C value 0 75%
											% C Value 1-3 0%
											% C value 4-6 25%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 3
											% Non-native 25%
											Wet Indicator (all) -0.75
											Wet Indicator (native) -1.33
											% hydrophyte (Midwest) 75%
											% native perennial 50%
											% native annual 25%
											% annual 25%
											% perennial 75%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-073

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 0.00 Mean C (all species) 0.00 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 0.00 FGAI (native species) 0.00 FGAI (all species) 0.00 Adjusted FGAJ 0.00 % C value 0 100% % C Value 1-3 0% % C value 4-6 0% % C value 7-10 0%
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
PERMAC	Panicum maculosa	POLYGONUM PERISCARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adventive	
SETPUM	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	FAC	0	Grass	Annual	Adventive	
											Additional Metrics
											Species Richness (all) 5
											Species Richness (native) 3
											% Non-native 40%
											Wet Indicator (all) -0.60
											Wet Indicator (native) -0.67
											% hydrophyte (Midwest) 100%
											% native perennial 40%
											% native annual 20%
											% annual 60%
											% perennial 40%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-074

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ALISUB	<i>Alisma subcordatum</i>	<i>Alisma subcordatum</i>	American Water-Plantain	3	OB1	OB1	-2	Forb	Perennial	Native	Mean C (native species) 2.70 Mean C (all species) 2.27 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.70 FQAI (native species) 6.33 FQAI (all species) 7.64 Adjusted FQAI 25.13 % C value 0 46% % C value 1-3 27% % C value 4-6 10% % C value 7-10 9%
CYPESC	<i>Cyperus esculentus</i>	<i>Cyperus esculentus</i>	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	
ECHCRU	<i>Echinochloa crus-galli</i>	<i>Echinochloa crus-galli</i>	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEOBT	<i>Eleocharis obtusa</i>	<i>Eleocharis ovata</i>	Blunt Spike-Rush	3	OB1	OB1	-2	Sedge	Annual	Native	
JUNNOO	<i>Juncus nodosus</i>	<i>Juncus nodosus</i>	Knotted Rush	0	OB1	OB1	-2	Forb	Perennial	Native	
LYTSAL	<i>Lythrum salicaria</i>	<i>LYTHRUM SALICARIA</i>	Purple Loosestrife	0	OB1	OB1	-2	Forb	Perennial	Adversive	
PERLAP	<i>Paspalum lapathifolia</i>	<i>Paspalum lapathifolium</i>	Dock-Leaf Smartweed	0	FACW	FACW	-1	Forb	Annual	Native	
SCIRLU	<i>Scheuchzeria palustris</i>	<i>Scheuchzeria palustris</i>	River Club-Rush	4	OB1	OB1	-2	Sedge	Perennial	Native	
SCHTAB	<i>Scheuchzeria palustris</i>	<i>Scheuchzeria palustris</i>	Soft-Stem Club-Rush	3	OB1	OB1	-2	Sedge	Perennial	Native	
SCIATV	<i>Scirpus atrovirens</i>	<i>Scirpus atrovirens</i>	Dark-Green Bulrush	4	OB1	OB1	-2	Sedge	Perennial	Native	
TYPANG	<i>Typha angustifolia</i>	<i>TYPHA ANGUSTIFOLIA</i>	Narrow-Leaf Cat-Tail	0	OB1	OB1	-2	Forb	Perennial	Adversive	Additional Metrics Species Richness (all) 11 Species Richness (native) 9 % Non-native 18% Wet Indicator (all) -1.73 Wet Indicator (native) -1.67 % hydrophyte (Midwest) 100% % native perennial 55% % native annual 27% % annual 27% % perennial 73%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-075

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ALISUB	<i>Alisma subcordatum</i>	<i>Alisma subcordatum</i>	American Water-Plantain	3	OBL	OBL	-2	Forb	Perennial	Native	Mean C (native species) 2.13 Mean C (all species) 1.70 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.13 FQAI (native species) 6.01 FQAI (all species) 6.30 Adjusted FQAI 10.01 % C value 0 60% % C value 1-3 30% % C value 4-6 20% % C value 7-10 0%
CYPESC	<i>Cyperus esculentus</i>	<i>Cyperus esculentus</i>	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	
ECHCRU	<i>Echinochloa crus-galli</i>	<i>Echinochloa crus-galli</i>	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ECHMUR	<i>Echinochloa muricata</i>	<i>Echinochloa muricata</i>	Rough Barnyard Grass	4	OBL	OBL	-2	Grass	Annual	Native	
ELEOBT	<i>Eleocharis obtusa</i>	<i>Eleocharis ovata</i>	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	
LYTSAL	<i>Lythrum salicaria</i>	<i>LYTHRUM SALICARIA</i>	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
PERLAP	<i>Persicaria lapathifolia</i>	<i>perigonum lapathifolium</i>	Dock-Leaf Smartweed	0	FACW	FACW	-1	Forb	Annual	Native	
SCIRLU	<i>Schoenoplectus fluviatilis</i>	<i>SCHLOTHUMIA FLUVIATILIS</i>	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native	
SCHTAB	<i>Schoenoplectus tabernaemontani</i>	<i>Sorpus validus onobis</i>	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	
TYPANG	<i>Typha angustifolia</i>	<i>TYPHA ANGUSTIFOLIA</i>	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
											Additional Metrics
											Species Richness (all) 10
											Species Richness (native) 8
											% Non-native 20%
											Wet Indicator (all) -1.70
											Wet Indicator (native) -1.63
											% hydrophyte (Midwest) 100%
											% native perennial 40%
											% native annual 40%
											% annual 40%
											% perennial 60%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

Inventory Calculator

Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species)	3.60
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (all species)	2.67
JUNNDO	Juncus nodosus	Juncus nodosus	Knotted Rush	9	OBL	OBL	-2	Forb	Perennial	Native	Mean C (native trees)	n/a
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	Mean C (native shrubs)	n/a
SCHTAB	Schoenoplectus tabernaemontani	Sorpus validus oniber	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	Mean C (native herbaceous)	3.60
SCIATV	Sorpus atrovirens	Sorpus atrovirens	Dark-Green Bulrush	4	OBL	OBL	-2	Sedge	Perennial	Native	FOAI (native species)	6.05
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	FOAI (all species)	6.00
											Adjusted FOAI	30.43
											% C value 0	43%
											% C Value 1-3	25%
											% C value 4-6	14%
											% C value 7-10	14%
Additional Metrics												
											Species Richness (all)	7
											Species Richness (native)	5
											% Non-native	29%
											Wet Indicator (all)	-1.86
											Wet Indicator (native)	-1.80
											% hydrophyte (Midwest)	100%
											% native perennial	57%
											% native annual	14%
											% annual	14%
											% perennial	86%

NW19-077

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
OLYSTR	Glycyrrhiza striata	Glycyrrhiza striata var. striata	Fowl Manna Grass	4	GBL	GBL	-2	Grass	Perennial	Native	
PERPEN	Persicaria pensylvanica	Polygonum pensylvanicum	Pickweed	0	FACW	FACW	-1	Forb	Annual	Native	
POPTR	Populus tremuloides	Populus tremuloides	Quaking Aspen	3	FAC	FAC	0	Tree	Perennial	Native	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	GBL	GBL	-2	Forb	Perennial	Adventive	

NW19-078

Inventory Calculator													
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics		
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OB1	OB1	-2	Sedge	Annual	Native			
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OB1	OB1	-2	Forb	Perennial	Adversive			
PHARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive			
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adversive			
SCIATV	Scirpus atrovirens	Scirpus atrovirens	Dark-Green Bulrush	4	OB1	OB1	-2	Sedge	Perennial	Native			
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OB1	OB1	-2	Forb	Perennial	Adversive			
												Mean C (native species)	3.50
												Mean C (all species)	1.17
												Mean C (native trees)	n/a
											Mean C (native shrubs)	n/a	
											Mean C (native herbaceous)	3.50	
											FOAI (native species)	4.95	
											FOAI (all species)	2.06	
											Adjusted FOAI	20.21	
											% C value 0	67%	
											% C Value 1-3	17%	
											% C value 4-6	17%	
											% C value 7-10	0%	
Additional Metrics													
Species Richness (all)											6		
Species Richness (native)											2		
% Non-native											67%		
Wet Indicator (all)											-1.50		
Wet Indicator (native)											-2.00		
% hydrophyte (Midwest)											100%		
% native perennial											17%		
% native annual											17%		
% annual											17%		
% perennial											83%		

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-079

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Conservatism-Based Metrics Mean C (native species) 1.50 Mean C (all species) 1.20 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 1.50 FOAI (native species) 3.00 FOAI (all species) 2.60 Adjusted FOAI 13.42 % C value 0 60% % C Value 1-3 40% % C value 4-6 0% % C value 7-10 0%
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEGBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OBL	OBL	-2	Sedge	Annual	Native	
PERMAC	Paspalum maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adventive	
SCHTAB	Schoenoplectus tabernaemontani	Scirpus validus creber	Soft-Stem Club-Rush	3	OBL	OBL	-2	Sedge	Perennial	Native	
											Additional Metrics Species Richness (all) 5 Species Richness (native) 4 % Non-native 20% Wet Indicator (all) -1.40 Wet Indicator (native) -1.50 % hydrophyte (Midwest) 100% % native perennial 40% % native annual 40% % annual 60% % perennial 40%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-080

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativeity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 0.00
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 0.00
PERMAC	Persicaria maculosa	POLYGONUM PERISICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adventive	Mean C (native trees) n/a
											Mean C (native shrubs) n/a
											Mean C (native herbaceous) 0.00
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 3
											Species Richness (native) 2
											% Non-native 33%
											Wet Indicator (all) -1.00
											Wet Indicator (native) -1.00
											% hydrophyte (Midwest) 100%
											% native perennial 33%
											% native annual 33%
											% annual 67%
											% perennial 33%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-081

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CXSTIP	Carex stipata	Carex stipata	Stalk-Grass Sedge	4	GBL	GBL	-2	Sedge	Perennial	Native	Conservatism-Based Metrics Mean C (native species) 3.20 Mean C (all species) 2.67 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 3.20 FOAI (native species) 7.16 FOAI (all species) 6.83 Adjusted FOAI 20.21 % C value 0 60% % C value 1-3 0% % C value 4-6 33% % C value 7-10 17%
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
JUNNOD	Juncus nodosus	Juncus nodosus	Knotted Rush	8	GBL	GBL	-2	Forb	Perennial	Native	
PERMAC	Persicaria maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adversive	
SCIATV	Scirpus atrovirens	Scirpus atrovirens	Dark-Green Bulrush	4	GBL	GBL	-2	Sedge	Perennial	Native	
											Additional Metrics
											Species Richness (all) 6
											Species Richness (native) 5
											% Non-native 17%
											Wet Indicator (all) -1.33
											Wet Indicator (native) -1.40
											% hydrophyte (Midwest) 100%
											% native perennial 83%
											% native annual 0%
											% annual 17%
											% perennial 83%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-082

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 0.00
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 0.00
PERMAC	Persicaria maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adventive	Mean C (native trees) n/a
											Mean C (native shrubs) n/a
											Mean C (native herbaceous) 0.00
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 3
											Species Richness (native) 2
											% Non-native 33%
											Wet Indicator (all) -1.00
											Wet Indicator (native) -1.00
											% hydrophyte (Midwest) 100%
											% native perennial 33%
											% native annual 33%
											% annual 67%
											% perennial 33%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-083

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 2.20 Mean C (all species) 2.20 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.20 FOAI (native species) 4.92 FOAI (all species) 4.92 Adjusted FOAI 22.00 % C value 0 60% % C Value 1-3 20% % C value 4-6 0% % C value 7-10 20%
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OBL	OBL	-2	Sedge	Annual	Native	
JUNNOO	Juncus nodosus	Juncus nodosus	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native	
JUNTEN	Juncus tenuis	Juncus tenuis	Lesser Poverty Rush	0	FAC	FAC	0	Forb	Perennial	Native	
											Additional Metrics
											Species Richness (all) 5
											Species Richness (native) 5
											% Non-native 0%
											Wet Indicator (all) -1.20
											Wet Indicator (native) -1.20
											% hydrophyte (Midwest) 100%
											% native perennial 60%
											% native annual 40%
											% annual 40%
											% perennial 60%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-084

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
LYTSAL	<i>Lythrum salicaria</i>	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adaptive	Mean C (native species) 0.00
PHRAUSU	<i>Phragmites australis ssp. australis</i>	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adaptive	Mean C (all species) 0.00
SOLSDM	<i>Solidago sempervirens</i>	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adaptive	Mean C (native trees) n/a
											Mean C (native shrubs) n/a
											Mean C (native herbaceous) n/a
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 3
											Species Richness (native) 0
											% Non-native 100%
											Wet Indicator (all) -1.33
											Wet Indicator (native) 0.00
											% hydrophyte (Midwest) 100%
											% native perennial 0%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-085

Inventory Calculator										
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity
CYPESC	<i>Cyperus esculentus</i>	<i>Cyperus esculentus</i>	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native
DIPFUS	<i>Diplazium fuscum</i>	<i>LEPTODIUM ALUMINUM</i> <i>LEPTODIUM FUSCUM</i> DESR	Bearded Sprangletop	0	OBL	OBL	-2	Grass	Annual	Adversive
ECHCRU	<i>Echinochloa crus-galli</i>	<i>Echinochloa crus-galli</i>	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native
				Conservatism-Based Metrics						
				Mean C (native species)						
				Mean C (all species)						
				Mean C (native trees)						
				Mean C (native shrubs)						
				Mean C (native herbaceous)						
				FOAI (native species)						
				FOAI (all species)						
				Adjusted FOAI						
				% C value 0						
				% C Value 1-3						
				% C value 4-6						
				% C value 7-10						
				Additional Metrics						
				Species Richness (all)						
				Species Richness (native)						
				% Non-native						
				Wet Indicator (all)						
				Wet Indicator (native)						
				% hydrophyte (Midwest)						
				% native perennial						
				% native annual						
				% annual						
				% perennial						

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-086

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 0.00 Mean C (all species) 0.00 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 0.00 FOAI (native species) 0.00 FOAI (all species) 0.00 Adjusted FOAI 0.00 % C value 0 100% % C Value 1-3 0% % C value 4-6 0% % C value 7-10 0%
DIPFUS	Diplazium fuscus	LEPTODIUM ALUMINARIA LEPTODIUM FUSCUM	Bearded Springletop	0	OBL	OBL	-2	Grass	Annual	Adversive	
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
PERMAC	Panicum maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adversive	
											Additional Metrics
											Species Richness (all) 4
											Species Richness (native) 2
											% Non-native 50%
											Wet Indicator (all) -1.25
											Wet Indicator (native) -1.00
											% hydrophyte (Midwest) 100%
											% native perennial 25%
											% native annual 25%
											% annual 75%
											% perennial 25%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-087

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ATRPAT	Atriplex patula	ATRIPLEX PATULA	Halberd-Leaf Orache	0	FACW	FACW	-1	Forb	Annual	Adversive	Mean C (native species) 0.00
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (all species) 0.00
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (native trees) n/a
PERMAC	Pericoma maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adversive	Mean C (native shrubs) n/a
SETPUM	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	FAC	0	Grass	Annual	Adversive	Mean C (native herbaceous) 0.00
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
											Additional Metrics
											Species Richness (all) 5
											Species Richness (native) 2
											% Non-native 60%
											Wet Indicator (all) -0.80
											Wet Indicator (native) -1.00
											% hydrophyte (Midwest) 100%
											% native perennial 20%
											% native annual 20%
											% annual 80%
											% perennial 20%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

Inventory Calculator

Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species)	1.00
ECHCRU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species)	0.60
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (native trees)	n/a
PERMAC	Pennisetia maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adversive	Mean C (native shrubs)	n/a
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	Mean C (native herbaceous)	1.00
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	FQAI (native species)	1.75
											FQAI (all species)	1.22
											Adjusted FQAI	7.97
											% C value 0	89%
											% C value 1-3	17%
											% C value 4-6	0%
											% C value 7-10	6%
Additional Metrics												
											Species Richness (all)	6
											Species Richness (native)	3
											% Non-native	60%
											Wet Indicator (all)	-1.33
											Wet Indicator (native)	-1.33
											% hydrophyte (Midwest)	100%
											% native perennial	17%
											% native annual	33%
											% annual	60%
											% perennial	60%

NE19-089

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
LYTSAL	<i>Lythrum salicaria</i>	LYTHRUM SALICARIA	Purple Loosestrife	0	0BL	0BL	-2	Forb	Perennial	Adversive	Mean C (native species) 0.00
PHRAUSU	<i>Phragmites australis ssp. australis</i>	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	Mean C (all species) 0.00
TYPANG	<i>Typha angustifolia</i>	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	0BL	0BL	-2	Forb	Perennial	Adversive	Mean C (native trees) n/a
											Mean C (native shrubs) n/a
											Mean C (native herbaceous) n/a
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 3
											Species Richness (native) 0
											% Non-native 100%
											Wet Indicator (all) -1.67
											Wet Indicator (native) 0.00
											% hydrophyte (Midwest) 100%
											% native perennial 0%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-090

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
DIPFUS	Diplocheilus fuscus	LEPTOCHEILUS ACUMINATUS LEPTOCHEILUS ACUMINATUS	Bearded Sprangletop	0	OB	OB	-2	Grass	Annual	Adventive	Mean C (native species) 0.00 Mean C (all species) 0.00 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 0.00 FOAI (native species) 0.00 FOAI (all species) 0.00 Adjusted FOAI 0.00 % C value 0 100% % C Value 1-3 0% % C value 4-6 0% % C value 7-10 0%
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive	
POAPRA	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0	FAC	FACU	0	Grass	Perennial	Adventive	
											Additional Metrics
											Species Richness (all) 5
											Species Richness (native) 2
											% Non-native 60%
											Wet Indicator (all) -0.80
											Wet Indicator (native) -0.50
											% hydrophyte (Midwest) 100%
											% native perennial 20%
											% native annual 20%
											% annual 40%
											% perennial 60%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-091

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 0.00
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 0.00
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	Mean C (native trees) n/a
JUNTEN	Juncus tenuis	Juncus tenuis	Lesser Poverty Rush	0	FAC	FAC	0	Forb	Perennial	Native	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 0.00
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 4
											% Non-native 0%
											Wet Indicator (all) -0.50
											Wet Indicator (native) -0.50
											% hydrophyte (Midwest) 100%
											% native perennial 75%
											% native annual 25%
											% annual 25%
											% perennial 75%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-092

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
LYTSAL	<i>Lythrum salicaria</i>	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	Mean C (native species) 0.00
PHAARU	<i>Phalaris arundinacea</i>	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive	Mean C (all species) 0.00
											Mean C (native trees) n/a
											Mean C (native shrubs) n/a
											Mean C (native herbaceous) n/a
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
											Additional Metrics
											Species Richness (all) 2
											Species Richness (native) 0
											% Non-native 100%
											Wet Indicator (all) -1.50
											Wet Indicator (native) 0.00
											% hydrophyte (Midwest) 100%
											% native perennial 0%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-093

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 3.00 Mean C (all species) 2.14 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 3.00 FOAI (native species) 6.71 FOAI (all species) 6.67 Adjusted FOAI 26.36 % C value 0 67% % C Value 1-3 14% % C value 4-6 14% % C value 7-10 14%
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEGBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OBL	OBL	-2	Sedge	Annual	Native	
JUNNOO	Juncus nodosus	Juncus nodosus	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
SCHPUN	Schoenoplectus pungens	Scirpus pungens	Three-Square	4	OBL	OBL	-2	Sedge	Perennial	Native	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
Additional Metrics											
Species Richness (all)											7
Species Richness (native)											5
% Non-native											29%
Wet Indicator (all)											-1.71
Wet Indicator (native)											-1.60
% hydrophyte (Midwest)											100%
% native perennial											49%
% native annual											29%
% annual											29%
% perennial											71%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-094

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 1.00
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OB1	OB1	-2	Forb	Perennial	Adversive	Mean C (all species) 0.50
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	Mean C (native trees) n/a
SALINT	Salix interior	Salix interior	Sandbar Willow	2	FACW	FACW	-1	Shrub	Perennial	Native	Mean C (native shrubs) 2.00
											Mean C (native herbaceous) 0.00
											FQAI (native species) 1.41
											FQAI (all species) 1.00
											Adjusted FQAI 7.97
											% C value 0 75%
											% C Value 1-3 25%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 2
											% Non-native 50%
											Wet Indicator (all) -1.25
											Wet Indicator (native) -1.00
											% hydrophyte (Midwest) 100%
											% native perennial 50%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-095

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
PHRAUSU	<i>Phragmites australis</i> ssp. <i>australis</i>	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	Mean C (native species) 0.00
SOLSEM	<i>Solidago sempervirens</i>	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	Mean C (all species) 0.00
											Mean C (native trees) n/a
											Mean C (native shrubs) n/a
											Mean C (native herbaceous) n/a
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
											Additional Metrics
											Species Richness (all) 2
											Species Richness (native) 0
											% Non-native 100%
											Wet Indicator (all) -1.00
											Wet Indicator (native) 0.00
											% hydrophyte (Midwest) 100%
											% native perennial 0%
											% native annual 0%
											% annual 0%
											% perennial 100%

NW19-096

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ACENEG	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple	0	FAC	FAC	0	Tree	Perennial	Native	Mean C (native species) 1.67 Mean C (all species) 0.71 Mean C (native trees) 0.00 Mean C (native shrubs) 4.00 Mean C (native herbaceous) n/a FOAI (native species) 2.99 FOAI (all species) 1.99 Adjusted FOAI 10.91 % C value 0 71% % C Value 1-3 14% % C value 4-6 14% % C value 7-10 0%
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adversive	
SAMCAN	Sambucus nigra ssp. canadensis	Sambucus canadensis	Black Elder	4	FAC	FACW	-1	Shrub	Perennial	Native	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
VITRIP	Vitis riparia	Vitis riparia var. sylvestris	River-Bank Grape	1	FACW	FAC	-1	Vine	Perennial	Native	
											Additional Metrics
											Species Richness (all) 7
											Species Richness (native) 3
											% Non-native 67%
											Wet Indicator (all) -1.00
											Wet Indicator (native) -0.67
											% hydrophyte (Midwest) 100%
											% native perennial 45%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FOA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-097

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species)0.00 Mean C (all species)0.00 Mean C (native trees)n/a Mean C (native shrubs)n/a Mean C (native herbaceous)0.00 FOAI (native species)0.00 FOAI (all species)0.00 Adjusted FOAI0.00 % C value 0100% % C Value 1-30% % C value 4-60% % C value 7-100%
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive	
RUMCRI	Rumex crispus	RUMEX CRISPUS	Cutty Dock	0	FAC	FAC	0	Forb	Perennial	Adversive	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
SUADEL	Suaeda calceoliformis	SUAEDA DEPRESSA	Paletaweed	0	FACW	FACW	-1	Forb	Annual	Adversive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
Additional Metrics											
Species Richness (all)9											
Species Richness (native)3											
% Non-native67%											
Wet Indicator (all)-1.00											
Wet Indicator (native)-0.67											
% hydrophyte (Midwest)100%											
% native perennial22%											
% native annual11%											
% annual22%											
% perennial78%											

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-098

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native		
EUPSEB	Eupatorium serotinum	Eupatorium serotinum	Late-flowering Thoroughwort	0	FAC	FAC	0	Forb	Perennial	Native		
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native		
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native		
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive		
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive		
SCIRLU	Schoenoplectus fluviatilis	Schoenoplectus fluviatilis, Schoenoplectus fluviatilis	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native		
SCIRPUN	Schoenoplectus purpureus	Sorpus purpureus	Three-Square	4	OBL	OBL	-2	Sedge	Perennial	Native		
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive		
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive		
											Mean C (native species)	2.17
											Mean C (all species)	1.50
											Mean C (native trees)	n/a
											Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	2.17
											FQAI (native species)	6.31
											FQAI (all species)	4.11
											Adjusted FQAI	16.76
											% C value 0	60%
											% C value 1-3	20%
											% C value 4-6	20%
											% C value 7-10	0%
Additional Metrics												
Species Richness (all)											10	
Species Richness (native)											6	
% Non-native											40%	
Wet Indicator (all)											-1.30	
Wet Indicator (native)											-1.17	
% hydrophyte (Midwest)											100%	
% native perennial											50%	
% native annual											10%	
% annual											10%	
% perennial											90%	

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-099

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 1.50
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (all species) 0.75
PERMAC	Persicaria maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adventive	Mean C (native trees) n/a
SETPUM	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	FAC	0	Grass	Annual	Adventive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 1.50
											FQAI (native species) 2.12
											FQAI (all species) 1.50
											Adjusted FQAI 10.61
											% C value 0 75%
											% C Value 1-3 25%
											% C value 4-6 0%
											% C value 7-10 0%
											Additional Metrics
											Species Richness (all) 4
											Species Richness (native) 2
											% Non-native 50%
											Wet Indicator (all) -1.00
											Wet Indicator (native) -1.50
											% hydrophyte (Midwest) 100%
											% native perennial 25%
											% native annual 25%
											% annual 75%
											% perennial 25%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

Inventory Calculator

[illegible]

SW19-101

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 0.00
DIPFUS	Diplocheilus fuscus	LEPTURUS ALUMINARIA, LEPTURUS ALUMINUS	Bearded Springletop	0	OBL	OBL	-2	Grass	Annual	Adversive	Mean C (all species) 0.00
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (native trees) n/a
PERMAC	Panicum maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adversive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 0.00
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 2
											% Non-native 50%
											Wet Indicator (all) -1.25
											Wet Indicator (native) -1.00
											% hydrophyte (Midwest) 100%
											% native perennial 25%
											% native annual 25%
											% annual 75%
											% perennial 25%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-102

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 0.00
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 0.00
HORLUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	Mean C (native trees) n/a
PERMAC	Persicaria maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adventive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 0.00
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 3
											% Non-native 25%
											Wet Indicator (all) -0.75
											Wet Indicator (native) -0.67
											% hydrophyte (Midwest) 100%
											% native perennial 50%
											% native annual 25%
											% annual 50%
											% perennial 50%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NW19-103

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ECHGRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (native species) 0.00 Mean C (all species) 0.00 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 0.00 FOAI (native species) 0.00 FOAI (all species) 0.00 Adjusted FOAI 0.00 % C value 0 100% % C Value 1-3 0% % C value 4-6 0% % C value 7-10 0%
EUPALT	Eupatorium altissimum	Eupatorium altissimum	Tall Boneset	0	UPL	UPL	2	Forb	Perennial	Native	
HELANN	Helianthus annuus	HELIANTHUS ANNUUS	Common Sunflower	0	FACU	FACU	1	Forb	Annual	Adventive	
PERLAP	Pericaria lapathifolia	PERICARIA LAPATHIFOLIA	Dock-Leaf Smartweed	0	FACW	FACW	-1	Forb	Annual	Native	
SCHARU	Schedonorus arundinaceus	SCHEDONORUS ARUNDINACEUS	Tall False Rye Grass	0	FACU	FACU	1	Grass	Perennial	Adventive	
SETPUM	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	FAC	0	Grass	Annual	Adventive	
TRIPRA	Trifolium pratense	TRIFOLIUM PRATENSE	Red Clover	0	FACU	FACU	1	Forb	Perennial	Adventive	
											Additional Metrics
											Species Richness (all) 7
											Species Richness (native) 3
											% Non-native 57%
											Wet Indicator (all) 0.43
											Wet Indicator (native) 0.00
											% hydrophyte (Midwest) 43%
											% native perennial 14%
											% native annual 29%
											% annual 57%
											% perennial 43%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-104

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics Mean C (native species)3.13 Mean C (all species)1.79 Mean C (native trees)2.00 Mean C (native shrubs)0.00 Mean C (native herbaceous)3.50 FQAI (native species)0.04 FQAI (all species)6.60 Adjusted FQAI23.62 % C value 060% % C Value 1-321% % C value 4-621% % C value 7-107%
BIDBIP	Bidens bipinnata	BIDENS BIPINNATA	Spanish-Needles	0	FAC	FACU	0	Forb	Annual	Adversive	
CXSTIP	Carex stipata	Carex stipata	Stalk-Grass Sedge	4	OBL	OBL	-2	Sedge	Perennial	Native	
DIPAC	Dipsacus laevis	DIPSACUS LAEVIATUS	Cut-Leaf Tassel	0	UPL	FACU	2	Forb	Biennial	Adversive	
ELAANG	Elaeagnus angustifolia	ELAEAGNUS ANGUSTIFOLIA	Russian-Olive	0	FACU	FACU	1	Shrub	Perennial	Adversive	
FRAPEN	Fraxinus pennsylvanica	Fraxinus pennsylvanica	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native	
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
JUNTOR	Juncus torreyi	Juncus torreyi	Torrey's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
LYCAME	Lyocopus americanus	Lyocopus americanus	Cut-Leaf Water-Horshound	4	OBL	OBL	-2	Forb	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
POAPAS	Poa palustris	Poa palustris	Fowl Blue Grass	7	FACW	FACW	-1	Grass	Perennial	Native	
PODEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native	
SCIPEN	Scirpus pendulus	Scirpus pendulus	Rufous Bulrush	2	OBL	OBL	-2	Sedge	Perennial	Native	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
Additional Metrics											
Species Richness (all)14											
Species Richness (native)8											
% Non-native43%											
Wet Indicator (all)-0.86											
Wet Indicator (native)-1.25											
% hydrophyte (Midwest)86%											
% native perennial57%											
% native annual0%											
% annual7%											
% perennial86%											

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-105

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
DIPLAC	Dipsacus laevis	DIPSACUS LACINATUS	Cut-Leaf Tassel	0	UPL	FACU	2	Forb	Biennial	Adversive	Mean C (native species) 1.33 Mean C (all species) 0.73 Mean C (native trees) 2.00 Mean C (native shrubs) n/a Mean C (native herbaceous) 1.00 FOAI (native species) 3.27 FOAI (all species) 2.41 Adjusted FOAI 9.06 % C value 0 73% % C value 1-3 10% % C value 4-6 9% % C value 7-10 0%
EUPALT	Eupatorium altissimum	Eupatorium altissimum	Tall Boneset	0	UPL	UPL	2	Forb	Perennial	Native	
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-flowering Thoroughwort	0	FAC	FAC	0	Forb	Perennial	Native	
FRAPEN	Fraxinus pennsylvanica	Fraxinus pennsylvanica	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native	
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
JUNTOR	Juncus torreyi	Juncus torreyi	Torrey's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
JUNVIR	Juniperus virginiana	Juniperus virginiana crebra	Eastern Red-Cedar	0	FACU	FACU	1	Tree	Perennial	Native	
LEUVUL	Leucanthemum vulgare	LEUCANTHEMUM VULGARE	Ox-Eye Daisy	0	UPL	UPL	2	Forb	Perennial	Adversive	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	Additional Metrics Species Richness (all) 11 Species Richness (native) 6 % Non-native 45% Wet Indicator (all) 0.00 Wet Indicator (native) 0.00 % hydrophyte (Midwest) 64% % native perennial 55% % native annual 0% % annual 0% % perennial 91%

USACE Chicago Region FOA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-106

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
BIDBIP	Bidens bipinnata	BIDENS BIPINNATA	Spanish-Needles	0	FAC	FACU	0	Forb	Annual	Adversive	
DIPALC	Dipsacus laevis	DIPSACUS LAEVIATUS	Cut-Leaf Teasel	0	UPL	FACU	2	Forb	Biennial	Adversive	
EUPALT	Eupatorium altissimum	Eupatorium altissimum	Tall Boneset	0	UPL	UPL	2	Forb	Perennial	Native	
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Little Ironweed	0	FAC	FAC	0	Forb	Perennial	Native	
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
JUNTOR	Juncus torreyi	Juncus torreyi	Torrey's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
PANVIR	Panicum virgatum	Panicum virgatum	Wand Panic Grass	3	FAC	FAC	0	Grass	Perennial	Native	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
POAPAS	Poa palustris	Poa palustris	Poa Blue Grass	7	FACW	FACW	-1	Grass	Perennial	Native	
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native	
SYMERI	Symphoricarpon encodes	Aster encodes	vinosa near american aster	6	FACU	FACU	1	Forb	Perennial	Native	
											Additional Metrics

USACE Chicago Region FOA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-107

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	
DIPFUS	Diplopia fuscus	LEPTALUM ALUMINARIA, LEPTODERMIS FUSCUS	Bearded Springletop	0	OBL	OBL	-2	Grass	Annual	Adventive	
PERMAC	Periscaris maculosa	POLYGONUM PERISCARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adventive	
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive	
POAPRA	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0	FAC	FACU	0	Grass	Perennial	Adventive	
SETPUM	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	FAC	0	Grass	Annual	Adventive	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-108

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	
DIPFUS	Diplazium fuscus	LEPTODERMIS ALUMINARIA, LEPTODERMIS ALUMINARIA	Bearded Springletop	0	OBL	OBL	-2	Grass	Annual	Adversive	
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
JUNTEN	Juncus tenuis	Juncus tenuis	Lesser Poverty Rush	0	FAC	FAC	0	Forb	Perennial	Native	
SETPUM	Setaria pumila	SETARIA GLAUCA	Yellow Bristle Grass	0	FAC	FAC	0	Grass	Annual	Adversive	
					</						

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-109

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ELEPAL	Eleocharis palustris	Eleocharis acuticarpa, Eleocharis palustris var. acuticarpa	Common Spike-Rush	1	OBL	OBL	-2	Sedge	Perennial	Native	Mean C (native species) 2.90 Mean C (all species) 1.50 Mean C (native trees) 2.00 Mean C (native shrubs) n/a Mean C (native herbaceous) 2.00 FQAI (native species) 4.90 FQAI (all species) 4.24 Adjusted FQAI 17.32 % C value 0 30% % C Value 1-3 60% % C value 4-6 13% % C value 7-10 0%
EPICOL	Epilobium coloratum	Epilobium coloratum	Purple-Leaf Willowherb	3	OBL	OBL	-2	Forb	Perennial	Native	
FRAPEN	Fraxinus pennsylvanica	Fraxinus pennsylvanica	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native	
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
JUNTOR	Juncus torreyi	Juncus torreyi	Torrey's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native	
											Additional Metrics
											Species Richness (all) 8
											Species Richness (native) 6
											% Non-native 25%
											Wet Indicator (all) -1.25
											Wet Indicator (native) -1.17
											% hydrophyte (Midwest) 100%
											% native perennial 75%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-110

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
AMBART	Ambrosia artemisiifolia	Ambrosia artemisiifolia elatior	Annual Ragweed	0	FACU	FACU	1	Forb	Annual	Native	Mean C (native species) 2.66 Mean C (all species) 1.92 Mean C (native trees) 2.00 Mean C (native shrubs) 0.00 Mean C (native herbaceous) 2.71 FQAI (native species) 7.67 FQAI (all species) 6.64 Adjusted FQAI 22.13 % C value 0 42% % C value 1-3 33% % C value 4-6 26% % C value 7-10 0%
BIDBIP	Bidens bipinnata	BIDENS BIPINNATA	Spanish-Needles	0	FAC	FACU	0	Forb	Annual	Adversive	
EUTGRA	Euthamia graminifolia	FRAXINUS pennsylvanica FRAXINUS pennsylvanica	Flat-Top Goldenrod	4	FACW	FAC	-1	Forb	Perennial	Native	
FRAPEN	Fraxinus pennsylvanica	FRAXINUS pennsylvanica FRAXINUS pennsylvanica	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native	
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
JUNTOR	Juncus torreyi	Juncus torreyi	Torrey's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
POPOEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native	
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adversive	
SCIPEN	Scirpus pendulus	Scirpus pendulus	Rufous Bulrush	2	OBL	OBL	-2	Sedge	Perennial	Native	
SYMERI	Symphyotrichum eriooides	Aster eriooides	White-Head American-Aster	6	FACU	FACU	1	Forb	Perennial	Native	Additional Metrics Species Richness (all) 12 Species Richness (native) 9 % Non-native 25% Wet Indicator (all) -0.50 Wet Indicator (native) -0.56 % hydrophyte (Midwest) 83% % native perennial 67% % native annual 8% % annual 17% % perennial 83%
SYMNOV	Symphyotrichum novae-angliae	Aster novae-angliae	Blue-Head American-Aster	3	FACW	FACW	-1	Forb	Perennial	Native	

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-111

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
FRAPEN	<i>Fraxinus pennsylvanica</i>	<i>Fraxinus pennsylvanica</i> <i>Fraxinus pennsylvanica</i>	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native	Mean C (native species) 3.00 Mean C (all species) 2.93 Mean C (native trees) 2.00 Mean C (native shrubs) 0.00 Mean C (native herbaceous) 3.40 FQAI (native species) 7.94 FQAI (all species) 7.42 Adjusted FQAI 20.06 % C value 0 25% % C Value 1-3 30% % C value 4-6 25% % C value 7-10 13%
JUNDUD	<i>Juncus dudleyi</i>	<i>Juncus dudleyi</i>	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
JUNTOR	<i>Juncus torreyi</i>	<i>Juncus torreyi</i>	Torrey's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	
LYCAME	<i>Lycopus americanus</i>	<i>Lycopus americanus</i>	Cut-Leaf Water-Horehound	4	OBL	OBL	-2	Forb	Perennial	Native	
POAPAS	<i>Poa palustris</i>	<i>Poa palustris</i>	Fowl Blue Grass	7	FACW	FACW	-1	Grass	Perennial	Native	
POPDEL	<i>Populus deltoides</i>	<i>Populus deltoides</i>	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native	
RHACAT	<i>Rhamnus cathartica</i>	<i>RHAMNUS CATHARTICA</i>	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adventive	
SCIFEN	<i>Scirpus pendulus</i>	<i>Scirpus pendulus</i>	Rufous Bulrush	2	OBL	OBL	-2	Sedge	Perennial	Native	
											Additional Metrics
											Species Richness (all) 8
											Species Richness (native) 7
											% Non-native 13%
											Wet Indicator (all) -1.00
											Wet Indicator (native) -1.14
											% hydrophyte (Midwest) 100%
											% native perennial 88%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-112

Inventory Calculator										
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity
CIRARV	Cirsium arvense	CIRSIIUM ARVENSE	Canadian Thistle	0	FACU	FACU	1	Forb	Perennial	Adversive
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-flowering Thoroughwort	0	FAC	FAC	0	Forb	Perennial	Native
FRAPEN	Fraxinus pennsylvanica	Fraxinus pennsylvanica	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native
PARQUI	Parthenocissus quinquefolia	Parthenocissus quinquefolia	Virginia-Creeper	4	FACU	FACU	1	Vine	Perennial	Native
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive
										Conservatism-Based Metrics Mean C (native species) 2.67 Mean C (all species) 1.60 Mean C (native trees) 4.00 Mean C (native shrubs) n/a Mean C (native herbaceous) 0.00 FQAI (native species) 4.62 FQAI (all species) 3.60 Adjusted FQAI 20.66 % C value 0 60% % C Value 1-3 0% % C value 4-6 40% % C value 7-10 0%
										Additional Metrics Species Richness (all) 5 Species Richness (native) 3 % Non-native 40% Wet Indicator (all) 0.00 Wet Indicator (native) 0.00 % hydrophyte (Midwest) 60% % native perennial 60% % native annual 0% % annual 0% % perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-113

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
FRAPEN	<i>Fraxinus pennsylvanica</i>	<i>Fraxinus pennsylvanica</i> <i>Fraxinus americana</i>	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native	Mean C (native species) 2.67 Mean C (all species) 1.00 Mean C (native trees) 2.00 Mean C (native shrubs) 0.00 Mean C (native herbaceous) 4.00 FOAI (native species) 4.62 FOAI (all species) 2.89 Adjusted FOAI 16.33 % C value 0 75% % C Value 1-3 0% % C value 4-6 25% % C value 7-10 0%
LYCAME	<i>Lythrum americanus</i>	<i>Lythrum americanus</i>	Cut-Leaf Water-Horsehound	4	OBL	OBL	-2	Forb	Perennial	Native	
LYTSAL	<i>Lythrum salicaria</i>	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	
PHAARU	<i>Phalaris arundinacea</i>	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive	
PHRAUSU	<i>Phragmites australis</i> ssp. <i>australis</i>	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	
POPDEL	<i>Populus deltoides</i>	<i>Populus deltoides</i>	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native	
RHACAT	<i>Rhamnus cathartica</i>	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adventive	
TYPANG	<i>Typha angustifolia</i>	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	
											Additional Metrics
											Species Richness (all) 8
											Species Richness (native) 3
											% Non-native 63%
											Wet Indicator (all) -1.13
											Wet Indicator (native) -1.00
											% hydrophyte (Midwest) 100%
											% native perennial 38%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FOA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-114

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
DIPFUS	Diplazium fuscum	LEPTOCHLOA ACUMINATA LEPTOCHLOA ACUMINATA	Bearded Sprangletop	0	OBL	OBL	-2	Grass	Annual	Adventive	Mean C (native species) 1.00 Mean C (all species) 0.43 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 1.00 FOAI (native species) 1.73 FOAI (all species) 1.13 Adjusted FOAI 6.65 % C value 0 06% % C Value 1-3 14% % C value 4-6 0% % C value 7-10 0%
ECHGRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OBL	OBL	-2	Sedge	Annual	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	
											Additional Metrics
											Species Richness (all) 7
											Species Richness (native) 3
											% Non-native 67%
											Wet Indicator (all) -1.29
											Wet Indicator (native) -1.00
											% hydrophyte (Midwest) 100%
											% native perennial 14%
											% native annual 29%
											% annual 43%
											% perennial 57%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-115

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
ECHGRU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native		
ELEOBT	Elaeagnus obtusa	Elaeagnis ovata	Blunt Spike-flush	3	OB	OB	-2	Sedge	Annual	Native		
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native		
PERMAC	Persicaria maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adversive		
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adversive		
SCHPUN	Schoenoplectus pungens	Scirpus pungens	Three-Square	4	OB	OB	-2	Sedge	Perennial	Native		
										Mean C (native species)		1.75
										Mean C (all species)		1.17
										Mean C (native trees)		n/a
										Mean C (native shrubs)	n/a	
										Mean C (native herbaceous)	1.75	
										FOAI (native species)	3.50	
										FOAI (all species)	2.86	
										Adjusted FOAI	14.29	
										% C value 0	67%	
										% C Value 1-3	17%	
										% C value 4-6	17%	
										% C value 7-10	0%	
Additional Metrics												
Species Richness (all)										6		
Species Richness (native)										4		
% Non-native										33%		
Wet Indicator (all)										-1.00		
Wet Indicator (native)										-1.25		
% hydrophyte (Midwest)										100%		
% native perennial										33%		
% native annual										33%		
% annual										50%		
% perennial										50%		

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-116

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ACENEG	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple	0	FAC	FAC	0	Tree	Perennial	Native	Mean C (native species) 0.00 Mean C (all species) 0.00 Mean C (native trees) 0.00 Mean C (native shrubs) 0.00 Mean C (native herbaceous) n/a FOAI (native species) 0.00 FOAI (all species) 0.00 Adjusted FOAI 0.00 % C value 0 100% % C Value 1-3 0% % C value 4-6 0% % C value 7-10 0%
POPEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native	
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adversive	
ROBPSE	Robinia pseudoacacia	ROBINIA PSEUDOACACIA	Black Locust	0	FACU	FACU	1	Tree	Perennial	Adversive	
Additional Metrics											
Species Richness (all)											4
Species Richness (native)											2
% Non-native											50%
Wet Indicator (all)											0.25
Wet Indicator (native)											0.00
% hydrophyte (Midwest)											75%
% native perennial											50%
% native annual											0%
% annual											0%
% perennial											100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-117

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
FRAPEN	Fraxinus pennsylvanica	Fraxinus pennsylvanica	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native	Mean C (native species)	2.00
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	Mean C (all species)	1.67
JUNTOR	Juncus torreyi	Juncus torreyi	Torrey's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	Mean C (native trees)	2.00
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (native shrubs)	n/a
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native	Mean C (native herbaceous)	2.00
SCIPEN	Scirpus pendulus	Scirpus pendulus	Rufous Bulrush	2	GBL	GBL	-2	Sedge	Perennial	Native	FGAI (native species)	4.47
											FGAI (all species)	4.00
											Adjusted FGAJ	10.26
											% C value 0	33%
											% C Value 1-3	66%
											% C value 4-6	17%
											% C value 7-10	0%
											Additional Metrics	
											Species Richness (all)	6
											Species Richness (native)	5
											% Non-native	17%
											Wet Indicator (all)	-1.00
											Wet Indicator (native)	-1.00
											% hydrophyte (Midwest)	100%
											% native perennial	85%
											% native annual	0%
											% annual	0%
											% perennial	100%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-118

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
ASCINC	Asclepias incarnata	Asclepias incarnata	Swamp Milkweed	3	OBL	OBL	-2	Forb	Perennial	Native		
CXVULP	Carex vulpinoidea	Carex vulpinoidea	Common Fox Sedge	2	FACW	OBL	-1	Sedge	Perennial	Native		
FRAPEN	Fraxinus pennsylvanica	Fraxinus pennsylvanica	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native		
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive		
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native		
RHAMCAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adversive		
SALNIG	Salix nigra	Salix nigra	Black Willow	5	OBL	OBL	-2	Tree	Perennial	Native		
										Mean C (native species)		2.00
										Mean C (all species)		2.00
										Mean C (native trees)	3.00	
										Mean C (native shrubs)	0.00	
										Mean C (native herbaceous)	2.50	
										FOAI (native species)	6.25	
										FOAI (all species)	6.25	
										Adjusted FOAI	23.66	
										% C value 0	43%	
										% C Value 1-3	25%	
										% C value 4-6	25%	
										% C value 7-10	0%	
Additional Metrics												
										Species Richness (all)	7	
										Species Richness (native)	5	
										% Non-native	29%	
										Wet Indicator (all)	-1.14	
										Wet Indicator (native)	-1.20	
										% hydrophyte (Midwest)	100%	
										% native perennial	71%	
										% native annual	0%	
										% annual	0%	
										% perennial	100%	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-119

Inventory Calculator										
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity
ECHCRU	Echinodhisa crux-galli	Echinodhisa cruxgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native
								Conservatism-Based Metrics		
								Mean C (native species)	0.00	
								Mean C (all species)	0.00	
								Mean C (native trees)	n/a	
								Mean C (native shrubs)	n/a	
								Mean C (native herbaceous)	0.00	
								FQAI (native species)	0.00	
								FQAI (all species)	0.00	
								Adjusted FQAI	0.00	
								% C value 0	100%	
								% C Value 1-3	0%	
								% C value 4-6	0%	
								% C value 7-10	0%	
								Additional Metrics		
								Species Richness (all)	1	
								Species Richness (native)	1	
								% Non-native	0%	
								Wet Indicator (all)	-1.00	
								Wet Indicator (native)	-1.00	
								% hydrophyte (Midwest)	100%	
								% native perennial	0%	
								% native annual	100%	
								% annual	100%	
								% perennial	0%	

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-120

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
CIRARV	Cirsium arvense	CIRSIIUM ARVENSE	Canadian Thistle	0	FACU	FACU	1	Forb	Perennial	Adventive		
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native		
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-flowering Thoroughwort	0	FAC	FAC	0	Forb	Perennial	Native		
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive		
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native		
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive		
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive		
Mean C (native species)												0.00
Mean C (all species)												0.00
Mean C (native trees)											0.00	
Mean C (native shrubs)											n/a	
Mean C (native herbaceous)											0.00	
FOAI (native species)											0.00	
FOAI (all species)											0.00	
Adjusted FOAI											0.00	
% C value 0											100%	
% C Value 1-3											0%	
% C value 4-6											0%	
% C value 7-10											0%	
Additional Metrics												
Species Richness (all)											7	
Species Richness (native)											3	
% Non-native											57%	
Wet Indicator (all)											-0.57	
Wet Indicator (native)											-0.33	
% hydrophyte (Midwest)											86%	
% native perennial											43%	
% native annual											0%	
% annual											0%	
% perennial											100%	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-121

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
APOCAN	Apocynum cannabinum	Apocynum sibiricum	Indian Hemp	2	FAC	FAC	0	Forb	Perennial	Native	Mean C (native species) 2.00 Mean C (all species) 0.06 Mean C (native trees) n/a Mean C (native shrubs) 0.00 Mean C (native herbaceous) 2.00 FOAI (native species) 3.46 FOAI (all species) 2.27 Adjusted FOAI 13.09 % C value 0 71% % C Value 1-3 14% % C value 4-6 14% % C value 7-10 0%
CXSTIP	Carex stipata	Carex stipata	Stalk-Grass Sedge	4	OBL	OBL	-2	Sedge	Perennial	Native	
DIPLAC	Dipsacus laevis	DIPSACUS LACINATUS	Cut-Leaf Tassel	0	UPL	FACU	2	Forb	Biennial	Adversive	
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Wild-chickweed	0	FAC	FAC	0	Forb	Perennial	Native	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adversive	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
											Additional Metrics
											Species Richness (all) 7
											Species Richness (native) 3
											% Non-native 67%
											Wet Indicator (all) -0.29
											Wet Indicator (native) -0.67
											% hydrophyte (Midwest) 80%
											% native perennial 43%
											% native annual 0%
											% annual 0%
											% perennial 86%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-122

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species)	1.50
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (all species)	0.75
PHAAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (native trees)	n/a
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	1.50
											FOAI (native species)	2.12
											FOAI (all species)	1.50
											Adjusted FOAI	10.61
											% C value 0	75%
											% C value 1-3	25%
											% C value 4-6	0%
											% C value 7-10	0%
											Additional Metrics	
											Species Richness (all)	4
											Species Richness (native)	2
											% Non-native	50%
											Wet Indicator (all)	-1.25
											Wet Indicator (native)	-1.50
											% hydrophyte (Midwest)	100%
											% native perennial	25%
											% native annual	25%
											% annual	25%
											% perennial	75%

Inventory Calculator

Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
ALISUB	Alisma subcordatum	Alisma subcordatum	American Water-Plantain	3	GBL	GBL	-2	Forb	Perennial	Native	Mean C (native species) 1.43 Mean C (all species) 0.77 Mean C (native trees) 0.00 Mean C (native shrubs) 0.00 Mean C (native herbaceous) 1.67 FQAI (native species) 3.76 FQAI (all species) 2.77 Adjusted FQAI 10.40 % C value 0 62% % C Value 1-3 30% % C value 4-6 0% % C value 7-10 0%	
APOCAN	Apocynum canadense	Apocynum sibiricum	Indian-Hemp	2	FAC	FAC	0	Forb	Perennial	Native		
ECHGRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native		
ELEPAL	Eleocharis palustris	Eleocharis acicularis; Eleocharis palustris	Common Spike-Rush	1	GBL	GBL	-2	Sedge	Perennial	Native		
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native		
JUNTOR	Juncus torreyi	Juncus torreyi	Torrey's Rush	2	FACW	FACW	-1	Forb	Perennial	Native		
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive		
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native		
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adversive		
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adversive		
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive		
SYMSUB	Symphyotrichum subulatum	ASTER SUBULATUS	Seaside American-Aster	0	GBL	FACW	-2	Forb	Annual	Adversive		
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	GBL	GBL	-2	Forb	Perennial	Adversive		
Additional Metrics												
Species Richness (all)											13	
Species Richness (native)											7	
% Non-native											46%	
Wet Indicator (all)											-1.00	
Wet Indicator (native)											-1.00	
% hydrophyte (Midwest)											100%	
% native perennial											46%	
% native annual											8%	
% annual											15%	
% perennial											85%	

SE19-124

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
AMBART	Ambrosia artemisiifolia	Ambrosia artemisiifolia elatior	Annual Ragweed	0	FACU	FACU	1	Forb	Annual	Native	
PHABRU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive	
PHPAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native	
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adversive	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
ULMAME	Ulmus americana	Ulmus americana	American Elm	3	FACW	FACW	-1	Tree	Perennial	Native	

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-125

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
PHARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (native species) 0.00
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (all species) 0.00
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adventive	Mean C (native trees) n/a
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) n/a
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 0
											% Non-native 100%
											Wet Indicator (all) -0.75
											Wet Indicator (native) 0.00
											% hydrophyte (Midwest) 100%
											% native perennial 0%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-126

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
DIPFUS	Diplopia fusca	LEPTOCHLOA ACUTIBERTELLA	Bearded Sprangletop	0	OB	OB	-2	Grass	Annual	Adventive	
ECHGRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
HORJUG	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	
SCIRU	Schoenoplectus fluviatilis	Schoenoplectus fluviatilis, scirpus fluviatilis	River Club-Rush	4	OB	OB	-2	Sedge	Perennial	Native	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive	
SYMSUB	Symphoricarpos subulatum	ASTER SUBULATUS	Seaside American-Aster	0	OB	FACW	-2	Forb	Annual	Adventive	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-127

Inventory Calculator													
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics		
DIPFUS	Diplazium fuscum	LEPTOCHLOA ACUMINATA	Bearded Sprangletop	0	GBL	GBL	-2	Grass	Annual	Adventive			
ECHGRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native			
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	GBL	GBL	-2	Sedge	Annual	Native			
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native			
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive			
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	GBL	GBL	-2	Forb	Perennial	Adventive			
											Mean C (native species)	1.00	
											Mean C (all species)	0.50	
											Mean C (native trees)	n/a	
											Mean C (native shrubs)	n/a	
											Mean C (native herbaceous)	1.00	
											FQAI (native species)	1.73	
											FQAI (all species)	1.22	
											Adjusted FQAI	7.97	
											% C value 0	0%	
											% C value 1-3	17%	
											% C value 4-6	0%	
											% C value 7-10	0%	
												Additional Metrics	
											Species Richness (all)	6	
											Species Richness (native)	3	
											% Non-native	50%	
											Wet Indicator (all)	-1.33	
											Wet Indicator (native)	-1.00	
											% hydrophyte (Midwest)	100%	
											% native perennial	17%	
											% native annual	33%	
											% annual	60%	
											% perennial	50%	

NE19-128

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OB1	OB1	-2	Sedge	Annual	Native	Mean C (native species) 3.00 Mean C (all species) 0.60 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 3.00 FQAI (native species) 3.00 FQAI (all species) 1.34 Adjusted FQAI 13.42 % C value 0 00% % C Value 1-3 20% % C value 4-6 0% % C value 7-10 0%
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
POAPRA	Poa pratensis	POA PRATENSIS	Kentucky Blue Grass	0	FAC	FACU	0	Grass	Perennial	Adversive	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OB1	OB1	-2	Forb	Perennial	Adversive	
Additional Metrics											
Species Richness (all)										5	
Species Richness (native)										1	
% Non-native										80%	
Wet Indicator (all)										-1.20	
Wet Indicator (native)										-2.00	
% hydrophyte (Midwest)										100%	
% native perennial										0%	
% native annual										20%	
% annual										20%	
% perennial										80%	

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-129

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
DIPAC	Dipsacus laevis	DIPSACUS LACINATUS	Cut-Leaf Tassel	0	UPL	FACU	2	Forb	Biennial	Adventive	Mean C (native species) 2.00 Mean C (all species) 0.67 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 2.00 FQAI (native species) 2.03 FQAI (all species) 1.63 Adjusted FQAI 11.55 % C value 0 0% % C Value 1-3 0% % C value 4-6 17% % C value 7-10 0%
ECHCRU	Echinodhiza crus-galli	Echinodhiza crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
PHACRU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive	
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adventive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	
VERHAS	Verbena hastata	Verbena hastata	Simpson's Joy	4	FACW	FACW	-1	Forb	Perennial	Native	
											Additional Metrics
											Species Richness (all) 6
											Species Richness (native) 2
											% Non-native 67%
											Wet Indicator (all) -0.50
											Wet Indicator (native) -1.00
											% hydrophyte (Midwest) 83%
											% native perennial 17%
											% native annual 17%
											% annual 17%
											% perennial 67%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-130

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
APOCAN	Apocynum cannabinum	Apocynum sibiricum	Indian Hemp	2	FAC	FAC	0	Forb	Perennial	Native		
CXVULP	Carex vulpinoidea	Carex vulpinoidea	Common Fox Sedge	2	FACW	OBL	-1	Sedge	Perennial	Native		
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native		
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native		
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native		
SCIRLU	Schoenoplectus fluviatilis	Schoenoplectus fluviatilis, Scirpus fluviatilis	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native		
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive		
SYMSUB	Symphoricarum subulatum	ASTER SUBULATUS	Seaside American Aster	0	OBL	FACW	-2	Forb	Annual	Adversive		
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive		
											Mean C (native species)	1.03
											Mean C (all species)	1.22
											Mean C (native trees)	n/a
											Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	1.03
											FOAI (native species)	4.49
											FOAI (all species)	3.67
											Adjusted FOAI	14.97
											% C value 0	66%
											% C Value 1-3	33%
											% C value 4-6	11%
											% C value 7-10	0%
Additional Metrics												
Species Richness (all)											9	
Species Richness (native)											6	
% Non-native											33%	
Wet Indicator (all)											-1.22	
Wet Indicator (native)											-1.00	
% hydrophyte (Midwest)											100%	
% native perennial											44%	
% native annual											22%	
% annual											33%	
% perennial											67%	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-131

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
APOCAN	Apocynum cannabinum	Apocynum sibiricum	Indian Hemp	2	FAC	FAC	0	Forb	Perennial	Native	
CIRARV	Cirsium arvense	CIRSIMUM ARVENSE	Canadian Thistle	0	FACU	FACU	1	Forb	Perennial	Adversive	
EUPALT	Eupatorium altissimum	Eupatorium altissimum	Tall Boneset	0	UPL	UPL	2	Forb	Perennial	Native	
EUPSER	Eupatorium serotinum	Eupatorium serotinum <i>Thymus occidentalis</i>	Little-flowering Thymus	0	FAC	FAC	0	Forb	Perennial	Native	
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
SYMSUB	Symphoricarpos subulatum	ASTER SUBULATUS	Seaside American Aster	0	OBL	FACW	-2	Forb	Annual	Adversive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-132

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species)	0.75
CYPSQU	Cyperus squarrosus	Cyperus inflexus	Awed Flat Sedge	0	OBL	OBL	-2	Sedge	Annual	Native	Mean C (all species)	0.50
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (native trees)	n/a
ELEOBT	Eleocharis obtusa	Eleocharis orata	Slant Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (native shrubs)	n/a
PERMAC	Panicum maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adventive	Mean C (native herbaceous)	0.75
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	FQAI (native species)	1.50
											FQAI (all species)	1.22
											Adjusted FQAI	6.12
											% C value 0	0%
											% C Value 1-3	17%
											% C value 4-6	0%
											% C value 7-10	0%
Additional Metrics												
											Species Richness (all)	6
											Species Richness (native)	4
											% Non-native	33%
											Wet Indicator (all)	-1.50
											Wet Indicator (native)	-1.50
											% hydrophyte (Midwest)	100%
											% native perennial	17%
											% native annual	50%
											% annual	67%
											% perennial	33%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-133

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 1.00
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 0.75
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	CGL	CGL	-2	Sedge	Annual	Native	Mean C (native trees) n/a
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 1.00
											FQAI (native species) 1.73
											FQAI (all species) 1.60
											Adjusted FQAI 0.66
											% C value 0 75%
											% C Value 1-3 25%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 3
											% Non-native 25%
											Wet Indicator (all) -1.25
											Wet Indicator (native) -1.33
											% hydrophyte (Midwest) 100%
											% native perennial 25%
											% native annual 50%
											% annual 50%
											% perennial 50%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-134

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species) 1.00
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species) 0.75
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	CGL	CGL	-2	Sedge	Annual	Native	Mean C (native trees) n/a
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 1.00
											FQAI (native species) 1.73
											FQAI (all species) 1.60
											Adjusted FQAI 0.66
											% C value 0 75%
											% C Value 1-3 25%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 3
											% Non-native 25%
											Wet Indicator (all) -1.25
											Wet Indicator (native) -1.33
											% hydrophyte (Midwest) 100%
											% native perennial 25%
											% native annual 50%
											% annual 50%
											% perennial 50%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

Inventory Calculator

Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species)	1.00
DIPFUS	Diplazium fuscus	LEPTOCLADUM ALUMINARIAE LEPTOCLADUM FUSCUM ASER	Bearded Springtailcap	0	OBL	OBL	-2	Grass	Annual	Adversive	Mean C (all species)	0.60
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (native trees)	n/a
ELEOBT	Eleocharis obtusa	Eleocharis orata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (native shrubs)	n/a
PERMAC	Paspalum maculosum	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adversive	Mean C (native herbaceous)	1.00
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive	FOAI (native species)	1.75
											FOAI (all species)	1.22
											Adjusted FOAI	7.97
											% C value 0	85%
											% C value 1-3	17%
											% C value 4-6	0%
											% C value 7-10	0%
Additional Metrics												
											Species Richness (all)	6
											Species Richness (native)	3
											% Non-native	50%
											Wet Indicator (all)	-1.33
											Wet Indicator (native)	-1.33
											% hydrophyte (Midwest)	100%
											% native perennial	17%
											% native annual	33%
											% annual	67%
											% perennial	33%

SE19-136

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
DIPFUS	Diplopia fusa	LEPTOCHLOA ACUMINATA	Bearded Sprangletop	0	OBL	OBL	-2	Grass	Annual	Adventive	Mean C (native species) 1.50 Mean C (all species) 0.50 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 1.50 FOAI (native species) 2.12 FOAI (all species) 1.22 Adjusted FOAI 0.66 % C value 0 05% % C Value 1-3 17% % C value 4-6 0% % C value 7-10 0%
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEGT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OBL	OBL	-2	Sedge	Annual	Native	
PERMAC	Pericoma maculosa	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adventive	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive	
TRIPRA	Trifolium pratense	TRIFOLIUM PRATENSE	Red Clover	0	FACU	FACU	1	Forb	Perennial	Adventive	
											Additional Metrics
											Species Richness (all) 6
											Species Richness (native) 2
											% Non-native 67%
											Wet Indicator (all) -1.00
											Wet Indicator (native) -1.50
											% hydrophyte (Midwest) 83%
											% native perennial 0%
											% native annual 33%
											% annual 67%
											% perennial 33%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-137

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
DIPFUS	Dipsachis fuscus	LEPTOCHLOA ACUMINATA, LEPTOCHLOA ACUMINATA	Bearded Sprangletop	0	OB1	OB1	-2	Grass	Annual	Adversive	
DIPLAC	Dipsacus laevis	DIPSACUS LACINIATUS	Cut-Leaf Teasel	0	UPL	FACU	2	Forb	Biennial	Adversive	
ECHCRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	
ELEPAL	Eleocharis palustris	Eleocharis acicularis, Eleocharis acicularis	Common Spike-Rush	1	OB1	OB1	-2	Sedge	Perennial	Native	
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-blooming Thoroughwort	0	FAC	FAC	0	Forb	Perennial	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
PERMAC	Panicum maculosum	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adversive	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
SCIRLU	Schoenoplectus fluviatilis	Sorpus nutans, Schoenoplectus fluviatilis	River Club-Rush	4	OB1	OB1	-2	Sedge	Perennial	Native	
SCHTAB	Schoenoplectus tabernaemontani	Sorpus validus oniber	Soft-Stem Club-Rush	3	OB1	OB1	-2	Sedge	Perennial	Native	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
SYMSUB	Symphyotrichum subulatum	ASTER SUBULATUS	Seaside American-Aster	0	OB1	FACW	-2	Forb	Annual	Adversive	
											Additional Metrics

USACE Chicago Region FOA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-138

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
ECHGRU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (native species) 0.33 Mean C (all species) 0.13 Mean C (native trees) n/a Mean C (native shrubs) n/a Mean C (native herbaceous) 0.33 FOAI (native species) 0.80 FOAI (all species) 0.35 Adjusted FOAI 2.04 % C value 0 60% % C Value 1-3 13% % C value 4-6 0% % C value 7-10 0%
ELEPAL	Elaeagnus palustris	Elaeagnus erythropoda, elaeagnus	Common Spike-Rush	1	OBL	OBL	-2	Sedge	Perennial	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
SYMSUB	Symphoricarpos subulatum	ASTER SUBULATUS	Seaside American-Aster	0	OBL	FACW	-2	Forb	Annual	Adversive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
											Additional Metrics
											Species Richness (all) 8
											Species Richness (native) 3
											% Non-native 63%
											Wet Indicator (all) -1.38
											Wet Indicator (native) -1.00
											% hydrophyte (Midwest) 100%
											% native perennial 25%
											% native annual 13%
											% annual 25%
											% perennial 75%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-139

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CXVULP	Carex vulpinoidea	Carex vulpinoidea	Common Fox Sedge	2	FACW	OBL	-1	Sedge	Perennial	Native	
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OBL	OBL	-2	Sedge	Annual	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
LEPCOG	Leptoloma cognatum	Leptoloma cognatum	Fall Witch Grass	1	UPL	UPL	2	Grass	Perennial	Native	
PERMAC	Panicum maculosum	POLYGONUM PERSICARIA	Lady's-Thumb	0	FACW	FAC	-1	Forb	Annual	Adversive	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
SCIRLU	Schoenoplectus fluviatilis	Schoenoplectus fluviatilis, Schoenoplectus fluviatilis	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native	
SCHPUN	Schoenoplectus pungens	Sorpus pungens	Three-Square	4	OBL	OBL	-2	Sedge	Perennial	Native	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
SYMSUB	Symphycarum subulatum	ASTER SUBULATUS	Seaside American-Aster	0	OBL	FACW	-2	Forb	Annual	Adversive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
Additional Metrics											
Species Richness (all) 12											
Species Richness (native) 7											
% Non-native 42%											
Wet Indicator (all) -1.08											
Wet Indicator (native) -0.86											
% hydrophyte (Midwest) 90%											
% native perennial 50%											
% native annual 9%											
% annual 25%											
% perennial 75%											

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NE19-140

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	
DIPLAC	Dipsacus laevis	DIPSACUS LACINIATUS	Cut-Leaf Teasel	0	UPL	FACU	2	Forb	Biennial	Adversive	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-flush	3	OBL	OBL	-2	Sedge	Annual	Native	
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
VERHAS	Verbena hastata	Verbena hastata	Simple's Joy	4	FACW	FACW	-1	Forb	Perennial	Native	
Additional Metrics											
Species Richness (all) 8											
Species Richness (native) 3											
% Non-native 63%											
Wet Indicator (all) -1.00											
Wet Indicator (native) -1.33											
% hydrophyte (Midwest) 80%											
% native perennial 25%											
% native annual 13%											
% annual 13%											
% perennial 75%											

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-141

Inventory Calculator													
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics		
BIDFRO	Bidens frondosa	Bidens frondosa	Devils-Pitchfork	1	FACW	FACW	-1	Forb	Annual	Native			
JUNTOR	Juncus torreyi	Juncus torreyi	Torrey's Rush	2	FACW	FACW	-1	Forb	Perennial	Native			
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive			
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive			
SCIRLU	Schoenoplectus fluviatilis	SCHOENOPLECTUS FLUVIATILIS	River Club-Rush	4	OBL	OBL	-2	Sedge	Perennial	Native			
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive			
												Mean C (native species)	2.33
												Mean C (all species)	1.17
												Mean C (native trees)	n/a
											Mean C (native shrubs)	n/a	
											Mean C (native herbaceous)	2.33	
											FQAI (native species)	4.04	
											FQAI (all species)	2.06	
											Adjusted FQAI	16.60	
											% C value 0	60%	
											% C Value 1-3	33%	
											% C value 4-6	17%	
											% C value 7-10	0%	
Additional Metrics													
Species Richness (all)											6		
Species Richness (native)											3		
% Non-native											50%		
Wet Indicator (all)											-1.50		
Wet Indicator (native)											-1.33		
% hydrophyte (Midwest)											100%		
% native perennial											33%		
% native annual											17%		
% annual											17%		
% perennial											60%		

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

Inventory Calculator

Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
DIPFUS	Diplazium fuscum	LITHOCLETHRA FOENICULIFOLIA	Bearded Sprangletop	0	OBL	OBL	-2	Grass	Annual	Adversive	Mean C (native species)	0.00
ECHCRU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species)	0.00
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	Mean C (native trees)	n/a
PERMAC	Penstemon maculosa	POLYGONUM PERSICARIA	Lady's Thumb	0	FACW	FAC	-1	Forb	Annual	Adversive	Mean C (native shrubs)	n/a
SYSUBS	Symphytichnum subulatum	ASTER SUBULATUS	Seaside American Aster	0	OBL	FACW	-2	Forb	Annual	Adversive	Mean C (native herbaceous)	0.00
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	FQAI (native species)	0.00
											FQAI (all species)	0.00
											Adjusted FQA	0.00
											% C value 0	100%
											% C Value 1-3	0%
											% C value 4-6	0%
											% C value 7-10	0%
Additional Metrics												
											Species Richness (all)	6
											Species Richness (native)	1
											% Non-native	89%
											Wet Indicator (all)	-1.67
											Wet Indicator (native)	-1.00
											% hydrophyte (Midwest)	100%
											% native perennial	0%
											% native annual	17%
											% annual	67%
											% perennial	39%

SE19-143

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
LYTSAL	<i>Lythrum salicaria</i>	LYTHRUM SALICARIA	Purple Loosestrife	0	0BL	0BL	-2	Forb	Perennial	Adventive	Mean C (native species) 0.00
PHPAUSU	<i>Phragmites australis ssp. australis</i>	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (all species) 0.00
											Mean C (native trees) n/a
											Mean C (native shrubs) n/a
											Mean C (native herbaceous) n/a
											FQAI (native species) 0.00
											FQAI (all species) 0.00
											Adjusted FQAI 0.00
											% C value 0 100%
											% C Value 1-3 0%
											% C value 4-6 0%
											% C value 7-10 0%
											Additional Metrics
											Species Richness (all) 2
											Species Richness (native) 0
											% Non-native 100%
											Wet Indicator (all) -1.50
											Wet Indicator (native) 0.00
											% hydrophyte (Midwest) 100%
											% native perennial 0%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-144

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OB	OB	-2	Sedge	Annual	Native		
ELEPAL	Eleocharis palustris	Eleocharis erythropoda; Eleocharis palustris minor; Eleocharis ovalis	Common Spike-Rush	1	OB	OB	-2	Sedge	Perennial	Native		
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OB	OB	-2	Forb	Perennial	Adventive		
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive		
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OB	OB	-2	Forb	Perennial	Adventive		
											Mean C (native species)	2.00
											Mean C (all species)	0.00
											Mean C (native trees)	n/a
											Mean C (native shrubs)	n/a
											Mean C (native herbaceous)	2.00
											FOAI (native species)	2.00
											FOAI (all species)	1.79
											Adjusted FOAI	12.65
											% C value 0	60%
											% C Value 1-3	40%
											% C value 4-6	0%
											% C value 7-10	0%
Additional Metrics												
											Species Richness (all)	5
											Species Richness (native)	2
											% Non-native	60%
											Wet Indicator (all)	-1.80
											Wet Indicator (native)	-2.00
											% hydrophyte (Midwest)	100%
											% native perennial	20%
											% native annual	20%
											% annual	20%
											% perennial	80%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SE19-145

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
CYPESC	Cyperus esculentus	Cyperus esculentus	Chufa	0	FACW	FACW	-1	Sedge	Perennial	Native	Mean C (native species)	2.00
ECHORU	Echinochloa crus-galli	Echinochloa crus-galli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (all species)	1.14
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (native trees)	n/a
SCIRLU	Schoenoplectus fluviatilis	Schoenoplectus fluviatilis, Sphaerocarpos fluviatilis, proserpinacens fluvialis	River Club-Rush	4	OB	OB	-2	Sedge	Perennial	Native	Mean C (native shrubs)	n/a
SCIRPUN	Schoenoplectus pungens	Sorpus pungens	Three-Square	4	OB	OB	-2	Sedge	Perennial	Native	Mean C (native herbaceous)	2.00
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive	FOAI (native species)	4.00
SYMSUB	Symphoricarum subulatum	ASTER SUBULATUS	Seaside American-Aster	0	OB	FACW	-2	Forb	Annual	Adventive	FOAI (all species)	3.02
											Adjusted FOAI	16.12
											% C value 0	71%
											% C Value 1-3	0%
											% C value 4-6	26%
											% C value 7-10	0%
Additional Metrics												
											Species Richness (all)	7
											Species Richness (native)	4
											% Non-native	43%
											Wet Indicator (all)	-1.43
											Wet Indicator (native)	-1.50
											% hydrophyte (Midwest)	100%
											% native perennial	43%
											% native annual	14%
											% annual	29%
											% perennial	71%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

SW19-146

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
ECHGRU	Echinochloa crus-galli	Echinochloa crusgalli	Large Barnyard Grass	0	FACW	FAC	-1	Grass	Annual	Native	Mean C (native species)	1.67
ELEOBT	Eleocharis obtusa	Eleocharis ovata	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (all species)	1.00
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	Mean C (native trees)	n/a
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adventive	Mean C (native shrubs)	n/a
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adventive	Mean C (native herbaceous)	1.67
											FOAI (native species)	2.99
											FOAI (all species)	2.24
											Adjusted FOAI	12.91
											% C value 0	60%
											% C Value 1-3	40%
											% C value 4-6	0%
											% C value 7-10	0%
Additional Metrics												
											Species Richness (all)	5
											Species Richness (native)	3
											% Non-native	40%
											Wet Indicator (all)	-1.40
											Wet Indicator (native)	-1.33
											% hydrophyte (Midwest)	100%
											% native perennial	20%
											% native annual	40%
											% annual	40%
											% perennial	60%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE01

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
GLEHED	Glechoma hederacea	GLECHOMA HEDERACEA	Groundivy	0	FACU	FACU	1	Forb	Perennial	Adventive	Mean C (native species) 2.00
POLHYD	Parsipata hydropiper	Polygonum hydropiper	Mild Water-Pepper	2	OBL	OBL	-2	Forb	Annual	Native	Mean C (all species) 0.50
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adventive	Mean C (native trees) n/a
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive	Mean C (native shrubs) 0.00
											Mean C (native herbaceous) 2.00
											FQAI (native species) 2.00
											FQAI (all species) 1.00
											Adjusted FQAI 10.00
											% C value 0 75%
											% C Value 1-3 25%
											% C value 4-6 0%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 1
											% Non-native 75%
											Wet Indicator (all) -0.50
											Wet Indicator (native) -2.00
											% hydrophyte (Midwest) 75%
											% native perennial 0%
											% native annual 25%
											% annual 25%
											% perennial 75%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NW39/NW01

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
APOCAN	Apocynum cannabinum	Apocynum sibiricum	Indian Hemp	2	FAC	FAC	0	Forb	Perennial	Native		
CXVULP	Carex vulpinoidea	Carex vulpinoidea	Common Fox Sedge	2	FACW	OBL	-1	Sedge	Perennial	Native		
DIPLAC	Dipsacus laetifolius	DIPSACUS LACINIATUS	Cut-Leaf Teasel	0	UPL	FACU	2	Forb	Biennial	Adversive		
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Little Ironwort	0	FAC	FAC	0	Forb	Perennial	Native		
EUTGRA	Euthamia graminifolia	EUTHAMIA GRAMINIFOLIA	Flat-Top Goldenrod	4	FACW	FAC	-1	Forb	Perennial	Native		
FRAPEN	Fraxinus pennsylvanica	FRAXINUS PENNSYLVANICA	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native		
GEUALE	Geum aleppicum	Geum aleppicum strictum	Yellow Avena	3	FACW	FAC	-1	Forb	Perennial	Native		
JUNTOR	Juncus torreyi	Juncus torreyi	Torrey's Rush	2	FACW	FACW	-1	Forb	Perennial	Native		
LYCAME	Lycopus americanus	Lycopus americanus	Cut-Leaf Water-Horshound	4	OBL	OBL	-2	Forb	Perennial	Native		
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive		
PHAARU	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive		
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive		
POPDOL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native		
RHAMCAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adversive		
SALIALB	Salix alba	SALIX ALBA	White Willow	0	FACW	FACW	-1	Tree	Perennial	Adversive		
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive		
											Mean C (native species)	2.33
											Mean C (all species)	1.31
											Mean C (native trees)	2.00
											Mean C (native shrubs)	0.00
											Mean C (native herbaceous)	2.43
											FQAI (native species)	7.00
											FQAI (all species)	6.25
											Adjusted FQAI	17.50
											% C value 0	66%
											% C value 1-3	25%
											% C value 4-6	15%
											% C value 7-10	0%
Additional Metrics												
											Species Richness (all)	16
											Species Richness (native)	9
											% Non-native	44%
											Wet Indicator (all)	-0.69
											Wet Indicator (native)	-0.78
											% hydrophyte (Midwest)	94%
											% native perennial	56%
											% native annual	0%
											% annual	0%
											% perennial	94%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

NE41

Inventory Calculator											Conservatism-Based Metrics	
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity		
ALISUB	<i>Alisma subcordatum</i>	<i>Alisma subcordatum</i>	American Water-Plantain	3	OBL	OBL	-2	Forb	Perennial	Native	Mean C (native species)	3.06
CXSTIP	<i>Carex stipata</i>	<i>Carex stipata</i>	Stalk-Grass Sedge	4	OBL	OBL	-2	Sedge	Perennial	Native	Mean C (all species)	3.00
CXTRID	<i>Carex tribuloides</i>	<i>Carex tribuloides</i>	Blunt Bloom Sedge	7	OBL	FACW	-2	Sedge	Perennial	Native	Mean C (native trees)	n/a
ELEOBT	<i>Eleocharis obtusa</i>	<i>Eleocharis ovata</i>	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (native shrubs)	n/a
JUNDUD	<i>Juncus dudleyi</i>	<i>Juncus dudleyi</i>	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native	Mean C (native herbaceous)	3.06
JUNNOO	<i>Juncus nodosus</i>	<i>Juncus nodosus</i>	Knotted Rush	8	OBL	OBL	-2	Forb	Perennial	Native	FQAI (native species)	10.21
JUNTEN	<i>Juncus tenuis</i>	<i>Juncus tenuis</i>	Lesser Poverty Rush	0	FAC	FAC	0	Forb	Perennial	Native	FQAI (all species)	9.00
PHAMRU	<i>Phalaris arundinacea</i>	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive	Adjusted FQAI	34.02
POAPPA	<i>Poa pratensis</i>	POA PRATENSIS	Kentucky Blue Grass	0	FAC	FACU	0	Grass	Perennial	Adversive	% C value 0	33%
											% C Value 1-3	33%
											% C value 4-6	11%
											% C value 7-10	22%
											Additional Metrics	
											Species Richness (all)	9
											Species Richness (native)	7
											% Non-native	22%
											Wet Indicator (all)	-1.33
											Wet Indicator (native)	-1.57
											% hydrophyte (Midwest)	100%
											% native perennial	67%
											% native annual	11%
											% annual	11%
											% perennial	89%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE62

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
EUPSEI	Eupatorium serotinum	Eupatorium serotinum	Late-Flowering Thoroughwort	0	FAC	FAC	0	Forb	Perennial	Native	Mean C (native species) 2.00
PARQUI	Parthenocissus quinquefolia	Parthenocissus quinquefolia	Virginia-Creeper	4	FACU	FACU	1	Vine	Perennial	Native	Mean C (all species) 1.00
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adventive	Mean C (native trees) n/a
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adventive	Mean C (native shrubs) n/a
											Mean C (native herbaceous) 0.00
											FQAI (native species) 2.03
											FQAI (all species) 2.00
											Adjusted FQAI 14.14
											% C value 0 75%
											% C Value 1-3 0%
											% C value 4-6 25%
											% C value 7-10 0%
Additional Metrics											
											Species Richness (all) 4
											Species Richness (native) 2
											% Non-native 50%
											Wet Indicator (all) -0.50
											Wet Indicator (native) 0.50
											% hydrophyte (Midwest) 75%
											% native perennial 50%
											% native annual 0%
											% annual 0%
											% perennial 100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SE64

Inventory Calculator											
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics
CXSTIP	Carex stipata	Carex stipata	Stalk-Grass Sedge	4	OBL	OBL	-2	Sedge	Perennial	Native	Mean C (native species)1.33 Mean C (all species)0.44 Mean C (native trees)n/a Mean C (native shrubs)0.00 Mean C (native herbaceous)1.33 FOAI (native species)2.31 FOAI (all species)1.33 Adjusted FOAI7.70 % C value 00% % C Value 1-30% % C value 4-611% % C value 7-100%
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-flowering Thoroughwort	0	FAC	FAC	0	Forb	Perennial	Native	
HORJUB	Hordeum jubatum	HORDEUM JUBATUM	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	
LEUVUL	Leucanthemum vulgare	LEUCANTHEMUM VULGARE	Ox-Eye Daisy	0	UPL	UPL	2	Forb	Perennial	Adversive	
PHRAUSU	Phragmites australis ssp. australis	PHRAGMITES AUSTRALIS	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	
RHAMCAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adversive	
RUMCRI	Rumex crispus	RUMEX CRISPUS	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adversive	
SOLSEM	Solidago sempervirens	SOLIDAGO SEMPERVIRENS	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	
											Additional Metrics
											Species Richness (all)9
											Species Richness (native)3
											% Non-native67%
											Wet Indicator (all)-0.44
											Wet Indicator (native)-0.67
											% hydrophyte (Midwest)89%
											% native perennial33%
											% native annual0%
											% annual0%
											% perennial100%

USACE Chicago Region FGA Calculator 12.12.17

ORD Waters of the US Delineation

NE65

Inventory Calculator												
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity	Conservatism-Based Metrics	
ACESAI	Acer saccharinum	Acer saccharinum	Silver Maple	1	FACW	FACW	-1	Tree	Perennial	Native		
EUPSER	Eupatorium serotinum	Eupatorium serotinum	Late-flowering Thoroughwort	0	FAC	FAC	0	Forb	Perennial	Native		
FRAPEN	Fraxinus pennsylvanica	Fraxinus pennsylvanica	Green Ash	4	FACW	FACW	-1	Tree	Perennial	Native		
JUNDUD	Juncus dudleyi	Juncus dudleyi	Dudley's Rush	2	FACW	FACW	-1	Forb	Perennial	Native		
LYTSAL	Lythrum salicaria	LYTHRUM SALICARIA	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive		
POPDEL	Populus deltoides	Populus deltoides	Eastern Cottonwood	0	FAC	FAC	0	Tree	Perennial	Native		
RHACAT	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adversive		
SALINT	Salix interior	Salix interior	Sandbar Willow	2	FACW	FACW	-1	Shrub	Perennial	Native		
TYPANG	Typha angustifolia	TYPHA ANGUSTIFOLIA	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive		
VITRIP	Vitis riparia	Vitis riparia var. cyclocla	River-Bank Grape	1	FACW	FAC	-1	Vine	Perennial	Native		
											Mean C (native species)	1.43
											Mean C (all species)	1.00
											Mean C (native trees)	1.67
											Mean C (native shrubs)	2.00
											Mean C (native herbaceous)	1.00
											FQAI (native species)	3.76
											FQAI (all species)	3.16
											Adjusted FQAI	11.95
											% C value 0	60%
											% C value 1-3	40%
											% C value 4-6	10%
											% C value 7-10	0%
											Additional Metrics	
											Species Richness (all)	10
											Species Richness (native)	7
											% Non-native	30%
											Wet Indicator (all)	-0.90
											Wet Indicator (native)	-0.71
											% hydrophyte (Midwest)	100%
											% native perennial	70%
											% native annual	0%
											% annual	0%
											% perennial	100%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

SW120

Inventory Calculator											Conservatism-Based Metrics	
Species Acronym	Species Name (NWPL/Mohlenbrock)	Species(Synonym)	Common Name	C Value	Midwest WET Indicator	NC-NE WET Indicator	WET Indicator (numeric)	Habit	Duration	Nativity		
ASCINC	<i>Asclepias incarnata</i>	<i>Asclepias incarnata</i>	Swamp Milkweed	3	OBL	OBL	-2	Forb	Perennial	Native	Mean C (native species)	2.00
CXSTIP	<i>Carex stipata</i>	<i>Carex stipata</i>	Stalk-Grass Sedge	4	OBL	OBL	-2	Sedge	Perennial	Native	Mean C (all species)	1.00
CXVULP	<i>Carex vulpinoidea</i>	<i>Carex vulpinoidea</i>	Common Fox Sedge	2	FACW	OBL	-1	Sedge	Perennial	Native	Mean C (native trees)	n/a
ELEOBT	<i>Eleocharis obtusa</i>	<i>Eleocharis ovata</i>	Blunt Spike-Rush	3	OBL	OBL	-2	Sedge	Annual	Native	Mean C (native shrubs)	n/a
HORIUB	<i>Hordeum jubatum</i>	<i>HORDEUM JUBATUM</i>	Fox-Tail Barley	0	FAC	FAC	0	Grass	Perennial	Native	Mean C (native herbaceous)	2.00
JUNTEN	<i>Juncus tenuis</i>	<i>Juncus tenuis</i>	Lesser Poverty Rush	0	FAC	FAC	0	Forb	Perennial	Native	FQAI (native species)	4.90
LYTSAL	<i>Lythrum salicaria</i>	<i>LYTHRUM SALICARIA</i>	Purple Loosestrife	0	OBL	OBL	-2	Forb	Perennial	Adversive	FQAI (all species)	3.66
PHARARU	<i>Phalaris arundinacea</i>	<i>PHALARIS ARUNDINACEA</i>	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adversive	Adjusted FQAI	14.14
PHRAUSU	<i>Phragmites australis</i> ssp. <i>australis</i>	<i>PHRAGMITES AUSTRALIS</i>	Common Reed	0	FACW	FACW	-1	Grass	Perennial	Adversive	% C value 0	67%
RUMCRI	<i>Rumex crispus</i>	<i>RUMEX CRISPUS</i>	Curly Dock	0	FAC	FAC	0	Forb	Perennial	Adversive	% C Value 1-3	25%
SOLSEM	<i>Solidago sempervirens</i>	<i>SOLIDAGO SEMPERVIRENS</i>	Seaside Goldenrod	0	FACW	FACW	-1	Forb	Perennial	Adversive	% C value 4-6	0%
TYPANG	<i>Typha angustifolia</i>	<i>TYPHA ANGUSTIFOLIA</i>	Narrow-Leaf Cat-Tail	0	OBL	OBL	-2	Forb	Perennial	Adversive	% C value 7-10	0%
											Additional Metrics	
											Species Richness (all)	12
											Species Richness (native)	6
											% Non-native	50%
											Wet Indicator (all)	-1.17
											Wet Indicator (native)	-1.17
											% hydrophyte (Midwest)	100%
											% native perennial	42%
											% native annual	8%
											% annual	8%
											% perennial	92%

USACE Chicago Region FQA Calculator 12.12.17

ORD Waters of the US Delineation

**Appendix M. U.S. Army Corps of Engineers Approved
Jurisdictional Determination**



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
CHICAGO DISTRICT, CORPS OF ENGINEERS
231 SOUTH LA SALLE STREET
CHICAGO, ILLINOIS 60604-1437

December 20, 2019

Technical Services Division
Regulatory Branch
LRC-2003-22401

SUBJECT: Updated Approved Jurisdictional Determination Supporting the Terminal Area Plan and Air Traffic Procedures Environmental Assessment, O'Hare International Airport, City of Chicago, Cook County, Illinois (Latitude 41.992762, Longitude -87.90237)

Aaron J. Frame
Chicago Department of Aviation
10510 West Zemke Road
Chicago, Illinois 60666

Dear Mr. Frame:

This is in response to your request that the U.S. Army Corps of Engineers complete a jurisdictional determination for the above-referenced site submitted on your behalf by Mead & Hunt, through the U.S. Federal Aviation Administration. The subject project remains assigned number LRC-2003-22401. Please reference this number in all future correspondence concerning this project.

Following a review of the information you submitted, this office has determined that the subject property contains "waters of the United States" as well as aquatic resources outside the Corps jurisdiction.

Bensenville Ditch - Section 1, Bensenville Ditch - Section 2, Bensenville Ditch - Section 3, Crystal Creek - Section 1, Crystal Creek - Section 2, Crystal Creek - Section 3, Crystal Creek - Section 4, Ditch 03, Ditch 08, Ditch 10, Ditch 13 - Section 2, Ditch 30, Higgins Creek - Section 2, Higgins Creek - Section 3, Middle Sister, North Sister, South Sister, Tributary 1: Willow Creek, Tributary 2: Willow Creek, Tributary 3: Willow Creek, Willow Creek - Section 1, Willow Creek - Section 2, Willow Creek - Section 3, Willow Creek - Section 4, Willow Creek - Section 5, Willow Creek - Section 6, Willow Creek - Section 7, Willow Creek - Section 8, Willow Creek - Section 9, NE 41, NW19-96, SE19-55, SE19-97, SW120, SW19-94, NE19-116, NW19-01, NW19-78, SE19-114, SE64, SW19-44, SE19-124, SE19-46, SE19-47, SE19-60, SW19-37, NE19-104, NE19-104A, NE19-104B, NE19-105, NE19-106, NE19-109, NE19-110, NE19-111, NE19-112, NE19-113, NE19-117, NE19-118, NE19-20, NE19-61, NE19-62, NE19-87, NE19-88, NE65, NW19-04, NW19-05, NW19-06, NW19-12, NW19-18, NW19-77, NW39, SE19-115, SE19-120, SE19-121, SE19-122, SE19-125, SE19-127, SE19-136, SE19-137, SE19-138, SE19-48, SE19-49, SE19-50, SE19-51, SE19-52, SE19-65, SE19-66, SE19-95, and SE62, have been determined to be under the jurisdiction of this office and therefore, subject to Federal regulation.

SE19-43, SE19-53, SE19-58, SE19-63, SE19-64, SW19-28, SW19-34, SW19-56, SW19-57, SW19-59, SW19-72, and SW19-73, have been determined to not have a significant nexus to the Des Plaines River, and are therefore not subject to Federal regulation. Please be informed that this office does not concur with the boundaries of waters not under the jurisdiction of this office.

Ditch 01, Ditch 22, Ditch 25, Ditch 28, NE19-126, NE19-128, NE19-16, NE19-17, NE19-19, NE19-21, NE19-89, NW19-07, NW19-08, NW19-09, NW19-75, NW19-76, NW19-84, SE19-98, SE19-119, SE19-129, SE19-140, SE19-141, SE19-143, SE19-144, SE19-146, SE19-67, SW19-142, SW19-35, SW19-38, SW19-39, SW19-71, SW19-93, Ditch 02, Ditch 04, Ditch 05, Ditch 06, Ditch 07, Ditch 09, Ditch 11, Ditch 13 - Section 1, Ditch 14, Ditch 15, Ditch 16, Ditch 17, Ditch 18, Ditch 19, Ditch 20, Ditch 21, Ditch 23, Ditch 24, Ditch 27, Ditch 29, Ditch 31, Ditch 32, Ditch 33, Ditch 34, Ditch 35, Ditch 36, Ditch 37, Ditch 38, Ditch 39, Ditch 40, Ditch 41, Ditch 42 (PO Drainage), Ditch 43, Ditch 44, Ditch 45, Ditch 46, Ditch 47, Ditch 48, NE19-22, NW19-02, NW19-03, SE19-123, SE19-130, SE19-139, Ditch 12, NW19-103, SE19-25, SE19-26, SE19-27, SE19-41, SE19-54, SE19-68, SW19-29, SW19-30, SW19-31, SW19-32, SW19-33, SW19-36, SW19-42, SW19-70, SW19-74, NE19-69, Erosional Feature 1, Erosional Feature 2, Erosional Feature 3, NE19-13, NE19-14, NE19-15, NE19-23, NW19-10, NW19-11, SE19-131, and SE19-24, are water features excluded from Federal regulation under the definitions found at 33 CFR 328.3(b). Please be reminded that this office does not concur with the boundaries of waters not subject to Federal regulation.

NE19-107, NE19-108, NE19-80, NW19-79, NW19-81, NW19-82, NW19-83, NW19-90, NW19-91, NW19-92, SE19-100, SE19-132, SE19-133, SE19-134, SE19-135, SE19-145, SE19-85, SE19-86, SE19-99, SW19-101, and SW19-102, do not meet any of the definitions found at 33 CFR 328.3(a), and therefore are water features not under the jurisdiction of this office. Please be reminded that this office does not concur with the boundaries of waters not under the jurisdiction of this office.

This office concurs with the submitted wetland delineation and wetland boundaries at the subject site. In the event an application is submitted for work within jurisdictional areas, a survey of the wetland boundary(s) stamped by a professional surveyor shall accompany the approved wetland delineation.

For a detailed description of our determination please refer to the enclosed decision document. This determination covers only your project as depicted in the Wetland Delineation Report titled "ORD WOUS Delineation USACE AJD Transmittal" by Mead & Hunt, dated 31 October 2019.

This determination is valid for a period of five (5) years from the date of the letter, unless new information warrants revision of the determination before the expiration date or a District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

This letter is considered an approved jurisdictional determination for your subject site. If

you object to this determination, you may appeal, according to 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and a Request for Appeal (RFA) form. If you request to appeal the above determination, you must submit a completed RFA form to the Great Lakes/Ohio River Division Office at the following address:

Jacob Siegrist
Regulatory Appeals Review Officer
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10524
Cincinnati, Ohio 45202-3222
Phone: (513) 684-2699 Fax: (513) 684-2460

In order to be accepted, your RFA must be complete, meet the criteria for appeal and be received by the Division Office within sixty (60) days of the date of the NAP. If you concur with the determination in this letter, submittal of the RFA form to the Division office is not necessary.

This determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work. It is your responsibility to obtain any required state, county, or local approvals for impacts to wetland areas not under the Department of the Army jurisdiction.

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers regulates the discharge of dredged or fill material into waters of the United States, including wetlands. A Department of the Army permit is required for any proposed work involving the discharge of dredged or fill material within the jurisdiction of this office. To initiate the permit process, please submit a joint permit application form along with detailed plans of the proposed work. Information concerning our program, including the application form and an application checklist, can be found at and downloaded from our website:
<http://www.lrc.usace.army.mil/Missions/Regulatory.aspx>

If you have any questions, please contact Mr. Colin C. Smalley, PG of my staff by telephone at (312) 846-5538 or email at Colin.C.Smalley@usace.army.mil.

Sincerely,

Kathleen G. Chernich
Chief, East Section
Regulatory Branch

Enclosures

Copy Furnished w/ Enclosures:

U.S. Federal Aviation Administration (Amy Hanson)
Mead & Hunt (Brauna Hartzell, Conor Makepeace)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL		
Applicant: City of Chicago, Department of Aviation	File Number: LRC-2003-22401	Date: December 20, 2019
Attached is:		See Section below
☐	INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
☐	PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
☐	PERMIT DENIAL	C
☒	APPROVED JURISDICTIONAL DETERMINATION	D
☐	PRELIMINARY JURISDICTIONAL DETERMINATION	E
SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.		
A. INITIAL PROFFERED PERMIT: You may accept or object to the permit. - ACCEPT: If you received a Standard Permit or a Letter of Permission (LOP), you may sign the permit document and return it to the district commander for final authorization. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit. - OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district commander. Your objections must be received by the district commander within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district commander will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district commander will send you a proffered permit for your reconsideration, as indicated in Section B below.		
B. PROFFERED PERMIT: You may accept or appeal the permit - ACCEPT: If you received a Standard Permit or a Letter of Permission (LOP), you may sign the permit document and return it to the district commander for final authorization. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit. - APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.		
C. PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.		
D. APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information. - ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD. - APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division commander. This form must be received by the division commander within 60 days of the date of this notice.		
E. PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.		

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT		
REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)		
ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.		
POINT OF CONTACT FOR QUESTIONS OR INFORMATION:		
If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:	
Regulatory Branch Chicago District Corps of Engineers 231 South LaSalle Street, Suite 1500 Chicago, IL 60604-1437 Phone: (312) 846-5530 Fax: (312) 353-4110	Jacob Siegrist Regulatory Appeals Review Officer US Army Corps of Engineers Great Lakes and Ohio River Division 550 Main Street, Room 10524 Cincinnati, Ohio 45202-3222 Phone: (513) 684-2699 Fax: (513) 684-2460	
RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Commanders personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.		
Signature of appellant or agent.	Date:	Telephone number:



®

Regulatory Program



®

INTERIM APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided
in the Interim Approved Jurisdictional Determination Form User Manual.

SECTION I: BACKGROUND INFORMATION

A. COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (AJD): 20 December 2019

B. ORM NUMBER IN APPROPRIATE FORMAT (e.g., HQ-2015-00001-SMJ): LRC-2003-22401 (200301000)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Illinois

County/parish/borough: Cook

City: Chicago

Center coordinates of site (lat/long in degree decimal format): Lat. 41.992762, Long. -87.90237.

Map(s)/diagram(s) of review area (including map identifying single point of entry (SPOE) watershed and/or potential jurisdictional areas where applicable) is/are: ☐ attached ☒ in report/map titled (see delineation report, below).

☐ Other sites (e.g., offsite mitigation sites, disposal sites, etc.) are associated with this action and are recorded on a different jurisdictional determination (JD) form. List JD form ID numbers (e.g., HQ-2015-00001-SMJ-1):

D. REVIEW PERFORMED FOR SITE EVALUATION:

☐ Office (Desk) Determination Only. Date:

☒ Office (Desk) and Field Determination. Office/Desk Dates: 12-19 Dec 2019 Field Date(s): 4 October 2019.

SECTION II: DATA SOURCES

Check all that were used to aid in the determination and attach data/maps to this AJD form and/or references/citations in the administrative record, as appropriate.

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant. Title/Date: Included in the delineation report, titled "ORD WOUS Delineation USACE AJD Transmittal" by Mead & Hunt, dated 31 October 2019.

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☒ Data sheets/delineation report are sufficient for purposes of AJD form. Title/Date: Included in the delineation report cited above.

☐ Data sheets/delineation report are not sufficient for purposes of AJD form. Summarize rationale and include information on revised data sheets/delineation report that this AJD form has relied upon:

Revised Title/Date:

☐ Data sheets prepared by the Corps. Title/Date:

☐ Corps navigable waters study. Title/Date:

☐ CorpsMap ORM map layers. Title/Date:

☐ USGS Hydrologic Atlas. Title/Date:

☐ USGS, NHD, or WBD data/maps. Title/Date:

☐ USGS 8, 10 and/or 12 digit HUC maps. HUC number:

☒ USGS maps. Scale & quad name and date: 7.5 minute quadrangle, Elmhurst Ill., 1928 ed.; 7.5 minute topographic quadrangle, Arlington Heights Ill., 1927 ed.

☐ USDA NRCS Soil Survey. Citation:

☐ USFWS National Wetlands Inventory maps. Citation:

☐ State/Local wetland inventory maps. Citation:

☒ FEMA/FIRM maps. Citation: As shown on the National Flood Hazard Layer GIS service, accessed 12-19 December 2019.

☒ Photographs: ☒ Aerial. Citation: 1939 and 2003 aerial photography in the USACE GIS files, and 18 June 2019, 5 August 2019, and 25 July 2018 DigitalGlobe aeriels. or ☒ Other. Citation: As included in above-cited delineation report.

- ☐ LiDAR data/maps. Citation:
- ☐ Previous JDs. File no. and date of JD letter:
- ☐ Applicable/supporting case law:
- ☐ Applicable/supporting scientific literature:
- ☐ Other information (please specify):

SECTION III: SUMMARY OF FINDINGS

Complete ORM "Aquatic Resource Upload Sheet" or Export and Print the Aquatic Resource Water Droplet Screen from ORM for All Waters and Features, Regardless of Jurisdictional Status – Required

A. RIVERS AND HARBORS ACT (RHA) SECTION 10 DETERMINATION OF JURISDICTION:

- ☐ "navigable waters of the U.S." within RHA jurisdiction (as defined by 33 CFR part 329) in the review area.

• **Complete Table 1 - Required**

NOTE: If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Section 10 navigable waters list, DO NOT USE THIS FORM TO MAKE THE DETERMINATION. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Section 10 RHA navigability determination.

B. CLEAN WATER ACT (CWA) SECTION 404 DETERMINATION OF JURISDICTION: "waters of the U.S." within CWA jurisdiction (as defined by 33 CFR part 328.3) in the review area. **Check all that apply.**

- ☐ (a)(1): All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide. (Traditional Navigable Waters (TNWs))

• **Complete Table 1 - Required**

- ☐ This AJD includes a case-specific (a)(1) TNW (Section 404 navigable-in-fact) determination on a water that has not previously been designated as such. Documentation required for this case-specific (a)(1) TNW determination is attached.

- ☐ (a)(2): All interstate waters, including interstate wetlands.

• **Complete Table 2 - Required**

- ☐ (a)(3): The territorial seas.

• **Complete Table 3 - Required**

- ☐ (a)(4): All impoundments of waters otherwise identified as waters of the U.S. under 33 CFR part 328.3.

• **Complete Table 4 - Required**

- ☒ (a)(5): All tributaries, as defined in 33 CFR part 328.3, of waters identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3.

• **Complete Table 5 - Required**

- ☒ (a)(6): All waters adjacent to a water identified in paragraphs (a)(1)-(a)(5) of 33 CFR part 328.3, including wetlands, ponds, lakes, oxbows, impoundments, and similar waters.

• **Complete Table 6 - Required**

- ☒ Bordering/Contiguous.

Neighboring:

- ☒ (c)(2)(i): All waters located within 100 feet of the ordinary high water mark (OHWM) of a water identified in paragraphs (a)(1)-(a)(5) of 33 CFR part 328.3.

- ☒ (c)(2)(ii): All waters located within the 100-year floodplain of a water identified in paragraphs (a)(1)-(a)(5) of 33 CFR part 328.3 and not more than 1,500 feet of the OHWM of such water.

- ☐ (c)(2)(iii): All waters located within 1,500 feet of the high tide line of a water identified in paragraphs (a)(1) or (a)(3) of 33 CFR part 328.3, and all waters within 1,500 feet of the OHWM of the Great Lakes.

- ☐ (a)(7): All waters identified in 33 CFR 328.3(a)(7)(i)-(v) where they are determined, on a case-specific basis, to have a significant nexus to a water identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3.

• **Complete Table 7 for the significant nexus determination. Attach a map delineating the SPOE watershed boundary with (a)(7) waters identified in the similarly situated analysis. - Required**

- ☐ Includes water(s) that are geographically and physically adjacent per (a)(6), but are being used for established, normal farming, silviculture, and ranching activities (33 USC Section 1344(f)(1)) and therefore are not adjacent and require a case-specific significant nexus determination.

- ☒ (a)(8): All waters located within the 100-year floodplain of a water identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3 not covered by (c)(2)(ii) above and all waters located within 4,000 feet of the high tide line or OHWM of a water identified in paragraphs (a)(1)-(a)(5) of 33 CFR part 328.3 where they are determined on a case-specific basis to have a significant nexus to a water identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3.

• **Complete Table 8 for the significant nexus determination. Attach a map delineating the SPOE watershed boundary with (a)(8) waters identified in the similarly situated analysis. - Required**

- ☐ Includes water(s) that are geographically and physically adjacent per (a)(6), but are being used for established, normal farming, silviculture, and ranching activities (33 USC Section 1344(f)(1)) and therefore are not adjacent and require a case-specific significant nexus determination.

C. NON-WATERS OF THE U.S. FINDINGS:

Check all that apply.

- ☐ The review area is comprised entirely of dry land.
- ☐ Potential-(a)(7) Waters: Waters that DO NOT have a significant nexus to a water identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3.
- **Complete Table 9 and attach a map delineating the SPOE watershed boundary with potential (a)(7) waters identified in the similarly situated analysis. - Required**
- ☐ Includes water(s) that are geographically and physically adjacent per (a)(6), but are being used for established, normal farming, silviculture, and ranching activities (33 USC Section 1344(f)(1)) and therefore are not adjacent and require a case-specific significant nexus determination.
- ☒ Potential-(a)(8) Waters: Waters that DO NOT have a significant nexus to a water identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3.
- **Complete Table 9 and attach a map delineating the SPOE watershed boundary with potential (a)(8) waters identified in the similarly situated analysis. - Required**
- ☐ Includes water(s) that are geographically and physically adjacent per (a)(6), but are being used for established, normal farming, silviculture, and ranching activities (33 USC Section 1344(f)(1)) and therefore are not adjacent and require a case-specific significant nexus determination.
- ☒ Excluded Waters (Non-Waters of U.S.), even where they otherwise meet the terms of paragraphs (a)(4)-(a)(8):
- **Complete Table 10 - Required**
- ☐ (b)(1): Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA.
- ☐ (b)(2): Prior converted cropland.
- ☒ (b)(3)(i): Ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary.
- ☒ (b)(3)(ii): Ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands.
- ☒ (b)(3)(iii): Ditches that do not flow, either directly or through another water, into a water identified in paragraphs (a)(1)-(a)(3).
- ☐ (b)(4)(i): Artificially irrigated areas that would revert to dry land should application of water to that area cease.
- ☐ (b)(4)(ii): Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds.
- ☐ (b)(4)(iii): Artificial reflecting pools or swimming pools created in dry land.¹
- ☐ (b)(4)(iv): Small ornamental waters created in dry land.¹
- ☒ (b)(4)(v): Water-filled depressions created in dry land incidental to mining or construction activity, including pits excavated for obtaining fill, sand, or gravel that fill with water.
- ☒ (b)(4)(vi): Erosional features, including gullies, rills, and other ephemeral features that do not meet the definition of tributary, non-wetland swales, and lawfully constructed grassed waterways.¹
- ☐ (b)(4)(vii): Puddles.¹
- ☐ (b)(5): Groundwater, including groundwater drained through subsurface drainage systems.¹
- ☒ (b)(6): Stormwater control features constructed to convey, treat, or store stormwater that are created in dry land.¹
- ☐ (b)(7): Wastewater recycling structures created in dry land; detention and retention basins built for wastewater recycling; groundwater recharge basins; percolation ponds built for wastewater recycling; and water distributary structures built for wastewater recycling.
- ☒ Other non-jurisdictional waters/features within review area that do not meet the definitions in 33 CFR 328.3 of (a)(1)-(a)(8) waters and are not excluded waters identified in (b)(1)-(b)(7).
- **Complete Table 11 - Required.**

D. ADDITIONAL COMMENTS TO SUPPORT AJD:

¹ In many cases these excluded features will not be specifically identified on the AJD form, unless specifically requested. Corps Districts may, in case-by-case instances, choose to identify some or all of these features within the review area.

Jurisdictional Waters of the U.S.Table 1. (a)(1) Traditional Navigable Waters

(a)(1) Waters Name	(a)(1) Criteria	Rationale to Support (a)(1) Designation Include High Tide Line or Ordinary High Water Mark indicators, when applicable.
N/A	Choose an item.	N/A

Table 2. (a)(2) Interstate Waters

(a)(2) Waters Name	Rationale to Support (a)(2) Designation
N/A	N/A

Table 3. (a)(3) Territorial Seas

(a)(3) Waters Name	Rationale to Support (a)(3) Designation
N/A	N/A

Table 4. (a)(4) Impoundments

(a)(4) Waters Name	Rationale to Support (a)(4) Designation
N/A	N/A
N/A	N/A

Table 5. (a)(5) Tributaries

(a)(5) Waters Name	Flow Regime	(a)(1)-(a)(3) Water Name to which this (a)(5) Tributary Flows	Tributary Breaks	Rationale for (a)(5) Designation and Additional Discussion. Identify flowpath to (a)(1)-(a)(3) water or attach map identifying the flowpath; explain any breaks or flow through excluded/non-jurisdictional features, etc.
Bensenville Ditch Sections 1, 2, 3	Perennial	Des Plaines River	Yes	Bensenville Ditch flows through a wetland (see the feature known as "SW120" in this JD), several culverts (with lengthy culverts at O'Hare Airport, the CP Rail Yard, and W North Ave and smaller road culverts in between) directly to the Des Plaines River, an a(1) traditionally navigable water.
Ditch 30	Intermittent	Des Plaines River	Yes	Ditch 30 is a former alignment of the Bensenville Ditch that flows through a long culvert system into the current alignment of the Bensenville Ditch, and from there follows the above-stated Bensenville Ditch flowpath to the Des Plaines River, an a(1) TNW.
Crystal Creek Sections 1, 2, 3, 4	Perennial	Des Plaines River	Yes	Crystal Creek flows through several culverts (with lengthy culverts at Interstate 290, a Canadian National Railroad Yard, a housing development and several smaller road culverts in-between) directly to the Des Plaines River, an a(1) traditionally-navigable water.
Willow Creek Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, South Sister	Perennial	Des Plaines River	Yes	Willow Creek flows through several culverts (with lengthy culverts at O'Hare Airport, Interstates 294 & 90, and several smaller road culverts in between) directly to the Des Plaines River, an a(1) traditionally navigable water.
North Sister Middle Sister	Perennial	Des Plaines River	Yes	These features are tributaries that each flow through two culverts and then directly into Willow Creek, and from there follows the above-stated Willow Creek flowpath to the Des Plaines River, an a(1) TNW.
Ditch 08	Intermittent	Des Plaines River	No	The features flows directly into the features known as the North Sister, Middle Sister, and South Sister, and from there follows the above-stated Willow Creek flowpath to the Des Plaines River, an a(1) TNW.
Tributary 1: Willow Creek	Perennial	Des Plaines River	No	This feature is a tributary that flows directly into Willow Creek, and from there follows the above-stated Willow Creek flowpath to the Des Plaines River, an a(1) TNW.
Tributary 2: Willow Creek	Perennial	Des Plaines River	Yes	This features is a tributary that flows through a stormwater basin to Willow Creek and from there follows the above-stated Willow Creek flowpath to the Des Plaines River, an a(1) TNW.

Table 5. (a)(5) Tributaries

(a)(5) Waters Name	Flow Regime	(a)(1)-(a)(3) Water Name to which this (a)(5) Tributary Flows	Tributary Breaks	Rationale for (a)(5) Designation and Additional Discussion. Identify flowpath to (a)(1)-(a)(3) water or attach map identifying the flowpath; explain any breaks or flow through excluded/non-jurisdictional features, etc.
Tributary 3: Willow Creek	Perennial	Des Plaines River	No	This feature is a tributary that flows directly into Willow Creek, and from there follows the above-stated Willow Creek flowpath to the Des Plaines River, an a(1) TNW.
Higgins Creek Sections 2, 3	Perennial	Des Plaines River	Yes	This feature is a tributary that flows through two large road culverts, and then directly into Willow Creek, and from there follows the above-stated Willow Creek flowpath to the Des Plaines River, an a(1) TNW.
Ditch 03	Intermittent	Des Plaines River	Yes	This feature is a tributary visible on the 1939 aerial photography and 1920's USGS maps that flows through a large culvert under O'Hare Airport, where it flows directly into Willow Creek, and from there follows the above-stated Willow Creek flowpath to the Des Plaines River, an a(1) TNW.
Ditch 10	Intermittent	Des Plaines River	Yes	This feature is a tributary visible on the 1939 aerial photography and 1920's USGS maps that flows through a large culvert under West Higgins Road and a commercial development, then directly into Willow Creek, and from there follows the above-stated Willow Creek flowpath to the Des Plaines River, an a(1) TNW.
Ditch 13 - Section 2	Intermittent	Des Plaines River	No	This feature is a tributary that flows directly into Willow Creek, and from there follows the above-stated Willow Creek flowpath to the Des Plaines River, an a(1) TNW.

Table 6. (a)(6) Adjacent Waters

(a)(6) Waters Name	(a)(1)-(a)(5) Water Name to which this Water is Adjacent	Rationale for (a)(6) Designation and Additional Discussion. Identify the type of water and how the limits of jurisdiction were established (e.g., wetland, 87 Manual/Regional Supplement); explain how the 100-year floodplain and/or the distance threshold was determined; whether this water extends beyond a threshold; explain if the water is part of a mosaic, etc.
SW19-94 SW120 SE19-55	Bensenville Ditch	The OHWM of the Bensenville Ditch was determined in the field and the wetland boundaries were established using the 1987 Manual/Regional Supplement, and since the established boundaries are bordering the OHWM, the wetlands are a(6) waters.

Table 6. (a)(6) Adjacent Waters		
(a)(6) Waters Name	(a)(1)-(a)(5) Water Name to which this Water is Adjacent	Rationale for (a)(6) Designation and Additional Discussion. Identify the type of water and how the limits of jurisdiction were established (e.g., wetland, 87 Manual/Regional Supplement); explain how the 100-year floodplain and/or the distance threshold was determined; whether this water extends beyond a threshold; explain if the water is part of a mosaic, etc.
SW19-44	Bensenville Ditch	The OHWM of the Bensenville Ditch was determined in the field and the wetland boundaries were established using the 1987 Manual/Regional Supplement, and since the established boundary is within 100 feet of the OHWM, the wetland is an a(6) water under the first neighboring definition.
SE19-46 SE19-47 SE19-60 SW19-37	Bensenville Ditch	The OHWM of the Bensenville Ditch was determined in the field and the wetland boundaries were established using the 1987 Manual/Regional Supplement, and since the established boundaries are within 1,500 feet of the OHWM and within the effective 100-year (Zone A) floodplain as shown on the effective FIRM, the wetlands are a(6) waters under the second neighboring definition.
SE19-97	Crystal Creek	The OHWM of Crystal Creek was determined in the field and the wetland boundary was established using the 1987 Manual/Regional Supplement, and since the established boundary is bordering the OHWM, the wetland is an a(6) water.
SE19-114 SE64	Crystal Creek	The OHWM of Willow Creek was determined in the field and the wetland boundaries were established using the 1987 Manual/Regional Supplement, and since the established boundaries are within 100 feet of the OHWM, the wetlands are a(6) waters under the first neighboring definition.
SE19-124	Crystal Creek	The OHWM of Crystal Creek was determined in the field and the wetland boundaries were established using the 1987 Manual/Regional Supplement, and since the established boundaries are within 1,500 feet of the OHWM and within the effective 100-year (Zone A) floodplain as shown on the effective FIRM, the wetlands are a(6) waters under the second neighboring definition.
NW19-01 NE19-116	Willow Creek	The OHWM of Willow Creek was determined in the field and the wetland boundaries were established using the 1987 Manual/Regional Supplement, and since the established boundaries are within 100 feet of the OHWM, the wetlands are a(6) waters under the first neighboring definition.
NE 41	Willow Creek	The OHWM of Willow Creek was determined in the field and the wetland boundary was established using the 1987 Manual/Regional Supplement, and since the established boundary is bordering the OHWM, the wetland is an a(6) water.
NW19-96	Tributary 1: Willow Creek	The OHWM of the Tributary 1: Willow Creek was determined in the field and the wetland boundary was established using the 1987 Manual/Regional Supplement, and since the established boundary is bordering the OHWM, the wetland is an a(6) water.
NW19-78	Tributary 2: Willow Creek	The OHWM of the Tributary 2: Willow Creek was determined in the field and the wetland boundary was established using the 1987 Manual/Regional Supplement, and since the established boundary is within 100 feet of the OHWM, the wetland is an a(6) water under the first neighboring definition.

Table 7. (a)(7) Waters

SPOE Name	(a)(7) Waters Name	(a)(1)-(a)(3) Water Name to which this Water has a Significant Nexus	Significant Nexus Determination Identify SPOE watershed; discuss whether any similarly situated waters were present and aggregated for SND; discuss data, provide analysis, and summarize how the waters have more than speculative or insubstantial effect on the physical, chemical, or biological integrity of the (a)(1)-(a)(3) water, etc.
N/A	N/A	N/A	N/A

Table 8. (a)(8) Waters

SPOE Name	(a)(8) Waters Name	(a)(1)-(a)(3) Water Name to which this Water has a Significant Nexus	Significant Nexus Determination Identify SPOE watershed; explain how 100-yr floodplain and/or the distance threshold was determined; discuss whether waters were determined to be similarly situated to subject water and aggregated for SND; discuss data, provide analysis, and then summarize how the waters have more than speculative or insubstantial effect the on the physical, chemical, or biological integrity of the (a)(1)-(a)(3) water, etc.
Willow Creek	SE62, SE19-50, SE19-48, SE19-49, SE19-51, SE19-65, SE19-66, SE19-95, SE19-120, SE19-121, SE19-122, SE19-125	Des Plaines River	The Willow Creek SPOE is the watershed that flows into the Des Plaines River at the confluence with Willow Creek. It has an area of approximately 13,400 acres. The Ordinary High Water Mark of the (a)(1) through (a)(5) waters was determined in the field, as set out in the (a)(5) waters above, and the 4000-foot buffer was calculated in ArcGIS using the NAD83 Illinois State Plane East projection. These features are all within the SPOE, are all the same Cowardin type (PEM), share the same type of soils, vegetation, and landform classifications, and therefore are all sufficiently close together and have similar functions. Together, these features have a greater than speculative or insubstantial effect on the physical and chemical integrity of the Des Plaines River through sediment trapping, pollutant management, and runoff storage.
Bensenville Ditch - Crystal Creek	NE19-104, NE19-104A, NE19-104B, NE19-105, NE19-106, NE19-109, NE19-110, NE19-111, NE19-112, NE19-113, NE19-117, NE19-118, NE19-20, NE19-51, NE65, NW19-04, NW19-05, NW19-12, NW39, SE19-137, NW19-06, SE19-52, NE19-62, NE19-87, NE19-88, NW19-18, NW19-77, SE19-115, SE19-127, SE19-136, SE19-138	Des Plaines River	The Bensenville Ditch – Crystal Creek SPOE is a combined topographic watershed that is drained by both Bensenville Ditch in its south and west portions, and Crystal Creek in its eastern portion. Recent modifications to the project area, as well as the highly modified nature of Bensenville Ditch and Crystal Creek, have made it impracticable to distinguish between the two flowpaths to the Des Plaines River using the best available GIS data, and therefore they will be regarded as a SPOE watershed. The Ordinary High Water Mark of the (a)(1) through (a)(5) waters was determined in the field, as set out in the (a)(5) waters above, and the 4000-foot buffer was calculated in ArcGIS using the NAD83 Illinois State Plane East projection. These features are all within the SPOE, are all the same Cowardin system (PEM/PSS/PFO), share the same type of soils, vegetation, and landform classifications, and therefore are all sufficiently close together and have similar functions. Together, these features have a greater than speculative or insubstantial effect on the physical and chemical integrity of the Des Plaines River through sediment trapping, pollutant management, and runoff storage.

Non-Jurisdictional Waters

<u>Table 9. Non-Waters/No Significant Nexus</u>			
SPOE Name	Non-(a)(7)/(a)(8) Waters Name	(a)(1)-(a)(3) Water Name to which this Water DOES NOT have a Significant Nexus	Basis for Determination that the Functions DO NOT Contribute Significantly to the Chemical, Physical, or Biological Integrity of the (a)(1)-(a)(3) Water. Identify SPOE watershed; explain how 100-yr floodplain and/or the distance threshold was determined; discuss whether waters were determined to be similarly situated to the subject water; discuss data, provide analysis, and summarize how the waters did not have more than a speculative or insubstantial effect on the physical, chemical, or biological integrity of the (a)(1)-(a)(3) water.
Bensenville Ditch – Crystal Creek	SE19-53, SE19-43, SE19-58, SE19-63, SE19-64, SW19-28, SW19-56, SW19-57, SW19-59, SW19-72, SW19-73, SW19-34	Des Plaines River	These features met the wetland criteria according to the 1987 Wetland Delineation manual and appropriate Regional Supplement, but are contained within the south stormwater treatment system and drain through a culvert system to the South Drainage Basin at O'Hare Airport, which discharges to the MWRD Deep Tunnel system and is eventually treated at a MWRD treatment plant, and accordingly are not hydrologically connected to the Des Plaines River. Because they are not physically connected, the likelihood of these features having effects on the chemical or physical integrity of the Des Plaines River is insubstantial. Because these features are on the airside of the O'Hare International Airport, which is controlled according to FAA regulations for wildlife, biological effects from these features on the Des Plaines River are also insubstantial.

<u>Table 10. Non-Waters/Excluded Waters and Features</u>	
Paragraph (b) Excluded Feature/Water Name	Rationale for Paragraph (b) Excluded Feature/Water and Additional Discussion.
Ditches 01, 22, 25, 28; NW19-07, NW19-08, NW19-09, NE19-16, NE19-17, NE19-19, NE19-21, SW19-35, SW19-38, SW19-39, SE19-67, SW19-71, NW19-75, NW19-76, NW19-84, SW19-93, SE19-98, NE19-89, SE19-119, NE19-126, NE19-128, SE19-129, SE19-140, SE19-141, SW19-142, SE19-143, SE19-144, SE19-146	These ditches have one or more indicators of an OHWM, but have ephemeral flow, were not constructed in or relocating a tributary (as compared to 1939 aerial photography and 1928 USGS topographic maps). Accordingly, these are b(3)(i) excluded ditches.

Table 10. Non-Waters/Excluded Waters and Features

Paragraph (b) Excluded Feature/Water Name	Rationale for Paragraph (b) Excluded Feature/Water and Additional Discussion.
Ditches 02, 04, 05, 06, 07, 09, 11, 13 (Section 1), 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 27, 29, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42 (PO Drainage), 43, 44, 45, 46, 47, 48; NE19-22, NW19-02, NW19-03, SE19-123, SE19-130, SE19-139	These ditches have one or more indicators of an OHWM, but have intermittent flow, were not constructed in or relocating a tributary (as compared to 1939 aerial photography and 1928 USGS topographic maps), and do not drain wetlands. Accordingly, these are b(3)(ii) excluded ditches.
Ditch 12	This Ditch does drain a wetland and has intermittent flow, but drains through a culvert system to the South Drainage Basin at O'Hare Airport, which discharges to the MWRD Deep Tunnel system and is eventually treated at a MWRD treatment plant. Accordingly, it does not drain to an (a)(1) through (a)(3) water and is a (b)(3)(iii) excluded ditch.
SE19-25, SE19-26, SE19-27, SE19-41, SE19-54, SE19-68, SW19-29, SW19-30, SW19-31, SW19-32, SW19-33, SW19-36, SW19-42, SW19-70, SW19-74	These ditches met the wetland criteria according to the 1987 Wetland Delineation manual and appropriate Regional Supplement, but drain through a culvert system to the South Drainage Basin at O'Hare Airport, which discharges to the MWRD Deep Tunnel system and is eventually treated at a MWRD treatment plant. Accordingly, it does not drain to an (a)(1) through (a)(3) water and is a (b)(3)(iii) excluded ditch.
NW19-103	This feature had one or more indicators of an OHWM and within that OHWM met the wetland criteria according to the 1987 Wetland Delineation manual and appropriate Regional Supplement, but is a ditch constructed in dry land. This ditch is not connected to a stream network and appears to connect and store local runoff. As such, it does not drain to an (a)(1) through (a)(3) water and is therefore an excluded (b)(3)(iii) water.
Erosional Features 1, 2, 3	These features are erosional features without an OHWM or Bed & Banks, and as such are excluded (b)(4)(vi) waters.
NE19-69	This feature met the wetland criteria according to the 1987 Wetland Delineation manual and appropriate Regional Supplement, but is a construction pit which has not been abandoned, and has no use in interstate or foreign commerce. Accordingly, this is an excluded (b)(4)(v) water.
NE19-13, NE19-14, NE19-15, NE19-23, NW19-10, NW19-11, SE19-131, SE19-24	These features met the wetland criteria according to the 1987 Wetland Delineation manual and appropriate Regional Supplement, but are part of stormwater control features constructed in dry land (as verified against 1939 and 2003 aerial photography). Accordingly, these are excluded (b)(6) waters.

Table 11. Non-Waters/Other	
Other Non-Waters of U.S. Feature/Water Name	Rationale for Non-Waters of U.S. Feature/Water and Additional Discussion.
NE19-107, NE19-108, NE19-80, NW19-79, NW19-81, NW19-82, NW19-83, NW19-90, NW19-91, NW19-92, SE19-100, SE19-132, SE19-133, SE19-134, SE19-135, SE19-145, SE19-85, SE19-86, SE19-99, SW19-101, SW19-102	These features met the wetland criteria according to the 1987 Wetland Delineation manual and appropriate Regional Supplement, but did not meet the criteria for adjacent (a)(6) waters. Furthermore, they are more than 4,000 feet from the OHWM of any (a)(1) through (a)(5) waters, and therefore cannot meet the definition of (a)(8) waters.

Appendix N. Delineator Qualifications

BRAUNA HARTZELL, GISP GEOGRAPHIC INFORMATION SYSTEM (GIS) ANALYST/ WETLANDS SCIENTIST

EXPERIENCE (GIS)

Brauna Hartzell has more than 20 years of experience applying GIS software and database design techniques to support wetlands and water resources, historic preservation, community planning, transportation, aviation and military planning, and municipal infrastructure and storm water management. She has worked extensively with GIS and mapping software including ArcGIS desktop and ARC/INFO workstation and has specialized experience with 3D Analyst, Network Analyst and Spatial Analyst. She also collects environmental field data using hand-held GPS units and post-processes information for inclusion in databases and use in spatial analyses. Brauna collaborates with personnel from multiple disciplines to solve complex spatial problems through scripting and spatial analysis to deliver results and data for project-specific needs. She utilizes geoprocessing models, Python, and VBA to meet analytical needs of projects.

Brauna is experienced with GIS-related data submittal requirements associated with the Federal Energy Regulatory Commission (FERC) and the Federal Aviation Administration (FAA) data standardization initiatives. She has extensive experience developing Geodatabases with the Spatial Data Standards for Facility, Infrastructure, and Environment (SDSFIE) standard and creating Federal Geographic Data Committee (FGDC)-compliant metadata.

Brauna has specialized experience with using 3D data formats for spatial analysis, contour generation and manipulation, and geospatial modeling. She is adept in the use of LiDAR-derived data and DTMs in support of hydrology and hydraulic analyses. Additionally, she has extensive experience with SSURGO databases and the National Hydrography Dataset.

EXPERIENCE (WETLAND/ENVIRONMENTAL)

Brauna Hartzell has more than fifteen years of experience in wetland delineation, wetland permitting, and restoration projects. She performs wetland and field delineations conforming to current United States Army Corps of Engineers (USACE) including the Northcentral and Northeast Regional Supplement and State standards, designs custom field data collection applications, collects field data using hand-held Global Positioning Systems (GPS) data collectors and tablets, and prepares National Environmental Policy Act (NEPA) documentation. Brauna has successfully guided numerous projects through the Section 404 permitting process.

Brauna has performed numerous wetland delineations in the Upper Midwest. She conducts wetland mitigation site monitoring according to established site-specific assessment protocols, performs vegetation surveys, and analyzes and presents field collected data in graphical and tabular form. She also assists in mitigation site design and construction specifications development.



Areas of Expertise

- Geographic Information Systems (GIS)
- Remote-sensing image processing
- Digital mapping
- Database design
- Programming
- Wetland delineation and permitting

Education

- MS, Environmental Monitoring, 1994, University of Wisconsin, Madison
- BS, Biological Science, 1982, Florida State University, Tallahassee, Florida

Registration/Certification

- Certified GIS Professional (GISP), GIS Certification Institute

Training and Seminars

- Geodatabase Design Concepts, ESRI
- Grasses, Sedges, and Rushes Workshop, University of Wisconsin–LaCrosse, 2017
- Vascular Flora of Wisconsin, University of Wisconsin – Madison, Spring 2002
- Wetlands Ecology, University of Wisconsin – Madison, Spring 2003
- Grasses: Identification and Ecology Workshop, University of Wisconsin – Milwaukee workshop, 2002
- GPS Field Collection Techniques Training Workshop for Trimble GeoXH, Seiler Instruments
- Basic Wetland Delineation Workshop, University of Wisconsin–LaCrosse, 2002
- Basic Hydric Soil Identification Workshop, University of Wisconsin – LaCrosse, 2005
- Advanced Wetland Delineation Workshop, University of Wisconsin – LaCrosse, 2007
- Critical Methods in Delineation, University of Wisconsin–LaCrosse, 2007, 2008, 2009, 2017, 2018, 2019, 2020
- Wildlife Inventory and Monitoring, University of Wisconsin – Milwaukee workshop, 2015

BRAUNA HARTZELL, GISP (CONTINUED)**RELATED PROJECTS (WETLANDS)****Wetland Delineations****Various Clients****Midwest USA**

Brauna performed wetland delineations in accordance with the Routine On-Site Method of 1987 United States Army Corps of Engineers (USACE) wetland delineation manual at various sites in Wisconsin and Minnesota. Work included conducting the delineation, documenting field investigations and site conditions, creating wetland boundary maps, and report writing. Delineations were performed for the following projects:

- Pellet Subdivision – Middleton, Wisconsin, 2002
- Potter's Creek Subdivision – Green Bay, Wisconsin, 2003
- Oak Street Bridge Design – La Crosse, Wisconsin, 2003
- Winona Municipal Airport – Winona, Minnesota, 2003 & 2009
- State Trunk Highway (STH) 29 – Marathon County, Wisconsin, 2003
- Hampton Heights Subdivision – Ledgeview, Wisconsin, 2004
- County Trunk Highway (CTH) W – Oconto County, Wisconsin, 2004
- Town of Rockland Preliminary Plat – Brown County, Wisconsin, 2004
- Mourning Dove Subdivision – Oconto County, Wisconsin, 2004
- Cinnamon Ridge Subdivision – Suamico, Oconto County, Wisconsin, 2004
- Kenosha Regional Airport – Kenosha, Wisconsin, 2005
- County Trunk Highway (CTH) A – Lincoln County, Wisconsin
- CTH D – Vernon County, Wisconsin, 2006
- Burton Street – Beloit, Wisconsin, 2006
- Central Wisconsin Airport – Mosinee, Marathon County, Wisconsin, 2008
- State Trunk Highway (STH) 67, Fond du Lac County, Wisconsin, 2011
- Interstate Highway 90/94 Corridor Study, 2014 & 2015
- Ontonagon County Airport, Ontonagon County, Michigan, 2016
- Central Wisconsin Airport – Mosinee, Marathon County, Wisconsin, 2016
- Little Rock Lake, Vilas County, Wisconsin, 2016
- Green Bay-Austin Straubel International Airport, 2017
- Lake Elmo Airport, Lake Elmo, Minnesota, 2017
- STH 48/US 53 Interchange, Rice Lake, Wisconsin, 2017
- Waukesha County Airport, Waukesha, Wisconsin, 2017
- I-43 Ozaukee/Milwaukee counties, Wisconsin, 2017
- Crystal Airport, Brooklyn Center, Minnesota, 2018
- STH 164, Waukesha County, Wisconsin, 2018
- STH 173, Juneau and Monroe counties, Wisconsin, 2018
- W. K. Kellogg Airport, Battle Creek, Michigan, 2018
- Ann Arbor Municipal Airport, Ann Arbor, Michigan, 2019
- Kalamazoo Battle Creek International Airport, Kalamazoo, Michigan, 2019
- Ontonagon County Airport, Ontonagon County, Michigan, 2019
- Houghton County Airport, Calumet, Michigan, 2019

Past Employment

- Information Management Systems, Inc.
- Adult Communities Total Services, Inc.
- Archeological Assessments, Inc.
- University of Wisconsin – Madison

No. of Years With Mead & Hunt

- Hired 08/28/1992

No. of Years With Other Firms

- Four

BRAUNA HARTZELL, GISP (CONTINUED)**Joint Individual Permit – USACE Approval, 2018
Construction of Production and Logistics Facility
Haribo of America
Pleasant Prairie, Wisconsin**

The proposed project includes construction of a production and logistics facility with visitor and employee parking, warehousing capability, and other amenities. 0.6 acres of wetland fill will be necessary to achieve project needs. Brauna served as the lead preparer of the individual permit application which included a Practicable Alternatives Analysis.

**Wetland Delineation, W.K. Kellogg Airport, 2018
W.K. Kellogg Airport
Battle Creek, Michigan**

Brauna served as lead wetland delineator in support of an environmental assessment for proposed grading and site improvements to facilitate hangar development and other support services at the airport. The area of interest is approximately 180 acres in size and resulted in the delineation of six wetlands. Wetland types encountered include emergent seasonally-flooded basins and aquatic bed wetlands.

**Wetland Delineation, Crystal Airport, 2018
Metropolitan Airports Commission
Brooklyn Center, Minnesota**

Brauna served as lead wetland delineator in support of alternatives analysis for an environmental assessment for proposed airfield improvements. The area of interest is approximately 50 acres in size spread over eight areas and resulted in the delineation of seven wetlands. Wetland delineated consisted of emergent Type 1 seasonally-flooded basins.

**Wetland Delineation, STH 73, Juneau and Monroe counties, 2018
Wisconsin Department of Transportation
Madison, Wisconsin**

Brauna served as lead wetland delineator in support of bridge replacements and beam guard upgrades along a 19.4 mile stretch of State Trunk Highway (STH) 173 slated for roadway resurfacing improvements in Juneau and Monroe counties. Wetlands were delineated in association with bridge crossings at three stream crossings and areas of beam guard upgrades. Wetland types encountered include: fresh wet meadows and hardwood and shrub swamps.

**Wetland Delineation, STH 164 Waukesha County, 2018
Wisconsin Department of Transportation
Madison, Wisconsin**

Brauna served as lead wetland delineator managing two delineator teams in support of resurfacing and intersection upgrade alternatives analysis for a 4.6 mile stretch of State Trunk Highway (STH) 164 in Waukesha County. The area of interest is approximately 133 acres in size and resulted in the delineation of 22 wetlands. Wetland types encountered include: fresh wet meadows, hardwood and shrub swamps, and riparian wetlands associated with six major and minor stream crossings.

**Joint Section 404 – WCA Permit and Compensatory Mitigation Plan, 2017
Detroit Lakes-Becker County Airport
Detroit Lakes, MN**

The proposed project at the Airport includes a relocation of the Runway 13 threshold 1,000 feet to the southeast to provide a 5,200-foot long runway which accommodates an instrument approach with CAT-I minimums. Additionally, a full-length taxiway will be constructed. In total, the proposed project will address airfield design deficiencies,

BRAUNA HARTZELL, GISP (CONTINUED)

improve runway pavement condition, and meet runway length requirements. Approximately 14 acres of wetland fill will be necessary to achieve project needs. A compensatory mitigation plan is included in the permit application. Brauna served as the lead preparer of the permit application.

Wetland Delineation, I-43 Ozaukee/Milwaukee counties, 2017**Wisconsin Department of Transportation****Madison, Wisconsin**

Brauna served as lead wetland delineator in support of roadway design alternatives analysis for a 1.4 mile stretch of Interstate highway in Ozaukee and Milwaukee counties. The area of interest is approximately 92 acres in size and resulted in the delineation of 61 wetlands. Wetland types encountered include: fresh wet meadows, and hardwood and shrub swamps.

Wetland Delineation and Re-certification, Waukesha County, 2017**Waukesha County Airport****Waukesha, WI**

Brauna served as the lead wetland delineator to update and re-certify previously delineated wetland boundaries more than 5 years old. Airfield projects spanning more than 8 years necessitated multiple delineations. Permitting for the current Runway Safety Area (RSA) improvement project required a reassessment of previous wetland boundaries. The boundaries of 12 previous identified wetlands were investigated during field work using hand-held GPS equipment. Three boundaries were updated based on changed environmental conditions and one new wetland was identified in an area not previously investigated. Sampling points and photographs combined to provide documentation of the re-certification.

Wetland Delineation, Lake Elmo Airport, 2017**Metropolitan Airports Commission****Lake Elmo, Minnesota**

Brauna served as lead wetland delineator in support of alternatives analysis for an environmental assessment for a proposed runway relocation and associated improvements. The area of interest is approximately 130 acres in size and resulted in the delineation of nine wetlands, one of which was in agricultural production. Wetland types encountered include: shallow marsh, fresh wet meadows, and shrub swamps. A functional assessment was performed using the MN Rapid Assessment Method (MNRAM), updating existing information and assessing newly delineated wetlands.

Wetland Delineation, Green Bay-Austin Straubel International Airport, 2017**Wisconsin Bureau of Aeronautics****Brown County, Wisconsin**

Brauna served as lead wetland delineator in support of an environmental assessment for a proposed expansion to the East General Aviation apron and regrading associated with Runway 6/24. The area of interest is approximately 65 acres in size, covering airport infield areas, which resulted in the delineation of 23 emergent wet-meadow wetlands.

Wetland Delineation, STH 48/US 53 Interchange Improvements, 2017**Wisconsin Department of Transportation****Rice Lake, Wisconsin**

Brauna served as the lead wetland delineator in support of permitting for interchange improvements to address safety, geometric and operational deficiencies, and improve facilities for non-motorized traffic. The area of interest is approximately 17.5 acres in size and resulted in the delineation of nine wetlands. Wetland types encountered include: fresh wet meadows and ditch wetlands.

BRAUNA HARTZELL, GISP (CONTINUED)**Wetland Delineation, Ontonagon County Airport, 2016****Michigan Bureau of Aeronautics****Ontonagon County, Michigan**

Brauna served as the lead wetland delineator in support of permitting and on-site mitigation activities related to proposed wetland disturbance in another area of the airport. The area of interest is approximately 19.4 acres in size and resulted in the delineation of 11 wetlands in areas previously in agricultural production. Brauna also performed groundwater well monitoring and data analysis in support of mitigation site design.

Wetland Delineation, Central Wisconsin Airport, 2016**Wisconsin Bureau of Aeronautics****Mosinee, Marathon County, Wisconsin**

Brauna served as the lead wetland delineator in support of master planning activities related to determining the viability of shifting Runway 17/35 to the south. The area of interest is approximately 70 acres in size and resulted in the delineation of three large wetlands on airport property and two off-site. The three on-site wetlands experience regular mowing and other maintenance activities as well as show evidence of groundwater contact on a sloping terrain with a seasonal high-water table; off-site wetlands consisted of an alder and a hardwood swamp.

Little Rock Lake Wetland Survey, 2016**National Ecological Observatory Network (NEON), Boulder, CO****Vilas County, Wisconsin**

Brauna served as the lead wetland scientist in support of site equipment layout investigations for long-term ecological monitoring. A total of four wetlands were delineated within the area of interest at this mesotrophic seepage lake covering about 39 acres. Each proposed equipment installation site was surveyed and wetlands delineated in close proximity to any proposed location.

Interstate Highway (IH) 90/94 Corridor Study, 2013-2017**Wisconsin Department of Transportation (WisDOT) Southwest Region****Portage, Juneau, Sauk, and Columbia Counties, Wisconsin**

Mead & Hunt is leading a team that is conducting a corridor study of IH 90/94 from US12/WIS 16 to IH39. The project consists of evaluating operational and safety issues, review of the interchanges and ramps within the corridor, and evaluating possible expansion. Environmental studies are being conducted and include; cultural resources surveys, endangered species surveys, contaminated material investigations, noise analysis and wetland delineations. Brauna is a wetland scientist assisting in the delineation, wetland field data collection and mapping. Cost: \$210 million

Wetland Mitigation, Runway 14/32 Safety Area, 2004-2011**WisDOT Bureau of Aeronautics****Madison, Wisconsin**

Brauna served as project scientist for this reconstruction of a runway safety area and railroad within a state natural area. 140 acres of fen and sedge meadow were restored and enhanced, and 6,000 feet of Starkweather creek was restored with an annually flooded riparian corridor. The project also included restoration of ten acres of swamp forest and 35 acres of upland buffer, plus negotiation of annual management and monitoring to enhance rare plant habitats within Cherokee Fen. The mitigation cost was more than \$1.5 million, with a total project construction cost of \$25 million. Brauna assisted with wetland monitoring and collection of botanical and hydrologic data for compliance. She also monitored for invasive species.



Conor Makepeace

ENVIRONMENTAL SCIENTIST

Areas of Expertise

- Wetland Delineation
- Geospatial analytics
- Wildlife surveys
- Environmental Permitting

Education

- MEM, Environmental Management, Duke University, 2017
- BS, Environmental Science and Politics and Law, Bryant University, 2015

Registration/Certifications

- Certificate of Geospatial Analytics, Duke University
- Basic Wetland Delineation, Duncan & Duncan WEST
- Interagency Consultation for Endangered Species, Duncan & Duncan WEST

Presentations

- Geological Society of America Northeastern Section Meeting, "A New Pyrolysis-Based Method to Assess Molecular Preservation of Ancient Silk Products," 2014

Past Employment

- USACE – Norfolk District
- Oregon Department of Forestry
- New England Testing Laboratory, North Providence, RI

No. of Years with

Mead & Hunt

- Hired 12/4/2017

No. of Years with Other

Firms

- None

LinkedIn URL

- www.linkedin.com/in/cmakepeace/

Conor's academic and professional experience focuses on ecosystem scale land management and geospatial analytics. Conor currently assists in providing environmentally sound solutions for infrastructure development. This includes coordinating closely with the South Carolina Department of Transportation (SCDOT) and other agencies to avoid impacts to wetlands, threatened and endangered species, and protected species critical habitat. He performs research and field surveys to promote compliance with the Clean Water Act (CWA), the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA).

RELATED PROJECTS

STH 164 Resurfacing and Intersection Improvements Wisconsin Department of Transportation Waukesha, Wisconsin

For this project, Conor lead one of two teams of subconsultants in delineating wetlands along 4.5 miles of a major roadway. State Truck Highway (STH) 164 is a Wisconsin State Highway that runs from the City of Waterford north around the City of Waukesha. Conor delineated roadside wetlands as well as areas around intersections and areas of planned intersection improvements.

Date: June 2018

Bridge No. 52 Over Neuse River and Bridge No. 152 Over Neuse River Overflow (B-5619) North Carolina Department of Transportation Lenoir County, North Carolina

Conor performed wetland delineation, a bald eagle field survey, and subsequently produced a Natural Resources Technical Report and Preliminary Jurisdictional Determination package. The Neuse River is critical habitat for the Atlantic Sturgeon, requires National Marine Fisheries Service application, and is also subject to US Coast Guard coordination. As this project is federally funded, Conor assisted in coordination with the USACE and NCDOT Environmental Analysis Unit.

Date: Ongoing

Delineation and Mitigation Planning Private Client Atoka and Pushmataha County, Oklahoma

Conor was responsible for the delineation and classification of multiple streams as well as data collection and mapping for the project. This involved the mapping of over 14-miles of perennial, intermittent, and ephemeral streams for potential use in mitigation. This project consists of an application for a 404 permit, agency

Date Rev : 9/20/2018 Page: 1

Conor Makepeace

Mead & Hunt

coordination, threatened and endangered species studies, alternatives analysis, and mitigation planning.

Date: Ongoing

**Wildlife Hazard Assessment (WHA)
Georgetown Municipal Airport
Georgetown, Texas**

Conor assisted in an ongoing Wildlife Hazard Assessment at the Georgetown Municipal Airport. Conor performed point counts to identify potentially hazardous avian species using both visual and auditory identification, performed trapping surveys for small mammals, and spotlight surveys for crepuscular animals, mainly deer. Conor performed these tasks in accordance with 14 CFR 139.337 and under the supervision of a Qualified Wildlife Biologist as defined in AC 150/5200-36A.

Date: Ongoing

**Corridor Improvements, Corley Mill at Sunset Boulevard Gateway
Improvements, Ongoing
Town of Lexington
Lexington, South Carolina**

Conor assisted in the jurisdictional determination field reviews and geospatial mapping for this long-term corridor redevelopment plan. The Town of Lexington requested Mead & Hunt's assistance to complete a traffic study and identify future growth opportunities and strategies to alleviate traffic in the Town's gateway corridor. In addition, Mead & Hunt is managing multiple safety design and improvement projects to create short-term relief for motorists who use these roadways for their daily commutes. This initiative is uniquely funded by a Tax Increment Financing District, which will generate \$2 million annually. Mead & Hunt's services include project management, a traffic study, alternative analysis, conceptual roadway design, roadway design, pavement marking plans, traffic engineering, signal plan design, maintenance of traffic plans, hydrology/hydraulic design, utility coordination and surveying.

Date: Ongoing

**Interstate Interchange Design, Carolina Crossroads (I-20/I-26/I-126)
South Carolina Department of Transportation (SCDOT)
Columbia, South Carolina**

Conor assisted with the natural resources review, permitting, and mapping for this multi-interstate project as well as delineation of additional areas of the project. The Carolina Crossroads project area has been defined as a mainline corridor including I-20 from the Saluda River to the Broad River, I-26 from US 378 to Broad River Road and I-126 from Colonial Life Boulevard to I-26. The corridor is a major hub for Midlands commuters and serves as a primary route into and out of Columbia. Both I-20 and I-26 serve as major cargo routes in the Southeast, and I-26 is the main thoroughfare for recreational travel. I-26 is an important route for South Carolina business as Lowcountry ports transport their goods to Upstate manufacturers. Our team was tasked with developing a solution to alleviate traffic

Date Rev: 9/20/2018 Page 2

Conor Makepeace



congestion for this corridor and develop an Environmental Impact Statement (EIS). The new design will improve mobility and safety in one of the most congested highway corridors in the state.

Date: December 2018

**Bald Eagle Survey
Oklahoma Department of Transportation (ODOT)
Statewide, Oklahoma**

Mead & Hunt was hired by ODOT to perform bald eagle surveys, and provide reports, throughout the state of Oklahoma for 2018-2020 transportation projects with potential or known bald eagle habitat. Mead & Hunt's survey area included over 100 sites in 29 counties throughout eastern Oklahoma, ranging from the Kansas to the Texas border. Biologists traveled over 6,000 miles of Oklahoma roads to document bald eagles. To accomplish this task over such a large project area, Mead & Hunt partnered with Environmental Solutions and Innovations, Inc. (ESI). At the start of this project the relevant counties were divided into three project regions with Mead & Hunt surveying in northeastern Oklahoma and ESI surveying sites in central and southern Oklahoma. During the months of January and February, 44 adult bald eagles and 23 juveniles were observed and documented. Conor assisted with the documentation and performing of field surveys throughout Oklahoma.

Date: February 2018

**Bridge Replacement, US 1 over CSX Railroad
South Carolina Department of Transportation (SCDOT)
Chesterfield County, South Carolina**

Conor performed field reviews for threatened and endangered species, particularly red-cockaded woodpeckers, and assisted in jurisdictional determination field reviews and mapping for this bridge replacement let under the SCDOT Bridge Design On-Call. This project will replace the existing 270-foot structurally-deficient bridge over CSX Railway. Per the Department's request, Mead & Hunt is aggressively accelerating our timeline to align this project's schedule with the nearby US 1 Bridge Replacement over Black and Alligator Creeks project which was let to design two years prior. SCDOT wishes to construct these two projects under the same contract while coordinating utility relocations, environmental and right-of-way impacts concurrently. This project has an ambitious schedule due to the railroad coordination component. However, our team is working tirelessly to expedite this bridge replacement project. Mead & Hunt is providing project management, bridge design, railroad coordination, environmental documentation and surveys.

Date: Ongoing

Date Rev: 9/20/2018 Page 3

KIMBERLY SHANNON ENVIRONMENTAL SCIENTIST

Kimberly Shannon is an environmental scientist with over 14 years of experience. Over the years she has gained professional experience in coordinating and completing a variety of project types including transportation, oil and gas, commercial development, local government, and nuclear. She has honed her regulatory and technical skills while providing excellent service to diverse clients. Her technical expertise and strongest skills as a consultant include the identification, mapping, and delineation of streams and wetlands; 404 permitting and compensatory mitigation; United States Army Corps of Engineers (USACE) regulatory coordination and assisting various clients through the 404 permitting process. Kimberly also has professional experience in the preparation and coordination of environmental assessment and categorical exclusion documents in support of the National Environmental Policy Act (NEPA) process, habitat evaluation for threatened and endangered species, bird surveys, proposal writing and pricing, technical writing and editing, training junior staff, and working with other project managers, colleagues and clients to achieve project goals and objectives in a timely and cost-effective manner.

Her professional experience prior to consulting includes working for a non-profit conservation organization and running the Oklahoma Natural Areas Registry program. She worked with private landowners throughout Oklahoma to identify and evaluate rare and protected species and their habitat so that voluntary protection agreements could be established.

CURRENT PROJECTS

Biological Assessment and Mitigation Planning for 404 Permit

Private Client

Atoka County, OK

Kimberly and other staff are assisting a client with the 404 permit comments from state and federal agencies by undertaking and coordinating an alternatives analysis, a mitigation plan for multiple miles of stream impacts, an adaptive management plan for the mitigation site, surveys for threatened and endangered species, a biological assessment report and agency coordination.

Delineation of Waters of the U.S. and 404 Permit

City of Atoka

Atoka, OK

Kimberly and staff are delineating streams and wetlands at a 300+ acre commercial site for a pending project. A delineation report will be prepared and used to complete a general 404 permit for the client. Mitigation may also be required.

PAST PROJECTS

Wetland Delineations

Ontonagon County Airport - Schuster Field

Ontonagon County, MI

Kimberly assisted with the assessment of potentially jurisdictional wetlands at Schuster Field during June 2019 and August 2016. Wetlands were assessed for hydrology, hydrophytic vegetation and hydric soils based on USACE guidelines and the



Areas of Expertise

- Stream and wetland delineation
- Permitting and licensing
- NEPA
- Project management
- Regulatory compliance
- Environmental Assessments
- Environmental Reports

LinkedIn url

- <https://www.linkedin.com/pub/kimberly-shannon/29/412/a38>

Education

- MS, Applied and Natural Science, Oklahoma State University, 1997
- BS, Biology, Oklahoma State University, 1994
- Certificate, GIS, Tulsa Community College, 2010

No. of Years with Mead & Hunt

- Hired 05/04/2015

No. of Years with Other Firms

- 10

KIMBERLY SHANNON (CONTINUED)

Northcentral and Northeast supplement to the 1987 guidelines. Boundaries of wetlands were mapped using sub-meter accurate GPS technology.

**Oka' Yanahli Preserve Waters of the U.S. Delineations
Oklahoma Chapter of The Nature Conservancy
Johnston County, OK**

Kimberly and other staff completed the identification and delineation of multiple intermittent and ephemeral streams, ponds and wetlands within The Nature Conservancy's eastern portion of the Oka' Yanahli preserve. Within a 575-acre portion of the larger 3,120 acre preserve, over 17,000 linear feet of potentially jurisdictional streams were delineated and mapped using sub-meter accurate Trimble GPS technology. A report with figures and shapefiles were included in the deliverables for this project. The delineation was performed in support of The Nature Conservancy's stream enhancement and restoration efforts as part of ongoing mitigation projects for ODOT and future mitigation projects.

**Threatened & Endangered Species Surveys, EC 1923
Oklahoma Department of Transportation
Statewide, Oklahoma**

Kimberly and a subconsultant will be completing Bald Eagle surveys for ODOT at 90+ project sites in 29 eastern Oklahoma counties during January 2018. Specific reports will be prepared and provided to ODOT.

**Mitigation Coordination for Oklahoma Department of Transportation with
Multiple Agencies, EC 1660, 2015-2016
Oklahoma Department of Transportation
Statewide, Oklahoma**

Kimberly assisted ODOT with the coordination of various mitigation projects across Oklahoma. As part of this contract she is working directly with the USACE, other consultants, and the Oklahoma Chapter of The Nature Conservancy.

**Mitigation Plan, Durant Bypass, May 2010-2015
Oklahoma Department of Transportation
Durant, Oklahoma**

Kimberly prepared a compensatory mitigation plan for a 404 permit in support of ODOT's bypass loop around US70 in Durant, Oklahoma. She coordinated with the United States Army Corps of Engineers, ODOT, subcontractors, and the City of Durant during the project.

**Delineation, Reporting, and 404 Permitting, November 2011-September 2012
QuikTrip Corporation
Muskogee, OK and Dallas/Fort Worth Metroplex**

Kimberly led and completed multiple delineations, protected species habitat evaluations, reporting efforts, and 404 permitting (NWP39) including mitigation bank and agency coordination for the client.

**Local Government Contract for Statewide County Road and Bridge Projects
Oklahoma Department of Transportation
Statewide Oklahoma**

These similar county-level projects included the delineation of potentially jurisdictional waterbodies, assessment of potential habitat for federally protected species, reporting efforts, the completion of project specific NEPA clearance documents, tribal coordination, and coordination with ODOT contacts and county commissioners.

KIMBERLY SHANNON (CONTINUED)**Chitwood/Sholem Lateral Pipeline Right-of-Way Assessments, Reports and 404 Permitting, April-August 2012****DCP Midstream, LLC****Jefferson County, Oklahoma and Clay and Jack Counties, Texas**

Kimberly classified over 189 waterbodies along 31.5 miles of pipeline ROW. She reviewed all ROW feature maps and coordinated field data for the presence of potentially jurisdictional waters and potential threatened and endangered species habitat. Kimberly classified and coordinated mapping efforts with GIS professionals and the client to assist with horizontal directional drilling (HDD) boring locations to avoid or minimize impacts to waterbodies. These data were used to complete delineation reports, 404 permitting (NWP12) and to prepare engineering alignment sheets. As appropriate, Kimberly coordinated directly with the Tulsa and Fort Worth District Regulatory Branch of the USACE for the timely completion and issuance of NWP12. She worked directly with the client's environmental project manager to assist with reroutes and attended alignment sheet review meetings.

Southern Hills Natural Gas Liquids Trunk Line ROW Assessments, Reports and 404 Permitting, December 2011-July 2012**DCP Midstream, LLC****Multiple Oklahoma Counties**

Kimberly reviewed and classified over 500 waterbodies along approximately 260 miles of pipeline right-of-way. This project scope was comparable to the project above.

Pipeline Project Coordination and Reporting, August 2014**DCP Midstream, LLC****Ozona, Texas**

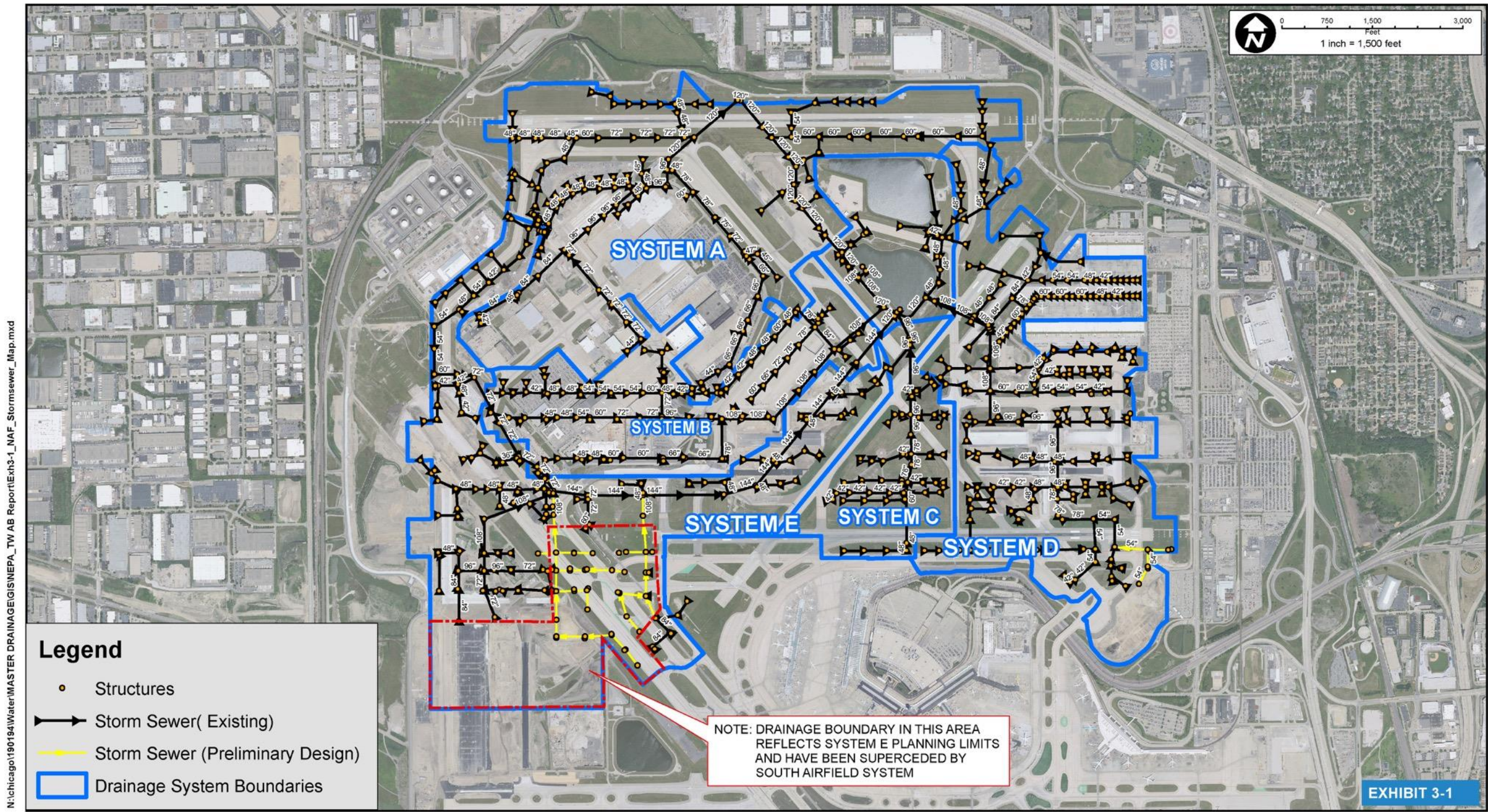
This was a very fast-paced project for a natural gas gathering pipeline project in Crockett County, Texas in which Kimberly coordinated field work and reporting and completed 404 and floodplain permitting with state and federal agencies for the client.

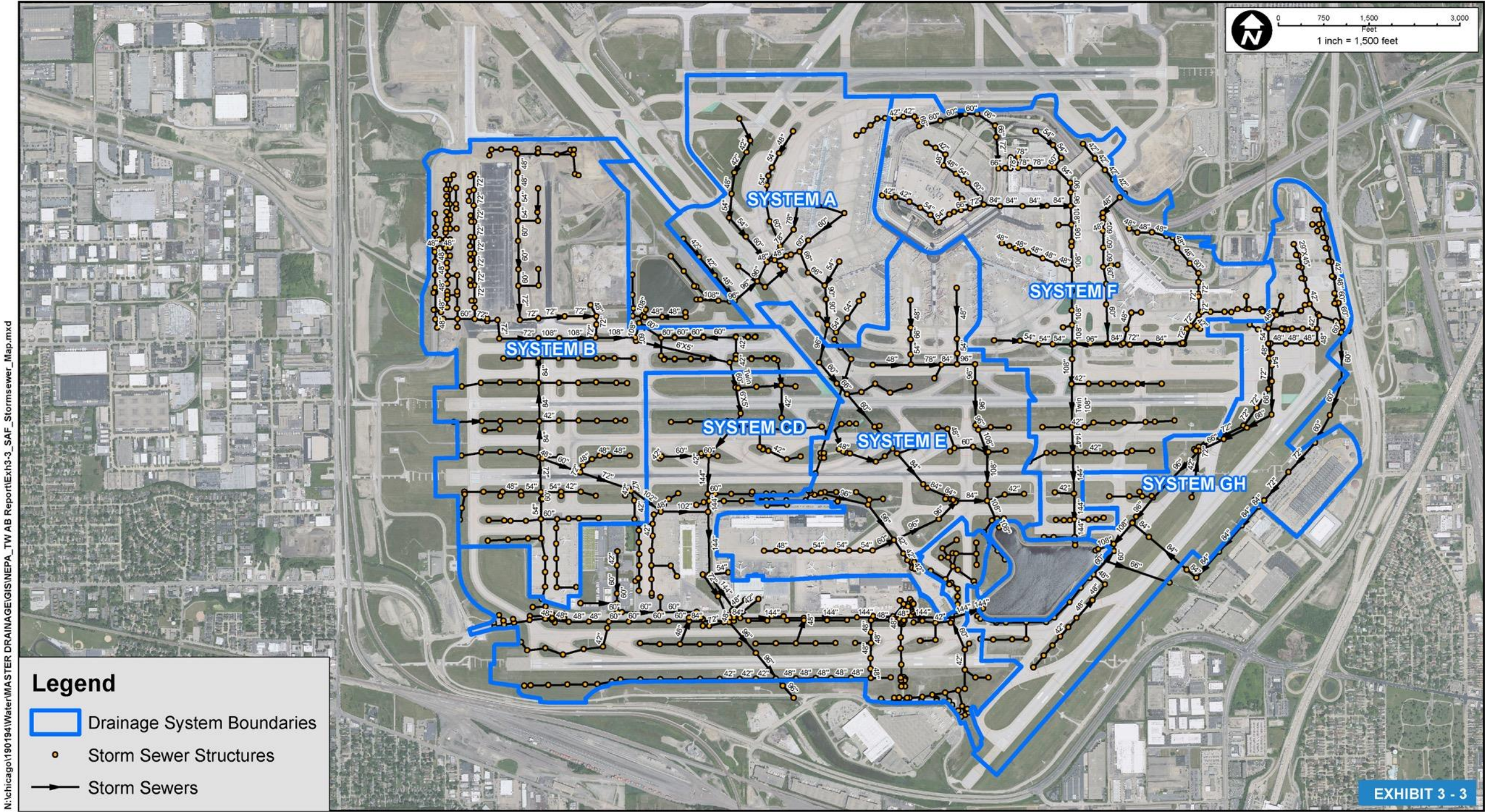
Comanche Peak Nuclear Power Plant, 2006-2008**Luminant Generation Company****Glen Rose, Texas**

Kimberly was part of a terrestrial ecology team that conducted field surveys and wrote sections of an environmental report (ER) in support of a combined license application (COL). She performed habitat assessments for federal and state threatened and endangered (T&E) species, vegetation mapping and calculation of percent cover by plant species, and wetland delineations both at the power plant and along water pipeline ROWs. She assisted the aquatic ecology team with fish surveys, water data, and invertebrate surveys. Kimberly participated in two Nuclear Regulatory Commission site audits and performed quality control of references for the ER and Final Safety Analysis Report (FSAR). ■

ATTACHMENT L-2

MAJOR STORM SEWER SYSTEMS (FROM CHRISTOPHER B. BURKE ENGINEERING, LTD., "FINAL TAXIWAY A-B/SOUTH AIRFIELD DETENTION CONSOLIDATION DRAINAGE SYSTEMS ENGINEERING REPORT," MARCH 10, 2021)





CITY OF CHICAGO
LORI LIGHTFOOT
MAYOR
JAMIE L. RHEE
COMMISSIONER



CHRISTOPHER B. BURKE ENGINEERING LTD.
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

**SOUTH AIRFIELD
STORM SEWER SYSTEMS**



DATE	8/23/2019	REV NO.	--
PROJECT NO.	190194		