Plate 01 - Ravine 8 Surficial Geology

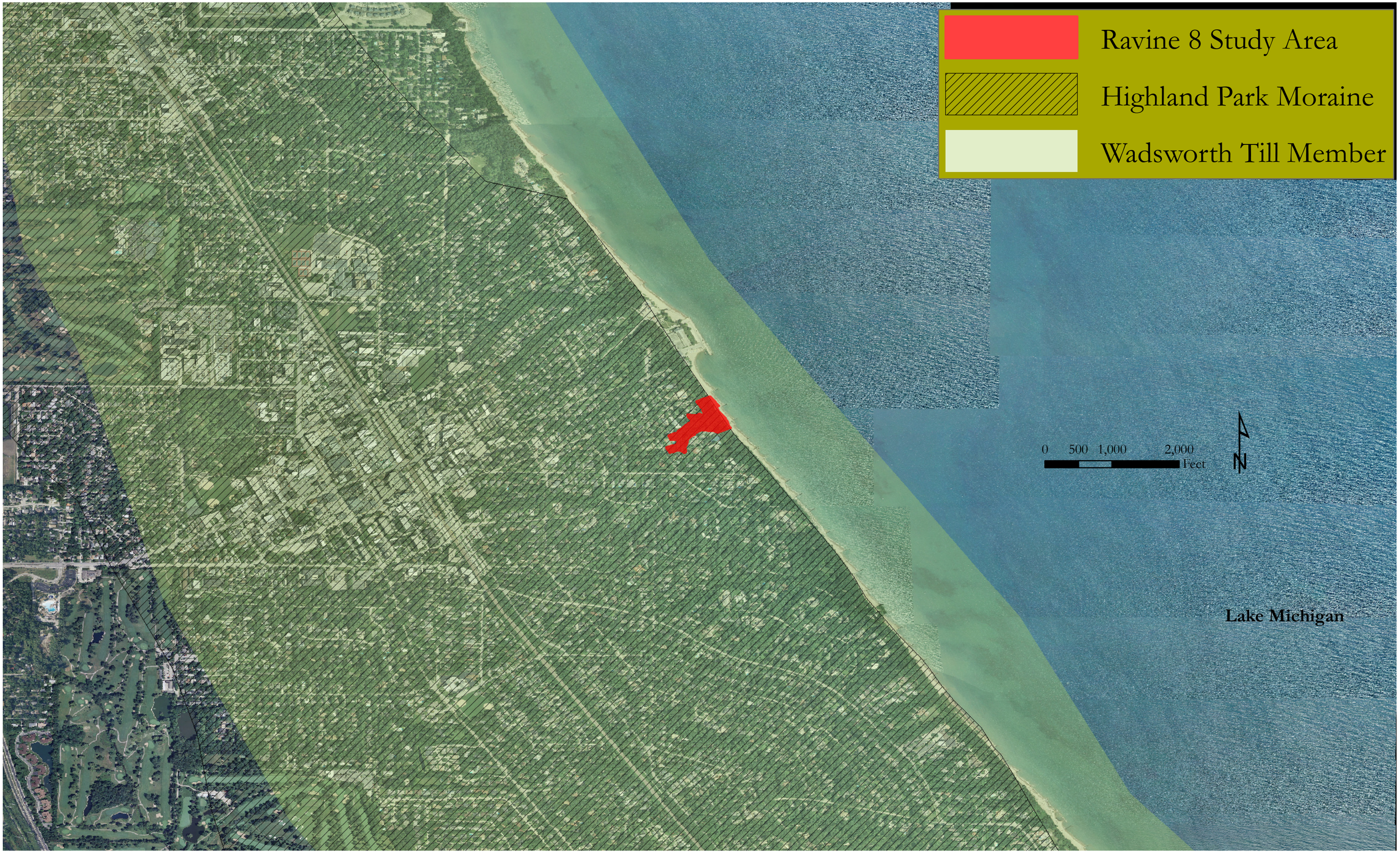


Plate 02 - Ravine 8 Geomorphology

Plate 03 - Plant Species Inventory for Ravine and Bluff Communities.

Floristic Quality Assessment Inventory Calculator

Species	Common Name	C Value	WET indicator	Habit	Duration	Nativity
Abutilon theophrasti	Velvetleaf	0	FACU	Forb	Annual	Adventive
Acer negundo	Ash-Leaf Maple	0	FAC	Tree	Perennial	Native
Acer platanoides	Norway Maple	0	UPL	Tree	Perennial	Adventive
Acer saccharum	Sugar Maple	3	FACU	Tree	Perennial	Native
Aegopodium podagraria	Bishop's Goutweed	0	FAC	Forb	Perennial	Adventive
Alliaria petiolata	Garlic-Mustard	0	FAC	Forb	Biennial	Adventive
Ambrosia artemisiifolia	Annual Ragweed	0	FACU	Forb	Annual	Native
Aquilegia canadensis	Red Columbine	6	FACU	Forb	Perennial	Native
Arctium minus	Lesser Burrdock	0	FACU	Forb	Biennial	Adventive
Brassica nigra	Black Mustard	0	UPL	Forb	Annual	Adventive
Bromus inermis	Smooth Brome	0	FACU	Grass	Perennial	Adventive
Bromus pubescens	Hairy Woodland Brome	5	FACU	Grass	Perennial	Native
Celastrus orbiculatus	Asian Bittersweet	0	UPL	Vine	Perennial	Adventive
Cirsium arvense	Canadian Thistle	0	FACU	Forb	Perennial	Adventive
Conyza canadensis	Canadian Horseweed	0	FACU	Forb	Annual	Native
Cornus alba	Red Osier	6	FACW	Shrub	Perennial	Native
Echinochloa crus-galli	Large Barnyard Grass	0	FACW	Grass	Annual	Native
Epilobium coloratum	Purple-Leaf Willowherb	3	OBL	Forb	Perennial	Native
Euonymus alatus	Winged Euonymus	0	UPL	Shrub	Perennial	Adventive
Euonymus hederaceus	Climbing Euonymus	0	UPL	Shrub	Perennial	Adventive
Eurybia macrophylla	Large-Leaf Wood-Aster	8	FACU	Forb	Perennial	Native
Eutrochium purpureum	Sweet-Scented Joe-Pye-Weed	7	FAC	Forb	Perennial	Native
Frangula alnus	Glossy False Buckthorn	0	FACW	Shrub	Perennial	Adventive
Fraxinus americana	White Ash	5	FACU	Tree	Perennial	Native
Geum canadense	White Avens	1	FAC	Forb	Perennial	Native
Glechoma hederacea	Groundivy	0	FACU	Forb	Perennial	Adventive
Hamamelis virginiana	American Witch-Hazel	8	FACU	Shrub	Perennial	Native
Helianthus strumosus	Pale-leaf Sunflower	5	UPL	Forb	Perennial	Native
Hesperis matronalis	Mother-of-the-Evening	0	FACU	Forb	Perennial	Adventive
Juniperus virginiana	Eastern Red-Cedar	2	FACU	Tree	Perennial	Native
Ligustrum vulgare	European Privet	0	FACU	Shrub	Perennial	Adventive
Lolium perenne ssp. multiflorum	Perennial Rye Grass	0	FACU	Grass	Annual	Adventive
Morus alba	White Mulberry	0	FAC	Tree	Perennial	Adventive
Oxalis stricta	Upright Yellow Wood-Sorrel	0	FACU	Forb	Perennial	Native
Persicaria maculosa	Lady's-Thumb	0	FACW	Forb	Annual	Adventive
Polygonatum biflorum var. commutatum	King Solomon's-Seal	3	FACU	Forb	Perennial	Native
Quercus rubra	Northern Red Oak	7	FACU	Tree	Perennial	Native
Rhamnus cathartica	European Buckthorn	0	FAC	Shrub	Perennial	Adventive
Robinia pseudoacacia	Black Locust	0	FACU	Tree	Perennial	Adventive
Rubus occidentalis	Black Raspberry	2	UPL	Shrub	Perennial	Native
Salix amygdaloides	Peach-Leaf Willow	5	FACW	Tree	Perennial	Native
Sanicula odorata	Clustered Black-Snakeroot	2	FAC	Forb	Perennial	Native
Setaria faberi	Japanese Bristle Grass	0	FACU	Grass	Annual	Adventive
Solanum dulcamara	Climbing Nightshade	0	FAC	Vine	Perennial	Adventive
Solidago altissima	Tall Goldenrod	1	FACU	Forb	Perennial	Native
Solidago flexicaulis	Zigzag Goldenrod	7	FACU	Forb	Perennial	Native
Symphyotrichum urophyllum	Arrow-Leaf Aster	5	UPL	Forb	Perennial	Native
Taraxacum officinale	Common Dandelion	0	FACU	Forb	Perennial	Adventive
Thalictrum dioicum	Early Meadow-Rue	7	FACU	Forb	Perennial	Native
Tilia americana	American Basswood	5	FACU	Tree	Perennial	Native
Trifolium repens	White Clover	0	FACU	Forb	Perennial	Adventive

Conservatism-Based Metrics

Mean C (native species)	3.81
Mean C (all species)	2.02
Mean C (native trees)	3.86
Mean C (native shrubs)	5.33
Mean C (native herbaceous)	3.53
FQAI (native species)	19.82
FQAI (all species)	14.42
Adjusted FQAI	27.76
% C value 0-3	73%
% C value 4-6	16%
% C value 7-10	12%

Additional Metrics

Species Richness (all)	51
Species Richness (native)	27
% Non-native	47%
Wet Indicator (all)	0.73
Wet Indicator (native)	0.63
% hydrophyte	29%
% native perennial	47%
% native annual	6%
% annual	16%
% perennial	80%

Ravine 8
Ravine & Bluff
11/1/2012
Robbie Sliwinski

Plate 04 - Plant Species Inventory for Dune and Beach Communities.

Floristic Quality Assessment Inventory Calculator

Species	Common Name	C Value	WET indicator	Habit	Duration	Nativity
Ammophila breviligulata	Beach Grass	7	UPL	Grass	Perennial	Native
Leymus arenarius	European Lyme Grass	0	FACU	Grass	Perennial	Adventive
Oenothera biennis	King's-Cureall	0	FACU	Forb	Biennial	Native
Glechoma hederacea	Groundivy	0	FACU	Forb	Perennial	Adventive
Xanthium strumarium	Rough Cockleburr	0	FAC	Forb	Annual	Adventive
Cakile edentula	American Searocket	9	FACU	Forb	Annual	Native
Robinia pseudoacacia	Black Locust	0	FACU	Tree	Perennial	Adventive
Alliaria petiolata	Garlic-Mustard	0	FAC	Forb	Biennial	Adventive
Ligustrum vulgare	European Privet	0	FACU	Shrub	Perennial	Adventive
Conyza canadensis	Canadian Horseweed	0	FACU	Forb	Annual	Native
Sporobolus vaginiflorus	Poverty Dropseed	0	UPL	Grass	Annual	Native
Vitis riparia	River-Bank Grape	2	FACW	Vine	Perennial	Native
Cornus alba	Red Osier	6	FACW	Shrub	Perennial	Native
Rhamnus cathartica	European Buckthorn	0	FAC	Shrub	Perennial	Adventive
Populus deltoides	Eastern Cottonwood	2	FAC	Tree	Perennial	Native
Asclepias syriaca	Common Milkweed	0	FACU	Forb	Perennial	Native
Belamcanda chinensis	Blackberry Lily	0	UPL	Forb	Perennial	Adventive
Rubus occidentalis	Black Raspberry	2	UPL	Shrub	Perennial	Native
Solidago altissima	Tall Goldenrod	1	FACU	Forb	Perennial	Native
Frangula alnus	Glossy False Buckthorn	0	FACW	Shrub	Perennial	Adventive

Conservatism-Based Metrics

Mean C (native species)	**2.64**
Mean C (all species)	**1.45**
Mean C (native trees)	**2.00**
Mean C (native shrubs)	**4.00**
Mean C (native herbaceous)	**2.428571429**
FQAI (native species)	**8.74**
FQAI (all species)	**6.48**
Adjusted FQAI	**19.55**
% C value 0-3	**85%**
% C value 4-6	**5%**
% C value 7-10	**10%**

Additional Metrics

Species Richness (all)	20
Species Richness (native)	11
% Non-native	45%
Wet Indicator (all)	0.70
Wet Indicator (native)	0.82
% hydrophyte	35%
% native perennial	35%
% native annual	15%
% annual	20%
% perennial	70%

Ravine 8
Beach
11/1/2012
Robbie Sliwinski

Plate 05 - Study Area Measures

Plate 6 - Ravine Average Annual Habitat Units Calculation Sheet

2013-06-12 Reformulation

Code	AA R	AA Mean C	AAHSI	Acres	NAAHUs
HA	3.8		3.5		15.3
HB	4.5		3.8		16.7
RB		4.3		4.4	
D		3.8	3.8	0.5	1.9

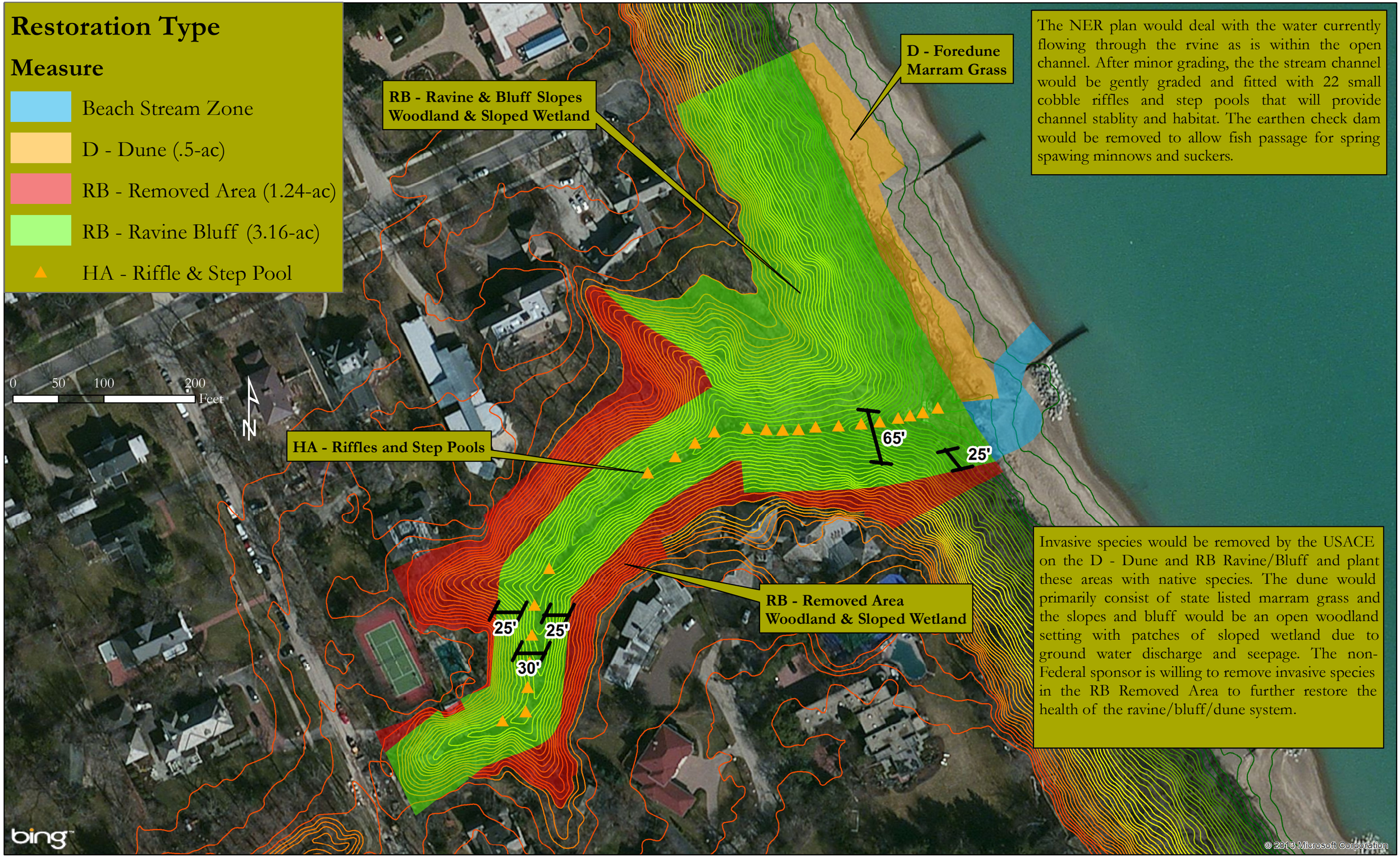
FWOP	D	1.5
FWOP	RB	1.2

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
HA	0.0	1.0	1.3	1.5	1.8	3.0	3.4	3.8	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
HB	0.0	1.0	1.3	1.5	1.8	3.0	3.4	3.8	4.2	4.6	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
RB	2.0	2.2	2.5	2.7	2.9	3.1	3.2	3.3	3.4	3.5	3.6	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.5	4.6	4.7	4.8	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
D	1.5	1.8	2.1	2.4	2.7	3.1	3.2	3.2	3.3	3.3	3.4	3.4	3.5	3.5	3.6	3.7	3.7	3.8	3.8	3.9	3.9	4.0	4.0	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2

Plate 07 - Tentatively Selected Plan

Plate 08 - NER Plan

U.S. Army Corps
of Engineers
Chicago District



The NER plan would deal with the water currently flowing through the rvine as is within the open channel. After minor grading, the the stream channel would be gently graded and fitted with 22 small cobble riffles and step pools that will provide channel stablity and habitat. The earthen check dam would be removed to allow fish passage for spring spawing minnows and suckers.

Invasive species would be removed by the USACE on the D - Dune and RB Ravine/Bluff and plant these areas with native species. The dune would primarily consist of state listed marram grass and the slopes and bluff would be an open woodland setting with patches of sloped wetland due to ground water discharge and seepage. The non-Federal sponsor is willing to remove invasive species in the RB Removed Area to further restore the health of the ravine/bluff/dune system.