Arroyo Trails - Project Update
March 2018

Trail Alignment

The Park District has continued to refine the design of the path's alignment and materials for the ravine trail. The intent continues to minimize impacts to this high quality natural area and allow access for education and interpretation.

Tree Removal and Trail Grading

The project scope continues to be refined. Tree removal is now scheduled for approximately 80 trees through the one-mile long trail, and the grading boundary limits have been narrowed to no more than ten feet in width. These changes result from a trail design to be more of a woodland hiking experience.

One specific way that we are making these changes is relocating a five hundred fifty-foot portion of trail that was to be cut into the ravine slope, to a lower elevation in the ravine. This will eliminate significant grading work in this area and remove the need for a retaining wall.

We plan to investigate a section of elevated boardwalk to limit ravine slope grading beginning at the east end near the temporary culvert. If incorporated into the plan, the wood boardwalk through the tree canopy will further enrich the experience for all users.

Timeline

Tree removal work will take place within the next few weeks. The trees will be dropped and left in place off the trail corridor; no chipping or stump removal will be part of the process at this time. Once tree removal is completed, the trail construction bidding phase will begin and the project will be awarded in May. This schedule will enable us to complete the trail project by December 2018.

Evaluation of elements and timing for trail head improvements remains in planning.

Accessibility

The accessible elements at the east end of the trail allow people of all abilities to experience the pristine wooded ravine that Arroyo Trails offers.

Environmental Review

We have sought out input from experts in the field of natural areas preservation and restoration ecology.

According to Jack Pizzo, President and Senior Ecologist at The Pizzo Group, “The project area is amazing! Currently there are 85 species of native plants and the site is 92% native. This site should be an Illinois State Nature Preserve!”

Kim Roman, senior level Natural Areas Preservation Specialist with Illinois Nature Preserves Commission conducted a site assessment. She was pleased to learn that the park district plans to keep the wooded ravine as permanent open space. Ms. Roman also encouraged us to develop user amenities that are compatible with the site’s long-term preservation goals as the District manages this remnant natural community. She too thinks that with proper management, Arroyo Trails may qualify as an Illinois State Nature Preserve.

Neighborhood Park

The Park District has identified a lead site to develop into a neighborhood park in Ravine Woods subdivision. If the site is acquired in the first half of 2018, the District has budgeted funds to develop the park this year. Ravine Woods residents will be invited to provide input for the park’s features.

SITE:	Channahon Park District	Arroyo Trails
LOCALE:	Channahon, IL	
BY:	Jack Pizzo	
NOTES:	7/26/2017	

CONSERVATISM-BASED			ADDITIONAL METRICS
MEAN C (NATIVE SPECIES)	4.76	SPECIES RICHNESS (ALL)	92
MEAN C (ALL SPECIES)	4.40	SPECIES RICHNESS (NATIVE)	85
MEAN C (NATIVE TREES)	4.50	% NON-NATIVE	0.08
MEAN C (NATIVE SHRUBS)	3.50	WET INDICATOR (ALL)	0.35
MEAN C (NATIVE	5.09	WET INDICATOR (NATIVE)	0.33
FQAI (NATIVE SPECIES)	43.93	% HYDROPHYTE (MIDWEST)	0.50
FQAI (ALL SPECIES)	42.22	% NATIVE PERENNIAL	0.87
ADJUSTED FQAI	45.80	% NATIVE ANNUAL	0.04
% C VALUE 0	0.12	% ANNUAL	0.04
% C VALUE 1-3	0.24	% PERENNIAL	0.95
% C VALUE 4-6	0.40		
% C VALUE 7-10	0.24		

SPECIES ACRONYM	SPECIES NAME (NWPL/MOHLENBROCK)	SPECIES (SYNONYM)	COMMON NAME	C VALUE	MIDWEST WET	NC-NE WET INDICATOR	WET INDICATOR	HABIT	DURATION	NATIVITY
aceneg	Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple	0	FAC	FAC	0	Tree	Perennial	Native
acenig	Acer nigrum	Acer nigrum	Black Maple	5	FACU	FACU	1	Tree	Perennial	Native
acesai	Acer saccharinum	Acer saccharinum	Silver Maple	0	FACW	FACW	-1	Tree	Perennial	Native
acesau	Acer saccharum	Acer saccharum	Sugar Maple	3	FACU	FACU	1	Tree	Perennial	Native
actrub	Actaea rubra	Actaea rubra	Red Baneberry	10	FACU	FACU	1	Forb	Perennial	Native
euprug	Ageratina altissima	Eupatorium rugosum	White Snakeroot	4	FACU	FACU	1	Forb	Perennial	Native
ailalt	Ailanthus altissima	AILANTHUS ALTISSIMA	Tree-of-Heaven	0	FACU	UPL	1	Tree	Perennial	Adventive
alltri	Allium tricoccum	Allium tricoccum	Ramp	7	FACU	FACU	1	Forb	Perennial	Native
ampbra	Amphicarpaea bracteata	Amphicarpaea bracteata	American Hog-Peanut	4	FAC	FAC	0	Vine	Annual	Native
apiame	Apios americana	Apios americana	Groundnut	7	FACW	FACW	-1	Forb	Perennial	Native
aridra	Arisaema dracontium	Arisaema dracontium	Greendragon	7	FACW	FACW	-1	Forb	Perennial	Native
aritri	Arisaema triphyllum	Arisaema triphyllum	Jack-In-The-Pulpit	4	FACW	FAC	-1	Forb	Perennial	Native
asacan	Asarum canadense	Asarum canadense	Canadian Wild Ginger	7	FACU	UPL	1	Forb	Perennial	Native
asitri	Asimina triloba	Asimina triloba	Common Pawpaw	9	FAC	FAC	0	Tree	Perennial	Native
aracan	Boechera canadensis	Arabis canadensis	Sicklepod	10	UPL	UPL	2	Forb	Biennial	Native
brolat	Bromus latiglumis	Bromus latiglumis	Early-Leaf Brome	5	FACW	FACW	-1	Grass	Perennial	Native
bropub	Bromus pubescens	Bromus pubescens	Hairy Woodland Brome	5	FACU	FACU	1	Grass	Perennial	Native
camame	Campanulastrum americanum	Campanula americana	American-Bellflower	3	FAC	FAC	0	Forb	Annual	Native
cxblan	Carex blanda	Carex blanda	Eastern Woodland Sedge	1	FAC	FAC	0	Sedge	Perennial	Native
cxjame	Carex jamesii	Carex jamesii	James' Sedge	5	UPL	UPL	2	Sedge	Perennial	Native
cxpens	Carex pensylvanica	Carex pensylvanica	Pennsylvania Sedge	5	UPL	UPL	2	Sedge	Perennial	Native
cxplat	Carex platyphylla	Carex platyphylla	Broad-Leaf Sedge	10	UPL	UPL	2	Sedge	Perennial	Native
cxvulp	Carex vulpinoidea	Carex vulpinoidea	Common Fox Sedge	2	FACW	OBL	-1	Sedge	Perennial	Native
carcor	Carya cordiformis	Carya cordiformis	Bitter-Nut Hickory	7	FACU	FAC	1	Tree	Perennial	Native
celocc	Celtis occidentalis	Celtis occidentalis	Common Hackberry	3	FAC	FAC	0	Tree	Perennial	Native
cercan	Cercis canadensis	Cercis canadensis	Redbud	10	FACU	FACU	1	Tree	Perennial	Native
cracru	Crataegus crus-galli	Crataegus crus-galli	Cock-Spur Hawthorn	2	FAC	FAC	0	Tree	Perennial	Native
crycan	Cryptotaenia canadensis	Cryptotaenia canadensis	Canadian Honewort	2	FAC	FAC	0	Forb	Perennial	Native
desnud	Desmodium nudiflorum	Desmodium nudiflorum	Bare-Stem Tick-Trefoil	9	UPL	UPL	2	Forb	Perennial	Native
drymar	Dryopteris marginalis	Dryopteris marginalis	Marginal Wood Fern	10	FACU	FACU	1	Fern	Perennial	Native
elycan	Elymus canadensis	Elymus canadensis	Nodding Wild Rye	4	FACU	FACU	1	Grass	Perennial	Native
elyhys	Elymus hystrix	Hystrix patula	Eastern Bottle-Brush Grass	5	FACU	FACU	1	Grass	Perennial	Native
elyvil	Elymus villosus	Elymus villosus	Hairy Wild Rye	5	FACU	FACU	1	Grass	Perennial	Native
elyvir	Elymus virginicus	Elymus virginicus	Virginia Wild Rye	4	FACW	FACW	-1	Grass	Perennial	Native
isobit	Enemion biternatum	Isopyrum biternatum	Eastern False Rue-Anemone	8	FAC	FAC	0	Forb	Perennial	Native
euppur	Eutrochium purpureum	Eupatorium purpureum	Sweet-Scented Joe-Pye-Weed	7	FAC	FAC	0	Forb	Perennial	Native
frapen	Fraxinus pennsylvanica	Fraxinus pennsylvanica subintegerrima	Green Ash	1	FACW	FACW	-1	Tree	Perennial	Native
galapa	Galium aparine	Galium aparine	Sticky-Willy	1	FACU	FACU	1	Forb	Annual	Native
galcon	Galium concinnum	Galium concinnum	Shining Bedstraw	5	FACU	FACU	1	Forb	Perennial	Native
germac	Geranium maculatum	Geranium maculatum	Spotted Crane's-Bill	4	FACU	FACU	1	Forb	Perennial	Native
glystr	Glyceria striata	Glyceria striata	Fowl Manna Grass	4	OBL	OBL	-2	Grass	Perennial	Native
hydvir	Hydrophyllum virginianum	Hydrophyllum virginianum	Shawnee-Salad	5	FAC	FAC	0	Forb	Perennial	Native
impcap	Impatiens capensis	Impatiens capensis	Spotted Touch-Me-Not	3	FACW	FACW	-1	Forb	Annual	Native
jugnig	Juglans nigra	Juglans nigra	Black Walnut	5	FACU	FACU	1	Tree	Perennial	Native
lapcan	Laportea canadensis	Laportea canadensis	Canadian Wood-Nettle	3	FACW	FACW	-1	Forb	Perennial	Native

leevir	Leersia virginica	Leersia virginica	White Grass	7	FACW	FACW	-1	Grass	Perennial	Native
lontat	Lonicera tatarica	LONICERA TATARICA	Twinsisters	0	FACU	FACU	1	Shrub	Perennial	Adventive
smirac	Maianthemum racemosum	Smilacina racemosa	Feathery False Solomon's-Seal	3	FACU	FACU	1	Forb	Perennial	Native
mervir	Mertensia virginica	Mertensia virginica	Virginia Bluebells	5	FACW	FAC	-1	Forb	Perennial	Native
moralb	Morus alba	MORUS ALBA	White Mulberry	0	FAC	FACU	0	Tree	Perennial	Adventive
osmcla	Osmunda claytoniana	Osmunda claytoniana	Interrupted Fern	9	FAC	FAC	0	Fern	Perennial	Native
ostvir	Ostrya virginiana	Ostrya virginiana	Eastern Hop-Hornbeam	5	FACU	FACU	1	Tree	Perennial	Native
oxaeur	Oxalis stricta	Oxalis europaea	Upright Yellow Wood-Sorrel	0	FACU	FACU	1	Forb	Perennial	Native
parqui	Parthenocissus quinquefolia	Parthenocissus quinquefolia	Virginia-Creeper	2	FACU	FACU	1	Vine	Perennial	Native
polvir	Persicaria virginiana	Polygonum virginianum	Jumpseed	2	FAC	FAC	0	Forb	Perennial	Native
phaaru	Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	FACW	-1	Grass	Perennial	Adventive
phrlep	Phryma leptostachya	Phryma leptostachya	Lopseed	4	UPL	FACU	2	Forb	Perennial	Native
plaocc	Platanus occidentalis	Platanus occidentalis	American Sycamore	9	FACW	FACW	-1	Tree	Perennial	Native
podpel	Podophyllum peltatum	Podophyllum peltatum	May-Apple	4	FACU	FACU	1	Forb	Perennial	Native
popdel	Populus deltoides	Populus deltoides	Eastern Cottonwood	2	FAC	FAC	0	Tree	Perennial	Native
potsim	Potentilla simplex	Potentilla simplex argyrisma	Oldfield Cinquefoil	4	FACU	FACU	1	Forb	Perennial	Native
pruvla	Prunella vulgaris ssp. lanceolata	Prunella vulgaris lanceolata	Common Selfheal	0	FAC	FAC	0	Forb	Perennial	Native
pruser	Prunus serotina	Prunus serotina	Black Cherry	1	FACU	FACU	1	Tree	Perennial	Native
pruvir	Prunus virginiana	Prunus virginiana	Choke Cherry	3	FACU	FACU	1	Shrub	Perennial	Native
quealb	Quercus alba	Quercus alba	Northern White Oak	5	FACU	FACU	1	Tree	Perennial	Native
quemac	Quercus macrocarpa	Quercus macrocarpa	Burr Oak	5	FAC	FACU	0	Tree	Perennial	Native
quemuh	Quercus muhlenbergii	Quercus muhlenbergii	Chinkapin Oak	8	FACU	FACU	1	Tree	Perennial	Native
querub	Quercus rubra	Quercus rubra	Northern Red Oak	7	FACU	FACU	1	Tree	Perennial	Native
rhacat	Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	FAC	0	Shrub	Perennial	Adventive
ribcyn	Ribes cynosbati	Ribes cynosbati	Eastern Prickly Gooseberry	5	FAC	FACU	0	Shrub	Perennial	Native
rosmul	Rosa multiflora	ROSA MULTIFLORA	Rambler Rose	0	FACU	FACU	1	Shrub	Perennial	Adventive
rudful	Rudbeckia fulgida var. sullivantii	Rudbeckia speciosa sullivantii	Orange Coneflower	8	OBL	OBL	-2	Forb	Perennial	Native
rudlac	Rudbeckia laciniata	Rudbeckia laciniata	Green-Head Coneflower	5	FACW	FACW	-1	Forb	Perennial	Native
salfra	Salix fragilis	SALIX FRAGILIS	Crack Willow	0	UPL	UPL	2	Tree	Perennial	Adventive
samcan	Sambucus nigra ssp. canadensis	Sambucus canadensis	Black Elder	1	FACW	FACW	-1	Shrub	Perennial	Native
sancad	Sanguinaria canadensis	Sanguinaria canadensis	Bloodroot	6	FACU	FACU	1	Forb	Perennial	Native
sangre	Sanicula odorata	Sanicula gregaria	Clustered Black-Snakeroot	2	FAC	FAC	0	Forb	Perennial	Native
silste	Silene stellata	Silene stellata	Starry Campion	6	UPL	UPL	2	Forb	Perennial	Native
silper	Silphium perfoliatum	Silphium perfoliatum	Cup-Plant	5	FACW	FACW	-1	Forb	Perennial	Native
smirot	Smilax rotundifolia	Smilax rotundifolia	Horsebrier	7	FAC	FAC	0	Vine	Perennial	Native
solulm	Solidago ulmifolia	Solidago ulmifolia	Elm-Leaf Goldenrod	5	UPL	UPL	2	Forb	Perennial	Native
astsag	Symphyotrichum urophyllum	Aster sagittifolius	Arrow-Leaf Aster	5	UPL	UPL	2	Forb	Perennial	Native
tilame	Tilia americana	Tilia americana	American Basswood	5	FACU	FACU	1	Tree	Perennial	Native
rhurad	Toxicodendron radicans	Rhus radicans	Eastern Poison-Ivy	2	FAC	FAC	0	Vine	Perennial	Native
trioau	Triosteum aurantiacum	Triosteum aurantiacum	Early Horse Gentian	5	UPL	UPL	2	Forb	Perennial	Native
ulmame	Ulmus americana	Ulmus americana	American Elm	3	FACW	FACW	-1	Tree	Perennial	Native
ulmrub	Ulmus rubra	Ulmus rubra	Slippery Elm	4	FAC	FAC	0	Tree	Perennial	Native
actalt	Verbesina alternifolia	Actinomeris alternifolia	Wingstem	5	FACW	FACW	-1	Forb	Perennial	Native
verfas	Vernonia fasciculata	Vernonia fasciculata	Prairie Ironweed	5	FACW	FACW	-1	Forb	Perennial	Native
vibpru	Viburnum prunifolium	Viburnum prunifolium	Smooth Blackhaw	5	FACU	FACU	1	Shrub	Perennial	Native
viocan	Viola canadensis	Viola canadensis	Canadian White Violet	9	FACU	FACU	1	Forb	Perennial	Native
vitrip	Vitis riparia	Vitis riparia	River-Bank Grape	2	FACW	FAC	-1	Vine	Perennial	Native

Floristic Quality Assessment or FQA

A system to assess the "quality" of a natural area based on the plant species present.

Site: 123 Any Street, Your Town, IL
Locale: SW1/4, SW1/4 Section 14, Dekalb Co.
By: Jack Pizzo
File: C:\Studies\123.inv

The first number you see is the number of recorded native species. The second number is the total number including non-natives.

FLORISTIC QUALITY DATA
42 NATIVE SPECIES
59 Total Species
3.2 NATIVE MEAN C
2.3 W/Adventives
21.0 NATIVE FQI
17.7 W/Adventives
-1.1 NATIVE MEAN W
-0.1 W/Adventives
AVG: Faculative (+)

Native	42	71.2%	Adventive	17	28.8%
Tree	1	1.7%	Tree	0	0.0%
Shrub			hrub	1	1.7%
W-Vine			-Vine	1	1.7%
H-Vine			-Vine	0	0.0%
P-Forb			-Forb	6	10.2%
B-Forb			-Forb	5	8.5%
A-Forb			-Forb	1	1.7%
P-Gras			-Grass	3	5.1%
A-Gras			-Grass	0	0.0%
P-Sedg			-Sedge	0	0.0%
A-Sedg			-Sedge	0	0.0%
Crypto					

The first number is the degree of conservativeness of the native species on your site. The second number is the degree of conservativeness of all the species including the non-natives.

P = Perennial
A = Annual
B = Biennial
Forb = Flower
Grass=Grass
Sedge=Grass Like
Cryptogam=Ferns+
Shrub=Shrub
Tree=Tree

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMM
ACENEG	0	Acer negundo	-2	FACW-	Nt Tree	BOX
ACHMIL	0	ACHILLEA MILLEFOLIUM	3	FACU	Ad P-Forb	YARR
ALLPET	0	ALLIARIA PETIOL	0	FAC	Ad B-Forb	GARL
APOSIB HEMP	2	Apocynum sibiri	-1	FAC+	Nt P-Forb	PRAI
ASCSYR	0	Asclepias syria	5	UPL	Nt P-Forb	COMM
ASTPIL	0	Aster pilosus	2	FACU+	Nt P-Forb	HAIRY ASTER
BARVUL	0	BARBAREA VULGAR	0	FAC	Ad B	YELLOW ROCKET
BROINE	0	BROMUS INERMIS	5	UPL	Ad P	
CXBLAN	1	Carex blanda	0	FAC	Nt P	
CXPELL WOOLLY SEDGE	4	Carex pellita	-5	OBL	Nt P-Sedge	BROAD-LEAVED
CXVULP	2	Carex vulpinoidea	-5	OBL	Nt P-Sedge	BROWN FOX SEDGE
CHEALB	0	CHENOPODIUM ALBUM	1	FAC-	Ad A-Forb	LAMB'S QUARTERS
CIRARV	0	CIRSIUM ARVENSE	5	UPL	Ad P-Forb	FIELD THISTLE
CONAR		ENSIS	5	UPL	Ad P-Forb	FIELD BINDWEED
CORRA			-2	FACW-	Nt Shrub	GRAY DOGWOOD
CORST		era	-3	FACW	Nt Shrub	RED-OSIER DOGWOOD
DAUCAR	0	DAUCUS CAROTA	5	UPL	Ad B-Forb	QUEEN ANNE'S LACE
ECHCRU	0	Echinochloa cr			s	BARNYARD GRASS
EQUARV	0	Equisetum arve				HORSETAIL
ERIANS	0	Erigeron annuu				ANNUAL FLEABANE
ERICAN	0	Erigeron canac				HORSEWEED
EUPPER	4	Eupatorium per				COMMON BONESET
EUPPUR WEED	7	Eupatorium pur				PURPLE JOE PYE
FRAVIR	1	Fragaria virgi				WILD STRAWBERRY
GALAPA	1	Galium aparine				ANNUAL BEDSTRAW

The less tolerant a native plant species is of disturbance, the higher the number. Conversely, the more tolerant the lower the number (1-10).

Nt = Native
Ad = Adventives (non-native)

The more moisture a plant species requires, the lower the number. The drier the site required, the higher the number. Scale is marked from –5 to 5.

A value of 0 means the species is a non-native or an extremely aggressive native.

PIZZO & ASSOCIATES, LTD.
ECOLOGICAL RESTORATION

815-495-2300

PIZZO & ASSOCIATES, LTD.
ECOLOGICAL RESTORATION

815-495-2300

Floristic Quality Assessment
Summary

The system provides a dispassionate, cost-effective, and repeatable methodology. Anyone with a reasonable field knowledge of vascular plants, now or a hundred years from now can apply these techniques and obtain comparable evaluations. Clearly, a chronic decline in floristic quality index values over a period of years would indicate a dissipation of natural area quality and the need to modify management protocols. On the other hand stable or steadily increasing values indicate that current management is optimizing the ecological potential of the site.

A look at the FQI number:

0-10 The land and flora are severely altered and has lost much if not all natural features and worthy of restoration it will require significant time and effort to implement.

10-15 The land and flora are altered yet still retains natural features worthy of restoration. Time and effort will still be required.

15-20 The land and flora are have been altered but still posses many of the their original ecological functions. A good candidate for restoration and should respond positively.

20+ This land still has significant ecological functions and processes therefore are worthy of restoration efforts and legal protections.