

**Appendix I**  
Site Investigation Field Notes

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# NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page 1 of 2

Site: Adelaide WF  
 Polygon: WOD-001  
 UTM: 17T 0445136 4762881  
 Date: July 20/11 Time: 12:35  
 Surveyor(s): AMD, KNP  
 Weather: 30°C, wind 4 from SW, C.C. 20%

### Community Classification

Vegetation Type: Fresh-moist Burr oak Decid forest site (FODMa-2)  
 Inclusion: Silver maple mineral Decid swamp site (SWD13-2)  
 Inclusion: Thicket Swamp SWT

### Polygon Description

System	Substrate	Topo Feature	Community		
<input checked="" type="checkbox"/> Terrestrial	Organic	Lacustrine	Talus	Lake	Barren
<input type="checkbox"/> Wetland	<input checked="" type="checkbox"/> Mineral Soil	<input checked="" type="checkbox"/> Riverine	Crevice/Cave	Pond	Meadow
<input type="checkbox"/> Aquatic	Parent Min.	Bottomland	Alvar	River	Prairie
	Acidic Bedrock	Terrace	Rockland	Stream	Thicket
	Basic Bedrock	Valley Slope	Beach/Bar	Marsh	Savannah
<input checked="" type="checkbox"/> Natural	Carb. Bedrock	<input checked="" type="checkbox"/> Tableland	Sand Dune	Swamp	Woodland
<input type="checkbox"/> Cultural		Roll. Upland	Bluff	Fen	<input checked="" type="checkbox"/> Forest
		Cliff		Bog	Plantation

  

Cover	Open Water	Plant Form		
<input type="checkbox"/> Open	Shallow Water	Plankton	Forb	Coniferous
<input type="checkbox"/> Shrub	<input checked="" type="checkbox"/> Surficial Dep.	Submerged	Lichen	Mixed
<input checked="" type="checkbox"/> Treed	Bedrock	Floating-Lvd.	Bryophyte	
		Graminoid	<input checked="" type="checkbox"/> Deciduous	

### Stand Description

Layer	HT	Cover	Species
Super-canopy			
1 Canopy	1	3	burr oak = red oak > wh elm > basswood
2 Sub-canopy	2	3	basswood > hawthorn sp. > silver maple
3 Understorey	3	2	basswood > white ash = white elm
4 Groundcover	5	4	poison ivy > riverbank grape > solidago sp. = aster sp.

HT Codes: 1: >25m 2: 25-10m 3: 10-2m 4: 2-1m 5: 1-0.5m 6: 0.5-0.2m 7: <0.2m  
 Cover Codes: 0: none 1: 0-10% 2: 10-25% 3: 25-60% 4: >60%

Size Class Analysis	D < 10	D 10-24	D 25-50	D > 50
Snags	R < 10	R 10-24	O 25-50	O > 50
Deadfall/Logs	O < 10	O 10-24	O 25-50	R > 50

Abundance Codes: N: None R: Rare O: Occasional A: Abundant

Community Age	Pioneer	Young	Mid-age	Mature	Old Growth
		<input checked="" type="checkbox"/>			

# NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page 2 of 2

### PLANT SPECIES LIST

Site: See page 1 of 2  
 Polygon:  
 UTM:  
 Date:  
 Surveyor(s):  
 Weather:

Layers: 1=canopy 2=sub-canopy 3=understorey 4=ground layer

Abundance Codes: R=rare O=occasional A=abundant D=dominant

Species	Layer				Sample	Species	Layer				Sample	
	1	2	3	4			1	2	3	4		
burr oak	A	R	O			poison ivy					O	
hawthorn sp.	A	O				elder sp.					A	
wh. elm	A	O	A			solidago sp.					A	
wh. ash			A	O		fringe hellebore					R	
silver maple	D	A	A			riverbank grape					A	
hackberry	O	O				wh. ash					O	
hannberry			R			riverbank grape					O	
choke cherry			R	D		norfolk wisteria					A	
<del>gray dogwood</del>						red raspberry					O	
gray dogwood			O	R		wild strawberry					O	
basswood	O	A	A			viola sp.					O	
black ash			O			virginia waterbat					R	
am. beech			O	O		enchant-nightsade					O	
bitternut			O	O		hoop sp.					A	
shag hick			O	O		wild geranium					A	
red oak	A					herb robert					O	
ironwood			R	R		bittersweet-N.S.					R	
hackberry			R									
trembling aspen			O									
ribes cuneifol.				R								
ribes syc. can.				O								

Other Notes (Landowner Contact, General Notes, etc.) WET-001 = 0.926 ha

- drainage channel running through forest roughly N→S  
 - tile drain directed into channel  
 - site appears to support vernal pooling - swamp area?  
 - silver/freemans maple dominant in inclusion swamp only  
 - riverine due to drainage channel influence

WET-002 = 0.333 ha

**NATURAL RESOURCE SOLUTIONS INC**

Modified ELC Community Description

Page 1 of 2

Site: Adelaide 1230	
Polygon: W0D-001	
UTM: E: 0447737 N: 4761417 Elevation: 223m	
Date: September 27, 2011	Time: 9:56
Surveyor(s): HLW, KNP	
Weather: Sunny, 18°C, cloud cover: 10%.	

**Community Classification**

Vegetation Type:	
Inclusion:	
Complex:	

**Polygon Description**

System	Substrate	Topo Feature	Community			
<input type="checkbox"/> Terrestrial	<input type="checkbox"/> Organic	<input type="checkbox"/> Lacustrine	<input type="checkbox"/> Talus	<input type="checkbox"/> Lake	<input type="checkbox"/> Barren	
<input type="checkbox"/> Wetland	<input type="checkbox"/> Mineral Soil	<input type="checkbox"/> Riverine	<input type="checkbox"/> Crevice/Cave	<input type="checkbox"/> Pond	<input type="checkbox"/> Meadow	
<input type="checkbox"/> Aquatic	<input type="checkbox"/> Parent Min.	<input type="checkbox"/> Bottomland	<input type="checkbox"/> Alvar	<input type="checkbox"/> River	<input type="checkbox"/> Prairie	
	<input type="checkbox"/> Acidic Bedrock	<input type="checkbox"/> Terrace	<input type="checkbox"/> Rockland	<input type="checkbox"/> Stream	<input type="checkbox"/> Thicket	
<b>History</b>	<input type="checkbox"/> Basic Bedrock	<input type="checkbox"/> Valley Slope	<input type="checkbox"/> Beach/Bar	<input type="checkbox"/> Marsh	<input type="checkbox"/> Savannah	
<input type="checkbox"/> Natural	<input type="checkbox"/> Carb. Bedrock	<input type="checkbox"/> Tableland	<input type="checkbox"/> Sand Dune	<input type="checkbox"/> Swamp	<input type="checkbox"/> Woodland	
<input type="checkbox"/> Cultural		<input type="checkbox"/> Roll. Upland	<input type="checkbox"/> Bluff	<input type="checkbox"/> Fen	<input type="checkbox"/> Forest	
	<b>Site</b>	<input type="checkbox"/> Cliff		<input type="checkbox"/> Bog	<input type="checkbox"/> Plantation	

Cover	Open Water	Plant Form			
<input type="checkbox"/> Open	<input type="checkbox"/> Shallow Water	<input type="checkbox"/> Plankton	<input type="checkbox"/> Forb	<input type="checkbox"/> Coniferous	
<input type="checkbox"/> Shrub	<input type="checkbox"/> Surficial Dep.	<input type="checkbox"/> Submerged	<input type="checkbox"/> Lichen	<input type="checkbox"/> Mixed	
<input type="checkbox"/> Treed	<input type="checkbox"/> Bedrock	<input type="checkbox"/> Floating-Lvd.	<input type="checkbox"/> Bryophyte		
		<input type="checkbox"/> Graminoid	<input type="checkbox"/> Deciduous		

**Stand Description**

Layer	HT	Cover	Species
* Super-canopy			
1 Canopy			
2 Sub-canopy			
3 Understorey			
4 Groundcover			

HT Codes: 1: >25m 2: 25-10m 3: 10-2m 4: 2-1m 5: 1-0.5m 6: 0.5-0.2m 7: <0.2m

Cover Codes: 0: none 1: 0-10% 2: 10-25 3: 25-60% 4: >60%

Size Class Analysis	< 10	10 - 24	25 - 50	> 50
Snags	< 10	10 - 24	25 - 50	> 50
Deadfall/Logs	< 10	10 - 24	25 - 50	> 50

Abundance Codes: N: None R: Rare O: Occasional A: Abundant

Community Age	Pioneer	Young	Mid-age	Mature	Old Growth

Modified ELC Community Description

Page 2 of 2

Soils	1	2	3
Position:	5		
Aspect:	W/A		
%	2-5		
Type:	C		
Class:	C		

Polygon: W0D-001

**Tree Tally**

Species	Tally 1	Tally 2	Tally 3
<b>Total:</b>			
<b>Basal Area</b>			
<b>Snags</b>			

<b>Strata:</b> Texture	4		
Depth	911		
<b>Strata:</b> Texture	61d		
Depth	47		
<b>Strata:</b> Texture	5C		
Depth	83		
<b>Strata:</b> Texture			
Depth			

Effective Texture	51cl		
Surface Stoniness	0		
Surface Rockiness	0		
Depth to:			
Mottles	30		
Gley	NA		
Bedrock	NA		
Water table	NA		
Carbonates	NA		
Depth of Organics	-		
Pore Size Disc #1	-		
Pore Size Disc #2	-		
Pore Size Disc #3	-		
Moisture Regime	5		

**NOTES:** - Could not auger past 93 cm, due to root system  
Wetland area is a <sup>slight</sup> depression in the landscape



# NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

## Wetland Vegetation Communities

Project Name: Adelaide

Project #: 1230

Observer(s): PWD, KND

Date: Sept. 29, 2011

Time (24h): 11:20

Field #: 005002a

Weather: Precipitation: None Temp (°C): 16

Map Code:

Wind Speed & Direction: 2/W Cloud %: 75

Wetland Type: Swamp

Site Type: Palustrine Dominant Form: Treed

% Open Water: 0

ELC Code: SWD13-2

Photos: 0577, 0578, 0579

Forms % (Circle those  $\geq 25\%$ ) Species (dominant species, secondary species, present species)

h Freeman's Maple 40% Silver Maple 15% White Elm 10% Burr Oak 15%

c \_\_\_\_\_

dc, dh, ds Maple sp. <5%

ts White Elm <5% Green Ash <5% Black Currant 10% Freeman's Maple 10% Gr. Downywood <5%  
Euro. Buckthorn <5% Freeman's Maple <5% Black Currant 10% White Elm <5% Burr Oak <5%

ls Euro. Buckthorn <5% Freeman's Maple <5% Black Currant 10% White Elm <5% Swamp Rose <5%  
Poison Ivy 40% Strawberry Blight <5% Sens. Fern <5% Bladder Sedge <5% Purple Stem Aster 10% Wild Strawberry <5%

gc Blue Flag Iris <5% Penn. Sedge 10%

ne \_\_\_\_\_

be \_\_\_\_\_

re \_\_\_\_\_

ff \_\_\_\_\_

f \_\_\_\_\_

su \_\_\_\_\_

m \_\_\_\_\_

Soil type: cl

Organic

Mineral

Rare Species (Local, Regional, Provincial):

Wildlife Notes:

Bluejay  
Raccoon TR

SAR observations must also include a specific UTM location.

Forms: h=deciduous trees; c=coniferous trees; dh, dc, ds=dead trees/shrubs; ts=tall shrubs; ls=low shrubs; gc=ground cover; ne=narrow emergents; be=broad emergents; f=floating plants; ff=free-floating plants; su=submerged plants; m=mosses

Wetland Type: S=swamp; M=marsh; B=bog; F=fen

Site Type: L=lacustrine; P=palustrine; R=riverine; IS=isolated

Soil type: cl=clay/loam; sl=silt/loam; l=limestone; s=sand; hm=humic/mesic; f=fibric; g=granite Organic=>60cm depth over mineral (>10cm over bedrock) Mineral=<60cm depth over mineral

Wet - 001 = 0.926 ha



# NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

## Wetland Vegetation Communities

Project Name: Adelaide Project #: 1230

Observer(s): PWD, KND

Date: Sept 29, 2011 Time (24h): 12:20

Field #: WCB001h Weather: Precipitation: None Temp (°C): 18

Map Code: Wind Speed & Direction: 3/W Cloud %: 90

Wetland Type: Swamp Site Type: Palustrine Dominant Form: Shrub

% Open Water: 0 ELC Code: SWT

Photos:

Forms % (Circle those ≥25%)	Species (dominant species, secondary species, present species)
h	<u>Basswood 10% Burr Oak 5% Green Ash 10% White Elm 5%</u>
c	—
dc, dh, ds	<u>White Elm 15%</u>
ts	<u>Gr. Dogwood 20% Non-hairy 5% Ribes sp 15% E. Buckthorn 5% Hawthorn sp. 20%</u>
ls	<u>Ribes sp.</u>
gc	<u>Pump. Stem Aster 10% Swamp Bog. Ticks 5% Sp. Jewelweed 10% Calico Aster 10%</u>
ne	—
be	—
re	—
ff	—
f	—
su	—
m	—

Soil type: cl Organic  Mineral

Rare Species (Local, Regional, Provincial):	Wildlife Notes:
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SAR observations must also include a specific UTM location.

Forms: h=deciduous trees; c=coniferous trees; dh, dc, ds=dead trees/shrubs; ts=tall shrubs; ls=low shrubs; gc=ground cover; ne=narrow emergents; be=broad emergents; f=floating plants; ff=free-floating plants; su=submerged plants; m=mosses

Wetland Type: S=swamp; M=marsh; B=bog; F=fen

Site Type: L=lacustrine; P=palustrine; R=riverine; IS=isolated

Soil type: cl=clay/loam; sl=silt/loam; l=limestone; s=sand; hm=humic/mesic; f=fibric; g=granite Organic= >60cm depth over mineral (>10cm over bedrock) Mineral= <60cm depth over mineral

WET-002 = 0.333 ha

Site: 1230 Adelaide  
 Polygon: WOD-001  
 UTM:  
 Date: 20 July 2011 Time: 12:35  
 Surveyor(s): KNP, AMD wind speed  
 Weather: 30°C wind 20<sup>km/h</sup> 4 from SW

**Wildlife Habitat (Check all that apply AND record UTM / mark on map)**  
 \*Habitats and Habitat Features are independent of wildlife observations\*

Habitat Type	Habitat Features	
<input checked="" type="checkbox"/> Deciduous Forest	<b>Birds</b>	<b>Snakes</b>
<input type="checkbox"/> Mixed Forest	<input type="checkbox"/> Spring Flooded Field	<input checked="" type="checkbox"/> Burrow
<input type="checkbox"/> Coniferous Forest	<input type="checkbox"/> Stick Nest (Raptors, Herons)	<input checked="" type="checkbox"/> Fallen Rotting Log
<input type="checkbox"/> Marsh	<input checked="" type="checkbox"/> Snag (Raptors, Herons)	<input type="checkbox"/> Old Well
<input type="checkbox"/> Swamp	<input type="checkbox"/> Tree Cavity Nest (Ducks)	<input type="checkbox"/> Rock Pile/Stone Wall
<input type="checkbox"/> Bog	<input type="checkbox"/> Seep/Spring (Turkeys/Grouse)	<input type="checkbox"/> Organics Pile
<input type="checkbox"/> Fen	<input checked="" type="checkbox"/> Cliffs/Banks	<input type="checkbox"/> Log Pile
<input type="checkbox"/> Water	<b>Bats</b>	<input type="checkbox"/> Karst
<input type="checkbox"/> (Silt/low & Open)	<input type="checkbox"/> Cave Entrance	<input type="checkbox"/> Broken/Fissured Rock
<input type="checkbox"/> Meadow	<input type="checkbox"/> Mine Shaft	<input type="checkbox"/> Old Foundation
<input type="checkbox"/> Tallgrass Prairie	<input checked="" type="checkbox"/> Snag (>20cm DBH)	<input type="checkbox"/> Old Bridge/Concrete Culvert
<input type="checkbox"/> Thicket	<b>Mink/Otter/Fisher/Marten</b>	<b>Amphibians and Turtles</b>
<input type="checkbox"/> Savannah	<input checked="" type="checkbox"/> Snag	<input type="checkbox"/> Vernal Pool/Woodland Pond (Amphibian Breeding)
<input type="checkbox"/> Woodland	<input checked="" type="checkbox"/> Burrow	<input type="checkbox"/> Sand (Turtle Nesting)
<input type="checkbox"/> Valley	<input type="checkbox"/> Den	<input type="checkbox"/> Fine/Sandy Gravel (Turtle Nesting)
<input type="checkbox"/> (Describe Below)	<input checked="" type="checkbox"/> Tree Cavity	<b>Invertebrates</b>
<input type="checkbox"/> Headwater Area	<input checked="" type="checkbox"/> Fallen Log	<input type="checkbox"/> Crayfish Chimney
(check for Seeps/Springs)	<b>Deer/Moose</b>	
	<input type="checkbox"/> Seep/Spring	
	<input type="checkbox"/> Mineral Lick	

**For every Habitat Type or Habitat Feature, record UTM below (for each occurrence) or mark on map**

Habitat Feature:	UTM	Description
Burrow	17T0445136 4762881	Burrows/collapsed soil on edge of field
Fallen log	multiple locations	throughout WOD-001
Snag >20cm DBH	17T0445175 4762896	snag w cavity
Tree cavity	17T0445182 4762908	220cm DBH tree w several cavities
Fallen rotting logs	multiple locations	throughout WOD-001
Banks	water course	dry creek banks traversing WOD-001
Burrow	several	2-4 cm diameter
Snag	17T0445116 4762883	220cm dbh, multiple cavities (large)
Snag	17T0445213 4762885	220cm dbh, " " (small)
Burrow	17T0445211 4762851	15 cm diameter in dirt pile
Snag	17T0445200 4762793	220cm dbh snag, no noticeable cavities

**Describe Valley (depth, geomorphological traits):**  
 Watercourse traverses site w steep banks 1.5m-2m high; creek bed is 1.5-2m wide

**Additional Details:**

Wildlife Observation Form  
 NATURAL RESOURCE SOLUTIONS INC.

Site: 1230 Adelaide  
 Polygon: WOD-001  
 UTM:  
 Date: 20 July 2011 Time: 12130  
 Surveyor(s): AMD, KNP  
 Weather: 50°C + humidity - 20<sup>0</sup> cloud cover 4 wind from SW speed

Species Observed					Check for Wildlife Habitat that may be associated with an observation					
TY	Species	EV	Notes	#		TY	Species	EV	Notes	#
M	Deer	TK	2 sets	?						
M	Raccoon	TK	multiple sets	?						
L	Monarch	OB		3						
B	Peregrine	VO		1						

Faunal Type Codes (TY)  
 B=Bird M=Mammal H=Herpetofauna L=Lepidoptera F=Fish D=Dragonfly or Damselfly

- Evidence Codes (EV)  
**Breeding Birds**  
 SH- Suitable Habitat  
 SM- Singing Male  
 T- Territory  
 A- Anxiety Behavior  
 D- Courtship Display  
 N- Nest Building  
 P- Pair  
 V- Visiting Nest  
 DD- Distraction Display  
 NE- Nest with Eggs  
 AE-Adult entering nest  
 NU- Used nest  
 FY- Fledged Young  
 FS- Food/Fecal Sac

- Other Wildlife**  
 OB- Observed  
 DP- Distinctive Parts  
 TK- Tracks  
 VO- Vocalization  
 HO- House/Den  
 FE- Feeding Evidence  
 CA- Carcass/Bones  
 FY- Eggs or young  
 SC- Scat  
 SI- Other Signs (Specify)

Site: See page 2 of 2.  
 Polygon:  
 UTM:  
 Date: Time:  
 Surveyor(s):  
 Weather:

Community Classification

Vegetation Type: Dry-Fresh Barwood Decid. Forest (FOD14-9)  
 Inclusion: none  
 Complex:

Polygon Description

System	Substrate	Topo Feature	Community
<input checked="" type="checkbox"/> Terrestrial	Organic	Lacustrine	Lake
<input type="checkbox"/> Wetland	<input checked="" type="checkbox"/> Mineral Soil	<input checked="" type="checkbox"/> Riverine	Pond
<input type="checkbox"/> Aquatic	Parent Min.	Bottomland	River
	Acidic Bedrock	Terrace	Stream
	Basic Bedrock	Valley Slope	Marsh
<b>History</b>	Carb. Bedrock	<input checked="" type="checkbox"/> Tableland	Swamp
<input type="checkbox"/> Natural		Roll. Upland	Fen
<input type="checkbox"/> Cultural		Bluff	<input checked="" type="checkbox"/> Forest
		Cliff	Bog
			Plantation
<b>Cover</b>	Open Water	<b>Plant Form</b>	
<input type="checkbox"/> Open	Shallow Water	Plankton	Forb
<input type="checkbox"/> Shrub	<input checked="" type="checkbox"/> Surficial Dep.	Submerged	Lichen
<input checked="" type="checkbox"/> Treed	Bedrock	Floating-Lvd.	Bryophyte
		Graminoid	<input checked="" type="checkbox"/> Deciduous

Stand Description

Layer	HT	Cover	Species
* Super-canopy			
1 Canopy	24	4	burr oak > basswood = wh ash.
2 Sub-canopy	3	3	basswood = hawthorn sp. = wh. ash = burr oak.
3 Understorey	4	2	buckthorn > hawthorn sp. > gray dogwood.
4 Groundcover	5	4	poison ivy > solidago sp. = aster sp.

HT Codes: 1: >25m 2: 25-10m 3: 10-2m 4: 2-1m 5: 1-0.5m 6: 0.5-0.2m 7: <0.2m

Cover Codes: 0:none 1:0-10% 2:10-25 3:25-60% 4:>60%

Size Class Analysis	A	< 10	A	10-24	A	25-50	O	> 50
Snags	N	< 10	O	10-24	N	25-50	N	> 50
Deadfall/Logs	N	< 10	O	10-24	N	25-50	N	> 50

Abundance Codes: N: None R: Rare O: Occasional A: Abundant

Community Age	Pioneer	Young	<input checked="" type="checkbox"/> Mid-age	Mature	Old Growth
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PLANT SPECIES LIST

Site: Adelaide WF  
 Polygon: WOD-002  
 UTM: 17T 0445365 4762860  
 Date: July 20/11, July 21/11 Time: 14:00 / 09:45  
 Surveyor(s): AMD, KNP  
 Weather: 30°C, 60% C.C. wind 5 from SW

Layers: 1=canopy 2=sub-canopy 3=understorey 4=ground layer

Abundance Codes: R=rare O=occasional A=abundant D=dominant

Species	Layer				Sample	Species	Layer				Sample
	1	2	3	4			1	2	3	4	
burr oak	D	A				poison ivy					D
buckthorn		O	A	A		solidago sp.					D
freeman maple		O	O			aster sp.					D
hawthorn sp.		A	A	A		smooth bone					A
gray dogwood		A	A			riverbank grape					A
pink dogwood		O	A			knapweed					A
basswood	D	A				cracked dock					R
non-native cherry		O				velvetleaf					R
wh elm		O				comm. st. juniper					R
willow sp.		O				oak leaf mist					A
east. white pine		R		O		wh. avena					O
red raspberry				D		yellow avena					O
wh ash	D	O	A			echinops					O
tr. ash				A		wild strawberry					A
ribes cynostol.				A		virginia creeper					R
chokeberry			O								
sugar maple				O							

Sweet cherry

Other Notes (Landowner Contact, General Notes, etc.)

- drainage channel running through site roughly E → W and goes S @ east side of polygon into corn field.  
 - site appears to support vernal pooling







# NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page \_\_\_ of \_\_\_

Site:	
Polygon:	
UTM:	
Date:	Time:
Surveyor(s):	
Weather:	

### Community Classification

Vegetation Type:	Dry-Fresh Basswood Decid. forest (FO DM 4-9)
Inclusion:	none
Complex:	

### Polygon Description

System	Substrate	Topo Feature	Community		
<input checked="" type="checkbox"/> Terrestrial	Organic	Lacustrine	Talus	Lake	Barren
<input type="checkbox"/> Wetland	<input checked="" type="checkbox"/> Mineral Soil	Riverine	Crevise/Cave	Pond	Meadow
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	Acidic Bedrock	Terrace	Rockland	Stream	Thicket
	Basic Bedrock	Valley Slope	Beach/Bar	Marsh	Savannah
<b>History</b>	Carb. Bedrock	<input checked="" type="checkbox"/> Tableland	Sand Dune	Swamp	Woodland
<input checked="" type="checkbox"/> Natural		Roll. Upland	Bluff	Fen	<input checked="" type="checkbox"/> Forest
<input type="checkbox"/> Cultural		Cliff		Bog	Plantation
	<b>Site</b>				
<b>Cover</b>	Open Water	<b>Plant Form</b>			
<input type="checkbox"/> Open	Shallow Water	Plankton	Forb	Coniferous	
<input type="checkbox"/> Shrub	<input checked="" type="checkbox"/> Surficial Dep.	Submerged	Lichen	Mixed	
<input checked="" type="checkbox"/> Treed	Bedrock	Floating-Lvd.	Bryophyte		
		Graminoid	<input checked="" type="checkbox"/> Deciduous		

### Stand Description

Layer	HT	Cover	Species
* Super-canopy			
1 Canopy	1	3	burr oak > basswood > wh elm = wh ash
2 Sub-canopy	2	4	basswood > wh elm > wh ash = burr oak
3 Understorey	3/4	3	wh ash = basswood > wh elm > choke cherry
4 Groundcover	5	4	poison ivy > wild strawberry > anemones

HT Codes: 1: >25m 2: 25-10m 3: 10-2m 4: 2-1m 5: 1-0.5m 6: 0.5-0.2m 7: <0.2m  
 Cover Codes: 0:none 1: 0-10% 2: 10-25 3: 25-60% 4: >60%

Size Class Analysis	A < 10	A 10-24	A 25-50	R > 50
Snags	N < 10	N 10-24	N 25-50	N > 50
Deadfall/Logs	A < 10	O 10-24	O 25-50	R > 50

Abundance Codes: N: None R: Rare O: Occasional A: Abundant

Community Age	Pioneer	Young	<input checked="" type="checkbox"/> Mid-age	Mature	Old Growth
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# NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page \_\_\_ of \_\_\_

### PLANT SPECIES LIST

Site:	Adelaide WF		
Polygon:	WOD-003		
UTM:	17T 0445618 4762799		
Date:	July 21/11	Time:	09:30
Surveyor(s):	AMD RNP		
Weather:	Sunny, humid, 30°C, wind S from SW, C.C 0%		

Layers: 1=canopy 2=sub-canopy 3=understorey 4=ground layer

Abundance Codes: R=rare O=occasional A=abundant D=dominant

Species	Layer				Sample	Species	Layer				Sample
	1	2	3	4			1	2	3	4	
burr oak	D	A	O			poison ivy					D
shag hick		O	O			wild strawberry					D
hawthorn sp.			O			yellow avens					O
gray dogwood			R	R		wh avens					O
wh elm	A	A	A			prch nightshade					D
buckthorn			O	A		wild geranium					R
hickory hick			O			jack pulp					R
choke cherry			A			anemones					R
basswood	D	D	A			garlic mustard					O
buckthorn			O	A		herb robert					O
ov. beech			R			Solidago sp.					A
wh ash	A	A	A	A		aster sp.					A
green maple				R		bottlebrush grass					R
ironwood			O			riverbank grape					O
red maple			O	O		agrimony					R
loniceris dioica			O	O							
honeyberry			R								

### Other Notes (Landowner Contact, General Notes, etc.)

- no wildlife habitat encountered w exception of fallen rotting logs





# NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page \_\_\_ of \_\_\_

Site:	
Polygon:	
UTM:	
Date:	Time:
Surveyor(s):	
Weather:	

### Community Classification

Vegetation Type:	Dry - Fresh White Ash - Hardwood Decid. Forest (FODM4-2)
Inclusion:	none
Complex:	

### Polygon Description

System	Substrate	Topo Feature	Community
<input checked="" type="checkbox"/> Terrestrial	Organic	Lacustrine	Lake
<input type="checkbox"/> Wetland	<input checked="" type="checkbox"/> Mineral Soil	Riverine	Pond
<input type="checkbox"/> Aquatic	Parent Min.	Bottomland	River
	Acidic Bedrock	Terrace	Stream
	Basic Bedrock	Valley Slope	Marsh
<b>History</b>	Carb. Bedrock	<input checked="" type="checkbox"/> Tableland	Swamp
<input checked="" type="checkbox"/> Natural		Roll, Upland	Fen
<input type="checkbox"/> Cultural		Bluff	Bog
		Cliff	Plantation
<b>Cover</b>	Open Water	<b>Plant Form</b>	
<input type="checkbox"/> Open	Shallow Water	Plankton	Forb
<input type="checkbox"/> Shrub	<input checked="" type="checkbox"/> Surficial Dep.	Submerged	Lichen
<input checked="" type="checkbox"/> Treed	Bedrock	Floating-Lvd.	Bryophyte
		Graminoid	<input checked="" type="checkbox"/> Deciduous

### Stand Description

Layer	HT	Cover	Species
* Super-canopy			
1 Canopy	1	4	wh. ash >> burr oak > freemans maple
2 Sub-canopy	2	3	hasswood > wh. ash > burr oak > red oak
3 Understorey	3/4	2	hasswood > freemans maple > wh. elm = black maple
4 Groundcover	5	4	poison ivy > wh. ash > solidago sp. = aster sp.

HT Codes: 1: >25m 2: 25-10m 3: 10-2m 4: 2-1m 5: 1-0.5m 6: 0.5-0.2m 7: <0.2m  
 Cover Codes: 0: none 1: 0-10% 2: 10-25 3: 25-60% 4: >60%

Size Class Analysis	A < 10	A 10-24	O 25-50	R > 50
Snags	N < 10	R 10-24	R 25-50	R > 50
Deadfall/Logs	A < 10	O 10-24	R 25-50	N > 50

Abundance Codes: N: None R: Rare O: Occasional A: Abundant

Community Age	<input type="checkbox"/> Pioneer	<input type="checkbox"/> Young	<input checked="" type="checkbox"/> Mid-age	<input type="checkbox"/> Mature	<input type="checkbox"/> Old Growth
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# NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page \_\_\_ of \_\_\_

### PLANT SPECIES LIST

Site:	Adelaide WF		
Polygon:	WOD-004		
UTM:	17T 0445771 4762750		
Date:	July 21/11	Time:	10:15
Surveyor(s):	AMD, KNP		
Weather:	32°C. Sunny + humid. wind 4 from SE GC 09%		

Layers: 1=canopy 2=sub-canopy 3=understorey 4=ground layer

Abundance Codes: R=rare O=occasional A=abundant D=dominant

Species	Layer				Sample	Species	Layer				Sample
	1	2	3	4			1	2	3	4	
basswood	R	D	A	O		poison ivy				D	
burr oak	D	A				wh. ash				A	
wh. elm.		O	O			yellow birch				A	
gray dogwood			A			solidago sp.				A	
hawthorn sp.		O	O	O		aster sp.				O	
wh. ash	D	A	A	A		bottlebrush grass				R	
am. beech			O	O		ench. whitebark				O	
Shag Bk.	R	O	O	O		wild geranium				O	
choke cherry			O			jack pulp it				O	
Sugar maple			R			Carpe sp.				O	
ironwood		O	R			virginia creeper				A	
black maple		O	A			arise sp (wad)				O	
red oak	R	O				garlic mustard				R	
freemans maple	O	O	A			enomyces clavata				R	

### Other Notes (Landowner Contact, General Notes, etc.)







# NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page 1 of 2

Site: see page 2.  
 Polygon:  
 UTM:  
 Date: Time:  
 Surveyor(s):  
 Weather:

### Community Classification

Vegetation Type: Dry-Fresh white Ash-Hardwood Decid Forest (FODM4-2)  
 Inclusion: none.  
 Complex:

### Polygon Description

System	Substrate	Topo Feature	Community
<input checked="" type="checkbox"/> Terrestrial	Organic	Lacustrine	Lake
<input type="checkbox"/> Wetland	<input checked="" type="checkbox"/> Mineral Soil	Riverine	Pond
<input type="checkbox"/> Aquatic	Parent Min.	Bottomland	River
	Acidic Bedrock	Terrace	Stream
	Basic Bedrock	Valley Slope	Marsh
<input checked="" type="checkbox"/> Natural	Carb. Bedrock	<input checked="" type="checkbox"/> Tableland	Swamp
<input type="checkbox"/> Cultural		Roll, Upland	Fen
		Cliff	Bog

Cover	Open Water	Plant Form
<input type="checkbox"/> Open	Shallow Water	Plankton
<input type="checkbox"/> Shrub	<input checked="" type="checkbox"/> Surficial Dep.	Submerged
<input checked="" type="checkbox"/> Treed	Bedrock	Floating-Lvd.
		Graminoid

### Stand Description

Layer	HT	Cover	Species
* Super-canopy			
1 Canopy	1	3	wh. ash > burr oak = red oak = basswood.
2 Sub-canopy	2	4	wh. ash > black maple = ironwood = red oak = burr oak = basswood
3 Understorey	3/4	4	basswood = black maple > ironwood
4 Groundcover	5-7	4	prison ivy > wild strawberry > euonymus obovata

HT Codes: 1: >25m 2: 25-10m 3: 10-2m 4: 2-1m 5: 1-0.5m 6: 0.5-0.2m 7: <0.2m

Cover Codes: 0: none 1: 0-10% 2: 10-25 3: 25-60% 4: >60%

Size Class Analysis	A	< 10	A	10-24	A	25-50	R	> 50
Snags	R	< 10	N	10-24	R	25-50	N	> 50
Deadfall/Logs	A	< 10	R	10-24	R	25-50	R	> 50

Abundance Codes: N: None R: Rare O: Occasional A: Abundant

Community Age	Pioneer	Young	<input checked="" type="checkbox"/> Mid-age	<input checked="" type="checkbox"/> Mature	Old Growth
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(Some very large oaks)

# NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page 2 of 2

### PLANT SPECIES LIST

Site: Adelaide WF  
 Polygon: WOD-005  
 UTM: 17T 0445849 4762868  
 Date: July 21/11 Time: 11:15  
 Surveyor(s): AMP  
 Weather: Sunny humid 32°C, wind 4 from SW C.G. 15%

Layers: 1=canopy 2=sub-canopy 3=understorey 4=ground layer

Abundance Codes: R=rare O=occasional A=abundant D=dominant

Species	Layer				Sample	Species	Layer				Sample
	1	2	3	4			1	2	3	4	
burr oak	O	A				virginia creeper				O	
basswood	O	O	A	O		prison ivy				A	
gray birch			O	O		wild geranium				A	
choke cherry			O	O		garlic mustard				O	
ribes cynosbati				O		euonymus obovata				A	
sugar maple			R			aster sp.				A	
black maple		A	A			yellow axils				A	
ironwood		A	A			wh. avens				A	
shag hick.			A	O		moneywort				R	
wh. elm	O	O	O	O		anchusa sp.				O	
wh. ash	D	A	A			wild strawberry				A	
hawthorn sp.			O	O		carex sp.				R	
lobelia sp.			O	O		grass sp. (w/)				R	
blue beech			R			xmas fern				R	
smooth serviceberry			R								
red oak	O	A	O								
ribes americanum				A							
am. beech			O	R							
red raspberry				R							

### Other Notes (Landowner Contact, General Notes, etc.)

- turkey vulture seen in tree tops.  
 - american toad seen.  
 - deer movement heard.  
 - old page wire fence, in polygon in eastern portion, running roughly N-S

Site: <u>1235 - Adelaide</u>
Polygon: <u>WAD-005</u>
UTM:
Date: <u>21 July 2011</u> Time: <u>11:00 AM</u>
Surveyor(s): <u>KNP, AMD</u>
Weather: <u>32°C cloud cover 10-15%, wind speed 4 from SW</u>

**Wildlife Habitat (Check all that apply AND record UTM / mark on map)**  
*\*Habitats and Habitat Features are independent of wildlife observations\**

Habitat Type	Habitat Features	
<input checked="" type="checkbox"/> Deciduous Forest	<b>Birds</b>	<b>Snakes</b>
<input type="checkbox"/> Mixed Forest	<input type="checkbox"/> Spring Flooded Field	<input type="checkbox"/> Burrow
<input type="checkbox"/> Coniferous Forest	<input type="checkbox"/> Stick Nest (Raptors, Herons)	<input checked="" type="checkbox"/> Fallen Rotting Log
<input type="checkbox"/> Marsh	<input type="checkbox"/> Snag (Raptors, Herons)	<input type="checkbox"/> Old Well
<input type="checkbox"/> Swamp	<input type="checkbox"/> Tree Cavity Nest (Ducks)	<input type="checkbox"/> Rock Pile/Stone Wall
<input type="checkbox"/> Bog	<input type="checkbox"/> Seep/Spring (Turkeys/Grouse)	<input type="checkbox"/> Organics Pile
<input type="checkbox"/> Fen	<input type="checkbox"/> Cliffs/Banks	<input checked="" type="checkbox"/> Log Pile
<input type="checkbox"/> Water	<b>Bats</b>	<input type="checkbox"/> Karst
<input type="checkbox"/> (Shallow & Open)	<input type="checkbox"/> Cave Entrance	<input type="checkbox"/> Broken/Fissured Rock
<input type="checkbox"/> Meadow	<input type="checkbox"/> Mine Shaft	<input type="checkbox"/> Old Foundation
<input type="checkbox"/> Tallgrass Prairie	<input checked="" type="checkbox"/> Snag (>20cm DBH)	<input type="checkbox"/> Old Bridge/Concrete Culvert
<input type="checkbox"/> Thicket	<b>Mink/Otter/Fisher/Marten</b>	<b>Amphibians and Turtles</b>
<input type="checkbox"/> Savannah	<input type="checkbox"/> Snag	<input checked="" type="checkbox"/> Vernal Pool/Woodland Pond (Amphibian Breeding)
<input type="checkbox"/> Woodland	<input type="checkbox"/> Burrow	<input type="checkbox"/> Sand (Turtle Nesting)
<input type="checkbox"/> Valley	<input type="checkbox"/> Den	<input type="checkbox"/> Fine/Sandy Gravel (Turtle Nesting)
<input type="checkbox"/> (Describe Below)	<input type="checkbox"/> Tree Cavity	<b>Invertebrates</b>
<input type="checkbox"/> Headwater Area	<input checked="" type="checkbox"/> Fallen Log	<input type="checkbox"/> Crayfish Chimney
<input type="checkbox"/> (check for Seeps/Springs)	<b>Deer/Moose</b>	
	<input type="checkbox"/> Seep/Spring	
	<input type="checkbox"/> Mineral Lick	

**For every Habitat Type or Habitat Feature, record UTM below (for each occurrence) or mark on map**

Habitat Feature:	UTM	Description
Fallen Log	several locations	varying sizes throughout
Fallen rotting log	" "	" "
Snag 20cm dbh	171 0445851 4762834	~ 30cm dbh, ~ 11m tall, cavity
Vernal Pool	171 0445930 4762878	
Vernal Pool	171 0445865 4762895	several vernal pools in area 1-4
Snags	171 0445873 4762856	cluster of 3, all > 30cm dbh, no
Snag	171 0445918 4762944	~ 40cm dbh, ~ 7m tall, large cavity
Log/branch pile	171 0445949 4763017	debris mixed in w logs & branches
Snag	171 0446113 4762753	~ 60cm dbh, ~ 13m tall, cavity @ ~ 6m

Describe Valley (depth, geomorphological traits):

Additional Details:

**Wildlife Observation Form**  
**NATURAL RESOURCE SOLUTIONS INC.**

Site: 1230-Adelaide  
 Polygon: WOD-005  
 UTM:  
 Date: 21 July 2011 Time: 11:10 am  
 Surveyor(s): KNP, AMD  
 Weather: 32°C, cloud cover 10-15% wind speed 4 from SW

Species Observed					Check for Wildlife Habitat that may be associated with an observation				
TY	Species	EV	Notes	#	TY	Species	EV	Notes	#
B	Turkey Vulture	OB	Taking flight from tree	1					
B	Chimney Swift	VO		1					
B	Peewee	VO		1					
B	Unidentified 1	VO		1					
L	Cabbage White	OB		1					
B	Wood Thrush	VO		1					
B	Unidentified 2	VO		1					
H	American Toad	OB		1					
M	Deer	OB	Walking	1					
L	Monarch	OB		2					
B	Goldfinches	OB		2					
B	Red-eyed Vireo	VO		2					

Faunal Type Codes (TY)  
 B=Bird M=Mammal H=Herpetofauna L=Lepidoptera F=Fish D=Dragonfly or Damselfly

- Evidence Codes (EV)
- Breeding Birds**
  - SH- Suitable Habitat
  - SM- Singing Male
  - T- Territory
  - A- Anxiently Behavior
  - D- Courtship Display
  - N- Nest Building
  - P- Pair
  - V- Visiting Nest
  - DD- Distraction Display
  - NE- Nest with Eggs
  - AE-Adult entering nest
  - NU- Used nest
  - FY- Fledged Young
  - FS- Food/Fecal Sac
- Other Wildlife**
  - OB- Observed
  - DP- Distinctive Parts
  - TK- Tracks
  - VO- Vocalization
  - HO- House/Den
  - FE- Feeding Evidence
  - CA- Carcass/Bones
  - FY- Eggs or young
  - SC- Scat
  - SI- Other Signs (Specify)

# NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page \_\_\_ of \_\_\_

Site:	
Polygon:	
UTM:	
Date:	Time:
Surveyor(s):	
Weather:	

## Community Classification

Vegetation Type:	Dry-Fresh White Ash-Hardwood Decid. Forest (FODM4-2)
Inclusion:	none
Complex:	

## Polygon Description

System	Substrate	Topo Feature	Community
<input checked="" type="checkbox"/> Terrestrial	Organic	Lacustrine	Lake
<input type="checkbox"/> Wetland	<input checked="" type="checkbox"/> Mineral Soil	Riverine	Pond
<input type="checkbox"/> Aquatic	Parent Min.	Bottomland	River
	Acidic Bedrock	Terrace	Stream
	Basic Bedrock	Valley Slope	Marsh
<input checked="" type="checkbox"/> Natural	Carb. Bedrock	<input checked="" type="checkbox"/> Tableland	Swamp
<input type="checkbox"/> Cultural		Roll. Upland	Fen
		Cliff	Bog

Cover	Site	Plant Form
<input type="checkbox"/> Open	Open Water	Plankton
<input type="checkbox"/> Shrub	Shallow Water	Forb
<input checked="" type="checkbox"/> Treed	<input checked="" type="checkbox"/> Surficial Dep.	Submerged
	Bedrock	Floating-Lvd.
		Graminoid
		<input checked="" type="checkbox"/> Deciduous

## Stand Description

Layer	HT	Cover	Species
* Super-canopy			
1 Canopy	1	3	burr oak > white ash
2 Sub-canopy	2	4	wh. elm = basswood = white ash
3 Understorey	3	3	shag hick = wh. elm = basswood = ironwood
4 Groundcover	5	4	wh. ash (dominates forest floor)

HT Codes: 1: >25m 2: 25-10m 3: 10-2m 4: 2-1m 5: 1-0.5m 6: 0.5-0.2m 7: <0.2m

Cover Codes: 0: none 1: 0-10% 2: 10-25 3: 25-60% 4: >60%

Size Class Analysis	A	< 10	A	10-24	A	25-50	R	> 50
Snags	N	< 10	O	10-24	R	25-50	N	> 50
Deadfall/Logs	A	< 10	O	10-24	O	25-50	N	> 50

Abundance Codes: N: None R: Rare O: Occasional A: Abundant

Community Age	<input type="checkbox"/> Pioneer	<input type="checkbox"/> Young	<input checked="" type="checkbox"/> Mid-age	<input type="checkbox"/> Mature	<input type="checkbox"/> Old Growth
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# NATURAL RESOURCE SOLUTIONS INC

Modified ELC Community Description

Page \_\_\_ of \_\_\_

## PLANT SPECIES LIST

Site:	Adelaide WF		
Polygon:	WOD-006		
UTM:	17T 0446105 4762867		
Date:	July 21/11	Time:	3:15
Surveyor(s):	AMD, KNP		
Weather:	Sunny & cloudy periods, humid, 35°C, wind 5 from SW C. C. 5590		

Layers: 1=canopy 2=sub-canopy 3=understorey 4=ground layer

Abundance Codes: R=rare O=occasional A=abundant D=dominant

Species	Layer				Sample	Species	Layer				Sample
	1	2	3	4			1	2	3	4	
burr oak	D	O				goldenrod sp.				A	
wh. elm		D	A			aster sp.				A	
hawthorn sp.		O	O			yellow axens				A	
wh. ash	D	A	O	D		wh. axens				A	
basswood		D	A	O		garlic must.				O	
shag hick		O	A			Stemmatococcus ubovata				A	
ribes americanum				O		poison ivy				A	
chokecherry			O	O		wild alonium				A	
am. beech			D	O		Arch. nightshade				O	
ironwood		O	A	O		carex sp.				O	
sugar maple		D	O			grass sp. (wood)				O	
trubling alder				R		herb robert				O	
blue beech			O			wild strawberries				O	
						virginia creeper				O	
						riverbank grape				R	

## Other Notes (Landowner Contact, General Notes, etc.)

- old page wire fence @ eastern edge of property