HOW MANY DAMS DOES IT TAKE TO IMPACT A WATERSHED?

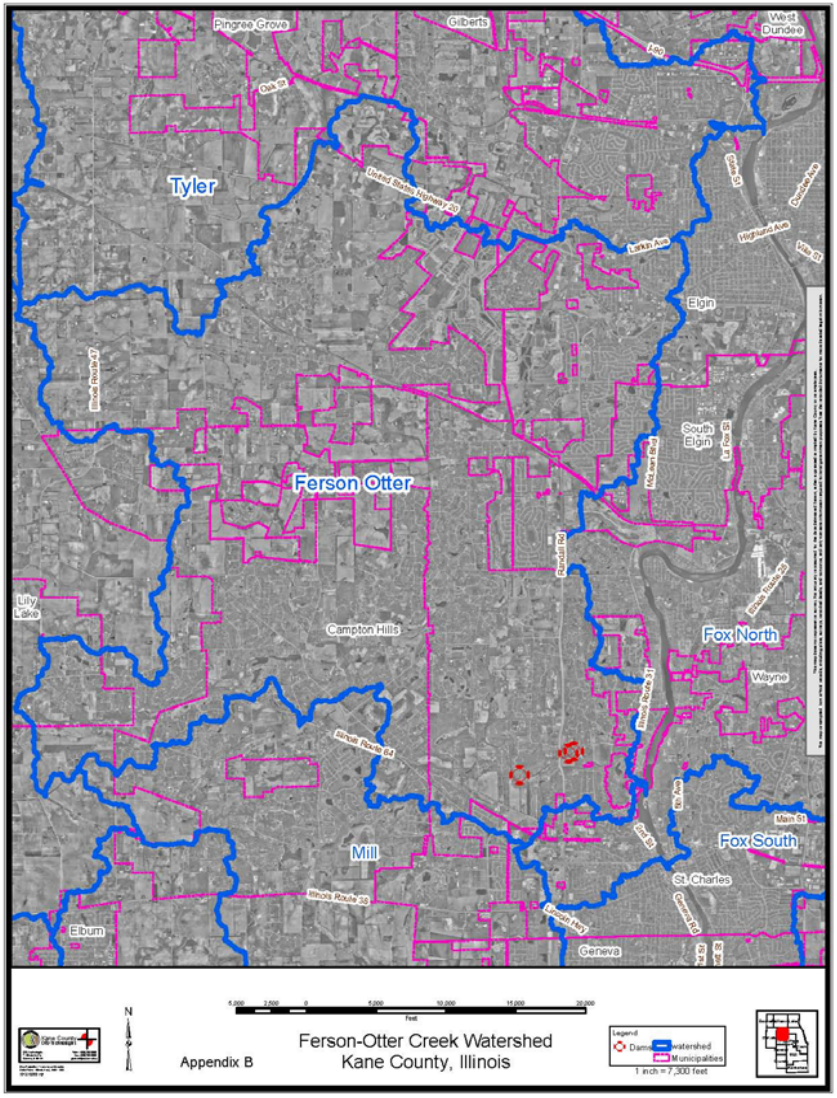
FERSON-OTTER CREEK DAM MODIFICATION PROJECT

IAFSM 2010 Annual Conference
Tinley Park, Illinois

Kenneth N. Anderson, Jr., Kane County Department of Facilities, Subdivision, & Environmental Resources

THE PROJECT?

Ferson-Otter Creek Watershed
Kane County, Illinois
1 in = 45 miles
N
Legend
Ferson-Otter Creek Watershed
Illinois
Kane County


Tyler
Ferson Otter
Mill
Fox North
Fox South
Pingree Grove
Gilberts
West Dundee
Elgin
South Elgin
Campton Hills
Lily Lake
Wayne
St. Charles
Geneva
Elburn
Appendix B
Ferson-Otter Creek Watershed
Kane County, Illinois
1 inch = 7,300 feet

PAST & PRESENT

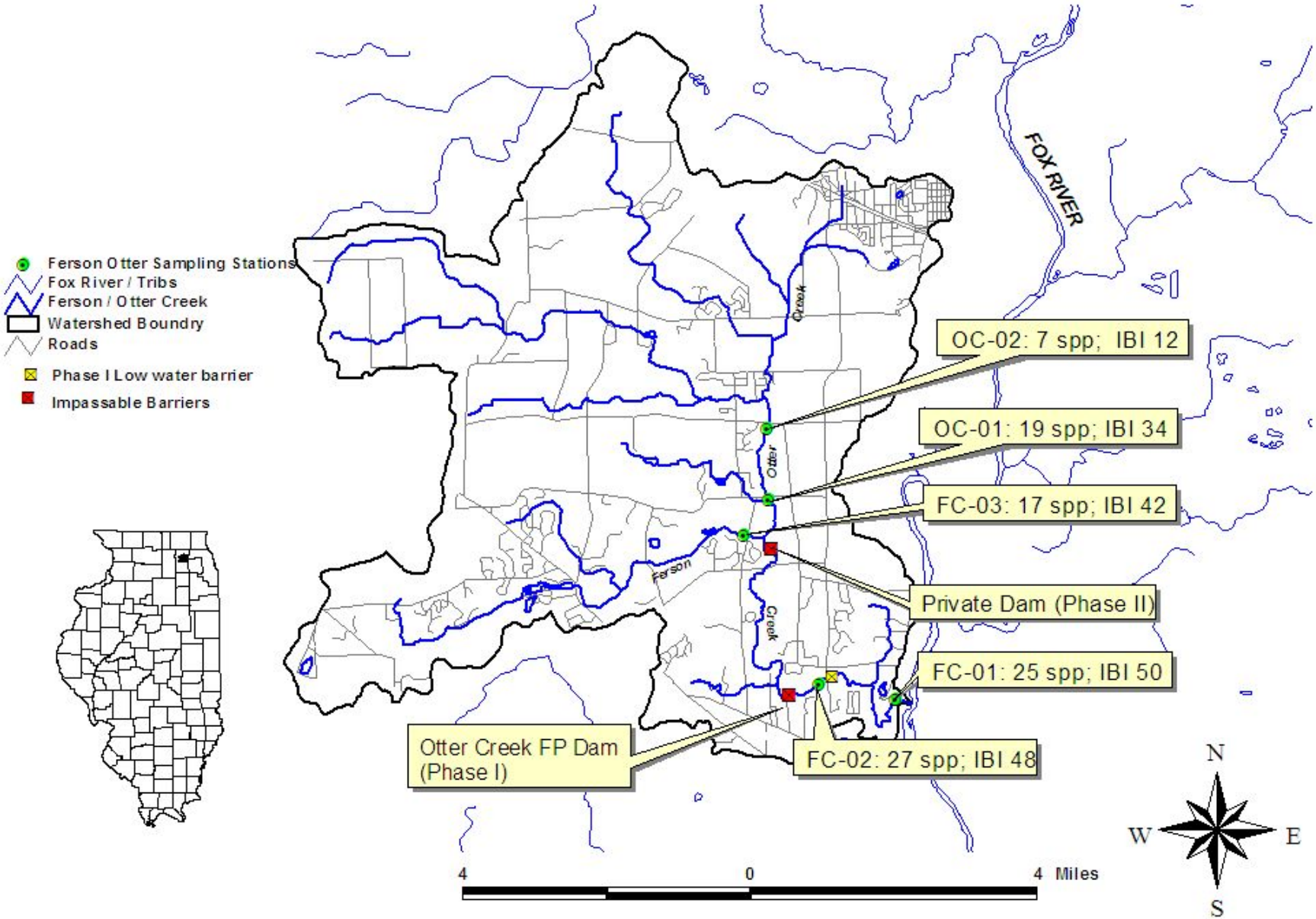
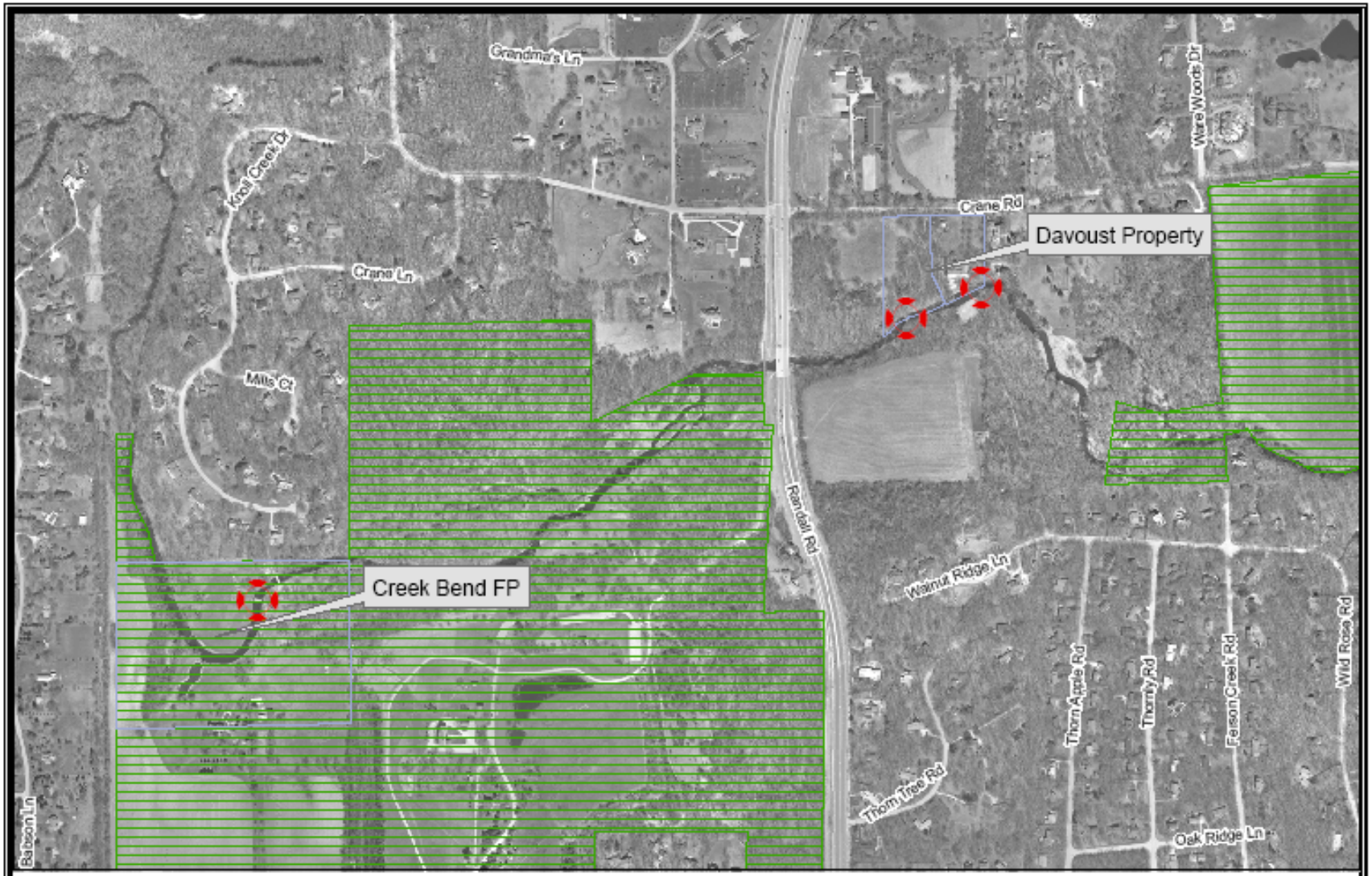


Figure 1. Ferson / Oter Creek Watershed with locations of low water barrier and Otter Creek Forest Preserve Dam to be removed in Phase I, Private Dam slted for removal in Phase II, and location of Illlinois DNR fish sampling station. (Inset shows Ferson /Otter Creek location in Kane Co., Illinois)



Kane County GIS Division

N

Appendix A

400 200 0 400 800 1,200 1,600 2,000 2,400
Feet

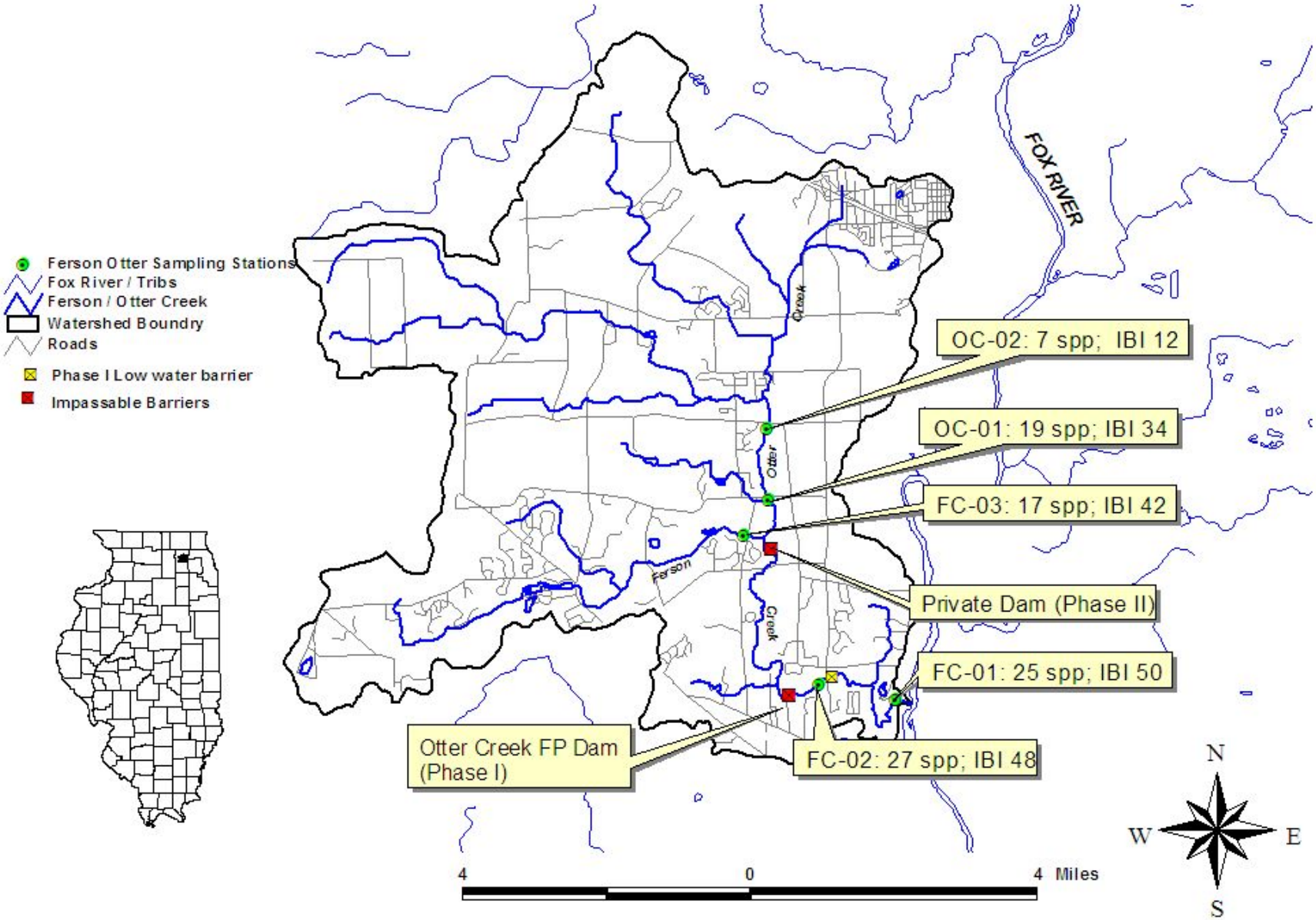
Ferson-Otter Creek Dam Modification project
(Creek Bend FP and Davoust Property)
Kane County Illinois

Legend
Dams
Creek Bend FP
Davoust Property
Forest Preserves

1 inch = 700 feet

Table 1. Results of Illinois DNR fish community sampling in the Ferson / Otter Creek Watershed 1996 - 2007. Species limited to the lower watershed downstream of impassable dams are highlighted in orange. (Multiple samples combined or average for FC-02 and OC-01)

		Ferson Creek			Otter Creek	
Common name	Scientific name	FC-01	FC-02	FC-03	OC-01	OC-2
Carp	Cyprinus carpio		X	X	X	X
Golden shiner	Notemigonus crysoleucas				X	
Creek chub	Semotilus atromaculatus		X	X	X	X
Hornyhead chub	Nocomis biguttatus	X	X	X	X	
Central stoneroller	Campostoma anomalum	X	X	X	X	
Largescale stoneroller	**Campostoma oligolepis**		**X**			
Blacknose dace	**Rhinichthys atratulus**		**X**			
Striped shiner	Luxilus chrysocephalus		X	X	X	
Common shiner	Luxilius cornutus		X	X	X	X
Spotfin shiner	Cyprinella spiloptera	X			X	
Fathead minnow	Pimephales promelas				X	
Bluntnose minnow	Pimephales notatus	X	X	X	X	
Emerald shiner	**Notropis atherinoides**	**X**				
Rosyface shiner	**Notropis rubellus**	**X**				
Sand shiner	Notropis ludibundus	X	X		X	
White sucker	Catostomus commersoni	X	X	X	X	X
Northern hog sucker	Hypentelium nigricans	X	X	X	X	
Golden redhorse	Moxostoma erythrurum	X	X			
Channel catfish	**Ictalurus punctatus**	**X**	**X**			
Yellow bullhead	Ameiurus natalis		X		X	
Stonecat	Noturus flavus	X	X	X	X	
Tadpole madtom	**Noturus gyrinus**	**X**				
Mosquitofish	Gambusia affinis		X			
Mottled sculpin	**Cottus bairdi**	**X**	**X**			
Black crappie	Pomoxis nigromaculatus		X			
Largemouth bass	Micropterus salmoides	X	X	X		X
Smallmouth bass	**Micropterus dolomieu**	**X**	**X**			
Green sunfish	Lepomis cyanellus	X	X	X	X	X
Bluegill x Green sunfish hybrid	Lepomis macrochirus x L. cyanellus		X			
Bluegill	Lepomis macrochirus	X	X	X	X	X
Walleye	**Stizostedion vitreum**	**X**				
Blackside darter	**Percina maculata**	**X**	**X**			
Slenderhead darter	**Percina phoxocephala**	**X**				
Logperch	**Percina caprodes**	**X**				
Johnny darter	Etheostoma nigrum	X	X	X	X	
Banded darter	Etheostoma zonale	X	X	X	X	
Rainbow darter	Etheostoma caeruleum			X		
Fantail darter	Etheostoma flabellare	X		X		
	Total No. Species	25	27	17	19	7
	Index of Biotic Integrity (*mean)	50	48*	42	34*	12



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Illinois Department of Natural Resources - Region 2
Streams

Creek Bend Forest Preserve, Dam Removal Study - Ferson Creek

Common name	Scientific name	Total	9/11/2009 DTF-XDS Downstream dam	9/11/2009 DTF-XUS Upstream dam
Northern pike	Esox lucius	1	0	1
Carp	Cyprinus carpio	16	15	1
Golden shiner	Notemigonus crysoleucas	1	1	0
Creek chub	Semotilus atromaculatus	5	5	0
Hornyhead chub	Nocomis biguttatus	81	80	1
Central stoneroller	Campostoma anomalum	36	36	0
Striped shiner	Luxilus chrysocephalus	36	35	1
Spotfin shiner	Cyprinella spiloptera	3	3	0
Bluntnose minnow	Pimephales notatus	111	111	0
Sand shiner	Notropis ludibundus	1	1	0
White sucker	Catostomus commersoni	25	9	16
Northern hog sucker	Hypentelium nigricans	42	33	9
Golden redhorse	Moxostoma erythrurum	6	4	2
Channel catfish	Ictalurus punctatus	1	1	0
Yellow bullhead	Ameiurus natalis	2	1	1
Stonecat	Noturus flavus	1	1	0
Mottled sculpin	Cottus bairdi	12	12	0
Largemouth bass	Micropterus salmoides	8	7	1
Smallmouth bass	Micropterus dolomieu	9	9	0
Green sunfish	Lepomis cyanellus	49	43	6
Bluegill x Green sunfish hybrid	Lepomis macrochirus x L. cyanellus	1	1	0
Bluegill	Lepomis macrochirus	154	148	6
Orange spotted sunfish	Lepomis humilis	1	1	0
Johnny darter	Etheostoma nigrum	6	4	2
Banded darter	Etheostoma zonale	12	12	0
Fantail darter	Etheostoma flabellare	2	2	0
Total fish		622	575	47
Total species		25	24	12

	Total	Downstream dam	Upstream dam
Native fish species	24	23	11
Native minnow species	8	8	2
Native sucker species	3	3	3
Native sunfish species	5	5	3
Benthic invertivore species	7	7	3
Intolerant species	5	5	2
Prop. specialist benthic invertivores	0.13	0.12	0.28
Prop. geneneralist feeders	0.65	0.65	0.66
Prop. mineral-substrate spawners	0.34	0.34	0.28
Prop. tolerant species	0.29	0.3	0.36
Index of Biotic Integrity (IBI)		51	36

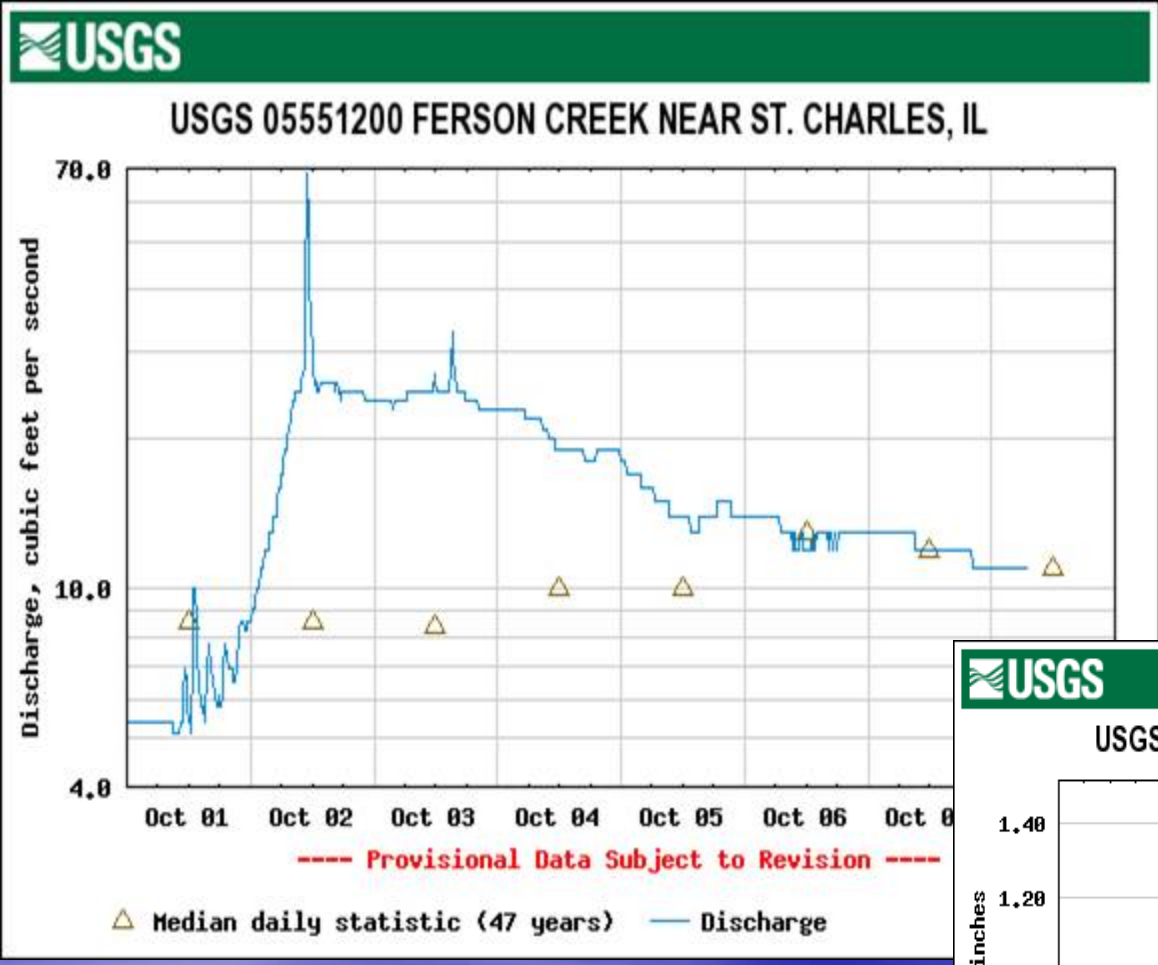
Partner Contribution and Total Project Costs

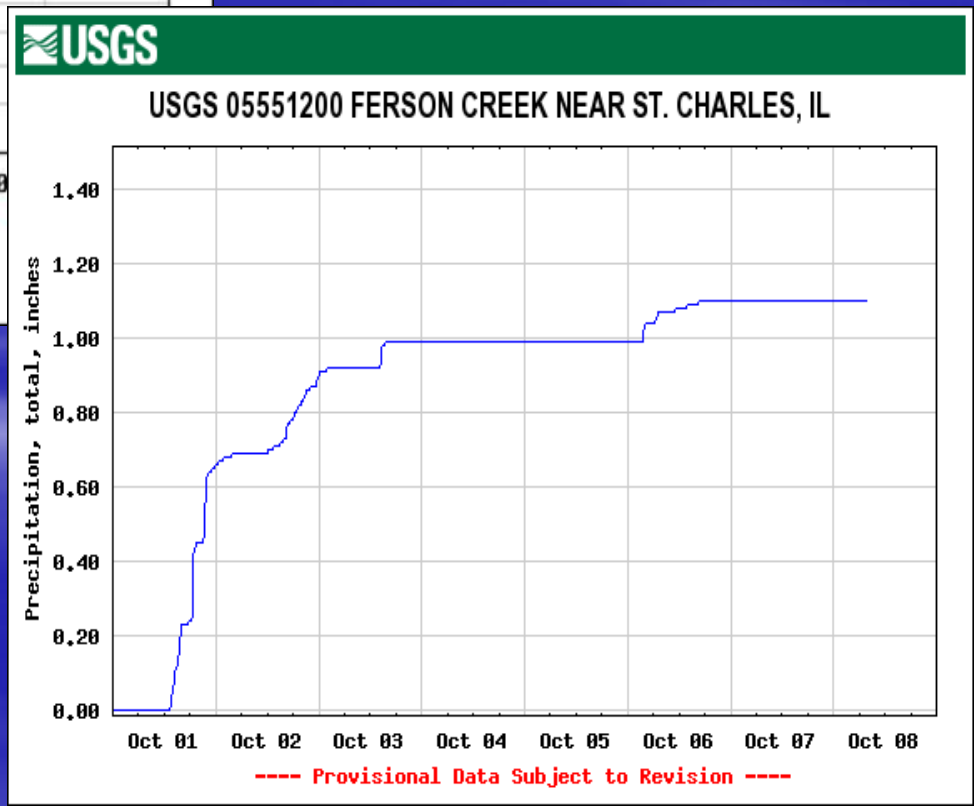
Contributing Partners	Cash or In-Kind?	Amount $ Contributed
Kane County Forest Preserve District	Cash	$10,000.00
Kane County Department of Environmental Management	In-Kind	$5,000.00
Illinois Department of Natural Resources	In-Kind	$4,125.00
Kane-DuPage Soil & Water Conservation District	Cash	$2,420.00
United States Fish & Wildlife Service	Cash	$9,800.00
	Total Project Cost =	$31,345.00

WHO CAN MAKE THE JUMP?

“I THINK I CAN?
I THINK I CAN?”

GAGE INFORMATION



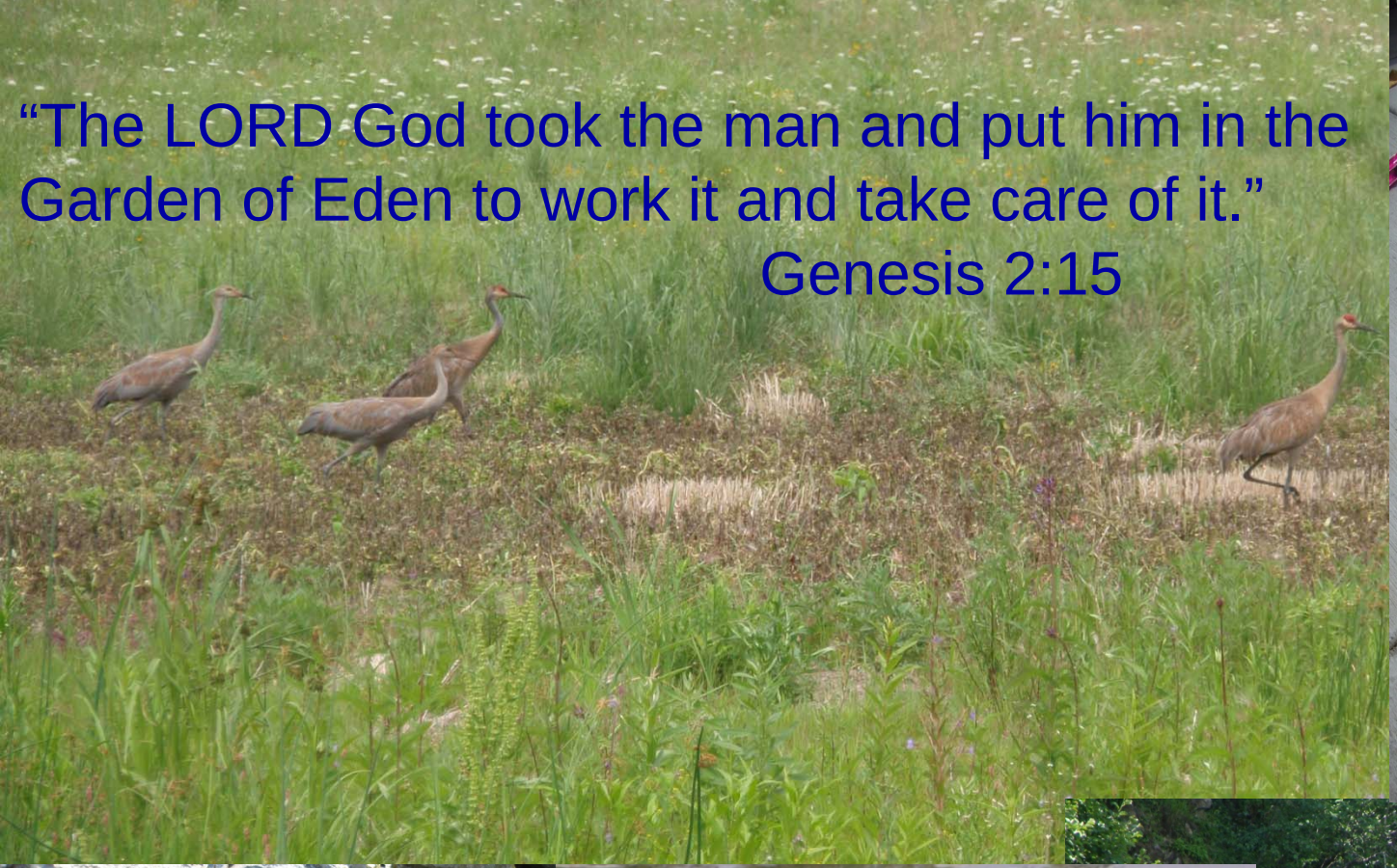


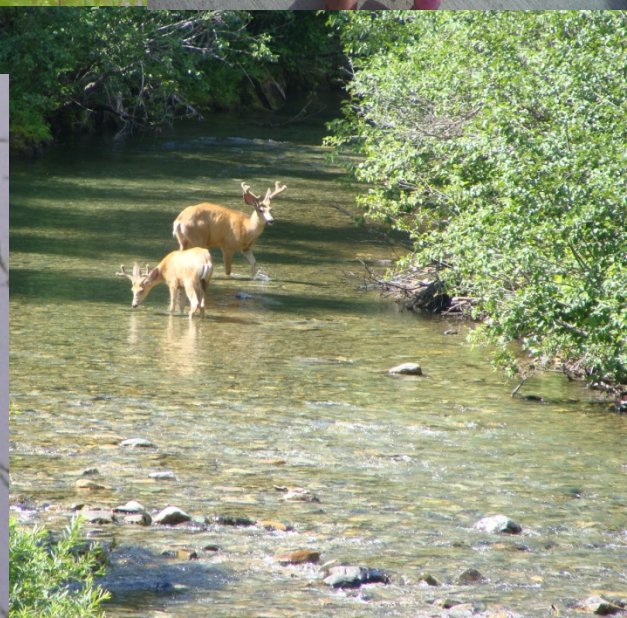
Bird's eye
Labels

WHO HAS THE ANSWER TO THE ORIGNINAL QUESTION?

“The LORD God took the man and put him in the Garden of Eden to work it and take care of it.”

Genesis 2:15





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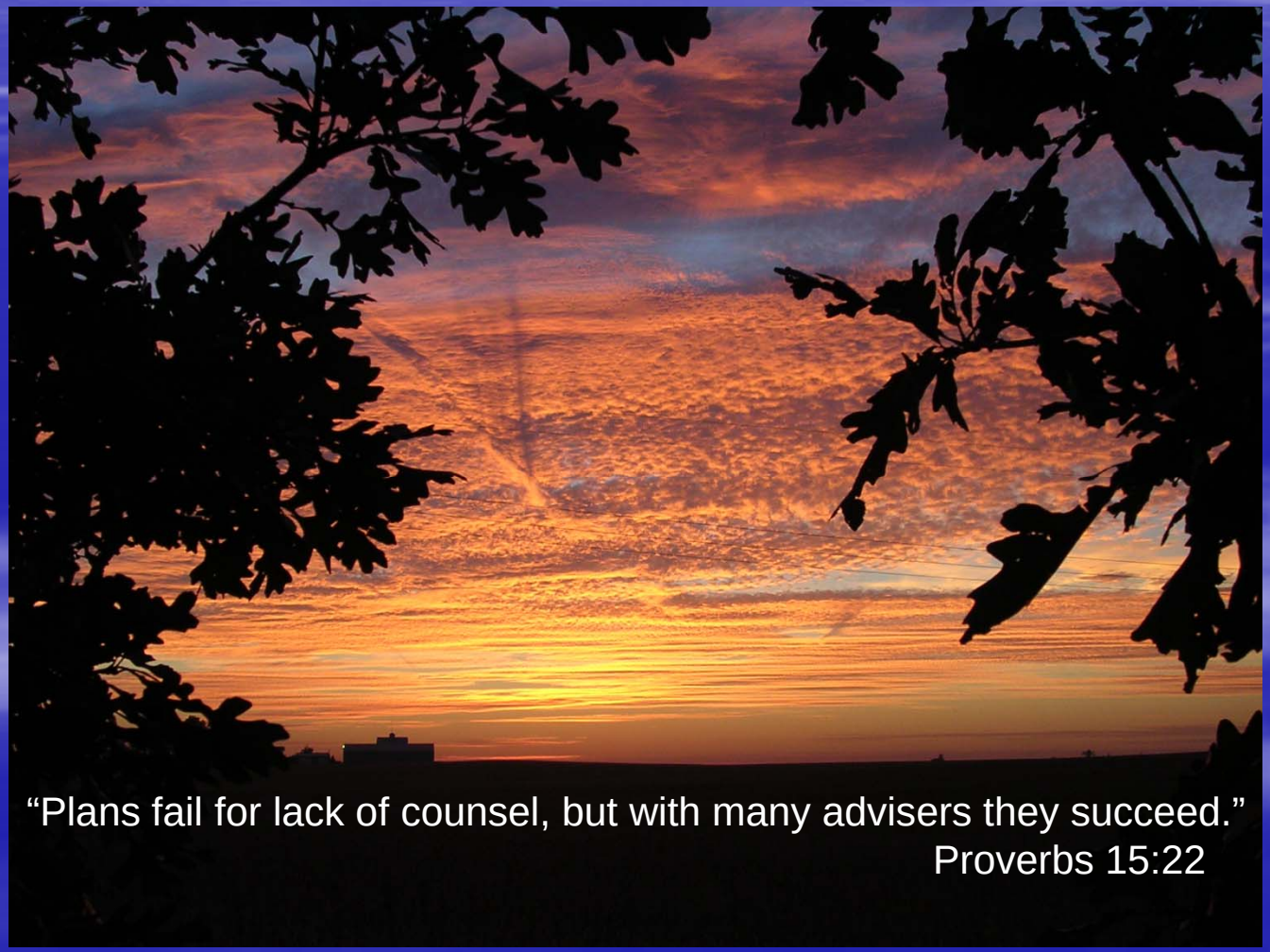
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