



Miesville Ravine Park Reserve Natural Resource Management Plan Phase 1: Research & Findings

Dakota County Planning Commission, October 28, 2021

Joe Walton
Parks Senior Ecologist
Physical Development Division

Jason Naber, CMWP
Project Manager-Biologist
Emmons & Olivier Resources

1

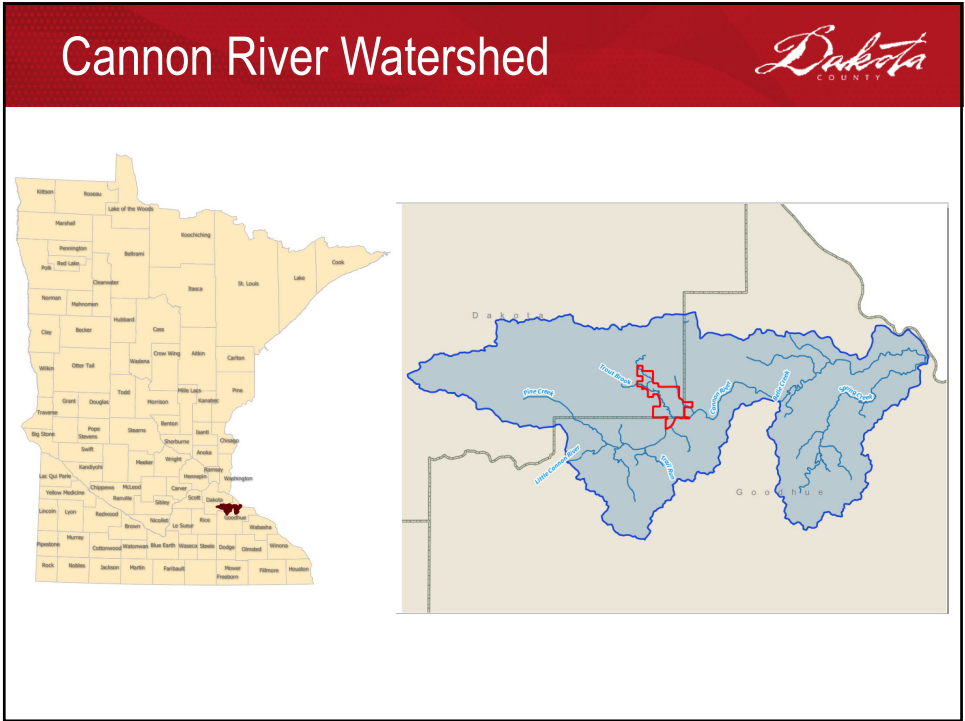
Overview



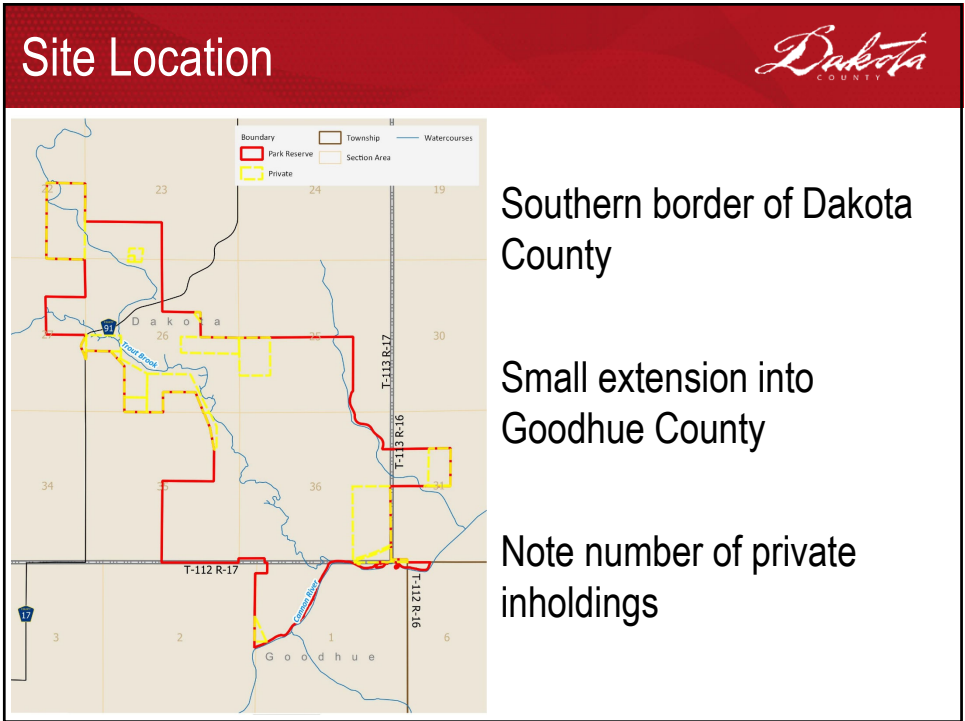
Presentation Outline

- Research and Findings
 - Site Location
 - Site Features
 - Site Observations
 - Site Issues
- Requested Actions – Informational Only
- Questions/Comments

2




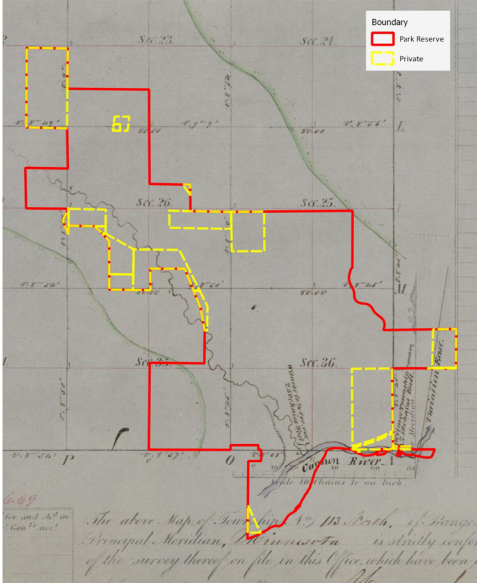
3



4

Original Land Survey Map





Boundary
 Park Reserve
 Private


Original Land Survey

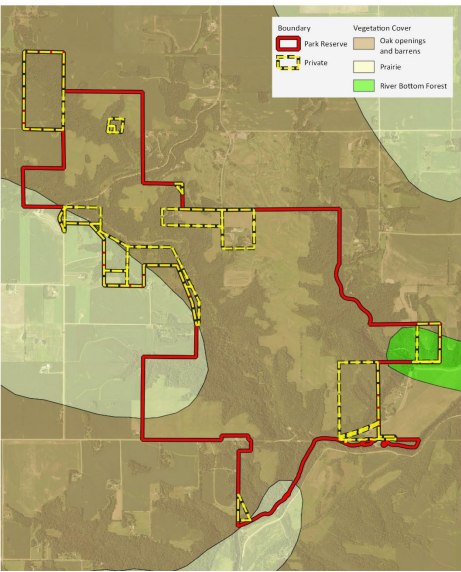
Note the green line indicates general line between prairie and tree cover

See the inaccurate mapping- stream is outside park boundary.

5

Pre-settlement Vegetation





Boundary
 Park Reserve
 Private

Vegetation Cover
 Oak openings and barrens
 Prairie
 River Bottom Forest

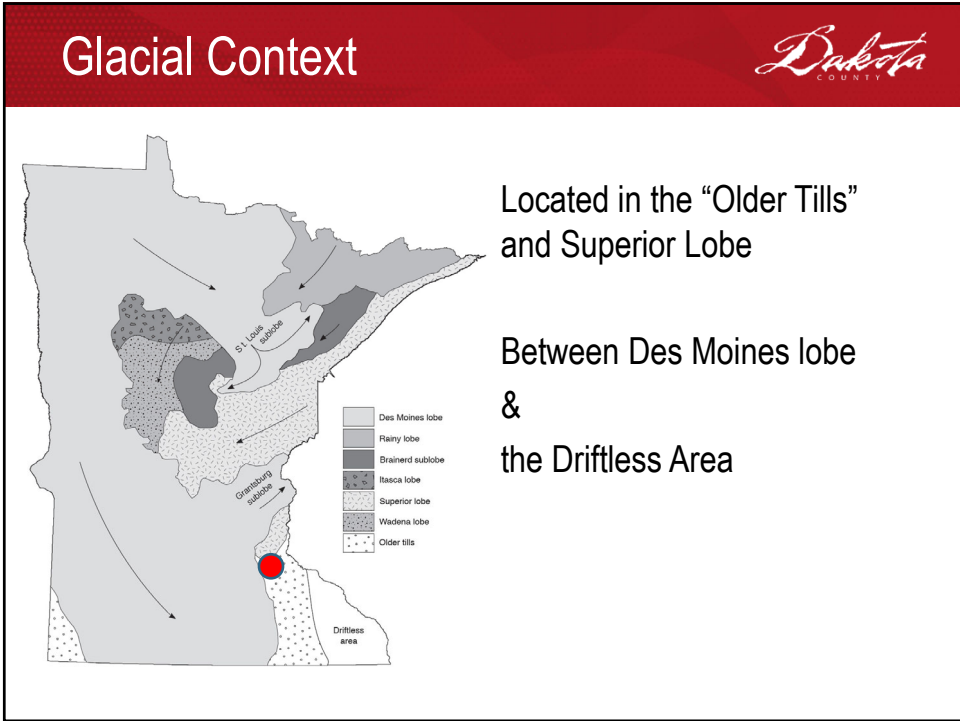
Original Land Survey-converted by Marschner

Oak Openings & Barrens

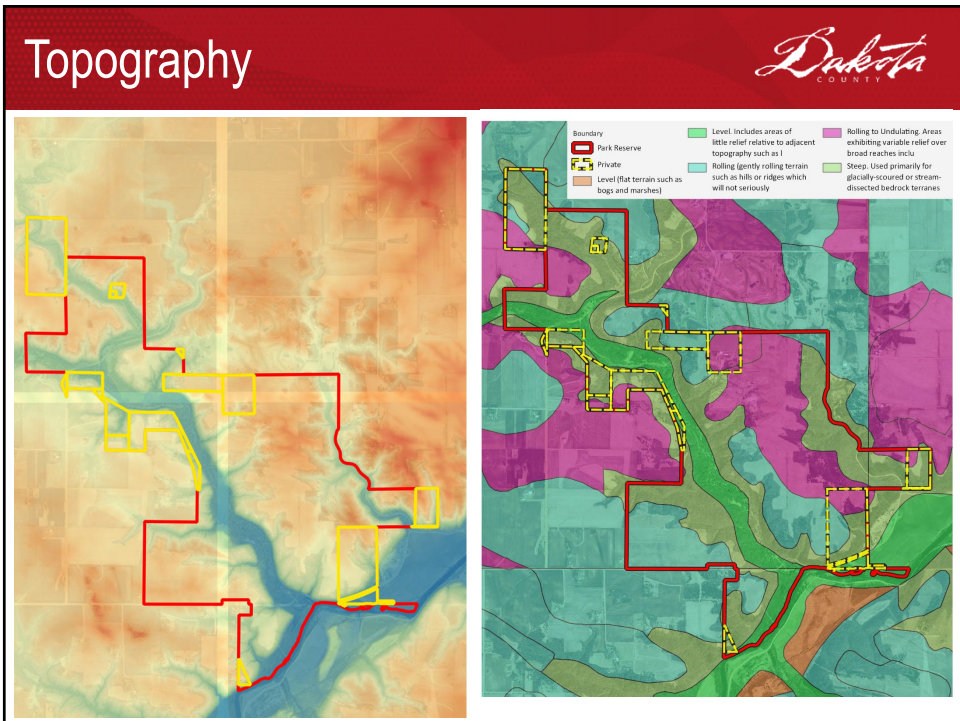
Prairie

River Bottom Forest

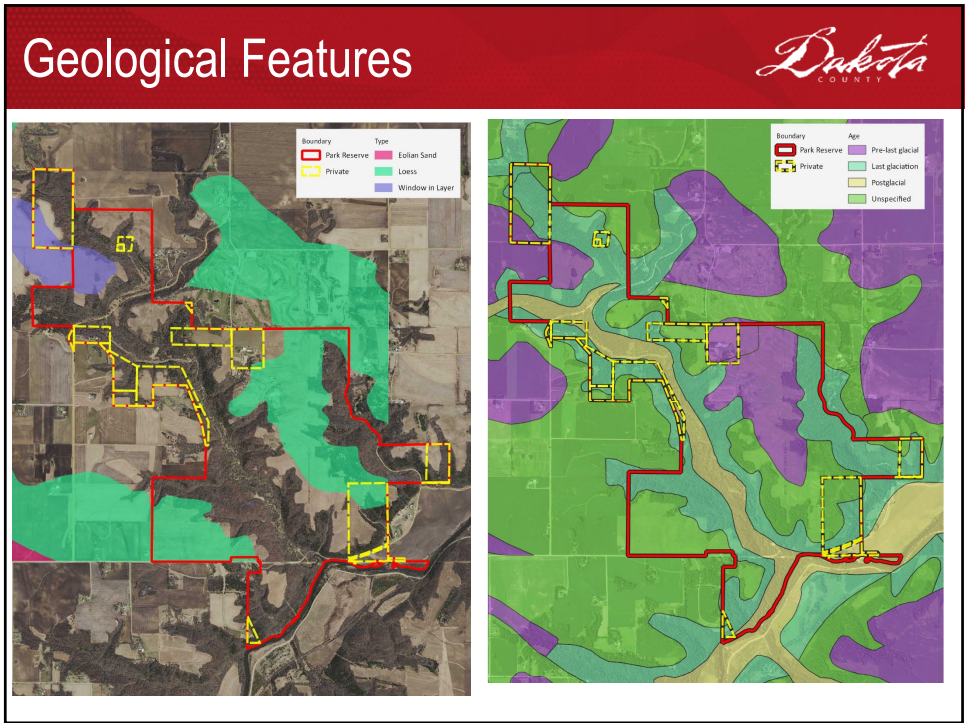
6



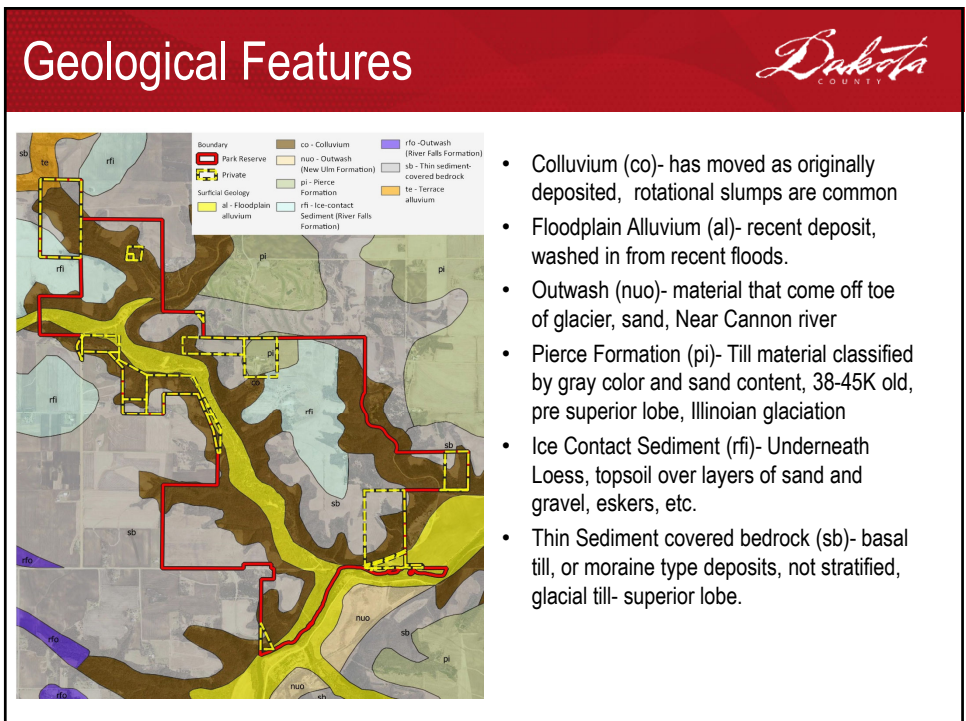
7



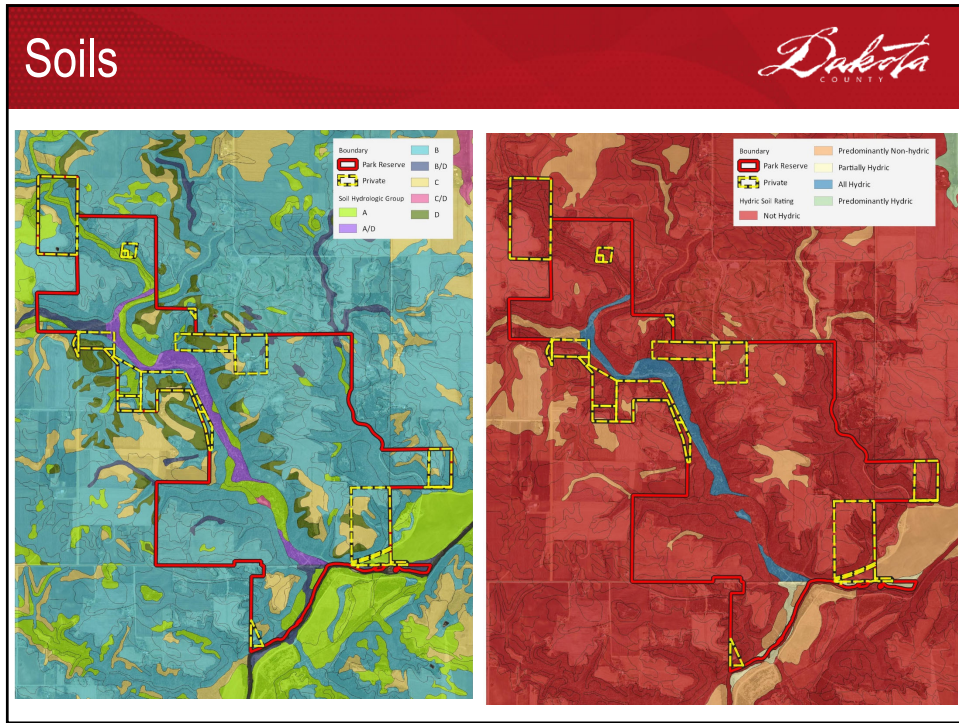
8



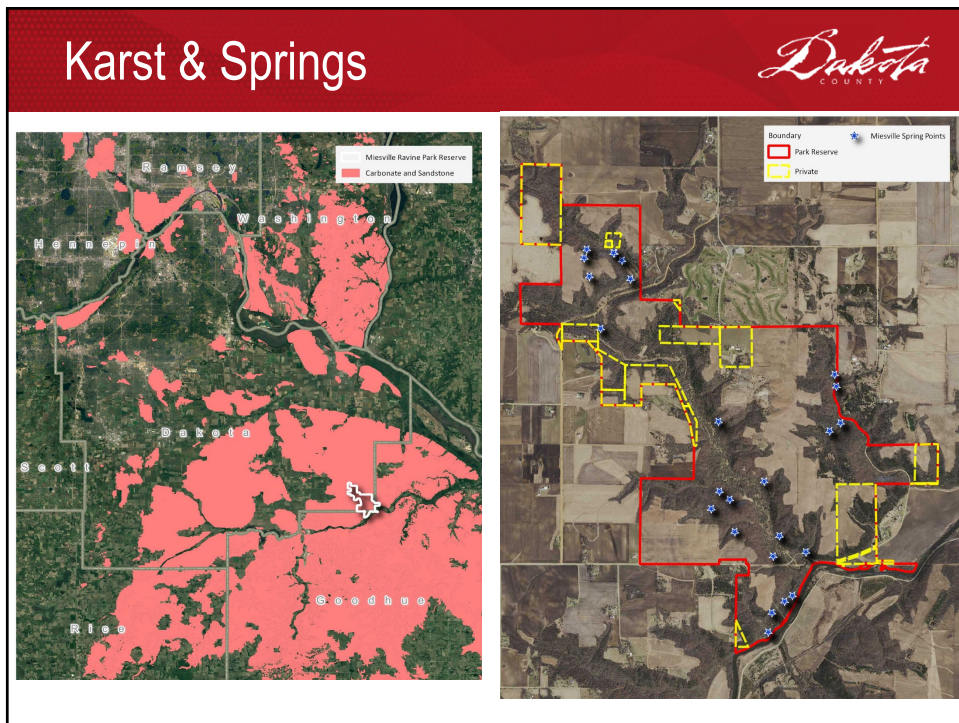
9



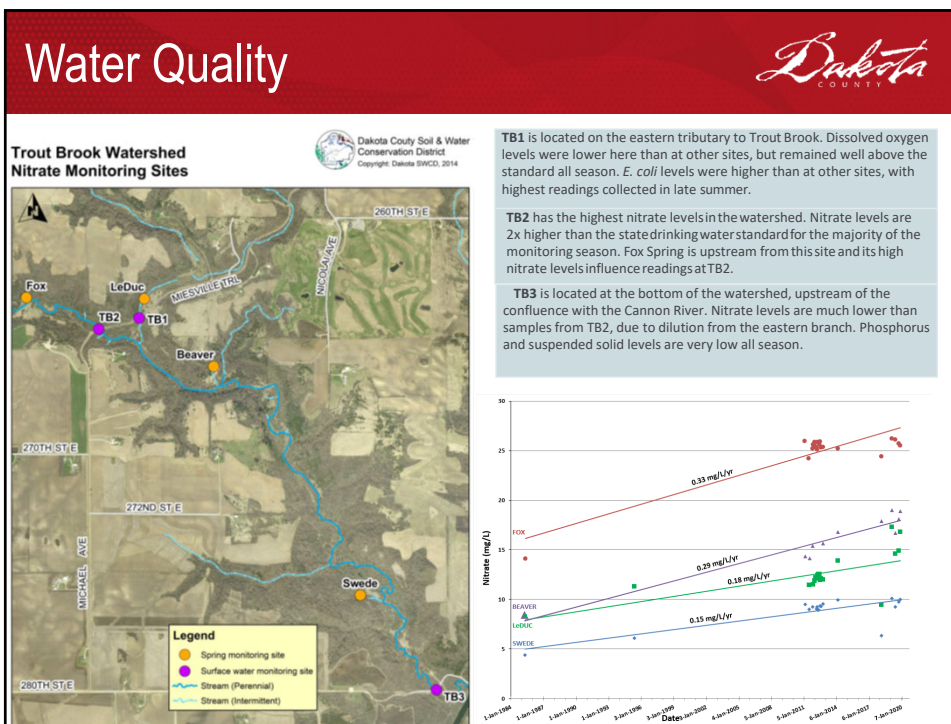
10



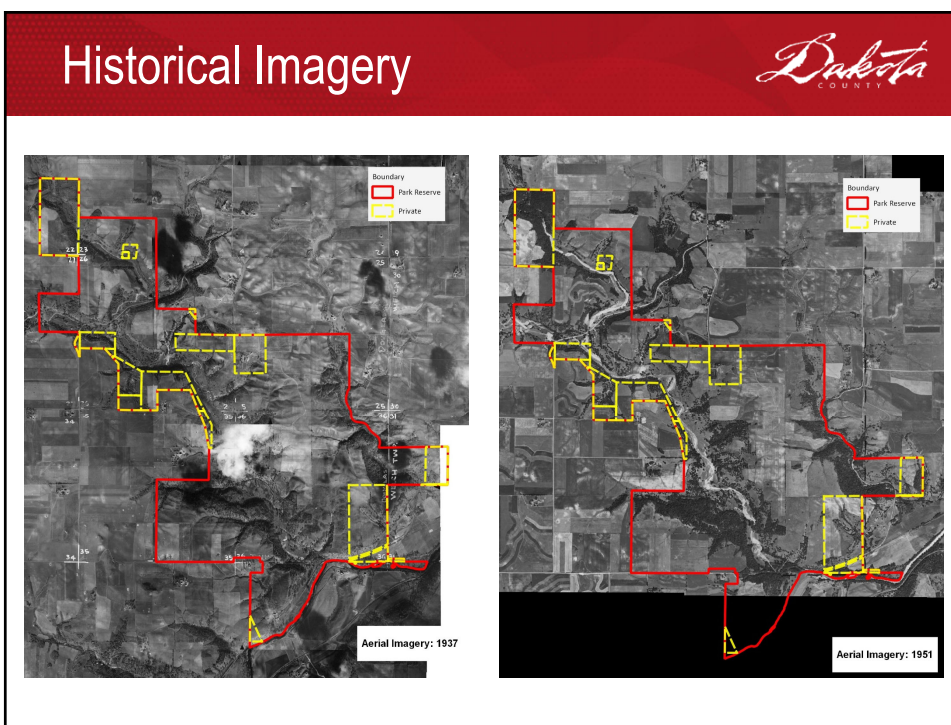
11



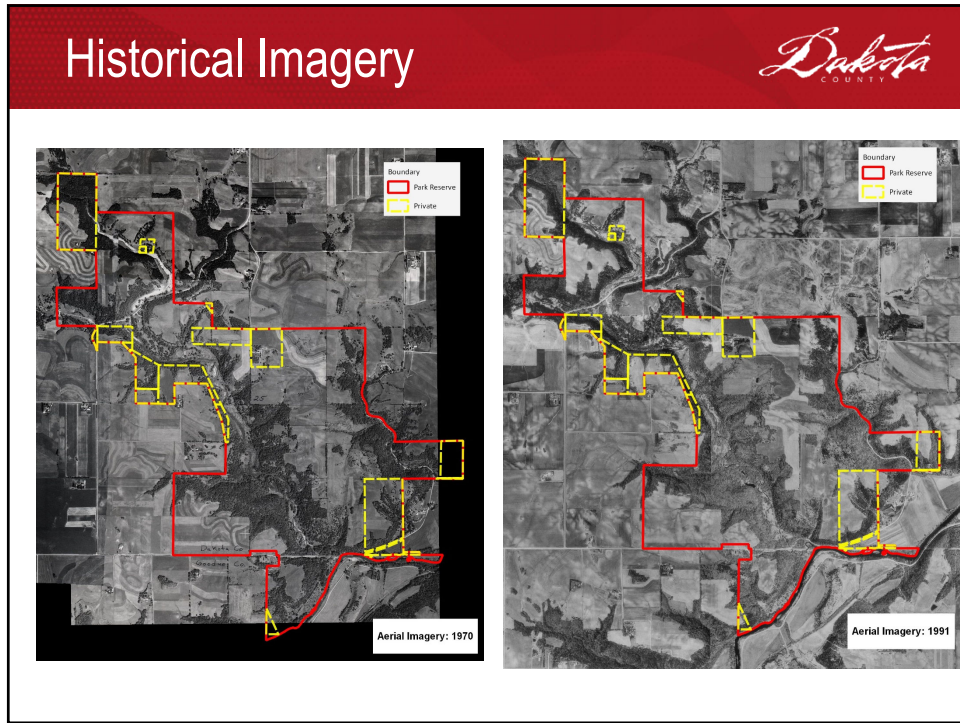
12



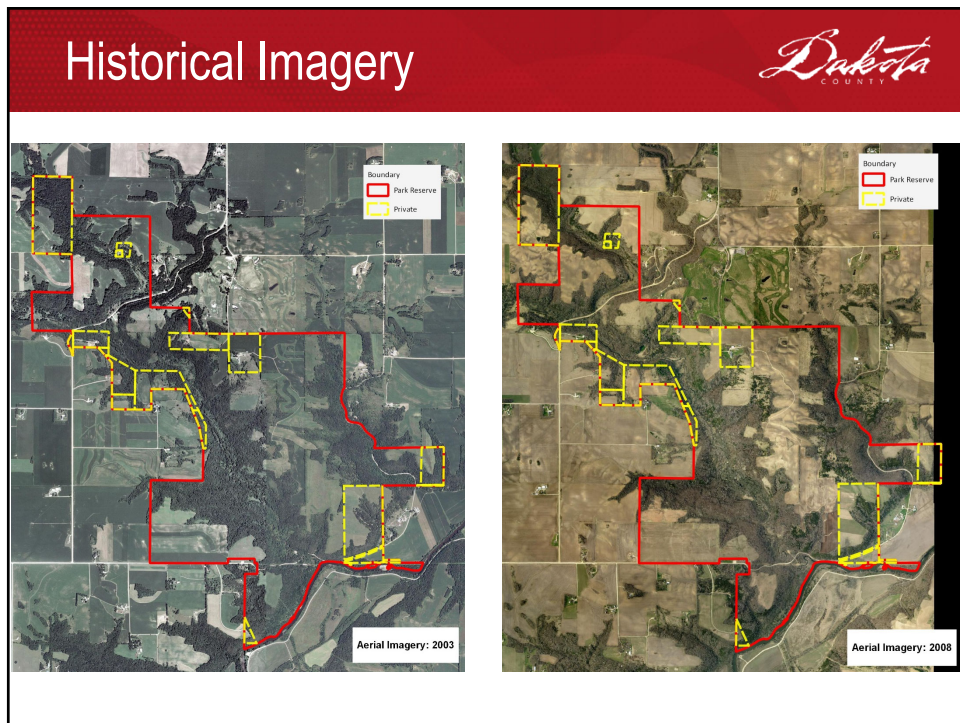
13



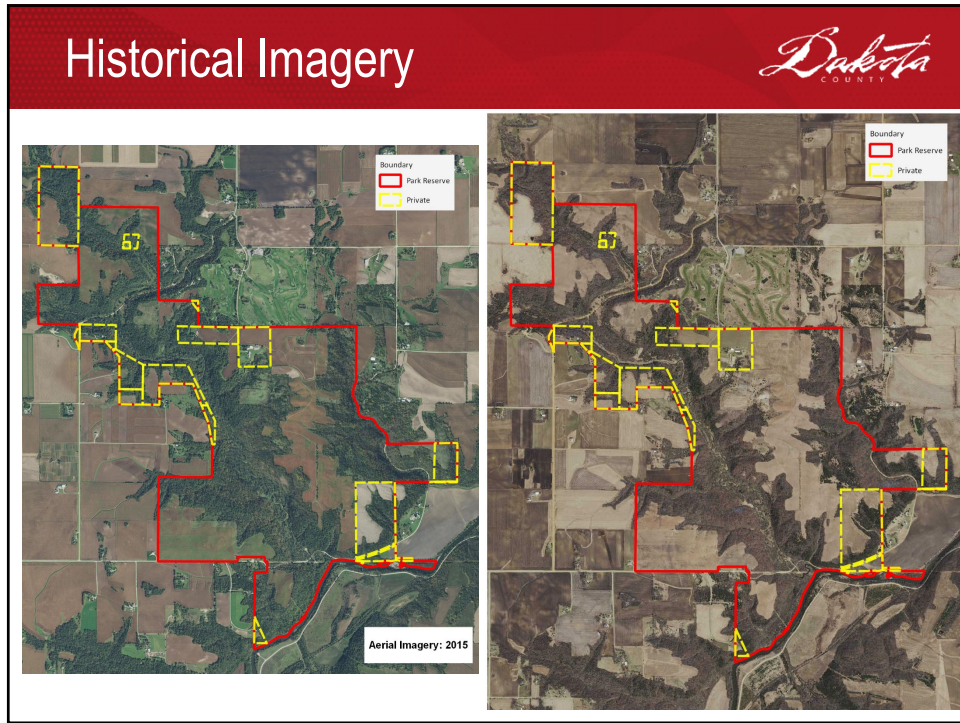
14



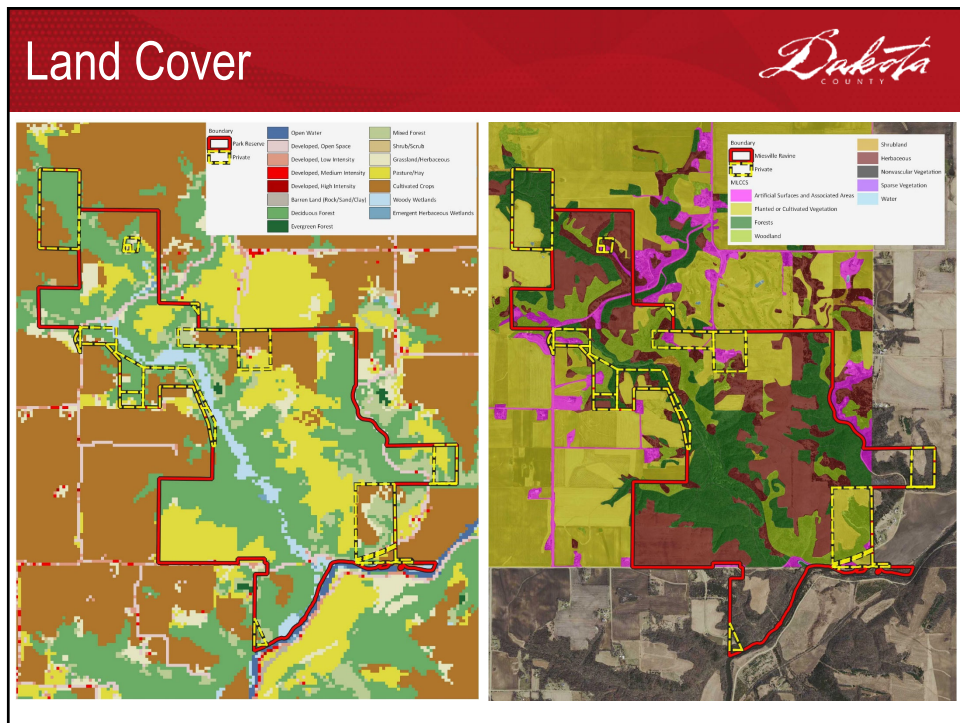
15



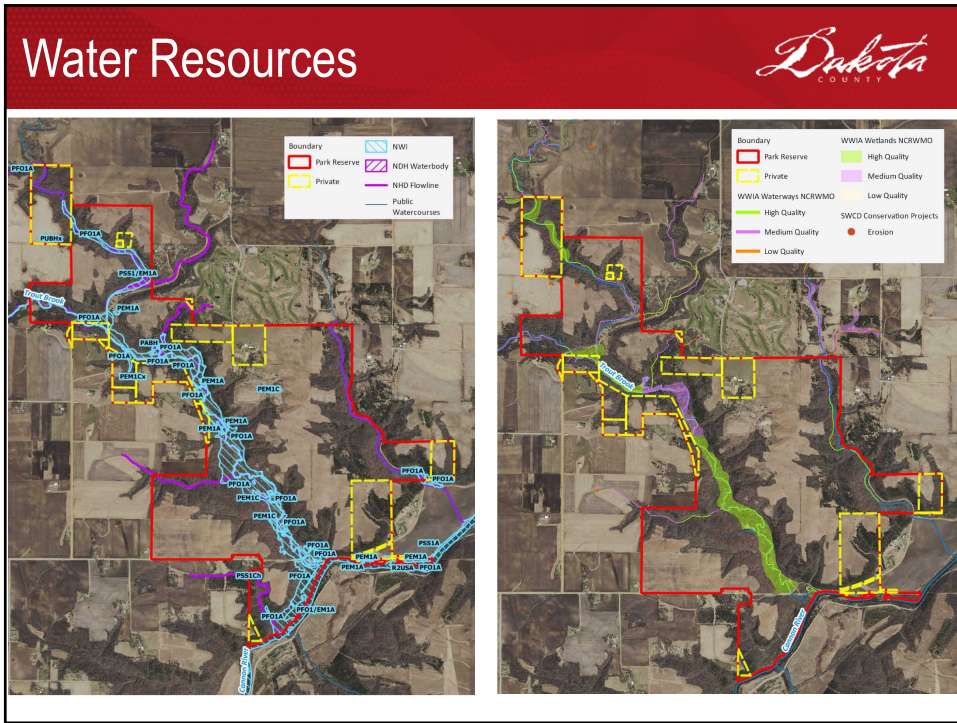
16



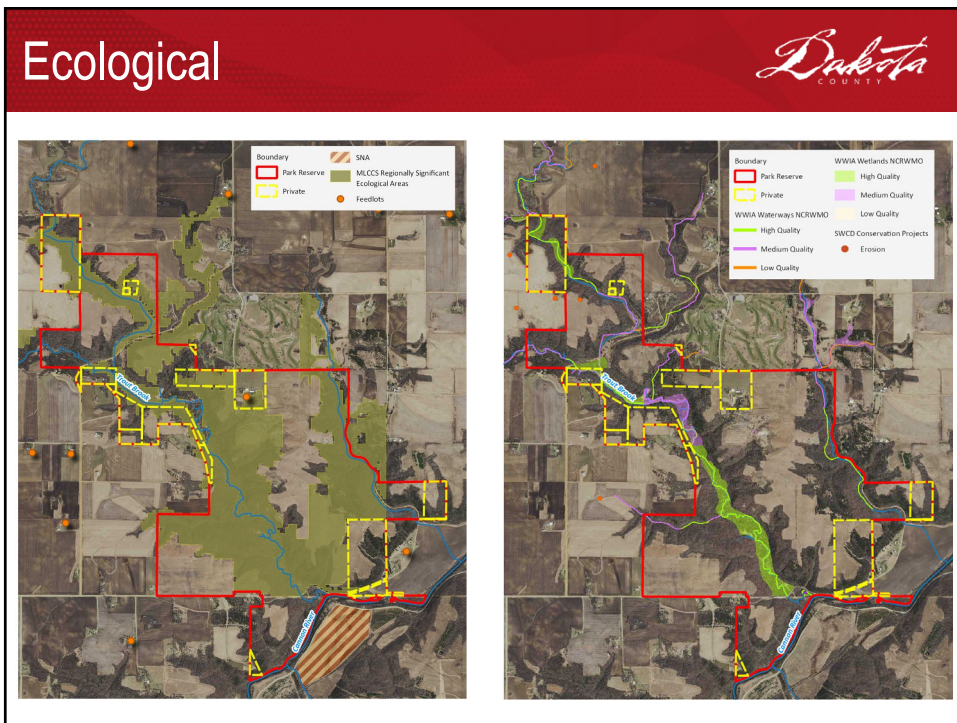
17



18



19

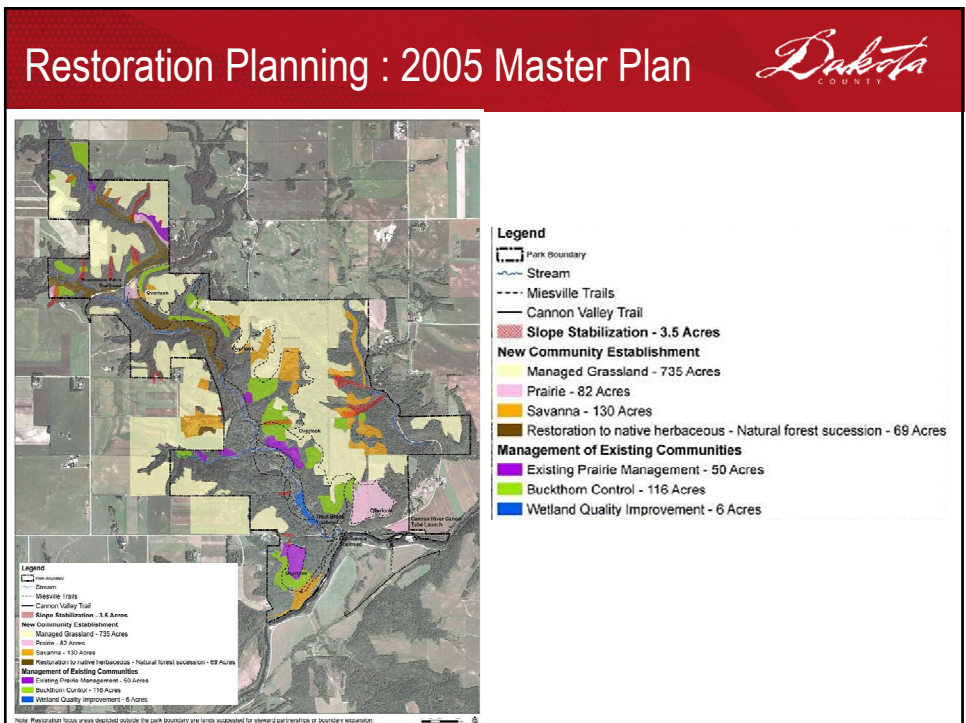


20

Site Observations: Wildlife Dakota COUNTY

Animal	2016-17 # observed	Survey type		
American badger	1	Trail camera	Breeding Birds	Breeding Birds cont.
American beaver	18	Trail camera	American woodcock	Henslow's sparrow
American mink	1	Trail camera	Baltimore oriole	House wren
American red squirrel	69	Trail camera	Barn swallow	Indigo bunting
American robin	5	Trail camera and Visual	Black-capped chickadee	Lark sparrow
Black bear	1	Trail camera	Blue-gray gnatcatcher	Mallard
Blue jay	1	Trail camera	Brown-headed cowbird	Mourning dove
Common garter snake	1	Visual	Blue jay	Northern cardinal
Coyote	36	Trail camera	Blue-winged warbler	Northern flicker
Domestic dog	1	Trail camera	Canada goose	Ovenbird
Eastern cottontail	44	Trail camera	Brewer's sparrow	Pileated woodpecker
Eastern gray squirrel	10	Trail camera and Visual	Cerulean warbler	Red-breasted grosbeak
Eastern towhee	1	Trail camera	Chipping sparrow	Red-bellied woodpecker
Fox squirrel	8	Trail camera and Visual	Common grackle	Red-eyed vireo
Gray catbird	9	Trail camera	Common yellowthroat	Ring-necked pheasant
Groundhog	2	Visual	Dickcissel	Red-throated hummingbird
Mouse	29	Trail camera	Downy woodpecker	Red-winged blackbird
Ovenbird	11	Trail camera	Eastern bluebird	Scarlet tanager
Raccoon	42	Trail camera and Visual	Eastern kingbird	Song sparrow
Red admiral	1	Visual	Eastern towhee	Spotted sandpiper
Ring-necked pheasant	4	Trail camera and Visual	Eastern wood peewee	Turkey vulture
Swainson's thrush	39	Trail camera	Vesper sparrow	Warbling vireo
Virginia opossum	22	Trail camera	Great blue heron	White-breasted nuthatch
Western fox snake	1	Visual	Great crested flycatcher	Wild turkey
White-tailed deer	360	Trail camera and Visual	Gray catbird	Yellow-bellied sapsucker
Wild turkey	21	Trail camera and Visual	Grasshopper sparrow	Yellow warbler
			Hairy woodpecker	Yellow-throated vireo

21



22

Restoration Projects *Dakota* COUNTY

Fiscal Year Initiated	Name	Acres, (*lineal feet)	End Date
1998	Restored prairie east of the church on the south end of park.	16	
1999	Shortgrass prairie north of 280 th Street on the south end of the park.	16	
2006	Prairie restored north of the church on the south end of the park.	95	
2008-10	Prairie restored on the former Banks property in the northwest end of the park.	161	
2009	Prairie restored on the former Bauer property in the northwest end of the park.	36	
2010	Prairie restored on the former Weber property in the northwest end of the park.	42	
Various	Streambank stabilization projects (Trout Unlimited and SWCD Projects)	3,000+*	Several
2016	Bluff Prairies of Miesville Restoration, Phase 1	94	June 30, 2019
2017	Bluff Prairies of Miesville Restoration, Phase 2	137	June 30, 2021
2019	Bluff Prairies of Miesville Restoration, Phase 3	80	June 30, 2022
TOTAL		677	


23

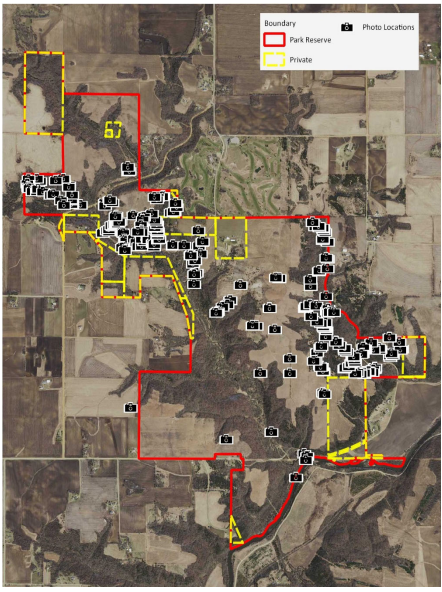
Site Observations: Natural Features *Dakota* COUNTY

- Maple-Basswood Forest
- Floodplain Forest
- Wet-Mesic Forest
- Oak Forest
- Oak Woodland
- Remnant Savanna
- Bluff Prairies
- Restored Prairie/Savanna
- Old Fields
- White Pine Stands
- Ravines
- Riparian (brook & river)


24

Site Observations: Site Photos






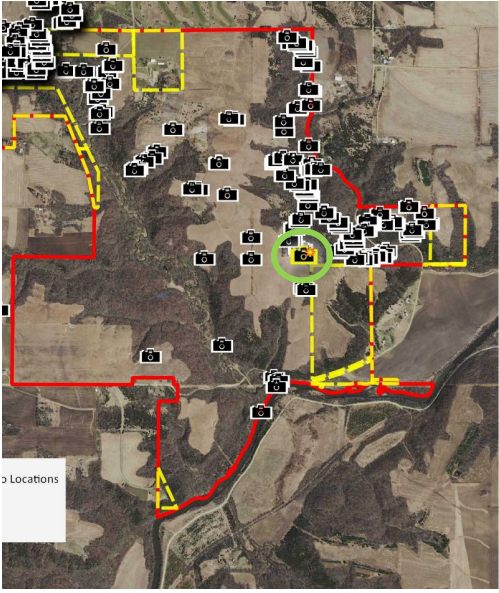
Boundary
Park Reserve
Private
Photo Locations




25

Site Observations: Site Photos






Locations



26


Site Observations: Site Photos *Dakota* COUNTY



This slide features an aerial map on the left and a photograph on the right. The map shows a large area with a red boundary, a yellow dashed boundary, and a green circle highlighting a specific location. Numerous camera icons are scattered across the map. The photograph shows a river flowing through a wooded area with green and yellow foliage under a clear blue sky.

27

Site Observations: Site Photos *Dakota* COUNTY



This slide features an aerial map on the left and a photograph on the right. The map shows a large area with a red boundary, a yellow dashed boundary, and a green circle highlighting a specific location. Numerous camera icons are scattered across the map. The photograph shows a river flowing through a wooded area with green and yellow foliage under a cloudy sky.

28

Site Observations: Site Photos




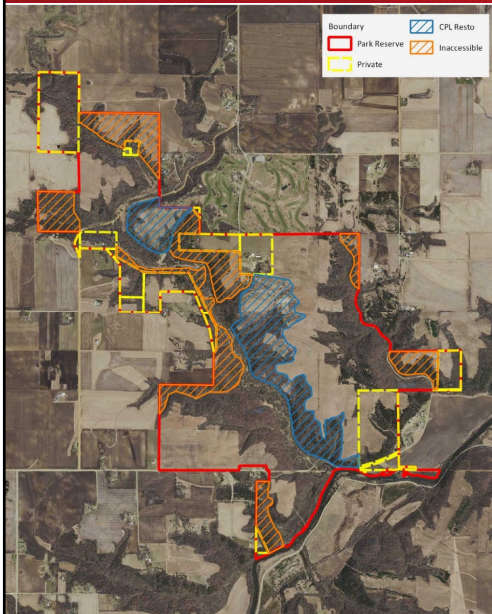




29

Site Issues





- Size of park
- Diversity at large scale
- Diversity at small scale
- Invasive plants
- Invasive animals
- Natural eco-processes
- Erosion/sedimentation
- Water quality/rate
- Restoration costs
- Staff capacity
- Access

30

Site Issues: Accessibility







31

Concepts





- Control garlic mustard in key areas
- Deer mgmnt and targeted fencing to prevent over grazing in sensitive areas
- Earthworms- what can be done?
- Goats- pre and post buckthorn clearing, target steep areas and slopes
- Forestry mowing- in areas of less steep topography
- Establish ground cover to support burns
- Seeding- consider phases over time
- Chemical treatments- to control invasive plants
- Headcutting/erosion- stabilize these areas
- Watershed restoration- SWCD projects and landcover conversion
- Stream habitat- focus on fish and aquatic life.

32

Concepts



33

Concepts



34

Concepts



35

Concepts



36

Concepts



37



38

