

# **Appendix A – IICEP Scoping Documents**

**Appendix A-1 - Interagency and Intergovernmental  
Coordination for Environmental Planning (ICEP)  
Point of Contact (POC) List**

<b>United States Army Corps of Engineers (USACE)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Steven E. Naylor	Regulatory Program Manager, South Dakota	605-224-8531	28563 Powerhouse Road, Pierre, SD 57501	SDRegulatoryMailbox@usace.army.mil
<b>United States Fish and Wildlife Service (USFWS), Mountain Prairie Region</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Amity Bass	Field Supervisor, North and South Dakota Ecological Services	(605) 224-8693 ext 224	420 South Garfield Avenue, Suite 400 Pierre, SD 57501	amity_bass@fws.gov
<b>Federal Emergency Management Agency (FEMA)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Lee DePalo	Regional Administrator, Region 8	(303) 235-4812	Denver Federal Center, Building 710 P.O. Box 25267 Denver, CO 80255-0267	
Cathy Bachhuber	Tribal Affairs, FEMA Region 8			Cathy.Bachhuber@fema.dhs.gov
<b>South Dakota (SD) State Historic Preservation Office (SHPO)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Jenna Carlson Dietmeier, PhD	Review & Compliance Coordinator	605-773-2906	900 Governors Dr. Pierre, SD 57501	Katie.Wasley@state.sd.us
<b>South Dakota Game, Fish, and Parks (SDGFP)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Stan Michals	Energy and Minerals Coordinator	Regional Office No. (605)394-2391 Cell No. (605)645-8881	4130 Adventure Trail Rapid City, SD 57702	Stan.Michals@state.sd.us
<b>South Dakota Department of Agricultural and Natural Resources (DANR)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Sean Kruger	Standards Team		Joe Foss Building, 523 East Capitol Pierre, SD 57501	Sean.Kruger@state.sd.us
Shannon Minerich	Standards Team	(605) 773-3351		shannon.minerich@state.sd.us

<b>South Dakota Ellsworth Development Authority (SDEDA)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Glen Kane	Managing Director	605-390-7290	14 St Joseph St, Rapid City, SD 57709	glen.kane@ellsworthauthority.org
<b>Tribal Governments</b>				
<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Apache Tribe of Oklahoma	Bobby Komardley, Chairman	405-247-9493	PO Box 1330 Anadarko, OK 73005	bkomardley@outlook.com
Arapaho Tribe of the Wind River Reservation, Wyoming	Ben Ridgley, THPO	307-851-1254	PO Box 67 St. Stevens, WY 82524	benridgley007@gmail.com
	Lee Spoonhunter, Chairperson	307-332-6120	PO Box 396 Fort Washakie, WY 82514-0396	lee.spoonhunter@northernarapaho.com
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, Montana	Dyan Youpee, THPO	406-768-2382	PO Box 1027 Poplar, MT 59255	d.youpee@fortpecktribes.net
	Floyd Azure, Chairperson	406-768-2300	PO Box 1027 Poplar, MT 59255-1027	fazure@fortpecktribes.net
Cheyenne and Arapaho Tribes, Oklahoma	Max Bear, THPO	405-422-7416	700 Black Kettle Blvd Concho, OK 73022	mbear@c-a-tribes.org
	Reggie Wassana, Governor	800-422-8224	P.O. Box 38 Concho, OK 73022	rwassana@c-a-tribes.org
Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota	Steven Vance, THPO	605-964-7554	PO Box 590 Eagle Butte, SD 57625	stevev.crstpres@outlook.com
	Harold Frazier, Chairperson	605-964-4155	PO Box 590 Eagle Butte, SD 57625-0590	HaroldCFrazier@yahoo.com
Comanche Nation, Oklahoma	Mark Woommavovah, Chairperson	580-492-3240	PO Box 908 Lawton, OK 73502	jennifer.rodriquez@comanchenation.com
	Martina Minthorn, THPO	580-595-9618	6 SW D Avenue Lawton, OK 73502	martina.minthorn@comanchenation.com
Confederated Salish and Kootenai Tribes of the Flathead Reservation	Kathryn McDonald, THPO	406-675-2700, ext. 1082	PO Box 278 Pablo, MT 59855	kathryn.mcdonald@cslt.org
	Tom McDonald Chairman	406-675-2700	PO Box 278 Pablo, MT 59855-0278	council@cslt.org



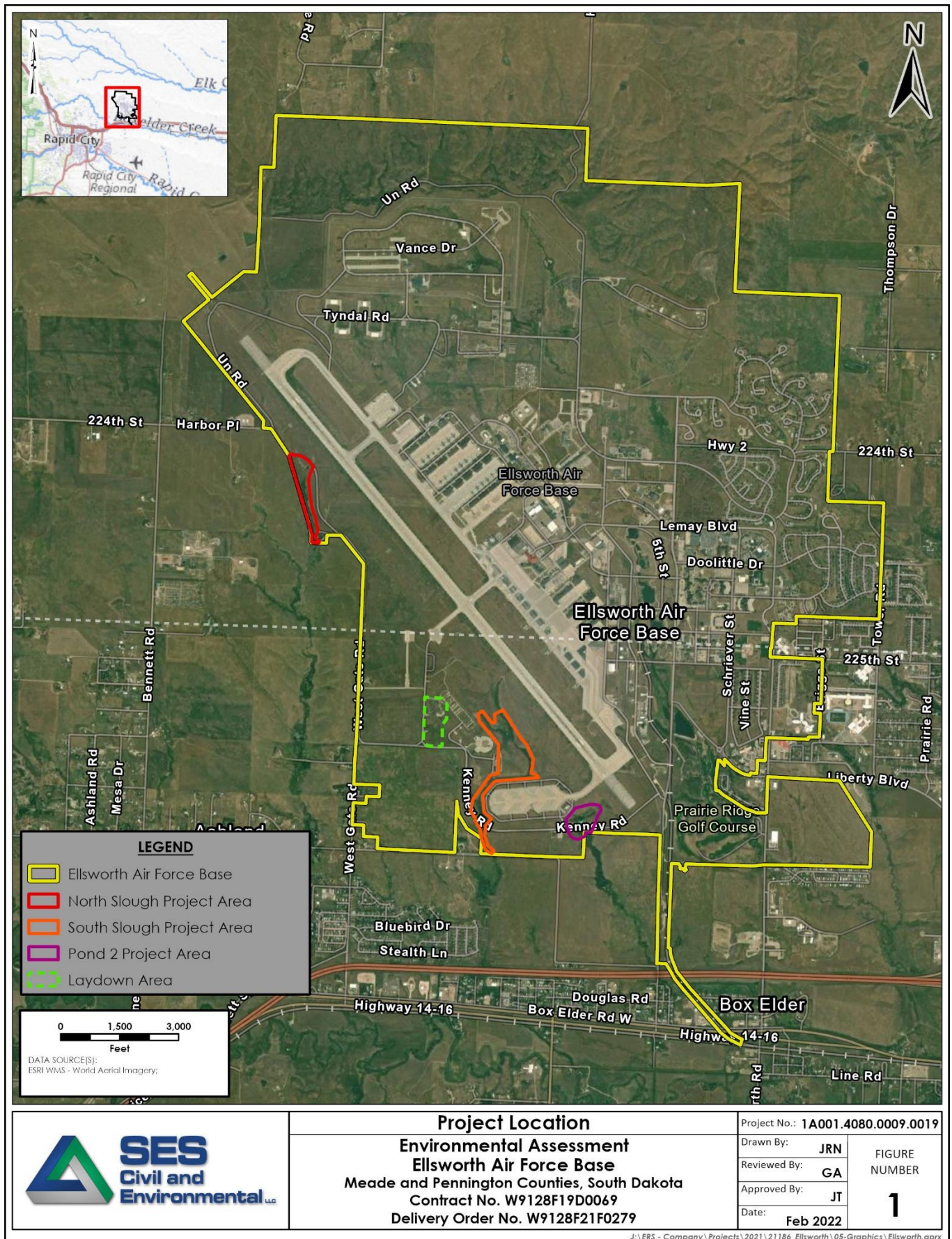
<b>Tribal Governments</b>				
<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Crow Creek Sioux Tribe of the Crow Creek Reservation, South Dakota	Lester Thompson Jr., Chairperson	605-245-2221	PO Box 50 Fort Thompson, SD 57339-0050	
	Merle Marks, THPO	605-245-2221	PO Box 50 Fort Thompson, SD 57339	cchistory@midstatesd.net
Crow Tribe of Montana	Aaron Brien, THPO	406-529-7991	PO Box 159 Crow Agency, MT 59022	aaron.brien@crow-nsn.gov
	AJ Not Afraid, Chairperson	406-638-3715	PO Box 159 Crow Agency, MT 59022	aj.notafraid@crow-nsn.gov
Eastern Shoshone Tribe of the Wind River Reservation, Wyoming	Joshua Mann, THPO	307-335-2081	PO Box 538 Fort Washakie, WY 82514	jmann@easternshoshone.org
Flandreau Santee Sioux Tribe of South Dakota	Garrie Kills-A-Hundred, THPO	605-864-1236	PO Box 283 Flandreau, SD 57028	garrie.killsahundred@FSST.org
	Anthony Reider, Chairperson	605-997-3891	PO Box 283 Flandreau, SD 57028-0283	president@fsst.org
Fort Belknap Indian Community of the Fort Belknap Reservation of Montana	Michael Blackwolf, THPO	406-353-2295	656 Agency Main Street Harlem, MT 59526-9455	mblackwolf@ftbelknap.org
	Jeffery (Jeff) Stiffarm President	406-353-2205	RR1, Box 66 Harlem, MT 59526-9455	jeffery.stiffarm@ftbelknap.org
Kiowa Indian Tribe of Oklahoma	Matthew Komalty, Chairman	508-654-2300	PO Box 369 Carnegie, OK 73015	tharris@kiowatribe.org
Lower Brule Sioux Tribe of the Lower Brule Reservation, South Dakota	Clyde Estes, Chairman	605-473-5561	187 Oyate Circle Lower Brule, SD 57548-8500	ClydeEstes@lowerbrule.net
Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana	Serena Wetherelt Vice-President	406-477-6284	PO Box 128 Lame Deer, MT 59043-0128	serena.wetherelt@cheyennenation.com
	Teanna Limpy, THPO	406-477-4839	PO Box 128 Lame Deer, MT 59043	Teanna.Limpy@cheyennenation.com
Oglala Sioux Tribe	Julian Bear Runner, President	605-867-8487	PO Box 2070 Pine Ridge, SD 57770-2070	president.bearrunner@oglala.org

<b>Tribal Governments</b>				
<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
	Thomas Brings, THPO	605-867-5624	PO Box 129 Kyle, SD 57752	t.brings@oglala.org
Ponca Tribe of Nebraska	Larry Wright, Chairman	402-857-3391	PO Box 288 Niobrara, NE 68760	
	Stacy Laravie, THPO	402-857-3519	PO Box 288 Niobrara, NE 68760	ssettje@poncatrib-ne.org
Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota	Scott O. Herman, President	605-747-2381	PO Box 430 Rosebud, SD 57570-0430	
	Ione Quigley, THPO	605-747-4211	PO Box 809 Rosebud, SD 57570	ione.quigley@rst-nsn.gov
Santee Sioux Nation, Nebraska	Misty Frazier, THPO	402-857-3568	425 Frazier Ave. N. Suite 2 Niobrara, NE 68760	ssn.thpo@gmail.com
	Roger Trudell, Chairperson	402-857-2772	108 Spirit Lake Ave. W Niobrara, NE 68760	rtrudell@santeedakota.org
Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, South Dakota	Verlyn Beaudreau, Interim Chairperson	605-698-3911	PO Box 509 Agency Village, SD 57262-0509	chairman@swo-nsn.gov
	Dianne Desrosiers, THPO	605-698-3584	P.O. Box 907 Sisseton, SD 57262-0509	dianned@swo-nsn.gov
Spirit Lake Tribe, North Dakota	Susie Fox, Interim Director THPO	701-766-4031	P.O. Box 198 Fort Totten, ND 58335-0359	sfox@gondtc.com
	Myra Pearson, Chairwoman	701-766-4221	PO Box 359 Fort Totten, ND 58335-0359	slt-adminsec@spiritlakenation.com
Standing Rock Sioux Tribe of North & South Dakota	Janet Alkire, Chairperson	701-854-8500	PO Box D Fort Yates, ND 58538-0522	
	Jon Eagle, THPO	701-854-8645	PO Box D Fort Yates, ND 58538	j.eagle@standingrock.org
Yankton Sioux Tribe of South Dakota	Kip Spotted Eagle, THPO	605-384-3641	PO Box 1153 Wagner, SD 57380	yst.thpo@gmail.com
	Robert Hawk, Chairperson	605-384-3641 ext. 1015	PO Box 1153 Wagner, SD 57380-1153	robertflyinghawk@gmail.com

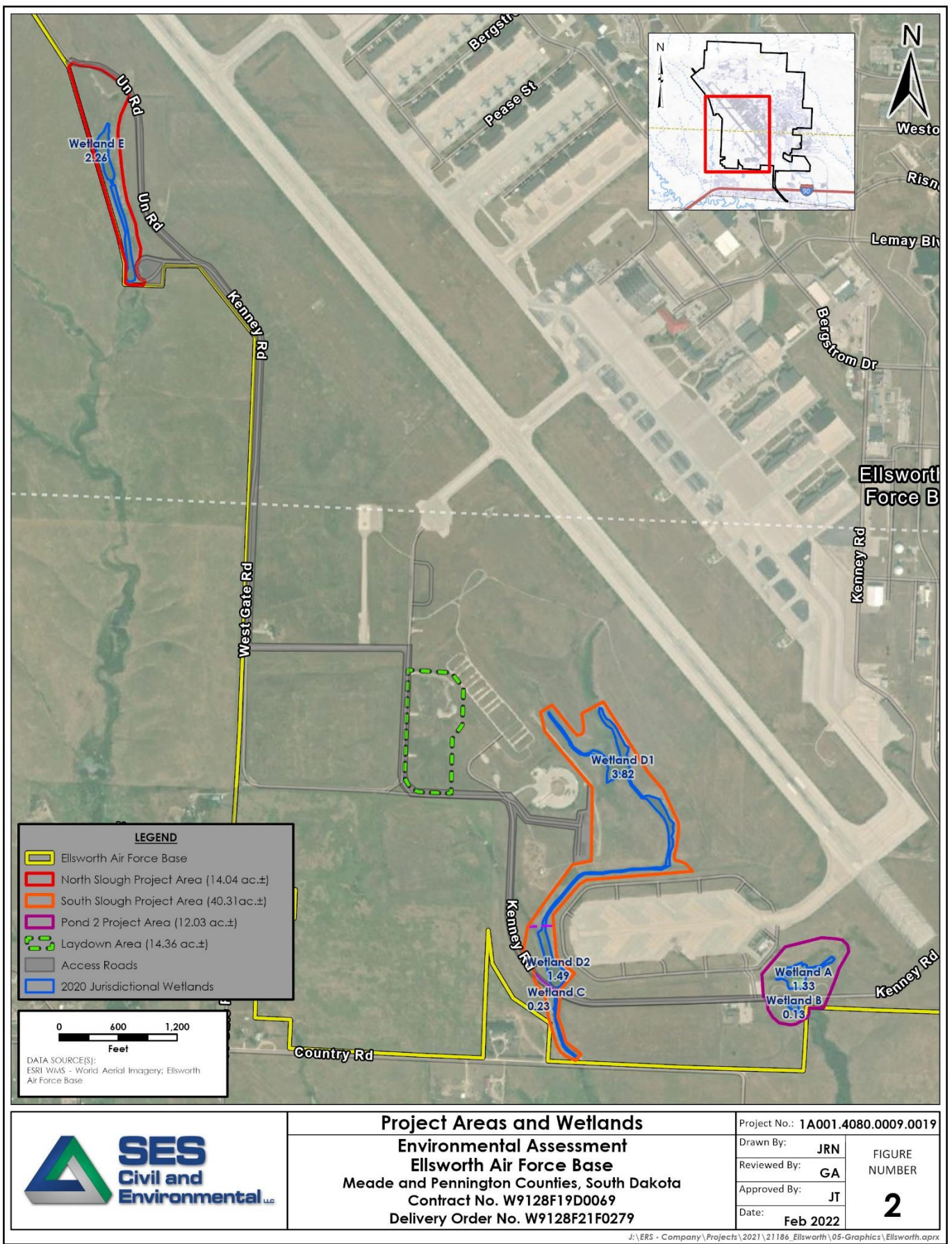
## **Appendix A-2 – EAFB Scoping Letters**

## **EAFB Scoping Letter Agency Attachments**

## **Attachment 1 – Figures**







## **Attachment 2 – IICEP Distribution List**



<b>United States Army Corps of Engineers (USACE)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
USACE SD Regulatory Office		605-224-8531	28563 Powerhouse Road, Pierre, SD 57501	SDRegulatoryMailbox@usace.army.mil
<b>United States Fish and Wildlife Service (USFWS), Mountain Prairie Region</b>				
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	Tom McDonald Chairman	406-675-2700	PO Box 278 Pablo, MT 59855-0278	council@cslt.org

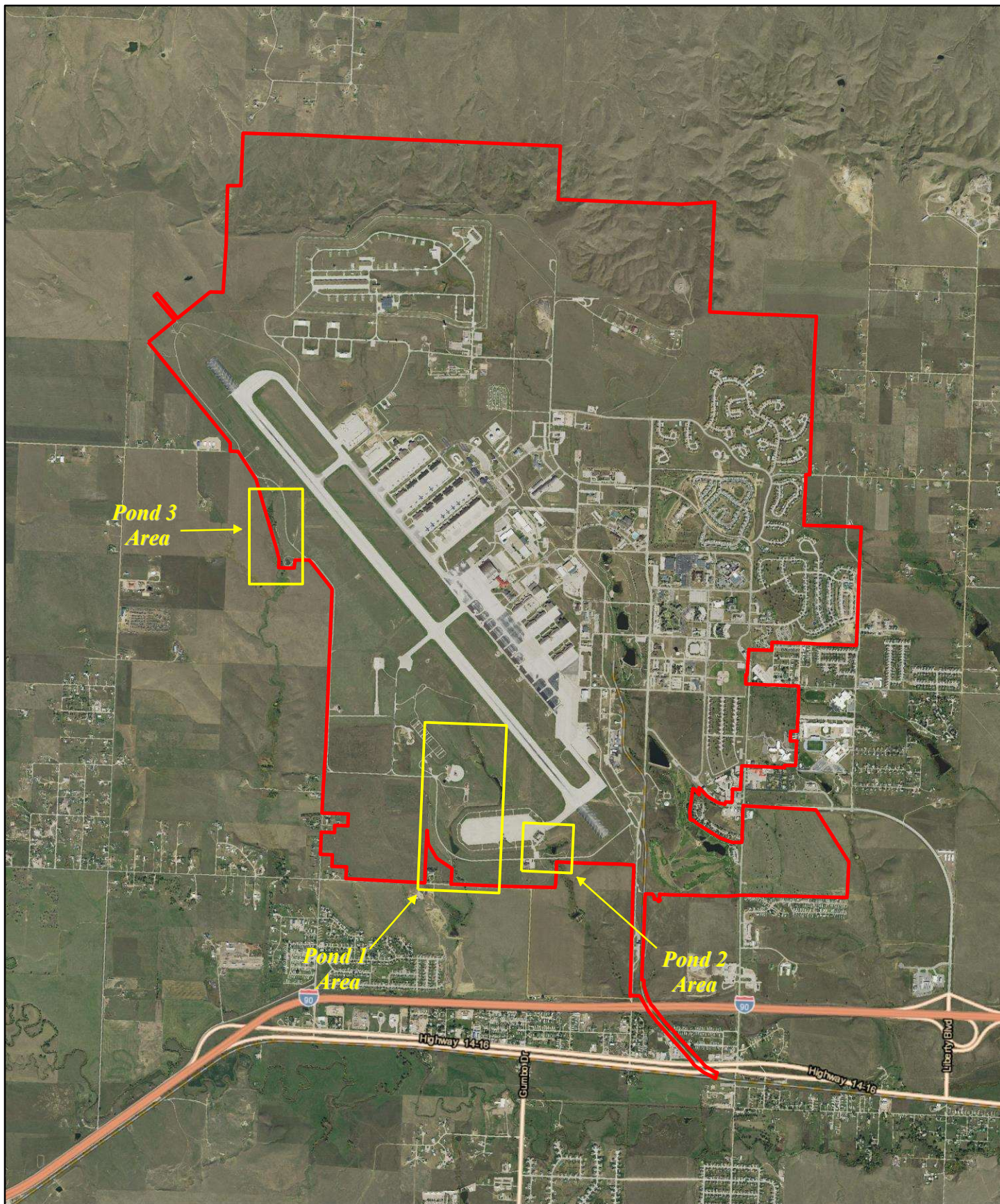
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Crow Creek Sioux Tribe of the Crow Creek Reservation, South Dakota	Lester Thompson Jr., Chairperson	605-245-2221	PO Box 50 Fort Thompson, SD 57339-0050	
	Merle Marks, THPO	605-245-2221	PO Box 50 Fort Thompson, SD 57339	cchistory@midstatesd.net
Crow Tribe of Montana	Aaron Brien, THPO	406-529-7991	PO Box 159 Crow Agency, MT 59022	aaron.brien@crow-nsn.gov
	AJ Not Afraid, Chairperson	406-638-3715	PO Box 159 Crow Agency, MT 59022	aj.notafraid@crow-nsn.gov
Eastern Shoshone Tribe of the Wind River Reservation, Wyoming	Joshua Mann, THPO	307-335-2081	PO Box 538 Fort Washakie, WY 82514	jmann@easternshoshone.org
Flandreau Santee Sioux Tribe of South Dakota	Garrie Kills-A-Hundred, THPO	605-864-1236	PO Box 283 Flandreau, SD 57028	garrie.killsahundred@FSST.org
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	Jeffery (Jeff) Stiffarm President	406-353-2205	RR1, Box 66 Harlem, MT 59526-9455	jeffery.stiffarm@ftbelknap.org
Kiowa Indian Tribe of Oklahoma	Matthew Komalty, Chairman	508-654-2300	PO Box 369 Carnegie, OK 73015	tharris@kiowatribe.org
Lower Brule Sioux Tribe of the Lower Brule Reservation, South Dakota	Clyde Estes, Chairman	605-473-5561	187 Oyate Circle Lower Brule, SD 57548-8500	ClydeEstes@lowerbrule.net
Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana	Serena Wetherelt Vice-President	406-477-6284	PO Box 128 Lame Deer, MT 59043-0128	serena.wetherelt@cheyennenation.com
	Teanna Limpy, THPO	406-477-4839	PO Box 128 Lame Deer, MT 59043	Teanna.Limpy@cheyennenation.com
Oglala Sioux Tribe	Julian Bear Runner, President	605-867-8487	PO Box 2070 Pine Ridge, SD 57770-2070	president.bearrunner@oglala.org

<b>Tribal Governments</b>				
<i>Tribes</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
	Thomas Brings, THPO	605-867-5624	PO Box 129 Kyle, SD 57752	t.brings@oglala.org
Ponca Tribe of Nebraska	Larry Wright, Chairman	402-857-3391	PO Box 288 Niobrara, NE 68760	
	Stacy Laravie, THPO	402-857-3519	PO Box 288 Niobrara, NE 68760	ssettje@poncatribes-ne.org
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	Ione Quigley, THPO	605-747-4211	PO Box 809 Rosebud, SD 57570	ione.quigley@rst-nsn.gov
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	Roger Trudell, Chairperson	402-857-2772	108 Spirit Lake Ave. W Niobrara, NE 68760	rtrudell@santeedakota.org
Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, South Dakota	Verlyn Beaudreau, Interim Chairperson	605-698-3911	PO Box 509 Agency Village, SD 57262-0509	chairman@swo-nsn.gov
	Dianne Desrosiers, THPO	605-698-3584	P.O. Box 907 Sisseton, SD 57262-0509	dianned@swo-nsn.gov
Spirit Lake Tribe, North Dakota	Susie Fox, Interim Director THPO	701-766-4031	P.O. Box 198 Fort Totten, ND 58335-0359	sfox@gondtc.com
	Myra Pearson, Chairwoman	701-766-4221	PO Box 359 Fort Totten, ND 58335-0359	slt-adminsec@spiritlakenation.com
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	Robert Hawk, Chairperson	605-384-3641 ext. 1015	PO Box 1153 Wagner, SD 57380-1153	robertflyinghawk@gmail.com

# **EAFB Scoping Letter Tribal Government Attachments**

## **Attachment 1 – Map of Project Areas and Proposed APE**





LEGEND

Ellsworth Air Force Base



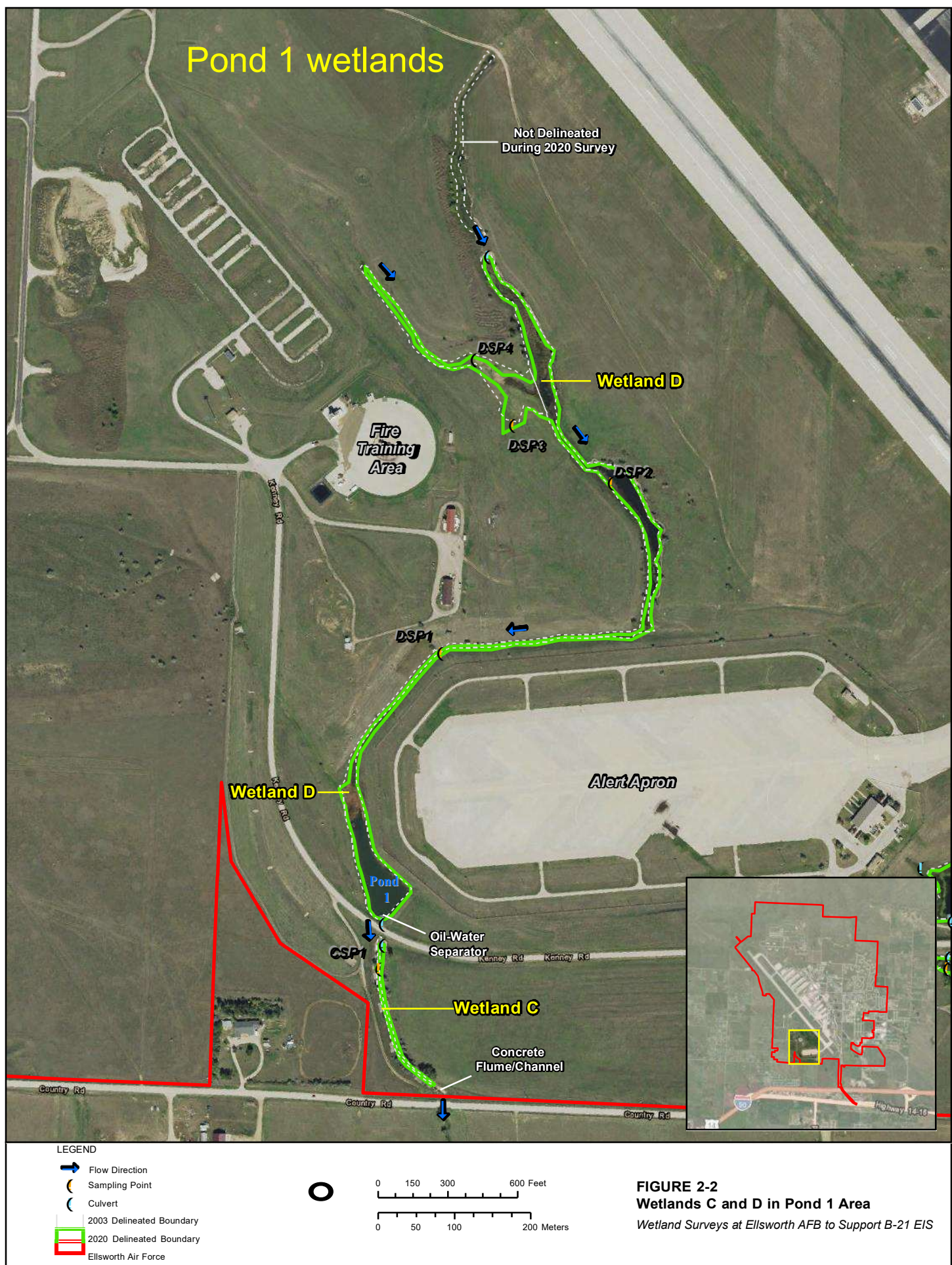
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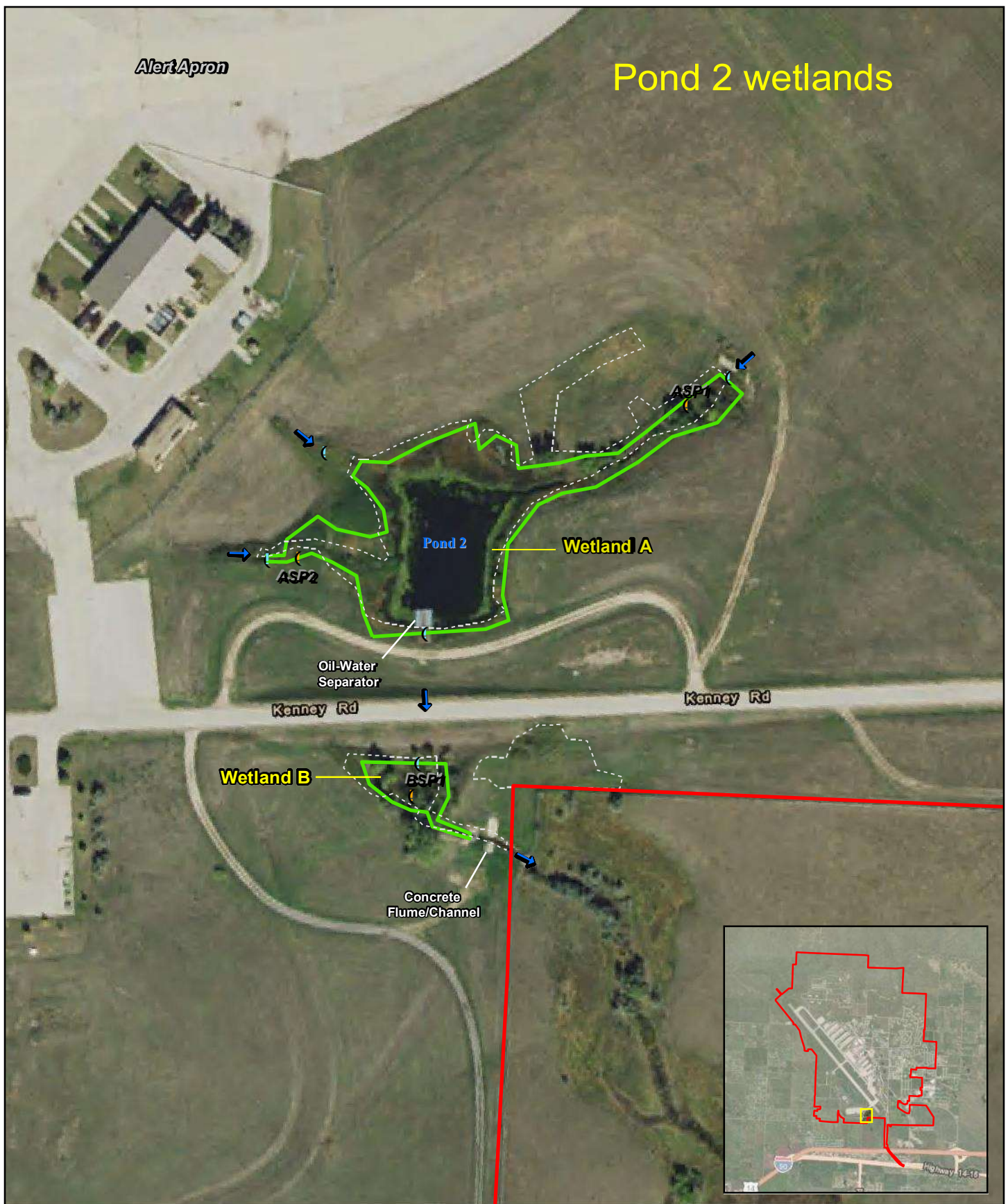
**FIGURE 1-2**  
**Location of Wetland Survey Areas**

*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*





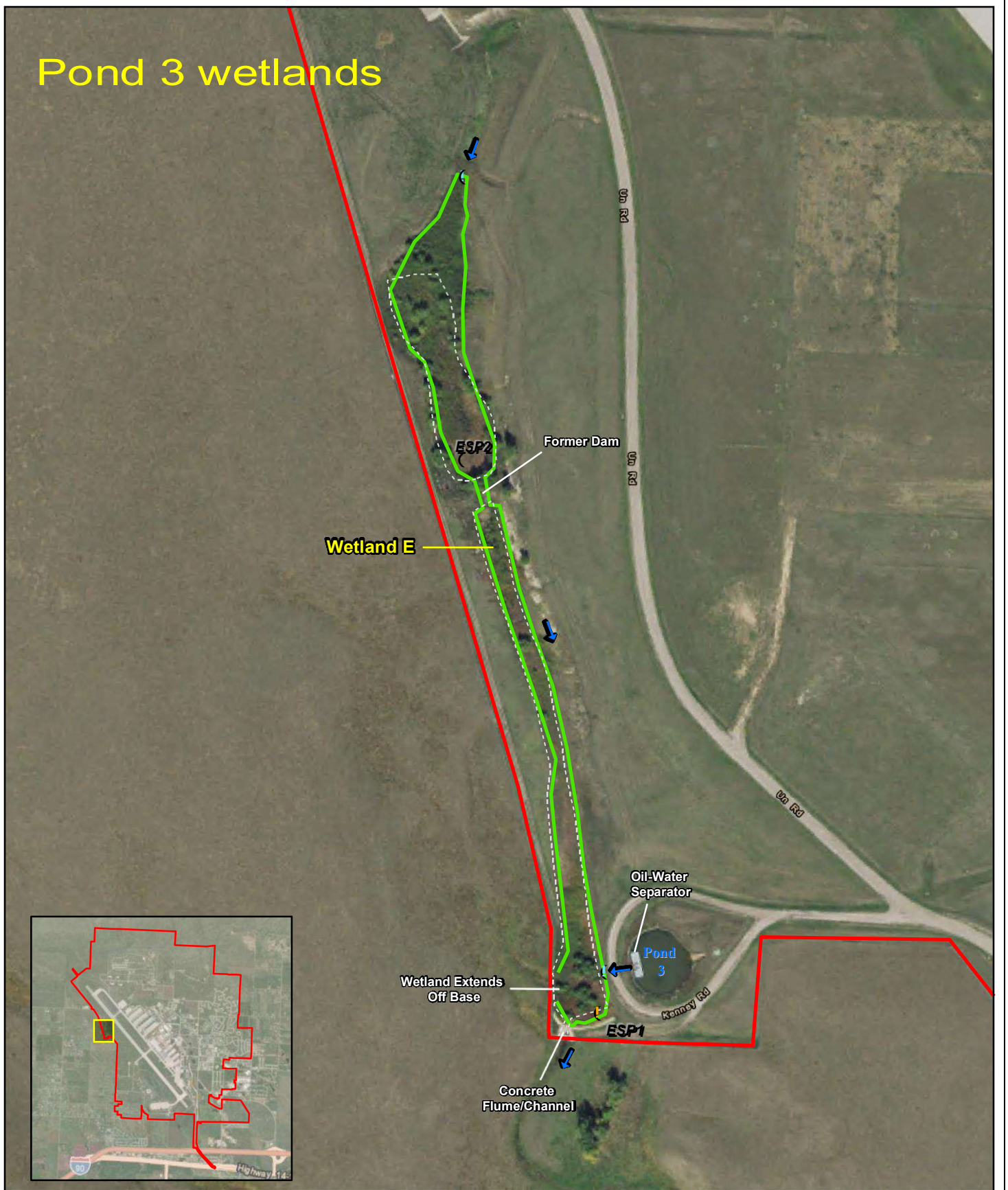




**FIGURE 2-1**  
**Wetlands A and B in Pond 2 Area**  
 Wetland Surveys at Ellsworth AFB to Support B-21 EIS



# Pond 3 wetlands



## LEGEND



Flow Direction  
Sampling Point



Culvert

2003 Delineated Boundary

2020 Delineated Boundary

Ellsworth Air Force Base



0 75 150 300 Feet

0 25 50 100 Meters

**FIGURE 2-3**  
**Wetland E in Pond 3 Area**

*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*

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<b>United States Army Corps of Engineers (USACE)</b>				
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<b>United States Fish and Wildlife Service (USFWS), Mountain Prairie Region</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Amity Bass	Field Supervisor, North and South Dakota Ecological Services	(605) 224-8693 ext 224	420 South Garfield Avenue, Suite 400 Pierre, SD 57501	amity_bass@fws.gov
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Lee DePalo	Regional Administrator, Region 8	(303) 235-4812	Denver Federal Center, Building 710 P.O. Box 25267 Denver, CO 80255-0267	
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	Lee Spoonhunter, Chairperson	307-332-6120	PO Box 396 Fort Washakie, WY 82514-0396	lee.spoonhunter@northernarapaho.com
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Cheyenne and Arapaho Tribes, Oklahoma	Max Bear, THPO	405-422-7416	700 Black Kettle Blvd Concho, OK 73022	mbear@c-a-tribes.org
	Reggie Wassana, Governor	800-422-8224	P.O. Box 38 Concho, OK 73022	rwassana@c-a-tribes.org
Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota	Steven Vance, THPO	605-964-7554	PO Box 590 Eagle Butte, SD 57625	stevev.crstpres@outlook.com
	Harold Frazier, Chairperson	605-964-4155	PO Box 590 Eagle Butte, SD 57625-0590	HaroldCFrazier@yahoo.com
Comanche Nation, Oklahoma	Mark Woommavovah, Chairperson	580-492-3240	PO Box 908 Lawton, OK 73502	jennifer.rodriguez@comanchenation.com
	Martina Minthorn, THPO	580-595-9618	6 SW D Avenue Lawton, OK 73502	martina.minthorn@comanchenation.com
Confederated Salish and Kootenai Tribes of the Flathead Reservation	Kathryn McDonald, THPO	406-675-2700, ext. 1082	PO Box 278 Pablo, MT 59855	kathryn.mcdonald@cslt.org
	Tom McDonald Chairman	406-675-2700	PO Box 278 Pablo, MT 59855-0278	council@cslt.org

<b>Tribal Governments</b>				
<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Crow Creek Sioux Tribe of the Crow Creek Reservation, South Dakota	Lester Thompson Jr., Chairperson	605-245-2221	PO Box 50 Fort Thompson, SD 57339-0050	
	Merle Marks, THPO	605-245-2221	PO Box 50 Fort Thompson, SD 57339	cchistory@midstatesd.net
Crow Tribe of Montana	Aaron Brien, THPO	406-529-7991	PO Box 159 Crow Agency, MT 59022	aaron.brien@crow-nsn.gov
	AJ Not Afraid, Chairperson	406-638-3715	PO Box 159 Crow Agency, MT 59022	aj.notafraid@crow-nsn.gov
Eastern Shoshone Tribe of the Wind River Reservation, Wyoming	Joshua Mann, THPO	307-335-2081	PO Box 538 Fort Washakie, WY 82514	jmann@easternshoshone.org
Flandreau Santee Sioux Tribe of South Dakota	Garrie Kills-A-Hundred, THPO	605-864-1236	PO Box 283 Flandreau, SD 57028	garrie.killsahundred@FSST.org
	Anthony Reider, Chairperson	605-997-3891	PO Box 283 Flandreau, SD 57028-0283	president@fsst.org
Fort Belknap Indian Community of the Fort Belknap Reservation of Montana	Michael Blackwolf, THPO	406-353-2295	656 Agency Main Street Harlem, MT 59526-9455	mblackwolf@ftbelknap.org
	Jeffery (Jeff) Stiffarm President	406-353-2205	RR1, Box 66 Harlem, MT 59526-9455	jeffery.stiffarm@ftbelknap.org
Kiowa Indian Tribe of Oklahoma	Matthew Komalty, Chairman	508-654-2300	PO Box 369 Carnegie, OK 73015	tharris@kiowatribe.org
Lower Brule Sioux Tribe of the Lower Brule Reservation, South Dakota	Clyde Estes, Chairman	605-473-5561	187 Oyate Circle Lower Brule, SD 57548-8500	ClydeEstes@lowerbrule.net
Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana	Serena Wetherelt Vice-President	406-477-6284	PO Box 128 Lame Deer, MT 59043-0128	serena.wetherelt@cheyennenation.com
	Teanna Limpy, THPO	406-477-4839	PO Box 128 Lame Deer, MT 59043	Teanna.Limpy@cheyennenation.com
Oglala Sioux Tribe	Julian Bear Runner, President	605-867-8487	PO Box 2070 Pine Ridge, SD 57770-2070	president.bearrunner@oglala.org

<b>Tribal Governments</b>				
<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
	Thomas Brings, THPO	605-867-5624	PO Box 129 Kyle, SD 57752	t.brings@oglala.org
Ponca Tribe of Nebraska	Larry Wright, Chairman	402-857-3391	PO Box 288 Niobrara, NE 68760	
	Stacy Laravie, THPO	402-857-3519	PO Box 288 Niobrara, NE 68760	ssettje@poncatrib-ne.org
Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota	Scott O. Herman, President	605-747-2381	PO Box 430 Rosebud, SD 57570-0430	
	Ione Quigley, THPO	605-747-4211	PO Box 809 Rosebud, SD 57570	ione.quigley@rst-nsn.gov
Santee Sioux Nation, Nebraska	Misty Frazier, THPO	402-857-3568	425 Frazier Ave. N. Suite 2 Niobrara, NE 68760	ssn.thpo@gmail.com
	Roger Trudell, Chairperson	402-857-2772	108 Spirit Lake Ave. W Niobrara, NE 68760	rtrudell@santeedakota.org
Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, South Dakota	Verlyn Beaudreau, Interim Chairperson	605-698-3911	PO Box 509 Agency Village, SD 57262-0509	chairman@swo-nsn.gov
	Dianne Desrosiers, THPO	605-698-3584	P.O. Box 907 Sisseton, SD 57262-0509	dianned@swo-nsn.gov
Spirit Lake Tribe, North Dakota	Susie Fox, Interim Director THPO	701-766-4031	P.O. Box 198 Fort Totten, ND 58335-0359	sfox@gondtc.com
	Myra Pearson, Chairwoman	701-766-4221	PO Box 359 Fort Totten, ND 58335-0359	slt-adminsec@spiritlakenation.com
Standing Rock Sioux Tribe of North & South Dakota	Janet Alkire, Chairperson	701-854-8500	PO Box D Fort Yates, ND 58538-0522	
	Jon Eagle, THPO	701-854-8645	PO Box D Fort Yates, ND 58538	j.eagle@standingrock.org
Yankton Sioux Tribe of South Dakota	Kip Spotted Eagle, THPO	605-384-3641	PO Box 1153 Wagner, SD 57380	yst.thpo@gmail.com
	Robert Hawk, Chairperson	605-384-3641 ext. 1015	PO Box 1153 Wagner, SD 57380-1153	robertflyinghawk@gmail.com

## **EAFB Scoping Letter – Section 106**





**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Katie Wasley  
South Dakota State Historic Preservation Office (SHPO)  
Northern Historic Preservation Specialist  
900 Governors Drive  
Pierre SD 57501

Dear Ms. Wasley

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment.

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR Part 800), we have provided project information for your review and concurrence regarding the above-referenced project via consultation letter dated 6 June 2022. The Section 106 Project Review Form is provided in Attachment 1.

EAFB has determined that this project will not impact current or potential historic properties, and has made a preliminary Finding of “No Historic Properties Affected” pursuant to the NHPA based on the following:

1. EAFB Integrated Cultural Resource Management Plan (updated 2021): Pedestrian survey and soil auger testing of potential culturally significant sites within EAFB did not yield findings within EAFB BASH EA defined APEs.
2. EAFB has 21 National Register of Historic Places eligible buildings, however none are located within the APEs.

Please see the attached Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) Distribution List (Attachment 2)

Attached for your review are copies of relevant documents supporting our finding. This documentation satisfies requirements set forth at 36 CFR §800.11(d). In accordance with §800.4(d)(1)(i), your office has thirty days to object to this finding. Please respond within this timeframe, otherwise we will assume that you concur with our finding. If you concur, please sign on the line below and return a copy of this letter to Greg Johnson, Environmental Compliance Chief, 2125 Scott Dr., Ellsworth AFB, SD 57706.

Please provide any further information, comments, or questions to Ellsworth Air Force Base, Attn: Mr. Greg Johnson, Environmental Compliance Chief, 2125 Scott Dr., Ellsworth AFB, SD 57706; or by email at gregory.johnson.8@us.af.mil, with the subject titled as ATTN: EAFB BASH EA. Thank you for your assistance.

Sincerely

SHEFFIELD.JOSEPH.L.1158180096  
PH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

Digitally signed by  
SHEFFIELD.JOSEPH.L.11581800  
96  
Date: 2022.08.16 11:25:26 -06'00'

2 Attachments:

1. Section 106 Project Review Form
2. Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) Distribution List

Concurrence:

Ms. Katie Wasley  
South Dakota State Historic Preservation Office  
Northern Historic Preservation Specialist

## **Attachment 1 – Section 106 Project Review Form**

**SOUTH DAKOTA STATE HISTORICAL SOCIETY  
STATE HISTORIC PRESERVATION OFFICE (SHPO)  
SECTION 106 PROJECT REVIEW FORM**

Submission of a completed Section 106 Project Review Form with adequate information and attachments constitutes a request for review pursuant to Section 106 of the National Historic Preservation Act of 1966 (as amended). Section 106 requires the South Dakota State Historic Preservation Office to review all projects that are federally funded, licensed, or assisted. We reserve the right to request more information if needed. Typed forms are preferred. **SUBMITTAL OF THIS FORM WITHOUT ALL REQUESTED INFORMATION WILL CAUSE REVIEW DELAYS.**

Section 106 regulations provide for a 30-day response time by the South Dakota State Historic Preservation Office from the date of receipt of complete information.

For projects requiring a license from the Federal Communications Commission, please use FCC Forms 620 or 621. **DO NOT USE THIS FORM.**

**I. PROJECT INFORMATION**

☒ THIS IS A NEW SUBMITTAL

☐ THIS IS MORE INFORMATION RELATING TO SHPO PROJECT \_\_\_\_\_

#

**1. PROJECT NAME:** BASH Drainage Improvements EA

**2. FEDERAL AGENCY FUNDING, LICENSING, OR ASSISTING THE PROJECT**

A. AGENCY NAME: Ellsworth AFB

B. AGENCY CONTACT PERSON: Gary Brundige

**DETERMINATION OF EFFECT**

See page 5, #12 for descriptions and space for explanations.

☒ **No Historic Properties Affected**      ☐ **Adverse Effect**      ☐ **No Adverse Effect**

The responsible federal agency official must sign this form here prior to submitting it to the SHPO. Projects received without an appropriate signature will cause review delays. **This must be an original signature and not electronic.**

**SIGNATURE** \_\_\_\_\_ **DATE** 6 June 2022

Please type/ the following:

**NAME** Gary Brundige

**TITLE** Cultural Resources Manager

**AGENCY** Ellsworth Air Force Base

FOR SHPO USE ONLY. DO NOT WRITE OR INSERT ANYTHING HERE.

## SD SHPO SECTION 106 PROJECT REVIEW FORM

### 2. FEDERAL AGENCY FUNDING, LICENSING, OR ASSISTING THE PROJECT

A. AGENCY NAME: Department of the Air Force, Ellsworth AFB  
B. AGENCY CONTACT PERSON: Gary Brundige  
C. MAILING ADDRESS: 2125 Scott Dr, Ellsworth AFB, SD 57706  
D. EMAIL ADDRESS: gary.brundige@us.af.mil  
E. TELEPHONE NUMBER: 605-385-2690

### 3. STATE AGENCY FUNDING, LICENSING, OR ASSISTING THE PROJECT, IF APPLICABLE

A. AGENCY NAME: \_\_\_\_\_  
B. AGENCY CONTACT PERSON: \_\_\_\_\_  
C. MAILING ADDRESS: \_\_\_\_\_  
D. EMAIL ADDRESS: \_\_\_\_\_  
E. TELEPHONE NUMBER: \_\_\_\_\_  
F. IF THIS IS A GRANT PROGRAM, PLEASE INCLUDE THE NAME OF THE PROGRAM (FOR EXAMPLE, CDBG OR SRF): \_\_\_\_\_

### 4. CONSULTANT CONTACT PERSON, IF APPLICABLE

A. COMPANY NAME: \_\_\_\_\_  
B. CONTACT PERSON: \_\_\_\_\_  
C. MAILING ADDRESS: \_\_\_\_\_  
D. EMAIL ADDRESS: \_\_\_\_\_  
E. TELEPHONE NUMBER: \_\_\_\_\_

### 5. PROJECT LOCATION

A. ADDRESS: South and west of the EAFB runway along of Kenny Road  
B. CITY: Ellsworth AFB  
C. COUNTY: Pennington  
D. TOWNSHIP: T2N E. RANGE R8E F. SECTION S11, 13

G. Provide a USGS 7.5 minute quadrangle map of the project area. If the project is in an urban area, show the location(s) on a city map. Photocopies are acceptable, but poor quality maps or insufficient information will cause review delays. Do not enlarge or reduce the map.

Is a map showing the exact location of the project attached to this form? YES ☒ or NO ☐

## SD SHPO SECTION 106 PROJECT REVIEW FORM

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### 6. PROJECT DESCRIPTION

Describe all anticipated work associated with the project. Be specific. The description should include all ancillary facilities such as access roads, placement of utilities, additional outbuildings, fences, material borrow areas, staging areas, etc. Use as much space and as many pages as needed to clearly describe the project.

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This Environmental Assessment (EA) evaluates a project that will modify wetland wildlife habitat presenting a Bird/Wildlife Aircraft Strike Hazard (BASH) adjacent to the primary runway at Ellsworth Air Force Base, SD.  
(Continued on Page 8)

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### 7. PROJECT PLANS

Plans, drawings, engineering specifications etc. should be included to help explain the project, but these cannot replace the above verbal description. If new construction is involved, elevation drawings and plans should be included.

Are plans, drawings, engineering specifications, or similar documents attached to this form?

YES ☐ or NO ☒

### 8. PHOTOGRAPHS

Provide several clear, original photographs of the project location. Also, include photographs of every affected buildings/structures, including an overall front view of each structure and other views necessary to describe fully the structures and the project. Streetscape photographs of surrounding buildings and structures should also be included. Photographs should be color and can be either printed or digital images submitted on a CD. Printed digital photographs should have a high dpi and clear resolution. Photographs should also either be labeled or include a key.

NOTE: Projects submitted with insufficient photographs will cause review delays.

Are photographs that clearly show the project location attached to this form? YES ☒ or NO ☐

### 9. PROJECT AREA OF POTENTIAL EFFECT (APE)

The APE consists of the geographic area or areas within which a project may directly or indirectly, cause changes in the character or use of historic properties. In most instances, the APE is not simply the project's physical boundaries or right-of-way. The APE also includes all ancillary facilities such as access roads, placement of utilities, additional outbuildings, fences, material borrow areas, staging areas, etc. The APE may include visual and audible effects.

Highlight the APE on a localized map.

A. Is a map highlighting the APE attached to this form? YES ☒ or NO ☐

B. Provide a written description of the APE. Describe the steps taken to identify the APE, and justify why the APE boundaries were chosen. If the APE has been previously disturbed, include an explanation of the previous ground disturbance.

## SD SHPO SECTION 106 PROJECT REVIEW FORM

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### II. IDENTIFY HISTORIC PROPERTIES

#### 10. IDENTIFICATION EFFORTS (See 36 CFR 800.4)

Identification of historic properties may include, but is not limited, any of the following identification methods. Check which steps were taken to identify historic properties in the APE. Check all that apply and describe the results.

A. ☐ RECORD SEARCH

Conducted a record search through the Archaeological Research Center in Rapid City. Record searches are available for a fee by calling 605.394.1936. This will include a search of all previously-surveyed archaeological sites and structures within the APE and within one mile of the APE.

If a record search was conducted, is a copy of the results attached to this form? YES ☐ or NO ☐

B. ☐ ON-THE-GROUND SURVEY

Survey by an archaeologist and/or an architectural historian of project area not previously surveyed. Survey type will depend on the scope of the project. A list of professionals is available at <http://history.sd.gov/Preservation/TechAssist/ConsultantsContractors.aspx>. Guidelines for surveys and reports are available at: [http://history.sd.gov/Preservation/PresLaws/r&c\\_guidelines.pdf](http://history.sd.gov/Preservation/PresLaws/r&c_guidelines.pdf) and <http://history.sd.gov/Preservation/OtherServices/HSArchitecturalSurveyManual2006.pdf>.

If a survey was conducted, is a copy of the survey report and/or survey forms attached to this form?  
YES ☐ or NO ☐

C. ☐ SEARCHED THE NATIONAL REGISTER OF HISTORIC PLACES DATABASE

This database is available online at: <http://nrhp.focus.nps.gov/>. NOTE: This database only includes properties *listed* on the National Register of Historic Places. Properties that are *eligible* for the National Register must also be taken into consideration.

If the National Register database was searched, is a printout of any results attached to this form?  
YES ☐ or NO ☐

D. ☐ BACKGROUND RESEARCH

Please describe sources reviewed and findings of research. This could include such things as reviewing county or city history books or conducting research at a local historical society, research facility, or county courthouse.

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E. ☐ ORAL HISTORY INTERVIEWS

Please list who was interviewed and describe what was learned through the interviews.

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## SD SHPO SECTION 106 PROJECT REVIEW FORM

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### F. ☐ CONSULTATION

Please describe who was consulted and the results of the consultation. Examples include tribes, historic preservation commissions, the public, and local historical societies.

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### G. ☒ OTHER

Describe any other efforts undertaken to identify historic properties and the results of those efforts.

Historic properties on Ellsworth AFB have been identified through a number of surveys and consultation with SD SHPO. Twenty-one properties on EAFB have been identified as eligible for inclusion on the NRHP. Three of these properties are scheduled for demolition under this action.

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## 11. HISTORIC PROPERTIES FINDING

Based on the efforts described above to identify historic properties, please choose one finding for the project. There are (mark one):

- ☐ Historic Properties Present in the APE
- ☐ No Historic Properties Present in the APE

## III. ASSESS EFFECTS

### 12. DETERMINATION OF EFFECT

The federal agency must submit a determination of effect for the SHPO to review this project. Based on the information provided above, the responsible agency official should make a determination of effect on historic properties for this project. Please select and mark one of the following determinations, then explain the basis for your decision.

- ☒ **No Historic Properties Affected** [36 CFR 800.4(d)(1)] – For a determination of no historic properties affected, the agency official finds no historic properties present or that the undertaking will have no effect upon historic properties as defined in Sec. 800.16(i). Please explain.

No Historic Properties located in the APE.

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- ☐ **Adverse Effect** [36 CFR Part 800.5(a)(1)] – For a determination of adverse effect, the undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects that may occur later in time, be farther removed in distance, or be cumulative. Please explain.
- 
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## SD SHPO SECTION 106 PROJECT REVIEW FORM

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☐ **No Adverse Effect** [36 CRF Part 800.5(b)] – For a determination of no adverse effect, the undertaking is modified or conditions are imposed to avoid adverse effects to a historic property. Please explain.

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### **Please print and mail completed form to:**

Review and Compliance Coordinator  
South Dakota State Historical Society  
900 Governors Drive  
Pierre, SD 57501

Questions about Section 106 can be directed to:

Paige Olson  
Review and Compliance Coordinator  
[Paige.Olson@state.sd.us](mailto:Paige.Olson@state.sd.us)  
605.773.6004

OR

Jenna Carlson Dietmeier  
Review and Compliance Archaeologist  
[Jenna.CarlsnDietmeier@state.sd.us](mailto:Jenna.CarlsnDietmeier@state.sd.us)  
605.773.8370

Questions about Section 106 projects on existing buildings or structures can be directed to:

Kate Nelson  
Restoration Specialist  
[Kate.Nelson@state.sd.us](mailto:Kate.Nelson@state.sd.us)  
605.773.6005

Project information submitted cannot be returned. This documentation is kept on file at the South Dakota State Historical Society. We review faxed and electronic submissions in the same manner as any other submission and with the same considerations for clarity and completeness. However, original documents with original signature must follow all faxed and electronic submissions. The submission of incomplete, unclear, or confusing information may result in unnecessary delays in the review process until adequate information is obtained.

## SD SHPO SECTION 106 PROJECT REVIEW FORM

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### Additional Resources

1. South Dakota State Historic Preservation Office <http://history.sd.gov/Preservation/>
  - a. Link to National and State Register Listed Properties:  
<http://history.sd.gov/Preservation/NatReg/NatReg.aspx>
  - b. Historic Contexts:  
[history.sd.gov/Preservation/OtherServices/SHPODocs.aspx](http://history.sd.gov/Preservation/OtherServices/SHPODocs.aspx)
  - c. *Guidelines for Cultural Resource Surveys and Survey Reports 2005*:  
[http://history.sd.gov/Preservation/PresLaws/r&c\\_guidelines.pdf](http://history.sd.gov/Preservation/PresLaws/r&c_guidelines.pdf)
2. Advisory Council on Historic Preservation: [www.achp.gov](http://www.achp.gov)
  - a. Link to National Historic Preservation Act of 1966 as amended
  - b. 36 CFR Part 800 – Protection of Historic Properties
3. National Park Service: [www.nps.gov/](http://www.nps.gov/)
  - a. National Register of Historic Places: [www.nps.gov/nr/](http://www.nps.gov/nr/)
  - b. Publications (National Register Bulletins, Preservation Briefs, etc.):  
[www.nps.gov/history/publications.htm](http://www.nps.gov/history/publications.htm)
4. Archaeological Research Center: [history.sd.gov/Archaeology/](http://history.sd.gov/Archaeology/) or 605.394.1936
  - a. Record Search Information
5. State Archives: [history.sd.gov/Archives/](http://history.sd.gov/Archives/) or 605.773.3804
  - a. Historic photographs
  - b. Research material

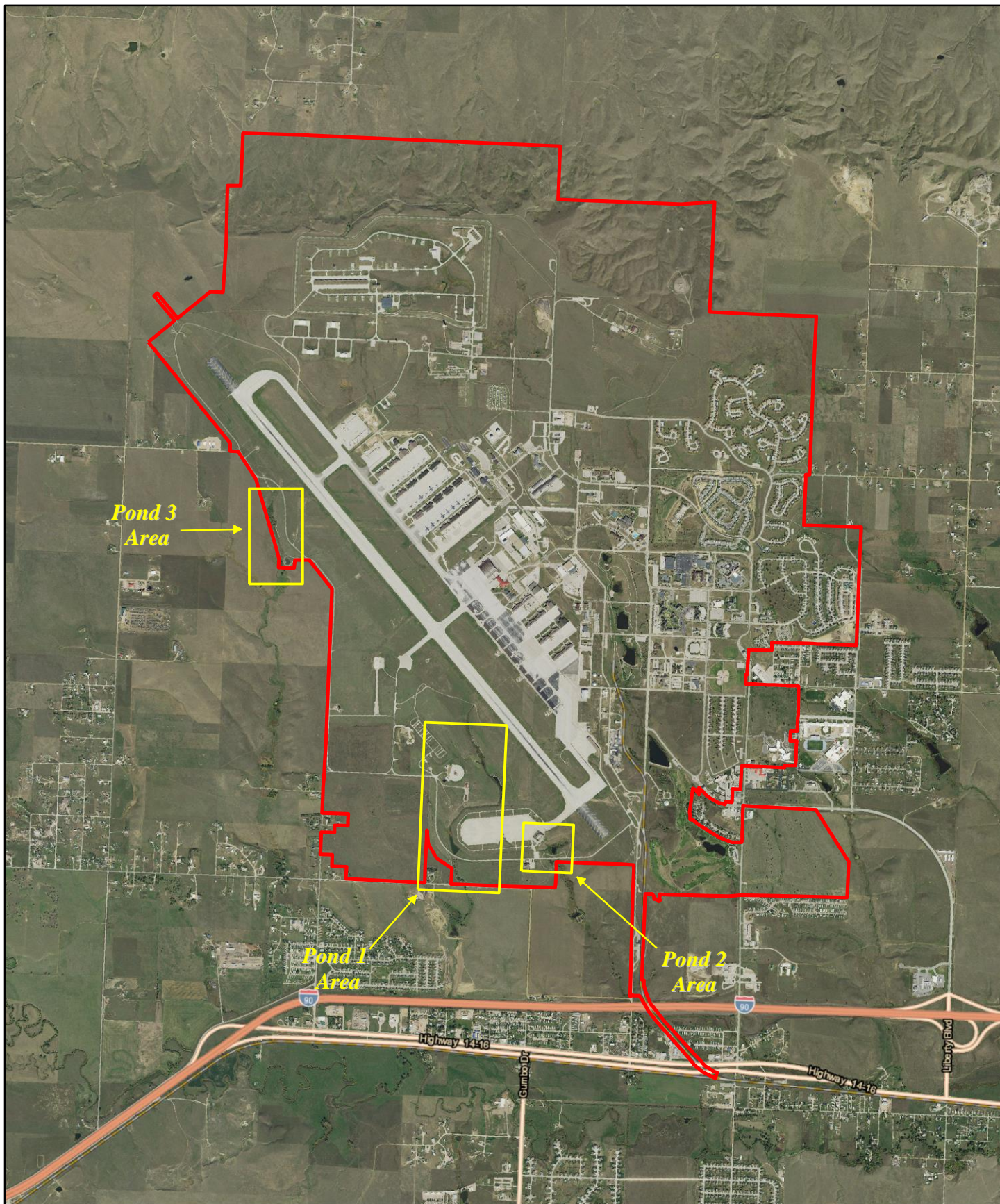
## SD SHPO SECTION 106 PROJECT REVIEW FORM

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Continued #6

The EA shall provide sufficient information to analyze potential environmental impacts associated with creating positive drainage of water through three drainage systems (hereafter referred to as Pond 1 wetlands, Pond 2 wetlands, and Pond 3 wetlands) adjacent to the Ellsworth AFB primary instrument, Runway 13-31 (see Bash Reduction Project Areas map). The North Slough runs approximately 2,000 ft adjacent to the west perimeter fence beginning at the existing storm pipe outlet across from Taxiway F and running to Outfall 3 (See Pond 3 wetland map). The south slough project area is approximately 4,000 ft beginning at the programmed drainage improvement project completion point (approximately 1,000 ft from the existing storm pipe outlet on the southwest side of the runway) through Pond 1 (see Pond 1 wetland map). The Pond 2 drainage runs approximately 550 ft from the storm pipe outlet in the south Clear Zone of runway 13-31 through Pond 2 to the outlet structure (see Pond 2 wetland map). This work is needed to remove areas of ponding water, hydrophytic vegetation, and wetlands habitats in the drainage attractive to wildlife and representing Bird/Aircraft Strike Hazards (BASH). The EA shall analyze proposed methods of construction and alternate methods. Methods of conveyance of the water include installation of storm sewer pipe, concrete channels, regraded turf reinforced vegetated channel, cable concrete protected channel, or combinations of all these methods. Analysis will include possible enlargement of the Pond 1 to increase storage capacity and replacement of Pond 1 outlet structure. A wetland delineation and Jurisdictional determination were completed in 2020. The North Slough contains 2.26 acres of Jurisdictional Wetlands, the South Slough contains 5.54 acres of Jurisdictional Wetlands, and Pond 2 contains 1.43 acres of Jurisdictional Wetlands. See attached four (4) wetland maps and supporting government furnished documents for additional details on scope of the proposal.





LEGEND

Ellsworth Air Force Base



0 1,000 2,000 4,000 Feet

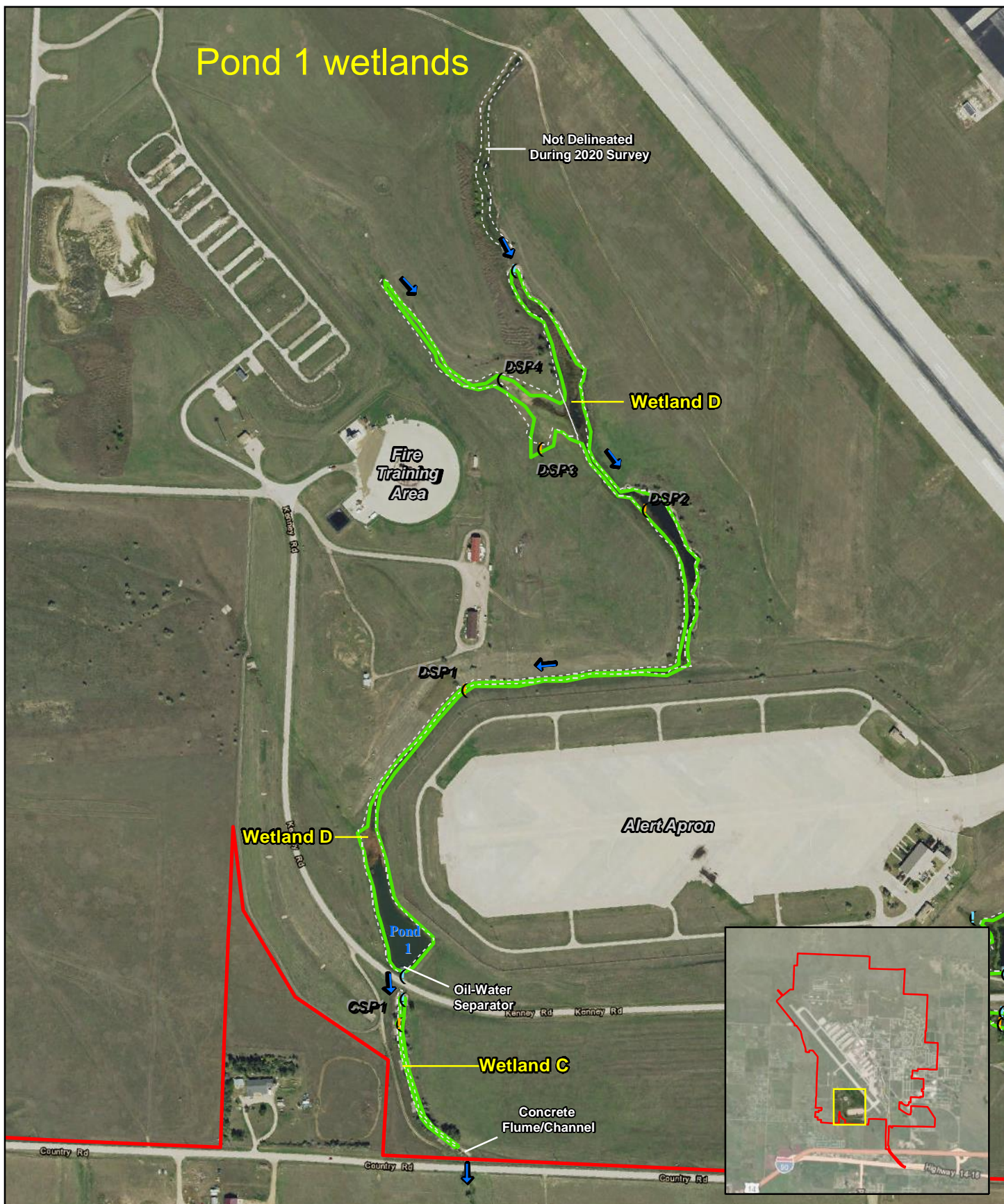
0 300 600 1,200 Meters

**FIGURE 1-2**

**Location of Wetland Survey Areas**

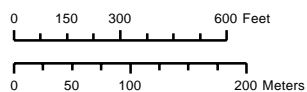
*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*





#### LEGEND

- Flow Direction
- Sampling Point
- Culvert
- 2003 Delineated Boundary
- 2020 Delineated Boundary
- Ellsworth Air Force

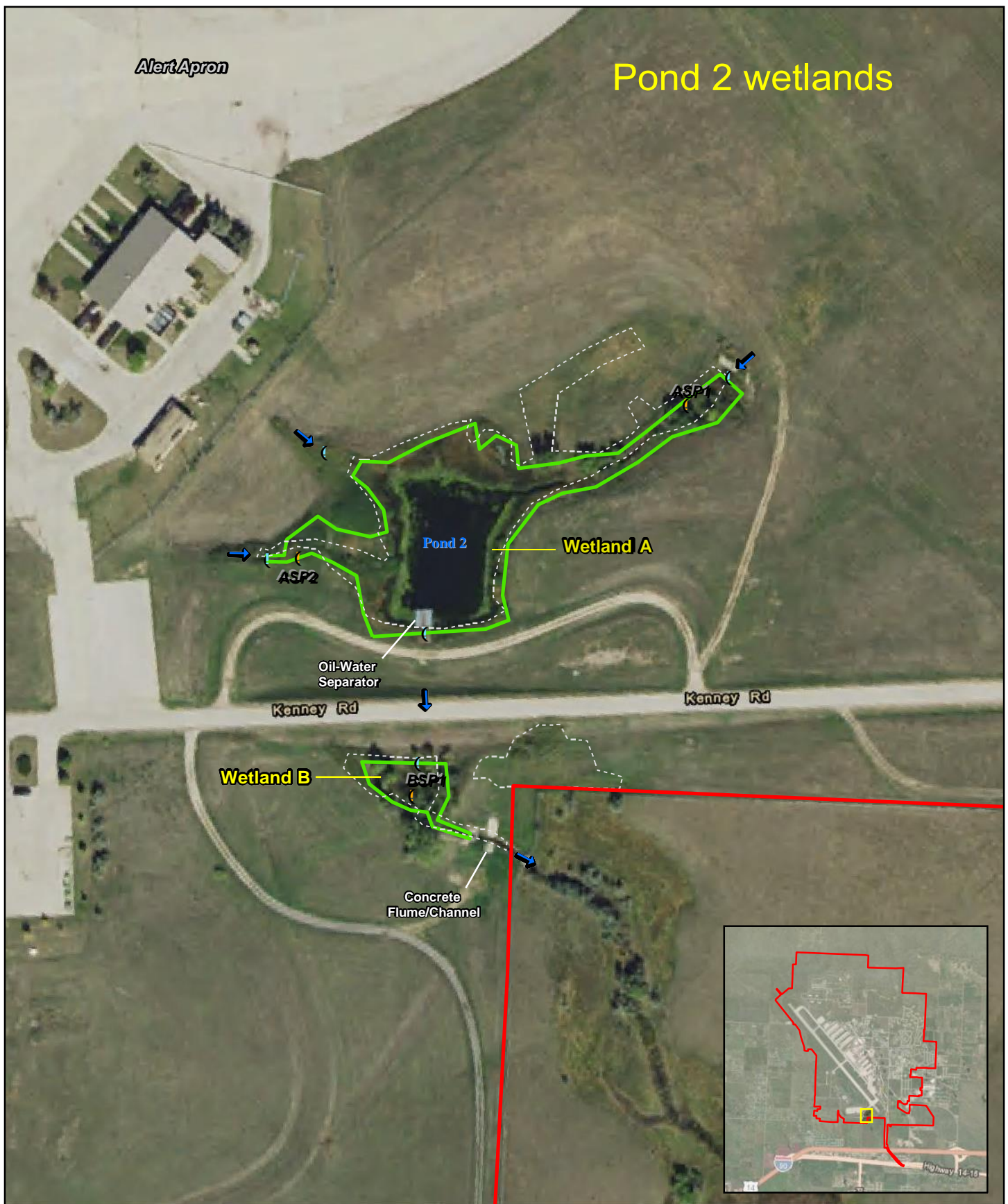


**FIGURE 2-2**

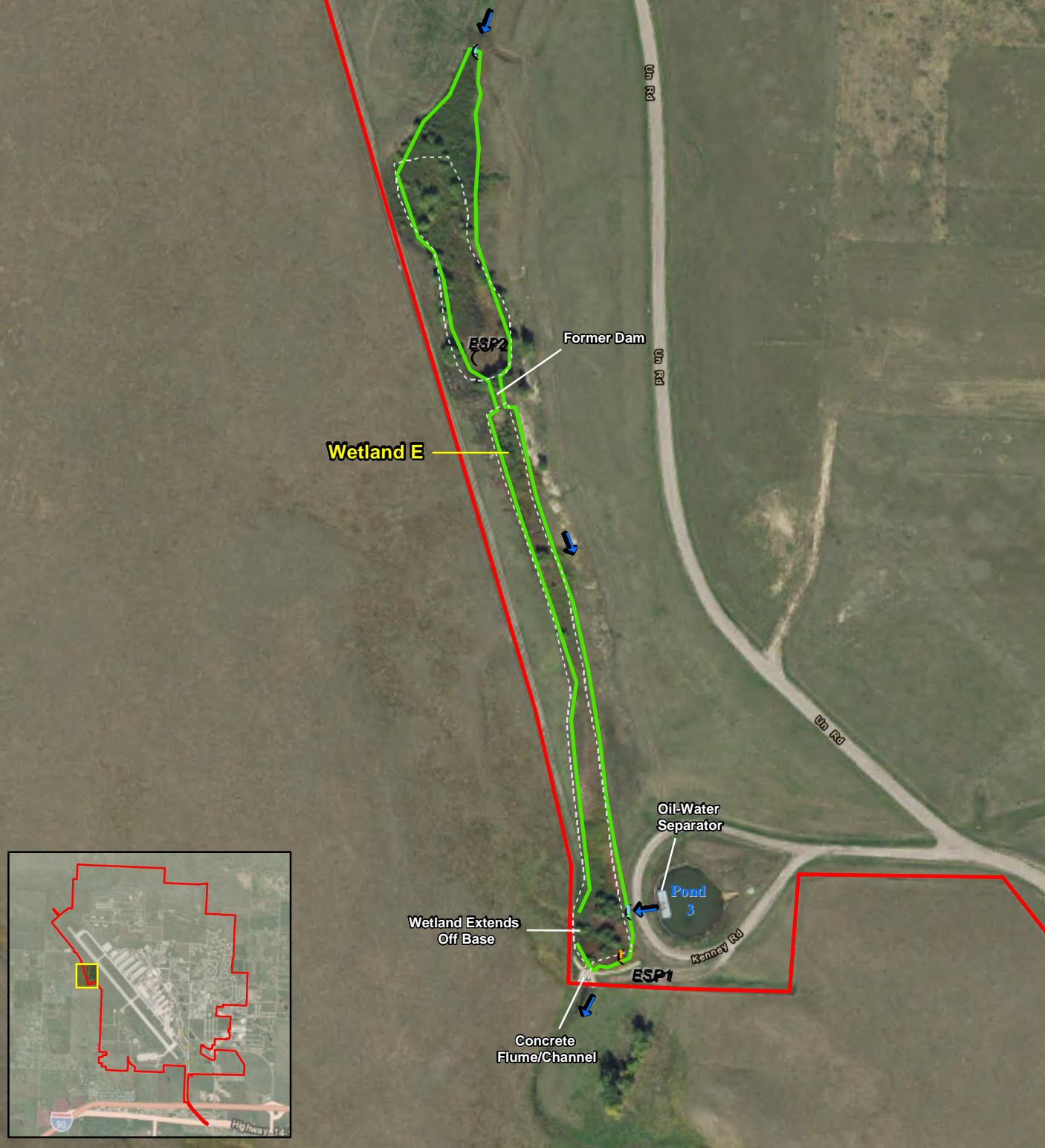
**Wetlands C and D in Pond 1 Area**

*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*



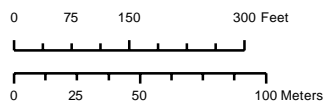


# Pond 3 wetlands



## LEGEND

- Flow Direction Sampling Point
- Culvert
- 2003 Delineated Boundary
- 2020 Delineated Boundary
- Ellsworth Air Force Base



**FIGURE 2-3**  
**Wetland E in Pond 3 Area**

*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*



## **Attachment 2 – IICEP Distribution List**

<b>United States Army Corps of Engineers (USACE)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
USACE SD Regulatory Office		605-224-8531	28563 Powerhouse Road, Pierre, SD 57501	SDRegulatoryMailbox@usace.army.mil
<b>United States Fish and Wildlife Service (USFWS), Mountain Prairie Region</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Amity Bass	Field Supervisor, North and South Dakota Ecological Services	(605) 224-8693 ext 224	420 South Garfield Avenue, Suite 400 Pierre, SD 57501	amity_bass@fws.gov
<b>Federal Emergency Management Agency (FEMA)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Lee DePalo	Regional Administrator, Region 8	(303) 235-4812	Denver Federal Center, Building 710 P.O. Box 25267 Denver, CO 80255-0267	
Cathy Bachhuber	Tribal Affairs, FEMA Region 8			Cathy.Bachhuber@fema.dhs.gov
<b>South Dakota (SD) State Historic Preservation Office (SHPO)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Katie Wasley	Northern Historic Preservation Specialist	605-773-2906	900 Governors Dr. Pierre, SD 57501	Katie.Wasley@state.sd.us
<b>South Dakota Game, Fish, and Parks (SDGFP)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Stan Michals	Energy and Minerals Coordinator	Regional Office No. (605)394-2391 Cell No. (605)645-8881	4130 Adventure Trail Rapid City, SD 57702	Stan.Michals@state.sd.us
<b>South Dakota Department of Agricultural and Natural Resources (DANR)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Sean Kruger	Standards Team		Joe Foss Building, 523 East Capitol Pierre, SD 57501	Sean.Kruger@state.sd.us
Shannon Minerich	Standards Team	(605) 773-3351		shannon.minerich@state.sd.us

<b>South Dakota Ellsworth Development Authority (SDEDA)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Glen Kane	Managing Director	605-390-7290	14 St Joseph St, Rapid City, SD 57709	glen.kane@ellsworthauthority.org
<b>Tribal Governments</b>				
<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Apache Tribe of Oklahoma	Bobby Komardley, Chairman	405-247-9493	PO Box 1330 Anadarko, OK 73005	bkomardley@outlook.com
Arapaho Tribe of the Wind River Reservation, Wyoming	Ben Ridgley, THPO	307-851-1254	PO Box 67 St. Stevens, WY 82524	benridgley007@gmail.com
	Lee Spoonhunter, Chairperson	307-332-6120	PO Box 396 Fort Washakie, WY 82514-0396	lee.spoonhunter@northernarapaho.com
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, Montana	Dyan Youpee, THPO	406-768-2382	PO Box 1027 Poplar, MT 59255	d.youpee@fortpecktribes.net
	Floyd Azure, Chairperson	406-768-2300	PO Box 1027 Poplar, MT 59255-1027	fazure@fortpecktribes.net
Cheyenne and Arapaho Tribes, Oklahoma	Max Bear, THPO	405-422-7416	700 Black Kettle Blvd Concho, OK 73022	mbear@c-a-tribes.org
	Reggie Wassana, Governor	800-422-8224	P.O. Box 38 Concho, OK 73022	rwassana@c-a-tribes.org
Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota	Steven Vance, THPO	605-964-7554	PO Box 590 Eagle Butte, SD 57625	stevev.crstpres@outlook.com
	Harold Frazier, Chairperson	605-964-4155	PO Box 590 Eagle Butte, SD 57625-0590	HaroldCFrazier@yahoo.com
Comanche Nation, Oklahoma	Mark Woommavovah, Chairperson	580-492-3240	PO Box 908 Lawton, OK 73502	jennifer.rodriquez@comanchenation.com
	Martina Minthorn, THPO	580-595-9618	6 SW D Avenue Lawton, OK 73502	martina.minthorn@comanchenation.com
Confederated Salish and Kootenai Tribes of the Flathead Reservation	Kathryn McDonald, THPO	406-675-2700, ext. 1082	PO Box 278 Pablo, MT 59855	kathryn.mcdonald@cslt.org
	Tom McDonald Chairman	406-675-2700	PO Box 278 Pablo, MT 59855-0278	council@cslt.org

<b>Tribal Governments</b>				
<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Crow Creek Sioux Tribe of the Crow Creek Reservation, South Dakota	Lester Thompson Jr., Chairperson	605-245-2221	PO Box 50 Fort Thompson, SD 57339-0050	
	Merle Marks, THPO	605-245-2221	PO Box 50 Fort Thompson, SD 57339	cchistory@midstatesd.net
Crow Tribe of Montana	Aaron Brien, THPO	406-529-7991	PO Box 159 Crow Agency, MT 59022	aaron.brien@crow-nsn.gov
	AJ Not Afraid, Chairperson	406-638-3715	PO Box 159 Crow Agency, MT 59022	aj.notafraid@crow-nsn.gov
Eastern Shoshone Tribe of the Wind River Reservation, Wyoming	Joshua Mann, THPO	307-335-2081	PO Box 538 Fort Washakie, WY 82514	jmann@easternshoshone.org
Flandreau Santee Sioux Tribe of South Dakota	Garrie Kills-A-Hundred, THPO	605-864-1236	PO Box 283 Flandreau, SD 57028	garrie.killsahundred@FSST.org
	Anthony Reider, Chairperson	605-997-3891	PO Box 283 Flandreau, SD 57028-0283	president@fsst.org
Fort Belknap Indian Community of the Fort Belknap Reservation of Montana	Michael Blackwolf, THPO	406-353-2295	656 Agency Main Street Harlem, MT 59526-9455	mblackwolf@ftbelknap.org
	Jeffery (Jeff) Stiffarm President	406-353-2205	RR1, Box 66 Harlem, MT 59526-9455	jeffery.stiffarm@ftbelknap.org
Kiowa Indian Tribe of Oklahoma	Matthew Komalty, Chairman	508-654-2300	PO Box 369 Carnegie, OK 73015	tharris@kiowatribe.org
Lower Brule Sioux Tribe of the Lower Brule Reservation, South Dakota	Clyde Estes, Chairman	605-473-5561	187 Oyate Circle Lower Brule, SD 57548-8500	ClydeEstes@lowerbrule.net
Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana	Serena Wetherelt Vice-President	406-477-6284	PO Box 128 Lame Deer, MT 59043-0128	serena.wetherelt@cheyennenation.com
	Teanna Limpy, THPO	406-477-4839	PO Box 128 Lame Deer, MT 59043	Teanna.Limpy@cheyennenation.com
Oglala Sioux Tribe	Julian Bear Runner, President	605-867-8487	PO Box 2070 Pine Ridge, SD 57770-2070	president.bearrunner@oglala.org

<b>Tribal Governments</b>				
<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
	Thomas Brings, THPO	605-867-5624	PO Box 129 Kyle, SD 57752	t.brings@oglala.org
Ponca Tribe of Nebraska	Larry Wright, Chairman	402-857-3391	PO Box 288 Niobrara, NE 68760	
	Stacy Laravie, THPO	402-857-3519	PO Box 288 Niobrara, NE 68760	ssettje@poncatribes-ne.org
Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota	Scott O. Herman, President	605-747-2381	PO Box 430 Rosebud, SD 57570-0430	
	Ione Quigley, THPO	605-747-4211	PO Box 809 Rosebud, SD 57570	ione.quigley@rst-nsn.gov
Santee Sioux Nation, Nebraska	Misty Frazier, THPO	402-857-3568	425 Frazier Ave. N. Suite 2 Niobrara, NE 68760	ssn.thpo@gmail.com
	Roger Trudell, Chairperson	402-857-2772	108 Spirit Lake Ave. W Niobrara, NE 68760	rtrudell@santeedakota.org
Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, South Dakota	Verlyn Beaudreau, Interim Chairperson	605-698-3911	PO Box 509 Agency Village, SD 57262-0509	chairman@swo-nsn.gov
	Dianne Desrosiers, THPO	605-698-3584	P.O. Box 907 Sisseton, SD 57262-0509	dianned@swo-nsn.gov
Spirit Lake Tribe, North Dakota	Susie Fox, Interim Director THPO	701-766-4031	P.O. Box 198 Fort Totten, ND 58335-0359	sfox@gondtc.com
	Myra Pearson, Chairwoman	701-766-4221	PO Box 359 Fort Totten, ND 58335-0359	slt-adminsec@spiritlakenation.com
Standing Rock Sioux Tribe of North & South Dakota	Janet Alkire, Chairperson	701-854-8500	PO Box D Fort Yates, ND 58538-0522	
	Jon Eagle, THPO	701-854-8645	PO Box D Fort Yates, ND 58538	j.eagle@standingrock.org
Yankton Sioux Tribe of South Dakota	Kip Spotted Eagle, THPO	605-384-3641	PO Box 1153 Wagner, SD 57380	yst.thpo@gmail.com
	Robert Hawk, Chairperson	605-384-3641 ext. 1015	PO Box 1153 Wagner, SD 57380-1153	robertflyinghawk@gmail.com

## **EAFB Scoping Letters – Section 7**



**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Amity Bass  
United States Fish and Wildlife Service (USFWS), Mountain Prairie Region  
Field Supervisor, North and South Dakota Ecological Services  
420 South Garfield Avenue, Suite 400  
Pierre SD 57501

Dear Ms. Bass

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment. The Project Areas are displayed in the attached figures (Attachment 1).

In accordance with Section 7 of the Endangered Species Act (ESA), we obtained a species list from the Information for Planning and Consultation Database (IPaC) on June 7, 2022 (Attachment 2).

EAFB expects that this project will not affect protected species based on the following:

1. EAFB Integrated Natural Resource Management Plan (INRMP) (updated 2020): No federally protected species have been documented within EAFB.
2. The species list from the IPaC indicated that there is no critical habitat present within the vicinity of the project areas. While the IPaC species list indicated the potential for Northern Long-Eared Bat and Red Knot to be present, these species have not been documented within the vicinity of the project areas. The candidate species Monarch Butterfly has been documented within the vicinity of the project areas.

At this time, the DAF respectfully requests your consideration of the following: Please send any information relevant to natural resources management at EAFB. These could include recent studies



(2015-present), new regulations/policy, or agency initiatives that you would like to be considered. The draft EA is anticipated to be ready in August 2021 for your review. We will provide thirty (30) days to review and appreciate your comments before we finalize the EA.

Please provide any information to Ellsworth Air Force Base, Attn: Mr. Greg Johnson, Environmental Compliance Chief, 28 CES/CEIE, 2125 Scott Dr., Ellsworth AFB, SD 57706; or by email at gregory.johnson.8@us.af.mil, with the subject titled as ATTN: EAFB BASH EA. Thank you for your assistance.

Sincerely

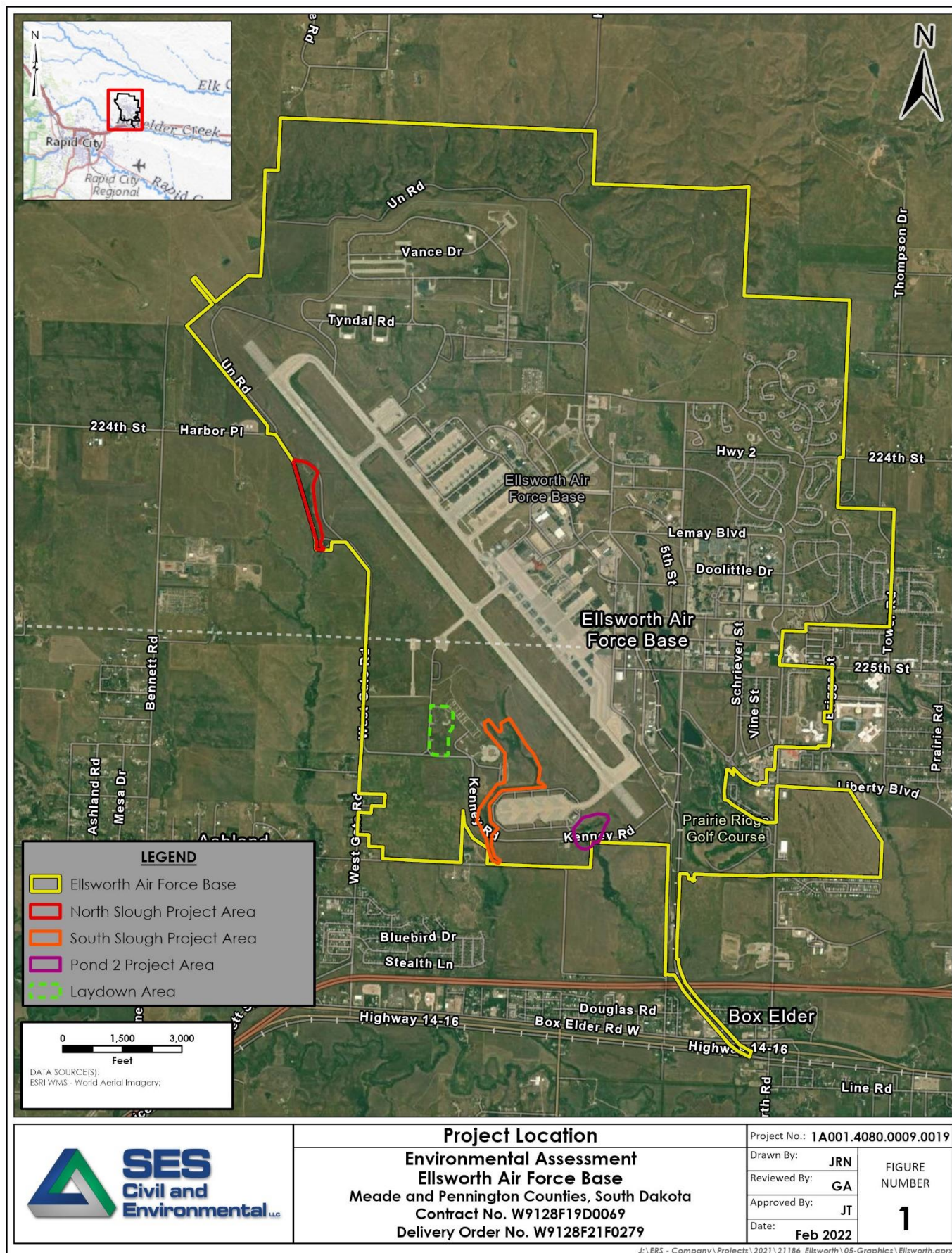
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PH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

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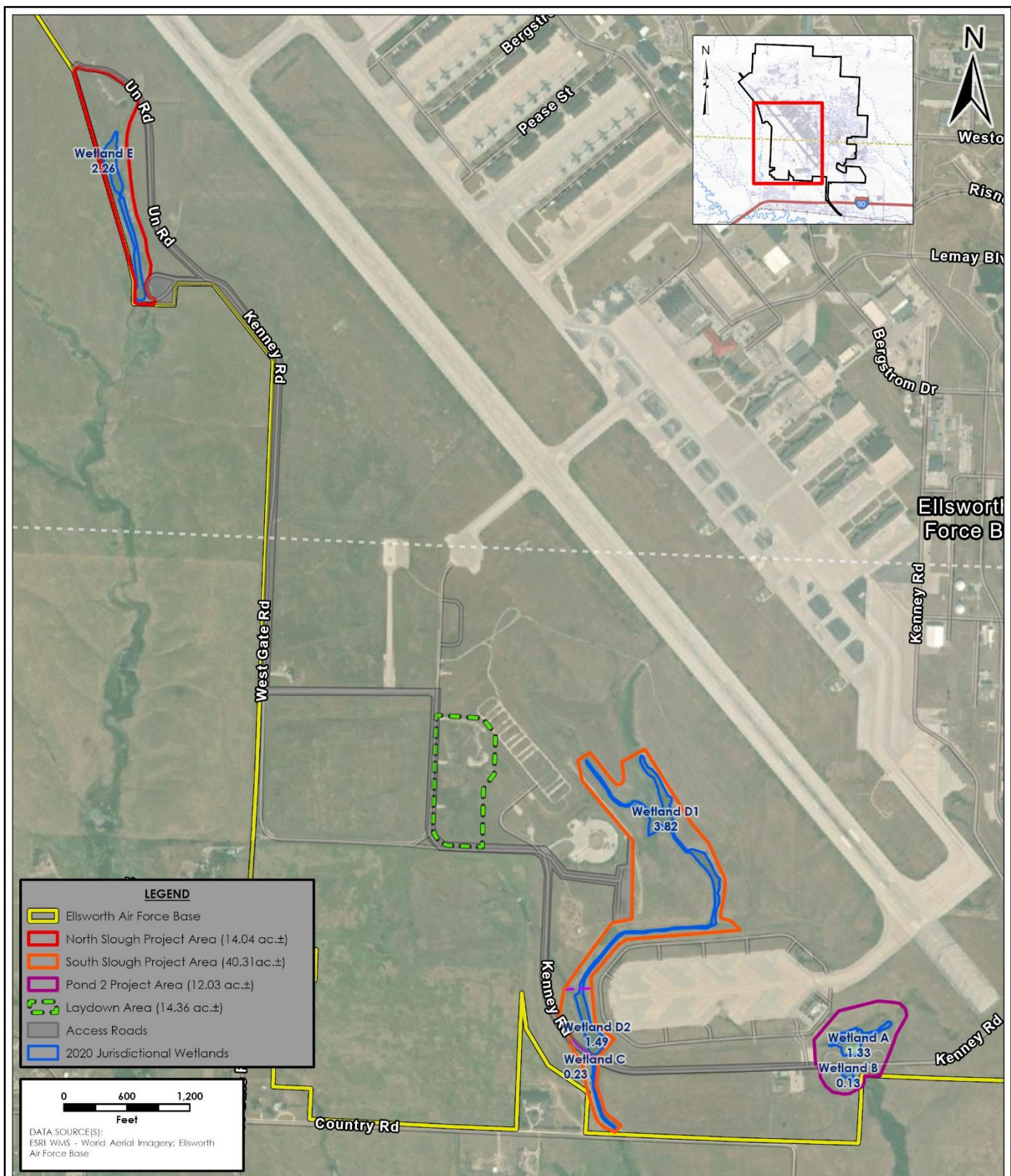
2 Attachments:

1. Figures
2. Species List from Information for Planning and Consultation (IPaC)

## **Attachment 1 – Figures**







## Project Areas and Wetlands

**Environmental Assessment**  
**Ellsworth Air Force Base**  
 Meade and Pennington Counties, South Dakota  
 Contract No. W9128F19D0069  
 Delivery Order No. W9128F21F0279

Project No.: 1A001.4080.0009.0019

Drawn By: JRN

Reviewed By: GA

Approved By: JT

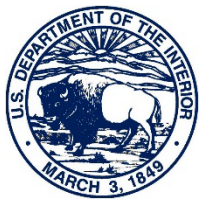
Date: Feb 2022

FIGURE  
NUMBER

**2**

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## **Attachment 2 – Species List from IPaC**



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
420 S Garfield Ave, Suite 400  
Pierre, South Dakota 57501-5408



June 7, 2022

In Reply Refer To:  
Species list for Ellsworth AFB

Mr. Gary Brundige  
Natural/Cultural/EIAP Program Manager  
28 CES/CEIEC  
1940 EP Howe Drive  
Ellsworth AFB, SD 57706

Dear Mr. Gary Brundige,

Thank you for your email received June 6, 2022 requesting a species list for Ellsworth Airforce Base. The project area used to create this list encompasses only Ellsworth Airforce Base. This project is located in Meade County, South Dakota.

### **ESA Federally Listed Species**

In accordance with section 7(c) of the Endangered Species Act, as amended, 16 U.S.C. 1531 et seq., we have determined that the following federally listed and candidate species may occur in the project area (this list is considered valid for 90 days):

<u>Species</u>	<u>Status</u>	<u>Expected Occurrence</u>
Monarch Butterfly ( <i>Danaus plexippus</i> )	Candidate	Spring-Fall, resident and migrant
Northern Long-eared Bat ( <i>Myotis septentrionalis</i> )	Threatened	Summer resident, seasonal migrant, known winter resident in Black Hills
Rufa Red Knot ( <i>Calidris canutus rufa</i> )	Threatened	Rare seasonal migrant

### **Monarch butterfly**

In December 2020, the Service determined that the monarch is warranted for listing under the ESA but is precluded at this time by higher priority listing actions. The monarch is a large



butterfly that lives in a variety of habitats throughout North America and various additional locations across the globe. The monarch needs milkweed (*Asclepias* spp.) for breeding. Adults use a wide variety of flowering plants throughout migration and breeding. Important nectar sources during the spring migration typically include *Coreopsis* spp., *Viburnum* spp., *Phlox* spp., and early blooming milkweeds. Important nectar sources during fall migration include goldenrods (*Solidago* spp.) asters (*Symphyotrichum* spp. and *Eurybia* spp.), gayfeathers (*Liatris* spp.), and coneflowers (*Helianthus* spp.), thistle (*Cirsium* spp.) and sage (*Salvia* spp.). Lists of preferred nectar plants by region specific to monarchs can be found at <http://www.xerces.org/monarch-nectar-plants/>. Avoiding milkweed patches would protect eggs and larvae. Avoiding nectar sources would conserve food for the adults during reproductive and migration stages.

### **Northern Long-eared Bat**

The northern long-eared bat is a medium-sized brown bat listed as threatened under the Endangered Species Act. Northern long-eared bats are known to be present in South Dakota year-round, primarily roosting singly or in colonies underneath bark, in cavities or in crevices of both live and dead trees in the summer. Some hibernacula have been documented in caves/mines in the Black Hills. The species has been documented in other forested areas in the state during the summer months and along the Missouri River during migration. Summer survey guidelines for this species are identical for those established for the Indiana Bat (available online at: <https://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html>). White nose syndrome - a fungus affecting hibernating bats - is considered a significant threat to this species, but individuals may be harmed by other activities such as modifications to hibernacula, timber harvest, human disturbance, and collisions with wind turbines. A 4(d) rule has been published that exempts take of Northern long-eared bats in certain circumstances. For more information, see: <https://www.fws.gov/Midwest/Endangered/mammals/nleb/index.html>.

### **Rufa Red Knot**

The rufa red knot is a robin-sized shorebird listed as threatened under the Endangered Species Act (see: < <http://www.gpo.gov/fdsys/pkg/FR-2014-12-11/pdf/2014-28338.pdf>> for more information). The red knot migrates annually between its breeding grounds in the Canadian Arctic and several wintering regions, including the Southeast United States, the Northeast Gulf of Mexico, northern Brazil, and Tierra del Fuego at the southern tip of South America. Although it is primarily a coastal species, small numbers of rufa red knots are reported annually across the interior United States (i.e., greater than 25 miles from the Gulf or Atlantic Coasts) during spring and fall migration. These reported sightings are concentrated along the Great Lakes, but multiple reports have been made from nearly every interior State, including South Dakota. The red knot likely uses South Dakota habitats similar to those of the least tern and piping plover. The species does not breed in this state.

Mr. Gary Brundige

The Service appreciates the opportunity to provide this species list. If you have any questions on this list, please contact Dylan Turner of this office at (605) 280-6704.

# **EAFB Scoping Letters**



**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

United States Army Corps of Engineers (USACE)  
South Dakota Regulatory Office  
28563 Powerhouse Rd  
Pierre, SD 57501

To whom it may concern,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment.

The goal of the USAF BASH Program is to preserve war fighting capabilities by reducing wildlife hazards to aircraft operations. EAFB is located within a major migration route (Central Flyway) for several bird species including waterfowl. Open water found in and around the airfield and the installation attract migrating waterfowl, as well as other bird and wildlife species. Birds flying from surrounding areas to the open water adjacent to the runway can place the birds in direct conflict with flight operations increasing the risk of bird strikes, which cause significant aircraft damage and endanger human lives.

The purpose of the Proposed Action is to modify on-site wetlands, so they no longer present a BASH risk to flight operations, using the airfield design standards set forth in the current EAFB BASH Plan and Air Force Instruction (AFI) 91-212. The project is needed due to wildlife's demonstrated recurrent use of wetland areas adjacent to the runway. The successes of EAFB's flight missions hinge on the operational readiness of the airfield, which is negatively impacted by wildlife habitat adjacent to the runway. The Proposed Action is needed to permanently resolve BASH risk associated with the subject wetlands, ensuring EAFB can continue to fulfill flight missions without further flight safety risk associated with these wildlife attractants.

The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

The USAF respectfully requests any information or specific comments your agency may have regarding the potential impacts of the proposed action, including but not limited to, natural, social, cultural, and archaeological resources. EAFB also requests any information that your agency may have regarding other proposed, ongoing, or recently completed projects in the vicinity of the Proposed Action. A list of all entities that are included on this distribution is included in Attachment 2.

Please provide any comments, concerns, or relevant background or supporting information within thirty (30) days of receipt of this letter to Ellsworth Air Force Base, Attn: Mr. Greg Johnson, Environmental Compliance Chief, 28 CES/CEIE, 2125 Scott Dr., Ellsworth AFB, SD 57706; or by email at gregory.johnson.8@us.af.mil, with the subject titled as ATTN: EAFB BASH EA. Thank you for your assistance.

Sincerely

SHEFFIELD.JOSEPH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

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Date: 2022.08.16 11:23:14 -06'00'

2 Attachments:

1. Figures
2. Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) Distribution List



**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Lee DePalo  
Federal Emergency Management Agency (FEMA)  
Regional Administrator, Region 8  
Denver Federal Center, Building 710  
P.O. Box 25267  
Denver, CO 80255-0267

Dear Mr. DePalo,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment.

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The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

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Sincerely

SHEFFIELD.JOSE  
PH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

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2 Attachments:

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**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Glen Kane  
South Dakota Ellsworth Development Authority (SDEDA)  
Managing director  
14 St Joseph Street  
Rapid City, SD 57709

Dear Mr. Kane,

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Sincerely

SHEFFIELD.JOSEPH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

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SHEFFIELD.JOSEPH.L.11581800  
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Date: 2022.08.16 11:23:14 -06'00'

2 Attachments:

1. Figures
2. Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) Distribution List



**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Stan Michals  
South Dakota Game, Fish, and Parks (SDGFP)  
Energy and Minerals Coordinator  
4130 Adventure Trail  
Rapid City, SD 57702

Dear Mr. Michals,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment.

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Shannon Minerich and Mr. Sean Kruger  
South Dakota Department of Agricultural and Natural Resources (DANR)  
Standards Team  
Joe Foss Building, 523 East Capitol  
Pierre, SD 57501

Dear Ms. Minerich and Mr. Kruger,

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The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Janet Alkire  
Chairperson  
Standing Rock Sioux Tribe of North & South Dakota  
PO Box D  
Fort Yates, ND 58538-0522

Dear Ms. Alkire,

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Additionally, as a stakeholder in the environmental analysis process, the USAF respectfully requests your input in identifying any issues or areas of concern you feel should be addressed, including but not limited to any information or specific comments you may have regarding the locations of, or concerns regarding, potential impacts to natural, social, cultural, and archaeological resources. EAFB also requests any information that your tribe may have regarding other proposed, ongoing, or recently completed projects in the vicinity of the Proposed Action. A list of all entities that are included on this distribution is included in Attachment 2.

In accordance with Section 306108 of the National Historic Preservation Act (NHPA) and its implementing regulations at 36 CFR Part 800, the USAF would like to initiate government-to-government consultation regarding the proposed actions. We would like to invite you to be a consulting party in this review to help identify historic properties in the proposed APE that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Floyd Azure  
Chairperson  
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, Montana  
PO Box 1027  
Poplar, MT 59255-1027

Dear Mr. Azure,

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Max Bear  
THPO  
Cheyenne and Arapaho Tribes, Oklahoma  
700 Black Kettle Blvd  
Concho, OK 73022

Dear Mr. Bear,

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Julian Bear Runner  
President  
Oglala Sioux Tribe  
PO Box 2070  
Pine Ridge, SD 57770-2070

Dear Mr. Bear Runner,

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Verlyn Beaudreau  
Interim Chairperson  
Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, South Dakota  
PO Box 509  
Agency Village, SD 57262-0509

Dear Ms. Beaudreau,

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Sincerely

SHEFFIELD.JOSEPH.L.1158180096  
PH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

Digitally signed by  
SHEFFIELD.JOSEPH.L.1158180  
096  
Date: 2022.08.16 11:24:41 -06'00'

2 Attachments:

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**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Michael Blackwolf  
THPO  
Fort Belknap Indian Community of the Fort Belknap Reservation of Montana  
656 Agency Main Street  
Harlem, MT 59526-9455

Dear Mr. Blackwolf,

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The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Aaron Brien  
THPO  
Crow Tribe of Montana  
PO Box 159  
Crow Agency, MT 59022

Dear Mr. Brien,

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The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Thomas Brings  
THPO  
Oglala Sioux Tribe  
PO Box 129  
Kyle, SD 57752

Dear Mr. Brings,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment.

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Dianne Desrosiers  
THPO  
Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, South Dakota  
P.O. Box 907  
Sisseton, SD 57262-0509

Dear Ms. Desrosiers,

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Jon Eagle  
THPO  
Standing Rock Sioux Tribe of North & South Dakota  
PO Box D  
Fort Yates, ND 58538

Dear Mr. Eagle,

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Clyde Estes  
Chairman  
Lower Brule Sioux Tribe of the Lower Brule Reservation, South Dakota  
187 Oyate Circle  
Lower Brule, SD 57548-8500

Dear Mr. Estes,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment.

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Susie Fox  
Interim Director THPO  
Spirit Lake Tribe, North Dakota  
P.O. Box 198  
Fort Totten, ND 58335-0359

Dear Ms. Fox,

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The goal of the USAF BASH Program is to preserve war fighting capabilities by reducing wildlife hazards to aircraft operations. EAFB is located within a major migration route (Central Flyway) for several bird species including waterfowl. Open water found in and around the airfield and the installation attract migrating waterfowl, as well as other bird and wildlife species. Birds flying from surrounding areas to the open water adjacent to the runway can place the birds in direct conflict with flight operations increasing the risk of bird strikes, which cause significant aircraft damage and endanger human lives.

The purpose of the Proposed Action is to modify on-site wetlands, so they no longer present a BASH risk to flight operations, using the airfield design standards set forth in the current EAFB BASH Plan and Air Force Instruction (AFI) 91-212. The project is needed due to wildlife's demonstrated recurrent use of wetland areas adjacent to the runway. The successes of EAFB's flight missions hinge on the operational readiness of the airfield, which is negatively impacted by wildlife habitat adjacent to the runway. The Proposed Action is needed to permanently resolve BASH risk associated with the subject wetlands, ensuring EAFB can continue to fulfill flight missions without further flight safety risk associated with these wildlife attractants.

The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

Additionally, as a stakeholder in the environmental analysis process, the USAF respectfully requests your input in identifying any issues or areas of concern you feel should be addressed, including but not limited to any information or specific comments you may have regarding the locations of, or concerns regarding, potential impacts to natural, social, cultural, and archaeological resources. EAFB also requests any information that your tribe may have regarding other proposed, ongoing, or recently completed projects in the vicinity of the Proposed Action. A list of all entities that are included on this distribution is included in Attachment 2.

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Sincerely

SHEFFIELD.JOSEPH.L.1158180096  
PH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

Digitally signed by  
SHEFFIELD.JOSEPH.L.1158180  
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Date: 2022.08.16 11:24:41 -06'00'

2 Attachments:

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**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Harold Frazier  
Chairperson  
Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota  
PO Box 590  
Eagle Butte, SD 57625-0590

Dear Mr. Frazier,

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Misty Frazier  
THPO  
Santee Sioux Nation, Nebraska  
425 Frazier Ave. N. Suite 2  
Niobrara, NE 68760

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Robert Hawk  
Chairperson  
Yankton Sioux Tribe of South Dakota  
PO Box 1153  
Wagner, SD 57380-1153

Dear Mr. Hawk,

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Scott O. Herman  
President  
Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota  
PO Box 430  
Rosebud, SD 57570-0430

Dear Mr. Herman,

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Garrie Kills-A-Hundred  
THPO  
Flandreau Santee Sioux Tribe of South Dakota  
PO Box 283  
Flandreau, SD 57028

Dear Mr. Kills-A-Hundred,

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HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Matthew Komalty  
Chairman  
Kiowa Indian Tribe of Oklahoma  
PO Box 369  
Carnegie, OK 73015

Dear Mr. Komalty,

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Sincerely

SHEFFIELD.JOSEPH.L.1158180096  
PH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

Digitally signed by  
SHEFFIELD.JOSEPH.L.1158180  
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Date: 2022.08.16 11:24:41 -06'00'

2 Attachments:

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**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Bobby Komardley  
Chairman  
Apache Tribe of Oklahoma  
PO Box 1330  
Anadarko, OK 73005

Dear Mr. Komardley,

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The purpose of the Proposed Action is to modify on-site wetlands, so they no longer present a BASH risk to flight operations, using the airfield design standards set forth in the current EAFB BASH Plan and Air Force Instruction (AFI) 91-212. The project is needed due to wildlife's demonstrated recurrent use of wetland areas adjacent to the runway. The successes of EAFB's flight missions hinge on the operational readiness of the airfield, which is negatively impacted by wildlife habitat adjacent to the runway. The Proposed Action is needed to permanently resolve BASH risk associated with the subject wetlands, ensuring EAFB can continue to fulfill flight missions without further flight safety risk associated with these wildlife attractants.

The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Stacy Laravie  
THPO  
Ponca Tribe of Nebraska  
PO Box 288  
Niobrara, NE 68760

Dear Ms. Laravie,

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Teanna Limpy  
THPO  
Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana  
PO Box 128  
Lame Deer, MT 59043

Dear Ms. Limpy,

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Joshua Mann  
THPO  
Eastern Shoshone Tribe of the Wind River Reservation, Wyoming  
PO Box 538  
Fort Washakie, WY 82514

Dear Mr. Mann,

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Merle Marks  
THPO  
Crow Creek Sioux Tribe of the Crow Creek Reservation, South Dakota  
PO Box 50  
Fort Thompson, SD 57339-0050

Dear Mr. Marks,

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Kathryn McDonald  
THPO  
Confederated Salish and Kootenai Tribes of the Flathead Reservation  
PO Box 278  
Pablo, MT 59855

Dear Ms. McDonald,

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Tom McDonald  
Chairman  
Confederated Salish and Kootenai Tribes of the Flathead Reservation  
PO Box 278  
Pablo, MT 59855-0278

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The purpose of the Proposed Action is to modify on-site wetlands, so they no longer present a BASH risk to flight operations, using the airfield design standards set forth in the current EAFB BASH Plan and Air Force Instruction (AFI) 91-212. The project is needed due to wildlife's demonstrated recurrent use of wetland areas adjacent to the runway. The successes of EAFB's flight missions hinge on the operational readiness of the airfield, which is negatively impacted by wildlife habitat adjacent to the runway. The Proposed Action is needed to permanently resolve BASH risk associated with the subject wetlands, ensuring EAFB can continue to fulfill flight missions without further flight safety risk associated with these wildlife attractants.

The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

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Sincerely

SHEFFIELD.JOSEPH.L.1158180096  
PH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

Digitally signed by  
SHEFFIELD.JOSEPH.L.1158180  
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Date: 2022.08.16 11:24:41 -06'00'

2 Attachments:

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**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Martina Minthorn  
THPO  
Comanche Nation, Oklahoma  
6 SW D Avenue  
Lawton, OK 73502

Dear Ms. Minthorn,

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The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

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HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. AJ Not Afraid  
Chairperson  
Crow Tribe of Montana  
PO Box 159  
Crow Agency, MT 59022

Dear Mr. Not Afraid,

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Myra Pearson  
Chairwoman  
Spirit Lake Tribe, North Dakota  
PO Box 359  
Fort Totten, ND 58335-0359

Dear Ms. Pearson,

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Ione Quigley  
THPO  
Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota  
PO Box 809  
Rosebud, SD 57570

Dear Ms. Quigley,

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Anthony Reider  
Chairperson  
Flandreau Santee Sioux Tribe of South Dakota  
PO Box 283  
Flandreau, SD 57028-0283

Dear Mr. Reider,

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Ben Ridgley  
THPO  
Arapaho Tribe of the Wind River Reservation, Wyoming  
PO Box 67  
St. Stevens, WY 82524

Dear Mr. Ridgley,

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Sincerely

SHEFFIELD.JOSEPH.L.1158180096  
PH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

Digitally signed by  
SHEFFIELD.JOSEPH.L.1158180  
096  
Date: 2022.08.16 11:24:41 -06'00'

2 Attachments:

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**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Lee Spoonhunter  
Chairperson  
Arapaho Tribe of the Wind River Reservation, Wyoming  
PO Box 396  
Fort Washakie, WY 82514-0396

Dear Mr. Spoonhunter,

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The purpose of the Proposed Action is to modify on-site wetlands, so they no longer present a BASH risk to flight operations, using the airfield design standards set forth in the current EAFB BASH Plan and Air Force Instruction (AFI) 91-212. The project is needed due to wildlife's demonstrated recurrent use of wetland areas adjacent to the runway. The successes of EAFB's flight missions hinge on the operational readiness of the airfield, which is negatively impacted by wildlife habitat adjacent to the runway. The Proposed Action is needed to permanently resolve BASH risk associated with the subject wetlands, ensuring EAFB can continue to fulfill flight missions without further flight safety risk associated with these wildlife attractants.

The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Kip Spotted Eagle  
THPO  
Yankton Sioux Tribe of South Dakota  
PO Box 1153  
Wagner, SD 57380

Dear Mr. Spotted Eagle,

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The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Jeffery (Jeff) Stiffarm  
President  
Fort Belknap Indian Community of the Fort Belknap Reservation of Montana  
RR1, Box 66  
Harlem, MT 59526-9455

Dear Mr. Stiffarm,

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Lester Thompson Jr.  
Chairperson  
Crow Creek Sioux Tribe of the Crow Creek Reservation, South Dakota  
PO Box 50  
Fort Thompson, SD 57339-0050

Dear Mr. Thompson Jr.,

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ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Roger Trudell  
Chairperson  
Santee Sioux Nation, Nebraska  
108 Spirit Lake Ave. W  
Niobrara, NE 68760

Dear Mr. Trudell,

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Steven Vance  
THPO  
Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota  
PO Box 590  
Eagle Butte, SD 57625

Dear Mr. Vance,

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Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Reggie Wassana  
Governor  
Cheyenne and Arapaho Tribes, Oklahoma  
P.O. Box 38  
Concho, OK 73022

Dear Mr. Wassana,

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The purpose of the Proposed Action is to modify on-site wetlands, so they no longer present a BASH risk to flight operations, using the airfield design standards set forth in the current EAFB BASH Plan and Air Force Instruction (AFI) 91-212. The project is needed due to wildlife's demonstrated recurrent use of wetland areas adjacent to the runway. The successes of EAFB's flight missions hinge on the operational readiness of the airfield, which is negatively impacted by wildlife habitat adjacent to the runway. The Proposed Action is needed to permanently resolve BASH risk associated with the subject wetlands, ensuring EAFB can continue to fulfill flight missions without further flight safety risk associated with these wildlife attractants.

The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

Additionally, as a stakeholder in the environmental analysis process, the USAF respectfully requests your input in identifying any issues or areas of concern you feel should be addressed, including but not limited to any information or specific comments you may have regarding the locations of, or concerns regarding, potential impacts to natural, social, cultural, and archaeological resources. EAFB also requests any information that your tribe may have regarding other proposed, ongoing, or recently completed projects in the vicinity of the Proposed Action. A list of all entities that are included on this distribution is included in Attachment 2.

In accordance with Section 306108 of the National Historic Preservation Act (NHPA) and its implementing regulations at 36 CFR Part 800, the USAF would like to initiate government-to-government consultation regarding the proposed actions. We would like to invite you to be a consulting party in this review to help identify historic properties in the proposed APE that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

Please provide any comments, concerns, or relevant background or supporting information within thirty (30) days of receipt of this letter to Ellsworth Air Force Base, Attn: Mr. Greg Johnson, Environmental Compliance Chief, 28 CES/CEIE, 2125 Scott Dr., Ellsworth AFB, SD 57706; or by email at [gregory.johnson.8@us.af.mil](mailto:gregory.johnson.8@us.af.mil), with the subject titled as ATTN: EAFB BASH EA. Thank you for your assistance.

Sincerely

SHEFFIELD.JOSEPH.L.1158180096  
PH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

Digitally signed by  
SHEFFIELD.JOSEPH.L.1158180  
096  
Date: 2022.08.16 11:24:41 -06'00'

2 Attachments:

1. Map of Project Areas and Proposed APE
2. Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) Distribution List





**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Serena Wetherelt  
Vice-President  
Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana  
PO Box 128  
Lame Deer, MT 59043-0128

Dear Ms. Wetherelt,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment.

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The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

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Sincerely

SHEFFIELD.JOSEPH.L.1158180096  
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JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

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**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Mark Woommavovah  
Chairperson  
Comanche Nation, Oklahoma  
PO Box 908  
Lawton, OK 73502

Dear Mr. Woommavovah,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment.

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SHEFFIELD.JOSEPH.L.1158180096  
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JOSEPH L. SHEFFIELD, Colonel USAF  
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**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Mr. Larry Wright  
Chairman  
Ponca Tribe of Nebraska  
PO Box 288  
Niobrara, NE 68760

Dear Mr. Wright,

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**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Dyan Youpee  
THPO  
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, Montana  
PO Box 1027  
Poplar, MT 59255

Dear Ms. Youpee,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment.

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## **Appendix A-3 – Public Comments Received During Scoping and Associated Correspondence**



**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

United States Army Corps of Engineers (USACE)  
South Dakota Regulatory Office  
28563 Powerhouse Rd  
Pierre, SD 57501

To whom it may concern,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment.

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SHEFFIELD.JOSEPH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

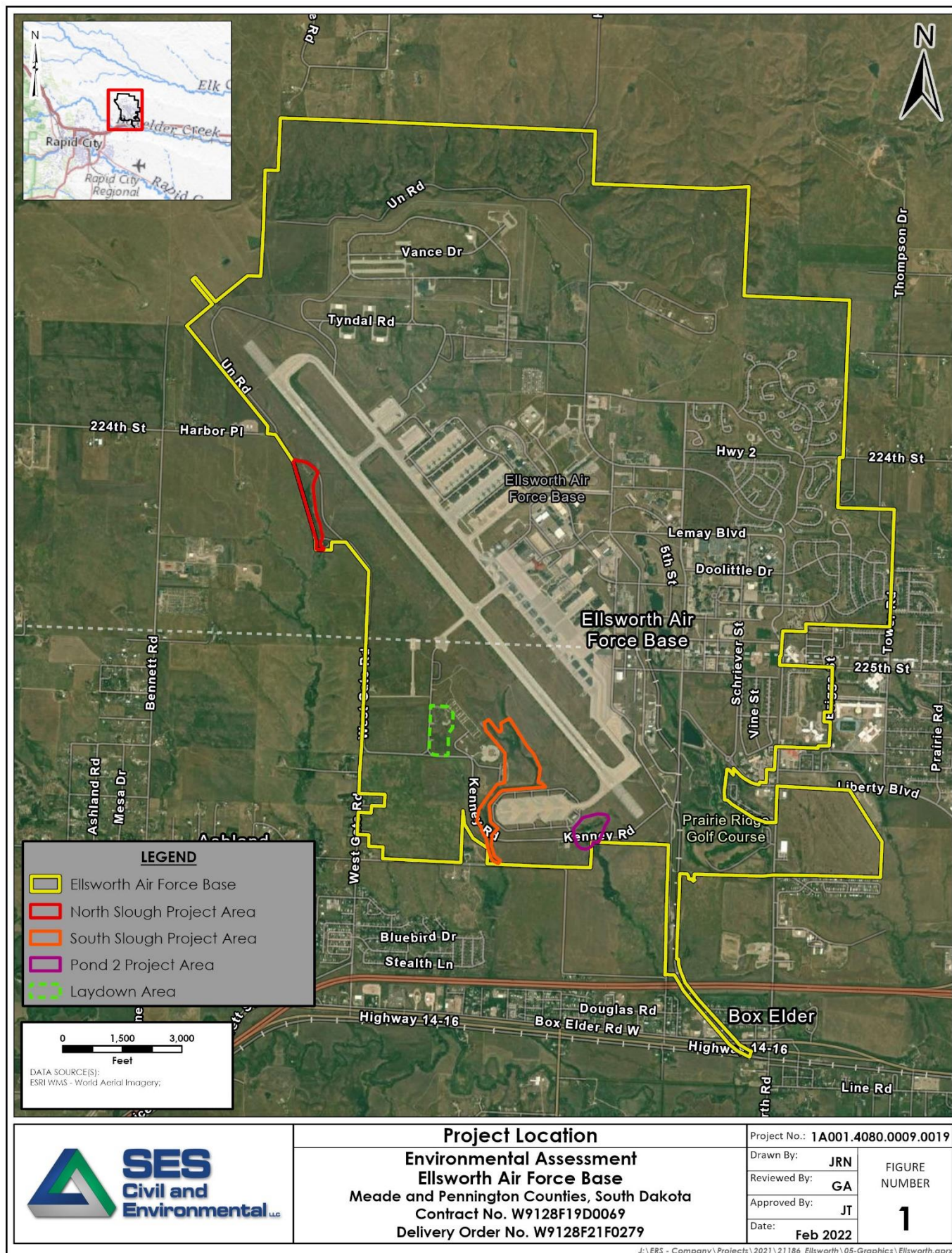
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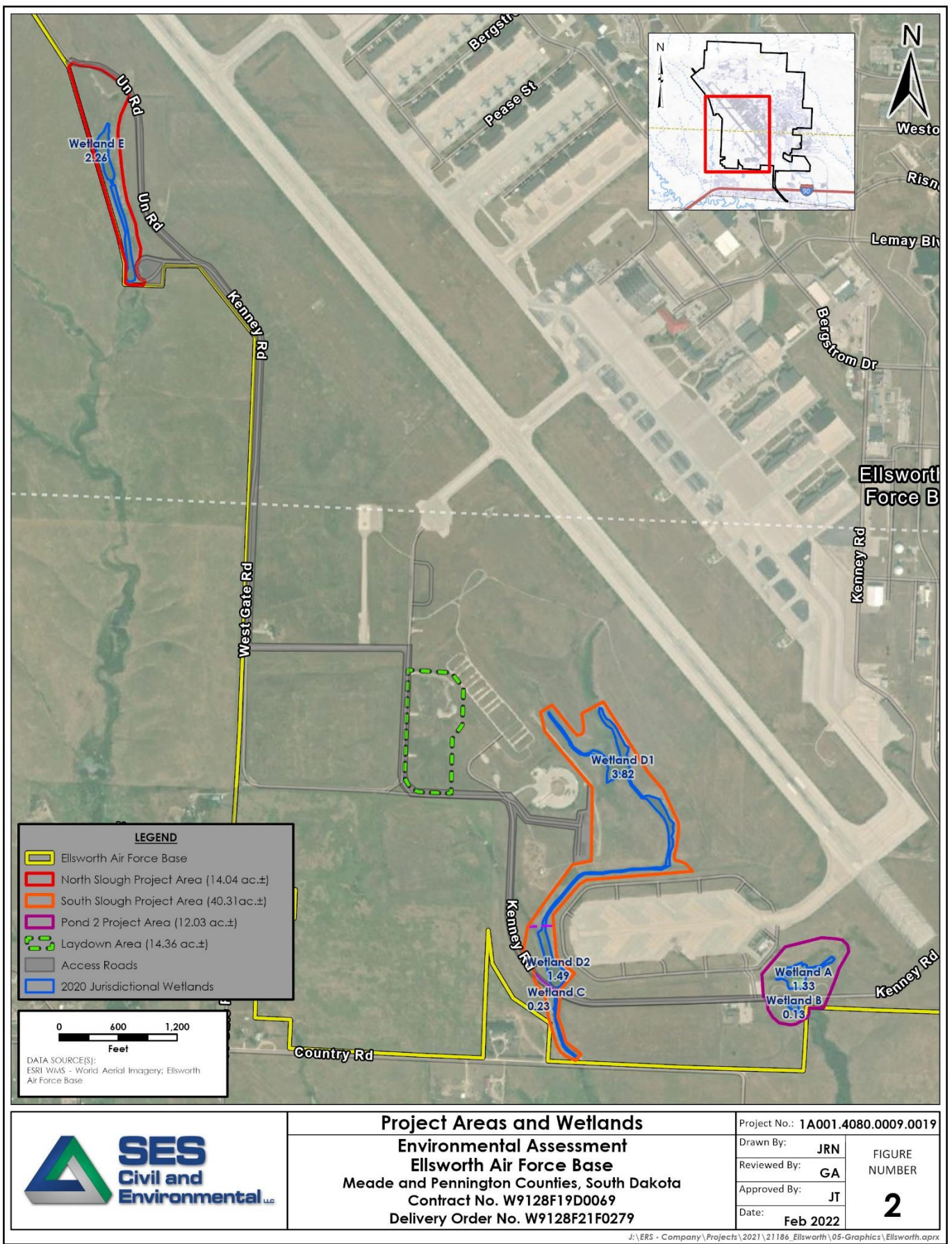
1. Figures
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## **Attachment 1 – Figures**









## **Attachment 2 – IICEP Distribution List**

<b>United States Army Corps of Engineers (USACE)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
USACE SD Regulatory Office		605-224-8531	28563 Powerhouse Road, Pierre, SD 57501	SDRegulatoryMailbox@usace.army.mil
<b>United States Fish and Wildlife Service (USFWS), Mountain Prairie Region</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Amity Bass	Field Supervisor, North and South Dakota Ecological Services	(605) 224-8693 ext 224	420 South Garfield Avenue, Suite 400 Pierre, SD 57501	amity_bass@fws.gov
<b>Federal Emergency Management Agency (FEMA)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Lee DePalo	Regional Administrator, Region 8	(303) 235-4812	Denver Federal Center, Building 710 P.O. Box 25267 Denver, CO 80255-0267	
Cathy Bachhuber	Tribal Affairs, FEMA Region 8			Cathy.Bachhuber@fema.dhs.gov
<b>South Dakota (SD) State Historic Preservation Office (SHPO)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Katie Wasley	Northern Historic Preservation Specialist	605-773-2906	900 Governors Dr. Pierre, SD 57501	Katie.Wasley@state.sd.us
<b>South Dakota Game, Fish, and Parks (SDGFP)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Stan Michals	Energy and Minerals Coordinator	Regional Office No. (605)394-2391 Cell No. (605)645-8881	4130 Adventure Trail Rapid City, SD 57702	Stan.Michals@state.sd.us
<b>South Dakota Department of Agricultural and Natural Resources (DANR)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Sean Kruger	Standards Team		Joe Foss Building, 523 East Capitol Pierre, SD 57501	Sean.Kruger@state.sd.us
Shannon Minerich	Standards Team	(605) 773-3351		shannon.minerich@state.sd.us

<b>South Dakota Ellsworth Development Authority (SDEDA)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Glen Kane	Managing Director	605-390-7290	14 St Joseph St, Rapid City, SD 57709	glen.kane@ellsworthauthority.org
<b>Tribal Governments</b>				
<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Apache Tribe of Oklahoma	Bobby Komardley, Chairman	405-247-9493	PO Box 1330 Anadarko, OK 73005	bkomardley@outlook.com
Arapaho Tribe of the Wind River Reservation, Wyoming	Ben Ridgley, THPO	307-851-1254	PO Box 67 St. Stevens, WY 82524	benridgley007@gmail.com
	Lee Spoonhunter, Chairperson	307-332-6120	PO Box 396 Fort Washakie, WY 82514-0396	lee.spoonhunter@northernarapaho.com
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, Montana	Dyan Youpee, THPO	406-768-2382	PO Box 1027 Poplar, MT 59255	d.youpee@fortpecktribes.net
	Floyd Azure, Chairperson	406-768-2300	PO Box 1027 Poplar, MT 59255-1027	fazure@fortpecktribes.net
Cheyenne and Arapaho Tribes, Oklahoma	Max Bear, THPO	405-422-7416	700 Black Kettle Blvd Concho, OK 73022	mbear@c-a-tribes.org
	Reggie Wassana, Governor	800-422-8224	P.O. Box 38 Concho, OK 73022	rwassana@c-a-tribes.org
Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota	Steven Vance, THPO	605-964-7554	PO Box 590 Eagle Butte, SD 57625	stevev.crstpres@outlook.com
	Harold Frazier, Chairperson	605-964-4155	PO Box 590 Eagle Butte, SD 57625-0590	HaroldCFrazier@yahoo.com
Comanche Nation, Oklahoma	Mark Woommavovah, Chairperson	580-492-3240	PO Box 908 Lawton, OK 73502	jennifer.rodriquez@comanchenation.com
	Martina Minthorn, THPO	580-595-9618	6 SW D Avenue Lawton, OK 73502	martina.minthorn@comanchenation.com
Confederated Salish and Kootenai Tribes of the Flathead Reservation	Kathryn McDonald, THPO	406-675-2700, ext. 1082	PO Box 278 Pablo, MT 59855	kathryn.mcdonald@cslt.org
	Tom McDonald Chairman	406-675-2700	PO Box 278 Pablo, MT 59855-0278	council@cslt.org

<b>Tribal Governments</b>				
<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Crow Creek Sioux Tribe of the Crow Creek Reservation, South Dakota	Lester Thompson Jr., Chairperson	605-245-2221	PO Box 50 Fort Thompson, SD 57339-0050	
	Merle Marks, THPO	605-245-2221	PO Box 50 Fort Thompson, SD 57339	cchistory@midstatesd.net
Crow Tribe of Montana	Aaron Brien, THPO	406-529-7991	PO Box 159 Crow Agency, MT 59022	aaron.brien@crow-nsn.gov
	AJ Not Afraid, Chairperson	406-638-3715	PO Box 159 Crow Agency, MT 59022	aj.notafraid@crow-nsn.gov
Eastern Shoshone Tribe of the Wind River Reservation, Wyoming	Joshua Mann, THPO	307-335-2081	PO Box 538 Fort Washakie, WY 82514	jmann@easternshoshone.org
Flandreau Santee Sioux Tribe of South Dakota	Garrie Kills-A-Hundred, THPO	605-864-1236	PO Box 283 Flandreau, SD 57028	garrie.killsahundred@FSST.org
	Anthony Reider, Chairperson	605-997-3891	PO Box 283 Flandreau, SD 57028-0283	president@fsst.org
Fort Belknap Indian Community of the Fort Belknap Reservation of Montana	Michael Blackwolf, THPO	406-353-2295	656 Agency Main Street Harlem, MT 59526-9455	mblackwolf@ftbelknap.org
	Jeffery (Jeff) Stiffarm President	406-353-2205	RR1, Box 66 Harlem, MT 59526-9455	jeffery.stiffarm@ftbelknap.org
Kiowa Indian Tribe of Oklahoma	Matthew Komalty, Chairman	508-654-2300	PO Box 369 Carnegie, OK 73015	tharris@kiowatribe.org
Lower Brule Sioux Tribe of the Lower Brule Reservation, South Dakota	Clyde Estes, Chairman	605-473-5561	187 Oyate Circle Lower Brule, SD 57548-8500	ClydeEstes@lowerbrule.net
Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana	Serena Wetherelt Vice-President	406-477-6284	PO Box 128 Lame Deer, MT 59043-0128	serena.wetherelt@cheyennenation.com
	Teanna Limpy, THPO	406-477-4839	PO Box 128 Lame Deer, MT 59043	Teanna.Limpy@cheyennenation.com
Oglala Sioux Tribe	Julian Bear Runner, President	605-867-8487	PO Box 2070 Pine Ridge, SD 57770-2070	president.bearrunner@oglala.org



<b>Tribal Governments</b>				
<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
	Thomas Brings, THPO	605-867-5624	PO Box 129 Kyle, SD 57752	t.brings@oglala.org
Ponca Tribe of Nebraska	Larry Wright, Chairman	402-857-3391	PO Box 288 Niobrara, NE 68760	
	Stacy Laravie, THPO	402-857-3519	PO Box 288 Niobrara, NE 68760	ssettje@poncatrib-ne.org
Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota	Scott O. Herman, President	605-747-2381	PO Box 430 Rosebud, SD 57570-0430	
	Ione Quigley, THPO	605-747-4211	PO Box 809 Rosebud, SD 57570	ione.quigley@rst-nsn.gov
Santee Sioux Nation, Nebraska	Misty Frazier, THPO	402-857-3568	425 Frazier Ave. N. Suite 2 Niobrara, NE 68760	ssn.thpo@gmail.com
	Roger Trudell, Chairperson	402-857-2772	108 Spirit Lake Ave. W Niobrara, NE 68760	rtrudell@santeedakota.org
Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, South Dakota	Verlyn Beaudreau, Interim Chairperson	605-698-3911	PO Box 509 Agency Village, SD 57262-0509	chairman@swo-nsn.gov
	Dianne Desrosiers, THPO	605-698-3584	P.O. Box 907 Sisseton, SD 57262-0509	dianned@swo-nsn.gov
Spirit Lake Tribe, North Dakota	Susie Fox, Interim Director THPO	701-766-4031	P.O. Box 198 Fort Totten, ND 58335-0359	sfox@gondtc.com
	Myra Pearson, Chairwoman	701-766-4221	PO Box 359 Fort Totten, ND 58335-0359	slt-adminsec@spiritlakenation.com
Standing Rock Sioux Tribe of North & South Dakota	Janet Alkire, Chairperson	701-854-8500	PO Box D Fort Yates, ND 58538-0522	
	Jon Eagle, THPO	701-854-8645	PO Box D Fort Yates, ND 58538	j.eagle@standingrock.org
Yankton Sioux Tribe of South Dakota	Kip Spotted Eagle, THPO	605-384-3641	PO Box 1153 Wagner, SD 57380	yst.thpo@gmail.com
	Robert Hawk, Chairperson	605-384-3641 ext. 1015	PO Box 1153 Wagner, SD 57380-1153	robertflyinghawk@gmail.com



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
CORPS OF ENGINEERS, OMAHA DISTRICT  
SOUTH DAKOTA REGULATORY OFFICE  
28563 POWERHOUSE ROAD, ROOM 118  
PIERRE, SOUTH DAKOTA 57501-6174

August 26, 2022

South Dakota Regulatory Office  
28563 Powerhouse Road, Room 118  
Pierre, South Dakota 57501

Colonel Joseph L. Sheffield  
Commander  
28<sup>th</sup> Bomb Wing  
1958 Scott Drive, Suite 1  
Ellsworth AFB, South Dakota 57706-4710

Dear Colonel Sheffield,

Reference is made to the preliminary information received August 23, 2022 concerning Department of the Army authorization requirements to construct a project that would reduce wildlife habitat, including loss and/or modification of aquatic resources. The purpose is to reduce the potential for wildlife/bird strike hazards. The work would involve a potential modification and/or removal of approximately 9.3 acres of wetlands on/near Ellsworth Air Force Base in Rapid City, South Dakota. Subject: EAFB BASH EA.

The Corps' jurisdiction is derived from Section 404 of the Clean Water Act which calls for Federal regulation of the discharge of dredged or fill material into certain waterways, lakes and/or wetlands, (i.e. waters of the United States). Based on the preliminary information provided it appears that the project, as currently proposed, would require a DA permit pursuant to Section 404 of the Clean Water Act and it is requested that the project proponent submit an application for a Department of the Army permit.

You can obtain additional information about the Regulatory Program and download the permit application form from our website:

<http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/SouthDakota.aspx>

If you have any questions or need any assistance, please feel free to contact this office at the above Regulatory Office address or telephone at (605) 224-8531 and reference ORM # NWO-2018-01824-PIE.

Sincerely,

Steven E. Naylor  
Regulatory Program Manager,  
South Dakota



**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Katie Wasley  
South Dakota State Historic Preservation Office (SHPO)  
Northern Historic Preservation Specialist  
900 Governors Drive  
Pierre SD 57501

Dear Ms. Wasley

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment.

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR Part 800), we have provided project information for your review and concurrence regarding the above-referenced project via consultation letter dated 6 June 2022. The Section 106 Project Review Form is provided in Attachment 1.

EAFB has determined that this project will not impact current or potential historic properties, and has made a preliminary Finding of "No Historic Properties Affected" pursuant to the NHPA based on the following:

1. EAFB Integrated Cultural Resource Management Plan (updated 2021): Pedestrian survey and soil auger testing of potential culturally significant sites within EAFB did not yield findings within EAFB BASH EA defined APEs.
2. EAFB has 21 National Register of Historic Places eligible buildings, however none are located within the APEs.

Please see the attached Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) Distribution List (Attachment 2)

Attached for your review are copies of relevant documents supporting our finding. This documentation satisfies requirements set forth at 36 CFR §800.11(d). In accordance with §800.4(d)(1)(i), your office has thirty days to object to this finding. Please respond within this timeframe, otherwise we will assume that you concur with our finding. If you concur, please sign on the line below and return a copy of this letter to Greg Johnson, Environmental Compliance Chief, 2125 Scott Dr., Ellsworth AFB, SD 57706.

Please provide any further information, comments, or questions to Ellsworth Air Force Base, Attn: Mr. Greg Johnson, Environmental Compliance Chief, 2125 Scott Dr., Ellsworth AFB, SD 57706; or by email at gregory.johnson.8@us.af.mil, with the subject titled as ATTN: EAFB BASH EA. Thank you for your assistance.

Sincerely

SHEFFIELD.JOSEPH.L.1158180096  
PH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

Digitally signed by  
SHEFFIELD.JOSEPH.L.11581800  
96  
Date: 2022.08.16 11:25:26 -06'00'

2 Attachments:

1. Section 106 Project Review Form
2. Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) Distribution List

Concurrence:

Ms. Katie Wasley  
South Dakota State Historic Preservation Office  
Northern Historic Preservation Specialist

## **Attachment 1 – Section 106 Project Review Form**

**SOUTH DAKOTA STATE HISTORICAL SOCIETY  
STATE HISTORIC PRESERVATION OFFICE (SHPO)  
SECTION 106 PROJECT REVIEW FORM**

Submission of a completed Section 106 Project Review Form with adequate information and attachments constitutes a request for review pursuant to Section 106 of the National Historic Preservation Act of 1966 (as amended). Section 106 requires the South Dakota State Historic Preservation Office to review all projects that are federally funded, licensed, or assisted. We reserve the right to request more information if needed. Typed forms are preferred. **SUBMITTAL OF THIS FORM WITHOUT ALL REQUESTED INFORMATION WILL CAUSE REVIEW DELAYS.**

Section 106 regulations provide for a 30-day response time by the South Dakota State Historic Preservation Office from the date of receipt of complete information.

For projects requiring a license from the Federal Communications Commission, please use FCC Forms 620 or 621. **DO NOT USE THIS FORM.**

**I. PROJECT INFORMATION**

☒ THIS IS A NEW SUBMITTAL

☐ THIS IS MORE INFORMATION RELATING TO SHPO PROJECT \_\_\_\_\_

#

**1. PROJECT NAME:** BASH Drainage Improvements EA

**2. FEDERAL AGENCY FUNDING, LICENSING, OR ASSISTING THE PROJECT**

A. AGENCY NAME: Ellsworth AFB

B. AGENCY CONTACT PERSON: Gary Brundige

**DETERMINATION OF EFFECT**

See page 5, #12 for descriptions and space for explanations.

☒ **No Historic Properties Affected**      ☐ **Adverse Effect**      ☐ **No Adverse Effect**

The responsible federal agency official must sign this form here prior to submitting it to the SHPO. Projects received without an appropriate signature will cause review delays. **This must be an original signature and not electronic.**

**SIGNATURE** \_\_\_\_\_ **DATE** 6 June 2022

Please type/ the following:

**NAME** Gary Brundige

**TITLE** Cultural Resources Manager

**AGENCY** Ellsworth Air Force Base

FOR SHPO USE ONLY. DO NOT WRITE OR INSERT ANYTHING HERE.



## SD SHPO SECTION 106 PROJECT REVIEW FORM

### 2. FEDERAL AGENCY FUNDING, LICENSING, OR ASSISTING THE PROJECT

A. AGENCY NAME: Department of the Air Force, Ellsworth AFB  
B. AGENCY CONTACT PERSON: Gary Brundige  
C. MAILING ADDRESS: 2125 Scott Dr, Ellsworth AFB, SD 57706  
D. EMAIL ADDRESS: gary.brundige@us.af.mil  
E. TELEPHONE NUMBER: 605-385-2690

### 3. STATE AGENCY FUNDING, LICENSING, OR ASSISTING THE PROJECT, IF APPLICABLE

A. AGENCY NAME: \_\_\_\_\_  
B. AGENCY CONTACT PERSON: \_\_\_\_\_  
C. MAILING ADDRESS: \_\_\_\_\_  
D. EMAIL ADDRESS: \_\_\_\_\_  
E. TELEPHONE NUMBER: \_\_\_\_\_  
F. IF THIS IS A GRANT PROGRAM, PLEASE INCLUDE THE NAME OF THE PROGRAM (FOR EXAMPLE, CDBG OR SRF): \_\_\_\_\_

### 4. CONSULTANT CONTACT PERSON, IF APPLICABLE

A. COMPANY NAME: \_\_\_\_\_  
B. CONTACT PERSON: \_\_\_\_\_  
C. MAILING ADDRESS: \_\_\_\_\_  
D. EMAIL ADDRESS: \_\_\_\_\_  
E. TELEPHONE NUMBER: \_\_\_\_\_

### 5. PROJECT LOCATION

A. ADDRESS: South and west of the EAFB runway along of Kenny Road  
B. CITY: Ellsworth AFB  
C. COUNTY: Pennington  
D. TOWNSHIP: T2N E. RANGE R8E F. SECTION S11, 13

G. Provide a USGS 7.5 minute quadrangle map of the project area. If the project is in an urban area, show the location(s) on a city map. Photocopies are acceptable, but poor quality maps or insufficient information will cause review delays. Do not enlarge or reduce the map.

Is a map showing the exact location of the project attached to this form? YES ☒ or NO ☐

## SD SHPO SECTION 106 PROJECT REVIEW FORM

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### 6. PROJECT DESCRIPTION

Describe all anticipated work associated with the project. Be specific. The description should include all ancillary facilities such as access roads, placement of utilities, additional outbuildings, fences, material borrow areas, staging areas, etc. Use as much space and as many pages as needed to clearly describe the project.

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This Environmental Assessment (EA) evaluates a project that will modify wetland wildlife habitat presenting a Bird/Wildlife Aircraft Strike Hazard (BASH) adjacent to the primary runway at Ellsworth Air Force Base, SD.

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(Continued on Page 8)

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### 7. PROJECT PLANS

Plans, drawings, engineering specifications etc. should be included to help explain the project, but these cannot replace the above verbal description. If new construction is involved, elevation drawings and plans should be included.

Are plans, drawings, engineering specifications, or similar documents attached to this form?

YES ☐ or NO ☒

### 8. PHOTOGRAPHS

Provide several clear, original photographs of the project location. Also, include photographs of every affected buildings/structures, including an overall front view of each structure and other views necessary to describe fully the structures and the project. Streetscape photographs of surrounding buildings and structures should also be included. Photographs should be color and can be either printed or digital images submitted on a CD. Printed digital photographs should have a high dpi and clear resolution. Photographs should also either be labeled or include a key.

NOTE: Projects submitted with insufficient photographs will cause review delays.

Are photographs that clearly show the project location attached to this form? YES ☒ or NO ☐

### 9. PROJECT AREA OF POTENTIAL EFFECT (APE)

The APE consists of the geographic area or areas within which a project may directly or indirectly, cause changes in the character or use of historic properties. In most instances, the APE is not simply the project's physical boundaries or right-of-way. The APE also includes all ancillary facilities such as access roads, placement of utilities, additional outbuildings, fences, material borrow areas, staging areas, etc. The APE may include visual and audible effects.

Highlight the APE on a localized map.

A. Is a map highlighting the APE attached to this form? YES ☒ or NO ☐

B. Provide a written description of the APE. Describe the steps taken to identify the APE, and justify why the APE boundaries were chosen. If the APE has been previously disturbed, include an explanation of the previous ground disturbance.

## SD SHPO SECTION 106 PROJECT REVIEW FORM

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### II. IDENTIFY HISTORIC PROPERTIES

#### 10. IDENTIFICATION EFFORTS (See 36 CFR 800.4)

Identification of historic properties may include, but is not limited, any of the following identification methods. Check which steps were taken to identify historic properties in the APE. Check all that apply and describe the results.

A. ☐ RECORD SEARCH

Conducted a record search through the Archaeological Research Center in Rapid City. Record searches are available for a fee by calling 605.394.1936. This will include a search of all previously-surveyed archaeological sites and structures within the APE and within one mile of the APE.

If a record search was conducted, is a copy of the results attached to this form? YES ☐ or NO ☐

B. ☐ ON-THE-GROUND SURVEY

Survey by an archaeologist and/or an architectural historian of project area not previously surveyed. Survey type will depend on the scope of the project. A list of professionals is available at <http://history.sd.gov/Preservation/TechAssist/ConsultantsContractors.aspx>. Guidelines for surveys and reports are available at: [http://history.sd.gov/Preservation/PresLaws/r&c\\_guidelines.pdf](http://history.sd.gov/Preservation/PresLaws/r&c_guidelines.pdf) and <http://history.sd.gov/Preservation/OtherServices/HSArchitecturalSurveyManual2006.pdf>.

If a survey was conducted, is a copy of the survey report and/or survey forms attached to this form?  
YES ☐ or NO ☐

C. ☐ SEARCHED THE NATIONAL REGISTER OF HISTORIC PLACES DATABASE

This database is available online at: <http://nrhp.focus.nps.gov/>. NOTE: This database only includes properties *listed* on the National Register of Historic Places. Properties that are *eligible* for the National Register must also be taken into consideration.

If the National Register database was searched, is a printout of any results attached to this form?  
YES ☐ or NO ☐

D. ☐ BACKGROUND RESEARCH

Please describe sources reviewed and findings of research. This could include such things as reviewing county or city history books or conducting research at a local historical society, research facility, or county courthouse.

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E. ☐ ORAL HISTORY INTERVIEWS

Please list who was interviewed and describe what was learned through the interviews.

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## SD SHPO SECTION 106 PROJECT REVIEW FORM

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### F. ☐ CONSULTATION

Please describe who was consulted and the results of the consultation. Examples include tribes, historic preservation commissions, the public, and local historical societies.

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### G. ☒ OTHER

Describe any other efforts undertaken to identify historic properties and the results of those efforts.

Historic properties on Ellsworth AFB have been identified through a number of surveys and consultation with SD SHPO. Twenty-one properties on EAFB have been identified as eligible for inclusion on the NRHP. Three of these properties are scheduled for demolition under this action.

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## 11. HISTORIC PROPERTIES FINDING

Based on the efforts described above to identify historic properties, please choose one finding for the project. There are (mark one):

- ☐ Historic Properties Present in the APE
- ☐ No Historic Properties Present in the APE

## III. ASSESS EFFECTS

### 12. DETERMINATION OF EFFECT

The federal agency must submit a determination of effect for the SHPO to review this project. Based on the information provided above, the responsible agency official should make a determination of effect on historic properties for this project. Please select and mark one of the following determinations, then explain the basis for your decision.

- ☒ **No Historic Properties Affected** [36 CFR 800.4(d)(1)] – For a determination of no historic properties affected, the agency official finds no historic properties present or that the undertaking will have no effect upon historic properties as defined in Sec. 800.16(i). Please explain.

No Historic Properties located in the APE.

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- ☐ **Adverse Effect** [36 CFR Part 800.5(a)(1)] – For a determination of adverse effect, the undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects that may occur later in time, be farther removed in distance, or be cumulative. Please explain.
- 
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## SD SHPO SECTION 106 PROJECT REVIEW FORM

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☐ **No Adverse Effect** [36 CRF Part 800.5(b)] – For a determination of no adverse effect, the undertaking is modified or conditions are imposed to avoid adverse effects to a historic property. Please explain.

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### **Please print and mail completed form to:**

Review and Compliance Coordinator  
South Dakota State Historical Society  
900 Governors Drive  
Pierre, SD 57501

Questions about Section 106 can be directed to:

Paige Olson  
Review and Compliance Coordinator  
[Paige.Olson@state.sd.us](mailto:Paige.Olson@state.sd.us)  
605.773.6004

OR

Jenna Carlson Dietmeier  
Review and Compliance Archaeologist  
[Jenna.CarlsonDietmeier@state.sd.us](mailto:Jenna.CarlsonDietmeier@state.sd.us)  
605.773.8370

Questions about Section 106 projects on existing buildings or structures can be directed to:

Kate Nelson  
Restoration Specialist  
[Kate.Nelson@state.sd.us](mailto:Kate.Nelson@state.sd.us)  
605.773.6005

Project information submitted cannot be returned. This documentation is kept on file at the South Dakota State Historical Society. We review faxed and electronic submissions in the same manner as any other submission and with the same considerations for clarity and completeness. However, original documents with original signature must follow all faxed and electronic submissions. The submission of incomplete, unclear, or confusing information may result in unnecessary delays in the review process until adequate information is obtained.

## SD SHPO SECTION 106 PROJECT REVIEW FORM

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### Additional Resources

1. South Dakota State Historic Preservation Office <http://history.sd.gov/Preservation/>
  - a. Link to National and State Register Listed Properties:  
<http://history.sd.gov/Preservation/NatReg/NatReg.aspx>
  - b. Historic Contexts:  
[history.sd.gov/Preservation/OtherServices/SHPODocs.aspx](http://history.sd.gov/Preservation/OtherServices/SHPODocs.aspx)
  - c. *Guidelines for Cultural Resource Surveys and Survey Reports 2005*:  
[http://history.sd.gov/Preservation/PresLaws/r&c\\_guidelines.pdf](http://history.sd.gov/Preservation/PresLaws/r&c_guidelines.pdf)
2. Advisory Council on Historic Preservation: [www.achp.gov](http://www.achp.gov)
  - a. Link to National Historic Preservation Act of 1966 as amended
  - b. 36 CFR Part 800 – Protection of Historic Properties
3. National Park Service: [www.nps.gov/](http://www.nps.gov/)
  - a. National Register of Historic Places: [www.nps.gov/nr/](http://www.nps.gov/nr/)
  - b. Publications (National Register Bulletins, Preservation Briefs, etc.):  
[www.nps.gov/history/publications.htm](http://www.nps.gov/history/publications.htm)
4. Archaeological Research Center: [history.sd.gov/Archaeology/](http://history.sd.gov/Archaeology/) or 605.394.1936
  - a. Record Search Information
5. State Archives: [history.sd.gov/Archives/](http://history.sd.gov/Archives/) or 605.773.3804
  - a. Historic photographs
  - b. Research material

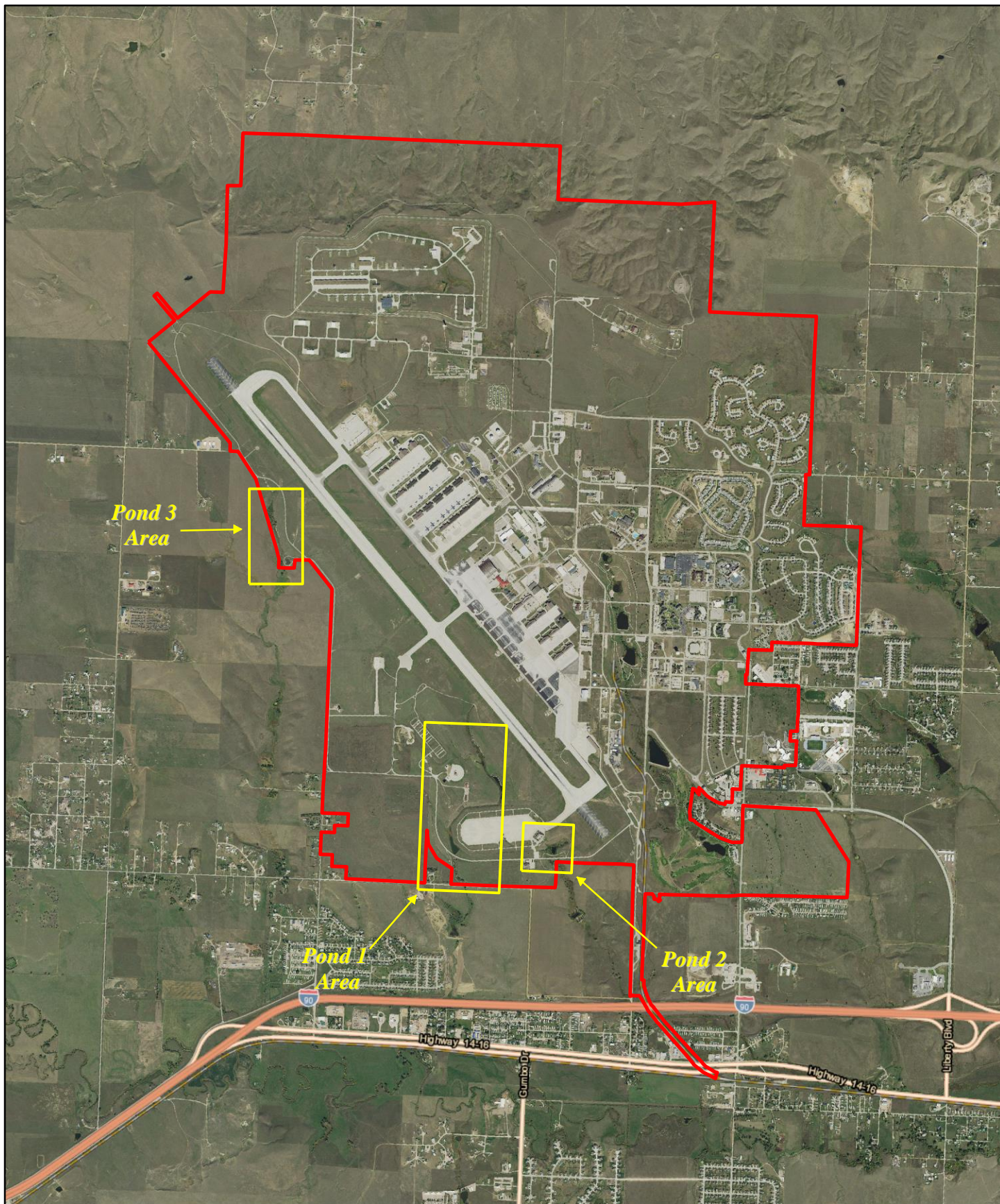


## SD SHPO SECTION 106 PROJECT REVIEW FORM

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Continued #6

The EA shall provide sufficient information to analyze potential environmental impacts associated with creating positive drainage of water through three drainage systems (hereafter referred to as Pond 1 wetlands, Pond 2 wetlands, and Pond 3 wetlands) adjacent to the Ellsworth AFB primary instrument, Runway 13-31 (see Bash Reduction Project Areas map). The North Slough runs approximately 2,000 ft adjacent to the west perimeter fence beginning at the existing storm pipe outlet across from Taxiway F and running to Outfall 3 (See Pond 3 wetland map). The south slough project area is approximately 4,000 ft beginning at the programmed drainage improvement project completion point (approximately 1,000 ft from the existing storm pipe outlet on the southwest side of the runway) through Pond 1 (see Pond 1 wetland map). The Pond 2 drainage runs approximately 550 ft from the storm pipe outlet in the south Clear Zone of runway 13-31 through Pond 2 to the outlet structure (see Pond 2 wetland map). This work is needed to remove areas of ponding water, hydrophytic vegetation, and wetlands habitats in the drainage attractive to wildlife and representing Bird/Aircraft Strike Hazards (BASH). The EA shall analyze proposed methods of construction and alternate methods. Methods of conveyance of the water include installation of storm sewer pipe, concrete channels, regraded turf reinforced vegetated channel, cable concrete protected channel, or combinations of all these methods. Analysis will include possible enlargement of the Pond 1 to increase storage capacity and replacement of Pond 1 outlet structure. A wetland delineation and Jurisdictional determination were completed in 2020. The North Slough contains 2.26 acres of Jurisdictional Wetlands, the South Slough contains 5.54 acres of Jurisdictional Wetlands, and Pond 2 contains 1.43 acres of Jurisdictional Wetlands. See attached four (4) wetland maps and supporting government furnished documents for additional details on scope of the proposal.



LEGEND

Ellsworth Air Force Base



0 1,000 2,000 4,000 Feet

0 300 600 1,200 Meters

**FIGURE 1-2**

**Location of Wetland Survey Areas**

*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*



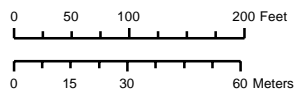






#### LEGEND

- Flow Direction
- Sampling Point
- Culvert
- 2003 Delineated Boundary
- 2020 Delineated Boundary
- Ellsworth Air Force Base

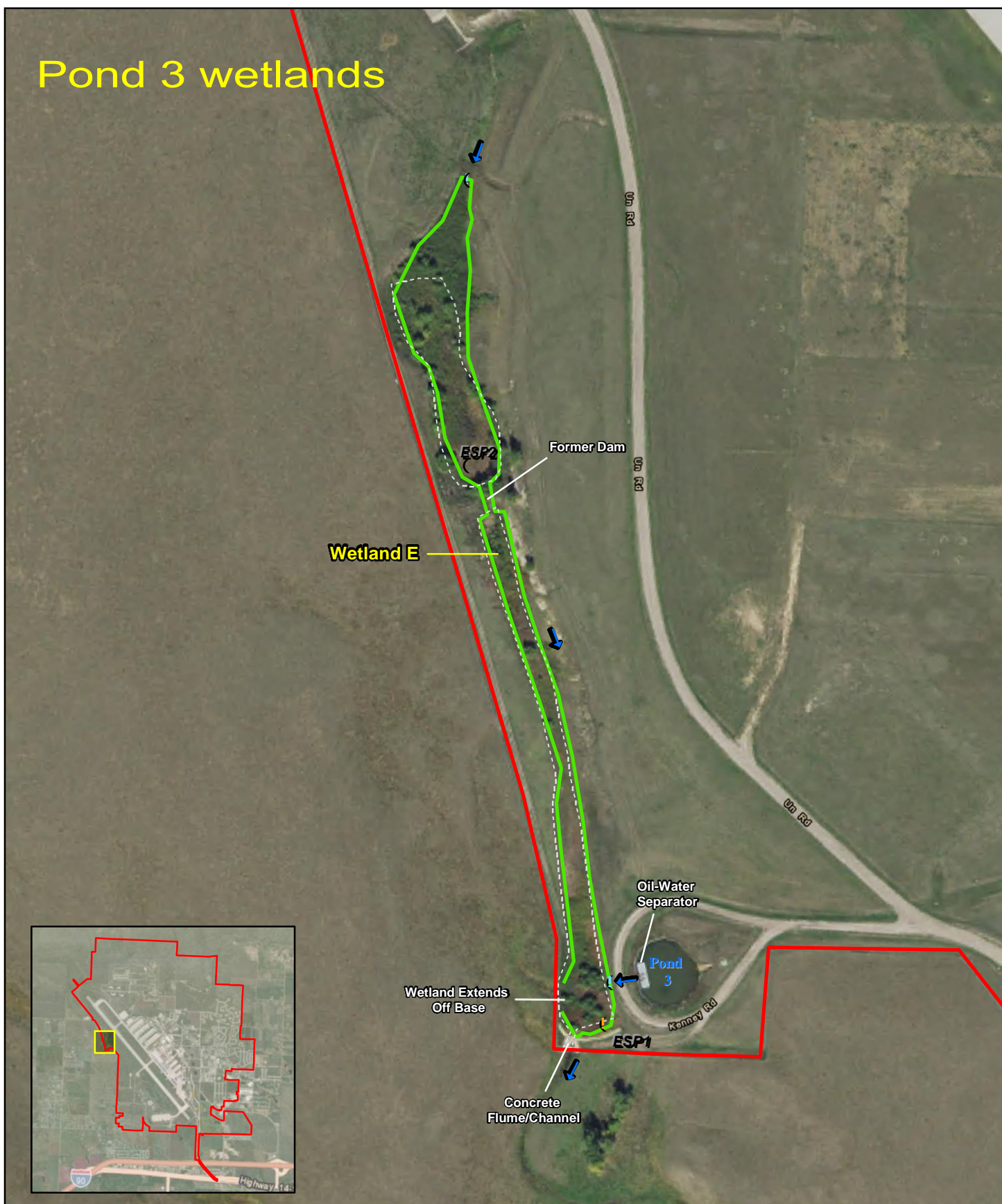


**FIGURE 2-1**

#### **Wetlands A and B in Pond 2 Area**

*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*

# Pond 3 wetlands



## LEGEND



Flow Direction  
Sampling Point



Culvert

2003 Delineated Boundary

2020 Delineated Boundary

Ellsworth Air Force Base



0 75 150 300 Feet

0 25 50 100 Meters

## FIGURE 2-3

### Wetland E in Pond 3 Area

Wetland Surveys at Ellsworth AFB to Support B-21 EIS

## **Attachment 2 – IICEP Distribution List**



<b>United States Army Corps of Engineers (USACE)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
USACE SD Regulatory Office		605-224-8531	28563 Powerhouse Road, Pierre, SD 57501	SDRegulatoryMailbox@usace.army.mil
<b>United States Fish and Wildlife Service (USFWS), Mountain Prairie Region</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Amity Bass	Field Supervisor, North and South Dakota Ecological Services	(605) 224-8693 ext 224	420 South Garfield Avenue, Suite 400 Pierre, SD 57501	amity_bass@fws.gov
<b>Federal Emergency Management Agency (FEMA)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Lee DePalo	Regional Administrator, Region 8	(303) 235-4812	Denver Federal Center, Building 710 P.O. Box 25267 Denver, CO 80255-0267	
Cathy Bachhuber	Tribal Affairs, FEMA Region 8			Cathy.Bachhuber@fema.dhs.gov
<b>South Dakota (SD) State Historic Preservation Office (SHPO)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Katie Wasley	Northern Historic Preservation Specialist	605-773-2906	900 Governors Dr. Pierre, SD 57501	Katie.Wasley@state.sd.us
<b>South Dakota Game, Fish, and Parks (SDGFP)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Stan Michals	Energy and Minerals Coordinator	Regional Office No. (605)394-2391 Cell No. (605)645-8881	4130 Adventure Trail Rapid City, SD 57702	Stan.Michals@state.sd.us
<b>South Dakota Department of Agricultural and Natural Resources (DANR)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Sean Kruger	Standards Team		Joe Foss Building, 523 East Capitol Pierre, SD 57501	Sean.Kruger@state.sd.us
Shannon Minerich	Standards Team	(605) 773-3351		shannon.minerich@state.sd.us

<b>South Dakota Ellsworth Development Authority (SDEDA)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Glen Kane	Managing Director	605-390-7290	14 St Joseph St, Rapid City, SD 57709	glen.kane@ellsworthauthority.org
<b>Tribal Governments</b>				
<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Apache Tribe of Oklahoma	Bobby Komardley, Chairman	405-247-9493	PO Box 1330 Anadarko, OK 73005	bkomardley@outlook.com
Arapaho Tribe of the Wind River Reservation, Wyoming	Ben Ridgley, THPO	307-851-1254	PO Box 67 St. Stevens, WY 82524	benridgley007@gmail.com
	Lee Spoonhunter, Chairperson	307-332-6120	PO Box 396 Fort Washakie, WY 82514-0396	lee.spoonhunter@northernarapaho.com
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, Montana	Dyan Youpee, THPO	406-768-2382	PO Box 1027 Poplar, MT 59255	d.youpee@fortpecktribes.net
	Floyd Azure, Chairperson	406-768-2300	PO Box 1027 Poplar, MT 59255-1027	fazure@fortpecktribes.net
Cheyenne and Arapaho Tribes, Oklahoma	Max Bear, THPO	405-422-7416	700 Black Kettle Blvd Concho, OK 73022	mbear@c-a-tribes.org
	Reggie Wassana, Governor	800-422-8224	P.O. Box 38 Concho, OK 73022	rwassana@c-a-tribes.org
Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota	Steven Vance, THPO	605-964-7554	PO Box 590 Eagle Butte, SD 57625	stevev.crstpres@outlook.com
	Harold Frazier, Chairperson	605-964-4155	PO Box 590 Eagle Butte, SD 57625-0590	HaroldCFrazier@yahoo.com
Comanche Nation, Oklahoma	Mark Woommavovah, Chairperson	580-492-3240	PO Box 908 Lawton, OK 73502	jennifer.rodriquez@comanchenation.com
	Martina Minthorn, THPO	580-595-9618	6 SW D Avenue Lawton, OK 73502	martina.minthorn@comanchenation.com
Confederated Salish and Kootenai Tribes of the Flathead Reservation	Kathryn McDonald, THPO	406-675-2700, ext. 1082	PO Box 278 Pablo, MT 59855	kathryn.mcdonald@cslt.org
	Tom McDonald Chairman	406-675-2700	PO Box 278 Pablo, MT 59855-0278	council@cslt.org

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Crow Creek Sioux Tribe of the Crow Creek Reservation, South Dakota	Lester Thompson Jr., Chairperson	605-245-2221	PO Box 50 Fort Thompson, SD 57339-0050	
	Merle Marks, THPO	605-245-2221	PO Box 50 Fort Thompson, SD 57339	cchistory@midstatesd.net
Crow Tribe of Montana	Aaron Brien, THPO	406-529-7991	PO Box 159 Crow Agency, MT 59022	aaron.brien@crow-nsn.gov
	AJ Not Afraid, Chairperson	406-638-3715	PO Box 159 Crow Agency, MT 59022	aj.notafraid@crow-nsn.gov
Eastern Shoshone Tribe of the Wind River Reservation, Wyoming	Joshua Mann, THPO	307-335-2081	PO Box 538 Fort Washakie, WY 82514	jmann@easternshoshone.org
Flandreau Santee Sioux Tribe of South Dakota	Garrie Kills-A-Hundred, THPO	605-864-1236	PO Box 283 Flandreau, SD 57028	garrie.killsahundred@FSST.org
	Anthony Reider, Chairperson	605-997-3891	PO Box 283 Flandreau, SD 57028-0283	president@fsst.org
Fort Belknap Indian Community of the Fort Belknap Reservation of Montana	Michael Blackwolf, THPO	406-353-2295	656 Agency Main Street Harlem, MT 59526-9455	mblackwolf@ftbelknap.org
	Jeffery (Jeff) Stiffarm President	406-353-2205	RR1, Box 66 Harlem, MT 59526-9455	jeffery.stiffarm@ftbelknap.org
Kiowa Indian Tribe of Oklahoma	Matthew Komalty, Chairman	508-654-2300	PO Box 369 Carnegie, OK 73015	tharris@kiowatribe.org
Lower Brule Sioux Tribe of the Lower Brule Reservation, South Dakota	Clyde Estes, Chairman	605-473-5561	187 Oyate Circle Lower Brule, SD 57548-8500	ClydeEstes@lowerbrule.net
Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana	Serena Wetherelt Vice-President	406-477-6284	PO Box 128 Lame Deer, MT 59043-0128	serena.wetherelt@cheyennenation.com
	Teanna Limpy, THPO	406-477-4839	PO Box 128 Lame Deer, MT 59043	Teanna.Limpy@cheyennenation.com
Oglala Sioux Tribe	Julian Bear Runner, President	605-867-8487	PO Box 2070 Pine Ridge, SD 57770-2070	president.bearrunner@oglala.org

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<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
	Thomas Brings, THPO	605-867-5624	PO Box 129 Kyle, SD 57752	t.brings@oglala.org
Ponca Tribe of Nebraska	Larry Wright, Chairman	402-857-3391	PO Box 288 Niobrara, NE 68760	
	Stacy Laravie, THPO	402-857-3519	PO Box 288 Niobrara, NE 68760	ssettje@poncatrib-ne.org
Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota	Scott O. Herman, President	605-747-2381	PO Box 430 Rosebud, SD 57570-0430	
	Ione Quigley, THPO	605-747-4211	PO Box 809 Rosebud, SD 57570	ione.quigley@rst-nsn.gov
Santee Sioux Nation, Nebraska	Misty Frazier, THPO	402-857-3568	425 Frazier Ave. N. Suite 2 Niobrara, NE 68760	ssn.thpo@gmail.com
	Roger Trudell, Chairperson	402-857-2772	108 Spirit Lake Ave. W Niobrara, NE 68760	rtrudell@santeedakota.org
Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, South Dakota	Verlyn Beaudreau, Interim Chairperson	605-698-3911	PO Box 509 Agency Village, SD 57262-0509	chairman@swo-nsn.gov
	Dianne Desrosiers, THPO	605-698-3584	P.O. Box 907 Sisseton, SD 57262-0509	dianned@swo-nsn.gov
Spirit Lake Tribe, North Dakota	Susie Fox, Interim Director THPO	701-766-4031	P.O. Box 198 Fort Totten, ND 58335-0359	sfox@gondtc.com
	Myra Pearson, Chairwoman	701-766-4221	PO Box 359 Fort Totten, ND 58335-0359	slt-adminsec@spiritlakenation.com
Standing Rock Sioux Tribe of North & South Dakota	Janet Alkire, Chairperson	701-854-8500	PO Box D Fort Yates, ND 58538-0522	
	Jon Eagle, THPO	701-854-8645	PO Box D Fort Yates, ND 58538	j.eagle@standingrock.org
Yankton Sioux Tribe of South Dakota	Kip Spotted Eagle, THPO	605-384-3641	PO Box 1153 Wagner, SD 57380	yst.thpo@gmail.com
	Robert Hawk, Chairperson	605-384-3641 ext. 1015	PO Box 1153 Wagner, SD 57380-1153	robertflyinghawk@gmail.com



September 19, 2022

Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB, SD 57706-4710

## **SECTION 106 PROJECT CONSULTATION**

Project: 220823002F – BASH Drainage Improvements EA  
Location: Pennington  
USAF - U.S. Air Force

Dear Colonel Sheffield,

Thank you for the opportunity to comment on the above referenced project pursuant to 54 U.S.C. 306108, also known as Section 106 of the National Historic Preservation Act of 1966 (as amended). The South Dakota Office of the State Historic Preservation Officer (SHPO) concurs with your determination regarding the effect of the proposed undertaking on the non-renewable cultural resources of South Dakota.

On August 23, 2022, SHPO received your letter and the Section 106 Project Review Form dated June 6, 2022. In a September 15, 2022, email reply, John Carreiro clarified that no buildings or structures will be demolished during the BASH EA project; all work activities, including staging, will be confined to the areas delineated in yellow on the maps submitted to SHPO; and the Area of Potential Effects (APE) for the BASH EA project has not been subject to previous archaeological survey because it has been previously disturbed. Based upon the information provided and a brief check of our records, SHPO concurs with your determination of "No Historic Properties Affected" for the proposed undertaking, provided all project activities are confined to the previously disturbed areas delineated in yellow on the maps submitted to SHPO.

Changes in the location and/or nature of activities from those identified in your request will require the submission of additional documentation pertaining to the identification of historic properties, as described in 36 C.F.R. § 800.4, and/or the undertaking's effects on historic properties, as described in 36 C.F.R. § 800.11.

Concurrence of the SHPO does not relieve the federal agency official from consulting with other



appropriate parties, as described in 36 C.F.R. § 800.2(c).

Please ensure that contractors and construction personnel are aware that construction activities must halt if any cultural resources are discovered during project implementation. If historic properties are discovered or unanticipated effects on historic properties are found after the agency official has completed the Section 106 process, the agency official shall avoid, minimize or mitigate the adverse effects to such properties and notify the SHPO and Indian tribes that might attach religious and cultural significance to the affected property within 48 hours of the discovery, pursuant to 36 C.F.R. § 800.13.

Should you require any additional information, please contact Jenna Carlson Dietmeier at Jenna.CarlsonDietmeier@state.sd.us or at (605)773-8370. Your concern for the non-renewable cultural heritage of our state is appreciated.

Sincerely,  
Ted M. Spencer  
State Historic Preservation Officer

A handwritten signature in blue ink that reads "Jenna Carlson Dietmeier".

Jenna Carlson Dietmeier, PhD  
Review & Compliance Coordinator

CC: Gregory Johnson - Environmental Compliance Chief, Ellsworth Air Force Base  
John Carreiro - Natural & Cultural Resource Manager, Ellsworth Air Force Base





**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Shannon Minerich and Mr. Sean Kruger  
South Dakota Department of Agricultural and Natural Resources (DANR)  
Standards Team  
Joe Foss Building, 523 East Capitol  
Pierre, SD 57501

Dear Ms. Minerich and Mr. Kruger,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment.

The goal of the USAF BASH Program is to preserve war fighting capabilities by reducing wildlife hazards to aircraft operations. EAFB is located within a major migration route (Central Flyway) for several bird species including waterfowl. Open water found in and around the airfield and the installation attract migrating waterfowl, as well as other bird and wildlife species. Birds flying from surrounding areas to the open water adjacent to the runway can place the birds in direct conflict with flight operations increasing the risk of bird strikes, which cause significant aircraft damage and endanger human lives.

The purpose of the Proposed Action is to modify on-site wetlands, so they no longer present a BASH risk to flight operations, using the airfield design standards set forth in the current EAFB BASH Plan and Air Force Instruction (AFI) 91-212. The project is needed due to wildlife's demonstrated recurrent use of wetland areas adjacent to the runway. The successes of EAFB's flight missions hinge on the operational readiness of the airfield, which is negatively impacted by wildlife habitat adjacent to the runway. The Proposed Action is needed to permanently resolve BASH risk associated with the subject wetlands, ensuring EAFB can continue to fulfill flight missions without further flight safety risk associated with these wildlife attractants.

The Proposed Action would include removal and/or modification of three separate wetland areas within the airfield perimeter fence: Pond 2, North Slough, and South Slough, totaling approximately 9.3 acres of wetlands. The Proposed Action may include a variety of engineered solutions to retain the storm water management function of the wetlands while removing wildlife attractants. Specific construction methods that may be used as part of the Proposed Action include, but are not limited to, culvert extensions, maintaining open drainage features with a hardened bottom, and sharpened drainage features and/or pond edges. Figures showing the BASH risk areas in question are in Attachment 1.

The USAF respectfully requests any information or specific comments your agency may have regarding the potential impacts of the proposed action, including but not limited to, natural, social, cultural, and archaeological resources. EAFB also requests any information that your agency may have regarding other proposed, ongoing, or recently completed projects in the vicinity of the Proposed Action. A list of all entities that are included on this distribution is included in Attachment 2.

Please provide any comments, concerns, or relevant background or supporting information within thirty (30) days of receipt of this letter to Ellsworth Air Force Base, Attn: Mr. Greg Johnson, Environmental Compliance Chief, 28 CES/CEIE, 2125 Scott Dr., Ellsworth AFB, SD 57706; or by email at gregory.johnson.8@us.af.mil, with the subject titled as ATTN: EAFB BASH EA. Thank you for your assistance.

Sincerely

SHEFFIELD.JOSEPH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

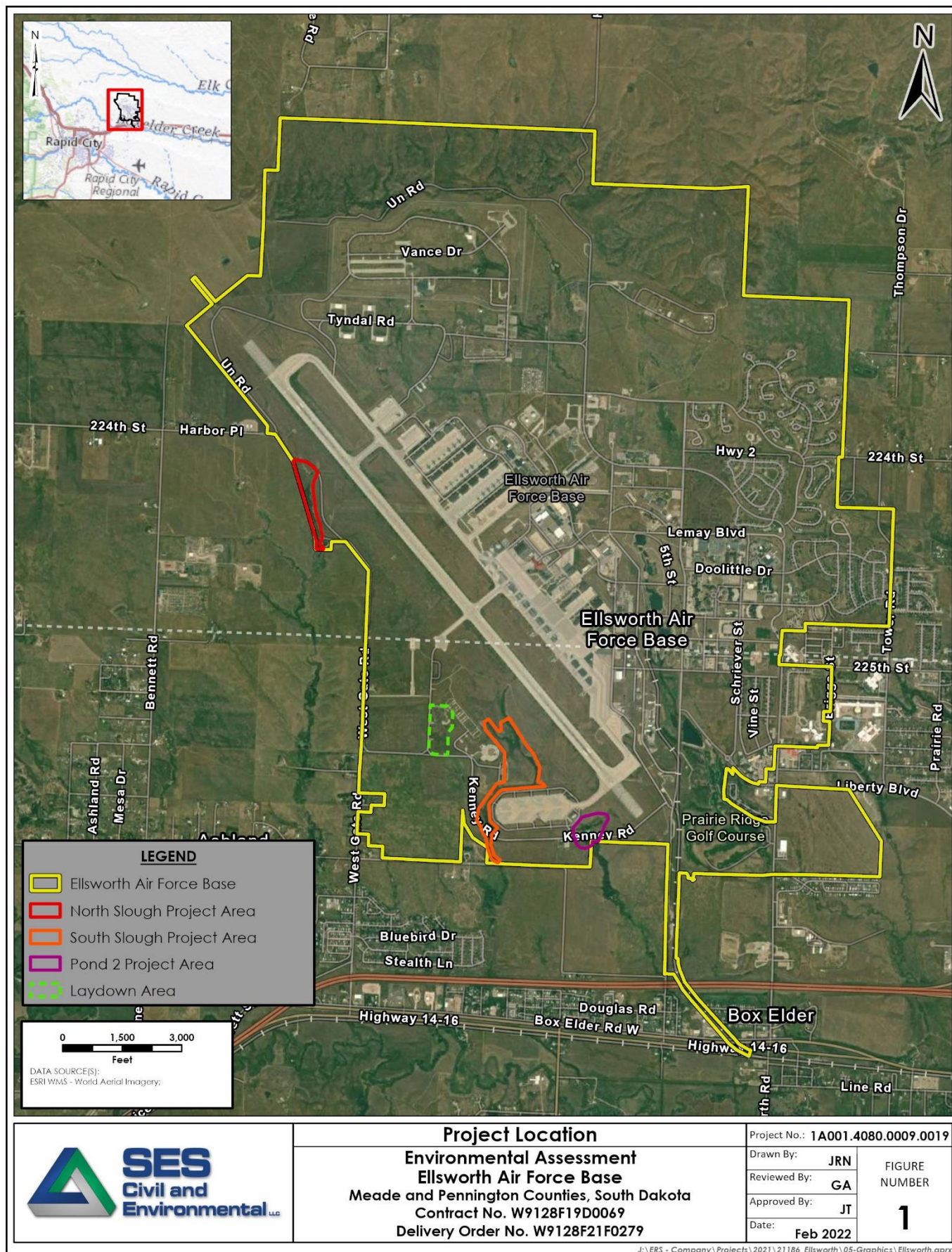
Digitally signed by  
SHEFFIELD.JOSEPH.L.11581800  
96  
Date: 2022.08.16 11:23:14 -06'00'

2 Attachments:

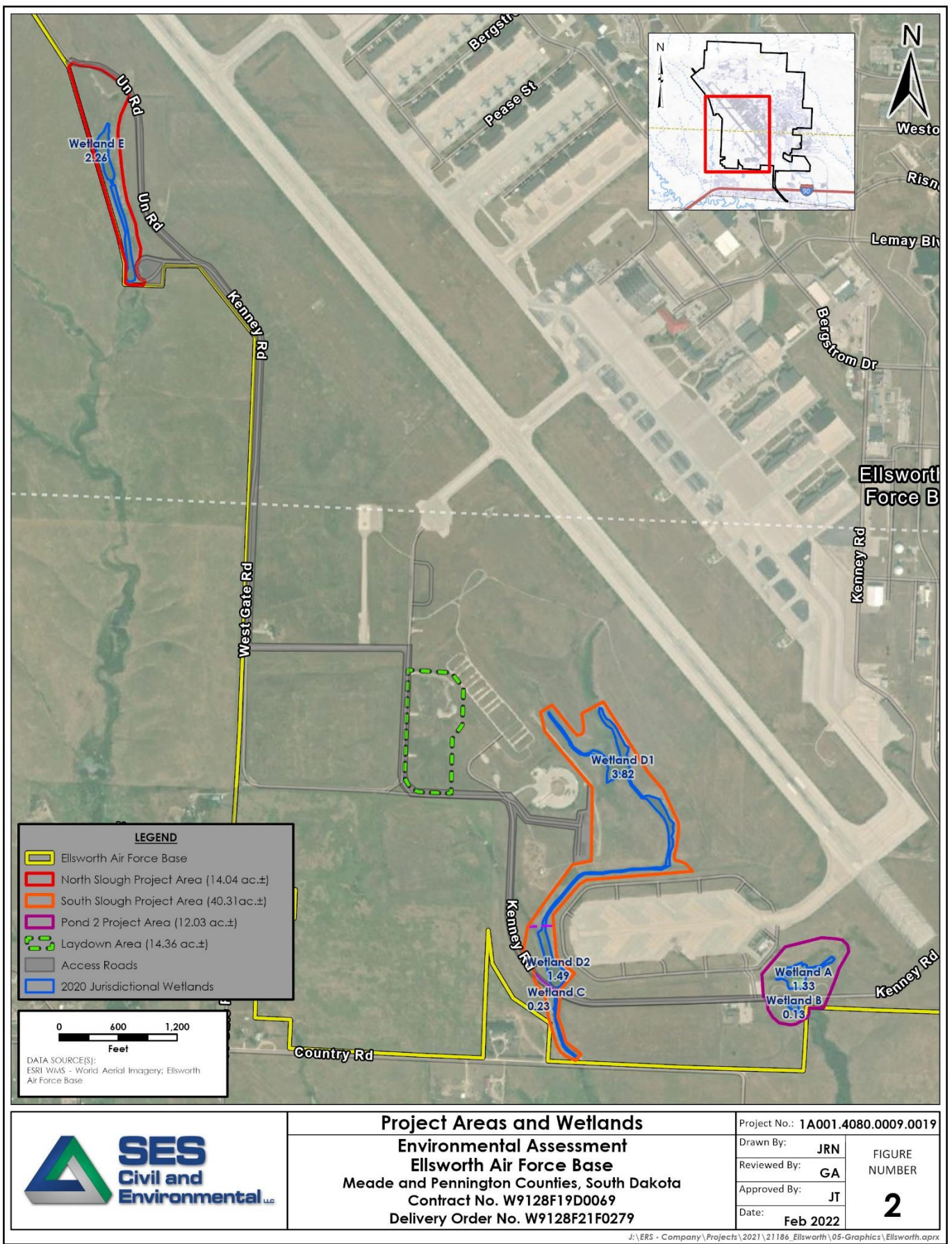
1. Figures
2. Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) Distribution List

## **Attachment 1 – Figures**









## **Attachment 2 – IICEP Distribution List**



<b>United States Army Corps of Engineers (USACE)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
USACE SD Regulatory Office		605-224-8531	28563 Powerhouse Road, Pierre, SD 57501	SDRegulatoryMailbox@usace.army.mil
<b>United States Fish and Wildlife Service (USFWS), Mountain Prairie Region</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Amity Bass	Field Supervisor, North and South Dakota Ecological Services	(605) 224-8693 ext 224	420 South Garfield Avenue, Suite 400 Pierre, SD 57501	amity_bass@fws.gov
<b>Federal Emergency Management Agency (FEMA)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Lee DePalo	Regional Administrator, Region 8	(303) 235-4812	Denver Federal Center, Building 710 P.O. Box 25267 Denver, CO 80255-0267	
Cathy Bachhuber	Tribal Affairs, FEMA Region 8			Cathy.Bachhuber@fema.dhs.gov
<b>South Dakota (SD) State Historic Preservation Office (SHPO)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Katie Wasley	Northern Historic Preservation Specialist	605-773-2906	900 Governors Dr. Pierre, SD 57501	Katie.Wasley@state.sd.us
<b>South Dakota Game, Fish, and Parks (SDGFP)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Stan Michals	Energy and Minerals Coordinator	Regional Office No. (605)394-2391 Cell No. (605)645-8881	4130 Adventure Trail Rapid City, SD 57702	Stan.Michals@state.sd.us
<b>South Dakota Department of Agricultural and Natural Resources (DANR)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Sean Kruger	Standards Team		Joe Foss Building, 523 East Capitol Pierre, SD 57501	Sean.Kruger@state.sd.us
Shannon Minerich	Standards Team	(605) 773-3351		shannon.minerich@state.sd.us

<b>South Dakota Ellsworth Development Authority (SDEDA)</b>				
<i>Name</i>	<i>Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Glen Kane	Managing Director	605-390-7290	14 St Joseph St, Rapid City, SD 57709	glen.kane@ellsworthauthority.org
<b>Tribal Governments</b>				
<i>Tribe</i>	<i>Name/Title</i>	<i>Phone</i>	<i>Address</i>	<i>E-Mail</i>
Apache Tribe of Oklahoma	Bobby Komardley, Chairman	405-247-9493	PO Box 1330 Anadarko, OK 73005	bkomardley@outlook.com
Arapaho Tribe of the Wind River Reservation, Wyoming	Ben Ridgley, THPO	307-851-1254	PO Box 67 St. Stevens, WY 82524	benridgley007@gmail.com
	Lee Spoonhunter, Chairperson	307-332-6120	PO Box 396 Fort Washakie, WY 82514-0396	lee.spoonhunter@northernarapaho.com
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, Montana	Dyan Youpee, THPO	406-768-2382	PO Box 1027 Poplar, MT 59255	d.youpee@fortpecktribes.net
	Floyd Azure, Chairperson	406-768-2300	PO Box 1027 Poplar, MT 59255-1027	fazure@fortpecktribes.net
Cheyenne and Arapaho Tribes, Oklahoma	Max Bear, THPO	405-422-7416	700 Black Kettle Blvd Concho, OK 73022	mbear@c-a-tribes.org
	Reggie Wassana, Governor	800-422-8224	P.O. Box 38 Concho, OK 73022	rwassana@c-a-tribes.org
Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota	Steven Vance, THPO	605-964-7554	PO Box 590 Eagle Butte, SD 57625	stevev.crstpres@outlook.com
	Harold Frazier, Chairperson	605-964-4155	PO Box 590 Eagle Butte, SD 57625-0590	HaroldCFrazier@yahoo.com
Comanche Nation, Oklahoma	Mark Woommavovah, Chairperson	580-492-3240	PO Box 908 Lawton, OK 73502	jennifer.rodriquez@comanchenation.com
	Martina Minthorn, THPO	580-595-9618	6 SW D Avenue Lawton, OK 73502	martina.minthorn@comanchenation.com
Confederated Salish and Kootenai Tribes of the Flathead Reservation	Kathryn McDonald, THPO	406-675-2700, ext. 1082	PO Box 278 Pablo, MT 59855	kathryn.mcdonald@cslt.org
	Tom McDonald Chairman	406-675-2700	PO Box 278 Pablo, MT 59855-0278	council@cslt.org

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	Merle Marks, THPO	605-245-2221	PO Box 50 Fort Thompson, SD 57339	cchistory@midstatesd.net
Crow Tribe of Montana	Aaron Brien, THPO	406-529-7991	PO Box 159 Crow Agency, MT 59022	aaron.brien@crow-nsn.gov
	AJ Not Afraid, Chairperson	406-638-3715	PO Box 159 Crow Agency, MT 59022	aj.notafraid@crow-nsn.gov
Eastern Shoshone Tribe of the Wind River Reservation, Wyoming	Joshua Mann, THPO	307-335-2081	PO Box 538 Fort Washakie, WY 82514	jmann@easternshoshone.org
Flandreau Santee Sioux Tribe of South Dakota	Garrie Kills-A-Hundred, THPO	605-864-1236	PO Box 283 Flandreau, SD 57028	garrie.killsahundred@FSST.org
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	Jeffery (Jeff) Stiffarm President	406-353-2205	RR1, Box 66 Harlem, MT 59526-9455	jeffery.stiffarm@ftbelknap.org
Kiowa Indian Tribe of Oklahoma	Matthew Komalty, Chairman	508-654-2300	PO Box 369 Carnegie, OK 73015	tharris@kiowatribe.org
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Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana	Serena Wetherelt Vice-President	406-477-6284	PO Box 128 Lame Deer, MT 59043-0128	serena.wetherelt@cheyennenation.com
	Teanna Limpy, THPO	406-477-4839	PO Box 128 Lame Deer, MT 59043	Teanna.Limpy@cheyennenation.com
Oglala Sioux Tribe	Julian Bear Runner, President	605-867-8487	PO Box 2070 Pine Ridge, SD 57770-2070	president.bearrunner@oglala.org

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	Stacy Laravie, THPO	402-857-3519	PO Box 288 Niobrara, NE 68760	ssettje@poncatrib-ne.org
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	Ione Quigley, THPO	605-747-4211	PO Box 809 Rosebud, SD 57570	ione.quigley@rst-nsn.gov
Santee Sioux Nation, Nebraska	Misty Frazier, THPO	402-857-3568	425 Frazier Ave. N. Suite 2 Niobrara, NE 68760	ssn.thpo@gmail.com
	Roger Trudell, Chairperson	402-857-2772	108 Spirit Lake Ave. W Niobrara, NE 68760	rtrudell@santeedakota.org
Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, South Dakota	Verlyn Beaudreau, Interim Chairperson	605-698-3911	PO Box 509 Agency Village, SD 57262-0509	chairman@swo-nsn.gov
	Dianne Desrosiers, THPO	605-698-3584	P.O. Box 907 Sisseton, SD 57262-0509	dianned@swo-nsn.gov
Spirit Lake Tribe, North Dakota	Susie Fox, Interim Director THPO	701-766-4031	P.O. Box 198 Fort Totten, ND 58335-0359	sfox@gondtc.com
	Myra Pearson, Chairwoman	701-766-4221	PO Box 359 Fort Totten, ND 58335-0359	slt-adminsec@spiritlakenation.com
Standing Rock Sioux Tribe of North & South Dakota	Janet Alkire, Chairperson	701-854-8500	PO Box D Fort Yates, ND 58538-0522	
	Jon Eagle, THPO	701-854-8645	PO Box D Fort Yates, ND 58538	j.eagle@standingrock.org
Yankton Sioux Tribe of South Dakota	Kip Spotted Eagle, THPO	605-384-3641	PO Box 1153 Wagner, SD 57380	yst.thpo@gmail.com
	Robert Hawk, Chairperson	605-384-3641 ext. 1015	PO Box 1153 Wagner, SD 57380-1153	robertflyinghawk@gmail.com



## DEPARTMENT of AGRICULTURE and NATURAL RESOURCES

JOE FOSS BUILDING  
523 E CAPITOL AVE  
PIERRE SD 57501-3182  
danr.sd.gov

September 21, 2022

Greg Johnson  
Environmental Compliance Chief  
28 CES/CEIE  
2125 Scott Drive  
Ellsworth Air Force Base, SD 57706

Subject: EAFB BASH EA - Environmental Review - Modify Existing Wetlands  
Adjacent to Primary Instrument Runways.

Dear Col. Sheffield:

The South Dakota Department of Agriculture and Natural Resources (DANR) has reviewed the above-referenced project for potential impacts to natural resources. Based on the information submitted in your letter received August 22, 2022, DANR has the following comments and permitting requirements.

### ***Tanks and Spills***

The Inspection, Compliance, and Remediation Program (ICRP) maintains a database of registered storage tanks and spills/environmental events, including petroleum and chemical releases in South Dakota. Our records identified several previous environmental events within the Ellsworth AFB property boundary. We also identified several storage tanks within the boundary of the Ellsworth AFB. In addition to these specific sites and tanks, Ellsworth AFB is identified as having per-and polyfluoroalkyl substances within the soil and groundwater. We recommend reviewing our online spills and tanks database regularly as your project progresses, to determine if future spills or new tanks are in or near your project area. For more information about tanks and spills/environmental events (including pdf copies of many case files), please visit: <https://apps.sd.gov/nr42interactivemap>.

While we do our best to maintain accurate information about environmental events and tanks, in some cases the location information provided to us may have been inaccurate. If contamination is caused by or is encountered during onsite construction activity, that contamination must be reported to DANR at 605-773-3296. Contaminated soil that has been excavated should be segregated from clean soil and sampled to determine disposal requirements. Further, any piping, equipment, or other material to be placed in a location where it will be in contact with contaminated soil or groundwater, should be evaluated to determine if it is compatible with the contaminant. If you have questions, please contact Baylee Hoff at [baylee.hoff@state.sd.us](mailto:baylee.hoff@state.sd.us) or (605) 773-3296.

### ***Solid and Hazardous Waste***

It appears, based on the information provided, this project will have little or no impact on solid waste management in the area. If you have any questions, please contact Waste Management at 605-773-3153.

It is not expected that any hazardous waste sites will be encountered within the vicinity of your project area. However, if road construction is planned for areas within a city or town, the contractor should contact this Department prior to construction. Should any hazardous waste be generated during the implementation of this project, the generator must abide by all applicable hazardous waste regulations. To determine whether your project may generate hazardous waste, visit:

<https://www.epa.gov/hwgenerators/managing-your-hazardous-waste-guide-small-businesses>. If you have any questions please contact Anthony Wagner at 605-773-3153, or [anthony.wagner@state.sd.us](mailto:anthony.wagner@state.sd.us).

Demolition or renovation of a building structure may be subject to the South Dakota asbestos requirements. If demolition or renovation is part of this construction project, or if the scope of the project changes to include demolition or renovation, please contact Anthony Wagner at 605-773-3153, or [anthony.wagner@state.sd.us](mailto:anthony.wagner@state.sd.us).

### ***Air Quality***

Based on the information provided, it appears this project will have minor impacts to air quality in South Dakota. This impact would be through source and fugitive emissions. In many cases, an air quality permit is required to operate equipment with point source emissions. A permit application can be obtained from the Air Quality or Minerals and Mining Program. Fugitive emissions, although not covered under State air quality regulations, are a common source of public concern and may be subject to local or county ordinances. Please contact your local officials to discuss requirements regarding fugitive emissions.

For further air quality information, please contact Rick Boddicker, Air Quality Program, telephone number 605-773-3151.

### ***Drinking Water***

Based on the information provided, this project will not have adverse environmental effects to drinking water in this area. Should the parameters of your project change, please reach out to Mark Mayer at 605-773-6039 or [Mark.Mayer@state.sd.us](mailto:Mark.Mayer@state.sd.us).

### ***Surface Water***

The Surface Water Quality Program (SWQ) has reviewed your request for comments letter. Based on the information provided, SWQ has the following comments:

1. At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site. Any construction activity that disturbs an area of one or more acres of land must have authorization under the General Permit for Storm Water



Discharges Associated with Construction Activities. Contact the Department of Agriculture and Natural Resources for additional information or guidance at 1-800-SDSTORM (1-800-737-8676) or <https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/default.aspx>.

2. A Surface Water Discharge permit may be required if any construction dewatering should occur as a result of this project. Please contact this office for more information.
3. Impacts to tributaries, creeks, wetlands, and lakes should be avoided by this project. These waterbodies are considered waters of the state and are protected under Administrative Rules of South Dakota Chapter 74:51. Special construction measures may have to be taken to ensure that water quality standards are not violated.
4. The discharge of pollutants from any source, including indiscriminate use of fill material, may not cause destruction or impairment except where authorized under Section 404 of the Federal Water Pollution Control Act. Please contact the United States Army Corps of Engineers for more information 605-224-8531 and to obtain a 404 permit. SD DANR is the certifying authority for 401 water quality certification. Please email [Shannon.Minerich@state.sd.us](mailto:Shannon.Minerich@state.sd.us) for more information on the 401 water quality certification process.

### **Groundwater**

Based on the information provided, this project is unlikely to have adverse effects on ground water quality. Should the parameters of your project change, please reach out to Matt Hicks at 605-773-5337 or [Matt.Hicks@state.sd.us](mailto:Matt.Hicks@state.sd.us).

Thank you for providing DANR the opportunity to comment on this project. If you have any questions regarding the information provided, please contact me at 605-773-3296.

Sincerely,

*Trish Kindt for*

Baylee Hoff  
Environmental Scientist  
SD DANR- Environmental Assessment Contact  
Phone: (605) 773-3296  
Email: [Baylee.Hoff@state.sd.us](mailto:Baylee.Hoff@state.sd.us)

cc: Dustin Willet, Pennington County EM  
Eric Pearson, Meade County EM  
TSgt, USAF Timothy R. Bricker, Emergency Manager  
Colonel Joseph L. Sheffield, Commander, 28<sup>th</sup> Bomb Wing, 1958 Scott Drive  
Suite 1, Ellsworth AFB, SD 57796- 4710



**DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 28TH BOMB WING (AFGSC)  
ELLSWORTH AIR FORCE BASE SOUTH DAKOTA**



Colonel Joseph L. Sheffield  
Commander  
28th Bomb Wing  
1958 Scott Drive Suite 1  
Ellsworth AFB SD 57706-4710

Ms. Amity Bass  
United States Fish and Wildlife Service (USFWS), Mountain Prairie Region  
Field Supervisor, North and South Dakota Ecological Services  
420 South Garfield Avenue, Suite 400  
Pierre SD 57501

Dear Ms. Bass

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) to modify existing wetlands adjacent to the primary instrument runway to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard (BASH) risk at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota (SD). Pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations Part 1500 et seq., as revised in July 2020), and the USAF Environmental Impact Analysis Process (32 Code of Federal Regulations Part 989), EAFB will prepare an EA that considers the potential consequences of the Proposed Action to human health and the natural environment. The Project Areas are displayed in the attached figures (Attachment 1).

In accordance with Section 7 of the Endangered Species Act (ESA), we obtained a species list from the Information for Planning and Consultation Database (IPaC) on June 7, 2022 (Attachment 2).

EAFB expects that this project will not affect protected species based on the following:

1. EAFB Integrated Natural Resource Management Plan (INRMP) (updated 2020): No federally protected species have been documented within EAFB.
2. The species list from the IPaC indicated that there is no critical habitat present within the vicinity of the project areas. While the IPaC species list indicated the potential for Northern Long-Eared Bat and Red Knot to be present, these species have not been documented within the vicinity of the project areas. The candidate species Monarch Butterfly has been documented within the vicinity of the project areas.

At this time, the DAF respectfully requests your consideration of the following: Please send any information relevant to natural resources management at EAFB. These could include recent studies

(2015-present), new regulations/policy, or agency initiatives that you would like to be considered. The draft EA is anticipated to be ready in August 2021 for your review. We will provide thirty (30) days to review and appreciate your comments before we finalize the EA.

Please provide any information to Ellsworth Air Force Base, Attn: Mr. Greg Johnson, Environmental Compliance Chief, 28 CES/CEIE, 2125 Scott Dr., Ellsworth AFB, SD 57706; or by email at gregory.johnson.8@us.af.mil, with the subject titled as ATTN: EAFB BASH EA. Thank you for your assistance.

Sincerely

SHEFFIELD.JOSEPH.L.1158180096  
PH.L.1158180096  
JOSEPH L. SHEFFIELD, Colonel USAF  
Commander

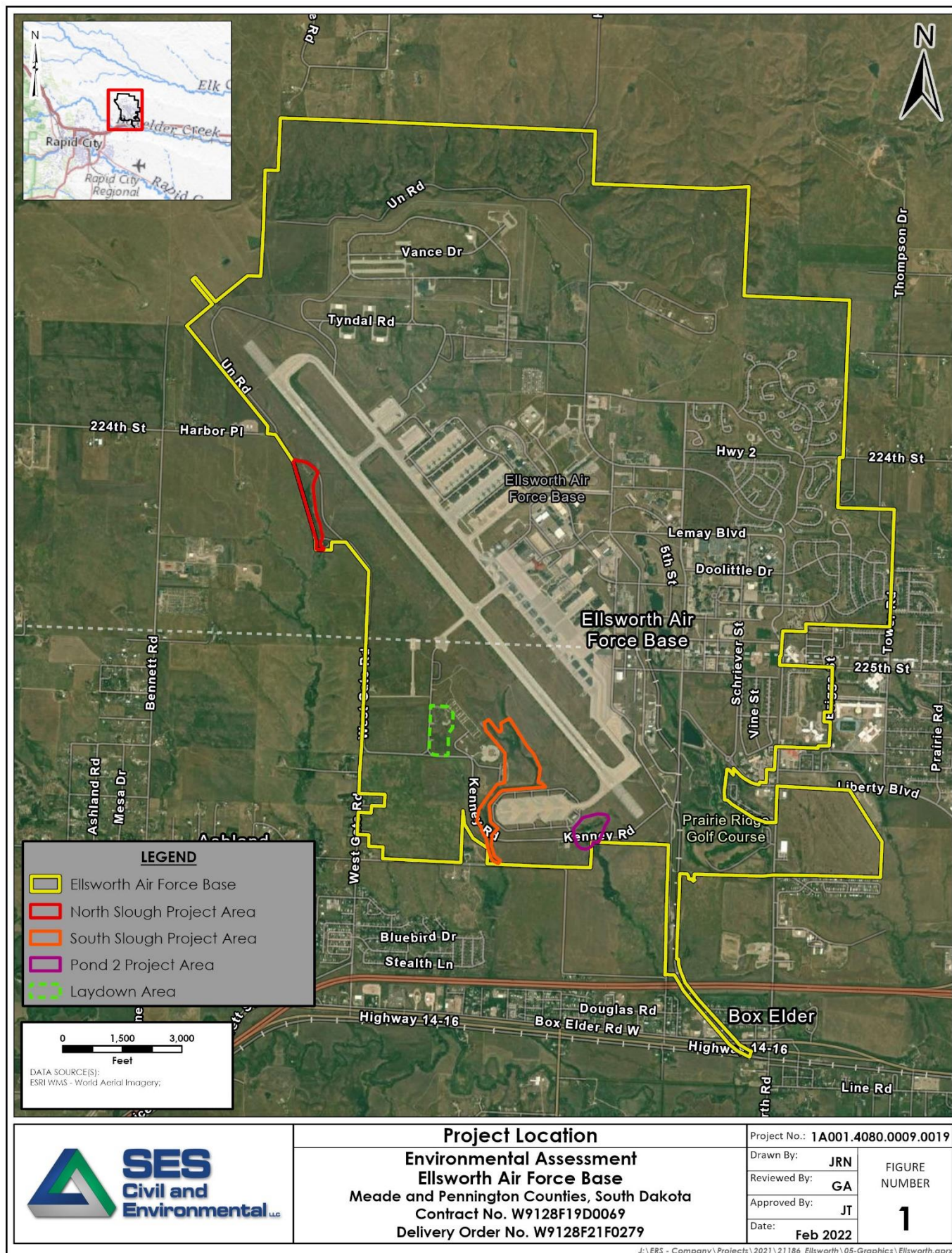
Digitally signed by  
SHEFFIELD.JOSEPH.L.11581800  
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Date: 2022.08.16 11:26:00 -06'00'

2 Attachments:

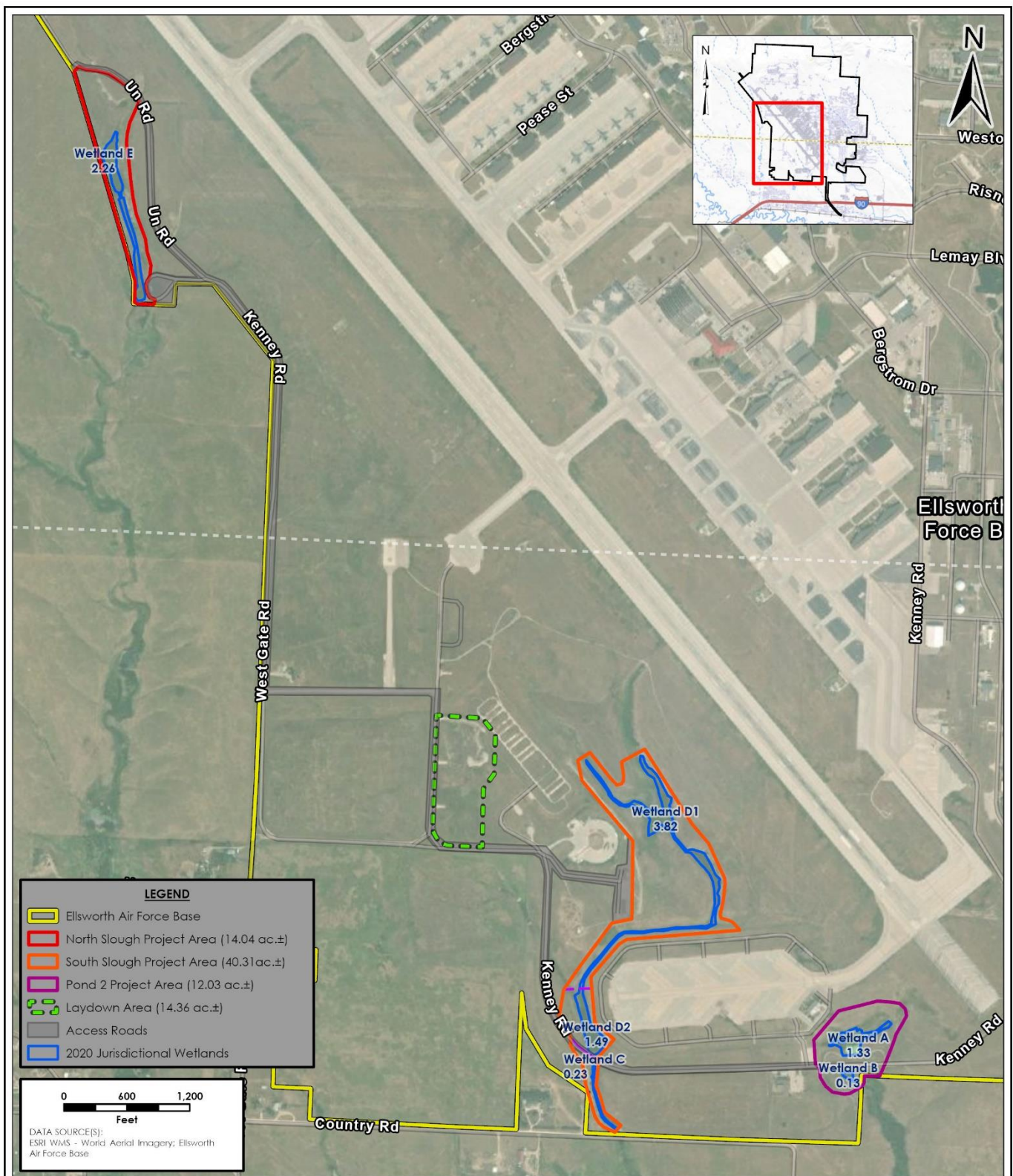
1. Figures
2. Species List from Information for Planning and Consultation (IPaC)

## **Attachment 1 – Figures**









## Project Areas and Wetlands

**Environmental Assessment**  
**Ellsworth Air Force Base**  
 Meade and Pennington Counties, South Dakota  
 Contract No. W9128F19D0069  
 Delivery Order No. W9128F21F0279

Project No.: 1A001.4080.0009.0019

Drawn By: JRN

Reviewed By: GA

Approved By: JT

Date: Feb 2022

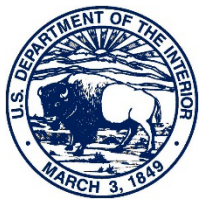
FIGURE  
NUMBER

**2**

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## **Attachment 2 – Species List from IPaC**



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
420 S Garfield Ave, Suite 400  
Pierre, South Dakota 57501-5408



June 7, 2022

In Reply Refer To:  
Species list for Ellsworth AFB

Mr. Gary Brundige  
Natural/Cultural/EIAP Program Manager  
28 CES/CEIEC  
1940 EP Howe Drive  
Ellsworth AFB, SD 57706

Dear Mr. Gary Brundige,

Thank you for your email received June 6, 2022 requesting a species list for Ellsworth Airforce Base. The project area used to create this list encompasses only Ellsworth Airforce Base. This project is located in Meade County, South Dakota.

### **ESA Federally Listed Species**

In accordance with section 7(c) of the Endangered Species Act, as amended, 16 U.S.C. 1531 et seq., we have determined that the following federally listed and candidate species may occur in the project area (this list is considered valid for 90 days):

<u>Species</u>	<u>Status</u>	<u>Expected Occurrence</u>
Monarch Butterfly ( <i>Danaus plexippus</i> )	Candidate	Spring-Fall, resident and migrant
Northern Long-eared Bat ( <i>Myotis septentrionalis</i> )	Threatened	Summer resident, seasonal migrant, known winter resident in Black Hills
Rufa Red Knot ( <i>Calidris canutus rufa</i> )	Threatened	Rare seasonal migrant

### **Monarch butterfly**

In December 2020, the Service determined that the monarch is warranted for listing under the ESA but is precluded at this time by higher priority listing actions. The monarch is a large

butterfly that lives in a variety of habitats throughout North America and various additional locations across the globe. The monarch needs milkweed (*Asclepias* spp.) for breeding. Adults use a wide variety of flowering plants throughout migration and breeding. Important nectar sources during the spring migration typically include *Coreopsis* spp., *Viburnum* spp., *Phlox* spp., and early blooming milkweeds. Important nectar sources during fall migration include goldenrods (*Solidago* spp.) asters (*Symphyotrichum* spp. and *Eurybia* spp.), gayfeathers (*Liatris* spp.), and coneflowers (*Helianthus* spp.), thistle (*Cirsium* spp.) and sage (*Salvia* spp.). Lists of preferred nectar plants by region specific to monarchs can be found at <http://www.xerces.org/monarch-nectar-plants/>. Avoiding milkweed patches would protect eggs and larvae. Avoiding nectar sources would conserve food for the adults during reproductive and migration stages.

### **Northern Long-eared Bat**

The northern long-eared bat is a medium-sized brown bat listed as threatened under the Endangered Species Act. Northern long-eared bats are known to be present in South Dakota year-round, primarily roosting singly or in colonies underneath bark, in cavities or in crevices of both live and dead trees in the summer. Some hibernacula have been documented in caves/mines in the Black Hills. The species has been documented in other forested areas in the state during the summer months and along the Missouri River during migration. Summer survey guidelines for this species are identical for those established for the Indiana Bat (available online at: <https://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html>). White nose syndrome - a fungus affecting hibernating bats - is considered a significant threat to this species, but individuals may be harmed by other activities such as modifications to hibernacula, timber harvest, human disturbance, and collisions with wind turbines. A 4(d) rule has been published that exempts take of Northern long-eared bats in certain circumstances. For more information, see: <https://www.fws.gov/Midwest/Endangered/mammals/nleb/index.html>.

### **Rufa Red Knot**

The rufa red knot is a robin-sized shorebird listed as threatened under the Endangered Species Act (see: < <http://www.gpo.gov/fdsys/pkg/FR-2014-12-11/pdf/2014-28338.pdf> > for more information). The red knot migrates annually between its breeding grounds in the Canadian Arctic and several wintering regions, including the Southeast United States, the Northeast Gulf of Mexico, northern Brazil, and Tierra del Fuego at the southern tip of South America. Although it is primarily a coastal species, small numbers of rufa red knots are reported annually across the interior United States (i.e., greater than 25 miles from the Gulf or Atlantic Coasts) during spring and fall migration. These reported sightings are concentrated along the Great Lakes, but multiple reports have been made from nearly every interior State, including South Dakota. The red knot likely uses South Dakota habitats similar to those of the least tern and piping plover. The species does not breed in this state.

Mr. Gary Brundige

The Service appreciates the opportunity to provide this species list. If you have any questions on this list, please contact Dylan Turner of this office at (605) 280-6704.



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
420 S Garfield Ave, Suite 400  
Pierre, South Dakota 57501-5408



In Reply Refer to:  
FWS/R6/Ellsworth AFB Wetland EA

September 27, 2022

Mr. Greg Johnson  
Environmental Compliance Chief, 28 CES/CEIE  
2125 Scott Drive  
Ellsworth AFB, South Dakota 57706

Dear Mr. Johnson:

Thank you for your letter received September 9, 2022, requesting environmental comments regarding the above referenced project involving the modification of existing wetlands adjacent to the primary instrument runway in order to reduce wildlife habitat and corresponding Bird/Wildlife Aircraft Strike Hazard risk at Ellsworth Airforce Base. This project is located in Meade County, South Dakota.

According to the National Wetlands Inventory, (available online at [www.fws.gov/wetlands/](http://www.fws.gov/wetlands/)) wetlands exist within the project boundary. If a project may impact wetlands or other important fish and wildlife habitats, the U.S. Fish and Wildlife Service (Service), in accordance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347) and other environmental laws and rules, recommends complete avoidance of these areas, if possible, then minimization of any adverse impacts, and finally replacement of any lost acres, in that order. Alternatives should be examined and the least damaging practical alternative selected. If wetland impacts are unavoidable, a mitigation plan addressing the number and types of wetland acres to be impacted, and the methods of replacement should be prepared and submitted to the resource agencies for review.

Generally, once all measures to avoid and minimize impacts to the maximum extent possible have been taken, the Service recommends mitigation in the form of restoration of drained wetlands at a ratio of 1:1. If creation of new wetlands is deemed necessary to mitigate for wetland losses, a 2:1 ratio (restored:impacted) is recommended. Created wetlands may have a lower rate of establishment success, result in a temporal delay in achieving value to wildlife, or may not contain the degree of biological diversity typically found in a natural wetland basin, thus are not preferred when considering mitigation options. Preservation of existing wetlands is also not recommended as a means of mitigation as this is not consistent with the “no net loss” of wetlands as outlined in Executive Order #11990.

Mr. Greg Johnson

The Service appreciates the opportunity to provide comments. If changes are made in the project plans or operating criteria, or if additional information becomes available, the Service must be informed so that the above determinations can be reconsidered. If you have any questions on these comments, please contact Dylan Turner of this office at (605) 280-6704.

Sincerely,

Amity Bass  
North and South Dakota Field Supervisor



## **Appendix A-4 Public Notice Affidavit**

# Affidavit of Publication

STATE OF SOUTH DAKOTA:

COUNTY OF LAWRENCE:

Letitia Lister of said County and State being first duly sworn, on her oath says: That the BLACK HILLS PIONEER is a legal daily newspaper of general circulation, printed and published in the City of Spearfish, in said County and State by Letitia Lister, and has been such a newspaper during the times hereinafter mentioned; and that said newspaper has a bonafide circulation of at least 200 copies weekly, and has been published within said County in the English language for at least one year prior to the first publication of the notice herein mentioned, and is printed in whole or in part in an office maintained at the place of publication; and that I, Letitia Lister, the undersigned, am the Publisher of said newspaper and have personal knowledge of all the facts stated in this affidavit; and that the advertisement headed:

Early Public Notice      Notice  
OF Availability  
"Display Advertisement"

a printed copy of which is hereto attached, was printed and published in said newspaper for 2 successive and consecutive <sup>days</sup> weeks, the first publication being made on the 25<sup>th</sup> day of Oct, 2022, and the last publication on the 29<sup>th</sup> day of Oct, 2022, that the full amount of fees charged for publishing same, to-wit: The sum of \$ 798.00, insures solely to the benefit of the publisher of the BLACK HILLS PIONEER, that no agreement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any other person whomsoever.

[Signature]  
Subscribed and sworn to before me this 2nd day of Nov, 2022

[Signature]

Notary Public, Lawrence County, South Dakota  
My commission expires: 7-18-2025

**EARLY PUBLIC NOTICE**

**NOTICE OF AVAILABILITY  
DRAFT ENVIRONMENTAL ASSESSMENT AND  
PROPOSED FINDING OF NO SIGNIFICANT IMPACT  
FOR THE MODIFICATION OF EXISTING WETLANDS  
ELLSWORTH AIR FORCE BASE, SOUTH DAKOTA**

An Environmental Assessment (EA) has been prepared to analyze the potential impacts of up to 9.3 acres of wetlands adjacent to the runway to reduce wildlife habitat and corresponding Bird/wildlife Aircraft Strike Hazard (BASH) risk located at Ellsworth Air Force Base (EAFB) in Rapid City, South Dakota. The project is needed due to wildlife's demonstrated recurrent use of wetland areas adjacent to the runway. The Proposed Action aims to permanently resolve BASH risk associated with the subject wetlands, ensuring EAFB can continue to fulfill flight missions without further flight safety risk associated with these wildlife attractants.

The purpose of the Proposed Action is to modify on-site wetlands, so they no longer present a BASH risk to flight operations, utilizing the airfield design standards set forth in the current EAFB BASH Plan and DAF Instruction (DAFI) 91-212. The project is needed due to wildlife's demonstrated recurrent use of wetland areas adjacent to the runway. The successes of EAFB's flight missions hinge on the operational readiness of the airfield, which is negatively impacted by wildlife habitat adjacent to the runway. The Proposed Action is needed to permanently resolve BASH risk associated with the subject wetlands, ensuring EAFB can continue to fulfill flight missions without further flight safety risk associated with these wildlife attractants.

The EA, prepared in accordance with the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations, and United States Department of the Air Force (DAF) Instructions implementing NEPA, evaluates potential impacts of the Proposed Action and the No-action Alternative. Based on this analysis, the DAF has prepared a proposed Finding of No Significant Impact (FONSI).

The public will have the opportunity to comment on the Draft EA and FONSI at the following location:

Rapid City Public Library  
610 Quincy St  
Rapid City, SD 57701

Electronic copies will be made available at: <https://www.ellsworth.af.mil/About-US/Environmental/>

Please provide any comments within thirty (30) days of the posted date to Ellsworth Air Force Base, Attn: Mr. Greg Johnson, Environmental Compliance Chief, 28 CES/CEIE, 2125 Scott Dr., Ellsworth AFB, SD 57706; or by email at [gregory.johnson.8@us.af.mil](mailto:gregory.johnson.8@us.af.mil), with the subject titled as ATTN: EAFB BASH EA.

**PRIVACY ADVISORY NOTICE**

Public comments on this Draft EA are requested pursuant to NEPA, 42 United States Code 4321, et seq. All written comments received during the comment period will be made available to the public and considered during the final EA preparation. Providing private address information with your comment is voluntary and such personal information will be kept confidential unless release is required by law. However, address information will be used to compile the project mailing list and failure to provide it will result in your name not being included on the mailing list.

Published twice at the total approximate cost of \$798.00 and can be viewed free of charge at [www.sdpublicnotices.com](http://www.sdpublicnotices.com).

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DRAFT ENVIRONMENTAL ASSESSMENT AND  
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\*\*\* Proof of Publication \*\*\*

STATE OF SOUTH DAKOTA)

County of Pennington)

SS:

SES Civil and Environmental LLC  
Olivia Roorbach  
3550 ST. JOHNS BLUFF RD. SOUTH  
JACKSONVILLE FL 32224

ORDER NUMBER 51816

The undersigned, being duly sworn, upon his/her oath says: That he/she is now and was at all time hereinafter mentioned, a clerk of the RAPID CITY JOURNAL, a corporation of Rapid City, South Dakota, a legal and daily newspaper printed and published in Rapid City, in said County of Pennington, and has full and personal knowledge of all the facts herein stated as follows: that said newspaper is and at all of the times herein mentioned has been a legal and daily newspaper with a bonafide paid circulation of at least Two Hundred copies daily, and has been printed and published for at least one year prior to the first date of the published notice.

This affidavit is a true and corrected copy of notice which appeared

in said newspaper once each day for 2

successive days the first publication there of being on the  
28 day of October, 2022.

Section: Legal

Category: 0064 Miscellaneous

PUBLISHED ON: 10/28/2022, 10/29/2022

TOTAL AD COST: 127.94

FILED ON: 10/31/2022

Subscribed and sworn to before me this

31st day of October, 2022.

Kelly L. Kanaan Notary Public

My commission expires

Jan 17, 2025

Kelly L. Kanaan

SEAL NOTARY PUBLIC  
SOUTH DAKOTA SEAL

EARLY PUBLIC NOTICE

NOTICE OF AVAILABILITY  
DRAFT ENVIRONMENTAL  
ASSESSMENT AND  
PROPOSED FINDING  
OF NO SIGNIFICANT IMPACT  
FOR THE MODIFICATION  
OF EXISTING WETLANDS  
ELLSWORTH AIR FORCE BASE,  
SOUTH DAKOTA

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(Published October 28 & 29, 2022, at the total approximate cost of \$127.94 and may be viewed free of charge at [www.sdpublicnotices.com](http://www.sdpublicnotices.com))  
Legal No: 51816

# **Appendix B - Final Wetland Surveys to Support B-21 Environmental Impact Statement EAFB, SD**



FINAL

# Wetland Surveys to Support B-21 Environmental Impact Statement Ellsworth Air Force Base, South Dakota

*Prepared for*

Department of the Air Force  
Global Strike Command  
Ellsworth Air Force Base, South Dakota



*Prepared by*



1066 Commerce Park Drive  
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# Contents

<b>Acronyms and Abbreviations.....</b>	<b>ii</b>
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<b>1</b>	<b>Background and Methodology .....</b>	<b>1-1</b>
1.1	Introduction .....	1-1
1.2	Regulatory Background.....	1-1
1.3	Methodology.....	1-4
<b>2</b>	<b>Results and Discussion .....</b>	<b>2-1</b>
2.1	Results.....	2-1
2.1.1	Wetland A .....	2-5
2.1.2	Wetland B .....	2-6
2.1.3	Wetland C .....	2-7
2.1.4	Wetland D .....	2-8
2.1.5	Wetland E.....	2-9
2.2	Comparison to Past Surveys .....	2-10
2.3	Jurisdictional Determination.....	2-12
2.4	Wetland Impacts.....	2-12
<b>3</b>	<b>References.....</b>	<b>3-1</b>

## Tables

2-1	Jurisdictional Wetlands Identified During Surveys .....	2-1
2-2	Vegetation in Wetland A.....	2-6
2-3	Vegetation in Wetland B.....	2-7
2-4	Vegetation in Wetland C.....	2-8
2-5	Vegetation in Wetland D.....	2-9
2-6	Vegetation in Wetland E .....	2-10
2-7	Wetland Sizes Determined by 2020 and 2003 Wetland Surveys.....	2-11

## Figures

1-1	Location of Ellsworth Air Force Base .....	1-2
1-2	Location of Wetland Survey Areas.....	1-3
2-1	Wetlands A and B in Pond 2 Area .....	2-2
2-2	Wetlands C and D in Pond 1 Area .....	2-3
2-3	Wetland E in Pond 3 Area .....	2-4

Appendix A Wetland Determination Data Forms

Appendix B Photographs

Appendix C Approved Jurisdictional Determination

# Acronyms and Abbreviations

AFB	Air Force Base
CWA	Clean Water Act
EIS	Environmental Impact Statement
EPA	United State Environmental Protection Agency
L1UBHx	Lacustrine-Limnetic-Unconsolidated Bottom-Excavated
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OWS	oil-water separator
PEM	Palustrine Emergent
R2UBx	Riverine-Lower Perennial-Unconsolidated Bottom-Excavated
USACE	United States Army Corps of Engineers
USAF	United States Air Force
XCEL	XCEL Engineering

# Background and Methodology

## 1.1 Introduction

This report presents the results of wetland surveys conducted by XCEL Engineering (XCEL) at Ellsworth Air Force Base (AFB), South Dakota to support the Environmental Impact Statement (EIS) being prepared by the United States Air Force (USAF) for the beddown of the B-21 aircraft. The EIS analyzes the potential environmental impacts of locating the first of three potential beddown sites for the B-21, referred to as Main Operating Base 1, at either Ellsworth AFB or Dyess AFB, Texas. This report addresses wetland surveys only at Ellsworth AFB.

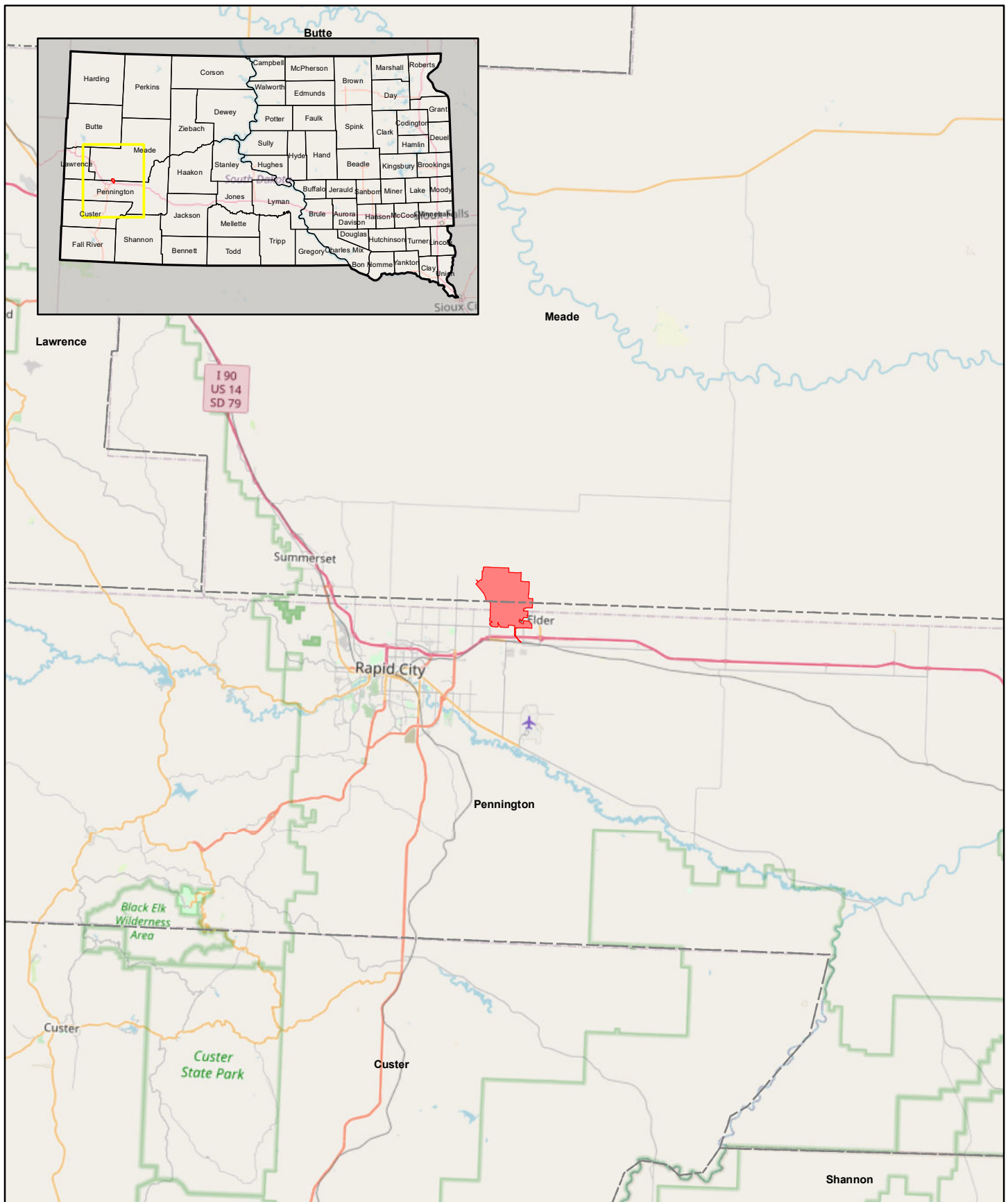
Ellsworth AFB is located in western South Dakota (Figure 1-1). The Base encompasses approximately 5,415 acres in Meade and Pennington Counties, and is approximately 7 miles northeast of Rapid City. The wetland surveys conducted for this project involved delineations of jurisdictional wetland boundaries and assessments of wetland characteristics. The surveys were conducted in three pre-determined areas identified by the USAF based on their potential to contain wetlands and potential to be affected by beddown construction. These areas are referred to in this report as the Pond 1 Area, Pond 2 Area, and Pond 3 Area to correspond to the existing stormwater retention ponds in the areas and are shown on Figure 1-2.

Wetlands within the three pre-determined survey areas were delineated during past base-wide wetland surveys conducted in 1994 by Mariah Associates (Mariah Associates, 1994) and in 2003 by the USAF (Ellsworth AFB, 2003). The current wetland surveys provide an updated assessment of the jurisdictional boundaries of the wetlands based on current field conditions and federal wetland regulations. The wetland delineations conducted in 2003 are discussed in this report as applicable to assess differences between past and current jurisdictional boundaries of the wetlands.

## 1.2 Regulatory Background

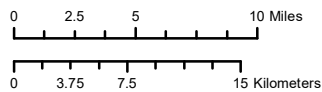
The United States Environmental Protection Agency (EPA) and United States Army Corps of Engineers (USACE) jointly define wetlands as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” Executive Order 11990, *Protection of Wetlands*, requires federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands, and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.

Wetlands and surface water bodies, unless they qualify to be exempted, are under the regulatory jurisdiction of the federal Clean Water Act (CWA) Section 404 program. Section 404 of the CWA regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Under the federal Section 404 program, no discharge of dredged or fill material may be permitted if a practicable alternative exists that is less damaging to the aquatic environment, or if the nation’s waters would be significantly degraded. The Section 404 program is jointly administered by the EPA and USACE, with the USACE being responsible for Section 404 permit decisions.



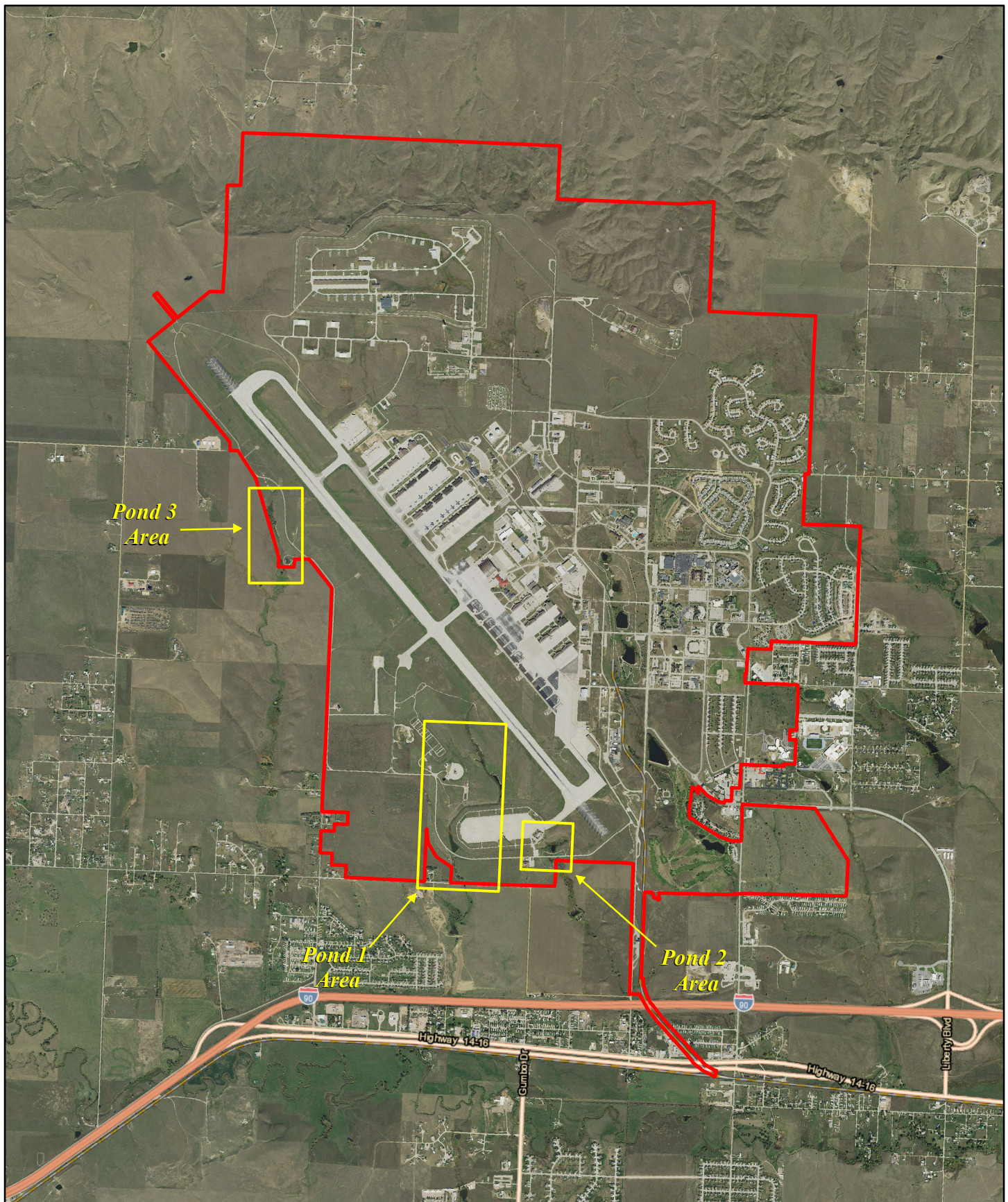
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- County Boundary
- Ellsworth Air Force Base




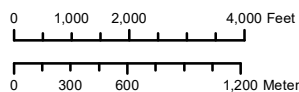
**FIGURE 1-1**  
**Location of Ellsworth Air Force Base**  
*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*





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 Ellsworth Air Force Base



**FIGURE 1-2**

**Location of Wetland Survey Areas**

*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*



*The Navigable Waters Protection Rule: Definition of “Waters of the United States”*, published in the Federal Register on April 21, 2020 (Volume 85, Number 77) and made effective on June 22, 2020, updated the scope of waters federally regulated under the CWA. In this Rule, the EPA and USACE redefined the types of waters that qualify as waters of the United States, referred to as jurisdictional waters, and the types of waters that do not qualify as waters of the United States, referred to as non-jurisdictional waters. The Rule identifies the following four categories of waters as being jurisdictional: territorial seas and traditional navigable waters; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters. The Rule excludes from the definition of “waters of the United States” all waters or features not included in the identified categories.

## 1.3 Methodology

Wetlands in the three pre-determined survey areas at Ellsworth AFB were surveyed by XCEL from July 28 to August 1, 2020. Prior to the field surveys, a desktop analysis was conducted to preliminarily assess site conditions and identify potential onsite wetland types and locations. The desktop analysis included review of the following data sources that contain information on wetlands at Ellsworth AFB:

- Ellsworth AFB Wetland Delineation Report (Mariah Associates, 1994)
- Ellsworth AFB Wetland Database and Mapping Report (Ellsworth AFB, 2003)
- Ellsworth AFB Integrated Natural Resources Management Plan (Ellsworth AFB, 2018)
- Ellsworth AFB Geographic Information System database
- National Wetlands Inventory (NWI) mapping
- True-color, ortho-rectified aerial photography
- Historic aerial photography and topographic mapping
- Natural Resources Conservation Service (NRCS) soil survey data (NRCS, 2020)

Wetland delineations were conducted by a senior wetland scientist in accordance with the *Corps of Engineers Wetlands Delineation Manual* (USACE, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)* (USACE, 2010). Jurisdictional wetland boundaries were marked by flagging and the flagged points were recorded by a hand-held Trimble Geo 7X Global Positioning System unit with sub-meter accuracy. Data on soils, vegetation, and hydrology of the wetlands at selected sampling point locations were recorded on USACE Wetland Determination Data Forms for the Great Plains Region. Determinations of soil color were made using 2009 Munsell Soil Color Charts. Photographs of the wetlands and other features were taken at the sampling point locations and other locations within and in the vicinity of the wetlands.

The general characteristics of the delineated wetlands were assessed as part of the wetland surveys. The delineated wetlands were classified in accordance with the NWI classification system as described in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et. al., 1979). In addition to the NWI classification, the wetlands were described in detail in terms of their type, hydrology, soils, vegetative composition, and other characteristics.

# Results and Discussion

## 2.1 Results

A total of five jurisdictional wetlands were identified during the wetland surveys conducted at Ellsworth AFB to support the B-21 EIS. The wetlands are identified in Table 2-1 and shown on Figures 2-1, 2-2, and 2-3; detailed descriptions of the wetlands are provided in the subsections that follow. The USACE Wetland Determination Data Forms completed for the sampling points selected during the surveys are provided as Appendix A. Photographs taken at the sampling points and other locations during the surveys are provided as Appendix B.

**Table 2-1. Jurisdictional Wetlands Identified During Surveys**

*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*

Wetland	Location	Total Size (acres)	Wetland Components (NWI Classification)	NRCS Soil Types in Wetland
A	Pond 2 Area	1.33	Pond 2 - stormwater retention pond (L1UBHx) and herbaceous wetland (PEM)	Zigweid-Nihill complex, 6 to 15 percent slopes
B	Pond 2 Area	0.13	Herbaceous wetland (PEM)	Zigweid-Nihill complex, 6 to 15 percent slopes
C	Pond 1 Area	0.23	Channelized stream (R2UBx)	Nunn loam, 6 to 9 percent slopes and Satanta loam, 2 to 6 percent slopes
D	Pond 1 Area	5.31	Pond 1 - stormwater retention pond (L1UBHx), channelized stream (R2UBx), and herbaceous wetland (PEM)	Nunn loam, 6 to 9 percent slopes
E	Pond 3 Area	2.26	Herbaceous wetland (PEM)	Nunn clay loam, 2 to 6 percent slopes and Lohmiller and Glenberg soils, channeled

**Notes:**

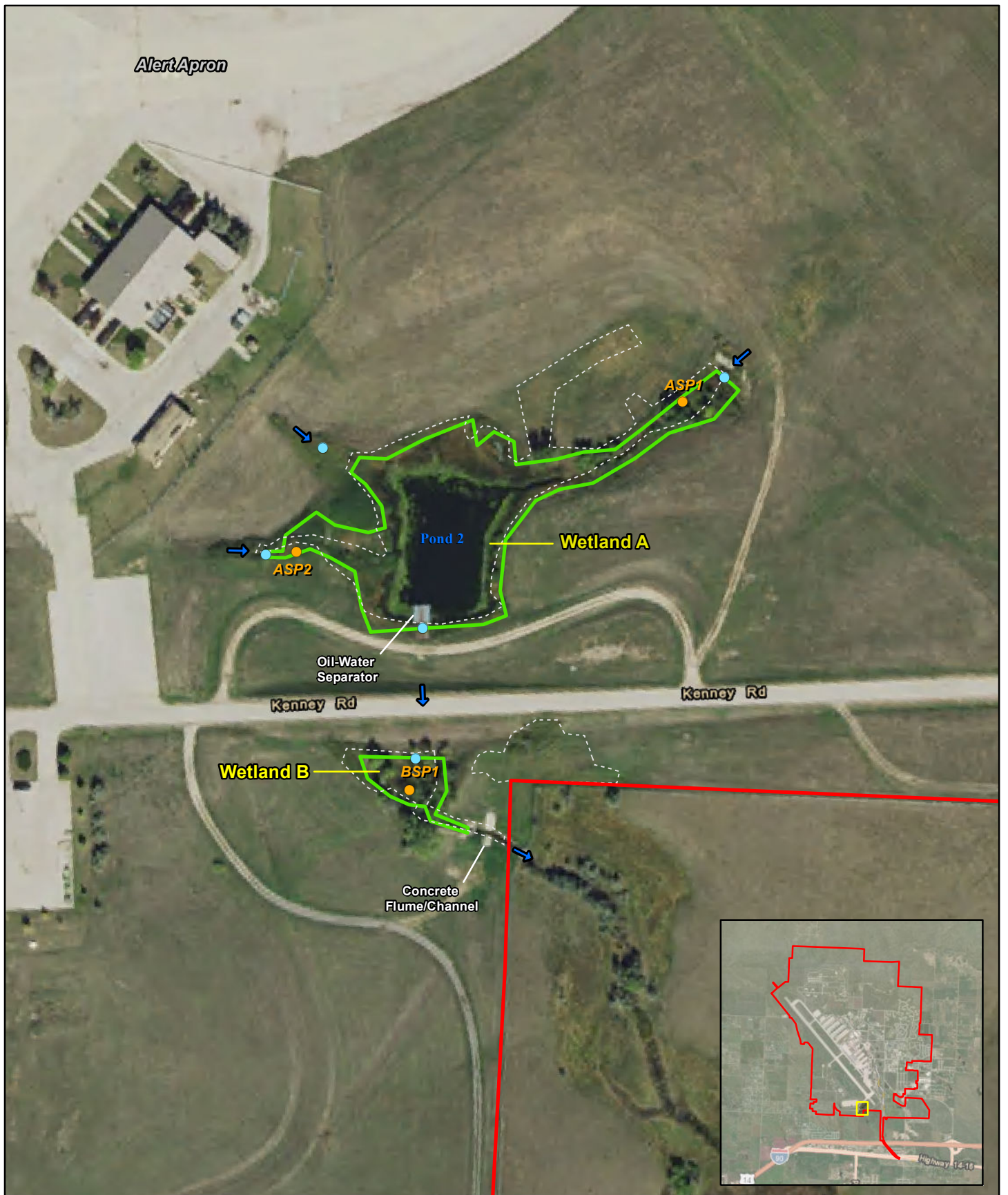
L1UBHx = Lacustrine-Limnetic-Unconsolidated Bottom-Excavated

PEM = Palustrine-Emergent

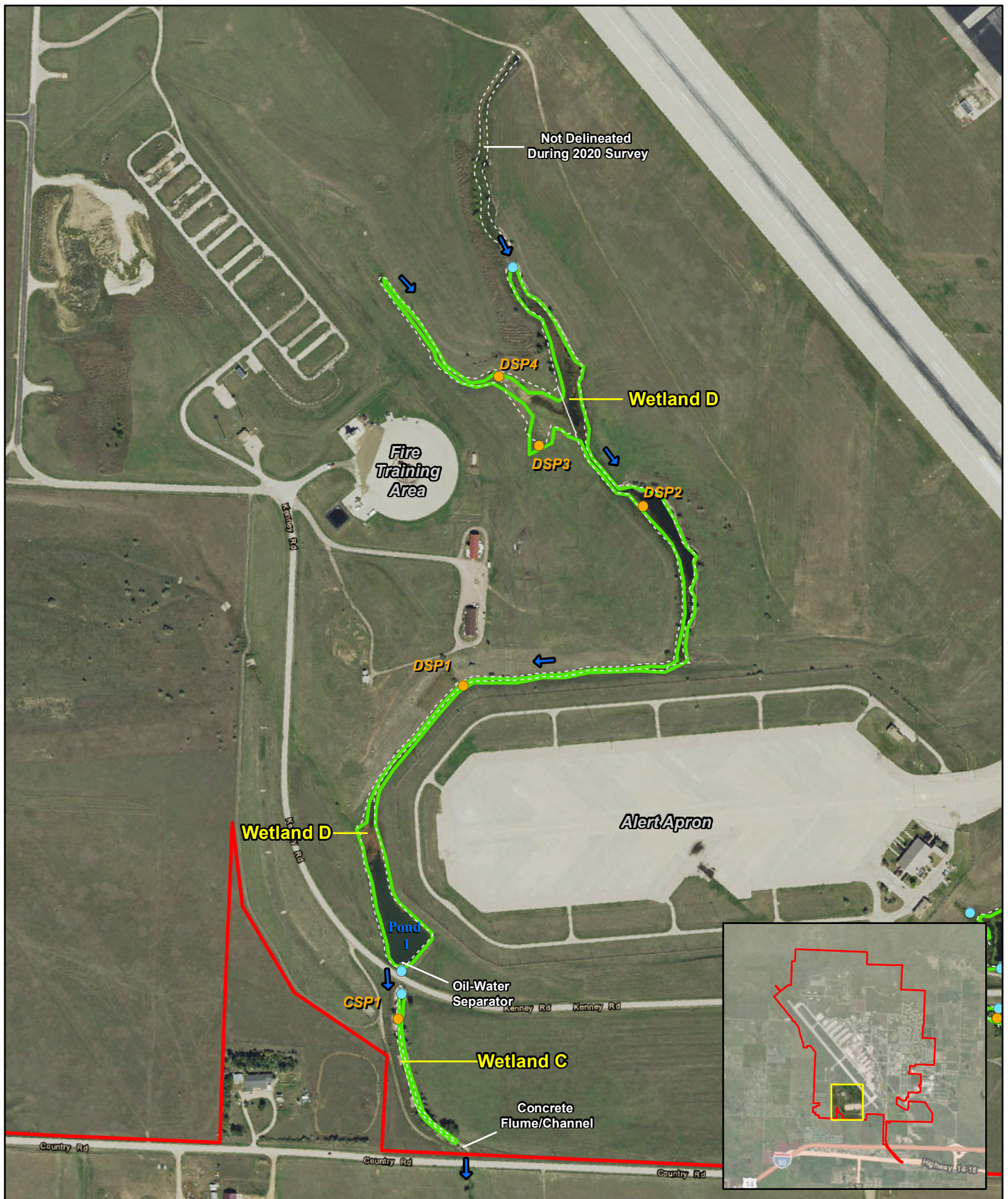
NRCS = Natural Resources Conservation Service

R2UBx = Riverine-Lower Perennial-Unconsolidated Bottom-Excavated

The wetlands, as delineated, range in size from approximately 0.13 to 5.31 acres. Wetlands A and D consist of multiple wetland types/components, that include surface water bodies; Wetland C is also a surface water body. Based on review of historic aerial photography and topographic mapping, all the identified wetlands originated, either wholly or partially, as natural wetland/water systems, although they all have been physically altered during past development of the Base. For example, the stream component of Wetland D was diverted to the west in the late 1950s to accommodate construction of the Alert Apron at that time. This diversion created a new drainageway on the west side of the Alert Apron and modified the connected upstream and downstream systems. Based on their natural origin, hydrological connectivity, and current hydric characteristics, all the identified wetlands are jurisdictional in accordance with the Navigable Waters Protection Rule, which became effective on June 22, 2020.

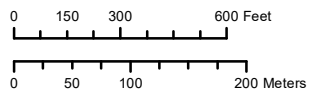






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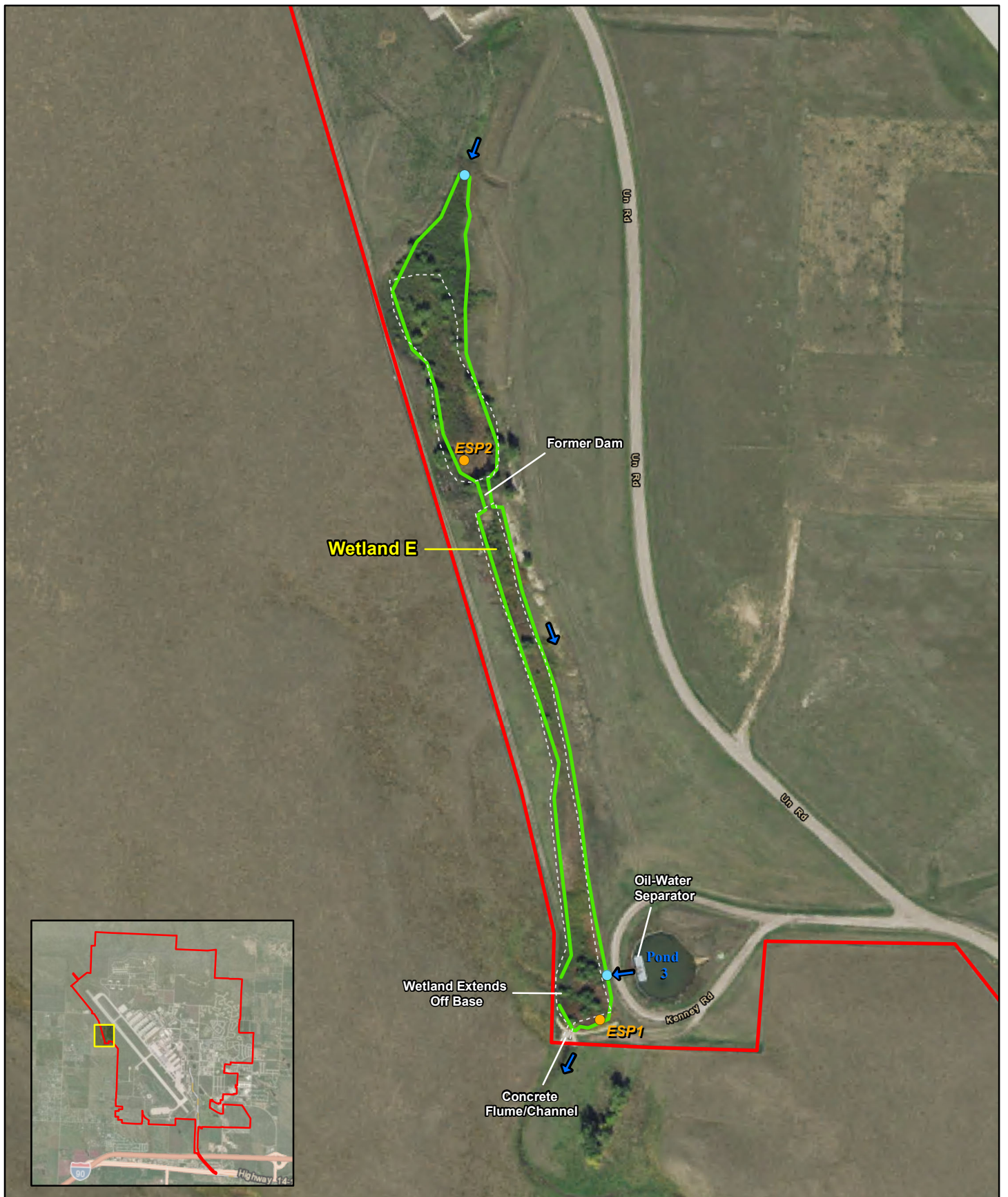
- Flow Direction
- Sampling Point
- Culvert
- 2003 Delineated Boundary
- 2020 Delineated Boundary
- Ellsworth Air Force



**FIGURE 2-2**  
**Wetlands C and D in Pond 1 Area**

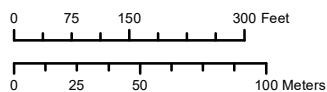
Wetland Surveys at Ellsworth AFB to Support B-21 EIS





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- Flow Direction
- Sampling Point
- Culvert
- 2003 Delineated Boundary
- 2020 Delineated Boundary
- Ellsworth Air Force Base



**FIGURE 2-3**  
**Wetland E in Pond 3 Area**

*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*

Table 2-1 identifies the soil types in each wetland based on NRCS soil survey data (NRCS, 2020). Of the identified soil map units, only the *Satanta loam, 2 to 6 percent slopes* soils map unit, which occurs in a relatively small portion of Wetland C, and the *Nunn clay loam, 2 to 6 percent slopes* and *Lohmiller and Glenberg soils, channeled* soil map units, which occur in Wetland E, are classified by the NRCS as hydric soils. Soils in all the identified wetlands were determined to be hydric during the surveys based on their characteristics, which included high organic content, presence of redox features, and other hydric indicators, as indicated on the USACE Wetland Determination Data Forms provided as Appendix A. Overall, soils in the identified wetlands are likely more hydric than indicated by their corresponding NRCS soil map units as a result of regular inputs of drainage from contributing on-base developed areas over decades, which have caused the wetlands to have wetter than normal hydrology.

### 2.1.1 Wetland A

Wetland A is located in the Pond 2 Area, southeast of the Alert Apron and north of Kenney Road (Figure 2-1). Wetland A consists of Pond 2, which is a stormwater retention pond (NWI classification = L1UBx) and connected herbaceous wetland (NWI classification = PEM), which includes the banks/littoral area of the pond and adjacent wetland habitat. As delineated, Wetland A is approximately 1.33 acres.

Wetland A receives drainage from the southern end of the runway to the northeast via a culvert and from the alert apron to the northwest via two culverts (Figure 2-1). The drainage is retained in Pond 2, treated by the pond's oil-water separator (OWS), and discharged southward via a culvert under Kenney Road into Wetland B. During the field investigation, all three culverts that direct drainage into Pond 2 and the culvert that directs drainage out of Pond 2 into Wetland B had slow flowing water. Pond 2 had moderate water clarity; the depth of Pond 2 could not be estimated based on field observations. Standing water existed in certain portions of the herbaceous wetland component of Wetland A, outside Pond 2. Indicators of wetland hydrology observed at the Wetland A sampling points are identified on the corresponding USACE Wetland Determination Data Forms provided in Appendix A.

Information on the vegetation that existed in Wetland A during the survey is presented in Table 2-2. The dominant plant species observed at the Wetland A sampling points, which differ from those identified for the overall wetland, are listed on the corresponding USACE Wetland Determination Data Forms provided in Appendix A. The inundated basin of Pond 2 contained relatively small amounts of emergent vegetation, dominated by common cattail (*Typha latifolia*); no submerged or floating vegetation was observed within the pond. Overall vegetative cover within the pond was less than 2 percent. Overall vegetative cover in the herbaceous wetland component of Wetland A (outside Pond 2) ranged from approximately 75 to 90 percent, with trees and shrubs collectively accounting for less than 10 percent of the total vegetative cover. The tree and shrub strata were dominated by peach-leaf willow (*Salix amygdaloides*) and sandbar willow (*Salix interior*), respectively. The herbaceous strata was dominated by Torrey's rush (*Juncus torreyi*), blue vervain (*Verbena hastata*), curly dock (*Rumex crispus*), field sow-thistle (*Sonchus arvensis*), bog willowherb (*Epilobium leptophyllum*), and common cattail. Other plant species observed in Wetland A are listed in Table 2-2.



**Table 2-2. Vegetation in Wetland A***Wetland Surveys at Ellsworth AFB to Support B-21 EIS*

Wetland Component	Overall Vegetative Cover	Plant Species Composition	
		Dominant Species	Other Species
Pond 2	< 2%	Common cattail ( <i>Typha latifolia</i> )	None
Herbaceous Wetland	75% - 90%	Torrey's rush ( <i>Juncus torreyi</i> )	Peach-leaf willow ( <i>Salix amygdaloides</i> )
		Blue vervain ( <i>Verbena hastata</i> )	Sandbar willow ( <i>Salix interior</i> )
		Curly dock ( <i>Rumex crispus</i> )	Russian olive ( <i>Elaeagnus angustifolia</i> )
		Field sow-thistle ( <i>Sonchus arvensis</i> )	Late goldenrod ( <i>Solidago gigantea</i> )
		Bog willowherb ( <i>Epilobium leptophyllum</i> )	Common evening-primrose ( <i>Oenothera biennis</i> )
		Common cattail ( <i>Typha latifolia</i> )	Common mint ( <i>Mentha arvensis</i> )

### 2.1.2 Wetland B

Wetland B is an herbaceous wetland (NWI classification = PEM) located in the Pond 2 Area, southeast of the Alert Apron and south of Kenney Road (Figure 2-1). As delineated, Wetland B is approximately 0.13 acre.

Wetland B receives drainage from Wetland A to the north via a culvert under Kenney Road (Figure 2-1). The drainage flows southeastward through Wetland B and is ultimately discharged off-base where it continues to flow southward. A concrete flume and channel have been constructed between the southeastern boundary of the wetland and the boundary of the Base to measure the discharge flow and minimize associated erosion potential; the location of the flume/channel serves as the National Pollutant Discharge Elimination System (NPDES) outfall point established for the contributing drainage area for Pond 2. During the field investigation, the culvert that directs drainage into Wetland B and the concrete flume/channel that directs drainage out of Wetland B had slow flowing water; the interior portions of the wetland contained standing water with no obvious flow. Indicators of wetland hydrology observed at the Wetland B sampling point are identified on the corresponding USACE Wetland Determination Data Form provided in Appendix A.

Information on the vegetation that existed in Wetland B during the survey is presented in Table 2-3. The dominant plant species observed at the Wetland B sampling point, which differ from those identified for the overall wetland, are listed on the corresponding USACE Wetland Determination Data Form provided in Appendix A. Overall vegetative cover in Wetland B ranged from approximately 50 to 75 percent, with trees and shrubs collectively accounting for less than 30 percent of the total vegetative cover. The tree and shrub strata were dominated by eastern cottonwood (*Populus deltoides*) trees and saplings. Overall herbaceous cover within the wetland was dominated by narrow-leaf cattail (*Typha angustifolia*), curly dock, and blue vervain. Other plant species observed in Wetland B are listed in Table 2-3.

Table 2-3. Vegetation in Wetland B

Wetland Surveys at Ellsworth AFB to Support B-21 EIS

Overall Vegetative Cover	Plant Species Composition	
	Dominant Species	Other Species
50% - 75%	Eastern cottonwood ( <i>Populus deltoides</i> )	Common mint ( <i>Mentha arvensis</i> )
	Narrow-leaf cattail ( <i>Typha angustifolia</i> )	Bog willowherb ( <i>Epilobium leptophyllum</i> )
	Curly dock ( <i>Rumex crispus</i> )	
	Blue vervain ( <i>Verbena hastata</i> )	

### 2.1.3 Wetland C

Wetland C is a channelized stream (NWI classification = R2UBx) located in the Pond 1 Area, southwest of the Alert Apron and south of Kenney Road (Figure 2-2). As delineated, Wetland C is approximately 0.23 acre.

Wetland C has a channel that ranges from approximately 6 feet to 12 feet wide and steep banks that range from approximately 15 feet to 30 feet high in linear distance from toe-of-slope to top-of-bank. The channel and banks of the stream are mostly covered by riprap that is either loose or secured within gabion baskets, which has been added to minimize erosion potential. Wetland C receives drainage from Wetland D to the north via a culvert under Kenney Road (Figure 2-2). The drainage flows southeastward through Wetland C and is ultimately discharged off-base where it continues to flow southward. A concrete flume and channel have been constructed between the southeastern boundary of the wetland and the boundary of the Base to measure the discharge flow and minimize associated erosion potential; the location of the flume/ channel serves as the NPDES outfall point established for the contributing drainage area for Pond 1. During the field investigation, the set of culverts that direct drainage into Wetland C, the entire length of the stream, and the concrete flume/channel that directs drainage out of Wetland C had slow flowing water; the stream had moderate water clarity and ranged in depth from less than 1 inch to approximately 6 inches. Indicators of wetland hydrology observed at the Wetland C sampling point are identified on the corresponding USACE Wetland Determination Data Form provided in Appendix A.

Information on the vegetation that existed in Wetland C during the survey is presented in Table 2-4. The dominant plant species observed at the Wetland C sampling point, which differ slightly from those identified for the overall wetland, are listed on the corresponding USACE Wetland Determination Data Form provided in Appendix A. No emergent, submerged, or floating vegetation was observed within the inundated channel of the drainage ditch during the survey. Overall vegetative cover on the banks of the ditch ranged from approximately 25 to 40 percent, with trees and shrubs collectively accounting for less than 30 percent of the total vegetative cover. The tree and shrub strata were dominated by eastern cottonwood, peach-leaf willow, and sandbar willow trees and saplings. Overall herbaceous cover on the ditch banks was dominated by common cattail and three-square (*Schoenoplectus pungens*). Other plant species observed in Wetland C are listed in Table 2-4.

**Table 2-4. Vegetation in Wetland C***Wetland Surveys at Ellsworth AFB to Support B-21 EIS*

Overall Vegetative Cover	Plant Species Composition	
	Dominant Species	Other Species
25% - 40%	Eastern cottonwood ( <i>Populus deltoides</i> )	Curly dock ( <i>Rumex crispus</i> )
	Peach-leaf willow ( <i>Salix amygdaloides</i> )	Blue vervain ( <i>Verbena hastata</i> )
	Sandbar willow ( <i>Salix interior</i> )	
	Common cattail ( <i>Typha latifolia</i> )	
	Three-square ( <i>Schoenoplectus pungens</i> )	

### 2.1.4 Wetland D

Wetland D is located in the Pond 1 Area, west and north of the Alert Apron and southwest of the runway (Figure 2-2). Wetland D consists of Pond 1, which is a stormwater retention pond (NWI classification = L1UBx); a channelized stream (NWI classification = R2UBx); and connected herbaceous wetland (NWI classification = PEM), which includes the banks/littoral area of the stream and adjacent wetland habitat. As delineated, Wetland D is approximately 5.31 acres.

Most of Pond 1 has relatively steep banks and little to no littoral area. The stream component of Wetland D has a channel that ranges from approximately 6 feet to 90 feet wide and moderately sloped to very steep banks that range from approximately 4 feet to over 100 feet high in linear distance from toe-of-slope to top-of-bank; the banks in certain portions of the stream are covered by riprap. The northern portion of Wetland D consists of two separate stream segments (Figure 2-2). The northeastern segment is the main stream channel. Drainage from the runway and other portions of the airfield to the north enters the main stream channel via a set of two culverts located at the delineated northeastern end of the stream (Figure 2-2). The northwestern segment is a tributary to the main stream channel; this tributary receives drainage from higher elevations to the north and west via overland flow. This tributary conveys drainage to the southeast and converges with the main stream channel east of the Fire Training Area (Figure 2-2). As shown on Figure 2-2, there is another segment of the main stream channel north of the delineated northeastern end of Wetland D; this stream segment was not delineated during this survey because it is part of a separate ongoing project and associated CWA Section 404 permit application. The drainage that enters the northern portion of Wetland D flows southward through the wetland, is retained in Pond 1 and treated by the pond's OWS, and is ultimately discharged southward via a culvert under Kenney Road into Wetland C.

During the field investigation, the set of culverts that direct drainage into the main stream channel and the entire length of the main stream channel had slow flowing water; the main stream channel had moderate water clarity and ranged in depth from less than 1 inch to greater than 3 feet. Most of the tributary to the main stream channel had standing water that was less than 2 inches deep with no obvious flow. Pond 1 had moderate water clarity; the depth of Pond 1 could not be estimated based on field observations. Indicators of wetland hydrology observed at the Wetland D sampling points are identified on the corresponding USACE Wetland Determination Data Forms provided in Appendix A.

Information on the vegetation that existed in Wetland D during the survey is presented in Table 2-5. The dominant plant species observed at the Wetland D sampling points, which differ from those identified for the overall wetland, are listed on the corresponding USACE Wetland Determination Data Forms provided in Appendix A. No emergent, submerged, or floating vegetation was observed in Pond 1 during the survey. The inundated channel of the stream contained emergent vegetation in some areas and no vegetation in other areas; no submerged or floating vegetation was observed in the stream channel. Overall vegetative cover within the stream channel ranged from approximately 30 to 45 percent.

Dominant emergent species in the stream channel included common cattail, Torrey's rush, and softstem bulrush (*Schoenoplectus tabernaemontani*). Overall vegetative cover in the herbaceous wetland component of Wetland D, which includes the banks/littoral area of the stream and adjacent wetland habitat, ranged from approximately 75 to 90 percent, with trees and shrubs collectively accounting for less than 2 percent of the total vegetative cover. The tree and shrub strata were dominated by peach-leaf willow and sandbar willow trees and saplings. Overall herbaceous cover was dominated by common cattail, narrow-leaf cattail, Torrey's rush, softstem bulrush, curly dock, blue vervain, field sow-thistle, common evening-primrose (*Oenothera biennis*), and common water hemlock (*Cicuta maculata*). Other plant species observed in Wetland D are listed in Table 2-5.

Table 2-5. Vegetation in Wetland D  
Wetland Surveys at Ellsworth AFB to Support B-21 EIS

Wetland Component	Overall Vegetative Cover	Plant Species Composition	
		Dominant Species	Other Species
Pond 1	0%	None	None
Stream	30% - 45%	Common cattail ( <i>Typha latifolia</i> ) Torrey's rush ( <i>Juncus torreyi</i> ) Softstem bulrush ( <i>Schoenoplectus tabernaemontani</i> )	Narrow-leaf cattail ( <i>Typha angustifolia</i> )
Herbaceous Wetland	75% - 90%	Common cattail ( <i>Typha latifolia</i> ) Narrow-leaf cattail ( <i>Typha angustifolia</i> ) Torrey's rush ( <i>Juncus torreyi</i> ) Softstem bulrush ( <i>Schoenoplectus tabernaemontani</i> ) Curly dock ( <i>Rumex crispus</i> ) Blue vervain ( <i>Verbena hastata</i> ) Field sow-thistle ( <i>Sonchus arvensis</i> ) Common evening-primrose ( <i>Oenothera biennis</i> ) Common water hemlock ( <i>Cicuta maculata</i> )	Peach-leaf willow ( <i>Salix amygdaloides</i> ) Sandbar willow ( <i>Salix interior</i> ) Northern reedgrass ( <i>Calamagrostis stricta</i> ) Common mint ( <i>Mentha arvensis</i> ) Foxtail barley ( <i>Hordeum jubatum</i> ) Kentucky blue grass ( <i>Poa pratensis</i> ) Common sunflower ( <i>Helianthus annuus</i> )

## 2.1.5 Wetland E

Wetland E is an herbaceous wetland (NWI classification = PEM) located in the Pond 3 Area, southwest of the runway near the northwestern boundary of the Base (Figure 2-3). As delineated, Wetland E is approximately 2.26 acres.

Wetland E has steep, tall banks throughout most of its area, especially in its northern portion where some of the banks are over 50 feet high in linear distance from toe-of-slope to top-of-bank. Remnants of an earthen dam, which formerly impounded water on its northern side and divided Wetland E into two separate wetlands, exists in the northern portion of the wetland (Figure 2-3). The dam is largely intact and measures approximately 15 feet high and 30 feet wide. A cut created through the dam allows drainage to flow from north to south; the dam was cut sometime between 1983 and 1994. The northern portion of Wetland E receives drainage from the northern portion of the airfield to the north via a set of two culverts and the southern portion of Wetland E receives drainage from Pond 3 to the east via a set of three culverts (Figure 2-3). Pond 3 is a stormwater retention pond that receives drainage from the northern portion of the airfield. The drainage flows southward through Wetland E and is ultimately discharged off-base where it continues to flow southward. A concrete flume and channel have been

constructed between the southern boundary of the wetland and the boundary of the Base to measure the discharge flow and minimize associated erosion potential; the location of the flume/channel serves as the NPDES outfall point established for the contributing drainage area for Pond 3. Pond 3 is hydrologically connected to Wetland E; however, the pond is non-jurisdictional because it is concrete-lined. Drainage from Pond 3 is treated by the pond's OWS before it is discharged into Wetland E. As shown on Figure 2-3, the southwestern portion of Wetland E extends off-base to the west.

During the field investigation, the set of culverts that direct drainage into Wetland E from Pond 3 and the concrete flume/channel that directs drainage out of Wetland E had slow flowing water; the interior portions of the wetland contained standing water with no obvious flow. There was no flow from the set of two culverts at the northern end of the wetland. Indicators of wetland hydrology observed at the Wetland E sampling points are identified on the corresponding USACE Wetland Determination Data Forms provided in Appendix A.

Information on the vegetation that existed in Wetland E during the survey is presented in Table 2-6. The dominant plant species observed at the Wetland E sampling points, which differ from those identified for the overall wetland, are listed on the corresponding USACE Wetland Determination Data Forms provided in Appendix A. Overall vegetative cover in Wetland E ranged from approximately 80 to 95 percent, with trees and shrubs collectively accounting for less than 5 percent of the total vegetative cover. The tree and shrub strata were dominated by peach-leaf willow and sandbar willow trees and saplings. Overall herbaceous cover within the wetland was dominated by sandbar willow, common cattail, common spike-rush (*Eleocharis palustris*), curly dock, and common mint. Other plant species observed in Wetland E are listed in Table 2-6.

**Table 2-6. Vegetation in Wetland E**

*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*

Overall Vegetative Cover	Plant Species Composition	
	Dominant Species	Other Species
80% - 95%	Sandbar willow ( <i>Salix interior</i> )	Peach-leaf willow ( <i>Salix amygdaloides</i> )
	Common cattail ( <i>Typha latifolia</i> )	Rough barnyard grass ( <i>Echinochloa muricata</i> )
	Common spike-rush ( <i>Eleocharis palustris</i> )	Giant ragweed ( <i>Ambrosia trifida</i> )
	Curly dock ( <i>Rumex crispus</i> )	Lady's thumb ( <i>Persicaria maculosa</i> )
	Common mint ( <i>Mentha arvensis</i> )	Common evening-primrose ( <i>Oenothera biennis</i> )
		Softstem bulrush ( <i>Schoenoplectus tabernaemontani</i> )
		Arum-leaf arrowhead <i>Sagittaria cuneata</i>
		Foxtail barley ( <i>Hordeum jubatum</i> )
		Torrey's rush ( <i>Juncus torreyi</i> )

## 2.2 Comparison to Past Surveys

The wetlands delineated during this survey were also delineated during past base-wide wetland surveys conducted in 1994 by Mariah Associates (Mariah Associates, 1994) and in 2003 by the USAF (Ellsworth AFB, 2003). The wetland delineations conducted in 2003 are shown on Figures 2-1, 2-2, and 2-3 to assess how the jurisdictional wetland boundaries determined by that survey compare to those determined by the current survey. Table 2-7 compares the sizes of the wetlands determined by the two surveys.

**Table 2-7. Wetland Sizes Determined by 2020 and 2003 Wetland Surveys**  
*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*

<b>Wetland</b>	<b>Location</b>	<b>Total Wetland Size in 2020 (acres)</b>	<b>Total Wetland Size in 2003 (acres)</b>
A	Pond 2 Area	1.33	1.41
B	Pond 2 Area	0.13	0.17
C	Pond 1 Area	0.23	0.20
D	Pond 1 Area	5.31	6.05
E	Pond 3 Area	2.26	1.95

As indicated on Figure 2-1, there are distinct differences between the 2020 and 2003 delineations of Wetland A. Two prominent differences between the delineations exist along the northeastern boundary of the wetland, where two areas determined to be wetland by the 2003 survey were determined to be upland by the 2020 survey. No indicators of wetland soils, hydrology, or vegetation currently exist in these two areas, which suggests that the areas may have been inadvertently filled since the 2003 survey, potentially as part of land contouring conducted for erosion control on the northern side of the wetland, which is steeply sloped. Outside of these two areas, the 2003 and 2020 delineations resulted in comparable jurisdictional wetland boundaries, although more wetland area was identified during the 2020 survey in the western portion of the wetland.

The 2020 and 2003 delineations of Wetland B are comparable overall (Figure 2-1). The 2003 delineation included the area encompassed by the concrete flume and channel between the southeastern boundary of the wetland and the boundary of the Base (Figure 2-1), which serves as the NPDES outfall point for Pond 2. This area is concrete; therefore, it is non-jurisdictional and should be excluded from the jurisdictional boundary of the wetland. Lastly, the 2003 survey identified a separate wetland to the east of Wetland B, as shown on Figure 2-1. During the 2020 survey, this wetland was confirmed to be hydrologically isolated and, therefore, non-jurisdictional. In addition, the size of this wetland was determined to be smaller than indicated by the 2003 survey. This wetland currently extends only a few feet beyond the fence line boundary of the Base, suggesting that most of its original area may have been filled since the 2003 survey, potentially as part of land contouring conducted to improve vehicular access to the Pond 2 NPDES outfall point.

As indicated on Figure 2-2, the 2020 and 2003 delineations of Wetland C and Wetland D are comparable. Differences between the delineations are primarily evident in the northern portion of Wetland D, along the boundary of the northwestern tributary to the main stream channel. This tributary was shown to be connected to the main stream channel but was delineated as a separate wetland by the 2003 survey. Given that this tributary is hydrologically connected to the main stream channel, it should be treated as being part of the same wetland system instead of as a separate wetland. Lastly, the northernmost segment of the main stream channel shown on Figure 2-2 was delineated during the 2003 survey but not during the 2020 survey. This segment of the stream is part of a separate ongoing project and associated Section 404 permit application and, therefore, was not included in the 2020 delineation.

As indicated on Figure 2-3, there are distinct differences between the 2020 and 2003 delineations of Wetland E. Considerably more jurisdictional area was claimed in the northern portion of the wetland by the 2020 survey than the 2003 survey. The 2003 survey also delineated the area north of the former dam as being a separate wetland than the area south of the former dam. This dam was cut sometime between 1983 and 1994 and since then has not prevented drainage flow between the two areas; therefore, the areas should be treated as being part of the same wetland system instead of as separate wetlands. The 2003 delineation included the area encompassed by the concrete flume and channel



between the southern boundary of the wetland and the boundary of the Base (Figure 2-3), which serves as the NPDES outfall point for Pond 3. This area is concrete; therefore, it is non-jurisdictional and should be excluded from the jurisdictional boundary of the wetland. Lastly, the southwestern portion of Wetland E extends off-base to the west (Figure 2-3). The 2003 delineation closed off the boundary of this portion of the wetland at the fence line boundary of the Base. Given that this portion of the wetland extends off base, the boundary of the wetland in this location should not be closed off.

## 2.3 Jurisdictional Determination

Following completion of the wetland surveys, XCEL on behalf of the USAF, requested an approved Jurisdictional Determination (JD) for the wetland delineations from the USACE South Dakota Regulatory Office in Pierre, South Dakota. The draft version of this report along with the completed JD request form for the delineations were submitted to the USACE on September 14, 2020 to initiate the approved JD process. The approved JD for the wetland delineations (NWO-2020-01740-PIE) was issued by the USACE on November 3, 2020 (Appendix C). The approved JD did not include any revisions to the wetland delineations presented in this report. In addition to the wetlands/waters presented in this report, the issued JD also addressed a separate non-jurisdictional ditch identified as NOW-2020-01740-PIE-F (Appendix C).

## 2.4 Wetland Impacts

None of the wetlands identified during this survey are currently proposed to be impacted by the beddown of the B-21 aircraft at Ellsworth AFB. If the USAF proposes to impact one or more of the wetlands, the proposed impacts would be assessed in the ongoing B-21 EIS, and would be required to be authorized under the federal CWA Section 404 permitting program. Under Section 404(b)(1) of the CWA, permit applicants are required to show that they have, to the extent practicable, taken steps to avoid impacts to wetlands, minimize potential impacts to wetlands once they have avoided impacts, and provide compensatory mitigation for any remaining unavoidable impacts. There are currently no active commercial wetland mitigation banks that have a service area that includes Ellsworth AFB; therefore, permittee-responsible mitigation must be conducted on base or off base to compensate for unavoidable wetland impacts. On-base wetland mitigation has been successfully conducted at Ellsworth AFB in the past and a new on-base mitigation site is currently being designed to provide compensatory mitigation for proposed impacts to the northernmost segment of the stream component of Wetland D. As discussed previously, this stream segment was not delineated during this survey because it is part of a separate ongoing project and associated CWA Section 404 permit application. If compensatory mitigation is required for the B-21 beddown at Ellsworth AFB, on-base wetland mitigation opportunities would be evaluated for the project in coordination with the USACE.

# References

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- Mariah Associates. 1994. *Wetlands Delineation at Ellsworth Air Force Base, Pennington and Meade Counties, South Dakota*. September.
- Natural Resources Conservation Service (NRCS). 2020. Web Soil Survey. <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed August 8, 2020.
- United States Army Corps of Engineers (USACE). 2010. *Regional Supplement to Corps of Engineers Wetlands Delineation Manual; Great Plains Region (Version 2.0)*. March.
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# Appendix A

## Wetland Determination Data Forms

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Wetland A City/County: Pennington County Sampling Date: 7/28/2020  
 Applicant/Owner: Ellsworth AFB State: SD Sampling Point: ASP1  
 Investigator(s): Tunch Orsoy Section, Township, Range: S18, T2N, R9E  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%):           
 Subregion (LRR): G60A Lat: 44° 7' 43.394" N Long: 103° 5' 15.617" W Datum: NAD83  
 Soil Map Unit Name: Zigweid-Nihill complex, 6 to 15 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No          (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No           
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>        </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>        </u>
Hydric Soil Present? Yes <u>X</u> No <u>        </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>        </u>	
Remarks:	

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>        </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Salix amygdaloides</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
2. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
3. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>20</u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>        </u> Multiply by: <u>        </u> OBL species <u>        </u> x 1 = <u>        </u> FACW species <u>        </u> x 2 = <u>        </u> FAC species <u>        </u> x 3 = <u>        </u> FACU species <u>        </u> x 4 = <u>        </u> UPL species <u>        </u> x 5 = <u>        </u> Column Totals: <u>        </u> (A) <u>        </u> (B)  Prevalence Index = B/A = <u>        </u>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>        </u> ) 1. <u>Salix interior</u> <u>20</u> <u>Y</u> <u>FACW</u> 2. <u>        </u> <u>        </u> <u>        </u> <u>        </u> 3. <u>        </u> <u>        </u> <u>        </u> <u>        </u> 4. <u>        </u> <u>        </u> <u>        </u> <u>        </u> 5. <u>        </u> <u>        </u> <u>        </u> <u>        </u>				
<u>20</u> = Total Cover				
<b>Herb Stratum</b> (Plot size: <u>        </u> ) 1. <u>Solidago gigantea</u> <u>25</u> <u>Y</u> <u>FAC</u> 2. <u>Juncus torreyi</u> <u>15</u> <u>Y</u> <u>FACW</u> 3. <u>Verbena hastata</u> <u>12</u> <u>N</u> <u>FACW</u> 4. <u>Rumex crispus</u> <u>10</u> <u>N</u> <u>FAC</u> 5. <u>Oenothera biennis</u> <u>8</u> <u>N</u> <u>FACU</u> 6. <u>Typha latifolia</u> <u>5</u> <u>N</u> <u>OBL</u> 7. <u>        </u> <u>        </u> <u>        </u> <u>        </u> 8. <u>        </u> <u>        </u> <u>        </u> <u>        </u> 9. <u>        </u> <u>        </u> <u>        </u> <u>        </u> 10. <u>        </u> <u>        </u> <u>        </u> <u>        </u>				
<u>75</u> = Total Cover				
<b>Woody Vine Stratum</b> (Plot size: <u>        </u> ) 1. <u>        </u> <u>        </u> <u>        </u> <u>        </u> 2. <u>        </u> <u>        </u> <u>        </u> <u>        </u> % Bare Ground in Herb Stratum <u>15</u> <u>        </u> = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <u>        </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>        </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>        </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>        </u>				

Remarks:

Sampling point is in PEM component of wetland along bank/littoral area of pond. Tree and shrub cover is higher at sampling point than in overall wetland.

## SOIL

Sampling Point: ASP1

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): Below 4"		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:  Culvert east of sampling point has slow flowing water draining into pond. Portion of pond near sampling point has moderate water clarity and unknown depth.		

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Wetland A City/County: Pennington County Sampling Date: 7/28/2020  
 Applicant/Owner: Ellsworth AFB State: SD Sampling Point: ASP2  
 Investigator(s): Tunch Orsoy Section, Township, Range: S18, T2N, R9E  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%):           
 Subregion (LRR): G60A Lat: 44° 7' 41.350" N Long: 103° 5' 22.172" W Datum: NAD83  
 Soil Map Unit Name: Zigweid-Nihill complex, 6 to 15 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No          (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No           
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>        </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>        </u>
Hydric Soil Present? Yes <u>X</u> No <u>        </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>        </u>	
Remarks:	

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>        </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
2. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
3. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>        </u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>        </u> Multiply by: <u>        </u> OBL species <u>        </u> x 1 = <u>        </u> FACW species <u>        </u> x 2 = <u>        </u> FAC species <u>        </u> x 3 = <u>        </u> FACU species <u>        </u> x 4 = <u>        </u> UPL species <u>        </u> x 5 = <u>        </u> Column Totals: <u>        </u> (A) <u>        </u> (B)  Prevalence Index = B/A = <u>        </u>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>        </u> )				
1. <u>Salix interior</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Elaeagnus angustifolia</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
3. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
5. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>17</u> = Total Cover				
<b>Herb Stratum</b> (Plot size: <u>        </u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>        </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>        </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>        </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Verbena hastata</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Sonchus arvensis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Epilobium leptophyllum</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>	
4. <u>Mentha arvensis</u>	<u>12</u>	<u>N</u>	<u>FACW</u>	
5. <u>Typha latifolia</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
6. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
7. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
8. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
9. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
10. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>77</u> = Total Cover				
<b>Woody Vine Stratum</b> (Plot size: <u>        </u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>        </u>
1. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
2. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>        </u> = Total Cover				
% Bare Ground in Herb Stratum <u>23</u>				

Remarks:

Sampling point is in PEM component of wetland between westernmost culvert and bank/littoral area of pond. Shrub cover is higher at sampling point than in overall wetland.



## SOIL

Sampling Point: ASP2

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>
<input checked="" type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>
<b>Field Observations:</b>		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/>	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
Culvert west of sampling point has slow flowing water draining into pond.		

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Wetland B City/County: Pennington County Sampling Date: 7/28/2020  
 Applicant/Owner: Ellsworth AFB State: SD Sampling Point: BSP1  
 Investigator(s): Tunch Orsoy Section, Township, Range: S18, T2N, R9E  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%):           
 Subregion (LRR): G60A Lat: 44° 7' 38.447" N Long: 103° 5' 20.070" W Datum: NAD83  
 Soil Map Unit Name: Zigweid-Nihill complex, 6 to 15 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No          (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No           
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>        </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>        </u>
Hydric Soil Present? Yes <u>X</u> No <u>        </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>        </u>	
Remarks:	

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>        </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Populus deltoides</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
2. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
3. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>30</u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>        </u> Multiply by: <u>        </u> OBL species <u>        </u> x 1 = <u>        </u> FACW species <u>        </u> x 2 = <u>        </u> FAC species <u>        </u> x 3 = <u>        </u> FACU species <u>        </u> x 4 = <u>        </u> UPL species <u>        </u> x 5 = <u>        </u> Column Totals: <u>        </u> (A) <u>        </u> (B)  Prevalence Index = B/A = <u>        </u>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>        </u> ) 1. <u>        </u> 2. <u>        </u> 3. <u>        </u> 4. <u>        </u> 5. <u>        </u> <u>        </u> = Total Cover				
<b>Herb Stratum</b> (Plot size: <u>        </u> ) 1. <u>Typha angustifolia</u> <u>20</u> <u>Y</u> <u>OBL</u> 2. <u>Rumex crispus</u> <u>20</u> <u>Y</u> <u>FAC</u> 3. <u>Verbena hastata</u> <u>10</u> <u>N</u> <u>FACW</u> 4. <u>Mentha arvensis</u> <u>3</u> <u>N</u> <u>FACW</u> 5. <u>Epilobium leptophyllum</u> <u>3</u> <u>N</u> <u>OBL</u> 6. <u>        </u> 7. <u>        </u> 8. <u>        </u> 9. <u>        </u> 10. <u>        </u> <u>56</u> = Total Cover				
<b>Woody Vine Stratum</b> (Plot size: <u>        </u> ) 1. <u>        </u> 2. <u>        </u> <u>        </u> = Total Cover				
% Bare Ground in Herb Stratum <u>44</u>				
Remarks:				<b>Hydrophytic Vegetation Indicators:</b> <u>        </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>        </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>        </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>        </u>				

## SOIL

Sampling Point: BSP1

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>
<input checked="" type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 - 14 (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
Interior portion of wetland near sampling point has standing water with no obvious flow.		

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Wetland C City/County: Pennington County Sampling Date: 7/29/2020  
 Applicant/Owner: Ellsworth AFB State: SD Sampling Point: CSP1  
 Investigator(s): Tunch Orsoy Section, Township, Range: S13, T2N, R8E  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%):           
 Subregion (LRR): G60A Lat: 44° 7' 37.508" N Long: 103° 5' 53.465" W Datum: NAD83  
 Soil Map Unit Name: Nunn loam, 6 to 9 percent slopes NWI classification: R2UBx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No          (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No           
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u>        </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u> No <u>        </u>
Hydric Soil Present?	Yes <u>X</u> No <u>        </u>		
Wetland Hydrology Present?	Yes <u>X</u> No <u>        </u>		
Remarks:			

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>        </u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Salix amygdaloides</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Populus deltoides</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
3. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>80</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>        </u> )				Prevalence Index worksheet: <u>        </u> Total % Cover of: <u>        </u> Multiply by: <u>        </u> OBL species <u>        </u> x 1 = <u>        </u> FACW species <u>        </u> x 2 = <u>        </u> FAC species <u>        </u> x 3 = <u>        </u> FACU species <u>        </u> x 4 = <u>        </u> UPL species <u>        </u> x 5 = <u>        </u> Column Totals: <u>        </u> (A) <u>        </u> (B)  Prevalence Index = B/A = <u>        </u>
1. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
2. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
3. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
5. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>        </u> = Total Cover				
Herb Stratum (Plot size: <u>        </u> )				Hydrophytic Vegetation Indicators: <u>        </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>        </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>        </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Typha latifolia</u>	<u>8</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Schoenoplectus pungens</u>	<u>5</u>	<u>Y</u>	<u>OBL</u>	
3. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
5. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
6. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
7. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
8. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
9. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
10. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>13</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>        </u> )				Hydrophytic Vegetation Present? Yes <u>X</u> No <u>        </u>
1. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
2. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>        </u> = Total Cover				
% Bare Ground in Herb Stratum <u>87</u>				
Remarks: Sampling point is on lower bank of stream. Tree cover is higher at sampling point than in overall wetland.				

# SOIL

Sampling Point: CSP1

## Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 8	10 YR 4/1	100					Org Muck	Saturated throughout
> 8	Rocky							

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

### Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- |  |  |
|--|--|
| <input type="checkbox"/> Histosol (A1)                             | <input type="checkbox"/> Sandy Gleyed Matrix (S4)      |
| <input type="checkbox"/> Histic Epipedon (A2)                      | <input type="checkbox"/> Sandy Redox (S5)              |
| <input type="checkbox"/> Black Histic (A3)                         | <input type="checkbox"/> Stripped Matrix (S6)          |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1)      |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)      |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)              | <input type="checkbox"/> Depleted Matrix (F3)          |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)         | <input type="checkbox"/> Redox Dark Surface (F6)       |
| <input type="checkbox"/> Thick Dark Surface (A12)                  | <input type="checkbox"/> Depleted Dark Surface (F7)    |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                  | <input type="checkbox"/> Redox Depressions (F8)        |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)      | <b>(MLRA 72 &amp; 73 of LRR H)</b>                     |

### Indicators for Problematic Hydric Soils<sup>3</sup>:

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16) (LRR F, G, H)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
- (LRR H outside of MLRA 72 & 73)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

### Restrictive Layer (if present):

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes X No \_\_\_\_\_

Remarks:

# HYDROLOGY

## Wetland Hydrology Indicators:

### Primary Indicators (minimum of one required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                           |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Aquatic Invertebrates (B13)                |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input checked="" type="checkbox"/> Water Marks (B1)               | <input type="checkbox"/> Dry-Season Water Table (C2)                |
| <input checked="" type="checkbox"/> Sediment Deposits (B2)         | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input checked="" type="checkbox"/> Drift Deposits (B3)            | <b>(where not tilled)</b>   |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                 |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |   |

### Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- (where tilled)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

### Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes X No \_\_\_\_\_ Depth (inches): 0 - 8  
(includes capillary fringe)

Wetland Hydrology Present? Yes X No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Banks of stream at sampling point are covered with riprap. Stream has moderate flowing water and a depth of about 2 inches at sampling point.

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Wetland D City/County: Pennington County Sampling Date: 7/29/2020  
 Applicant/Owner: Ellsworth AFB State: SD Sampling Point: DSP1  
 Investigator(s): Tunch Orsoy Section, Township, Range: S13, T2N, R8E  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%):         
 Subregion (LRR): G60A Lat: 44° 7' 51.003" N Long: 103° 5' 50.561" W Datum: NAD83  
 Soil Map Unit Name: Nunn loam, 6 to 9 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u>      </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u> No <u>      </u>		
Wetland Hydrology Present?	Yes <u>X</u> No <u>      </u>		
Remarks:			

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>      </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>      </u> (A)  Total Number of Dominant Species Across All Strata: <u>      </u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>      </u> (A/B)
1. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
<u>      </u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>      </u> x 1 = <u>      </u> FACW species <u>      </u> x 2 = <u>      </u> FAC species <u>      </u> x 3 = <u>      </u> FACU species <u>      </u> x 4 = <u>      </u> UPL species <u>      </u> x 5 = <u>      </u> Column Totals: <u>      </u> (A) <u>      </u> (B)  Prevalence Index = B/A = <u>      </u>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>      </u> )				
1. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<b>Hydrophytic Vegetation Indicators:</b> <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u>      </u> = Total Cover				
<b>Herb Stratum</b> (Plot size: <u>      </u> )				
1. <u>Calamagrostis stricta</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Cicuta maculata</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Juncus torreyi</u>	<u>12</u>	<u>N</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
4. <u>Rumex crispus</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
5. <u>Verbena hastata</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
6. <u>Schoenoplectus tabernaemontani</u>	<u>3</u>	<u>N</u>	<u>OBL</u>	
7. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
8. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
9. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
10. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
<u>78</u> = Total Cover				
<b>Woody Vine Stratum</b> (Plot size: <u>      </u> )				
1. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
<u>      </u> = Total Cover				
% Bare Ground in Herb Stratum <u>22</u>				
Remarks:				
Sampling point is in PEM component of wetland along bank/littoral area of stream.				



## SOIL

Sampling Point: DSP1

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input checked="" type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): <input type="text"/>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present?	Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): <input type="text"/>		
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <input type="text" value="0 - 14"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
Stream bank at sampling point is steep and greater than 100 feet high; littoral area is 5 to 8 feet wide. Channel near sampling point is about 4 feet wide, 4 to 8 inches deep, and has clear moderate flow.			

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Wetland D City/County: Pennington County Sampling Date: 7/29/2020  
 Applicant/Owner: Ellsworth AFB State: SD Sampling Point: DSP2  
 Investigator(s): Tunch Orsoy Section, Township, Range: S13, T2N, R8E  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%):         
 Subregion (LRR): G60A Lat: 44° 7' 58.490" N Long: 103° 5' 40.882" W Datum: NAD83  
 Soil Map Unit Name: Nunn loam, 6 to 9 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u>      </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u> No <u>      </u>		
Wetland Hydrology Present?	Yes <u>X</u> No <u>      </u>		
Remarks:			

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>      </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
1. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
<u>      </u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>      </u> x 1 = <u>      </u> FACW species <u>      </u> x 2 = <u>      </u> FAC species <u>      </u> x 3 = <u>      </u> FACU species <u>      </u> x 4 = <u>      </u> UPL species <u>      </u> x 5 = <u>      </u> Column Totals: <u>      </u> (A) <u>      </u> (B)  Prevalence Index = B/A = <u>      </u>
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<b>Herb Stratum</b> (Plot size: <u>      </u> ) 1. <u>Sonchus arvensis</u> 20 Y FAC 2. <u>Oenothera biennis</u> 12 Y FACU 3. <u>Verbena hastata</u> 12 Y FACW 4. <u>Typha latifolia</u> 10 Y OBL 5. <u>Salix interior</u> 10 N FACW 6. <u>Mentha arvensis</u> 10 N FACW 7. <u>Schoenoplectus tabernaemontani</u> 7 N OBL 8. <u>Rumex crispus</u> 5 N FAC 9. <u>Cicuta maculata</u> 3 N OBL 10. <u>Juncus torreyi</u> 2 N FACW <u>91</u> = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<b>Woody Vine Stratum</b> (Plot size: <u>      </u> ) 1. <u>      </u> 2. <u>      </u> <u>      </u> = Total Cover  % Bare Ground in Herb Stratum <u>9</u>				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
<u>      </u> = Total Cover				
Remarks:				

Sampling point is in PEM component of wetland along bank/littoral area of stream.

## SOIL

Sampling Point: DSP2

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:  Stream bank at sampling point is moderately sloped; littoral area is 10 to 15 feet wide. Channel near sampling point is about 80 feet wide, greater than 3 feet deep, and has good water clarity and slow flow.		

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Wetland D City/County: Pennington County Sampling Date: 7/30/2020  
 Applicant/Owner: Ellsworth AFB State: SD Sampling Point: DSP3  
 Investigator(s): Tunch Orsoy Section, Township, Range: S13, T2N, R8E  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%):           
 Subregion (LRR): G60A Lat: 44° 8' 0.759" N Long: 103° 5' 46.828" W Datum: NAD83  
 Soil Map Unit Name: Nunn loam, 6 to 9 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No          (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No           
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u>        </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u> No <u>        </u>
Hydric Soil Present?	Yes <u>X</u> No <u>        </u>		
Wetland Hydrology Present?	Yes <u>X</u> No <u>        </u>		
Remarks:			

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>        </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>        </u> (A)  Total Number of Dominant Species Across All Strata: <u>        </u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>        </u> (A/B)
1. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
2. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
3. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>        </u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>        </u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>        </u> Multiply by: <u>        </u> OBL species <u>        </u> x 1 = <u>        </u> FACW species <u>        </u> x 2 = <u>        </u> FAC species <u>        </u> x 3 = <u>        </u> FACU species <u>        </u> x 4 = <u>        </u> UPL species <u>        </u> x 5 = <u>        </u> Column Totals: <u>        </u> (A) <u>        </u> (B)  Prevalence Index = B/A = <u>        </u>
1. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
2. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
3. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>        </u> = Total Cover				
Herb Stratum (Plot size: <u>        </u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>        </u> 2 - Dominance Test is >50% <u>        </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>        </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Typha latifolia</u>	<u>60</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Juncus torreyi</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Poa pratensis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u>Hordeum jubatum</u>	<u>8</u>	<u>N</u>	<u>FACW</u>	
5. <u>Helianthus annuus</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
6. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
7. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
8. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
9. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>        </u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>        </u>
1. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
2. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>        </u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: Sampling point is in PEM component of wetland adjacent to the northwestern tributary of the main stream channel.				

## SOIL

Sampling Point: DSP3

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>
<input checked="" type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>
<b>Field Observations:</b>		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
The area around the sampling point receives drainage from higher elevations to the west via overland flow. There are lots of tire ruts containing standing water near sampling point.		

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Wetland D City/County: Pennington County Sampling Date: 7/30/2020  
 Applicant/Owner: Ellsworth AFB State: SD Sampling Point: DSP4  
 Investigator(s): Tunch Orsoy Section, Township, Range: S13, T2N, R8E  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%):           
 Subregion (LRR): G60A Lat: 44° 8' 3.479" N Long: 103° 5' 49.239" W Datum: NAD83  
 Soil Map Unit Name: Nunn loam, 6 to 9 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No          (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No           
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>        </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>        </u>
Hydric Soil Present? Yes <u>X</u> No <u>        </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>        </u>	
Remarks:	

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>        </u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>        </u> (A)  Total Number of Dominant Species Across All Strata: <u>        </u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>        </u> (A/B)
1. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
2. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
3. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>        </u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>        </u> Multiply by: <u>        </u> OBL species <u>        </u> x 1 = <u>        </u> FACW species <u>        </u> x 2 = <u>        </u> FAC species <u>        </u> x 3 = <u>        </u> FACU species <u>        </u> x 4 = <u>        </u> UPL species <u>        </u> x 5 = <u>        </u> Column Totals: <u>        </u> (A) <u>        </u> (B)  Prevalence Index = B/A = <u>        </u>
Sapling/Shrub Stratum (Plot size: <u>        </u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
2. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
3. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
4. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
5. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>        </u> = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>        </u> 2 - Dominance Test is >50% <u>        </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>        </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Herb Stratum (Plot size: <u>        </u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Juncus torreyi</u>	<u>45</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Schoenoplectus tabernaemontani</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Typha angustifolia</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
4. <u>Rumex crispus</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
5. <u>Poa pratensis</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
6. <u>Sonchus arvensis</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
7. <u>Hordeum jubatum</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	
8. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
9. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
10. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>95</u> = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u>        </u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
2. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
3. <u>        </u>	<u>        </u>	<u>        </u>	<u>        </u>	
<u>        </u> = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>        </u>
% Bare Ground in Herb Stratum <u>5</u>				
Remarks: Sampling point is in PEM component of wetland adjacent to the northwestern tributary of the main stream channel.				



## SOIL

Sampling Point: DSP4

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>
<input checked="" type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>
<b>Field Observations:</b>		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <input type="text" value="0 - 14"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
The channel of the tributary near the sampling point has standing water that is less than 2 inches deep with no obvious flow.		

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Wetland E City/County: Meade County Sampling Date: 7/31/2020  
 Applicant/Owner: Ellsworth AFB State: SD Sampling Point: ESP1  
 Investigator(s): Tunch Orsoy Section, Township, Range: S11, T2N, R8E  
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): \_\_\_\_\_  
 Subregion (LRR): G60A Lat: 44° 8' 49.040" N Long: 103° 6' 56.110" W Datum: NAD83  
 Soil Map Unit Name: Lohmiller and Glenberg soils, channeled NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks:	

## VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b> 1. <u>Echinochloa muricata</u> 20 Y FACW 2. <u>Ambrosia trifida</u> 20 Y FAC 3. <u>Mentha arvensis</u> 15 N FACW 4. <u>Persicaria maculosa</u> 10 N FACW 5. <u>Typha latifolia</u> 5 N OBL 6. <u>Schoenoplectus tabernaemontani</u> 2 N OBL 7. <u>Sagittaria cuneata</u> 2 N OBL 8. <u>Hordeum jubatum</u> 2 N FACW 9. <u>Juncus torreyi</u> 2 N FACW 10. _____ 78 = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b> 1. _____ 2. _____ _____ = Total Cover				
% Bare Ground in Herb Stratum <u>22</u>				
<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____				
Remarks: The sampling point contains giant ragweed (Ambrosia trifida) and other species that are not dominant species in the overall wetland.				

## SOIL

Sampling Point: ESP1

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>
<input checked="" type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: No standing water at sampling point. The set of culverts that direct drainage from Pond 3 and the concrete flume/channel that directs drainage out of the wetland have slow flowing water.		

# WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Wetland E City/County: Meade County Sampling Date: 7/31/2020  
 Applicant/Owner: Ellsworth AFB State: SD Sampling Point: ESP2  
 Investigator(s): Tunch Orsoy Section, Township, Range: S11, T2N, R8E  
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%):         
 Subregion (LRR): G60A Lat: 44° 8' 59.351" N Long: 103° 7' 0.169" W Datum: NAD83  
 Soil Map Unit Name: Nunn clay loam, 2 to 6 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>      </u>
Hydric Soil Present? Yes <u>X</u> No <u>      </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	
Remarks:	

## VEGETATION – Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>      </u> ) 1. <u>      </u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> <u>      </u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>      </u> ) 1. <u>      </u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>      </u> ) 1. <u>Eleocharis palustris</u> 50 Y OBL 2. <u>Typha latifolia</u> 25 Y OBL 3. <u>Salix interior</u> 10 N FACW 4. <u>Rumex crispus</u> 10 N FAC 5. <u>Oenothera biennis</u> 5 N FACU 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>100</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>      </u> ) 1. <u>      </u> 2. <u>      </u> <u>      </u> = Total Cover % Bare Ground in Herb Stratum <u>0</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>      </u> (A) Total Number of Dominant Species Across All Strata: <u>      </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>      </u> (A/B) <b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>      </u> x 1 = <u>      </u> FACW species <u>      </u> x 2 = <u>      </u> FAC species <u>      </u> x 3 = <u>      </u> FACU species <u>      </u> x 4 = <u>      </u> UPL species <u>      </u> x 5 = <u>      </u> Column Totals: <u>      </u> (A) <u>      </u> (B) Prevalence Index = B/A = <u>      </u> <b>Hydrophytic Vegetation Indicators:</b> <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
Remarks:	

## SOIL

Sampling Point: ESP2

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>
<input checked="" type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>
<b>Field Observations:</b>		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <input type="text" value="0 - 14"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
No standing water at sampling point but pockets exist nearby. Ground is highly saturated.		

# Appendix B

## Photographs





Northeast of Wetland A – Facing Southwest



Culvert at Northeastern End of Wetland A – Facing Northeast





Wetland A at Sampling Point ASP1 – Facing Southwest



Wetland A at Sampling Point ASP2 – Facing West





North of Wetland B – Facing South



Wetland B at Sampling Point BSP1 – Facing Southeast





Wetland B at Sampling Point BSP1 – Facing North



Concrete Flume/Channel at Southern End of Wetland B – Facing Southeast





Northern End of Wetland C – Facing North



Southern Portion of Wetland C – Facing Northwest





Concrete Flume/Channel at Southern End of Wetland C – Facing Southeast



Pond 1 – Facing Southeast





Wetland D at Sampling Point DSP1 – Facing East



Wetland D at Sampling Point DSP2 – Facing East





Wetland D at Sampling Point DSP3 – Facing North



Wetland D at Sampling Point DSP4 – Facing West





Northern End of Wetland D – Facing South



Northern End of Wetland D – Facing Northwest





Wetland E at Sampling Point ESP1 – Facing North



Concrete Flume/Channel at Southern End of Wetland E – Facing South



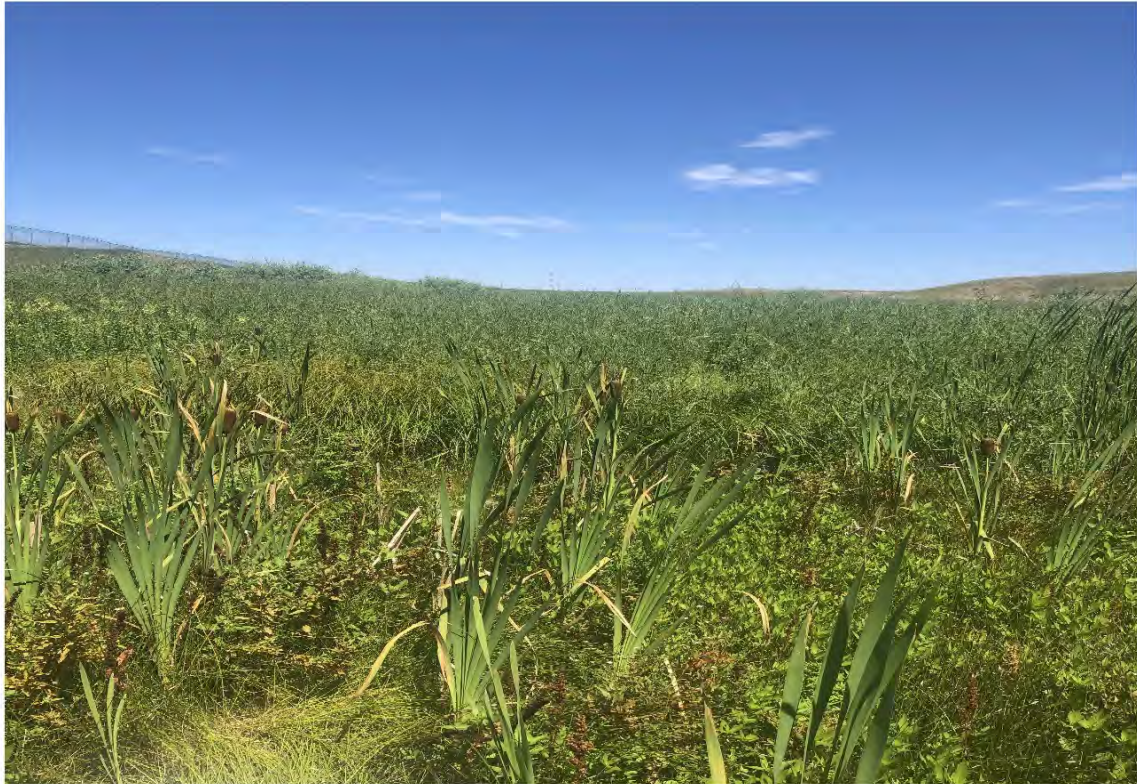


Southern Portion of Wetland E – Facing West



Pond 3 – Facing East





Wetland E at Sampling Point ESP2 – Facing North



Former Dam in Wetland E – Facing South





Northern Portion of Wetland E – Facing Southwest

# Appendix C

## Approved Jurisdictional Determination



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**

CORPS OF ENGINEERS, OMAHA DISTRICT  
SOUTH DAKOTA REGULATORY OFFICE  
28563 POWERHOUSE ROAD, ROOM 118  
PIERRE, SOUTH DAKOTA 57501-6174

November 4, 2020

South Dakota Regulatory Office  
28563 Powerhouse Road, Room 118  
Pierre, South Dakota 57501

Ellsworth Air Force Base 28 CES  
Attn: Mark Howard  
2125 Scott Drive  
Ellsworth Air Force Base, South Dakota 57706

Dear Mr. Howard:

Reference is made to the information received September 14, 2020, concerning Section 404 of the Clean Water Act permit requirements. The review area is located in portions of Sections 11 and 13, Township 8 East, Range 2 North and Section 18, Township 2 North, Range 9 East, Pennington and Meade County, South Dakota.

Based on the information provided, we have determined that there are waters of the United States (i.e. jurisdictional waters) located within the review area. Therefore, any activity involving the discharge of dredged or fill material within the waters of the United States would require a permit from the Corps of Engineers.

An approved jurisdictional determination (JD) has been completed for your project. This JD is valid for 5 years from the date of this letter. The JD is enclosed and also may be viewed at our website. The link to the website is shown below. The JD will be available on the website within 30 days. If you are not in agreement with the JD, you may request an administrative appeal under Corps of Engineers regulations found at 33 C.F.R. 331. Enclosed you will find a Notification of Administrative Appeal Options and Process and Request for Appeal form (RFA). Should you decide to submit an RFA form, it must be received by the Corps of Engineers Northwestern Division Office within 60 days from the date of this correspondence (by January 2, 2021). It is not necessary to submit a RFA if you do not object to the JD.

You can obtain additional information about the Regulatory Program from our website:

<http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/SouthDakota.aspx>

If you have any questions, please feel free to contact this office at the above Regulatory Office address, or telephone Jeff Breckenridge at (605) 341-3169, ext. 3621 and reference action ID NWO-2020-01740-PIE.

Sincerely,



for Steven E. Naylor  
Regulatory Program Manager,  
South Dakota

Enclosures

cc:  
XCEL Engineering (Orsoy)



**U.S. ARMY CORPS OF ENGINEERS  
REGULATORY PROGRAM  
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)  
NAVIGABLE WATERS PROTECTION RULE**

**I. ADMINISTRATIVE INFORMATION**

Completion Date of Approved Jurisdictional Determination (AJD): 11/3/2020

ORM Number: NWO-2020-01740-PIE

Associated JDs: N/A

Review Area Location<sup>1</sup>: State/Territory: South Dakota City: Ellsworth Air Force Base

County/Parish/Borough: Pennington County

Center Coordinates of Review Area: Latitude 44.135796 Longitude -103.099058

**II. FINDINGS**

**A. Summary:** Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☒ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

**B. Rivers and Harbors Act of 1899 Section 10 (§ 10)<sup>2</sup>**

§ 10 Name	§ 10 Size	§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A.	N/A.

**C. Clean Water Act Section 404**

Territorial Seas and Traditional Navigable Waters ((a)(1) waters): <sup>3</sup>				
(a)(1) Name	(a)(1) Size	(a)(1) Criteria	Rationale for (a)(1) Determination	
N/A.	N/A.	N/A.	N/A.	

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination	
NWO-2020-01740-PIE-C	.23	acre(s)	(a)(2) Perennial tributary contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	This (a)(2) tributary flows to Boxelder Creek which flows to the Cheyenne River (TNW).
NWO-2020-01740-PIE-D	5.31	acre(s)	(a)(2) Perennial tributary	This (a)(2) tributary flows to Boxelder Creek which flows to the Cheyenne River (TNW).

<sup>1</sup> Map(s)/figure(s) are attached to the AJD provided to the requestor.

<sup>2</sup> If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.

<sup>3</sup> A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.



**U.S. ARMY CORPS OF ENGINEERS  
REGULATORY PROGRAM  
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)  
NAVIGABLE WATERS PROTECTION RULE**

Tributaries ((a)(2) waters):			
(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination
		contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):			
(a)(3) Name	(a)(3) Size	(a)(3) Criteria	Rationale for (a)(3) Determination
NWO-2020-01740-PIE-A	1.33 acre(s)	(a)(3) Lake/pond or impoundment of a jurisdictional water contributes surface water flow directly or indirectly to an (a)(1) water in a typical year.	This is a stormwater detention pond constructed in an (a)(2) tributary to Boxelder Creek which flows to the Cheyenne River (TNW).

Adjacent wetlands ((a)(4) waters):			
(a)(4) Name	(a)(4) Size	(a)(4) Criteria	Rationale for (a)(4) Determination
NWO-2020-01740-PIE-B	0.13 acre(s)	(a)(4) Wetland separated from an (a)(1)-(a)(3) water only by an artificial structure allowing a direct hydrologic surface connection between the wetland and the (a)(1)-(a)(3) water, in a typical year.	Flow from this wetland goes through a concrete flume to an (a)(2) tributary to Boxelder Creek which flows to the Cheyenne River (TNW).
NWO-2020-01740-PIE-E	2.26 acre(s)	(a)(4) Wetland abuts an (a)(1)-(a)(3) water.	This is a riverine wetland feature that directly abuts an (a)(2) tributary to Boxelder Creek which flows to the Cheyenne River (TNW).

**D. Excluded Waters or Features**





**U.S. ARMY CORPS OF ENGINEERS  
REGULATORY PROGRAM  
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)  
NAVIGABLE WATERS PROTECTION RULE**

Excluded waters ((b)(1) – (b)(12)): <sup>4</sup>			
Exclusion Name	Exclusion Size	Exclusion <sup>5</sup>	Rationale for Exclusion Determination
NWO-2020-01740-PIE-F	2000	linear feet	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).  This feature is a road ditch constructed wholly in uplands.

### III. SUPPORTING INFORMATION

**A. Select/enter all resources** that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

☒ Information submitted by, or on behalf of, the applicant/consultant: [Wetland Surveys to Support B-21 Environmental Impact Statement Ellsworth Air Force Base, South Dakota, September 2020. Prepared by Xcel Engineering.](#)

This information is sufficient for purposes of this AJD.

Rationale: [N/A](#)

☐ Data sheets prepared by the Corps: [Title\(s\) and/or date\(s\).](#)

☒ Photographs: [Aerial: Google Earth various years.](#)

☐ Corps site visit(s) conducted on: [Date\(s\).](#)

☒ Previous Jurisdictional Determinations (AJDs or PJDs): [NWO-2004-30243-PIE, NWO-2008-00731-PIE, and NWO-2019-00351-PIE.](#)

☒ Antecedent Precipitation Tool: [provide detailed discussion in Section III.B.](#)

☐ USDA NRCS Soil Survey: [Title\(s\) and/or date\(s\).](#)

☐ USFWS NWI maps: [Title\(s\) and/or date\(s\).](#)

☒ USGS topographic maps: [Bend 24K.](#)

#### Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
<a href="#">USGS Sources</a>	<a href="#">N/A.</a>
<a href="#">USDA Sources</a>	<a href="#">N/A.</a>
<a href="#">NOAA Sources</a>	<a href="#">N/A.</a>
<a href="#">USACE Sources</a>	<a href="#">N/A.</a>
<a href="#">State/Local/Tribal Sources</a>	<a href="#">N/A.</a>
<a href="#">Other Sources</a>	<a href="#">N/A.</a>

**B. Typical year assessment(s):** [Tributaries were determined to be perennial based upon flowing water being observed and documented during the wetland delineation conducted 7/28/20 thru 8/1/20. The ATP showed](#)

<sup>4</sup> Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.

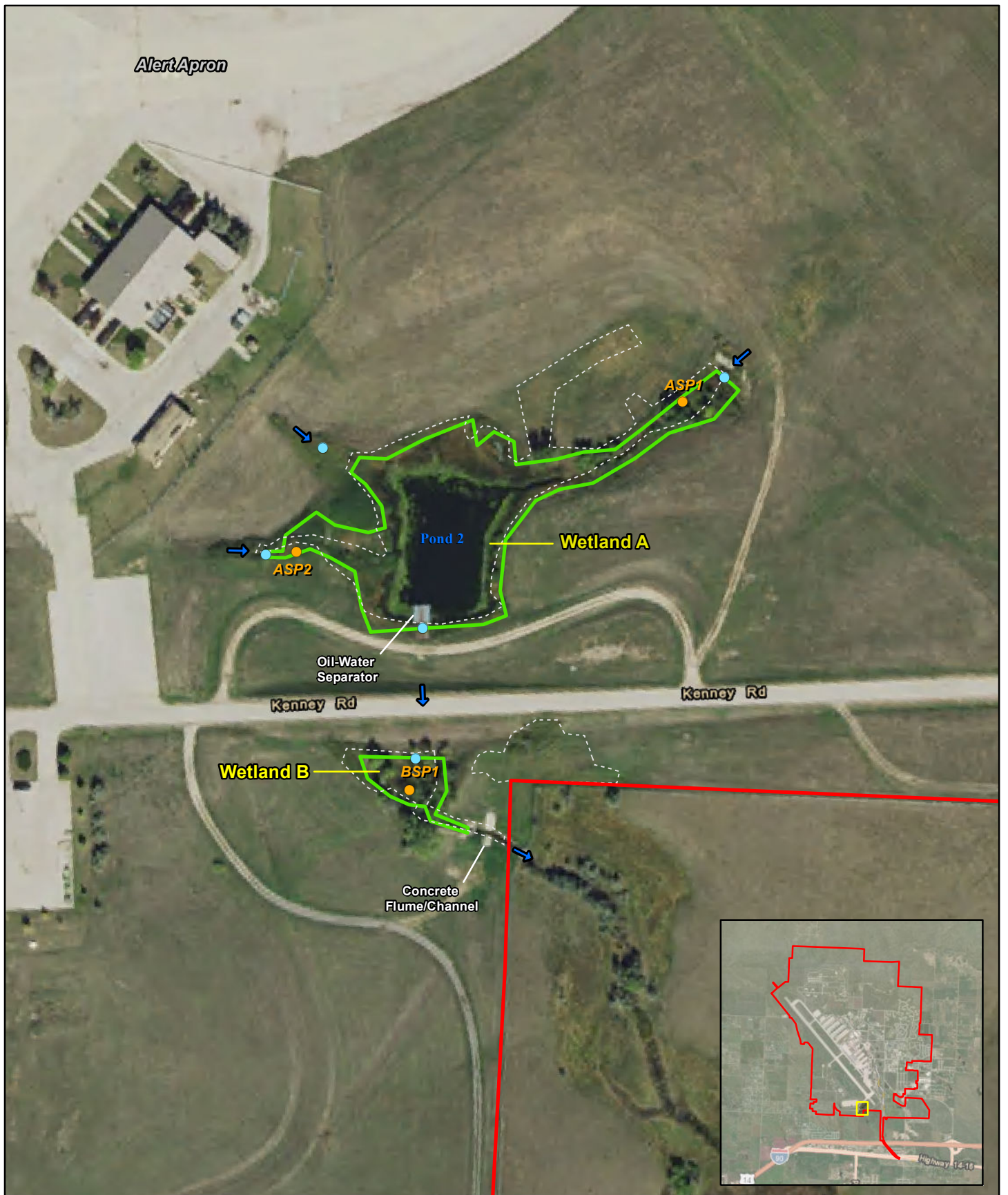
<sup>5</sup> Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.



**U.S. ARMY CORPS OF ENGINEERS  
REGULATORY PROGRAM  
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)  
NAVIGABLE WATERS PROTECTION RULE**

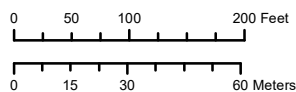
that this occurred during the dry season under slightly wetter than normal conditions right at the high end of the 30-Year Normal Range.

**C. Additional comments to support AJD:** [N/A.](#)



**LEGEND**

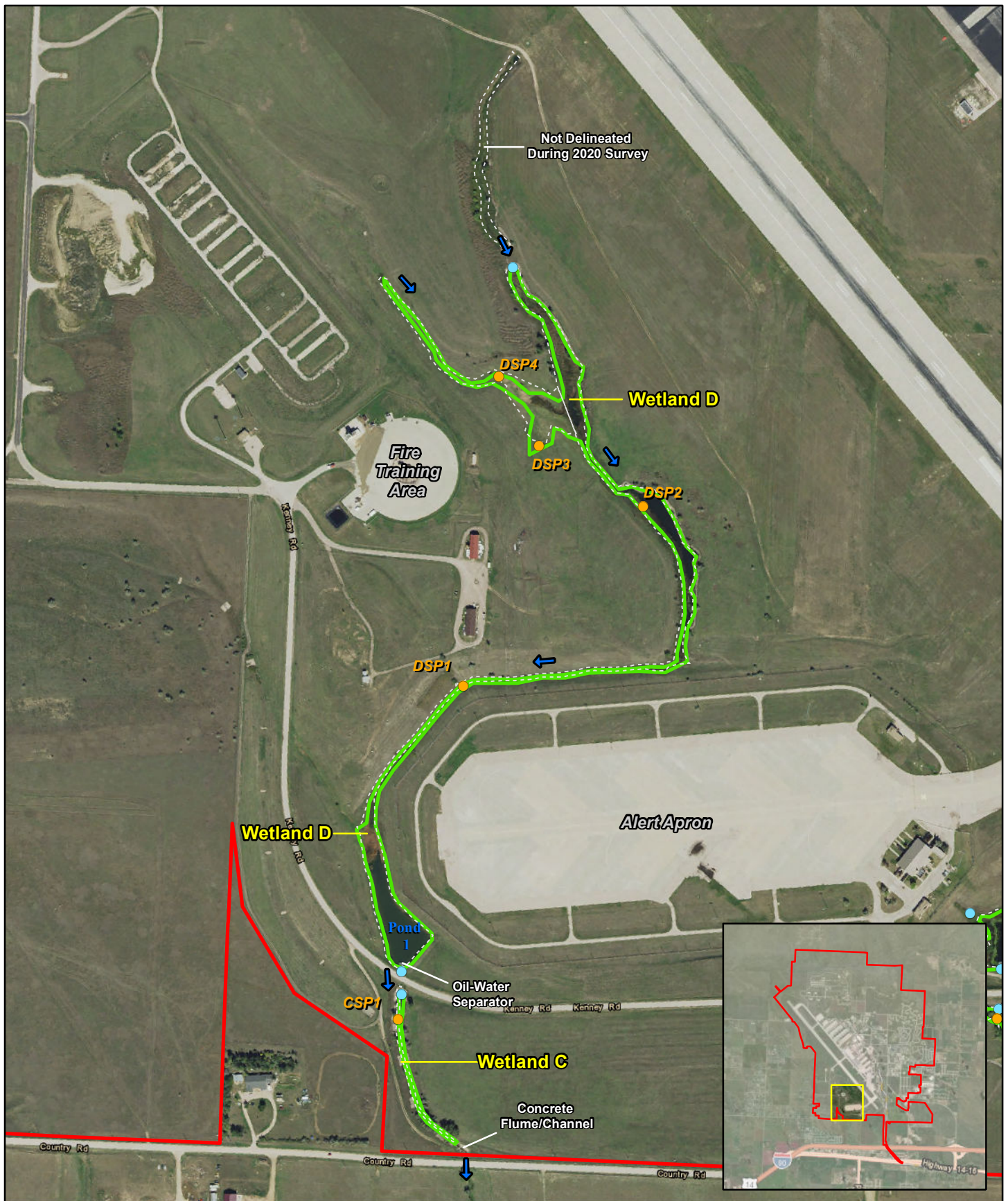
- Flow Direction
- Sampling Point
- Culvert
- 2003 Delineated Boundary
- 2020 Delineated Boundary
- Ellsworth Air Force Base



**FIGURE 2-1**  
**Wetlands A and B in Pond 2 Area**

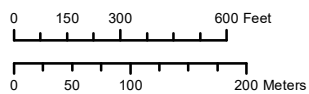
Wetland Surveys at Ellsworth AFB to Support B-21 EIS





LEGEND

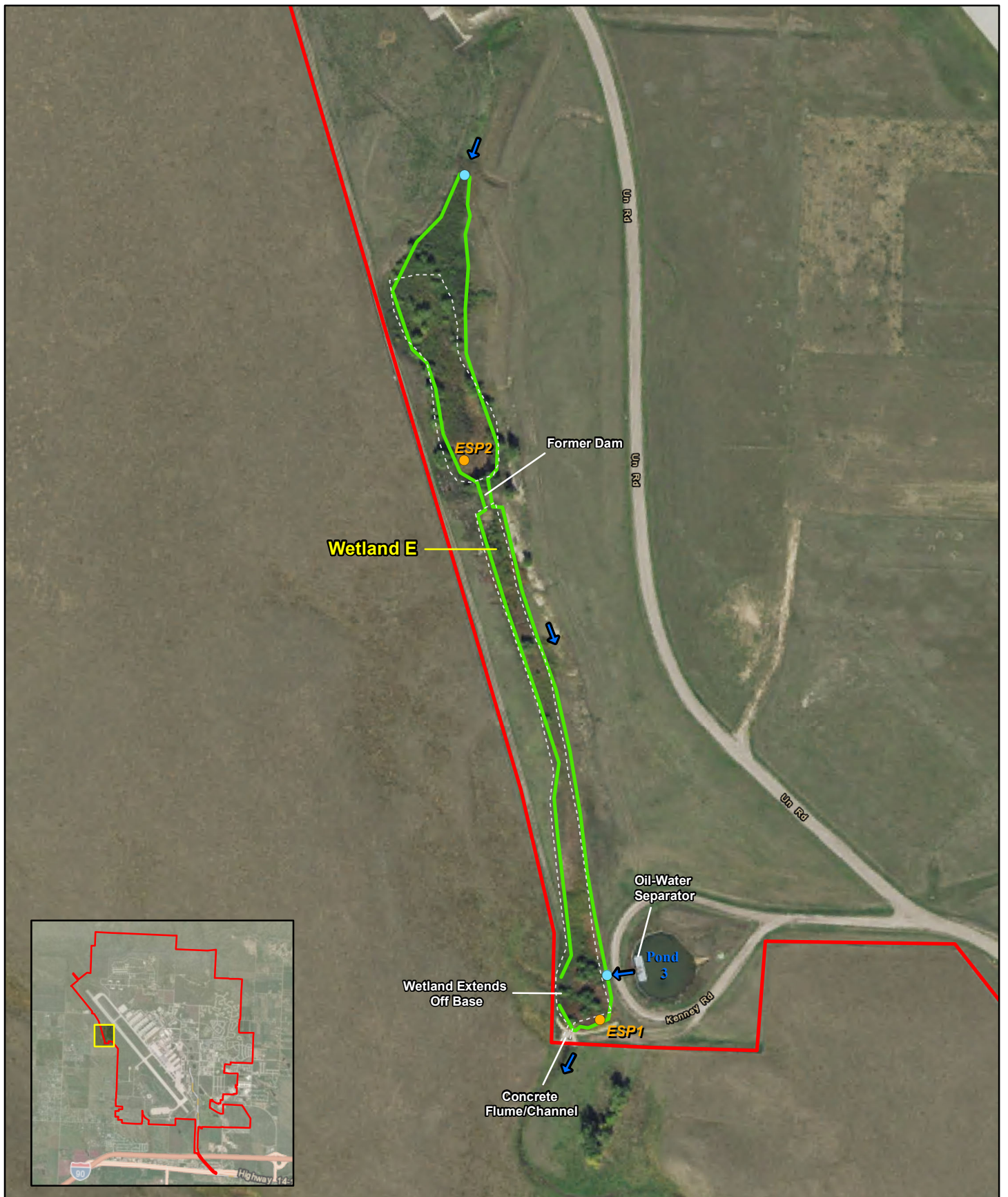
- Flow Direction
- Sampling Point
- Culvert
- 2003 Delineated Boundary
- 2020 Delineated Boundary
- Ellsworth Air Force



**FIGURE 2-2**  
**Wetlands C and D in Pond 1 Area**

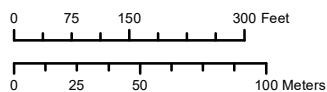
Wetland Surveys at Ellsworth AFB to Support B-21 EIS





LEGEND

- Flow Direction
- Sampling Point
- Culvert
- 2003 Delineated Boundary
- 2020 Delineated Boundary
- Ellsworth Air Force Base



**FIGURE 2-3**  
**Wetland E in Pond 3 Area**

*Wetland Surveys at Ellsworth AFB to Support B-21 EIS*

# JD Review Area

NWO-2020-01740-PIE-F

Legend

NWO-2020-01740-PIE-F

Kenney Rd

B-67

Google Earth

©2020 Google

Earth Point

1000 ft





## **Appendix C - Information for Planning and Consultation (IPaC) Species List**

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

Meade County, South Dakota



## Local office

South Dakota Ecological Services Field Office

☎ (605) 224-8693

📅 (605) 224-1416

420 South Garfield Avenue, Suite 400

Pierre, SD 57501-5408

<http://www.fws.gov/southdakotafieldoffice/>

NOT FOR CONSULTATION

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
  2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of

Commerce.

The following species are potentially affected by activities in this location:

## Mammals

NAME	STATUS
Black-footed Ferret <i>Mustela nigripes</i> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/6953">https://ecos.fws.gov/ecp/species/6953</a>	EXPN
Northern Long-eared Bat <i>Myotis septentrionalis</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

## Birds

NAME	STATUS
Red Knot <i>Calidris canutus rufa</i> Wherever found There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available. <a href="https://ecos.fws.gov/ecp/species/1864">https://ecos.fws.gov/ecp/species/1864</a>	Threatened
Whooping Crane <i>Grus americana</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. <a href="https://ecos.fws.gov/ecp/species/758">https://ecos.fws.gov/ecp/species/758</a>	Endangered

## Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.



THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A  
BREEDING SEASON IS  
.....

INDICATED FOR A BIRD ON  
YOUR LIST, THE BIRD MAY  
BREED IN YOUR PROJECT AREA  
SOMETIME WITHIN THE  
TIMEFRAME SPECIFIED, WHICH  
IS A VERY LIBERAL ESTIMATE  
OF THE DATES INSIDE WHICH  
THE BIRD BREEDS ACROSS ITS  
ENTIRE RANGE. "BREEDS  
ELSEWHERE" INDICATES THAT  
THE BIRD DOES NOT LIKELY  
BREED IN YOUR PROJECT  
AREA.)

---

**Bald Eagle** *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Dec 1 to Aug 31

**Black Tern** *Chlidonias niger*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3093>

Breeds May 15 to Aug 20

**Black-billed Cuckoo** *Coccyzus erythrophthalmus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9399>

Breeds May 15 to Oct 10

**Bobolink** *Dolichonyx oryzivorus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 20 to Jul 31

**Chestnut-collared Longspur** *Calcarius ornatus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 1 to Aug 10

**Ferruginous Hawk** *Buteo regalis*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/6038>

Breeds Mar 15 to Aug 15

<p><b>Franklin's Gull</b> <i>Leucophaeus pipixcan</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 1 to Jul 31
<p><b>Lark Bunting</b> <i>Calamospiza melanocorys</i></p> <p>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds May 10 to Aug 15
<p><b>Lesser Yellowlegs</b> <i>Tringa flavipes</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a></p>	Breeds elsewhere
<p><b>Lewis's Woodpecker</b> <i>Melanerpes lewis</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9408">https://ecos.fws.gov/ecp/species/9408</a></p>	Breeds Apr 20 to Sep 30
<p><b>Marbled Godwit</b> <i>Limosa fedoa</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9481">https://ecos.fws.gov/ecp/species/9481</a></p>	Breeds May 1 to Jul 31
<p><b>Pinyon Jay</b> <i>Gymnorhinus cyanocephalus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9420">https://ecos.fws.gov/ecp/species/9420</a></p>	Breeds Feb 15 to Jul 15
<p><b>Red-headed Woodpecker</b> <i>Melanerpes erythrocephalus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 10 to Sep 10
<p><b>Sprague's Pipit</b> <i>Anthus spragueii</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/8964">https://ecos.fws.gov/ecp/species/8964</a></p>	Breeds May 10 to Aug 31
<p><b>Willet</b> <i>Tringa semipalmata</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Apr 20 to Aug 5

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

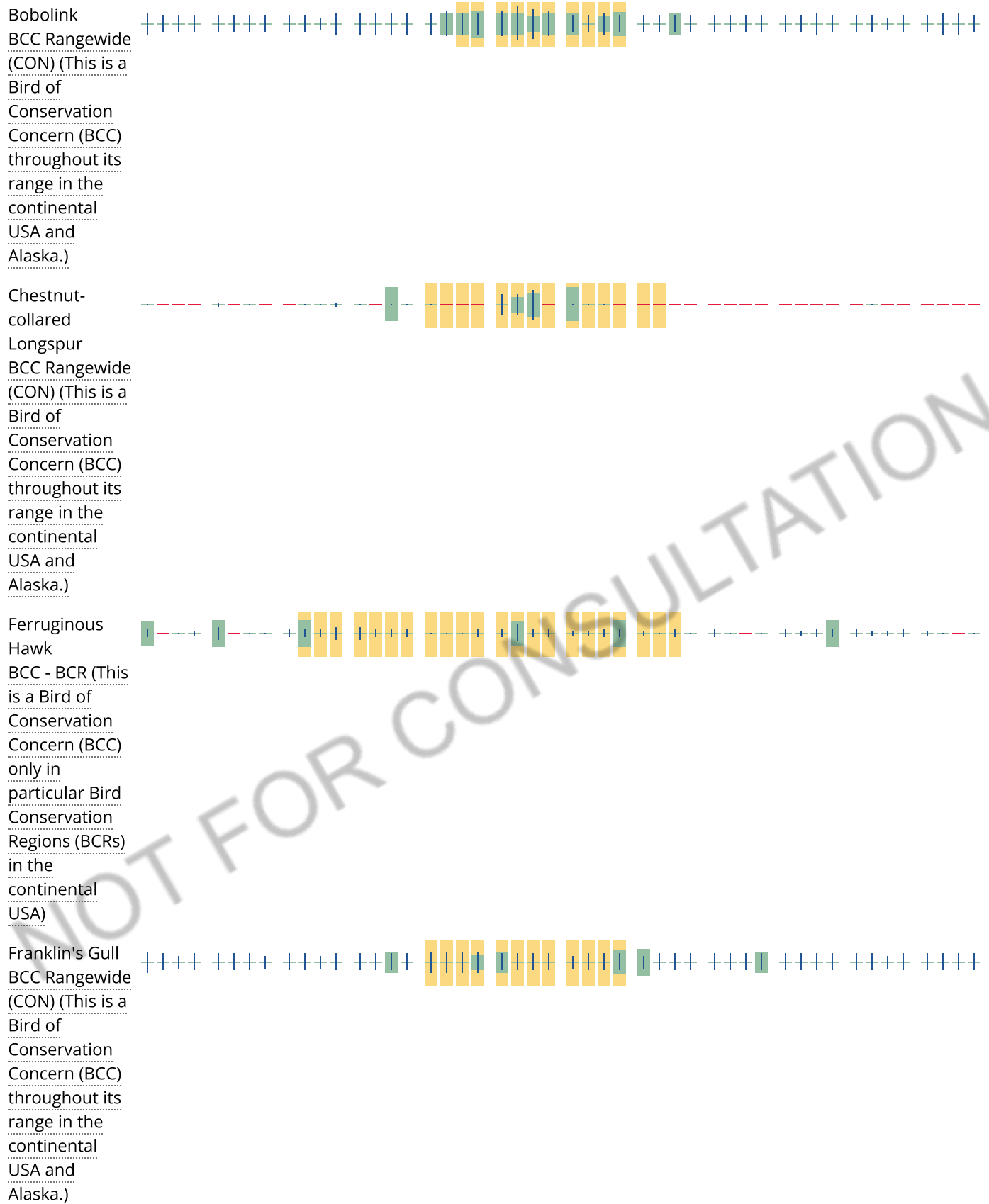
### No Data (—)

A week is marked as having no data if there were no survey events for that week.

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.







Lark Bunting  
BCC - BCR (This  
is a Bird of  
Conservation  
Concern (BCC)  
only in  
particular Bird  
Conservation  
Regions (BCRs)  
in the  
continental  
USA)

Lesser  
Yellowlegs  
BCC Rangewide  
(CON) (This is a  
Bird of  
Conservation  
Concern (BCC)  
throughout its  
range in the  
continental  
USA and  
Alaska.)

Lewis's  
Woodpecker  
BCC Rangewide  
(CON) (This is a  
Bird of  
Conservation  
Concern (BCC)  
throughout its  
range in the  
continental  
USA and  
Alaska.)

Marbled  
Godwit  
BCC Rangewide  
(CON) (This is a  
Bird of  
Conservation  
Concern (BCC)  
throughout its  
range in the  
continental  
USA and  
Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure.

To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

### **What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in

offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

# Coastal Barrier Resources System



Projects within the [John H. Chafee Coastal Barrier Resources System](#) (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local [Ecological Services Field Office](#) or visit the [CBRA Consultations website](#). The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION.

#### Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the [official CBRS maps](#). The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: <https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation>

#### Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact [CBRA@fws.gov](mailto:CBRA@fws.gov).

## Facilities

### Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

## Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

### **Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### **Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

# **Appendix D - Meade and Pennington Counties State Listed Species**

**State and Federally Listed Threatened, Endangered and Candidate Species Documented in South Dakota by County. Updated on 07/19/2016**

The following list contains documented occurrences of both state and federally listed species by county in South Dakota. Records were compiled from the South Dakota Natural Heritage Database and expert knowledge of species occurrences. Please note that the absence of a species from a county list does not preclude its presence and that a listing of a historical record does not necessarily mean the species still occurs in that county.

Documentations of bird species consist of known breeding records with the exception of the whooping crane (*Grus americana*) for which all observations are included. However, please note that while the year-round distribution of the American dipper (*Cinclus mexicanus*) does not change, all other listed bird species may be found throughout the state during migration.

If more specific information is needed for a particular project site, please visit the following website to request a search of the Natural Heritage Database: <http://gfp.sd.gov/wildlife/threatened-endangered/default.aspx>

Species statuses include: FE = Federally Endangered, FT = Federally Threatened, PE = Proposed Endangered (Federal), PT = Proposed Threatened (Federal) C = Federal Candidate, SE = State Endangered, ST = State Threatened.

County	Common Name	Scientific Name	Status
<b>Aurora</b>	Topeka Shiner	<i>Notropis topeka</i>	FE
	Whooping Crane	<i>Grus americana</i>	FE, SE
<b>Beadle</b>	Topeka Shiner	<i>Notropis topeka</i>	FE
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Bennett</b>	Northern Pearl Dace	<i>Margariscus nachtriebi</i>	ST
	American Burying Beetle	<i>Nicrophorus americanus</i>	FE
	Northern Redbelly Dace	<i>Chrosomus eos</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Swift Fox	<i>Vulpes velox</i>	ST
<b>Bon Homme</b>	Blacknose Shiner	<i>Notropis heterolepis</i>	SE
	Northern Redbelly Dace	<i>Chrosomus eos</i>	ST
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	FT
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	ST
	Sicklefin Chub	<i>Macrhybopsis meeki</i>	ST
	Topeka Shiner	<i>Notropis topeka</i>	FE
	False Map Turtle	<i>Graptemys pseudogeographica</i>	ST
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE

	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Brookings</b>	American Burying Beetle	<i>Nicrophorus americanus</i>	FE
	Poweshiek Skipperling	<i>Oarisma poweshiek</i>	FE
	Dakota Skipper	<i>Hesperia dacotae</i>	FT
	Northern Redbelly Dace	<i>Chrosomus eos</i>	ST
	Topeka Shiner	<i>Notropis topeka</i>	FE
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern River Otter	<i>Lontra canadensis</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT
<b>Brown</b>	Dakota Skipper	<i>Hesperia dacotae</i>	FT
	Topeka Shiner	<i>Notropis topeka</i>	FE
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Brule</b>	Northern Redbelly Dace	<i>Chrosomus eos</i>	ST
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	FT
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Buffalo</b>	Northern Redbelly Dace	<i>Chrosomus eos</i>	ST
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	FT
	False Map Turtle	<i>Graptemys pseudogeographica</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Butte</b>	Finescale Dace	<i>Chrosomus neogaeus</i>	SE
	Longnose Sucker	<i>Catostomus catostomus</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern River Otter	<i>Lontra canadensis</i>	ST
	Swift Fox	<i>Vulpes velox</i>	ST
<b>Campbell</b>	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	FT
	False Map Turtle	<i>Graptemys pseudogeographica</i>	ST
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
<b>Charles Mix</b>	Banded Killifish	<i>Fundulus diaphanus</i>	SE
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	FT
	Sicklefin Chub	<i>Macrhybopsis meeki</i>	ST



	Sturgeon Chub	<i>Macrhybopsis gelida</i>	ST
	False Map Turtle	<i>Graptemys pseudogeographica</i>	ST
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT
<b>Clark</b>	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Clay</b>	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	FT
	Sicklefin Chub	<i>Macrhybopsis meeki</i>	ST
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	ST
	Topeka Shiner	<i>Notropis topeka</i>	FE
	Eastern Hognose Snake	<i>Heterodon platirhinos</i>	ST
	False Map Turtle	<i>Graptemys pseudogeographica</i>	ST
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Codington</b>	Dakota Skipper	<i>Hesperia dacotae</i>	FT
	Poweshiek Skipperling	<i>Oarisma poweshiek</i>	FE
	Topeka Shiner	<i>Notropis topeka</i>	FE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Corson</b>	Northern Redbelly Dace	<i>Chrosomus eos</i>	ST
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	FT
	Sicklefin Chub	<i>Macrhybopsis meeki</i>	ST
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	ST
	False Map Turtle	<i>Graptemys pseudogeographica</i>	ST
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Black-footed Ferret	<i>Mustela nigripes</i>	FE, SE
<b>Custer</b>	Blacknose Shiner	<i>Notropis heterolepis</i>	SE
	Longnose Sucker	<i>Catostomus catostomus</i>	ST
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	ST
	American Dipper	<i>Cinclus mexicanus</i>	ST
	Osprey	<i>Pandion haliaetus</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Black-footed Ferret	<i>Mustela nigripes</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT
	Northern River Otter	<i>Lontra canadensis</i>	ST

	Swift Fox	<i>Vulpes velox</i>	ST
<b>Davison</b>	Topeka Shiner	<i>Notropis topeka</i>	FE
<b>Day</b>	Blacknose Shiner	<i>Notropis heterolepis</i>	SE
	Dakota Skipper	<i>Hesperia dacotae</i>	FT
	Poweshiek Skipperling	<i>Oarisma poweshiek</i>	FE
	Banded Killifish	<i>Fundulus diaphanus</i>	SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Deuel</b>	Dakota Skipper	<i>Hesperia dacotae</i>	FT
	Poweshiek Skipperling	<i>Oarisma poweshiek</i>	FE
	Banded Killifish	<i>Fundulus diaphanus</i>	SE
	Northern Redbelly Dace	<i>Chrosomus eos</i>	ST
	Topeka Shiner	<i>Notropis topeka</i>	FE
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Dewey</b>	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	FT
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Black-footed Ferret	<i>Mustela nigripes</i>	FE, SE
<b>Douglas</b>	Whooping Crane	<i>Grus americana</i>	FE, SE
<b>Edmunds</b>	Whooping Crane	<i>Grus americana</i>	FE, SE
<b>Fall River</b>	Finescale Dace	<i>Chrosomus neogaeus</i>	SE
	Osprey	<i>Pandion haliaetus</i>	ST
	Swift Fox	<i>Vulpes velox</i>	ST
<b>Faulk</b>	Whooping Crane	<i>Grus americana</i>	FE, SE
<b>Grant</b>	Dakota Skipper	<i>Hesperia dacotae</i>	FT
	Poweshiek Skipperling	<i>Oarisma poweshiek</i>	FE
	Blacknose Shiner	<i>Notropis heterolepis</i>	SE
	Northern Redbelly Dace	<i>Chrosomus eos</i>	ST
	Osprey	<i>Pandion haliaetus</i>	ST
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Gregory</b>	American Burying Beetle	<i>Nicrophorus americanus</i>	FE
	Northern Pearl Dace	<i>Margariscus nachtriebi</i>	ST
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	FT
	Sicklefin Chub	<i>Macrhybopsis meeki</i>	ST
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	ST
	False Map Turtle	<i>Graptemys pseudogeographica</i>	ST
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE

	Whooping Crane Northern Long-eared Bat	<i>Grus americana</i> <i>Myotis septentrionalis</i>	FE, SE FT
<b>Haakon</b>	Sturgeon Chub Interior Least Tern Whooping Crane Northern River Otter Swift Fox	<i>Macrhybopsis gelida</i> <i>Sternula antillarum athalassos</i> <i>Grus americana</i> <i>Lontra canadensis</i> <i>Vulpes velox</i>	ST FE, SE FE, SE ST ST
<b>Hamlin</b>	Dakota Skipper Poweshiek Skipperling Topeka Shiner Northern River Otter	<i>Hesperia dacotae</i> <i>Oarisma poweshiek</i> <i>Notropis topeka</i> <i>Lontra canadensis</i>	FT FE FE ST
<b>Hand</b>	Whooping Crane	<i>Grus americana</i>	FE, SE
<b>Hanson</b>	Topeka Shiner Northern River Otter	<i>Notropis topeka</i> <i>Lontra canadensis</i>	FE ST
<b>Harding</b>	Sturgeon Chub Peregrine Falcon Swift Fox	<i>Macrhybopsis gelida</i> <i>Falco peregrinus</i> <i>Vulpes velox</i>	ST SE ST
<b>Hughes</b>	Pallid Sturgeon Shovelnose Sturgeon Sicklefin Chub False Map Turtle Interior Least Tern Piping Plover Whooping Crane Northern Long-eared Bat Northern River Otter Swift Fox	<i>Scaphirhynchus albus</i> <i>Scaphirhynchus platyrhynchus</i> <i>Macrhybopsis meeki</i> <i>Graptemys pseudogeographica</i> <i>Sternula antillarum athalassos</i> <i>Charadrius melodus</i> <i>Grus americana</i> <i>Myotis septentrionalis</i> <i>Lontra canadensis</i> <i>Vulpes velox</i>	FE, SE FT ST ST FE, SE FT, ST FE, SE FT ST ST
<b>Hutchinson</b>	Topeka Shiner Whooping Crane	<i>Notropis topeka</i> <i>Grus americana</i>	FE FE, SE
<b>Hyde</b>	Pallid Sturgeon Shovelnose Sturgeon Whooping Crane Swift Fox	<i>Scaphirhynchus albus</i> <i>Scaphirhynchus platyrhynchus</i> <i>Grus americana</i> <i>Vulpes velox</i>	FE, SE FT FE, SE ST
<b>Jackson</b>	Northern Redbelly Dace Sturgeon Chub Whooping Crane Northern Long-eared Bat Swift Fox	<i>Chrosomus eos</i> <i>Macrhybopsis gelida</i> <i>Grus americana</i> <i>Myotis septentrionalis</i> <i>Vulpes velox</i>	ST ST FE, SE FT ST
<b>Jerauld</b>	Whooping Crane Northern River Otter	<i>Grus americana</i> <i>Lontra canadensis</i>	FE, SE ST
<b>Jones</b>	Sturgeon Chub Whooping Crane	<i>Macrhybopsis gelida</i> <i>Grus americana</i>	ST FE, SE

<b>Kingsbury</b>	Piping Plover Whooping Crane	<i>Charadrius melodus</i> <i>Grus americana</i>	FT, ST FE, SE
<b>Lake</b>	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Lawrence</b>	Finescale Dace Longnose Sucker American Dipper Osprey Northern Long-eared Bat	<i>Chrosomus neogaeus</i> <i>Catostomus catostomus</i> <i>Cinclus mexicanus</i> <i>Pandion haliaetus</i> <i>Myotis septentrionalis</i>	SE ST ST ST LT
<b>Lincoln</b>	Northern Redbelly Dace Topeka Shiner Lined Snake Northern River Otter	<i>Chrosomus eos</i> <i>Notropis topeka</i> <i>Tropidoclonion lineatum</i> <i>Lontra canadensis</i>	ST FE SE ST
<b>Lyman</b>	Pallid Sturgeon Shovelnose Sturgeon Sturgeon Chub False Map Turtle Whooping Crane Black-footed Ferret Northern Long-eared Bat Northern River Otter Swift Fox	<i>Scaphirhynchus albus</i> <i>Scaphirhynchus platyrhynchus</i> <i>Macrhybopsis gelida</i> <i>Graptemys pseudogeographica</i> <i>Grus americana</i> <i>Mustela nigripes</i> <i>Myotis septentrionalis</i> <i>Lontra canadensis</i> <i>Vulpes velox</i>	FE, SE FT ST ST FE, SE FE, SE LT ST ST
<b>Marshall</b>	Dakota Skipper Poweshiek Skipperling Whooping Crane Northern River Otter	<i>Hesperia dacotae</i> <i>Oarisma poweshiek</i> <i>Gus americana</i> <i>Lontra canadensis</i>	FT FE FE, SE ST
<b>McCook</b>	Topeka Shiner Northern River Otter	<i>Notropis topeka</i> <i>Lontra canadensis</i>	FE ST
<b>McPherson</b>	Dakota Skipper Banded Killifish Whooping Crane	<i>Hesperia dacotae</i> <i>Fundulus diaphanus</i> <i>Grus americana</i>	FT SE FE, SE
<b>Meade</b>	Banded Killifish Longnose Sucker Sturgeon Chub American Dipper Interior Least Tern Whooping Crane Northern Long-eared Bat Northern River Otter Swift Fox	<i>Fundulus diaphanus</i> <i>Catostomus catostomus</i> <i>Macrhybopsis gelida</i> <i>Cinclus mexicanus</i> <i>Sternula antillarum athalassos</i> <i>Grus americana</i> <i>Myotis septentrionalis</i> <i>Lontra canadensis</i> <i>Vulpes velox</i>	SE ST ST ST FE, SE FE, SE LT ST ST
<b>Mellette</b>	Sturgeon Chub Whooping Crane	<i>Macrhybopsis gelida</i> <i>Grus americana</i>	ST FE, SE
<b>Miner</b>	Topeka Shiner	<i>Notropis topeka</i>	FE

	Whooping Crane	<i>Grus americana</i>	FE, SE
<b>Minnehaha</b>	Topeka Shiner	<i>Notropis topeka</i>	FE
	Lined Snake	<i>Tropidoclonion lineatum</i>	SE
	Northern River Otter	<i>Lontra canadensis</i>	ST
	Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	FT
<b>Moody</b>	Dakota Skipper	<i>Hesperia dacotae</i>	FT
	Poweshiek Skipperling	<i>Oarisma poweshiek</i>	FE
	Blacknose Shiner	<i>Notropis heterolepis</i>	SE
	Topeka Shiner	<i>Notropis topeka</i>	FE
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Oglala Lakota</b>	Sturgeon Chub	<i>Macrhybopsis gelida</i>	ST
	Swift Fox	<i>Vulpes velox</i>	ST
<b>Pennington</b>	Longnose Sucker	<i>Catostomus catostomus</i>	ST
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	ST
	American Dipper	<i>Cinclus mexicanus</i>	ST
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Osprey	<i>Pandion haliaetus</i>	ST
	Peregrine Falcon	<i>Falco peregrinus</i>	SE
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Black-footed Ferret	<i>Mustela nigripes</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	LT
	Northern River Otter	<i>Lontra canadensis</i>	ST
	Swift Fox	<i>Vulpes velox</i>	ST
<b>Perkins</b>	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	LT
	Swift Fox	<i>Vulpes velox</i>	ST
<b>Potter</b>	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	FT
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
<b>Roberts</b>	Dakota Skipper	<i>Hesperia dacotae</i>	FT
	Poweshiek Skipperling	<i>Oarisma poweshiek</i>	FE
	Blacknose Shiner	<i>Notropis heterolepis</i>	SE
	Osprey	<i>Pandion haliaetus</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Sandborn</b>	Topeka Shiner	<i>Notropis topeka</i>	FE
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Spink</b>	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern River Otter	<i>Lontra canadensis</i>	ST



	Swift Fox	<i>Vulpes velox</i>	ST
<b>Stanley</b>	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	FT
	Sicklefin Chub	<i>Macrhybopsis meeki</i>	ST
	False Map Turtle	<i>Graptemys pseudogeographica</i>	ST
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Black-footed Ferret	<i>Mustela nigripes</i>	FE, SE
	Northern Long-eared Bat	<i>Myotis septentrionalis</i>	LT
	Northern River Otter	<i>Lontra canadensis</i>	ST
	Swift Fox	<i>Vulpes velox</i>	ST
<b>Sully</b>	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	FT
	Interior Least Tern	<i>Sternula antillarum athalassos</i>	FE, SE
	Piping Plover	<i>Charadrius melodus</i>	FT, ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern River Otter	<i>Lontra canadensis</i>	ST
	Swift Fox	<i>Vulpes velox</i>	ST
<b>Todd</b>	American Burying Beetle	<i>Nicrophorus americanus</i>	FE
	Blacknose Shiner	<i>Notropis heterolepis</i>	SE
	Finescale Dace	<i>Chrosomus neogaeus</i>	SE
	Northern Pearl Dace	<i>Margariscus nachtriebi</i>	ST
	Northern Redbelly Dace	<i>Chrosomus eos</i>	ST
	Black-footed Ferret	<i>Mustela nigripes</i>	FE, SE
<b>Tripp</b>	American Burying Beetle	<i>Nicrophorus americanus</i>	FE
	Blacknose Shiner	<i>Notropis heterolepis</i>	SE
	Northern Pearl Dace	<i>Margariscus nachtriebi</i>	ST
	Northern Redbelly Dace	<i>Chrosomus eos</i>	ST
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	ST
	Whooping Crane	<i>Grus americana</i>	FE, SE
	Northern River Otter	<i>Lontra canadensis</i>	ST
<b>Turner</b>	Northern Redbelly Dace	<i>Chrosomus eos</i>	ST
	Topeka Shiner	<i>Notropis topeka</i>	FE
<b>Union</b>	American Burying Beetle	<i>Nicrophorus americanus</i>	FE
	Pallid Sturgeon	<i>Scaphirhynchus albus</i>	FE, SE
	Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	FT
	Finescale Dace	<i>Chrosomus neogaeus</i>	SE
	Sturgeon Chub	<i>Macrhybopsis gelida</i>	ST
	Sicklefin Chub	<i>Macrhybopsis meeki</i>	ST
	Eastern Hognose Snake	<i>Heterodon platirhinos</i>	ST
	False Map Turtle	<i>Graptemys pseudogeographica</i>	ST
	Lined Snake	<i>Tropidoclonion lineatum</i>	SE

	Interior Least Tern Piping Plover Northern Long-eared Bat Northern River Otter	<i>Sternula antillarum athalassos</i> <i>Charadrius melodus</i> <i>Myotis septentrionalis</i> <i>Lontra canadensis</i>	FE, SE FT, ST LT ST
<b>Walworth</b>	Northern Redbelly Dace Pallid Sturgeon Shovelnose Sturgeon Sturgeon Chub Sicklefin Chub Interior Least Tern Piping Plover Whooping Crane Northern Long-eared Bat	<i>Chrosomus eos</i> <i>Scaphirhynchus albus</i> <i>Scaphirhynchus platyrhynchus</i> <i>Macrhybopsis gelida</i> <i>Macrhybopsis meeki</i> <i>Sternula antillarum athalassos</i> <i>Charadrius melodus</i> <i>Grus americana</i> <i>Myotis septentrionalis</i>	ST FE, SE FT ST ST FE, SE FT, ST FE, SE LT
<b>Yankton</b>	Higgins Eye Scaleshell Pallid Sturgeon Shovelnose Sturgeon Sicklefin Chub Sturgeon Chub Eastern Hognose Snake False Map Turtle Interior Least Tern Piping Plover Northern Long-eared Bat Northern River Otter	<i>Lampsilis higginsii</i> <i>Leptodea leptodon</i> <i>Scaphirhynchus albus</i> <i>Scaphirhynchus platyrhynchus</i> <i>Macrhybopsis meeki</i> <i>Macrhybopsis gelida</i> <i>Heterodon platirhinos</i> <i>Graptemys pseudogeographica</i> <i>Sternula antillarum athalassos</i> <i>Charadrius melodus</i> <i>Myotis septentrionalis</i> <i>Lontra canadensis</i>	FE FE FE, SE FT ST ST ST ST FE, SE FT, ST LT ST
<b>Ziebach</b>	Sturgeon Chub Interior Least Tern Black-footed Ferret Swift Fox Whooping Crane	<i>Macrhybopsis gelida</i> <i>Sternula antillarum athalassos</i> <i>Mustela nigripes</i> <i>Vulpes velox</i> <i>Grus americana</i>	ST FE, SE FE, SE ST FE, SE